

Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme

NTA Observations on the Proposed Scheme Submissions

December 2023

**BUS
CONNECTS**

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

Contents

1	Introduction and Overview	1
1.1	Introduction	1
1.2	Overview of Submissions Received	1
2	Response to Submissions on Proposed Scheme	5
2.1	General Issues Not Related to any Specific Geographic Area	5
2.1.1	Common Issues Raised and Responses	6
2.2	Proposed Scheme at Templeogue Road	53
2.2.1	Description of Proposed Scheme at this Location	53
2.2.2	Overview of Submissions Received	58
2.2.3	Common Issues Raised and Responses	60
2.3	Proposed Scheme at Rathfarnham Road	81
2.3.1	Description of Proposed Scheme at this Location	81
2.3.2	Overview of Submissions Received	84
2.3.3	Common Issues Raised and Responses	86
2.4	Proposed Scheme at Terenure and Rathgar	142
2.4.1	Description of Proposed Scheme at this Location	142
2.4.2	Overview of Submissions Received	145
2.4.3	Common Issues Raised and Responses	147
2.5	Proposed Scheme at Rathmines	190
2.5.1	Description of Proposed Scheme at this Location	190
2.5.2	Overview of Submissions Received	193
2.5.3	Common Issues Raised and Responses	194
2.6	Institutional/Lobby Groups	222
2.6.1	Overview of Submissions Received	222
2.6.2	084 Development Applications Unit	222
2.6.3	089 Dublin City Council	225
2.6.4	090 Dublin Commuter Coalition	272
2.6.5	091 Dublin Cycling Campaign	282
2.6.6	255 South Dublin County Council	305
2.6.7	281 Transport Infrastructure Ireland	353
3	Responses to Individual Submissions on the Proposed Scheme	353
3.1	001 – Adrian Young and Nicole Byrne	353
3.1.1	Submission – Rathfarnham Road	353
3.1.2	Response to submission	354
3.2	002 – Aidan Brennan	354
3.2.1	Submission – Rathmines	354
3.2.2	Response to submission	354
3.3	003 – Aislinn Collins	354
3.3.1	Submission – Rathfarnham Road	354
3.3.2	Response to submission	354
3.4	004 – Alan Murphy	354
3.4.1	Submission – Rathfarnham Castle Park	354
3.4.2	Response to submission	355

3.5	005 – Allison Dwyer	355
3.5.1	Submission – Whole scheme	355
3.5.2	Response to submission	355
3.6	006 – Andrew Baird	359
3.6.1	Submission – Terenure and Rathgar	359
3.6.2	Response to submission	359
3.7	007 – Ann and Bryan Strahan	360
3.7.1	Submission – Whole scheme	360
3.7.2	Response to submission	360
3.8	008 – Ann Moore	360
3.8.1	Submission – Templeogue Road	360
3.8.2	Response to submission	360
3.9	009 – Ann O'Donnell	361
3.9.1	Submission – Whole Scheme	361
3.9.2	Response to submission	361
3.10	010 – Anna Shanley and Ryan Stempniewicz	361
3.10.1	Submission – Terenure and Rathgar	361
3.10.2	Response to submission	361
3.11	011 – Anna, John & Sarah Meehan	361
3.11.1	Submission – Whole scheme	361
3.11.2	Response to submission	362
3.12	012 – Anne Marie James	362
3.12.1	Submission – Terenure and Rathgar	362
3.12.2	Response to submission	362
3.13	013 – Anne McMonagle	362
3.13.1	Submission – Whole scheme	362
3.13.2	Response to submission	363
3.14	014 – Anne Neary & Conor Farren	363
3.14.1	Submission – Terenure and Rathgar	363
3.14.2	Response to submission	363
3.15	015 – Anne Neville	363
3.15.1	Submission – Rathfarnham Road	363
3.15.2	Response to submission	364
3.16	016 – Anthony Gorman	364
3.16.1	Submission – Rathmines	364
3.16.2	Response to submission	364
3.17	017 – Antonio Autorita	364
3.17.1	Submission – Rathmines	364
3.17.2	Response to submission	364
3.18	018 – Aoidhbhen Ó Curraoin	364
3.18.1	Submission – Whole scheme	364
3.18.2	Response to submission	365
3.19	019 – Aoife & Patrick Ryan	365
3.19.1	Submission – Terenure and Rathgar	365
3.19.2	Response to submission	366
3.20	020 – Arran Timms & Others	366
3.20.1	Submission – Rathmines	366

3.20.2	Response to submission	366
3.21	021 – Ava Thornton	366
3.21.1	Submission – Whole scheme	366
3.21.2	Response to submission	367
3.22	022 – Ballyboden Tidy Towns CLG	367
3.22.1	Submission – Rathfarnham Castle Park	367
3.22.2	Response to submission	368
3.23	023 – Barbara Atkinson	368
3.23.1	Submission – Terenure and Rathgar	368
3.23.2	Response to submission	368
3.24	024 – Barbara Molloy	368
3.24.1	Submission – Terenure and Rathgar	368
3.24.2	Response to submission	368
3.25	025 – Barbara Smith	368
3.25.1	Submission – Terenure and Rathgar	368
3.25.2	Response to submission	369
3.26	026 – Barry & Bairbre Redmond and Leo & Marina Casey	369
3.26.1	Submission – Terenure and Rathgar	369
3.26.2	Response to submission	369
3.27	027 – Barry & Patricia Devaney	369
3.27.1	Submission – Terenure and Rathgar	369
3.27.2	Response to submission	370
3.28	028 – Beaufort Downs Residents' Association	370
3.28.1	Submission – Rathfarnham Castle Park	370
3.28.2	Response to submission	370
3.29	029 – Belgrave Residents Association	372
3.29.1	Submission – Rathmines	372
3.29.2	Response to submission	373
3.30	030 – Ben Costello	373
3.30.1	Submission – Terenure and Rathgar	373
3.30.2	Response to submission	373
3.31	031 – Bernadette Behan	373
3.31.1	Submission – Rathmines	373
3.31.2	Response to submission	373
3.32	032 – Bernadette Quigley & Alessandro D'Erme	374
3.32.1	Submission – Whole scheme	374
3.32.2	Response to submission	374
3.33	033 – Bernard Colman & Mary Muldoon	374
3.33.1	Submission – Terenure and Rathgar	374
3.33.2	Response to submission	374
3.34	034 – Bernardine Cantwell	388
3.34.1	Submission – Terenure and Rathgar	388
3.34.2	Response to submission	388
3.35	035 – Bertha Walsh	388
3.35.1	Submission – Templeogue Road	388
3.35.2	Response to submission	388
3.36	036 – Betty Murphy	388

3.36.1	Submission – Templeogue Road	388
3.36.2	Response to submission	388
3.37	037 – Brendan Heneghan	389
3.37.1	Submission – Whole Scheme	389
3.37.2	Response to submission	389
3.38	038 – Brendan Timbs	414
3.38.1	Submission – Whole scheme	414
3.38.2	Response to submission	414
3.39	039 – Brian & Audrey Mooney and John & Elisa Browne	436
3.39.1	Submission – Whole scheme	436
3.39.2	Response to submission	436
3.40	040 – Brian & Ethna Healy	436
3.40.1	Submission – Rathfarnham Road	436
3.40.2	Response to submission	437
3.41	041 – Brian Walker, Carol Walker, Alison Walker	451
3.41.1	Submission – Whole Scheme	451
3.41.2	Response to submission	452
3.42	042 – Bridget O'Donoghue & Others	452
3.42.1	Submission – Rathfarnham Road	452
3.42.2	Response to submission	453
3.43	043 – Butterfield District Residents' Association	453
3.43.1	Submission – Whole Scheme	453
3.43.2	Response to submission	453
3.44	044 – Caitriona Holt & Ken Dolan	453
3.44.1	Submission – Whole Scheme	453
3.44.2	Response to submission	453
3.45	045 – Catherine and Brendan Garvan	454
3.45.1	Submission – Rathmines	454
3.45.2	Response to submission	454
3.46	046 – Catherine Gaffney	454
3.46.1	Submission – Rathfarnham Road	454
3.46.2	Response to submission	454
3.47	047 – Cedar Court Residents Association	454
3.47.1	Submission – Terenure and Rathgar	454
3.47.2	Response to submission	455
3.48	048 – Celine & John Cullen	455
3.48.1	Submission – Templeogue Road	455
3.48.2	Response to submission	456
3.49	049 – Christian Schaffalitzky	458
3.49.1	Submission – Terenure and Rathgar	458
3.49.2	Response to submission	458
3.50	050 – Christine Artcanuthurry & Lorean Burke	458
3.50.1	Submission – Whole Scheme	458
3.50.2	Response to submission	459
3.51	051 – Ciara McElinn	459
3.51.1	Submission – Rathfarnham Road	459
3.51.2	Response to submission	459

3.52	052 – Ciarán Ahern	460
3.52.1	Submission – Whole Scheme	460
3.52.2	Response to submission	460
3.53	053 – Ciaran Mulligan & Bryan Mc Cormack	460
3.53.1	Submission – Terenure and Rathgar	460
3.53.2	Response to submission	460
3.54	054 – Clare Fitzpatrick and Will Czerniak & Others	460
3.54.1	Submission – Whole Scheme	460
3.54.2	Response to submission	461
3.55	055 – Clare Sexton	461
3.55.1	Submission – Terenure and Rathgar	461
3.55.2	Response to submission	461
3.56	056 – Claudia Gentile	461
3.56.1	Submission – Terenure and Rathgar	461
3.56.2	Response to submission	462
3.57	057 – Cliona Hickey	462
3.57.1	Submission – Rathmines	462
3.57.2	Response to submission	462
3.58	058 – Cliona Maughan	463
3.58.1	Submission – Terenure and Rathgar	463
3.58.2	Response to submission	463
3.59	059 – Cliona Mullen	463
3.59.1	Submission – Terenure and Rathgar	463
3.59.2	Response to submission	463
3.60	060 – Cllr. Pamela Kearns	464
3.60.1	Submission – Rathfarnham Road	464
3.60.2	Response to submission	465
3.61	061 – Cllr. Lynn McCrave	465
3.61.1	Submission – Rathfarnham Road	465
3.61.2	Response to submission	465
3.62	062 – Cllr. Yvonne Collins	465
3.62.1	Submission – Rathfarnham Road	465
3.62.2	Response to submission	466
3.63	063 – Colin McKeeman	466
3.63.1	Submission – Templeogue Road	466
3.63.2	Response to submission	467
3.64	064 – Colleen Feeley	467
3.64.1	Submission – Terenure and Rathgar	467
3.64.2	Response to submission	467
3.65	065 – Colm Brophy TD	467
3.65.1	Submission – Whole Scheme	467
3.65.2	Response to submission	468
3.66	066 – Conor and Anna O’Kelly and others	468
3.66.1	Submission – Templeogue Road	468
3.66.2	Response to submission	468
3.67	067 – Conor O’Meara	468
3.67.1	Submission – Templeogue Road	468

3.67.2	Response to submission	468
3.68	068 – Conor Ryan and Siobhan Ryan	469
3.68.1	Submission – Whole Scheme	469
3.68.2	Response to submission	469
3.69	069 – Councillor Anne Feeney	471
3.69.1	Submission – Whole scheme	471
3.69.2	Response to submission	471
3.70	070 – Councillor Carolyn Moore	472
3.70.1	Submission – Whole Scheme	472
3.70.2	Response to submission	472
3.71	071 – Danny & Margaret McLaughlin	472
3.71.1	Submission – Whole Scheme	472
3.71.2	Response to submission	473
3.72	072 – Daria Sochacka and William Mc Elinn	473
3.72.1	Submission – Rathfarnham Road	473
3.72.2	Response to submission	473
3.73	073 – Darren Twyford	473
3.73.1	Submission – Terenure and Rathgar	473
3.73.2	Response to submission	474
3.74	074 – David Byrne	474
3.74.1	Submission – Templeogue Road	474
3.74.2	Response to submission	475
3.75	075 – David O'Doherty and Niamh Tierney	475
3.75.1	Submission – Whole scheme	475
3.75.2	Response to submission	476
3.76	076 – David Phelan	478
3.76.1	Submission – Terenure and Rathgar	478
3.76.2	Response to submission	479
3.77	077 – Dearbhail Shannon	479
3.77.1	Submission – Whole scheme	479
3.77.2	Response to submission	479
3.78	078 – Denis O'Connell	482
3.78.1	Submission – Rathfarnham Road	482
3.78.2	Response to submission	482
3.79	079 – Denise Russell	483
3.79.1	Submission – Templeogue Road	483
3.79.2	Response to submission	483
3.80	080 – Deputy Francis Noel Duffy TD and Cllr. Mark Lynch	492
3.80.1	Submission – Rathfarnham Road	492
3.80.2	Response to submission	493
3.81	081 – Derek Bradley, Mrs. Wallace & Mr. & Mrs. Paul Jones	493
3.81.1	Submission – Rathfarnham Road	493
3.81.2	Response to submission	493
3.82	082 – Derval O'Brien	493
3.82.1	Submission – Terenure and Rathgar	493
3.82.2	Response to submission	493
3.83	083 – Desmond Ryan	494

3.83.1	Submission – Terenure and Rathgar	494
3.83.2	Response to submission	494
3.84	084 – Development Applications Unit	494
3.84.1	Submission – Rathfarnham Road	494
3.84.2	Response to submission	494
3.85	085 – Diarmaid McGuinness	494
3.85.1	Submission – Whole Scheme	494
3.85.2	Response to submission	495
3.86	086 – Diarmuid O'Brien & Deirdre Healy	498
3.86.1	Submission – Whole Scheme	498
3.86.2	Response to submission	498
3.87	087 – Dolores (Dee) Gaffney	498
3.87.1	Submission – Terenure and Rathgar	498
3.87.2	Response to submission	499
3.88	088 – Dr. Roderick Maguire and Dr. M.E. Maguire	499
3.88.1	Submission – Terenure and Rathgar	499
3.88.2	Response to submission	499
3.89	089 – Dublin City Council	499
3.89.1	Submission – Whole Scheme	499
3.89.2	Response to submission	500
3.90	090 – Dublin Commuter Coalition	500
3.90.1	Submission – Whole Scheme	500
3.90.2	Response to submission	500
3.91	091 – Dublin Cycling Campaign	500
3.91.1	Submission	500
3.91.2	Response to submission	500
3.92	092 – Dylan Timbs	500
3.92.1	Response to submission	500
3.93	093 – Eamon Kelly	500
3.93.1	Submission – Terenure and Rathgar	500
3.93.2	Response to submission	501
3.94	094 – Eileen Dolan	501
3.94.1	Submission – Terenure and Rathgar	501
3.94.2	Response to submission	501
3.95	095 – Eimear O'Broin	501
3.95.1	Submission – Templeogue Road	501
3.95.2	Response to submission	502
3.96	096 – Elaine J. Wright	502
3.96.1	Submission – Templeogue Road	502
3.96.2	Response to submission	502
3.97	097 – Elaine Timbs	503
3.97.1	Submission – Whole Scheme	503
3.97.2	Response to submission	503
3.98	098 – Emmanuel Kehoe and Dr Attracta Halpin	503
3.98.1	Submission – Templeogue Road	503
3.98.2	Response to submission	504
3.99	099 – Eoin & Liadh Ui Chinneide and Neil & Amy Adams	504

3.99.1	Submission – Rathfarnham Road	504
3.99.2	Response to submission	504
3.100	100 – Eve McMorrow	504
3.100.1	Submission – Rathfarnham Road	504
3.100.2	Response to submission	505
3.101	101 – Feidhlimidh Wrafter	505
3.101.1	Submission – Terenure and Rathgar	505
3.101.2	Response to submission	505
3.102	102 – Fergus Bolster & others	505
3.102.1	Submission – Rathfarnham Road	505
3.102.2	Response to submission	505
3.103	103 – Filipa Allen Egan	518
3.103.1	Submission – Rathmines	518
3.103.2	Response to submission	518
3.104	104 – Finola Connolly	519
3.104.1	Submission – Terenure and Rathgar	519
3.104.2	Response to submission	519
3.105	105 – Fiona Burns	519
3.105.1	Submission – Rathfarnham Road	519
3.105.2	Response to submission	519
3.106	106 – Fiona Daly	520
3.106.1	Submission – Terenure and Rathgar	520
3.106.2	Response to submission	520
3.107	107 – Fiona Eogan	521
3.107.1	Submission – Terenure and Rathgar	521
3.107.2	Response to submission	521
3.108	108 – Fiona Reilly	521
3.108.1	Submission – Templeogue Road	521
3.108.2	Response to submission	522
3.109	109 – Fionnuala and Dick Blake	526
3.109.1	Submission – Whole Scheme	526
3.109.2	Response to submission	526
3.110	110 – Frank O'Callaghan	527
3.110.1	Submission – Whole Scheme	527
3.110.2	Response to submission	528
3.111	111 – Gavin Maguire	531
3.111.1	Submission – Templeogue Road	531
3.111.2	Response to submission	531
3.112	112 – Graham Brooks and Jennifer Porter	531
3.112.1	Submission – Whole Scheme	531
3.112.2	Response to submission	531
3.113	113 – Grainne O'Neill & Others	534
3.113.1	Submission – Terenure and Rathgar	534
3.113.2	Response to submission	535
3.114	114 – Greg and Audrey Turley	535
3.114.1	Submission – Terenure and Rathgar	535
3.114.2	Response to submission	535

3.115	115 – Grove Park Residents Group	550
3.115.1	Submission – Rathmines	550
3.115.2	Response to submission	550
3.116	116 – Helena McLaughlin	551
3.116.1	Submission – Terenure and Rathgar	551
3.116.2	Response to submission	551
3.117	117 – I Love Terenure 2030	551
3.117.1	Submission – Terenure and Rathgar	551
3.117.2	Response to submission	552
3.118	118 – Involve Autism D6/D6W and Surrounds	554
3.118.1	Submission – Rathfarnham Road	554
3.118.2	Response to submission	555
3.119	119 – (AsIAm) Ireland’s National Autism Charity	555
3.119.1	Submission – Rathfarnham Road	555
3.119.2	Response to submission	555
3.120	120 – Ivana Bacik TD	555
3.120.1	Submission – Rathfarnham	555
3.120.2	Response to submission	556
3.121	121 – Jack Thornton	556
3.121.1	Submission – Terenure and Rathgar	556
3.121.2	Response to submission	557
3.122	122 – Jacqueline Murphy	557
3.122.1	Submission – Rathmines	557
3.122.2	Response to submission	558
3.123	123 – James & Cora McEntee	558
3.123.1	Submission – Terenure and Rathgar	558
3.123.2	Response to submission	558
3.124	124 – James Dwan	558
3.124.1	Submission – Whole Scheme	558
3.124.2	Response to submission	559
3.125	125 – James M. Bourke & Ilona de Burgh	561
3.125.1	Submission – Terenure and Rathgar	561
3.125.2	Response to submission	562
3.126	126 – Jason Devine and others	563
3.126.1	Submission – Rathfarnham Road	563
3.126.2	Response to submission	563
3.127	127 – Jean Murray	563
3.127.1	Submission – Rathfarnham Road	563
3.127.2	Response to submission	563
3.128	128 – Jim Byrne	563
3.128.1	Submission – Whole Scheme	563
3.128.2	Response to submission	564
3.129	129 – Jim O’Callaghan TD	564
3.129.1	Submission – Whole Scheme	564
3.129.2	Response to submission	564
3.130	130 – Joan Kelly	564
3.130.1	Submission – Rathmines	564

3.130.2	Response to submission	565
3.131	131 – Joe Davitt	565
3.131.1	Submission – Rathmines	565
3.131.2	Response to submission	565
3.132	132 – John Gleeson and Christine Blessing	565
3.132.1	Submission – Terenure and Rathgar	565
3.132.2	Response to submission	566
3.133	133 – John Grant	566
3.133.1	Submission – Rathfarnham Road	566
3.133.2	Response to submission	566
3.134	134 – John Lahart TD	567
3.134.1	Submission – Whole Scheme	567
3.134.2	Response to submission	567
3.135	135 – John Perham and Valerie Henderson	567
3.135.1	Submission – Templeogue Road	567
3.135.2	Response to submission	568
3.136	136 – John Shanahan	569
3.136.1	Submission – Whole Scheme	569
3.136.2	Response to submission	570
3.137	137 – John Walsh	582
3.137.1	Submission – Rathmines	582
3.137.2	Response to submission	583
3.138	138 – Judith Lunny	583
3.138.1	Submission – Terenure and Rathgar	583
3.138.2	Response to submission	583
3.139	139 – Karen Lynch	583
3.139.1	Submission – Rathfarnham Road	583
3.139.2	Response to submission	584
3.140	140 – Karen Quirk	588
3.140.1	Submission – Rathmines	588
3.140.2	Response to submission	589
3.141	141 – Kathryn & Eoin McVey	589
3.141.1	Submission – Terenure and Rathgar	589
3.141.2	Response to submission	589
3.142	142 – Kathy Jacobs	589
3.142.1	Submission – Terenure and Rathgar	589
3.142.2	Response to submission	590
3.143	143 – Keith Walsh, Camden Inns Limited	590
3.143.1	Submission – Camden Street	590
3.143.2	Response to submission	591
3.144	144 – Kerrie Glynn	597
3.144.1	Submission – Camden Street	597
3.144.2	Response to submission	597
3.145	145 – Kieran Comerford	599
3.145.1	Submission – Rathmines	599
3.145.2	Response to submission	600
3.146	146 – Leah Donnelly and Others	600

3.146.1	Submission – Rathfarnham Road	600
3.146.2	Response to submission	600
3.147	147 – Leila Anglade	600
3.147.1	Submission – Terenure and Rathgar	600
3.147.2	Response to submission	601
3.148	148 – Liam Bell	601
3.148.1	Submission – Terenure and Rathgar	601
3.148.2	Response to submission	601
3.149	149 – Liam Fitzgerald	603
3.149.1	Submission – Terenure and Rathgar	603
3.149.2	Response to submission	603
3.150	150 – Linda Hackett	603
3.150.1	Submission – Terenure and Rathgar	603
3.150.2	Response to submission	603
3.151	151 – Linda Patton	604
3.151.1	Submission – Terenure and Rathgar	604
3.151.2	Response to submission	604
3.152	152 – Lissonfield Management Company CLG	604
3.152.1	Submission – Rathmines	604
3.152.2	Response to submission	605
3.153	153 – Lorna Callanan	605
3.153.1	Submission – Rathfarnham Road	605
3.153.2	Response to submission	605
3.154	154 – Macdara O Morain	613
3.154.1	Submission – Terenure and Rathgar	613
3.154.2	Response to submission	613
3.155	155 – Maire O’Kelly	613
3.155.1	Submission – Rathmines	613
3.155.2	Response to submission	613
3.156	156 – Malachy & Jackie Farrell	614
3.156.1	Submission – Rathmines	614
3.156.2	Response to submission	614
3.157	157 – Marcus Purcell & Family	614
3.157.1	Submission – Whole Scheme	614
3.157.2	Response to submission	615
3.158	158 – Margaret and Patrick Kelly	617
3.158.1	Submission – Whole Scheme	617
3.158.2	Response to submission	618
3.159	159 – Margaret Silke	618
3.159.1	Submission – Whole Scheme	618
3.159.2	Response to submission	619
3.160	160 – Mari O’Leary	619
3.160.1	Submission – Terenure and Rathgar	619
3.160.2	Response to submission	620
3.161	161 – Maria Blair	620
3.161.1	Submission – Rathfarnham Road	620
3.161.2	Response to submission	620

3.162	162 – Marina Lynch & Kingston Mills	624
3.162.1	Submission – Terenure and Rathgar	624
3.162.2	Response to submission	624
3.163	163 – Mark and Linda Smith – Bijou Deli and Bistro	625
3.163.1	Submission – Terenure and Rathgar	625
3.163.2	Response to submission	625
3.164	164 – Mark Duggan and Maria and Brian Bilings	628
3.164.1	Submission – Whole Scheme	628
3.164.2	Response to submission	628
3.165	165 – Mark Fitzgerald	629
3.165.1	Submission – Rathfarnham Road	629
3.165.2	Response to submission	629
3.166	166 – Martin & Bernie Gibbons	633
3.166.1	Submission – Templeogue Road	633
3.166.2	Response to submission	633
3.167	167 – Mary Dunning	634
3.167.1	Submission – Whole scheme	634
3.167.2	Response to submission	635
3.168	168 – Mary O'Farrell	635
3.168.1	Response to submission	635
3.168.2	Submission – Rathmines	635
3.169	169 – Mary O'Mahony	635
3.169.1	Submission – Rathfarnham Road	635
3.169.2	Response to submission	635
3.170	170 – Maura Byrne	640
3.170.1	Submission – Terenure and Rathgar	640
3.170.2	Response to submission	641
3.171	171 – Maureen O'Halloran	641
3.171.1	Submission – Terenure and Rathgar	641
3.171.2	Response to submission	642
3.172	172 – Maurice Dorney & Dympna Dorney	642
3.172.1	Submission – Terenure and Rathgar	642
3.172.2	Response to submission	642
3.173	173 – Meals on Wheels Rathmines Melisa Kearney	642
3.173.1	Submission – Rathmines	642
3.173.2	Response to submission	642
3.174	174 – Melisa Kearney	643
3.174.1	Submission – Whole Scheme	643
3.174.2	Response to submission	644
3.175	175 – Mery Fenton, Olwyn Callaghan & Mary Rose Callaghan	646
3.175.1	Submission – Rathmines	646
3.175.2	Response to submission	646
3.176	176 – Michael & Ann Maire Morris	646
3.176.1	Submission – Terenure and Rathgar	646
3.176.2	Response to submission	647
3.177	177 – Michael and Colette Clarke and Others	647
3.177.1	Submission – Terenure and Rathgar	647

3.177.2	Response to submission	647
3.178	178 – Michael Bermingham	647
3.178.1	Submission – Whole Scheme	647
3.178.2	Response to submission	648
3.179	179 – Michael McAuley	648
3.179.1	Submission – Rathfarnham Road	648
3.179.2	Response to submission	648
3.180	180 – Michele Van Valey and Derek Hennessy	652
3.180.1	Submission – Templeogue Road	652
3.180.2	Response to submission	652
3.181	181 – Mick and Miriam Dunne	653
3.181.1	Submission – Terenure and Rathgar	653
3.181.2	Response to submission	653
3.182	182 – Mona Stafford	653
3.182.1	Submission – Templeogue Road	653
3.182.2	Response to submission	653
3.183	183 – Monica Tansey	653
3.183.1	Submission – Templeogue Road	653
3.183.2	Response to submission	653
3.184	184 – Mrs. Marian Pau	656
3.184.1	Submission – Rathfarnham Road	656
3.184.2	Response to submission	656
3.185	185 – Muireann O'Dea, Frank Cronin & Oran Doyle	656
3.185.1	Submission – Whole Scheme	656
3.185.2	Response to submission	657
3.186	186 – Naomi Murphy	657
3.186.1	Submission – Whole Scheme	657
3.186.2	Response to submission	657
3.187	187 – Neasa McGarrigle & Oisin Tobin	658
3.187.1	Submission – Whole Scheme	658
3.187.2	Response to submission	658
3.188	188 – Niall & Yvonne Gunne	659
3.188.1	Submission – Terenure and Rathgar	659
3.188.2	Response to submission	659
3.189	189 – Niall Turley	659
3.189.1	Submission – Terenure and Rathgar	659
3.189.2	Response to submission	660
3.190	190 – Niamh Wilson & David O'Doherty	660
3.190.1	Submission – Rathfarnham Road	660
3.190.2	Response to submission	660
3.191	191 – Nigel Clerkin	660
3.191.1	Submission – Whole Scheme	660
3.191.2	Response to submission	661
3.192	192 – Nora McCaul	664
3.192.1	Submission – Rathfarnham Road	664
3.192.2	Response to submission	664
3.193	193 – Orla Kelly and Paul Farrell	664

3.193.1	Submission – Whole Scheme	664
3.193.2	Response to submission	664
3.194	194 – Orla Murphy	666
3.194.1	Submission – Templeogue Road	666
3.194.2	Response to submission	666
3.195	195 – Orwell Park (Templeogue) Residents Association	666
3.195.1	Submission –	666
3.195.2	Response to submission	667
3.196	196 – Pat & Eileen McMorrow	668
3.196.1	Submission – Rathfarnham Road	668
3.196.2	Response to submission	669
3.197	197 – Pat and Maire Coman	669
3.197.1	Submission – Templeogue Road	669
3.197.2	Response to submission	669
3.198	198 – Pat and Theresa McCaffrey	671
3.198.1	Submission – Terenure and Rathgar	671
3.198.2	Response to submission	671
3.199	199 – Patrick & Anne Fletcher	671
3.199.1	Submission – Templeogue Road	671
3.199.2	Response to submission	672
3.200	200 – Patrick O'Hagan	672
3.200.1	Submission – Terenure and Rathgar	672
3.200.2	Response to submission	673
3.201	201 – Paul and Maria Baird	675
3.201.1	Submission – Templeogue Road	675
3.201.2	Response to submission	676
3.202	202 – Paul Jacobs	676
3.202.1	Submission – Whole Scheme	676
3.202.2	Response to submission	676
3.203	203 – Paul Kavanagh	676
3.203.1	Submission – Terenure and Rathgar	676
3.203.2	Response to submission	677
3.204	204 – Paula & Ray Moore	677
3.204.1	Submission – Terenure and Rathgar	677
3.204.2	Response to submission	678
3.205	205 – Pauline Wheatley	678
3.205.1	Submission – Terenure and Rathgar	678
3.205.2	Response to submission	678
3.206	206 – Pete & Emma Smyth	679
3.206.1	Submission – Terenure and Rathgar	679
3.206.2	Response to submission	679
3.207	207 – Peter Lynch	679
3.207.1	Submission – Rathfarnham Road	679
3.207.2	Response to submission	680
3.208	208 – Peter Thornton & Helen Callanan	686
3.208.1	Submission – Terenure and Rathgar	686
3.208.2	Response to submission	687

3.209	209 – Philip and Sally Berman	687
3.209.1	Submission – Whole Scheme	687
3.209.2	Response to submission	687
3.210	210 – Philip and Vivienne Mayne & Jacky Mayne	687
3.210.1	Submission – Templeogue Road	687
3.210.2	Response to submission	688
3.211	211 – Philip O'Reilly	688
3.211.1	Submission – Whole Scheme	688
3.211.2	Response to submission	688
3.212	212 – Philip O'Reilly	688
3.212.1	Submission – Whole Scheme	688
3.212.2	Response to submission	689
3.213	213 – Phillip Elliott, Elliott's Food Service	689
3.213.1	Submission – Rathmines	689
3.213.2	Response to submission	689
3.214	214 – Ranelagh Village Improvement Group	694
3.214.1	Submission – Rathmines	694
3.214.2	Response to submission	694
3.215	215 – Rathfarnham Castle Residents Association	695
3.215.1	Submission – Rathfarnham Road	695
3.215.2	Response to submission	695
3.216	216 – Rathfarnham Wood Residents Association	695
3.216.1	Submission – Rathfarnham Road	695
3.216.2	Response to submission	696
3.217	217 – Rathgar Business Association	696
3.217.1	Submission – Terenure and Rathgar	696
3.217.2	Response to submission	696
3.218	218 – Rathgar Medical Practice	696
3.218.1	Submission – Terenure and Rathgar	696
3.218.2	Response to submission	696
3.219	219 – Rathgar Residents Association	696
3.219.1	Submission – Terenure and Rathgar	696
3.219.2	Response to submission	697
3.220	220 – Rathmines Parish	698
3.220.1	Submission – Rathmines	698
3.220.2	Response to submission	698
3.221	221 – Recorder's Residents Association	698
3.221.1	Submission – Whole Scheme	698
3.221.2	Response to submission	699
3.222	222 – Residents of Brighton Road and Brighton Square	701
3.222.1	Submission – Terenure and Rathgar	701
3.222.2	Response to submission	701
3.223	223 – Residents of Fortfield Road	704
3.223.1	Submission – Templeogue Road	704
3.223.2	Response to submission	704
3.224	224 – Residents of Greenlea Avenue, Drive and Park	704
3.224.1	Submission – Templeogue Road	704

3.224.2	Response to submission	704
3.225	225 – Residents of Greenlea Road	705
3.225.1	Submission – Terenure and Rathgar	705
3.225.2	Response to submission	705
3.226	226 – Residents of Lavarna Grove and Lavarna Road	705
3.226.1	Submission – Templeogue Road	705
3.226.2	Response to submission	705
3.227	227 – Residents of Mountpleasant Area	706
3.227.1	Submission – Rathmines	706
3.227.2	Response to submission	706
3.228	228 – Residents of Mountpleasant Avenue Lower	707
3.228.1	Submission – Rathmines	707
3.228.2	Response to submission	707
3.229	229 – Residents of Numbers 51-71, Rathfarnham Road	707
3.229.1	Submission – Rathfarnham Road	707
3.229.2	Response to submission	708
3.230	230 – Residents of Parkmore Drive, Terenure	708
3.230.1	Submission – Templeogue Road	708
3.230.2	Response to submission	708
3.231	231 – Residents of Terenure Road West	708
3.231.1	Submission – Templeogue Road	708
3.231.2	Response to submission	709
3.232	232 – Residents of The Cloisters and Maple Drive Area	709
3.232.1	Submission – Terenure and Rathgar	709
3.232.2	Response to submission	709
3.233	233 – Residents of Upper Rathmines Road	710
3.233.1	Submission – Terenure and Rathgar	710
3.233.2	Response to submission	711
3.234	234 – Ria Duignan	711
3.234.1	Submission – Rathmines	711
3.234.2	Response to submission	711
3.235	235 – Richard Carroll	712
3.235.1	Submission – Whole Scheme	712
3.235.2	Response to submission	712
3.236	236 – Rita Delahunty	713
3.236.1	Submission – Rathmines	713
3.236.2	Response to submission	713
3.237	237 – Rita O Cleirigh	713
3.237.1	Submission – Terenure and Rathgar	713
3.237.2	Response to submission	713
3.238	238 – Robin Jones	714
3.238.1	Submission – Terenure and Rathgar	714
3.238.2	Response to submission	714
3.239	239 – Róisín Kennedy and Andrew Folan & Others	714
3.239.1	Submission – Rathmines	714
3.239.2	Response to submission	715
3.240	240 – Ronan & Siobhan Garrigan	715

3.240.1	Submission – Terenure and Rathgar	715
3.240.2	Response to submission	715
3.241	241 – Rory and Cliona Carton	715
3.241.1	Submission – Terenure and Rathgar	715
3.241.2	Response to submission	715
3.242	242 – Rory and Margaret Crerar and Others	716
3.242.1	Submission – Rathfarnham Road	716
3.242.2	Response to submission	716
3.243	243 – Rosemary & Roger Conan	716
3.243.1	Submission – Rathmines	716
3.243.2	Response to submission	716
3.244	244 – Rosemary Ryan	717
3.244.1	Submission – Terenure and Rathgar	717
3.244.2	Response to submission	717
3.245	245 – Rosemary Steen	717
3.245.1	Submission – Rathmines	717
3.245.2	Response to submission	717
3.246	246 – St. Judes Mens Shed Club	718
3.246.1	Submission – Templeogue Road	718
3.246.2	Response to submission	718
3.247	247 – Seán Crowe TD	720
3.247.1	Submission – Rathfarnham Road	720
3.247.2	Response to submission	720
3.248	248 – Seán Leake and Morina Carr	720
3.248.1	Submission – Terenure and Rathgar	720
3.248.2	Response to submission	721
3.249	249 – Seán Silke	722
3.249.1	Submission – Whole Scheme	722
3.249.2	Response to submission	722
3.250	250 – Senator Mary Seery Kearney	735
3.250.1	Submission – Whole Scheme	735
3.250.2	Response to submission	736
3.251	251 – Senator Michael McDowell	738
3.251.1	Submission – Whole Scheme	738
3.251.2	Response to submission	739
3.252	252 – Sharon McCaffrey	739
3.252.1	Submission – Terenure and Rathgar	739
3.252.2	Response to submission	739
3.253	253 – Shauna & Ray Clarke & Others	740
3.253.1	Submission – Terenure and Rathgar	740
3.253.2	Response to submission	740
3.254	254 – Simon Harrison and Maire Redmond	740
3.254.1	Submission – Rathfarnham Road	740
3.254.2	Response to submission	740
3.255	255 – South Dublin County Council	741
3.255.1	Submission	741
3.255.2	Response to submission	741

3.256	256 – St. Jude’s GAA Club	741
3.256.1	Submission – Templeogue Road	741
3.256.2	Response to submission	741
3.257	257 – St. Louis High School	741
3.257.1	Submission – Rathmines	741
3.257.2	Response to submission	741
3.258	258 – Stephanie Frame	742
3.258.1	Submission – Terenure and Rathgar	742
3.258.2	Response to submission	742
3.259	259 – Stephen Bailey	742
3.259.1	Submission – Rathgar Road	742
3.259.2	Response to submission	742
3.260	260 – Stephen Garland	742
3.260.1	Submission – Whole Scheme	742
3.260.2	Response to submission	743
3.261	261 – Stephen Woulfe	743
3.261.1	Submission – Whole Scheme	743
3.261.2	Response to submission	743
3.262	262 – Stonepark Investments Limited	743
3.262.1	Submission – Terenure and Rathgar	743
3.262.2	Response to submission	744
3.263	263 – Susan Coleman and Declan O’Neill	746
3.263.1	Submission – Terenure and Rathgar	746
3.263.2	Response to submission	747
3.264	264 – Susan Kearney, Mary Duff & Iona Whelan	747
3.264.1	Submission – Rathfarnham Road	747
3.264.2	Response to submission	747
3.265	265 – Susan McNamara	747
3.265.1	Submission – Rathfarnham Road	747
3.265.2	Response to submission	748
3.266	266 – Tara Delaney	748
3.266.1	Submission – Terenure and Rathgar	748
3.266.2	Response to submission	748
3.267	267 – Templeogue Wood Residents Association	748
3.267.1	Submission – Templeogue Road	748
3.267.2	Response to submission	749
3.268	268 – Terenure & Templeogue Sustainable Community Association CLG	749
3.268.1	Submission – Whole Scheme	749
3.268.2	Response to submission	750
3.269	269 – Terenure College Rugby Football Club	751
3.269.1	Submission – Templeogue Road	751
3.269.2	Response to submission	752
3.270	270 – Terenure Residents Association	752
3.270.1	Submission – Terenure and Rathgar	752
3.270.2	Response to submission	753
3.271	271 – Terenure Road East Residents' Group	755
3.271.1	Submission – Whole Scheme	755

3.271.2	Response to submission	755
3.272	272 – Terenure Road West Residents' Group	755
3.272.1	Submission – Whole Scheme	755
3.272.2	Response to submission	756
3.273	273 – Teresa & Vincent Lambe	756
3.273.1	Submission – Terenure and Rathgar	756
3.273.2	Response to submission	756
3.274	274 – Tesco Ireland Limited	757
3.274.1	Submission – Whole Scheme	757
3.274.2	Response to submission	757
3.275	275 – The Barber Family	757
3.275.1	Submission – Terenure and Rathgar	757
3.275.2	Response to submission	758
3.276	276 – The Rathmines Initiative	758
3.276.1	Submission – Rathmines	758
3.276.2	Response to submission	758
3.277	277 – The Richview Residents Association	759
3.277.1	Submission – Rathmines	759
3.277.2	Response to submission	759
3.278	278 – Thomas Michael Larkin	759
3.278.1	Submission – Rathmines	759
3.278.2	Response to submission	760
3.279	279 – Thomas Sexton	760
3.279.1	Submission – Rathfarnham Road	760
3.279.2	Response to submission	760
3.280	280 – Tom Kelly	765
3.280.1	Submission – Whole Scheme	765
3.280.2	Response to submission	766
3.281	281 – Transport Infrastructure Ireland	769
3.281.1	Submission – Whole Scheme	769
3.281.2	Response to submission	769
3.282	282 – Una Lyons	769
3.282.1	Submission – Terenure and Rathgar	769
3.282.2	Response to submission	770
3.283	283 – Una O'Neil	770
3.283.1	Submission – Templeogue Road	770
3.283.2	Response to submission	770
3.284	284 – Ursula Budd & Michael McArdle	770
3.284.1	Submission – Terenure and Rathgar	770
3.284.2	Response to submission	771
3.285	285 – Wainsfort and College Residents Association	771
3.285.1	Submission – Templeogue Road	771
3.285.2	Response to submission	772
3.286	286 – WORK Residents Association	773
3.286.1	Submission – Templeogue Road	773
3.286.2	Response to submission	774

1 Introduction and Overview

1.1 Introduction

1.2 Overview of Submissions Received

A total of 286 submissions in response to the Proposed Scheme were received by the Board.

Each submission was individually numbered by the Board and this numbering system has been retained for ease of reference in this report.

In Table 1.2.1 to Table 1.2.2 the 286 submissions in response to Proposed Scheme are broken down into groups either associated with a particular location along the Corridor or of a more general nature below.

Table 1.2.1 Summary of Locations Referenced by Submissions

Location	No. of submissions referencing this Location	Key Issues Raised
Templeogue Road	46	<ul style="list-style-type: none"> • The Templeogue Road Inbound Bus Gate <ul style="list-style-type: none"> ○ No need for bus gate as existing bus priority signal is considered to be sufficient ○ Hours of operation of bus gate are too onerous • Traffic impact of Templeogue Road Inbound Bus Gate and Associated Traffic Management Proposals <ul style="list-style-type: none"> ○ Impact on Fortfield Road/Greenlea Road/Lavarna Road ○ Impact on Access to Rathdown Area ○ Impact of traffic management proposals on parking at Bushy Park and Terenure Rugby Club ○ Effectiveness of proposed turn bans • Relocated bus stops on Templeogue Road <ul style="list-style-type: none"> ○ Relocation of bus stop outside 217-219 Templeogue Road. ○ Relocation of bus stops at Lakelands Park • Reduction in number of buses on Templeogue Road • Spawell Junction and environs <ul style="list-style-type: none"> ○ Proposals for additional inbound and outbound lanes ○ Two-way cycle track between Spawell and Rossmore Greenway should be retained ○ Safety Audit does not reflect the latest design at Spawell roundabout
Rathfarnham Road	64	<ul style="list-style-type: none"> • Impact on Rathfarnham Castle Park <ul style="list-style-type: none"> ○ Consider alternate bus signalling ○ Consider stopping scheme before Rathfarnham Castle ○ Climate impact of tree removal ○ Biodiversity impact ○ Replacement of the Castle Wall ○ No consideration of River Glinn ○ Landscape and visual ○ Impact on woodland playground • Option Assessment along Rathfarnham Road • Relocation of Bus Stops on Rathfarnham Road • Air and Noise Pollution on Rathfarnham Road • Increased Traffic and Congestion and consequential safety concerns • Impact on business in villages including Terenure due to loss of parking etc • Site Compound TR 3 <ul style="list-style-type: none"> ○ Air, noise, vibration and light pollution ○ Visual Impact ○ Loss of public amenity ○ Character of the area ○ Biodiversity

Location	No. of submissions referencing this Location	Key Issues Raised
		<ul style="list-style-type: none"> ○ Land use zoning ○ Flood Plain ○ Risk of spillage, contamination ○ Archaeological impact ○ Architectural heritage Impact ○ Compound Traffic and Overspill parking into residential areas ○ Not compliant with SDCC Development Plan 2022-2028 ○ Construction traffic
Terenure and Rathgar	116	<ul style="list-style-type: none"> ● Justification for corridor routing along Rathgar Road ● Proposed 1-way for general traffic on Rathgar Road <ul style="list-style-type: none"> ○ Impact on Highfield Road / Rathmines Road Upper ○ Reduced footpath widths on Rathgar Road ● Removal of parking/loading in Rathgar Village ● Removal of parking/loading in Terenure Village ● Removal of trees on Terenure Road East ● Impact on Heritage properties along Terenure Road East ● Relocation of bus stops <ul style="list-style-type: none"> ○ Bus Stop 1 Relocated bus stop outside No.12 and 14 Terenure Road East ○ Relocated bus stop outside No.12 and 14 Terenure Road East ● Existing Bus Priority Signal on Terenure Road East is Adequate ● Impact on access to/from Rathgar Road from the north ● Traffic impact of proposals at Terenure Cross
Rathmines	55	<ul style="list-style-type: none"> ● Impact on access to Rathmines Village as a result of the proposed bus gate <ul style="list-style-type: none"> ○ Need for the proposed bus gate and alternative options ○ Impact on access to / egress from other areas north of Lissenfield, Church of Mary Immaculate Refuge of Sinners, Blackberry Lane and Grove Road ○ Impact on businesses as a result of bus gate, including impact on deliveries. ○ Suggestion to reduce bus gate hours of operation to 6-9am and 4-8pm ● Traffic increases on surrounding roads including Castlewood Avenue, Dunville Avenue, Belgrave Square North <ul style="list-style-type: none"> ○ Increase in traffic on these roads and potential for congestion ○ Impact on noise and air quality as a result of redistributed traffic in the Rathmines / Ranelagh area ○ Effect of Turn Bans on Access in Ranelagh – RT from Cullenswood to Ranelagh Rd ● Proposed Shuttle Arrangement at Mountpleasant Avenue Upper <ul style="list-style-type: none"> ○ Need for the proposed shuttle arrangement at Mountpleasant Avenue Upper ○ Increase in traffic on Richmond Hill/Mountpleasant Avenue as a result of shuttle system ○ Inadequacy of Mountpleasant Avenue Lower to accommodate two-way traffic movement, including where traffic would be waiting at a red light at the shuttle system. ○ Impact of proposals on cycle facilities ○ Alternative measures could be introduced to improve access without impacting on Mountpleasant Avenue Upper. ● Insufficient Improvements to Public Realm in Rathmines
Richmond Street / Camden Street	7	<ul style="list-style-type: none"> ● Loading bay locations <ul style="list-style-type: none"> ○ Proposed loading bay in front of The Camden ○ Proposed removal of existing loading bay of Wexford St ● Conflicts with Dublin City Council plans for College Green ● Proposed narrow footpaths ● Traffic <ul style="list-style-type: none"> ○ Increased volume of buses ● Negative impact on businesses

Location	No. of submissions referencing this Location	Key Issues Raised
		<ul style="list-style-type: none"> • Alternative options <ul style="list-style-type: none"> ○ Tram / Luas ○ Metro

Table 1.2.2 Summary of Submissions Covering Scheme Wide Issues

Entity	Key Issues Raised
Dublin Commuter Coalition	<ul style="list-style-type: none"> • Advocate for the Proposed Scheme • Provide enforcement cameras • Provide 24/7 bus lane operation • Pedestrian crossings • Junction design • Bus stops design • Shared space • Bicycle parking
Dublin Cycling Campaign	<ul style="list-style-type: none"> • Achieving National Mobility Policy targets • Universal design • Welcome design interventions <ul style="list-style-type: none"> ○ Improved island bus stops • Cycle track widths • Cycle track continuity • Filtered permeability • Quiet Street treatment • Speed limits
Local business	<ul style="list-style-type: none"> • Traffic • Access to amenities • Negative effect on businesses • Safety of vulnerable pedestrians and cyclists
Local resident(s)	<ul style="list-style-type: none"> • Road widening • Character of area • No assessment of cumulative impact of 12 corridors • Request oral hearing • Pre-COVID traffic volumes used in analysis • Alternative options <ul style="list-style-type: none"> ○ Luas / tram ○ Metro ○ Park and ride facilities ○ Congestion pricing ○ City centre car ban ○ Cashless fare payment ○ Bus priority signals ○ Scheme on a trial basis ○ Improved enforcement ○ School buses ○ Previous Clongriffin to Tallaght Bus Rapid Transit scheme / Harold's Cross Road • Access to amenities • Lack of consultation • Proposed footpaths <ul style="list-style-type: none"> ○ Narrow width • Proposed bus gates <ul style="list-style-type: none"> ○ Limit hours of operation ○ Request exemption for residents • Air pollution

Entity	Key Issues Raised
	<ul style="list-style-type: none"> • Traffic <ul style="list-style-type: none"> ○ Diverted to residential streets • Architectural and cultural heritage • Biodiversity <ul style="list-style-type: none"> ○ Destruction of trees ○ Flora and fauna • Unnecessary change providing no real gains to bus travel times • Inadequate bus service proposed • Proposed cycle tracks <ul style="list-style-type: none"> ○ Narrow width ○ Discontinuities ○ Poor routing • Negative effect on businesses <ul style="list-style-type: none"> ○ Passing trade ○ Additional travel distance and access issues • Cost estimates • Proposed bus stops <ul style="list-style-type: none"> ○ Relocation • Access to amenities <ul style="list-style-type: none"> ○ Church of Mary Immaculate, Refuge of Sinners • Safety of vulnerable pedestrians • CPO • Property values • One-way operation of Rathgar Road • Property access • Noise and air pollution • Proposed turn bans • Removal of existing turn bans • Loss of green space <ul style="list-style-type: none"> ○ Amenity at Rathfarnham Castle Park • Compatibility with proposed College Green scheme • Signalisation of Spawell Roundabout
Public representatives	<ul style="list-style-type: none"> • Support for scheme • Alternative options <ul style="list-style-type: none"> ○ Luas / tram ○ Metro ○ Increased bus service ○ School buses ○ Low-emission buses ○ Existing bus priority signals ○ Park and ride facilities • Proposed cycle tracks <ul style="list-style-type: none"> ○ Prefer segregated facilities ○ Narrow widths ○ Discontinuities • Traffic <ul style="list-style-type: none"> ○ Diverted to residential streets ○ Increased volumes on Highfield Road • CPO • Bus stops <ul style="list-style-type: none"> ○ Shelter design ○ Removal of bus stops • Relocation • Turn bans • Unnecessary change providing no real gains to bus travel times • Inadequate bus service proposed • Lack of consultation • Speed limits <ul style="list-style-type: none"> ○ Limit to 30 km/hr near cycle tracks • Biodiversity <ul style="list-style-type: none"> ○ Destruction of trees • Character of area

Entity	Key Issues Raised
	<ul style="list-style-type: none"> • Request oral hearing • Flooding • Pre-COVID traffic volumes used in analysis • Loss of on-street parking • Negative impact on businesses <ul style="list-style-type: none"> ○ Loss of street parking ○ Loss of loading bays • Environmental impact assessment needed
St. Judes GAA Club	<ul style="list-style-type: none"> • Proposed bus service <ul style="list-style-type: none"> ○ Missing details on bus service and routings • Alternative options <ul style="list-style-type: none"> ○ Metro • Access to amenities
Transport Infrastructure Ireland	<ul style="list-style-type: none"> • No specific comments

2 Response to Submissions on Proposed Scheme

2.1 General Issues Not Related to any Specific Geographic Area

A number of submissions raised concerns around general items not specific to any geographic area as described below.

Common Issues Raised

1. Need for the Scheme
2. Benefits of the Proposed Scheme
3. Combining two routes late in the day but keeping other routes separate
4. No consideration of what happens buses in the City Centre
5. Traffic baseline data out of date (Covid-19)
6. Changes to work/travel patterns due to the Covid-19 pandemic
7. Metro is a more appropriate solution for this corridor
8. Alternative Measures Such as Congestion Charging should be Considered
9. Cumulative impact of all CBC schemes on traffic not considered in EIAR
10. Impact of Proposed Scheme on the Movement of Emergency Vehicles (Bus Gates/Turn Bans/Bus lanes)
11. No park and ride considered
12. Removal of trees generally along the scheme
13. Implementation of other less intrusive BusConnects measures first
14. Enforcement of bus lanes, bus gates, turn bans
15. Project is submitted under 2016 GDA strategy but there is an update.
16. 12 schemes submitted independently - suggested that this is project splitting
17. Inadequate Public Consultation and contravention of Aarhus Convention
18. General Concerns about Air Quality
19. General Concerns about Noise

20. Impact on Property Values

21. Request for Oral Hearing

2.1.1 Common Issues Raised and Responses

2.1.1.1 Need for the Scheme

Summary of Issue Raised

A number of submissions queried the need for the scheme, particularly in light of changes to travel patterns as a result of Covid-19.

Response to Issue Raised

Need for the Scheme

Chapter 2 in Volume 3 of the EIAR presents in detail the need for the Proposed Scheme. Section 2.1 summarises this:

Sustainable transport infrastructure assists in creating more sustainable communities and healthier places while also stimulating our economic development. It contributes to enhanced health and well-being when delivered effectively.

The key radial traffic routes into and out of Dublin City Centre are characterised by poor bus and cycle infrastructure in places. Effective and reliable bus priority depends on a combination of continuous bus lanes and signal control priority at pinch-points and junctions. Currently bus lanes are available for 30% of Templeogue / Rathfarnham to City Centre, with signal control priority for buses provided over 2% of the Proposed Scheme. Cyclists must typically share space on bus lanes or general traffic lanes with only 15% of the route providing segregated cycle tracks. Furthermore, there are key sections of the current bus lanes that are not operational on a 24-hour basis in addition to being shared with both formal and informal parking facilities and cyclists which compromises the reliability and effectiveness of the bus services in these areas.

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million. This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Without intervention, traffic congestion will lead to longer and less reliable bus journeys throughout the region and will affect the quality of people's lives. The Proposed Scheme is needed in order to enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region. The objectives of the Proposed Scheme are to:

- *Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movements over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*
- *Ensure that the public realm is carefully considered in the design and development of transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.*

The objectives outlined above relating to enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimisation of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.

The delivery of the Proposed Scheme is supported by International, European Union, National, Regional and Local strategies, policies and plans. The key policy and planning documents are described in Section 2.3, including the manner in which the need for the Proposed Scheme is supported by the relevant policies and objectives.

Finally, Section 2.4 describes the benefits that will accrue from the provision of the Proposed Scheme.

Investments in high quality public transport infrastructure and systems have been proven to result in significant modal shift. Indeed, in Dublin, the Canal Cordon Report (NTA 2019a) outlined that in 2019 (prior to COVID-19 restrictions) travel by sustainable modes accounted for 72% of all trips into Dublin City, compared to 59% in 2010. This positive improvement in sustainable mode uptake was facilitated by investment in walking, cycling and bus infrastructure, Luas Cross City and the re-opening of the Phoenix Park Tunnel in addition to investments in systems such as Leap Card and Real Time Passenger Information.

The COVID-19 pandemic brought about a short-term change in travel patterns in the Greater Dublin Area (which led, for example, to fewer people using public transport and more people working from home). Travel demand and patterns of travel have now started to return to pre-pandemic levels and are anticipated to grow in line with population growth. The impacts on travel demand and patterns of travel are still dependent on the quality of the transport system, in particular the reliability of a bus service that is not constrained by general traffic congestion.

Further detail on the need for the Proposed Scheme is presented in Chapter 2.

2.1.1.2 Benefits of the Proposed Scheme

Summary of Issue Raised

A number of submissions suggested that the benefits of the Proposed Scheme were minimal and as such did not warrant the significant investment. Typically, these submissions focussed on the journey time savings that the Proposed Scheme would deliver to buses.

Response to Issue Raised

The objectives of the Proposed Scheme are set out in Chapter 2 of Volume 2 of the EIAR:

- *Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movements over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*
- *Ensure that the public realm is carefully considered in the design and development of transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.*

A number of these objectives are quantified and set out in the various parts of the EIAR and summarised below.

People movement

The objectives outlined above relating to enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimisation of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate:

1. A significant decrease in people travelling to/from the city by car in each peak period with decreases of 30% and 39% in the AM and PM peak periods respectively;
2. A significant increase in people travelling by public transport in each peak period with increases of 123% and 145% in the AM and PM peak periods respectively;
3. A significant increase in people walking/cycling in each peak period with increases of 79% and 91% in the AM and PM peak periods respectively;

This is summarised in in Figure 2.1.1 and Figure 2.1.2 (reproduced from diagrams 6.6 and 6.7 in Chapter 6).

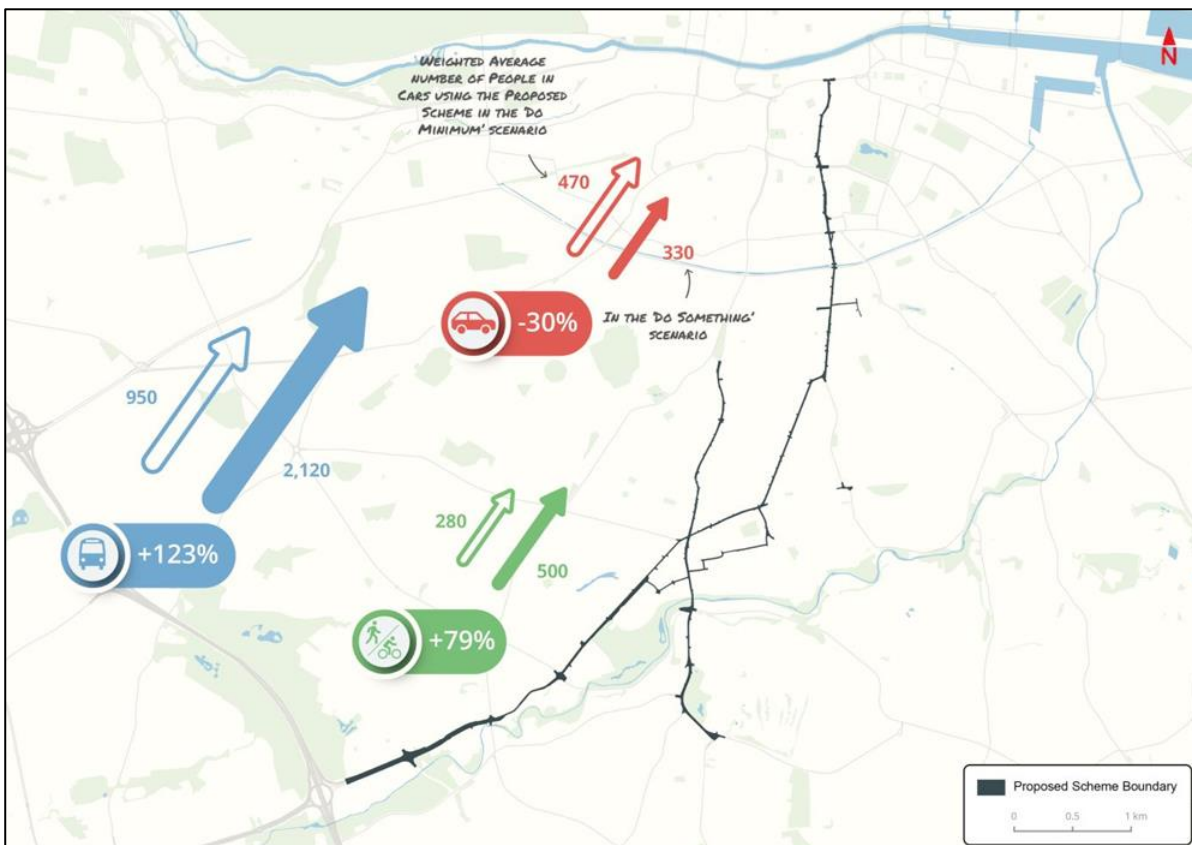


Figure 2.1.1 People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

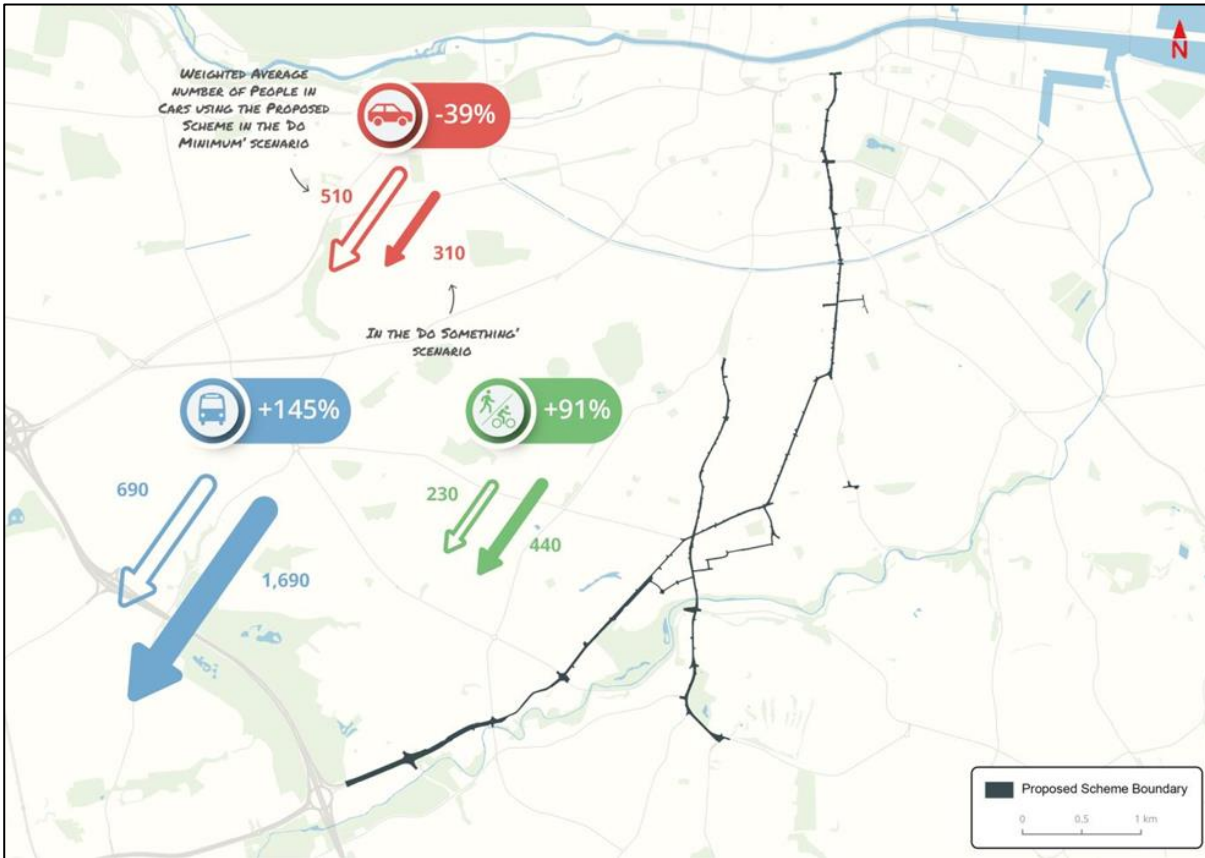


Figure 2.1.2 People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

As noted in section 6.4.6.1.8.1:

The Proposed Scheme will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridor. The transport modelling is conservative in terms of the predicted cycling mode share. The Proposed Scheme has been designed to cater for much higher levels of cycling uptake than modelled outputs, to cater for long-term trends in travel behaviours as people make sustainable travel lifestyle choices, which would otherwise not be achievable in the absence of the Proposed Scheme.

Mode Split

The Proposed Scheme will facilitate a significant modal shift towards sustainable modes. This is evidenced in table 6.42 and 6.43 in Chapter 6 of Volume 2 of the EIAR for the AM and PM Peak hours respectively.

Table 6.42: Modal Shift of 2028 AM Peak Hour along Proposed Scheme

Direction	Time Period	Mode of Transport	Do Minimum		Do Something		Difference	
			Hourly Trips	Modal Split (%)	Hourly Trips	Modal Split (%)	Hourly Trips	Difference (%)
Inbound towards the City Centre	AM Peak Period	General Traffic	470	28%	330	11%	-140	-30%
		Public Transport	950	56%	2,120	72%	1,170	123%
		Walking	170	10%	140	5%	-30	-18%
		Cycling	110	6%	360	12%	250	227%
		Combined Walking/Cycling	280	16%	500	17%	220	79%
		Sustainable Modes Total	1,230	72%	2,620	89%	1,390	113%
		Total (All modes)	1,700	100%	2,950	100%	1,250	74%

Table 6.43: Modal Shift of 2028 PM Peak Hour along Proposed Scheme

Direction	Time Period	Mode of Transport	Do Minimum		Do Something		Difference	
			Hourly Trips	Modal Split (%)	Hourly Trips	Modal Split (%)	Hourly Trips	Difference (%)
Outbound from the City Centre	PM Peak Period	General Traffic	510	36%	310	13%	-200	-39%
		Public Transport	690	48%	1,690	69%	1,000	145%
		Walking	150	10%	130	5%	-20	-13%
		Cycling	80	6%	310	13%	230	288%
		Combined Walking/Cycling	230	16%	440	18%	210	91%
		Sustainable Modes Total	920	64%	2,130	87%	1,210	132%
		Total (All modes)	1,430	64%	2,440	87%	1,010	71%

In the AM peak, the results indicate a 74% increase in people moved as a result of the Proposed Scheme and 113% increase in people moved by sustainable modes (Public Transport, Walk, Cycle).

In the PM peak, the results indicate a 71% increase in people moved as a result of the Proposed Scheme and 132% increase in people moved by sustainable modes (Public Transport, Walk, Cycle).

Bus Journey Times and Journey Time Reliability

Templeogue to Terenure Section

Section 6.4.6.1.11.2 of EIAR Volume 2 Chapter 6 Traffic & Transport which assessed Bus Journey Time and Reliability changes as a result of the Proposed Scheme notes the following:

Inbound direction

Average journey times for the inbound A3 service in 2028 Opening Year and in 2043 Design Year can be seen in Table 6.48. A breakdown of the changes in average journey times for all other bus services using the Proposed Scheme can be found in Appendix A6.4.3 (Average Bus Journey Times).

Table 6.48: A3 Service Bus Average Journey Times (Inbound Direction)

Peak Hour	Do Minimum (minutes)	Do Something (minutes)	Difference (minutes)	% Difference
2028 AM	11.7	10.1	-1.6	-14%
2028 PM	11.0	9.9	-1.1	-10%
2043 AM	10.7	10.0	-0.7	-7%
2043 PM	10.8	9.8	-1.0	-9%

Additional information regarding the range of journey times (minimum, maximum, average and standard deviation) for inbound A3 buses in the Do Minimum (red) and Do Something (blue) can be seen in Table 6.49 and Diagram 6.18. Each dot in the diagram represents the journey time for each individual bus in each scenario. A larger range of journey times are an indication of lower levels of reliability in a given scenario.

Table 6.49: A3 Service – Range of Journey Times (Inbound Direction)

Peak Hour	Do Minimum				Do Something			
	MIN	MAX	AVG	STDEV	MIN	MAX	AVG	STDEV
2028 AM	8.9	14.3	11.7	1.2	8.7	12.8	10.1	0.9
2028 PM	9.0	13.3	11.0	1.0	8.2	12.2	9.9	0.8
2043 AM	8.7	14.0	10.7	1.0	8.4	12.1	10.0	0.7
2043 PM	8.6	12.8	10.8	0.9	8.2	11.2	9.8	0.7

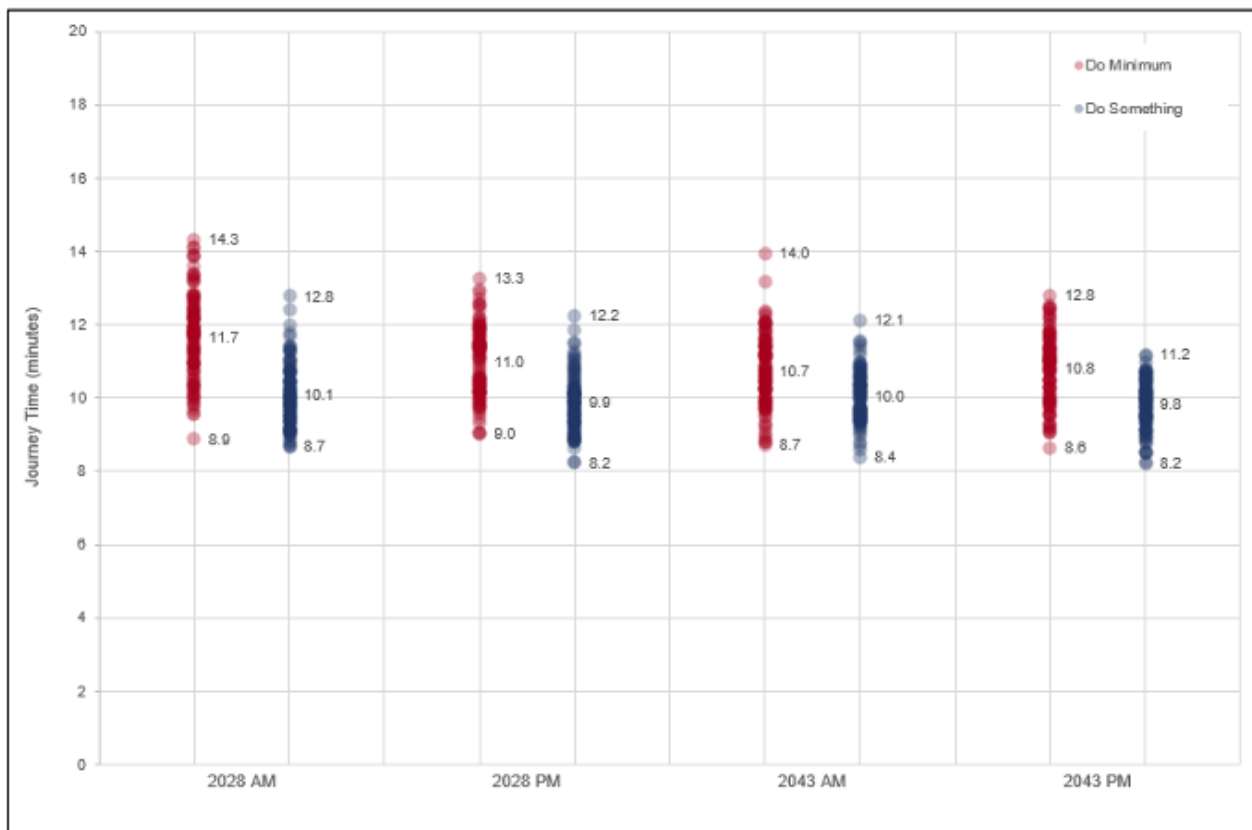


Diagram 6.18: A3 Bus Journey Times (Inbound Direction)

Based on the results presented in Table 6.48 the Proposed Scheme will deliver average inbound journey time savings for A3 service bus passengers of up to 1.6 minutes (14%) in 2028 (AM) and 0.7 minutes (7%) in 2043 (AM). Furthermore, results presented in Diagram 6.18 suggest an improvement in bus journey time reliability in all four scenarios, as indicated by the reduced ranges of journey times achieved with the individual durations focused much closer to the average journey times (lower standard deviation) in the Do Something scenario (blue dots) with the Proposed Scheme in place compared to the more dispersed range in the Do Minimum scenario (red dots).

Note that the variation in journey times shown above are based on one set of predicted flows for the Do Minimum and Do Something scenario. Traffic flows fluctuate daily which would mean that the variation in journey times would be much greater in the Do Minimum with any increases in traffic flows compared to the protection of journey time reliability provided by the bus priority measures that comprise the Proposed Scheme.

Outbound Direction

Average journey times for the outbound A3 service in 2028 Opening Year and in 2043 Design Year can be seen in Table 6.50. A breakdown of the changes in average journey times for all other bus services using this section of the Proposed Scheme can be found in Appendix A6.4.3 (Average Bus Journey Times).

Table 6.50: A3 Service Bus Journey Times (Outbound Direction)

Peak Hour	Do Minimum (minutes)	Do Something (minutes)	Difference (minutes)	% Difference
2028 AM	10.7	9.3	-1.4	-13%
2028 PM	10.9	9.3	-1.6	-15%
2043 AM	10.4	9.3	-1.1	-11%
2043 PM	10.2	9.4	-0.8	-8%

Additional information regarding the range of journey times (minimum, maximum, average and standard deviation) for outbound A3 buses in the Do Minimum (red) and Do Something (blue) can be seen in Table 6.51 and Diagram 6.23. Each dot represents the journey time for each individual bus in each scenario. A larger range of journey times are an indication of lower levels of reliability.

Table 6.51: A3 Service – Range of Journey Times (Outbound Direction)

Peak Hour	Do Minimum				Do Something			
	MIN	MAX	AVG	STDEV	MIN	MAX	AVG	STDEV
2028 AM	8.4	13.4	10.7	1.1	8.1	10.8	9.3	0.6
2028 PM	9.3	13.2	10.9	1.0	8.2	10.7	9.3	0.5
2043 AM	8.4	13.0	10.4	1.0	8.2	10.6	9.3	0.5
2043 PM	9.1	12.0	10.2	0.8	8.0	11.3	9.4	0.7

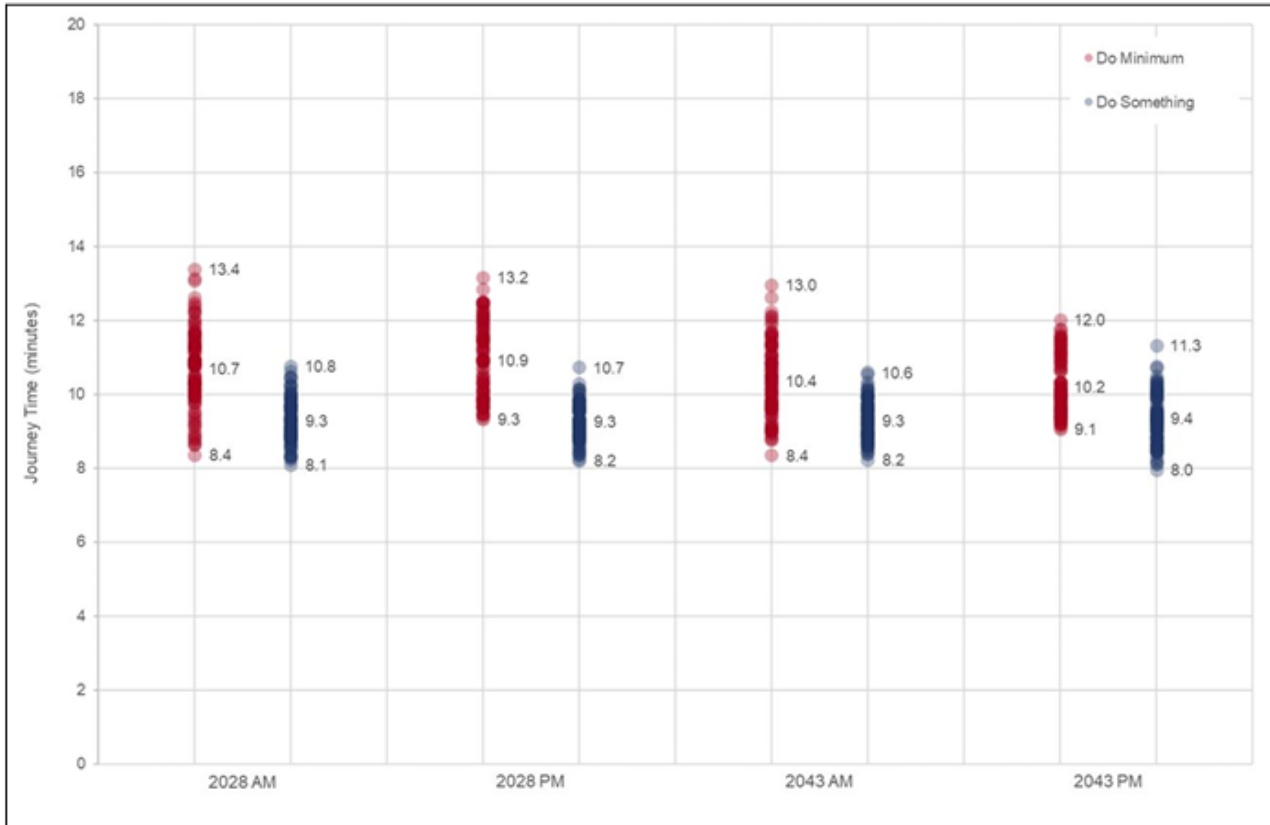


Diagram 6.23: A3 Bus Journey Times (Outbound Direction)

Based on the results presented in Table 6.51, the Proposed Scheme will deliver average outbound journey time savings for A3 service bus passengers of up to 1.6 minutes (15%) in 2028 (PM) and 0.8 minutes (8%) in 2043 (PM). Furthermore, results presented in Diagram 6.23 suggest an improvement in bus journey time reliability in all four scenarios as indicated by the reduced ranges of journey times achieved with the durations focused much closer to the average journey times (lower standard deviation) in the Do Something scenario (blue dots) with the Proposed Scheme in place compared to the more dispersed range in the Do Minimum scenario (red dots).

Note that the variation in journey times shown above are based on one set of predicted flows for the Do Minimum and Do Something scenario. Traffic flows fluctuate daily which would mean that the variation in journey times would be much greater in the Do Minimum with any increases in traffic flows compared to the protection of journey time reliability provided by the bus priority measures that comprise the Proposed Scheme.

Rathfarnham to City Centre Section

Inbound Direction

Average journey times for the inbound A2 service (which leaves the Proposed Scheme extents at the south arm of the Dame Street/South Great George’s Street junction) in the 2028 Opening Year and in the 2043 Design Year can be seen in Table 6.52. A breakdown of the changes in average journey times for all other bus services using the Proposed Scheme can be found in Appendix A6.4.3 (Average Bus Journey Times).

Table 6.52: A2 Service Bus Average Journey Times (Inbound Direction)

Peak Hour	Do Minimum (minutes)	Do Something (minutes)	Difference (minutes)	% Difference
2028 AM	35.2	29.4	-5.8	-16%
2028 PM	31.1	29.1	-2.0	-6%
2043 AM	33.2	29.3	-3.9	-12%
2043 PM	30.7	29.3	-1.4	-5%

Additional information regarding the range of journey times (minimum, maximum, average and standard deviation) for inbound A2 buses in the Do Minimum (red) and Do Something (blue) can be seen in Table 6.53 and Diagram 28. Each dot in the diagram represents the journey time for each individual bus in each scenario. A larger range of journey times are an indication of lower levels of reliability in a given scenario.

Table 6.53: A2 Service – Range of Journey Times (Inbound Direction)

Peak Hour	Do Minimum				Do Something			
	MIN	MAX	AVG	STDEV	MIN	MAX	AVG	STDEV
2028 AM	31.1	40.7	35.2	2.0	25.9	32.4	29.4	1.5
2028 PM	25.8	35.0	31.1	2.2	24.1	33.2	29.1	1.8
2043 AM	29.8	37.6	33.2	1.7	23.3	32.9	29.3	1.6
2043 PM	25.4	34.7	30.7	1.9	25.8	33.6	29.3	1.7

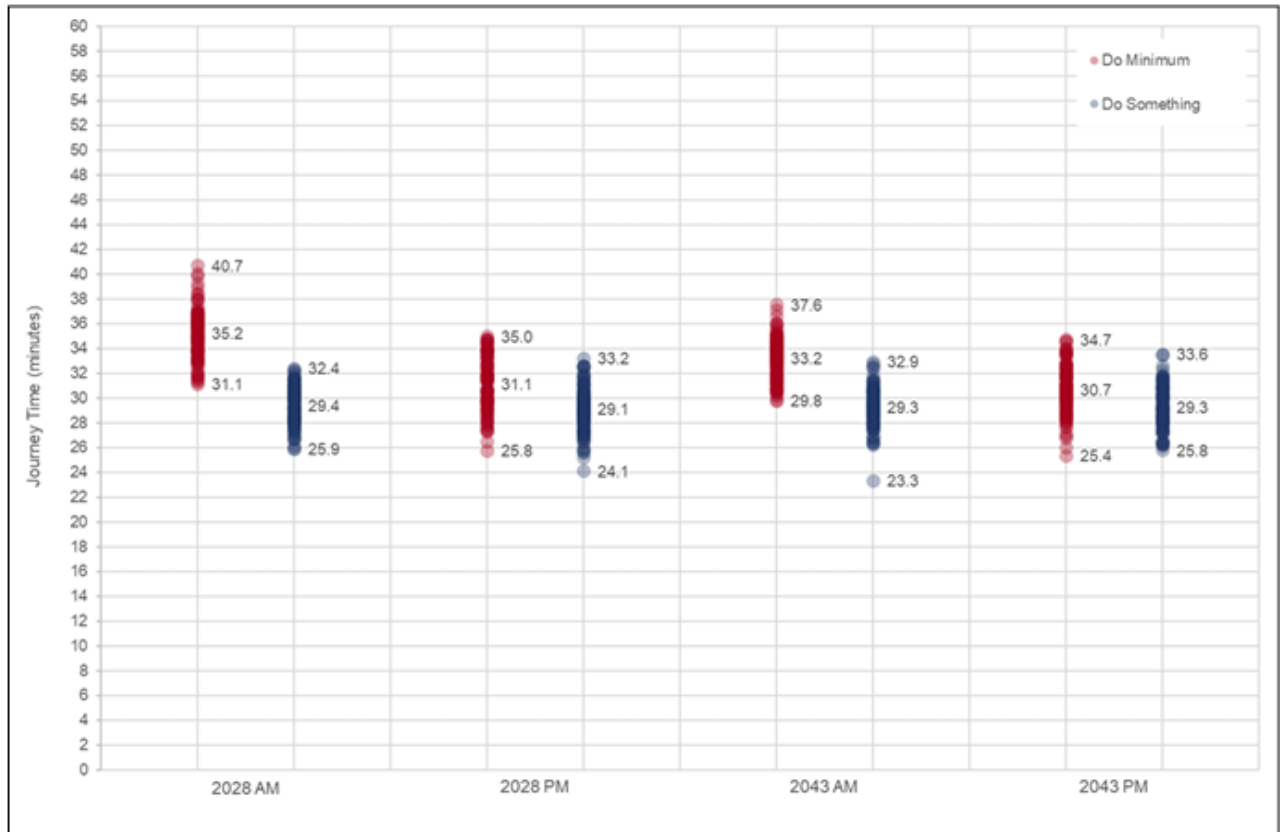


Diagram 6.28: A2 Bus Journey Times (Inbound Direction)

Based on the results presented in Table 6.53, the Proposed Scheme will deliver average inbound journey time savings for A2 service bus passengers of circa 6 minutes in the AM in 2028 and 4 minutes in the AM in 2043. Furthermore, results presented in Diagram 6.29 suggest an improvement in bus journey time reliability all 4 core scenarios as indicated by the reduced ranges of journey times achieved with the individual durations focused much closer to the average journey times (lower standard deviation) in the Do Something scenario (blue dots) with the Proposed Scheme in place compared to the more dispersed range in the Do Minimum scenario (red dots).

Note that the variation in journey times shown above are based on one set of predicted flows for the Do Minimum and Do Something scenario. Traffic flows fluctuate daily which would mean that the variation in journey times would be much greater in the Do Minimum with any increases in traffic flows compared to the protection of journey time reliability provided by the bus priority measures that comprise the Proposed Scheme.

Outbound Direction

Average journey times for the outbound A2 service (which serves the Proposed Scheme extents from (Dame Street to Rathfarnham Wood), in 2028 Opening Year and in 2043 Design Year can be seen in Table 6.54. A breakdown of the changes in average journey times for all other bus services using the Proposed Scheme can be found in Appendix A6.4.3 (Average Bus Journey Times).

Table 6.54: A2 Service Bus Journey Times (Outbound Direction)

Peak Hour	Do Minimum (minutes)	Do Something (minutes)	Difference (minutes)	% Difference
2028 AM	29.5	28.9	-0.6	-2%
2028 PM	35.2	27.0	-8.2	-23%
2043 AM	28.4	28.1	-0.3	-1%
2043 PM	31.1	26.5	-4.6	-15%

Additional information regarding the range of journey times (minimum, maximum, average and standard deviation) for outbound A2 buses in the Do Minimum (red) and Do Something (blue) can be seen in Table 6.55 and Diagram 6.33. Each dot represents the journey time for each individual bus in each scenario. A larger range of journey times are an indication of lower levels of reliability.

Table 6.55: A2 Service – Range of Journey Times (Outbound Direction)

Peak Hour	Do Minimum				Do Something			
	MIN	MAX	AVG	STDEV	MIN	MAX	AVG	STDEV
2028 AM	25.8	33.8	29.5	1.8	24.7	32.2	28.9	1.7
2028 PM	29.3	41.8	35.2	2.4	23.7	30.0	27.0	1.3
2043 AM	25.1	32.8	28.4	1.7	23.6	31.9	28.1	1.6
2043 PM	26.1	35.7	31.1	1.9	23.2	29.4	26.5	1.4

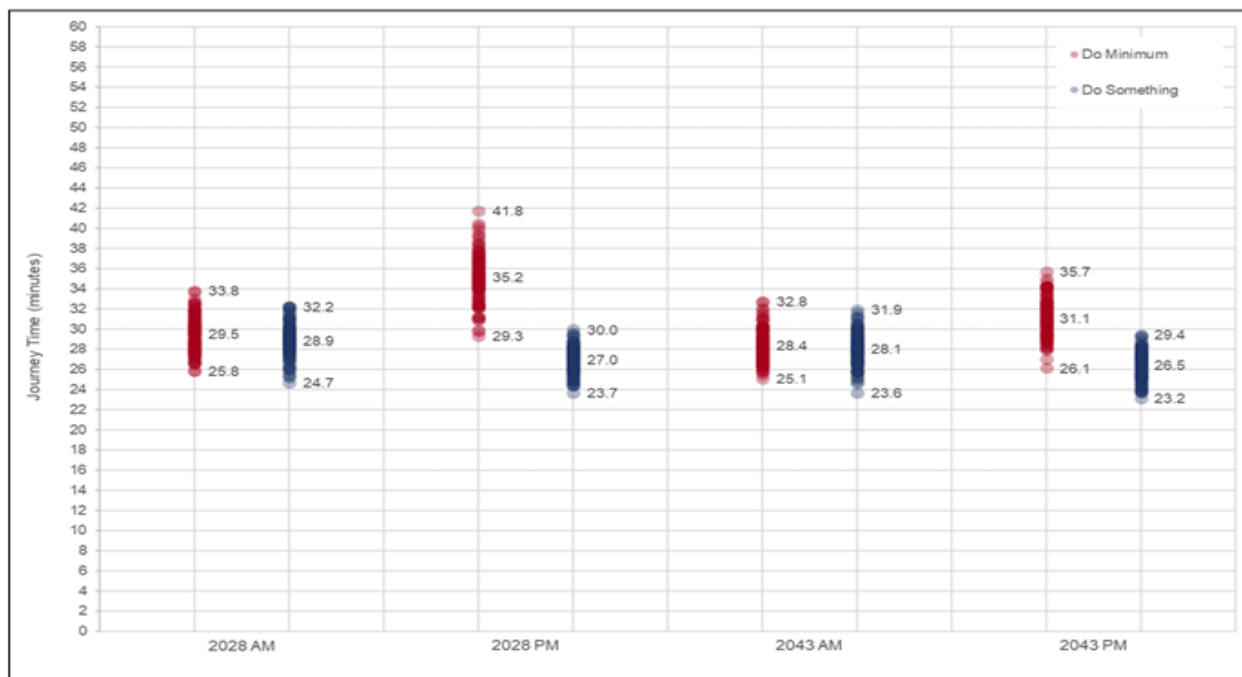


Diagram 6.33: A2 Bus Journey Times (Outbound Direction)

Based on the results presented in Table 6.55, the Proposed Scheme will deliver significant average outbound journey time savings, in the peak direction of travel, for A2 service bus passengers of up to 8.2 minutes (23%) in 2028 (PM) and 4.6 minutes (15%) in 2043 (PM). The Proposed Scheme will deliver modest journey time savings in the non-peak period direction. Furthermore, results presented in Diagram 6.33 suggest an improvement in bus journey time reliability in the two PM peak periods as indicated by the reduced ranges of journey times achieved with the durations focused much closer to the average journey times (lower standard deviation) in the Do Something scenario (blue dots) with the Proposed Scheme in place compared to the more dispersed range in the Do Minimum scenario (red dots).

In the AM peak period in the outbound direction, the improvement in bus journey time reliability is not as notable. This is primarily due to variable journey times through the Terenure Road/Rathfarnham Road junction, where priority is given to the inbound buses. In the PM peak, bus priority 'hurry calls' signalling is provided in the outbound direction only to ensure adequate progression for general traffic through the junction. For this reason, the outbound journey time reliability improvements are more significant in the PM peak, which is appropriate being the peak direction of travel for bus users.

The change in total bus journey time for all buses travelling along both the Templeogue and Rathfarnham sections of the Proposed Scheme, is shown in Table 6.56.

Table 6.56: Total Bus Journey Time

Peak Hour	Do Minimum (vehicle.minutes)	Do Something (vehicle.minutes)	Difference (vehicle.minutes)	%Difference
2028 AM	2240.5	2059.5	-181.0	-8%
2028 PM	2195.2	1930.4	-264.9	-12%
2043 AM	2142.7	1962.8	-179.9	-8%
2043 PM	2050.8	1860.0	-190.8	-9%

Based on the results presented in Table 6.72 modelling indicates that the Proposed Scheme will reduce total bus journey times along the Proposed Scheme by up to 12% in 2028 and 9% in 2043. Based on the AM and PM peak hours alone, this equates to **7.4 hours of savings in 2028 and 6.2 hours in 2043** combined across all buses when compared to the Do Minimum.

On an annual basis this equates to approximately 5,600 hours of bus vehicle savings in 2028 and 7,700 hours in 2043, when considering weekday peak periods only.

Emissions

Chapter 8 Climate of Volume 2 of the EIAR considers the potential climate impacts of the Proposed Scheme.

The assessment is summarised in Section 8.8.2 which states:

The maintenance CO₂e emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO₂e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent. The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions.

It is noted that the implementation of all elements of the BusConnects programme have been considered in the Do Minimum assessment scenario as set out in section 6.4.3.1:

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme of projects (apart from the CBC Infrastructure Works elements) i.e., the new BusConnects routes and services (as part of the revised Dublin Area bus network), new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios.

As such, the benefits contained in the EIAR, and summarised in this section, represents the incremental benefits associated with the infrastructure improvements.

2.1.1.3 Combining two routes into one scheme

Summary of Issue Raised

A number of the submissions raise concerns about the NTA combining two of the previously separate routes into one scheme when the NTA made its application to the Board for approval under section 51 of the Roads Act. Some of these submissions noted the rationale for this was unclear and that it made it difficult to review and comment on the scheme particulars in the application given the familiarity of the proposals as individual schemes (as presented at the public consultations).

Response to Issue Raised

The Preferred Route Option Report provided as part of the Supplementary Information sets out the rationale for combining

The Proposed Scheme consists of two sections namely:

- *The Templeogue to Terenure section (previously Tallaght to Terenure Core Bus Corridor); and*
- *The Rathfarnham to City Centre section (previously Rathfarnham to City Centre Core Bus Corridor).*

During the non-statutory public consultations and the route selection process up to the choice of the Preferred Route Option (PRO) these two sections had been considered separately. The principle reasons for combining the Templeogue to Terenure and the Rathfarnham to City Centre sections into the Proposed Scheme include: their geographical association, functional interdependence and the fact that the Templeogue to Terenure section joins the Rathfarnham to City Centre section at Terenure Place and shares the remaining section of the route from that junction to the City Centre.

Based on the above it was determined to be appropriate to apply for approval of the scheme as presented.

2.1.1.4 No consideration of what happens buses in the City Centre

Summary of Issue Raised

A number of the submissions raise concerns that no consideration has been given to what happens buses in the city centre, and how the Proposed Scheme would interact with proposals in the city centre to ensure the success of the scheme.

Response to Issue Raised

The Proposed Scheme forms part of the wider Core Bus network which aligns with the Greater Dublin Area Transport Strategy to form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan area.

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme outlines the policy context that underpins the Proposed Scheme as well as the regional and local transport need for the Proposed Scheme. Section 2.2.1.5 notes the following:

“To inform the preparation of the GDA Transport Strategy 2016 - 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes upon which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive.

The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

.... The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes.

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. This is demonstrated in the traffic modelling undertaken, the results of which are presented in Chapter 6 of the EIAR. It is noted that this modelling includes the movement of buses to and through the city and centre, and as such the benefits include consideration of buses moving through the city centre. It is noted that the modelled forecasts for the 2028 opening year indicate:

1. A significant decrease in people travelling to/from the city by car in each peak period with decreases of 30% and 39% in the AM and PM peak periods respectively;
2. A significant increase in people travelling by public transport in each peak period with increases of 123% and 145% in the AM and PM peak periods respectively;
3. A significant increase in people walking/cycling in each peak period with increases of 79% and 91% in the AM and PM peak periods respectively;

This is summarised in in Figure 2.1.3 and Figure 2.1.4 (reproduced from diagrams 6.6 and 6.7 in Chapter 6).

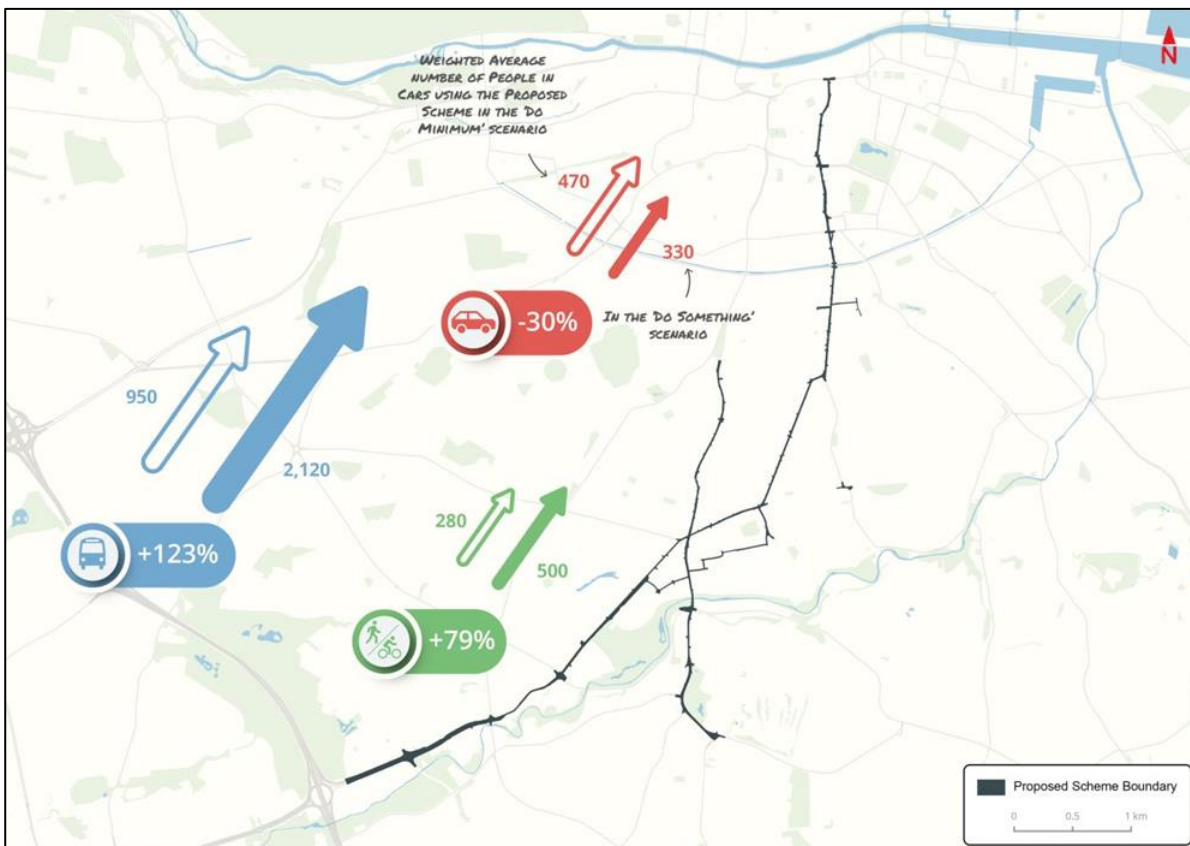


Figure 2.1.3 People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

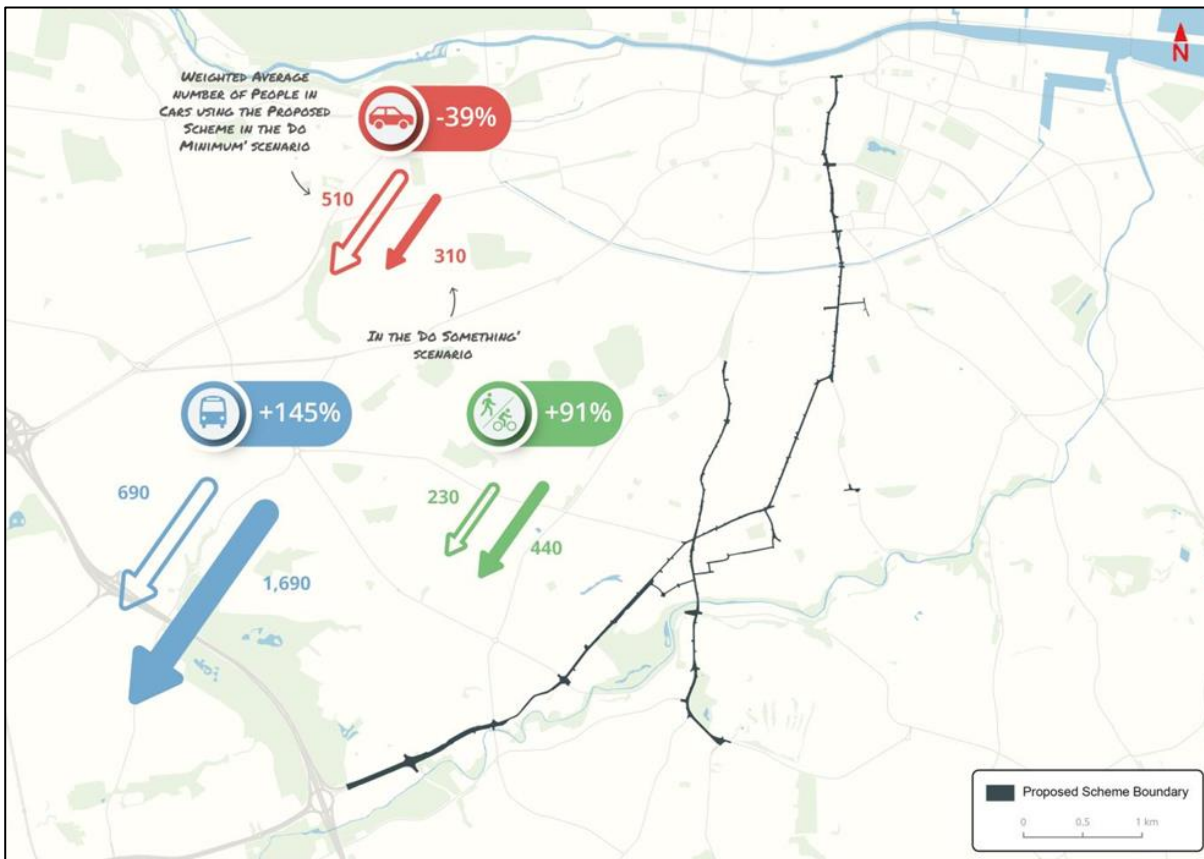


Figure 2.1.4 People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

As noted in section 6.4.6.1.8.1:

The Proposed Scheme will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridor. The transport modelling is conservative in terms of the predicted cycling mode share. The Proposed Scheme has been designed to cater for much higher levels of cycling uptake than modelled outputs, to cater for long-term trends in travel behaviours as people make sustainable travel lifestyle choices, which would otherwise not be achievable in the absence of the Proposed Scheme.

Mode Split

The Proposed Scheme will facilitate a significant modal shift towards sustainable modes. This is evidenced in table 6.42 and 6.43 in Chapter 6 of Volume 2 of the EIAR for the AM and PM Peak hours respectively.

Table 6.42: Modal Shift of 2028 AM Peak Hour along Proposed Scheme

Direction	Time Period	Mode of Transport	Do Minimum		Do Something		Difference	
			Hourly Trips	Modal Split (%)	Hourly Trips	Modal Split (%)	Hourly Trips	Difference (%)
Inbound towards the City Centre	AM Peak Period	General Traffic	470	28%	330	11%	-140	-30%
		Public Transport	950	56%	2,120	72%	1,170	123%
		Walking	170	10%	140	5%	-30	-18%
		Cycling	110	6%	360	12%	250	227%
		Combined Walking/Cycling	280	16%	500	17%	220	79%
		Sustainable Modes Total	1,230	72%	2,620	89%	1,390	113%
		Total (All modes)	1,700	100%	2,950	100%	1,250	74%

Table 6.43: Modal Shift of 2028 PM Peak Hour along Proposed Scheme

Direction	Time Period	Mode of Transport	Do Minimum		Do Something		Difference	
			Hourly Trips	Modal Split (%)	Hourly Trips	Modal Split (%)	Hourly Trips	Difference (%)
Outbound from the City Centre	PM Peak Period	General Traffic	510	36%	310	13%	-200	-39%
		Public Transport	690	48%	1,690	69%	1,000	145%
		Walking	150	10%	130	5%	-20	-13%
		Cycling	80	6%	310	13%	230	288%
		Combined Walking/Cycling	230	16%	440	18%	210	91%
		Sustainable Modes Total	920	64%	2,130	87%	1,210	132%
		Total (All modes)	1,430	64%	2,440	87%	1,010	71%

In the AM peak, the results indicate a 74% increase in people moved as a result of the Proposed Scheme and 113% increase in people moved by sustainable modes (Public Transport, Walk, Cycle).

In the PM peak, the results indicate a 71% increase in people moved as a result of the Proposed Scheme and 132% increase in people moved by sustainable modes (Public Transport, Walk, Cycle).

As set out in section 6.4.6.2:

*A micro-simulation model assessment has been developed and network performance indicators established for bus operations along Proposed Scheme. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. Based on the AM and PM peak hours alone, 7.4 hours of savings in 2028 and 6.2 hours in 2043, when compared to the Do Minimum combined across all buses. Overall, it is anticipated that the improvements to the network performance indicators for bus users along the Proposed Scheme will have a **Positive, Very-Significant and Long-term effect**.*

2.1.1.5 Traffic baseline data out of date (COVID-19)

Summary of Issue Raised

A number of the submissions raise concerns that the traffic data which informed the assessment was collected prior to the COVID-19 pandemic during which travel patterns changed. It is submitted in these submissions that the traffic assessment is therefore based on outdated traffic data.

Response to Issue Raised

The following is noted in Section 2.1 of Chapter 2 of Volume 2 of the EIAR, in relation to the effect of COVID-19:

“The COVID-19 pandemic brought about a short-term change in travel patterns in the Greater Dublin Area (which led, for example, to fewer people using public transport and more people working from home). Travel demand and patterns of travel have now started to return to pre-pandemic levels and are anticipated to grow in line with population growth. The impacts on travel demand and patterns of travel are still dependent on the quality of the transport system, in particular the reliability of a bus service that is not constrained by general traffic congestion.”

Section 3.2.2 of Chapter 3 of Volume 2 of the EIAR, in relation to the effect of COVID-19 states:

The most recent published figures for 2022 have shown that public transport passenger numbers are largely recovered to pre-pandemic levels. The figures presented that across the public transport network are 98% of pre-pandemic levels. Specifically, Dublin city area bus services carried 12.7m in November 2022, compared to 12.9m in November 2019 representing a 99% recovery.

6.4.6.1.15.1 of Chapter 06 (Traffic & Transport) of Volume 2 of the EIAR has addressed the flexibility in working arrangements brought on following COVID – 19 and states:

“The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling. It is, however, recognised that there will be an overall reduction in

operational capacity for general traffic along the direct study area given the proposed changes to the road layout and the rebalancing of priority to walking, cycling and bus. This reduction in operational capacity for general traffic along the Proposed Scheme will likely create some level of trip redistribution onto the surrounding road network.

It should be noted that the Do Minimum and Do Something scenarios are based on the assumption that travel behaviour will remain broadly consistent over time and that car demand, used for this assessment, represents a reasonable worst-case scenario. It is possible that societal trends in the medium to long term may reduce car demand further due to the ongoing changes to travel behaviours and further shifts towards sustainable travel, flexibility in working arrangements brought on following COVID-19, and delayed car ownership trends that are emerging.”

In summary it is considered that the traffic assessment contained in the EIAR, and the traffic data upon which it is based (collected pre-covid pandemic), represents an accurate basis for the assessment given travel patterns have generally recovered to prepandemic levels.

2.1.1.6 Changes to work/travel patterns due to the COVID-19 pandemic

Summary of Issue Raised

A number of the submissions raise concerns that due to the changes to work/travel patterns as a result of the COVID-19 pandemic, there is no need for the scheme as there is less demand for travel.

Response to Issue Raised

The following is noted in Section 2.1 of Chapter 2 of the EIAR, in relation to the effect of COVID-19:

The COVID-19 pandemic brought about a short-term change in travel patterns in the Greater Dublin Area (which led, for example, to fewer people using public transport and more people working from home). Travel demand and patterns of travel have now started to return to pre-pandemic levels and are anticipated to grow in line with population growth. The impacts on travel demand and patterns of travel are still dependent on the quality of the transport system, in particular the reliability of a bus service that is not constrained by general traffic congestion.

Section 2.1 of Chapter 2 describes the need for investment in sustainable infrastructure, stating that:

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million. This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Without intervention, traffic congestion will lead to longer and less reliable bus journeys throughout the region and will affect the quality of people’s lives. The Proposed Scheme is needed in order to enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region.

Section 3.2.2 of Chapter 3 of Volume 2 of the EIAR, in relation to the effect of COVID-19 states:

The most recent published figures for 2022 have shown that public transport passenger numbers are largely recovered to pre-pandemic levels. The figures presented that across the public transport network are 98% of prepandemic levels. Specifically, Dublin city area bus services carried 12.7m in November 2022, compared to 12.9m in November 2019 representing a 99% recovery.

The objectives outline in section 2.1 of chapter 2 relating to *enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of ‘People Movement’. People Movement is the concept of the optimisation of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme.*

In summary it is considered that the short term changes to travel patterns caused by the Covid-19 pandemic does not impact on the objectives of the scheme to reduce car dependency in the Greater Dublin Area and remains particularly relevant in light of anticipated population growth into the future.

2.1.1.7 Metro or light rail is a more appropriate solution for this corridor

Summary of Issue Raised

A number of the submissions request that other options such as Metro or Light Rail are given further consideration for this corridor. These submissions note that such schemes would result in less impact on properties and the environment while also delivering a more appropriate public transport solution for the corridor. Some submissions suggest that the demand projections presented in the modelling work undertaken to inform the Transport Strategy for the Greater Dublin Area 2022 – 2042 Strategy Development indicates that there is sufficient demand to justify a metro.

Response to Issue Raised

The consideration of these and other strategic alternatives have been considered through the preparation of both the GDA Transport Strategy 2016 – 2035 and the new GDA Transport Strategy 2022 – 2042. This is presented Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of the EIAR. Section 3.2.1 states:

The Transport Strategy for the Greater Dublin Area 2022-2042 (Transport Strategy) replaces the prior transport strategy for the period 2016 to 2035. That prior transport strategy set out to contribute to the economic, social, and cultural progress of the Greater Dublin Area (GDA) by providing for the efficient, effective, and sustainable movement of people and goods. In other words, it was about making the Dublin region a better place for people who live and work there, and for those who visit.

Section 3.2.1 goes on to say that:

The challenges outlined in the GDA Transport Strategy 2016 - 2035 and identified need for BusConnects Dublin as determined in the preparation of that prior strategy remain, and the evidence from the detailed corridor studies undertaken in the preparation of the prior strategy is still valid and robust. These studies are set out in section 3.2.2.

Section 3.2.2 sets out the development of the prior strategy and the various studies that informed the strategy.

The prior GDA Transport Strategy 2016-2035 was prepared by the NTA pursuant to Section 12 of the Dublin Transport Authority Act 2008 and approved by the Minister for Transport, Tourism and Sport in February 2016 in accordance with sub-section 12(13) of that Act.

The prior GDA Transport Strategy provided a comprehensive framework to guide the development of transport across the Greater Dublin Region over the period of that strategy. Careful consideration was undertaken of the transport requirements across the seven counties of the GDA, and the prior GDA Transport Strategy then formulated the appropriate transport responses to those requirements.

Various studies and reports were undertaken in the development of the prior GDA Transport Strategy, including:

- *Area-based studies covering the GDA area;*
- *Demand Management Study;*
- *Core Bus Network Study;*
- *Park & Ride Study;*
- *Transport Modelling Analysis; and*
- *Environmental reports.*

Specifically, a Strategic Environmental Assessment (SEA) was undertaken on the prior GDA Transport Strategy (NTA 2016). As set out in the Environmental Report, in respect of which the SEA of the prior GDA Transport Strategy was undertaken, a number of reasonable alternative strategies were devised and assessed, taking into account the objectives and the geographical scope of the strategy. The provisions of the prior GDA Transport Strategy (including bus-based transport modes), were evaluated for potential significant effects, and measures integrated into the prior Strategy on foot of SEA recommendations in order to ensure that potential adverse effects were mitigated.

In considering the alternative modes on a corridor basis, the environmental assessment undertaken considered that bus-based projects could contribute towards facilitating the achievement of Ireland's greenhouse gas emission targets in terms of emissions per passenger per kilometre.

In addition to direct studies and analyses undertaken as part of the strategy preparation work, the prior GDA Transport Strategy also took into account prior reports and plans in relation to transport provision. These prior studies included, inter alia, the following:

- *GDA Cycle Network Plan (2013);*
- *Bus Rapid Transit – Core Network Report (2012);*
- *Fingal / North Dublin Transport Study (2015);*
- *Review of the DART Expansion Programme (2015);*
- *Various prior Luas studies (including Line B2 (Bray), Line D1 (Finglas), Line F1, and F2 (Lucan and Liberties), and Line E (2008)); and*
- *Analysis carried for a 2011 Draft Transport Strategy.*

Given the importance of bus transport as the main public transport mode for the overall region, the delivery of an efficient and reliable bus system formed an important element of the prior GDA Transport Strategy, integrated appropriately with the other transport modes. As Dublin is a low-density city with a large geographic footprint, there are few areas with the size and concentration of population necessary to support rail based public transport, and the bus system remains essential to serve the needs of much of the region.

... The development of the prior GDA Transport Strategy took into account the data and analysis provided through the supporting studies and background information and formulated an overall integrated transport system to serve the needs of the GDA up to 2035. In relation to public transport, the prior GDA Transport Strategy and the GDA Transport Strategy 2022-2042 set out a network of heavy rail, metro, light rail and bus proposals, with those networks combining to serve the overall public transport needs of the region.

Consideration has been given to both a light rail or metro option for the corridor and details are presented in Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of the EIAR.

With respect to light rail, Section 3.2.5 states:

The appropriate type of public transport provision in any particular case is predominately determined by the likely quantum of passenger demand along the particular public transport route.

For urban transport systems, bus-based transport is the appropriate public transport mode for passenger demand levels of up to about 4,000 passengers per hour per direction. (UITP 2009). Light rail provision would generally be appropriate to cater for passenger demand of between 3,500 and about 7,000 passengers per hour per direction. Passenger demand levels above 7,000 passengers per hour per direction would generally be catered for by heavy rail or metro modes, which would usually be expected to serve a number of major origins or destinations along a particular corridor. In the case of both the bus and light rail modes, higher levels of passenger demand than the above stated figures can be accommodated under specific conditions.

The development of the prior GDA Transport Strategy considered the likely public transport passenger demand levels across the region using the NTA's transport model. That consideration also took into account the other studies referenced above, in addition to studies that had been carried out to investigate a potential light rail scheme within the area of this corridor. Likely passenger flows were identified to be within the capacity of bus transport, without reaching the quantum of passenger demand which would support the provision of higher capacity rail solutions.

Section 3.2.2 set out various studies undertaken for the prior GDA Transport Strategy. Arising from these studies and the specific assessment and transport modelling work undertaken for the prior Strategy, it was concluded that a bus-based transport system would be the proposed public transport solution in the corridor of the Proposed Scheme. It was considered that there would be insufficient demand to justify the provision of an additional light rail alternative above what is proposed above, particularly given the low to medium density nature of development in this corridor.

Similar to BRT, environmentally the light rail option compared to the Core Bus Corridor proposal would be more impactful in terms of construction impacts, including flora and fauna, heritage, air and noise. Light rail requires continuous unbroken physical lane infrastructure to achieve high-priority.

This would involve significantly more land take and potentially involve demolition of buildings at pinch-points. In the case of the Core Bus Corridor proposals bus-priority can be achieved through short lengths at pinch-points by the use of signal-control priority.

With respect to Metro, Section 3.2.6 states:

“As highlighted above, when considering the appropriate transport systems to meet the expected transport demand, Metro systems are a higher capacity form of light rail, generally designed for peak hour passenger numbers exceeding about 7,000 passengers per hour per direction, and often catering for multiples of that level.

Given the consideration of light rail provision, and the level of likely public passenger use along this overall corridor assessed in the transport modelling work, the development of the prior GDA Transport Strategy identified that a metro solution would not be economically justified within the area covered by this corridor (Corridor D). In addition, the development of an underground metro would not remove the need for additional infrastructure to serve the residual bus needs of the area covered by the Proposed Scheme, nor would it obviate the need to develop the cycling infrastructure required along the route of the Proposed Scheme.

Environmentally, in comparison to the CBC proposal, the metro alternative would be more impactful in terms of construction impacts, including flora and fauna, heritage, air and noise. Metro systems require unbroken physical lane infrastructure to achieve high-priority. This would involve significantly more land take and potentially involve demolition of buildings at pinch-points. In the case of the bus-based transport solution, bus-priority can be achieved through short lengths at pinch-points by the use of signal-control priority.”

A number of submissions raised concerns around the demand calculations presented in various documents and how this evolved over time. These submissions typically referenced the modelling work undertaken to inform the Transport Strategy for the Greater Dublin Area 2022 – 2042 Strategy Development and as presented in the Modelling Report.

For clarity, the Modelling Report prepared for the 2022 – 2042 Strategy Development presents a number of assessment scenarios which include various assumptions. The initial model runs were to understand the potential upper / hypothetical limit for public transport demand in the corridor, following which demand levels were assessed under various policy, transport supply and demand conditions and assumptions (e.g. increased levels of cycling, changes in travel patterns resulting from Covid-19 etc.) This was done in order to provide a balanced transport strategy that promotes sustainable modes but balances the demand across all modes. A full list of scenarios assessed are presented in Annex 3 Strategy Development Model Run Log of the Modelling Report where in excess of 80 modelled scenarios are listed.

The submissions which query the demand suggest that the demand along the corridor was deliberately reduced along the Rathmines corridor to facilitate a predetermined value that would match that of what the Proposed Scheme was capable of carrying. The changes in public transport demand along the corridor are a function of the iterative process to define the Strategy which best meets the needs of the GDA.

This iterative process is explained in Section 2 of the Modelling Report prepared for the 2022 – 2042 Strategy Development.

It is noted that this application is solely for the infrastructure proposals associated with this corridor. As noted in 6.4.6.1.14 Increased Bus Frequency – Resilience Sensitivity Analysis of Chapter 6 states the following:

For the purposes of this EIAR and the transport modelling undertaken in support of the EIAR, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios. This rollout is currently underway. The rationale for undertaking this approach was that the planning consent being sought and which this EIAR supports is solely for the infrastructural improvements associated with providing bus priority and other sustainable modes measures along the Proposed Scheme.

As noted in 6.4.6.1.14.2 Resilience Testing:

A key benefit of the provision of a resilient BusConnects Service network, one which can provide reliable and consistent journey times, is that it has potential to cater for further significant transfer from private car travel to more sustainable and environmentally friendly travel via public transport.

To assess the resilience of the Proposed Scheme to cater for additional bus service frequency provision whilst maintaining a high level of bus journey time reliability, a separate analysis was undertaken in the Proposed Scheme micro-simulation model.

In this analysis, the service frequency, in both directions of travel, was increased to achieve a 10 buses per hour increase, at the busiest section, to assess whether the Proposed Scheme could cater for this increased service frequency whilst maintaining a high level of journey time reliability. The analysis was undertaken in the 2028 Minimum and Do Something models to assess whether the bus priority infrastructure was having the desired impact of protecting bus journey time reliability.

..... The results indicate limited change in average journey times in the Do Something Resilience sensitivity tests per bus. In the Do Minimum Resilience sensitivity test, journey times are more severely impacted, particularly in the AM peak inbound. In the Do Something Resilience sensitivity test bus journey time reliability is maintained with the additional services in place as indicated by the reduced range of journey times compared to the Do Minimum Resilience Test scenario. This highlights the benefit that the Proposed Scheme infrastructure improvements can provide in protecting bus journey time reliability and consistency, as passenger demand continues to grow into the future.

The assessment therefore shows that if required, additional buses can be introduced to match passenger demand of c. 4,500 passengers per hour per direction.

It is noted that the new GDA Transport Strategy 2022 – 2042 acknowledges the need to continue to assess the need for light rail or metro connections to the south west in future to accommodate future growth which necessitate the need to upgrade the system beyond a bus-based solution post 2042. In terms of metro, section 12.3.2 of the GDA Transport Strategy 2022 – 2042 states:

Measure LRT2 – Further Metro Development

In reviewing and updating the Transport Strategy, which takes place every 6 years, the NTA will assess the requirement to provide additional Metro lines in the GDA based on updated forecast demand for travel and on emerging significant changes in land use and spatial policy, including previously considered options to extend Metrolink southwards towards UCD, or along the existing Luas Green Line, or towards South West Dublin.

With respect to light rail, section 12.3.8 of the GDA Transport Strategy 2022 – 2042 states:

Measure LRT7 – Post-2042 Luas Lines

The NTA will undertake detailed appraisal, planning and design work for the following Luas lines, with a view to their delivery in the period after 2042:

- 1. City Centre to Clongriffin;*
- 2. City Centre to Beaumont and Balgriffin;*
- 3. Green Line Extension to Tyrrelstown;*
- 4. City Centre to Blanchardstown;*
- 5. Red Line Reconfiguration to provide the following lines*:*
 - a. Clondalkin-City Centre; and*
 - b. Tallaght-Kimmage-City Centre.*
- 6. Tallaght to City Centre via Knocklyon*;*
- 7. Green Line Reconfiguration to provide the following lines*:*
 - a. City Centre to Bray via UCD and Sandyford; and*
 - b. Sandyford to City Centre*

** Subject to Measure LRT2*

It is noted that the Tallaght to City Centre via Knocklyon line could serve areas close to the Proposed Scheme.

2.1.1.8 Alternative Measures Such as Congestion Charging should be Considered

Summary of Issue Raised

A number of the submissions suggest that demand management measures such as congestion charging should be implemented first, or instead of the Proposed Scheme. These submissions state that this would remove cars from the road reducing delays to buses. It is suggested that these measures would therefore negate the need for road widening to provide bus lanes.

Response to Issue Raised

As stated in Section 3.2.8 of Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of the EIAR:

One of the primary aims of the prior GDA Transport Strategy was to significantly reduce demand for travel by private vehicles, particularly during the commuter peaks, and to encourage use of walking, cycling and public transport. One of the mechanisms to achieve such reduction of private vehicle use is the use of measures to discourage travel by car – i.e. demand management.

Demand management can take many different forms from restricting car movement or car access through regulatory signage and access prohibitions, to parking restrictions, to fiscal measures such as tolls, road pricing, congestion charging, fuel/vehicle surcharges and similar. All of these approaches discourage car use through physical means or by adding additional costs to car use such that it becomes more expensive and alternative modes become more attractive. A key success factor of demand management is greater use of alternative travel modes, in particular public transport.

However, in the case of Dublin, the existing public transport system does not currently have sufficient capacity to cater for large volumes of additional users. In the case of the bus system, the increasing levels of traffic congestion over recent years prior to the COVID-19 pandemic added to bus delays and meant that additional bus fleet and driver resources had been utilised simply to maintain existing timetables, rather than adding overall additional capacity. The objective of the prior GDA Transport Strategy was to significantly increase the capacity, and subsequent use, of the public transport system, focusing on the overall BusConnects Programme in the case of the bus system, the DART+ Programme in the case of heavy rail, and the Luas/Metro programme in the case of light rail.

Congestion is a significant contributor to GHG emissions and the related negative environmental impacts associated with poor air quality, noise levels, and related health and quality of life consequences. Demand management measures need to be associated with positive environmental benefits that can be achieved when commuters change modes to high-quality public transport, walking, and cycling that can help reduce GHG emissions and bring associated health benefits. The objective of the prior GDA Transport Strategy to significantly increase the capacity, and subsequent use of these alternative modes requires that the necessary physical infrastructure is necessary to deliver the efficiencies to make the mode-shift attractive and environmentally beneficial.

In advance of a significant uplift in overall public transport capacity in the Dublin metropolitan area, the implementation of major demand management measures across that area would be unsuccessful. Effectively constraining people from making journeys by car and requiring them to use other modes, without those modes having the necessary capacity to cater for such transfer, would not deliver an effective overall transport system. Instead, the capacity of the public transport system needs to be built up in advance of, or in conjunction with, the introduction of major demand management measures in the Dublin metropolitan area. This is especially true in the case of the bus system where a major increase in bus capacity through measures such as the Proposed Scheme would be required for the successful implementation of large scale demand management initiatives.

While the foregoing addresses the dependency of demand management measures on public transport capacity, it is equally correct that the provision of greatly enhanced cycling facilities will also be required to cater for the anticipated increase in cycling numbers, both in the absence of demand management measures and, even more so, with the implementation of such measures. Demand management initiatives by themselves will not deliver the level of segregated cycling infrastructure required to support the growth in that mode. Consequently, the progression of demand management proposals will not secure the enhanced safe cycling infrastructure envisaged under the Proposed Scheme.

Accordingly, the implementation of demand management measures would not remove the need for additional infrastructure to serve the bus transport needs of the corridor covered by the Proposed Scheme, nor would it obviate the need to develop the cycling infrastructure required along the route of the Proposed Scheme.

2.1.1.9 Cumulative impact of all CBC schemes on traffic not considered in EIAR

Summary of Issue Raised

A number of the submissions noted concern that the cumulative impact of all schemes associated with the BusConnects infrastructure works. Many submissions noted particular concern the cumulative impacts of the Proposed Scheme with immediately adjacent schemes such as the Kimmage to City Centre and Tallaght / Clondalkin to City Centre, did not appear to have been considered. Of particular concern was the cumulative traffic impact of bus gates and traffic management measures proposed along these schemes.

Response to Issue Raised

The potential of cumulative impacts arising from the construction and operation of the Proposed Scheme in combination with other projects (including the other proposed BusConnects schemes) has been considered in Chapter 21 in Volume 2 of the EIAR. Section 21.1 in Chapter 21 states:

“This chapter reports the assessment of cumulative impacts of the Templeogue-Rathfarnham to City Centre Core Bus Corridor Scheme (hereafter referred to the Proposed Scheme) in combination with other existing and or approved projects and projects which, at the time of assessment, were yet to be approved, but for which a decision on such project is reasonably foreseeable over the likely consenting and construction period anticipated for the Proposed Scheme. In addition, the chapter addresses the potential for interactions between impacts on different environmental factors of the Proposed Scheme itself on the receiving environment.”

Section 21.2.2.1 makes specific reference to the other BusConnects Core Bus Corridors:

“...As noted previously, the other 11 BusConnects Core Bus Corridor schemes were also included for assessment. While each of the other BusConnects Core Bus Corridor schemes will be subject to an application for approval, they have a similar likelihood of going ahead as this Proposed Scheme and therefore, the potential cumulative effects of the other BusConnects Core Bus Corridor schemes are of relevance to the potential cumulative effects of this Proposed Scheme so they were included on the preliminary long list.....”

Section 21.2.7 of EIAR Chapter 21 considers the cumulative traffic impacts for the operation scenario and states: *“For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational.”*

Section 21.3.2.1 of Chapter 21 (Cumulative Impacts & Environmental Interactions) of Volume 2 of the EIAR notes the following:

“A multi-tiered modelling framework (described further in Chapter 6 (Traffic & Transport) of this EIAR) was developed to support this iterative design process, whereby the emerging design for each of the Proposed Schemes has been tested using the transport models as part this iteration both in isolation and with all Core Bus Corridor schemes in place. Each of the CBC projects worked closely together to align proposals at direct interface points (e.g., overlapping junctions) as well in the indirect / offline areas where displaced traffic would arise. This included the provision of complimentary traffic management arrangements and/or turn bans to ensure that any displaced traffic was kept to a minimum and/or was maintained on higher capacity roads, whilst continuing to meet scheme objectives along the Proposed Scheme.

For the Proposed Scheme, the iterative process concluded when the design team were satisfied that the Proposed Scheme both in isolation and in combination with the other 11 Core Bus Corridor Schemes, met its required objectives (maximising the people movement capacity of the Proposed Scheme) and that the environmental impacts and level of residual impacts were reduced to a minimum.

Traffic Related Cumulative Effects

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The ‘area of influence’ is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has indirect interface with the proposed Kimmage to City Centre Core Bus Corridor Scheme, with modelling indicating some level of traffic displacement between the study areas of each scheme.

In terms of direct interfaces, the Proposed Scheme intersects the Kimmage to City Centre Core Bus Corridor at which the Proposed Scheme interacts at the signalised junction of Harold's Cross Road / Rathgar Avenue / Kenilworth Square / Kenilworth Park and the junction of Harold's Cross Road and Parkview Avenue. The BusConnects Infrastructure Team has coordinated the design tie-ins at these locations to ensure a holistic design has been achieved, so that each scheme can be implemented, and integrated, independent of the planning consent process. Further details on the tie-ins between both schemes can be found in Chapter 4 (Proposed Scheme Description) of this EIAR.

When both schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider GDA Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

Further detail on the cumulative traffic impact is presented in Section 7.2.6.3 of A6.1 Traffic Impact Assessment.

To determine the impact that the Proposed Scheme (in combination with the other proposed Core Bus Corridor schemes) will have in terms of general traffic redistribution, the LAM Opening Year (2028) and Design Year (2043) model results have been used to identify the difference in general traffic flows between the Do Minimum and Do Something scenarios i.e. with and without all proposed Core Bus Corridor schemes in place.

The changes in traffic flows have been presented with reference to TII's Traffic and Transport Assessment Guidelines (May 2014) i.e., traffic redistribution resulting in an increase or decrease above 100 combined flows (i.e. in a two-way direction) along roads in the vicinity of the Core Bus Corridors in the AM and PM Peak Hours are presented.

The threshold aligns with an approximate 1 vehicle per minute increase or decrease per direction on any given road. This is a very low level of traffic change on any road type and ensures that a robust assessment of the changes in traffic levels are presented.

Diagram 7.13 and Diagram 7.14 below illustrate the difference in traffic flows (Do Minimum vs Do Something) on roads in the AM Peak Hour for the 2028 Opening Year and 2043 Design Year with the Proposed Scheme and all other proposed Core Bus Corridor schemes in place. The diagrams are extracts from Figure 6.13 and 6.15 in TIA Appendix 3 (Maps). Reductions in traffic flows are indicated by the blue lines with increases in traffic flow indicated by the red lines.

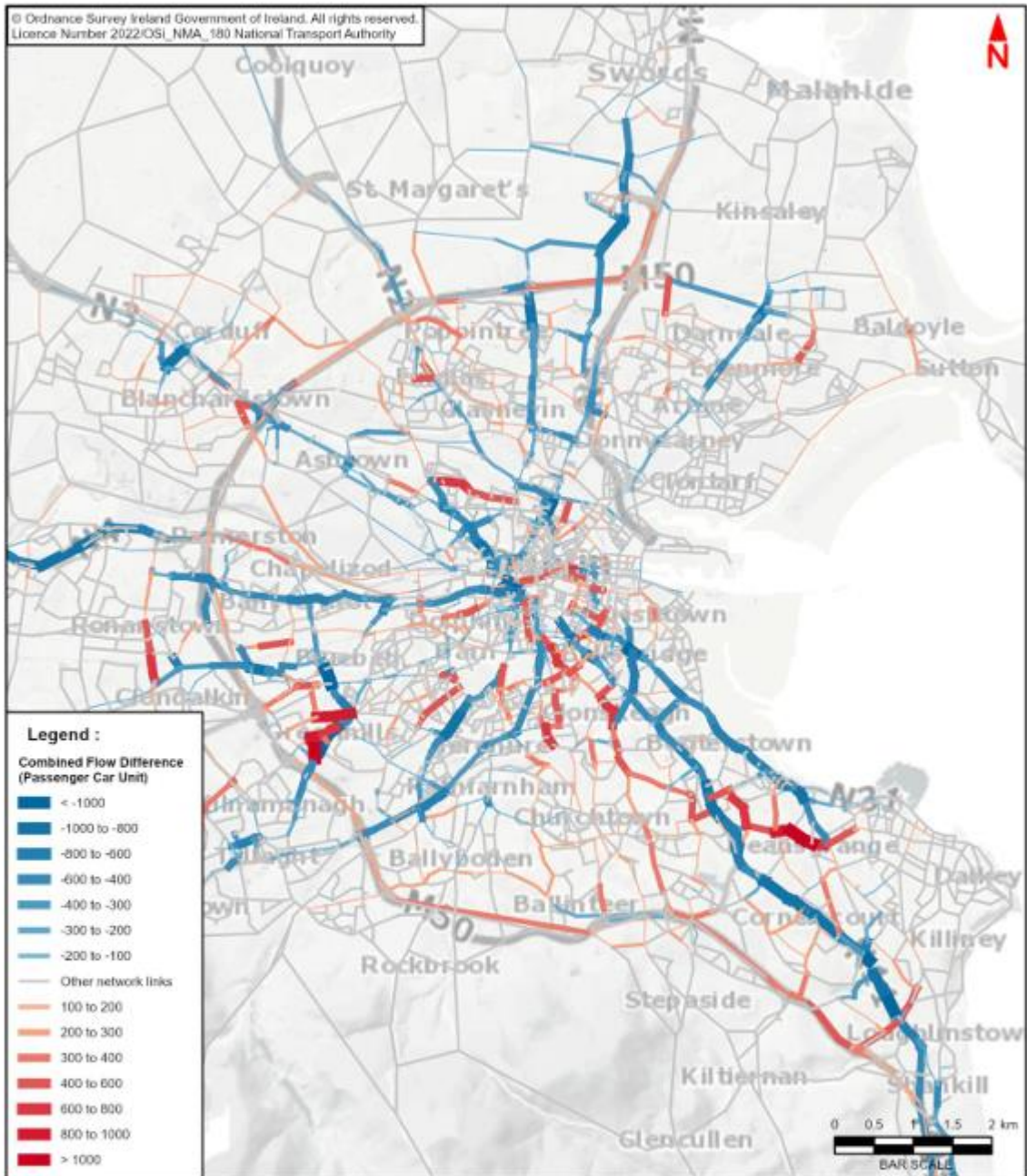


Diagram 7.13: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year – Cumulative Scenario

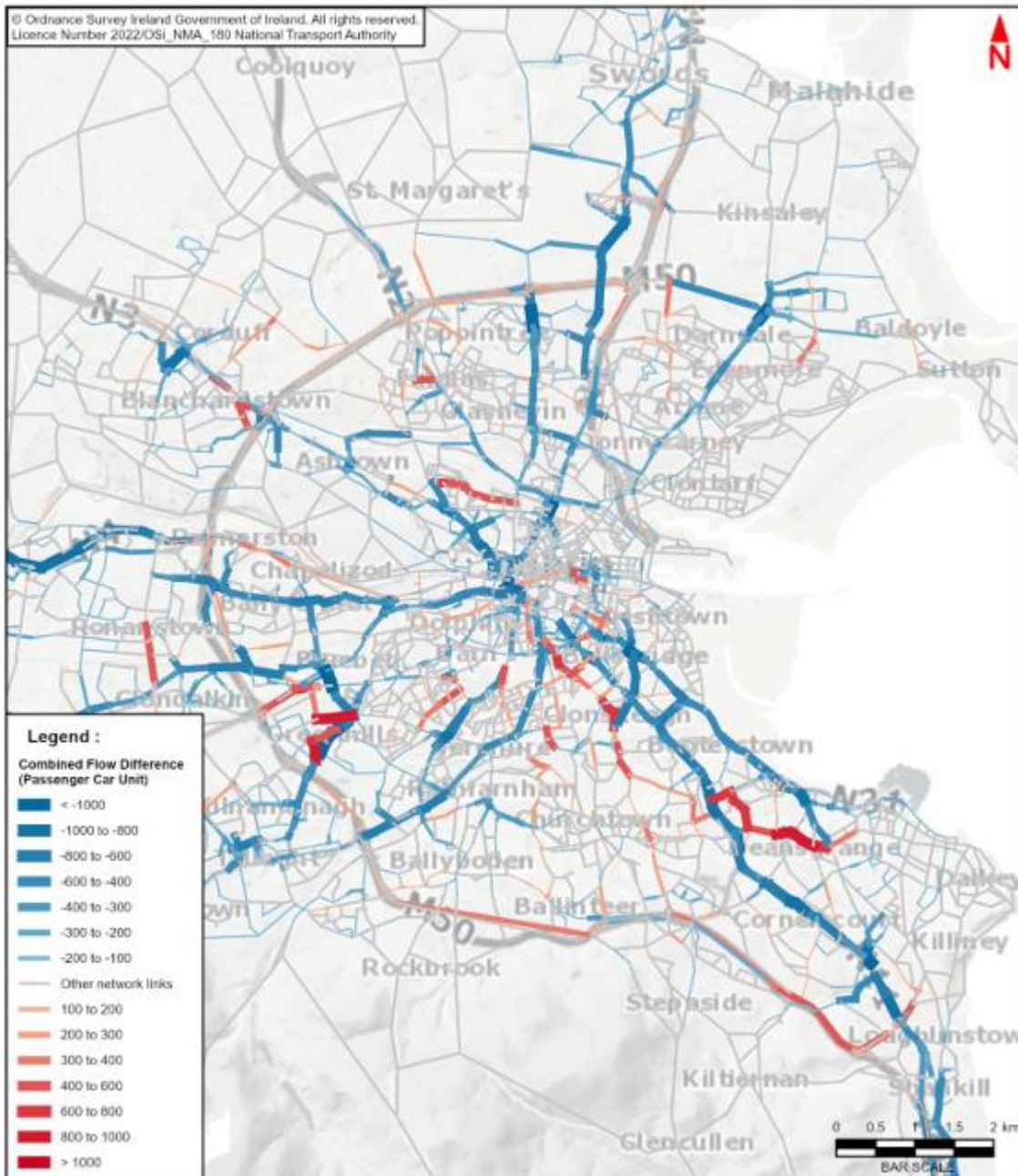


Diagram 7.14: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2043 Design Year – Cumulative Scenario

Diagram 7.15 and Diagram 7.16 below illustrate the difference in traffic flows (Do Minimum vs Do Something) on roads in the PM Peak Hour for the 2028 Opening Year and 2043 Design Year with the Proposed Scheme and all other proposed Core Bus Corridor schemes in place. The maps are extracts from Figure 6.14 and 6.16 in TIA Appendix 3 (Maps). Reductions in traffic flows are indicated by the blue lines with increases in traffic flow indicated by the red lines.

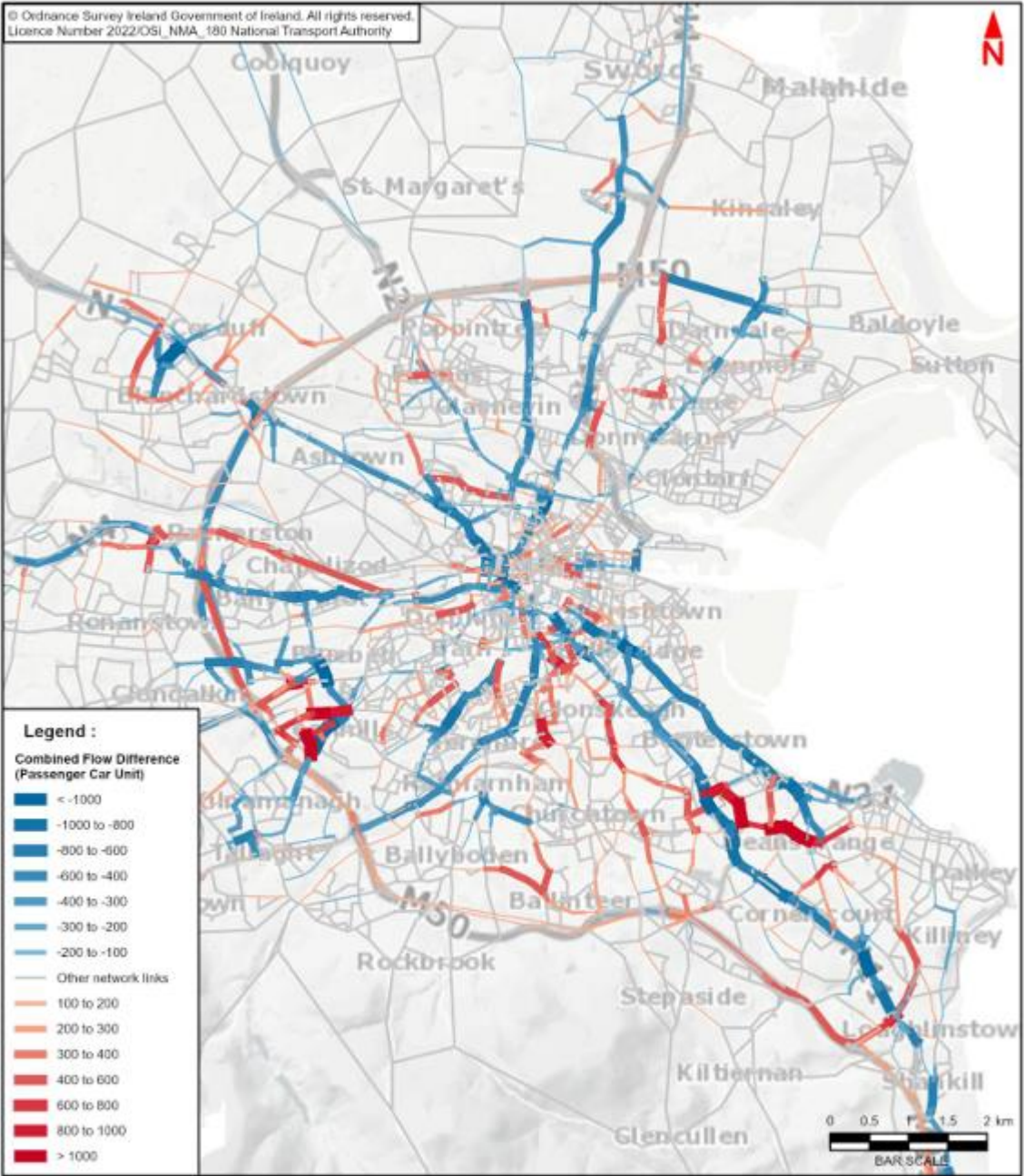


Diagram 7.15: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year – Cumulative Scenario

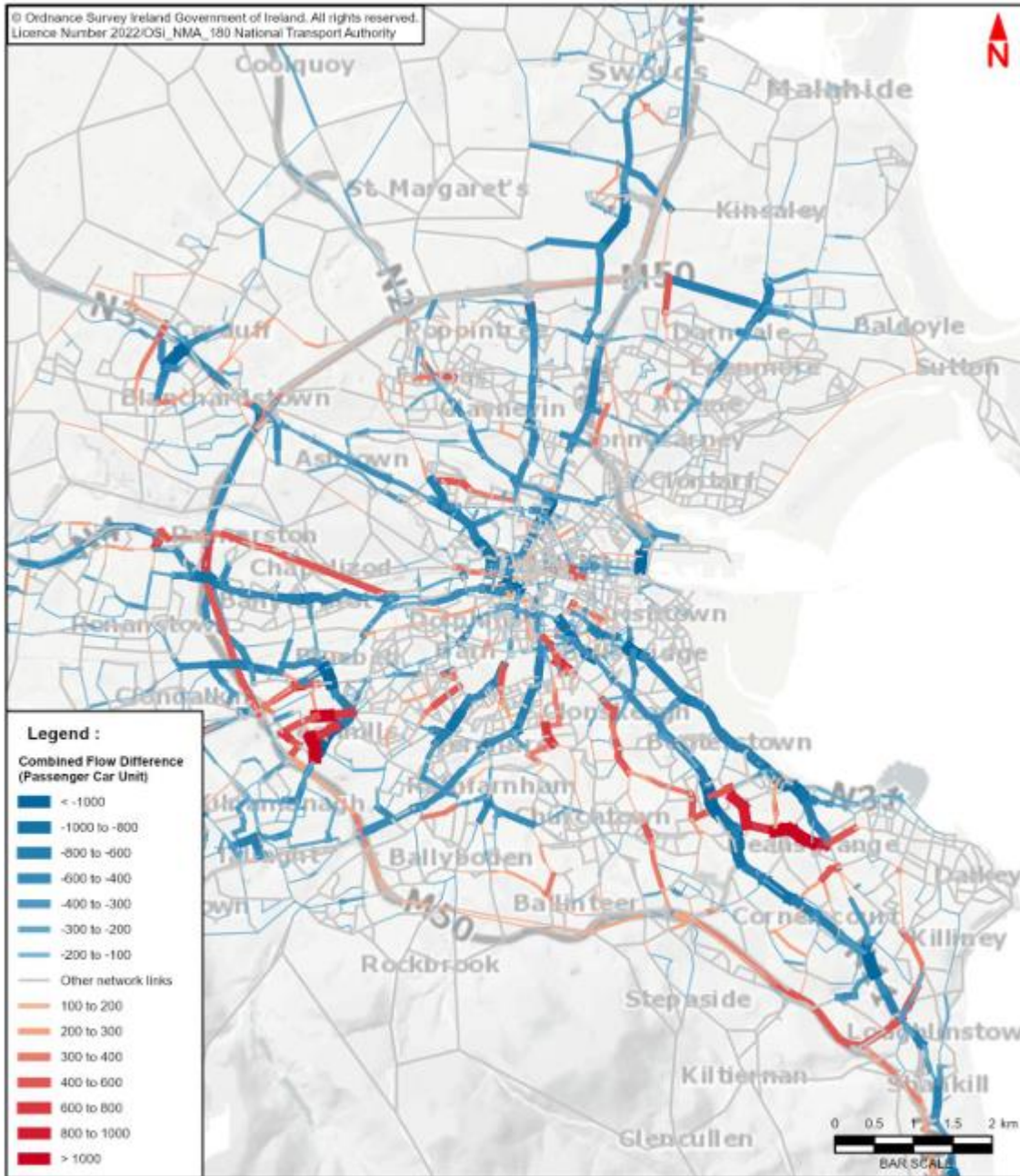


Diagram 7.16: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2043 Design Year – Cumulative Scenario

7.2.6.4 Cumulative Traffic Flow Summary

As can be seen in the diagrams above, the level of traffic redistribution is shown to reduce between the Opening and Design years as further modal shift from car to sustainable modes occurs during the period, facilitated by the further roll out of the GDA Transport Strategy measures and, importantly, the sustainable mode capacity provided Core Bus Corridor schemes. As mentioned previously the implementation of all Core Bus Corridor schemes will facilitate the ability of the network to accommodate significant levels of additional travel growth by sustainable modes. It should be noted that higher levels of modal shift from car to sustainable modes are likely to occur either during or before this period due to the requirement to achieve, for example, 2023 Climate Action Plan (CAP) targets with further policy measures, likely to be implemented. As the specifics of these policy measures have yet to be determined they are, therefore, not included in the transport modelling to ensure a conservative and reasonable worst-case assessment of effects.

The cumulative impact of the Proposed Scheme on people movement across the city is presented in section 7.2.4.3.

Diagram 7.5 illustrates the average People Movement by mode, across all Proposed Schemes, inbound towards the City Centre during the AM Peak Hour in 2028.

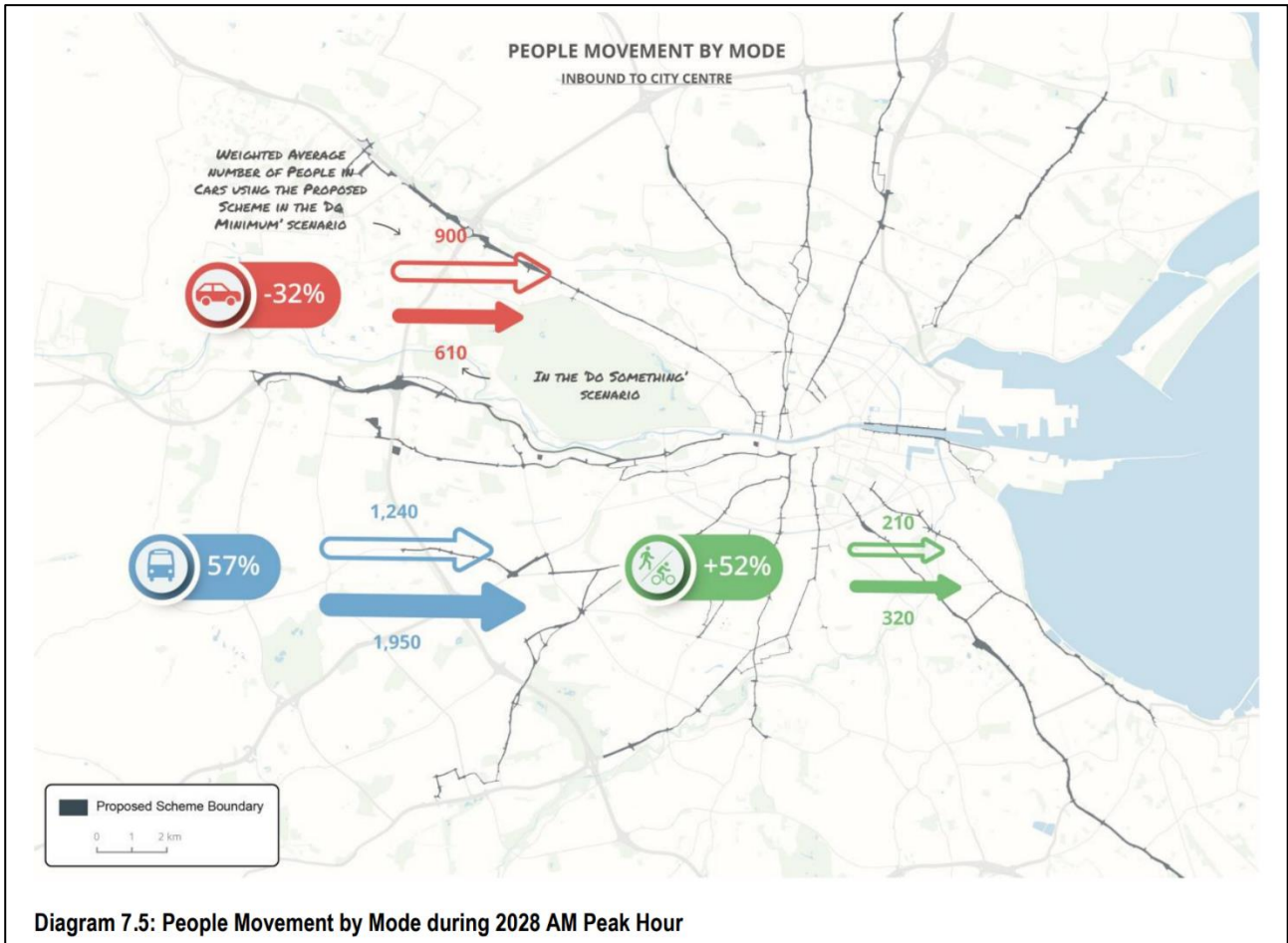
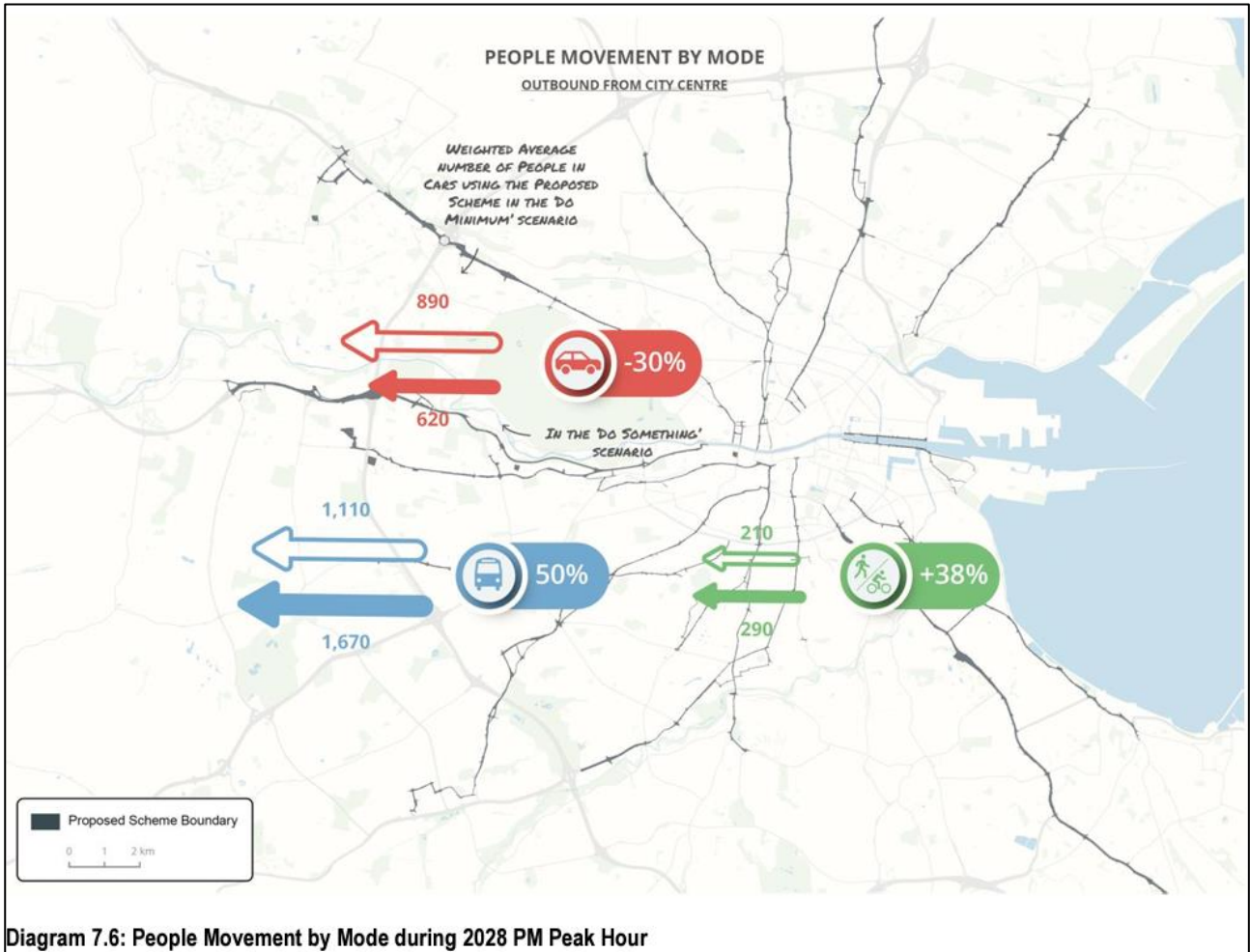


Diagram 7.5: People Movement by Mode during 2028 AM Peak Hour

Diagram 7.6 illustrates the average People Movement by mode, across all Proposed Schemes, travelling outbound from the city centre during the PM Peak Hour.



The cumulative impact on people movement is summarised in section 7.2.7.

7.2.7 People Movement – Cumulative Impact Summary

The cumulative impact for the movement of People Movement by sustainable modes with the Proposed Schemes in place has been appraised as a qualitative assessment, taking into account the changes in mode share, demand changes by mode along the Proposed Scheme (and the other Core Bus Corridors) as well as bus usage and integration with other public transport modes, as presented above. It is acknowledged that a certain level of residual traffic redistribution is likely, however, these increases are largely constrained to new road infrastructure (as part of the Proposed Schemes) and regional and distributor roads that are designed to cater for high volumes of traffic. The Proposed Schemes in combination have been adjudged to deliver a high positive overall impact on People Movement by sustainable modes. The Proposed Schemes can be shown to deliver significant improvements in People Movement by sustainable modes along the direct Proposed Scheme alignments, particularly by bus and cycling, with reductions in car mode share due to the enhanced sustainable mode provision. The Proposed Schemes provide for enhanced integration and efficiencies for all public transport modes by facilitating substantial increases in public transport average network wide travel speeds.

The traffic impact assessment has been used to inform further environmental assessments. As noted in Section 21.6.1 Construction Phase of Chapter 21 in Volume 2 of the EIAR:

The results of the modelling showed that with the CTMPs [Construction Traffic Management Plans] for all schemes in place at the same time, there would be significant traffic displacement across the Dublin area. The large cumulative increase of traffic on local roads had the potential to generate a significant adverse impacts of traffic congestion along with the risk of generating air quality and noise impacts. A revised construction scenario was developed which is based on four schemes which cannot be constructed concurrently with adjoining schemes. This scenario was developed to minimise potential significant impacts on traffic, air quality and noise.

The Biodiversity assessment identified potential for significant residual cumulative effects with regard disturbance and displacement of non-SCI breeding birds during construction and habitat loss for some projects in conjunction with the Proposed Scheme. However, these cumulative effects will be at the local geographic scale and short-term due to the construction duration.

The Landscape (Townscape) and Visual assessment identified the potential for temporary indirect cumulative townscape and visual effects to occur for some projects if the construction periods coincide or are successive with the Proposed Scheme. Effects would be not significant if this is not the case. These effects are most likely to occur at locations where concurrent construction of both schemes have the potential to overlap, however, it is also likely that the extent of any such impacts will be localised and contained.

No other significant construction related cumulative effects were identified from the Proposed Scheme in combination with other projects (including the other Core Bus Corridor Schemes) over and above those identified in the standalone assessments.

As noted in Section 21.6.2 Operation Phase of Chapter 21 in Volume 2 of the EIAR:

For Operational Phase effects, the assessments assume all 12 proposed Bus Corridor Schemes would be operational, along with other identified projects and GDA Strategy projects included in the Do Minimum and Do Something scenarios. For traffic and transport, the assessment predicted that the Proposed Scheme and the other 11 Core Bus Corridor schemes are expected to facilitate a long term, profound positive cumulative effect on People Movement by sustainable modes. The Core Bus Corridor schemes are seen to enable significant improvements in People Movement by sustainable modes along the direct Core Bus Corridor routes, particularly by bus and cycling, with reductions in car mode share due to the enhanced sustainable mode provision. The Proposed Scheme and the other 11 Core Bus Corridor schemes provide for enhanced integration and efficiencies for all public transport modes by facilitating substantial increases in public transport average network wide travel speeds.

The Core Bus Corridor Infrastructure Works will also support the delivery of government strategies outlined in the CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Core Bus Corridor Infrastructure Works will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined in the assessment, it is concluded that the Core Bus Corridor Infrastructure Works achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. The Core Bus Corridor Infrastructure Works has the potential to reduce GHG emissions equivalent to the removal of approximately 105,500 and 209,100 car trips per weekday from the road network in 2028 and 2043 respectively. This has the effect of a reduction in total vehicle kilometres, a reduction in fuel usage, and increases to sustainable transport trips and modal share in accordance with the 2023 Climate Action Plan (CAP) (DCCAE 2023). It is concluded that, cumulatively, the Core Bus Corridor Infrastructure Works will make a significant contribution to carbon reduction.

The Human Health assessment identified that the proposals for two SDCC planning applications, the DART+ Tunnel Element and the Greater Dublin Area Cycle Network Plan, would be complementary to the Proposed Scheme and could have a cumulative, beneficial effects by connecting different communities and destinations which would improve general accessibility to areas of leisure and employment. These cumulative impacts would result in positive effects in mental health, assessed to be Positive and Significant in the Long-term on health. A similar cumulative effect was identified for the Potential Metro South Alignment, assessed to be Positive and Moderate in the Long-term on health.

The only other significant operational cumulative impacts identified over and above the standalone scheme relate to human health. It was assessed that the proposals for the other 11 Core Bus Corridor schemes would also be complementary to the Proposed Scheme and could have a cumulative beneficial effect by encouraging active travel and increased use of public transport through offering a choice of routes. Due to the substantial size of overall population with the opportunity to benefit from the proposals, the effect is assessed as Positive, Very Significant and Long-term for health.

The Landscape (Townscape) and Visual assessment identified that the Kimmage to City Centre Core Bus Corridor in conjunction with the Proposed Scheme during operation has potential to provide long-term enhance to streetscape where the two projects intersect. There is potential for Positive, Significant, Medium to Long-term cumulative effects on townscape.

As noted in Section 21.6.3 Environmental Interactions of Chapter 21 in Volume 2 of the EIAR:

Significant environmental interactions occur between the topics of population, human health, air quality, noise and vibration and traffic and transport. The assessments made for each of those topics consider those interactions both directly and indirectly. As an environmental factor, landscape and visual considerations have natural relationships with all other environmental factors. Some are direct relationships, e.g., population and visual impacts; biodiversity and landscape; land, soils and water and landscape; or the setting around features of cultural heritage etc. Others may be indirect, e.g. human health, air quality and landscape, material assets and landscape and visual aspects. Wherever possible these potential interactions have been incorporated into the relevant assessments.

In brief, the Proposed Scheme will address sustainable mode transport infrastructure deficits while contributing to an overall integrated sustainable transport system as proposed in the GDA Strategy. It will increase the effectiveness and attractiveness of bus services operating along the corridor and will result in more people availing of public transport due to the faster journey times and reliability improvements which the Proposed Scheme provides. This in turn will support the potential to increase the bus network capacity of services operating along the corridor and thereby further increasing the attractiveness of public transport. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth.

2.1.1.10 Impact of Proposed Scheme on the Movement of Emergency Vehicles (Bus Gates/Bus lanes)

Summary of Issue Raised

A number of the submissions raised concern that the Proposed Scheme would add to congestion and therefore impede the movement of emergency vehicles along the route. It was also noted that emergency vehicles should be permitted to pass through bus gates.

Response to Issue Raised

As noted in section 4.6.5.3 of Chapter 4 of the EIAR states:

A Bus Gate is a sign-posted short length of stand-alone bus lane. This short length of road is restricted exclusively to buses, taxis, cyclists and emergency vehicles. It facilitates bus priority by removing general through traffic along the overall road where the bus gate is located. General traffic is directed by signage to divert towards other roads before it arrives at the Bus Gate.

It is also noted that it is permissible by law for emergency vehicles to utilise bus lanes at any time, ensuring that general traffic would not delay their movement.

2.1.1.11 No park and ride considered

Summary of Issue Raised

A number of the submissions raised concern that the Proposed Scheme did not include any proposals for park and ride. These submissions noted that removing people from cars on the outskirts of the city and transferring to public transport would remove the need for road widening.

Response to Issue Raised

EIAR Chapter 2, Need for the Proposed Scheme, Section 2.2.1.5 outlines the following:

BusConnects Dublin is a suite of transformative changes to the bus system, intended to make it more efficient, faster, reliable and easier to use. The BusConnects Dublin programme contains nine elements, one of which is the BusConnects Dublin – Core Bus Corridor Infrastructure Works (the CBC Infrastructure Works). The nine elements are:

- 1. Core Bus Corridor Infrastructure Works;*
- 2. Dublin Area Bus Network Redesign;*
- 3. Transitioning to a new low emissions bus fleet;*

4. *State of the art ticketing system;*
5. *Cashless payment system;*
6. *Simpler fare structure;*
7. *New Park and Ride sites in key locations;*
8. *New bus livery providing a common style across all operators; and*
9. *New bus stops and shelters with better signage and information.”*

It is noted that new park and ride facilities form part of the broader BusConnects programme and will be implemented to complement improvements to the overall bus system, including the Proposed Scheme infrastructure.

2.1.1.12 Removal of trees generally along the scheme

Summary of Issue Raised

A number of the submissions raised concern about the removal of trees generally across the scheme, with no specific area quoted. Concerns ranged from the visual impact of the loss to the impact the removal of trees would have to the environmental impacts. Some submissions raised concerns that the loss would be more significant than that suggested in the EIAR due to further impacts during construction.

Response to Issue Raised

A full assessment of the impact on trees has been undertaken in the EIAR. Section 1.1 of Appendix A17.1 Arboricultural Impact Assessment of Volume 4 of the EIAR states:

The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained, and to identify the trees that are to be removed to facilitate the Proposed Scheme.

The impact assessment report is based on the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – recommendations; this standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the site to identify trees that may be impacted on by the Proposed Scheme based on the proposed design.

Section 5 of Appendix A17.1 states:

The route traverses both Dublin City Council and South Dublin County Council administrative areas, with the boundary between both Local Authorities located close to the Fortfield Road junction for the Templeogue to Terenure section and at the River Dodder for the Rathfarnham to City Centre section. The relevant development plans of both local authorities have been examined.

National Planning Framework

The National Planning Framework (NPF) seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaptation. The NPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity.

Dublin City County Development Plan 2016 - 2022

Section 10.5.7 of the Dublin City Development Plan 2016 recognises the benefits of trees in humanising spaces, enhancing the environment and minimising the impacts of climate change. Appendix 1: Existing Tree Preservation Orders in Dublin City 2016-2020 of the Dublin City Development Plan has been reviewed and it has been concluded that there are no TPO's identified within the study area.

South Dublin County Council Development Plan 2016 – 2022

Chapter 8 (Green Infrastructure) of the South Dublin County Council Development Plan 2016 contains a number of policies relating to the protection and preservation of existing trees, groups of trees, woodlands and hedgerows, as well as the incorporation of new green infrastructure elements within new developments.

Section 6 of Appendix A17.1 states:

This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.

Table 4 of Appendix A17.1 notes that there will be 169 individual trees removed as a result of the Proposed Scheme.

Section 4.6.13.3.1 of Chapter Proposed Scheme Description of Volume 2 of the EIAR states:

The planting strategy has been developed to meet the needs of the South Dublin County Council Development Plan 2016 –2022, the Dublin City Tree Strategy and the Dublin Biodiversity Action Plan as follows:

- *Where possible the initial conservation of existing biodiversity has been considered;*
- *Opportunities have been identified to enhance biodiversity through green infrastructure;*
- *Promote the role of street trees planting consistent with the recommendations of South Dublin County Council Development Plan 2016 –2022 and the Dublin City Development Plan 2016 – 2022; and*
- *Develop the role of SuDS opportunities within the Proposed Scheme to ideally reduce impervious areas for drainage management benefit.*

Section 4.6.13.5.1 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR states:

As noted on the Landscaping General Arrangement (BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-9001) in Volume 3 of this EIAR, a range of urban street tree species (Image 4.19) have been incorporated into the design. The type of tree depends on the location and whether trees are to be planted in grass verges or in tree pits within paved urban environments as appropriate, and also to ensure diversity of species and provide habitats for urban wildlife. Typically, trees will be semi-mature and where appropriate, selected for having a clear stem height to facilitate visual permeability.

Refer to Figure 2.1.5 which reproduces Image 4.14.

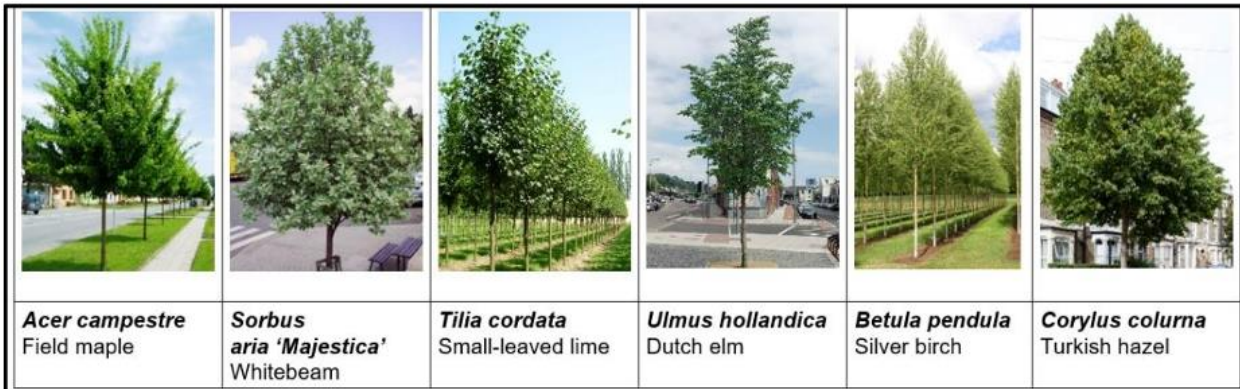


Figure 2.1.5 Street Tree Species

Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 231 trees as a result of the Proposed Scheme.

Chapter 17 of the EIAR has considered the potential landscape (townscape) and visual impacts associated with the Construction and Operational Phases of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (hereafter referred to as the Proposed Scheme). During the Construction Phase, the potential landscape (townscape) and visual impacts associated with the development of the Proposed Scheme have been assessed.

This included streetscape disturbance, impacts on property boundaries, removal of trees and vegetation, traffic issues and the general visual intrusion of construction activities due to utility diversions, road resurfacing and road realignments.

This chapter concludes:

As described in Chapter 3 (Consideration of Reasonable Alternatives) of this EIAR and noted at Section 17.4.1.2 of this Chapter, the Proposed Scheme has been subject to an iterative design development process which has sought insofar as practicable to avoid or reduce negative impacts, including townscape and visual impacts. Nevertheless, the Proposed Scheme will give rise to some degree of townscape and visual effect, most notably during the Construction Phase. These impacts arise especially where there is temporary and / or permanent acquisition of lands associated with residential or other properties including amenities, and where tree removal is required. The Proposed Scheme includes for replacement of disturbed boundaries, reinstatement of the Construction Compounds, return of temporary acquisition areas, and for additional tree and other planting where possible along the Proposed Scheme.

In the Operational Phase localised residual effects will remain for properties, including protected structures, experiencing permanent land acquisition. There will be overall positive effects for all sections of the scheme, excluding Nutgrove to Terenure Road North, which will have a neutral effect. The Proposed Scheme provides for improvements in the urban realm, which will provide positive long-term effects for the townscape and visual character, most notably at centres of Rathgar and Rathmines and along the route from Grand Canal to Dame Street. The restoration and reincorporation of Templeogue Arch into the streetscape will also be a notable improvement. The Proposed Scheme will also provide for a significantly enhanced level of service for public transport and for pedestrian / cycle connectivity.

In relation to submissions which claimed that further trees would be impacted as a result of construction works, Section 17.5.1 of the EIAR states:

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- *The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*
- *New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g., Cellweb or equivalent), installed without excavation using no dig techniques.*
- *Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*
- *Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required.*

- *New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- *Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- *The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- *All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 in Volume 4 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

2.1.1.13 Implementation of other less intrusive BusConnects measures first

Summary of Issue Raised

A number of the submissions requested that other less intrusive elements of the BusConnects programme were implemented first to understand the benefits of these in advance of committing to the infrastructure works. Some of the measures suggested included cashless fares, park and ride and congestion charging. It is suggested in many of these submissions that these measures would enhance bus journey times and reliability and therefore remove the need for road widening to facilitate bus priority.

Response to Issue Raised

As set out in Section 2.2.1.6 of Chapter 2 Need for the Scheme of Volume 2 of the EIAR,

The BusConnects programme seeks to greatly improve bus services in Irish cities, including Dublin, so that journeys by bus will be fast, reliable, punctual, convenient and affordable.....

The full programme for BusConnects Dublin includes a range of interlinked and complementary proposals including:

1. *Management elements: Redesigning the network to increase the number of homes, jobs and services with coverage, improving orbital accessibility and restructuring radial routes into spines;*
2. *Technological elements: Introducing new ticketing systems to improve convenience and reduce dwell time at bus stops;*
3. *Fleet elements: Replacing the bus fleet with low emission vehicles, introducing branding and livery to give a new “look and feel”;*
4. *Policy elements: Introducing a 90-minute ticket to remove the financial penalty for interchanging between buses or changing mode during trips; and*

5. *Infrastructure elements: Creating infrastructure to separate buses and cyclists from other traffic to make sustainable travel a faster, safer and more reliable choice. Developing interchange hubs. Improving pedestrian facilities around bus stops.*

BusConnects Dublin is a suite of transformative changes to the bus system, intended to make it more efficient, faster, reliable and easier to use. The BusConnects Dublin programme contains nine elements, one of which is the BusConnects Dublin – Core Bus Corridor Infrastructure Works (the CBC Infrastructure Works).

The nine elements are:

- *Core Bus Corridor Infrastructure Works;*
- *Dublin Area Bus Network Redesign;*
- *Transitioning to a new low emissions bus fleet;*
- *State of the art ticketing system;*
- *Cashless payment system;*
- *Simpler fare structure;*
- *New Park and Ride sites in key locations;*
- *New bus livery providing a common style across all operators; and*
- *New bus stops and shelters with better signage and information.*

The CBC Infrastructure Works are needed because they will provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

Each of the other elements individually brings its own benefits, but there are cumulative benefits that are dependent on the completion of the entire programme, given the network interdependencies between measures. The effectiveness of the programme is more than the sum of its parts. For example, some additional bus patronage will be attracted by simply adding new services and redesigning the network, but it will take an increase in speed and reliability to reach a wider segment of the market. Addressing fares and making the system easier to use will bring another market segment on board. Additionally, bringing all these changes to people's attention so that they can take advantage of the new opportunities would be difficult without refreshing the information system, the bus livery and the waiting environment.

The implementation of these other elements will progress independently of the CBC Infrastructure Works element.

The CBC Infrastructure Works brings a range of benefits as an element in its own right. However, the CBC Infrastructure Works is also integral to realising the fullest potential of the other elements.

In the absence of the Proposed Scheme, bus services will operate in a more congested environment, leading to higher journey times for bus and lower reliability which will lead to reduced levels of public transport use, making the bus system far less attractive and less resilient to higher levels of growth. The absence of walking and cycling measures that the Proposed Scheme provides will significantly limit the potential to grow those modes into the future.

In terms of the sequencing of implementation of the BusConnects Programme elements, this is an ongoing process with many of the elements already being implemented (e.g., new bus network, transition to low emission fleet). As explained in the above extract from the EIAR, all elements are required to realise the fullest potential of the programme as a whole and the sequence in which they are delivered is irrelevant to this overall goal.

It is noted that the implementation of all elements of the BusConnects programme have been considered in the Do Minimum assessment scenario as set out in section 6.4.3.1:

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme of projects (apart from the CBC Infrastructure Works elements) i.e., the new BusConnects routes and services (as part of the revised Dublin Area bus network), new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios.

As such, any comparison within the EIAR between Do Minimum and Do Something scenarios is a direct comparison of the scenarios with and without the Proposed Scheme only.

2.1.1.14 Enforcement of bus lanes, bus gates and turn bans

Summary of Issue Raised

A number of the submissions raised concern about the efficacy of the proposed turn bans in the absence of enforcement. Many of these submissions claim that the proposed turn bans would be ignored and therefore would not protect streets from the traffic the turn ban was proposed to deter, thereby increasing traffic on these streets.

Response to Issue Raised

The NTA acknowledges the comments raised in relation to camera enforcement. *Whilst enforcement for the lawful use of bus lanes is currently a matter for An Garda Síochána, the NTA is separately exploring proposals and methods for bus lane enforcement as set out under Measure INT24 – Enforcement of Road Traffic Laws of the Greater Dublin Area Transport Strategy 2022-2042.*

With the State having incurred the very large expenditure required to deliver the BusConnects Programme, it is vital to ensure that sufficient enforcement is in place such that the benefits of that investment are not eroded by widespread breaches of the restrictions applying to bus lanes, cycle tracks and junctions. To effectively ensure this outcome, camera-based enforcement will be required to augment the on-street activities of An Garda Síochána.

This type of arrangement is in place in many jurisdictions internationally, where camera detection of certain breaches of regulations is linked to the automatic issue of fixed penalty notices.

Action 67 in the Road Safety Strategy Phase 1 Action Plan 2021–2024 sets out the need to “further develop camera-based enforcement by the Gardaí, including at junctions and for management of bus/cycle lanes, building on existing and recent legislation through establishing suitable cross-agency administrative arrangements; and, where any legislative issues are identified, to consider and develop agreed proposals to remedy them.”

The Department of Transport has requested the National Transport Authority (NTA) to undertake the first phase of this action, namely to establish and chair a working group to explore this action and to bring forward recommendations on how it should be progressed. The subsequent steps for implementation, including addressing any legislative issues that may be identified, will be determined by the Department of Transport subsequent to the initial phase. It is expected that the report of the Working Group will be finalised and provided to the Department later this year

Notwithstanding this, specific measures have been considered in the development of the Proposed Scheme that will help deter inappropriate and unlawful use of bus lanes including advanced bus signal detection systems which will activate green signals at traffic lights for authorised vehicles only.

2.1.1.15 Project is submitted under 2016-2035 GDA Transport Strategy but there is More Recent Strategy

Summary of Issue Raised

A number of the submissions noted that the Proposed Scheme did not take account of the 2022-2042 GDA Transport Strategy.

Response to Issue Raised

As set out in section 2.2.1.1:

The Transport Strategy for the Greater Dublin Area 2022-2042 (Transport Strategy) replaces the prior transport strategy for the period 2016 to 2035.

That prior transport strategy set out to contribute to the economic, social, and cultural progress of the Greater Dublin Area (GDA) by providing for the efficient, effective, and sustainable movement of people and goods. In other words, it was about making the Dublin region a better place for people who live and work there, and for those who visit.

It did that by providing a framework for the planning and delivery of transport infrastructure and services in the GDA. It has also provided a transport planning policy around which other agencies involved in land use planning, environmental protection, and delivery of other infrastructure such as housing, water, and power, could align their own investment priorities.

It has been an essential component, along with investment programmes in other sectors, for the development of the GDA which covers the counties of Dublin, Meath, Kildare, and Wicklow. Major projects provided for in the prior strategy included BusConnects Dublin which the Proposed Scheme is a key component of.

Under the Dublin Transport Authority Act 2008, the National Transport Authority (NTA) must review its transport strategy every 6 years. Arising from the review of the 2016 plan, an updated strategy has been developed which sets out the framework for investment in transport infrastructure and services over the next two decades to 2042.

Since the prior transport strategy was approved by government in 2016, the NTA, along with the Councils, other transport delivery agencies and transport operators, have worked to build and develop that strategy's projects and proposals.

With respect to BusConnects Dublin, work was commenced 2017. BusConnects Dublin was launched in 2017. It is a multi-faceted programme comprising several elements of which the Core Bus Corridors (CBCs) which will provide approximately 230km of bus priority and approximately 200km of cycle routes.

It is the largest ever investment programme on the bus network to deliver high levels of bus priority on all the main corridors to not only support and significantly improve the operation of bus services now and into the future. It is proofed for resilience to enable the operation for more frequent services as required. The Proposed Scheme is a fundamental element of this ongoing work.

The challenges outlined in the GDA Transport Strategy 2016 - 2035 and identified need for BusConnects Dublin as determined in the preparation of that prior strategy remain, and the evidence from the detailed corridor studies undertaken in the preparation of the prior strategy is still valid and robust.

The Transport Strategy for the Greater Dublin Area 2022-2042 has been taken into account in the production of the EIAR as discussed in Section 2.3.4.3 of Chapter 2 of Volume 2 of the EIAR.

2.1.1.16 Criticism that the 12 stand-alone schemes were submitted independently - suggested that this is impermissible “project splitting”

Summary of Issue Raised

A number of the submissions raised concern that the 12 schemes that form the BusConnects Infrastructure Works were submitted to An Bord Pleanála as individual schemes rather than a single application for all 12 schemes. It is suggested that this represents ‘project splitting’.

Response to Issue Raised

The “project” for the purposes of environmental impact assessment is the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (the “**Proposed Scheme**”). The Proposed Scheme is one of 12 stand-alone and independent Core Bus Corridor Schemes set out in the GDA Transport Strategy as described in Section 2.2.1.7 of Chapter 2 of Volume 2 of the EIAR.

Each of the 12 stand-alone and independent Core Bus Corridor Schemes have been submitted to An Bord Pleanála as separate, stand-alone, and independent applications under section 51 of the Roads Act 1993 (as amended) each accompanied by an EIAR. Each of these stand-alone and independent schemes can function in isolation of each other and each delivers significant benefits. Indeed, the specific significant benefits of the Proposed Scheme are outlined throughout the EIAR and summarised in Section 2.1.1.2 of this document.

Further, the cumulative impacts of this Proposed Scheme together with other projects including the other stand-alone and independent Core Bus Corridor Schemes have been fully considered and assessed in the Chapter 21 of the EIAR.

The submissions identify cases such as (i) *O’Grianna v An Bord Pleanála*¹ and (ii) *Fitzpatrick v An Bord Pleanála*² in support of their contention that some alleged impermissible “*project splitting*” is occurring here. However, it is important to note that “*project splitting*” occurs where a development is split up so as to avoid the requirement to carry out an EIA in respect of any aspect of the development. As the Board will be aware, it occurs where a development is divided up in such a way so that each application on its own is sub-threshold and does not require an EIA. Indeed, *Simons on Planning Law* (3rd edition) describes “*project splitting*” in the following terms at paragraph 14-280:-

“If a project is identified in a restricted way, this may result in the evasion of the obligation for EIA. For example, if what is in reality only one project is artificially presented as a series of separate projects, it may be that none of these on its own will trigger an EIA. This practice is known as ‘project-splitting’ (sometimes also referred to as ‘salami-slicing’).”

This is simply not the case here where there is an EIAR for the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme including a robust cumulative impacts assessment and there has been no attempt to avoid the requirement to carry out an EIA in this Proposed Scheme or in any of the other stand-alone and independent Core Bus Corridor Schemes.

Further, this Proposed Scheme is functionally independent of the other Core Bus Corridor Schemes and there is no question of a functional interdependence here as is suggested in the submissions.

This is not like where a power project and its grid connection where neither aspect can operate without the other as discussed in the O’Grianna Case mentioned in the submissions that are being responded to here. In this regard, in O’Grianna, the High Court considered whether a grid connection and the windfarm it was to serve were part of the same “*project*” for the purposes of the EIA Directive and concluded that they were because the grid connection is an integral part of the overall development, and the wind turbines serve no function unless they can be connected to the national grid. By contrast, the Proposed Scheme serves its own function providing important public transport infrastructure and is not in any way dependent on the other 11 separate, stand-alone and independent Core Bus Corridor schemes.

The concept of “*functional interdependence*” was considered in both the High Court and the Supreme Court in *Fitzpatrick v An Bord Pleanála* [2017] IEHC 585; [2019] IESC 23 which is also a case referenced in the submissions. In *Fitzpatrick*, the development for which planning permission had been sought was a single data centre. A masterplan had been submitted with the application for the single data centre which made clear that it was envisaged that eight data halls would potentially be constructed on the site in the future. The appellants argued that the single data hall formed part of a larger “*project*”, i.e. the masterplan, and that the masterplan should have been subject to EIA. The High Court considered that the question was whether the proposed development in respect of which permission is sought (in that case, the single data hall) can operate on a stand-alone basis or whether it was part of a larger development, i.e. the masterplan. The High Court, and the Supreme Court on appeal, concluded that it could operate on a stand-alone basis and was not functionally interdependent on the masterplan.

One of the grounds of appeal advanced by the appellants was summarised by the Supreme Court at paragraph 39 of the judgment as follows:-

“The appellants seek to rely upon the principles behind the above line of authority to contend that on the facts herein, there was what they termed ‘salami slicing’, and submit that the data centre development for which planning permission was sought was not a standalone project and hence, was not a ‘project’ for the purposes of the EIA Directive. They submit that on the facts, the masterplan should be considered to be the ‘project’ for the purposes of the EIA Directive and hence, the planning permissions were granted in breach of the EIA Directive, as no EIA on the ‘project’ was carried out and thus, they must be quashed. In support of this submission, they rely upon the fact that the Inspector, and hence the Board, considered justification of the site selection by reference to the masterplan.”

A similar misplaced argument appears to be advanced in the submissions that are being responded to here that the “*Proposed Scheme is part of a wider project comprising 12 schemes to be delivered under the BusConnects Dublin – Core Bus Corridor Infrastructure Works*” and that this alleged “*wider project*” is not assessed in the EIAR, that therefore it is not possible for the Board to complete its environmental impact assessment.

¹ [2014] IEHC 632

² [2017] IEHC 585; [2019] IESC 23

This allegation is without substance. As noted above, the Proposed Scheme is the “*project*” for the purposes of environmental impact assessment as it is a separate and distinct project which can be constructed and operated independently of any other project and there is no functional interdependence with any of the other 11 stand-alone Core Bus Corridor Schemes.

The Supreme Court in Fitzpatrick concluded on the issue of whether the data hall and the masterplan were “*functionally interdependent*” at paragraphs 46 to 48 of its judgment in the following terms:-

“46. The trial judge in this case decided that there was no functional interdependence between the development of the first data centre for which permission was sought and the future potential the build out of further data halls in accordance with the masterplan. I agree with his assessment and determination. The development of the first data centre is not either functionally, as in the case of O’Grianna, or legally, as in the case of Brown, dependent upon the build out of further data centres, as envisaged in the masterplan. Once built, it could be operated as a single data hall. Hence, in that sense it was a project which was a standalone project and capable of being the subject of a planning application for which an EIA could properly be carried out.

47. In reaching that conclusion, I do not wish to suggest that the data centre development was functionally independent of the substation and grid connection. They are functionally interdependent. The environmental impacts of those two applications were correctly considered together in a cumulative assessment. No objection has been taken in the proceedings to the manner in which that was done. Therefore, subject to that comment, the Board was correct in considering the development of the first data centre and ancillary works to be a standalone development which could properly be the subject of a planning application and EIA assessment. While the Board took into account the fact that the data centre was the first of eight data centres proposed in the masterplan when considering the justification for the site selected, it does not follow that impermissible project splitting or slicing has taken place. The first data centre is stand-alone in the sense of not being functionally dependent on future phases of the masterplan. The fact that it was the first phase of the masterplan was a matter to be taken into account as part of the relevant circumstances which are to be considered both when conducting the EIA and making the planning decision. The scope of the EIA of the data centre required by reason of the fact that it is phase one of a masterplan is a separate issue considered below.

48. Accordingly, my conclusion on the primary and core contention of the appellants is that there was no obligation on the Board to conduct an EIA of the masterplan in the course of an application for planning permission for phase one thereof. As a matter of law, the obligation pursuant to the EIA Directive, as implemented in this jurisdiction by the 2000 Act, as amended, and the Regulations made thereunder, is to carry out an environmental impact assessment of the proposed development, or in this case developments, for which planning permission was sought. On the facts of this case, I have concluded that, notwithstanding that the data centre application is the first phase of an overall masterplan, it was permissible to treat it as a standalone project or development both for planning purposes and for the assessment under the EIA Directive, as it was not functionally or legally dependent on later phases of the masterplan. The EIA of the data centre application did require to assess its cumulative impacts with, inter alia, the proposed development of the substation and grid connection, as was carried out. Nevertheless, the fact that they were phase one of the overall masterplan affects the scope of the EIA of the proposed developments which was required to be carried out.” (emphasis added)

In the instant case, as with the first data centre in the Fitzpatrick case, the Proposed Scheme is a stand-alone project which is not functionally or legally dependent on any of the other 11 stand-alone Core Bus Corridor Schemes. This Proposed Scheme can be assessed on its own merits and is not functionally dependent on, or reliant on any of the other 11 stand-alone Core Bus Corridor Schemes being completed and in fact, if approved, it can go ahead irrespective of whether approval is granted for any of the other 11 stand-alone Core Bus Corridor Schemes.

Further, the cumulative impacts assessment undertaken as part of the EIAR considers and assesses the cumulative impact of the construction and operation of the Proposed Scheme with all other relevant projects including the other 11 stand-alone and independent Core Bus Corridor Schemes and so the submissions are incorrect insofar as they appear to suggest that a cumulative impacts assessment has not been properly conducted in the EIAR.

It is therefore entirely possible for An Bord Pleanála to conduct its environmental impact assessment of the Proposed Scheme on the basis of the EIAR which contains a comprehensive and robust assessment of the environmental impacts of the Proposed Scheme and the cumulative impacts of the Proposed Scheme with other projects including the other 11 stand-alone Core Bus Corridor Schemes and there is therefore no substance to the contention of there being any “*project splitting*” as alleged.

2.1.1.17 Inadequate Public Consultation and contravention of Aarhus Convention

Summary of Issue Raised

A number of submissions noted that they felt excluded from the consultation process and queried if there has been compliance with the Aarhus Convention due to Covid lock down, residents’ unfamiliarity with IT, lack of information books at public meetings.

Submissions stated that the consultation process was inadequate and that the entire process took place online therefore disenfranchising people who do not have access to the internet. Some submissions stated that their voice was not listened to and they see little changes in their area from what was originally presented to them.

Response to Issue Raised

As noted in section 1.6.1 Consultation of Chapter 1 of the EIAR:

Public participation has been an integral part of the iterative development of the Proposed Scheme from the outset. Pre-application public consultation was carried out in three phases (one in relation to Emerging Preferred Route (EPR) consultation and two in relation to the Preferred Route Option (PRO) consultation), to inform the public and stakeholders of the development of the Proposed Scheme from an early stage and to seek feedback and participation throughout its development. The BusConnects Infrastructure team has undertaken a comprehensive consultation and engagement process with stakeholders, landowners and members of the public throughout the development of the Proposed Scheme.

The primary objective of the non-statutory public consultation process was and is to provide opportunities for members of the public and interested stakeholders to contribute to the planning and design of the Proposed Scheme and to inform the development process. Public participation in the planning and design of the Proposed Scheme was encouraged from an early stage through on-the-ground engagement and information and media campaigns.

The early involvement of the public and stakeholders ensured the views of various groups, individuals and stakeholders were taken into consideration throughout the development of the Proposed Scheme and in the preparation of this EIAR.

The non-statutory consultation process assisted in:

- *The establishment of a sufficiently robust environmental baseline for the Proposed Scheme and its surroundings;*
- *The identification, early in the process, of specific concerns and issues relating to the Proposed Scheme so that they could be appropriately accounted for in the design and assessment scope; and*
- *Ensuring the appropriate involvement of the public and stakeholders in the assessment and design process.*

The consultation process involved engagement from:

- *Emerging Preferred Route (EPR) Option Consultations; and*
- *Preferred Route Option (PRO) Consultations.*

More specific information relating to the pre-application phases of public consultation, issues which emerged and the manner in which they informed the iterative development of the Proposed Scheme are outlined in the sections which follow.

In terms of adherence to the Aarhus Convention, Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the

provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

In relation to the effect of the Covid lock down it should be noted that every effort was made by the NTA to facilitate public participation and engagement during the Covid-19 pandemic.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

In terms of engagement with landowners of potentially impacted properties, section 1.7.3 sets out the various direct communications over the course of the project:

Since the initiation of the pre-application public consultation process in February 2019 there has been ongoing engagement with landowners, and / or anyone with an interest in potentially impacted properties or lands along the corridor of the Proposed Scheme, as the design development has progressed.

As set out in the Consultation Section (Section 1.6) during each round of public consultation those landowners identified as being either potentially impacted or no-longer potentially impacted were written to directly to receive information on the consultation in advance of any wider publication of the proposals. One-to-one meetings were offered on a face-to-face basis pre-COVID, and via Zoom or over the phone since March 2020, for those who wished to discuss the proposals further in relation to their own property with the minutes being recorded as part of the consultation process. Over the three rounds of consultation, approximately 734 letters of this kind were issued.

In addition, approximately 217 letters were issued between August 2020 and November 2020 to request access to properties to undertake more detailed noise or topographical surveys.

Throughout the planning process any requests for meetings, phone conversations, or other requests for information have been accommodated where possible. Many of the submissions received during consultations have included from those potentially impacted owners and as with all other submissions they have been considered in the design development.

Most recently during December 2022 and February 2023, approximately 509 letters (registered) have been issued to properties likely to be the subject of the Proposed Scheme Compulsory Purchase Order (CPO) process seeking to engage with them to ascertain ownership details (or to confirm ownership details based on Property Registration Authority – Registry of Deeds referencing research), or to ascertain any others with an interest in the property/lands. Follow-up conversations have been facilitated as a result of these letters on request.

Over the course of the engagements, affected property owners have had the opportunity to discuss, among other things, the following aspects with the BusConnects Infrastructure team:

- Overall scheme proposals and potential impacts;
- Timelines for the scheme design development and associated EIAR assessment;
- Procedural matters such as planning and CPO process;
- Specific details of impact of scheme on landowner property including approximate extent of encroachment; and
- General information around reinstatement and accommodation works.

The fees payable for observations / submissions are determined by An Bord Pleanála, as allowed by Section 144 of the Planning and Development Act 2000, as amended.

Section 38 of the Planning and Development Act 2000 provides that certain documents relating to planning applications shall be made available for inspection and purchase by members of the public. The Act does not prescribe fees for copying the relevant documents and the only reference in the Act to the fee to be charged for such a service is contained in section 38(4) which states: "(4) Copies of the documents under this section shall be made available for purchase on payment of a specified fee not exceeding the reasonable cost of making such a copy." The fees payable for obtaining hard copies of the various EIAR documents for the Proposed Scheme have been determined by the NTA and do not exceed the reasonable cost of making a copy of the EIAR documents.

Full details of the consultation undertaken as part of the Proposed Scheme development is presented in the Public Consultation Report 2018 – 2022 provided as part of the Supplementary Information.

2.1.1.18 General Concerns about Air Quality

Summary of Issue Raised

A number of submissions raised concerns about the impact of the Proposed Scheme on Air Quality generally, stating the scheme would result in poorer air quality along the corridor.

Response to Issue Raised

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area.

Construction phase air quality

For the Construction Phase Section 7.4.2.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011).

As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM₁₀ concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.27 and Figure 7.8 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean PM_{2.5} concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Construction Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.6.1 Construction Phase notes the following: *“When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no significant residual Construction Phase dust impacts.*

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme’s construction are Neutral and Short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).”

Operational phase air quality

For the Operational Phase Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011).

As shown in Table 7.33 and Figure 7.4 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM₁₀ concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.33 and Figure 7.5 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean PM_{2.5} concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.4.3.3 goes on to note that the predictions reported are based on conservative assumptions regarding background pollutant concentrations and the improvement in vehicle emission rates. 2019 background pollutant concentrations have been used to represent 2028 and are likely to be lower by the opening year than in 2019. Older fleet projections were used in the absence of a fleet that incorporates the effects of 2023 Climate Action Plan measures – a larger proportion of electric vehicles is planned by the opening year than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

Section 7.6.2 describes the residual impacts for the Operational Phase:

The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value.

However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In summary, the EIAR demonstrates that there will be no significant impact on air quality as a result of the operation of the Proposed Scheme.

2.1.1.19 General Concerns about Noise

Summary of Issue Raised

A number of submissions raised concerns about the impact of the Proposed Scheme on Noise generally, stating the scheme would result in increased noise along the corridor.

Response to Issue Raised

The potential Noise impacts, as a result of the Proposed Scheme has been assessed in the EIAR. The process of assessment and the results have been described in Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR.

Construction phase noise

Section 9.4.3.2 of Chapter 9 considers construction noise and Table 9.30 provides the predicted noise levels for Road Widening, Road Construction, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs.

As summarised in Table 9.30, road widening, road upgrade and utility diversion works are within 10m to 30m of the nearest NSLs in the four geographical sections of the Proposed Scheme. A minor retaining wall (RW01) is located in Section 1d within 10 to 15m of NSLs. The predicted CNL for these works at the closest NSL façades are between 73 to 83 dB LAeq,T in the absence of any noise mitigation. Making reference to the CNLs in Table 9.30, the potential noise impacts at the closest NSLs range between negative, moderate to very significant and temporary during the daytime period and negative, moderate to very significant, and temporary during the evening and weekend periods in the absence of noise mitigation.

The calculations are based on six plant items with an average noise level of 75 dB LAeq,T at 10m operating simultaneously along a given section of road. The average plant noise level has been calculated on the basis that plant will be operating at varying distances from a NSL at any one time. Reference to Table 9.26 indicates that highest noise levels will occur when breaking, excavators and road planers are operating at the closest distance to NSLs. During specific periods when these activities are operating outside NSLs, higher noise levels may occur compared to those discussed in Table 9.30. These activities will occur, however, for intermittent periods of time at any one location over the course of a working day.

The EIAR contains a comprehensive set of mitigation measures to minimise construction phase impacts, including noise impacts. Construction noise mitigation measures are set out in Chapter 9 in Volume 2 of the EIAR (and are also summarised in Appendix A5.1 Construction Environmental Management Plan in Volume 4 of the EIAR).

Section 9.5.1.1 of the EIAR Chapter 9 states the following:

"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.

These measures will ensure that:

- During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- Selection of quiet plant;*

- Control of noise sources;
- Screening;
- Hours of work;
- Liaison with the public; and
- Monitoring.

.....The appointed contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas (i.e. based on the construction threshold values for noise and vibration set out in Table 9.9 and Table 9.12). Reference to Table 9.38 indicates that intrusive works occurring within 75m of NSLs with a direct line of sight to work will need specific noise control measures to reduce impacts depending on time period over which they will occur (i.e., daytime or evening).”

Section 9.5.1.1.4 of Chapter 9 sets out the proposed working hours and states:

“It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16.30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under daytime / evening time conditions. The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas.

Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed construction noise thresholds at NSLs and will be scheduled according to their noise level, proximity to sensitive locations and possible options for noise control. In situations where an activity with potential for exceedance of construction noise thresholds is scheduled (e.g., road widening and utility diversions or activities with similar noise levels identified in Table 9.50), other construction activities will be scheduled to not result in significant cumulative noise levels.”

In summary the NTA is satisfied that the noise abatement measures set out in the EIAR that the appointed contractor will be required to put in place to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228-1 will result in appropriate and adequate mitigation measures in respect of construction noise impact.

Operational phase noise

As noted in figure 9.4 (Opening Year 2028 Traffic Noise Impact Summary) and figure 9.5 (Design Year 2043 Traffic Noise Impact Summary) of Volume 3 of the EIAR, an Imperceptible/Positive to Not Significant noise impact is generally forecast along the Proposed Scheme. The exceptions to this for 2028 are outlined in section 9.4.4.1.1.5:

In the year of opening, 2028, along Orwell Road, the short-term change in traffic noise is defined as moderate with a traffic noise level calculated at the closest NSLs along this road categorised as negligible to low. The overall impact is determined to be indirect, negative, not significant to slight and short to medium-term.

Along Grantham Street, Palmerstown Park, Grove Park and Palmerstown Road, the short-term change in traffic noise is defined as moderate with a traffic noise level calculated at the closest NSLs along these roads categorised as low to medium. The overall impact is determined to be indirect, negative, slight to moderate and short to medium-term.

Along Castlewood Park, the short-term change in traffic noise is defined as major with a traffic noise level calculated at the closest NSLs along this road categorised as low to medium. The overall impact is determined to be indirect, negative, moderate and short to medium-term.

The traffic noise levels of 53 to 59 dB LAeq, 16hr at the closest NSLs along the roads discussed in Table 9.39 are typical of the semi-urban to urban environments in which they are located and are also in line with road traffic noise levels in the surrounding environment, as discussed in Section 9.3. The operational noise levels will be below and up to 4 dB above the desirable low noise threshold values set within the Dublin Agglomeration NAP 2018 – 2023 (DCC; FCC; SDCC; DLRCC 2018) and are significantly below the Undesirable High noise threshold.

For all other roads off the Proposed Scheme, impacts are determined to be indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term. Similar to the

daytime LAeq, 16hr parameter, the difference in the Lden parameter between the Do Minimum and Do Something scenario is Positive or Not Significant along the Proposed Scheme and the surrounding road network (a change in Lden of less than or equal to 3 dB). Highest increases are along the roads discussed in Table 9.39 which have a calculated increase in the Lden parameter of 2 to 5 dB.

The residual noise level along these roads are in the range of 54 and 60 dB Lden, in line with similar traffic noise levels along the surrounding adjacent roads and is typical for an urban environment. No increase in night-time noise levels is calculated along these roads.

A full suite of calculated noise levels along roads within the study area is included in Appendix A9.2 in Volume 4 of this EIAR.

The exceptions to this for 2043 are outlined in section 9.4.4.1.1.5:

During the Design Year (2043), a minor change in traffic noise is defined along Grantham Street, Palmerstown Park, Palmerstown Road and Castlewood Park. The calculated traffic noise level at the closest NSLs along these roads is categorised as low to medium. The overall impact along these roads is determined to be indirect, negative, slight and long-term.

Along Butterfield Road, the long-term change in traffic noise is defined as minor with a traffic noise level calculated at the closest NSLs along this road categorised as negligible to low. The overall impact along this road is determined to be indirect, negative, not significant and long-term.

Along Castlewood Park, the long-term change in traffic noise is defined as moderate with a traffic noise level calculated at the closest NSLs along this road categorised as low to medium. The overall impact is determined to be indirect, negative, slight to moderate and long-term.

For all other roads across the study area, an indirect, positive, imperceptible to slight, to negative, not significant to slight, long term impact is determined.

2.1.1.20 Impact on Property Values

Summary of Issue Raised

A number of submissions raised concerns about the impact of the Proposed Scheme property values stating that the impacts of the Proposed Scheme would reduce the value of their property. Some of the reasons quoted for the decrease in value included increase traffic volumes, increased bus numbers, poorer air quality, increased noise and compulsory purchase order.

Response to Issue Raised

The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix discusses the envisaged impact of the Proposed Scheme on property prices. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes: "*Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area.*"

and

"Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties along the scheme.

If the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent/valuer in preparing, negotiating, and advising on compensation.

2.1.1.21 Concerns about gaps in segregated cycle infrastructure

Summary of Issue Raised

A number of submissions raised concerns about gaps in segregated cycle infrastructure on along the Proposed Scheme stating that segregated facilities should be provided. These submissions included examples of areas where no segregated facilities are proposed including Terenure Road East, Templeogue Road west of Templeogue Village and Rathfarnham Road south of Dodder View Road

Response to Issue Raised

One of the objectives of the Proposed Scheme outlined in Chapter 1, Introduction of Volume 2 of the EIAR is to *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.*

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route. This table is reproduced in Table 2.1.1.

Table 2.1.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Further details on the specifics of the rationale at each area quoted in the submissions are detailed in sections 2.2.3 to 2.5.3.

2.1.1.22 Request for Oral Hearing

Summary of Issue Raised

A number of submissions requested that an oral hearing is held.

Response to Issue Raised

The NTA notes the requests for an oral hearing which will be a matter for An Bord Pleanála to decide.

2.2 Proposed Scheme at Templeogue Road

2.2.1 Description of Proposed Scheme at this Location

The Proposed Scheme along this section of the corridor, is described in paragraph 4.5.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description:

The Proposed Scheme will commence on the R137 Tallaght Road adjacent to D’Arcy McGee’s, east of the M50 interchange. It is proposed to retain the existing bus and traffic lane configuration on the R137. Between the M50 interchange and the Spawell Roundabout junction it is proposed to relocate the existing two-way cycle track to the carriageway side of the footpath to better tie in with proposals at the Spawell Roundabout junction. It is proposed to convert the Spawell Roundabout to a signalised junction with kerb protection for cyclists. The design of this junction has been coordinated with design proposals under the Wellington Lane Walking and Cycling Scheme and the Dodder Greenway.

Between the Spawell Roundabout and Cypress Grove Road junction, it is proposed to retain the existing bus and traffic lane configuration on the R137. The existing cycle track on the northern side of the carriageway will be relocated to the carriageway side of the footpath, and a new cycle track provided on the southern side of the carriageway between Cheeverstown and the Spawell Roundabout Junction. At the Cypress Grove Road junction, general through traffic may divert to Old Bridge Road for access to the City Centre via the R114. Significantly enhanced cycle facilities will also be provided at this junction with the introduction of kerb protection.

Within this section the existing free standing stone arch adjacent to the R137 Templeogue Road will be cleared of the overgrown vegetation which currently covers it and conserved in its existing location. The existing fencing around the arch will be removed and the arch opened up to the public realm. It is proposed to install high quality stone paving, decorative lighting and soft landscaping elements around the arch as well as to construct a new footpath running behind the arch.

Between the Cypress Grove Road junction and the Ashfield Place development it is proposed to provide bus lanes and traffic lanes in each direction. A limited amount of land take will be required from a number of residential properties on the northern side of the carriageway to achieve this cross section. Dedicated cycle facilities are provided on the approach to the Cypress Grove Road junction, however these will terminate approximately 100m from the junction where cyclists will share the bus lane in an inbound direction and the general traffic lane in an outbound direction. To improve safety for cyclists, it is proposed to introduce a 30kph speed limit between Cypress Grove Road and Templeogue Village. Outside the Ashfield Place Development, there is insufficient space for a bus lane and a general traffic lane in each direction. Therefore, it is proposed to stop the outbound bus lane for a distance of approximately 170m and use Signal-controlled priority along this section.

Within this section, the existing service/access road serving 252 to 256 Templeogue Road will be converted to provide a shared surface for vehicles and pedestrians. This will facilitate the provision of an outbound bus lane to the stop line at the Cypress Grove Road junction, while minimising land acquisition from properties to the north of Templeogue Road.

Between Ashfield Place and the Templeogue Tennis Club, it is proposed to provide a bus lane and a general traffic lane in each direction. It is proposed to utilise a limited amount of land-take within this section to achieve the desired cross-section.

Within Templeogue Village, between Templeogue Tennis Club and the Templeville Road junction, it is proposed to manage bus priority through the use of signal-controlled priority and tie into South Dublin County Council's Templeogue Village Initiative Scheme.

North of Templeogue Village, a cross section consisting of a general traffic lane, and bus lane and a cycle track in each direction is resumed. Between the village and the Springfield Avenue junction, the width of the proposed cycle tracks is reduced locally to minimise the impact on existing mature trees in this section.

At the junction with Templeville Road, general inbound through traffic may divert to the R112 and further to the R114 through the reintroduction of the right turn onto Springfield Avenue. It is proposed to introduce kerb protection at this junction which will improve cycle facilities and cyclist safety.

Between the Templeville Road junction and Fortfield Road it is proposed to provide one bus lane, one general traffic lane and cycle tracks in each direction. The proposed cycle tracks have been narrowed to 1.5m along this section to minimise impacts on mature trees on the eastern side of the road. It is proposed to upgrade the Fortfield Road junction to provide a direct, protected cycle crossing for inbound cyclists to a proposed two-way cycle facility on the eastern side of Templeogue Road north of the junction.

Between Fortfield Road and Terenure Road West, the Templeogue Road width is heavily constrained. Within this section of the Proposed Scheme, it is proposed to maintain one outbound bus lane, one outbound general traffic lane and one inbound general traffic lane. A segregated two-way cycle track and footpath is proposed on the southern side of the carriageway within Bushy Park along the alignment of the existing shared path.

This cycle track will link to a quiet street treatment on Rathdown Drive. The existing dirt path through the green space adjacent to Rathdown Drive will be formalised as a footpath, through shallow dig construction methods to minimise impacts on the existing trees within this area.

It is proposed to provide an inbound a Bus Gate at the junction of Olney Grove, which will restrict northbound general traffic on Templeogue Road from accessing Terenure Road West or Terenure Place during the

hours of operation of the Bus Gate (06:00 – 20:00 - 7 days a week). A right turn ban is proposed from Fergus Road to Templeogue Road, and a left turn ban from Olney Grove to Templeogue Road.

Right turn bans are also proposed from Templeogue Road to Rathdown Park and to Rathdown Avenue and from Fortfield Road to Greenlea Road and to Lavarna Grove in order to prevent through traffic diverting inappropriately. A quiet street treatment to Rathdown Crescent is intended to tie into the proposed quiet street treatment on Rathdown Park described in Section 2 of the Proposed Scheme section.

Figure 2.2.1 to Figure 2.2.9 present extracts from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout along Templeogue Road.

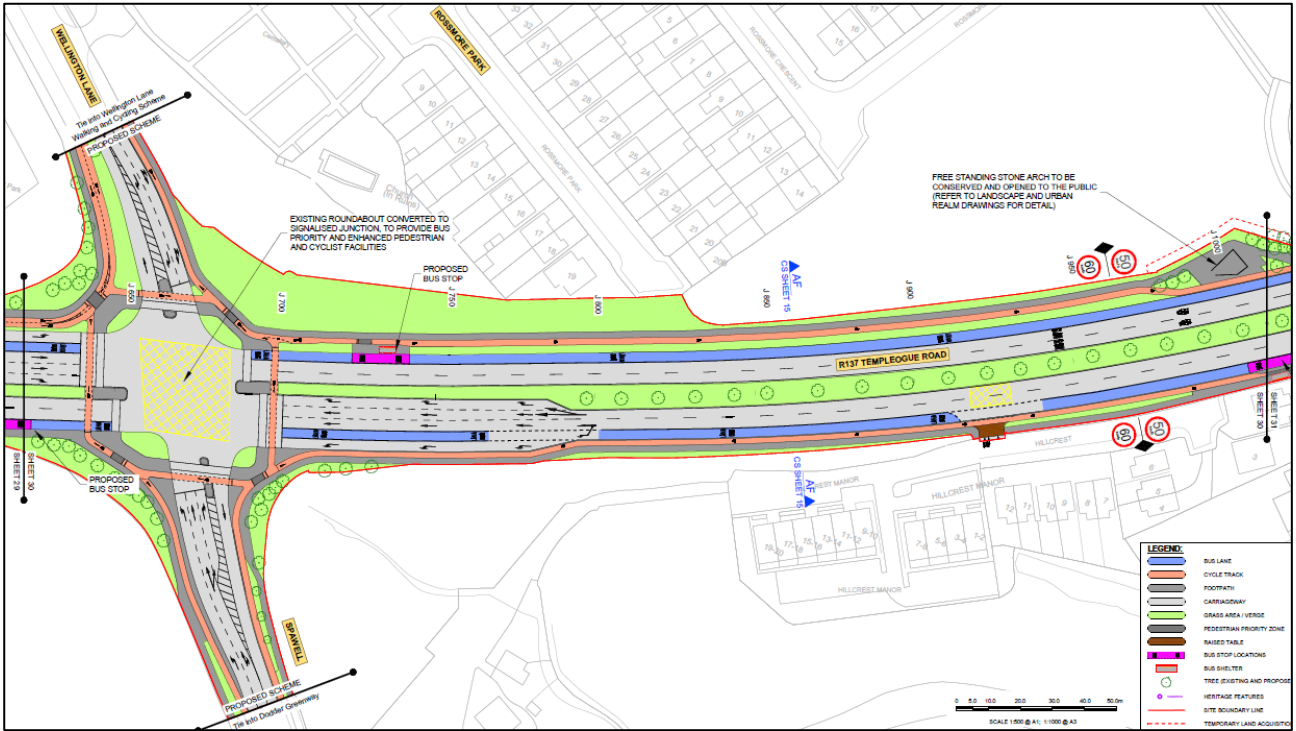


Figure 2.2.1 Extract from General Arrangement Drawings (Sheet 30)

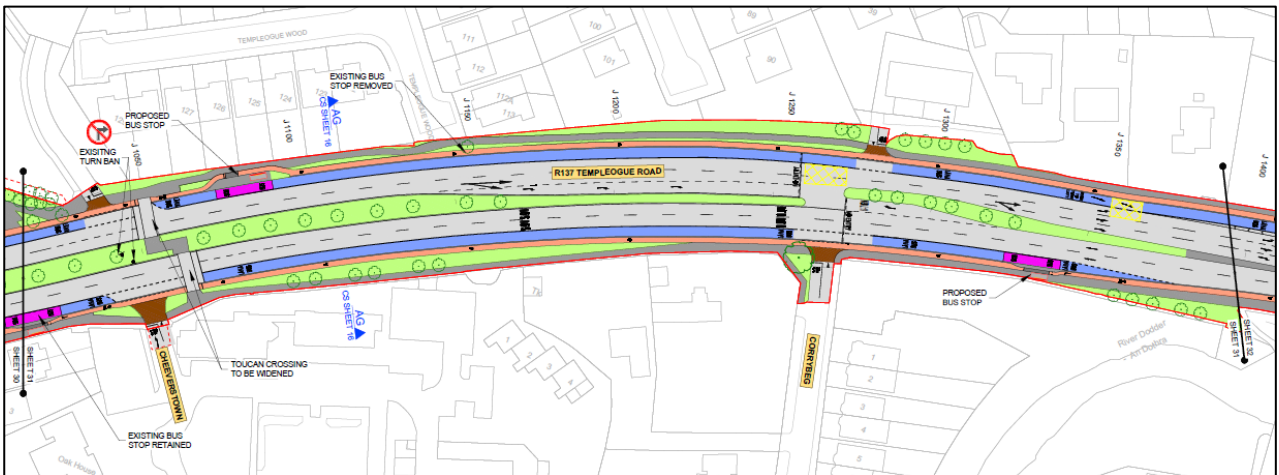


Figure 2.2.2 Extract from General Arrangement Drawings (Sheet 31)

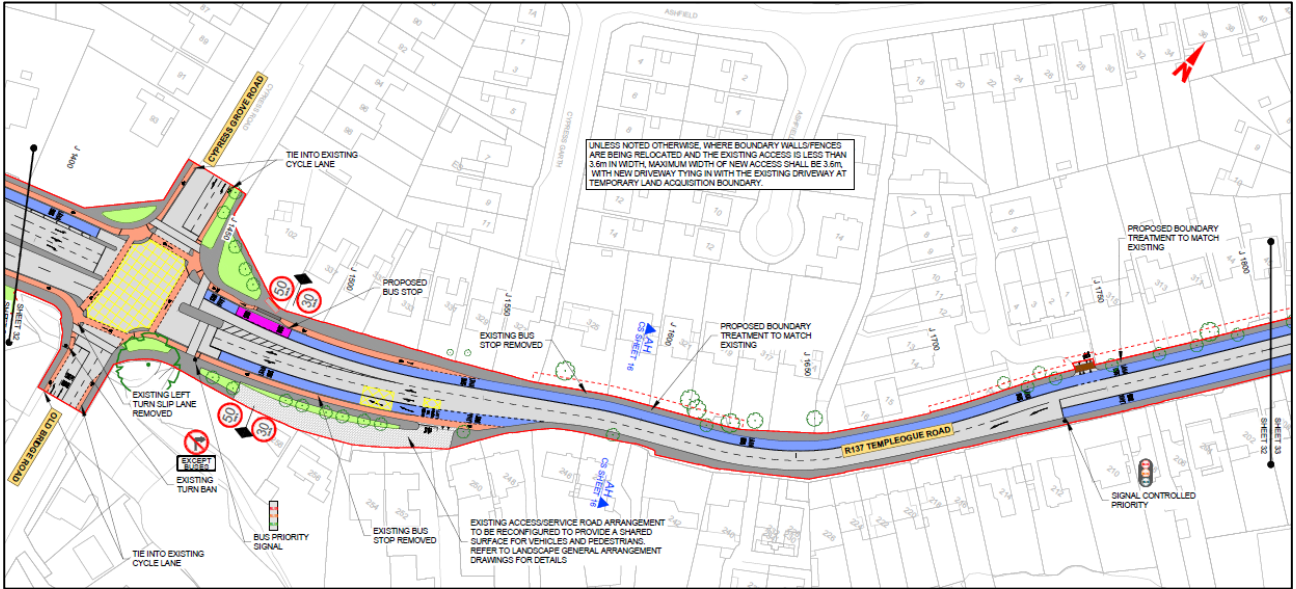


Figure 2.2.3 Extract from General Arrangement Drawings (Sheet 32)

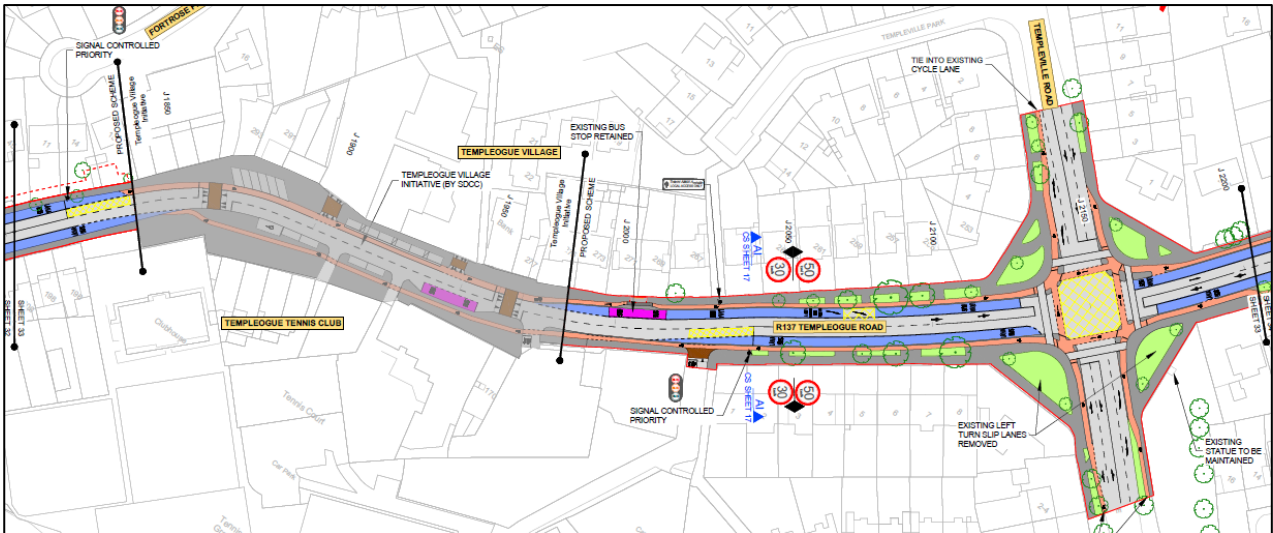


Figure 2.2.4 Extract from General Arrangement Drawings (Sheet 33)

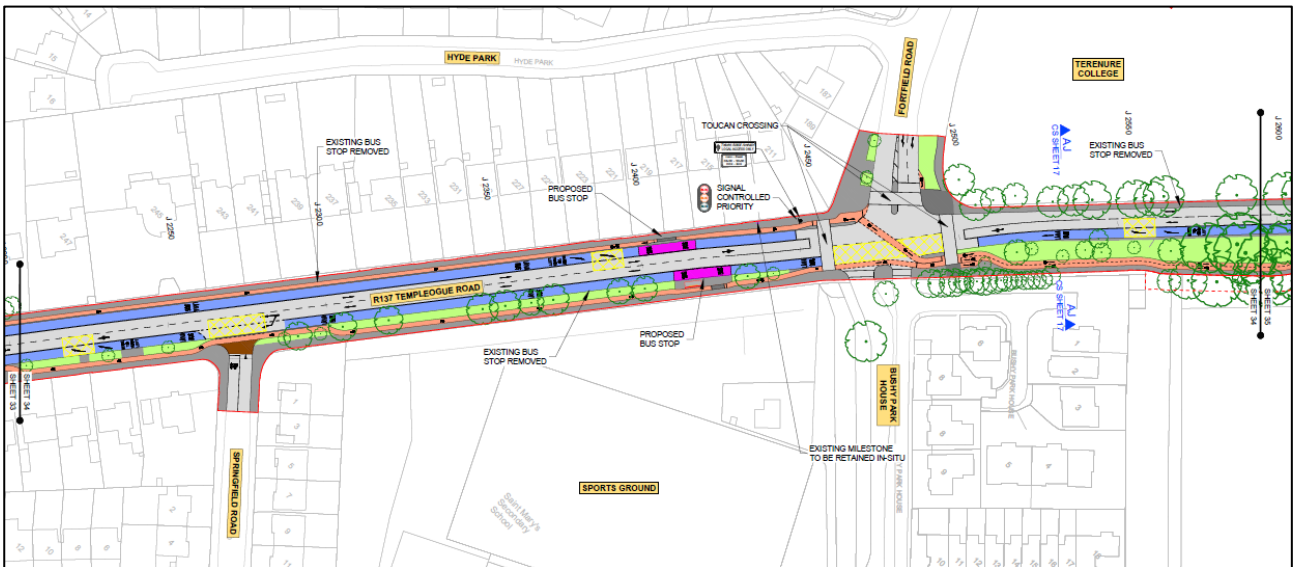


Figure 2.2.5 Extract from General Arrangement Drawings (Sheet 34)

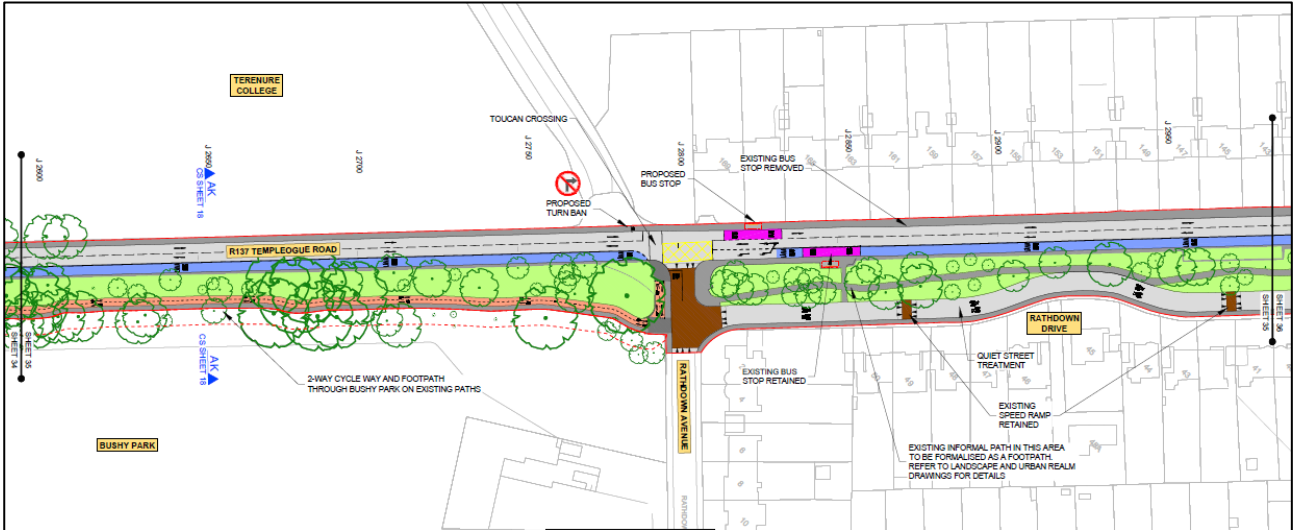


Figure 2.2.6 Extract from General Arrangement Drawings (Sheet 35)

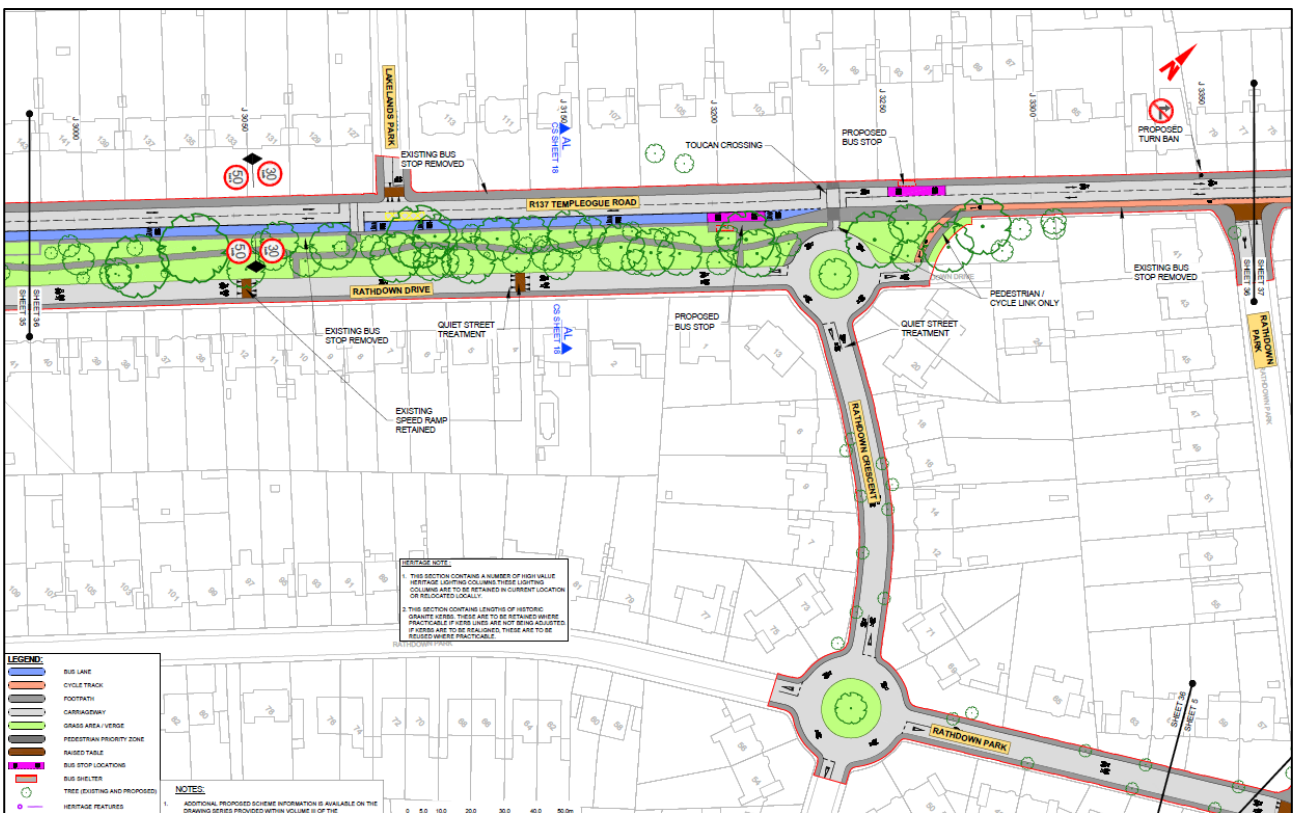


Figure 2.2.7 Extract from General Arrangement Drawings (Sheet 36)

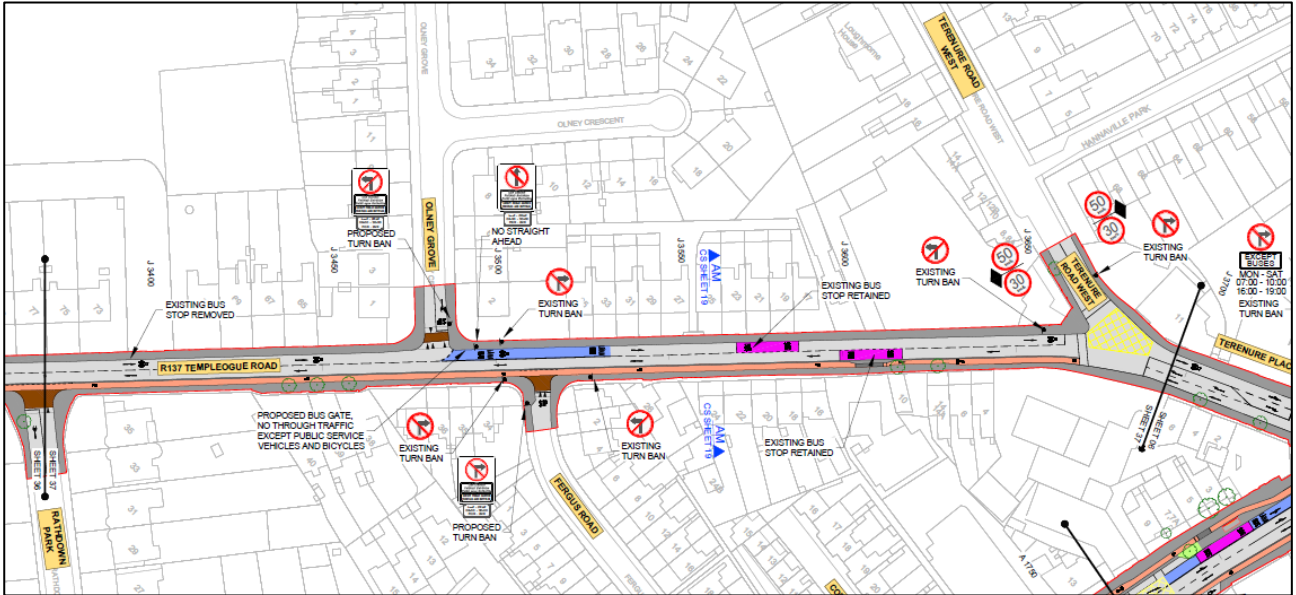


Figure 2.2.8 Extract from General Arrangement Drawings (Sheet 37)



Figure 2.2.9 Extract from General Arrangement Drawings (Sheet 38)

Table 2.2.1 below lists the 46 submissions within which issues were raised in respect of the Proposed Scheme on Templeogue Road and the neighbouring vicinity.

2.2.2 Overview of Submissions Received

Table 2.2.1 below lists the 46 submissions within which issues were raised in respect of the Proposed Scheme at Templeogue Road.

Table 2.2.1 Submissions Made in Respect of Templeogue Road

No	Name	No	Name	No	Name
8	Ann Moore	108	Fiona Reilly	201	Paul and Maria Baird
35	Bertha Walsh	111	Gavin Maguire	202	Paul Jacobs
36	Betty Murphy	128	Jim Byrne	210	Philip and Vivienne Mayne & Jacky Mayne
37	Brendan Heneghan	134	John Lahart TD	223	Residents of Fortfield Road
44	Caitriona Holt & Ken Dolan	135	John Perham and Valerie Henderson	224	Residents of Greenlea Avenue, Drive and Park
48	Celine & John Cullen	136	John Shanahan	226	Residents of Lavarna Grove and Lavarna Road
63	Colin McKeeman	142	Kathy Jacobs	230	Residents of Parkmore Drive, Terenure
66	Conor and Anna O'Kelly and others	164	Mark Duggan and Maria and Brian Bilings	231	Residents of Terenure Road West
67	Conor O'Meara	166	Martin & Bernie Gibbons	246	Saint Judes Mens Shed Club
68	Conor Ryan and Siobhan Ryan	174	Melisa Kearney	260	Stephen Garland
74	David Byrne	180	Michele Van Valey and Derek Hennessy	267	Templeogue Wood Residents Association
75	David O'Doherty and Niamh Tierney	182	Mona Stafford	268	Terenure & Templeogue Sustainable Community Assoc.
79	Denise Russell	183	Monica Tansey	283	Una O'Neil
95	Eimear O'Broin	194	Orla Murphy	286	WORK Residents Association
96	Elaine J. Wright	197	Pat and Maire Coman		
98	Emmanuel Kehoe and Dr Attracta Halpin	199	Patrick & Anne Fletcher		

A number of issues were raised, and these are listed below and described in Section 2.2.3 below.

Common Issues Raised

1. The Templeogue Road Inbound Bus Gate
 - a. No need for bus gate as existing bus priority signal is considered to be sufficient
 - b. Hours of operation of bus gate are too onerous
2. Traffic impact of Templeogue Road Inbound Bus Gate and Associated Traffic Management Proposals
 - a. Impact on Fortfield Road/Greenlea Road/Lavarna Road
 - i. Increase in traffic on Fortfield Road
 - ii. Effect of Turn Bans on Access
 - iii. Inadequate advanced signage to divert through traffic away from Templeogue Road
 - b. Impact on Access to Rathdown Area
 - c. Impact of traffic management proposals on parking at Bushy Park and Terenure Rugby Club
 - d. Effectiveness of proposed turn bans

3. Relocated bus stops on Templeogue Road
 - a. Relocation of bus stop outside 217-219 Templeogue Road.
 - b. Relocation of bus stops at Lakelands Park
4. Reduction in number of buses on Templeogue Road
5. Spawell Junction and environs
 - a. Proposals for additional inbound and outbound lanes
 - i. Increase in ped crossing lengths
 - ii. Potential for increased speeds
 - b. Two-way cycle track between Spawell and Rossmore Greenway should be retained
 - c. Safety Audit does not reflect the latest design at Spawell roundabout

2.2.3 Common Issues Raised and Responses

2.2.3.1 The Templeogue Road Inbound Bus Gate

Summary of Issues Raised

- a) No need for bus gate as existing bus priority signal sufficient

A number of submissions queried the need for the proposed inbound bus gate on Templeogue Road. Some of these stated that the existing bus priority signal operated satisfactorily and noted that this arrangement could be retained.

- b) Hours of operation of bus gate are too onerous

Some submissions queried the hours of operation of the proposed bus gate stating that these should be limited to peak hours only.

Response to Issues Raised

- a) No need for bus gate as existing bus priority signal sufficient

At present, bus priority along Templeogue Road is intermittent as described in section 6.3.2.3.1 of Chapter 6 Traffic and Transport:

Bus lanes are intermittent along Section 1 of the Proposed Scheme, but are present at the following locations:

- *In both directions between Spawell Service Station and Spawell Roundabout, operating 24 hours;*
- *Northbound between Spawell Roundabout and 90m west of R817 Cypress Grove Road, operating 24 hours (no designated bus lane southbound, however, there are three traffic lanes);*
- *Northbound between the east of Templeogue Village (out the Hollingsworth Cycles shop) and Springfield Avenue/ Templeville Road.*
- *Between the majority of Springfield Road and Fortfield Road, operating 24 hours; and*
- *Northbound for approximately 420m from Rathdown Avenue, operating Monday to Saturday between 07:00 – 10:00 and 12:30 – 19:00.*

In addition to the above physical infrastructure provision, a bus priority signal operates from the termination of the inbound bus lane at Lakelands Drive as far as Terenure Cross.

Given the intermittent nature of the bus priority measures in each direction, as well as the absence of safe, segregated cycle facilities, it is considered that the existing situation will not deliver the aim and objectives to provide enhanced walking, cycling and bus infrastructure on this key corridor, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

As such, options were developed evaluated using a sifting process and multi-criteria assessment (MCA), with the route and scheme along Templeogue Road identified as the preferred option to deliver the aim and objectives of the scheme. Alternative options considered could not meet the objectives to enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through provision of bus lanes and other measures to provide priority to bus movements over general traffic movements, and to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

A comprehensive options assessment process was undertaken for the scheme and is summarised in Section 3.3.2.1.2 of Chapter 3 Consideration of Reasonable Alternatives in Volume 2 of the EIAR as presented below:

Due to a number of existing constraints, the section of Templeogue Road between the Fortfield Road/Templeogue Road junction and the Terenure Road East/Templeogue Road junction, required specific consideration which required the identification of alternative scheme options (12 no.) for this section. An MCA was undertaken on these alternative scheme options in order to determine the most appropriate scheme for this section of Templeogue Road. These options, which all follow the same route, are briefly summarised below.

- *Option S2-1 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction.*
- *Option S2-2 would consist of providing bus lanes in each direction from Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West with the exception of a 50m section of Templeogue Road approaching Rathdown Park. Segregated cycle facilities would be provided along each side of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road.*

A bus gate would be implemented on Templeogue Road at Rathdown Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic would share with buses in the proposed bus lanes.

- *Option S2-3 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road at Rathdown Avenue/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic would share with buses in the proposed bus lanes.*
- *Option S2-4 would consist of providing bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Rathdown Park/Templeogue junction. An inbound bus lane would be provided on Rathdown Park and then connecting with the Rathfarnham CBC on Rathfarnham Road. An outbound bus lane would be provided on Fergus Road connecting Rathfarnham Road to Templeogue Road. From the Fergus Road/Templeogue Road junction to Rathdown Park/Templeogue Road junction outbound buses will share with general traffic in the general traffic lane. Cycle lanes would be provided along each side of Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction.*
- *Option S2-5 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-6 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. The outbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross.*

Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.

- *Option S2-7 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. The inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-8 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. A bus gate would be implemented on Templeogue Road to ensure only buses and cyclists would be permitted entry from the Fortfield Road/Templeogue Road junction to Terenure Road West/Templeogue Road junction. Between the aforementioned bus gates, local access traffic would share with buses in the proposed bus lanes. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park.*
- *Option S2-9 would consist of providing bus lanes in each direction for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where an outbound bus lane would not be provided. The inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access would be permitted). Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-10 would consist of providing an outbound bus lane along Templeogue Road from Rathdown Park to Fortfield Road. An inbound bus lane would be provided along from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from the Springfield Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access would be permitted). No inbound traffic lane would be provided between the Fortfield Road/Templeogue Road junction and the Rathdown Park/Templeogue junction (Local access would be permitted). Outbound cycle facilities would be provided along Templeogue Road from Terenure Cross to Rathdown Park. Between the Lakelands Park/Templeogue Road junction and the Terenure Road West/Templeogue Road junction cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. The removal of the inbound general traffic lane is proposed on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.*
- *Option S2-11 would consist of providing bus lanes in each direction for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where an outbound bus lane would not be provided. The removal of the inbound general traffic lane is proposed on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.*

A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access would be permitted).

Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.

- *Option S2-12 would consist of providing an outbound bus lane along Templeogue Road from Rathdown Park to Springfield Avenue. An inbound bus lane would be provided between the Olney Grove/Templeogue Road junction and the Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access would be permitted). No inbound traffic lane would be provided between the Fortfield Road/Templeogue Road junction and Rathdown Park/Templeogue junction (Local access would be permitted). A two-way cycle route would be provided through Bushy Park adjacent to Templeogue Road. A shared/mixed street would be provided along Rathdown Drive. Segregated cycle facilities would be provided in the outbound direction from the Terenure Road West/Templeogue Road junction to Rathdown Drive pedestrian access/new proposed Toucan crossing. The inbound general traffic lane on Templeogue Road would be removed from Olney Grove to Terenure Cross, to reduce the required land acquisition on residential properties approaching Terenure Cross.*

A multi-criteria assessment of all scheme options was undertaken. The assessment sub-criteria which were differentiators between scheme options included Capital Cost, Transport Reliability and Quality, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Pedestrian Safety, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character.

The assessment concluded that ‘Option S2-12 was identified as having significant benefits over other options in relation to Capital Cost, Flora and Fauna, Landscape and Visual, Air Quality and Noise and Vibration. Option S2-12 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route’.

- b) Hours of operation of bus gate are too onerous.

The Proposed Scheme along the Templeogue Road proposes an inbound bus gate which will be operational between 06:00 and 20:00 seven days a week. An analysis of existing traffic flow levels on the corridor do not show a significant reduction in traffic volumes through the day (relative to peak hours), and hence bus gate operation during the hours noted above is necessary to provide fast, reliable bus journey times for all services.

2.2.3.2 Traffic impact of Templeogue Road Inbound Bus Gate and Associated Traffic Management Proposals

Summary of Issues Raised

- a. Impact on Fortfield Road/Greenlea Road/Lavarna Road
 - i. Increase in traffic on Fortfield Road
 - ii. Inadequate advanced signage to divert through traffic away from Templeogue Road
 - iii. Effect of Turn Bans on Access

A number of submissions raised concerns around the impact of the proposed inbound bus gate on Templeogue Road on traffic movement in the area.

Some submissions stated that the proposed arrangement would see increases in traffic volumes along Fortfield Road as this is the last opportunity for inbound traffic to divert in advance of the proposed bus gate. Residents were concerned that this would lead to congestion along Fortfield Road and impact on safety of all road users.

It was noted in some submissions that the Proposed Scheme did not include sufficient signage for inbound traffic to adequately notify motorists of the alternative routing to the city centre away from Templeogue Road.

Submissions noted that the proposed right turn bans into Greenlea Road and Lavarna Grove would severely restrict vehicular access to these residential streets impacting on residents on these streets. It was further noted that the right turn ban into Greenlea Road would restrict vehicular access local amenities including a post office, medical centre and pharmacy.

- b. Impact on Access to Rathdown Area

A number of submissions received noted that the proposed turn bans from Templeogue Road into Rathdown Avenue and Rathdown Park would restrict vehicular access for residents. These submissions noted that alternative access routes would be circuitous and would result in significant inconvenience for residents in Rathdown.

Other submissions noted that the proposed turn bans would restrict vehicular access to Bushy Park and in particular the sporting facilities in the park. It was noted that on-street parking within the Rathdown estate is used by people visiting the park and that the proposed turn bans would restrict the ability for visitors to park here.

c. Effectiveness of proposed turn bans

A number of submissions received raised concerns about the effectiveness of turn bans stating that these would not be enforced and that traffic would ignore any restrictions. This would result in rat-running along the roads intended to be protected by the proposed turn bans (e.g Lavarna Grove, Greenlea Road, Rathdown Avenue.)

Response to Issues Raised

a. Impact on Fortfield Road/Greenlea Road/Lavarna Road

- i. Increase in traffic on Fortfield Road
- ii. Inadequate advanced signage to divert through traffic away from Templeogue Road
- iii. Effect of Turn Bans on Access

Increase in traffic on Fortfield Road

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

'a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences'.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

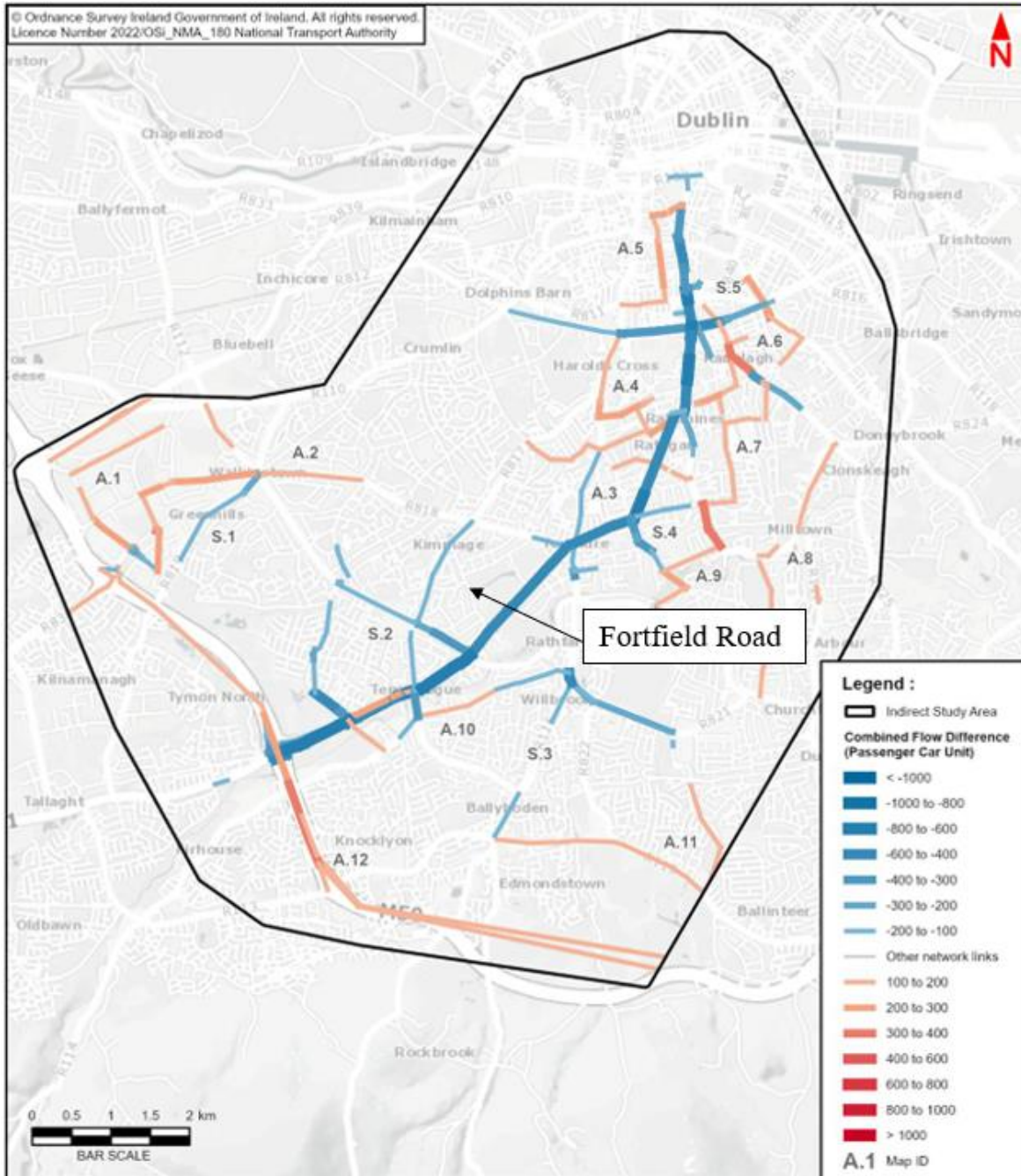


Figure 2.2.10 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

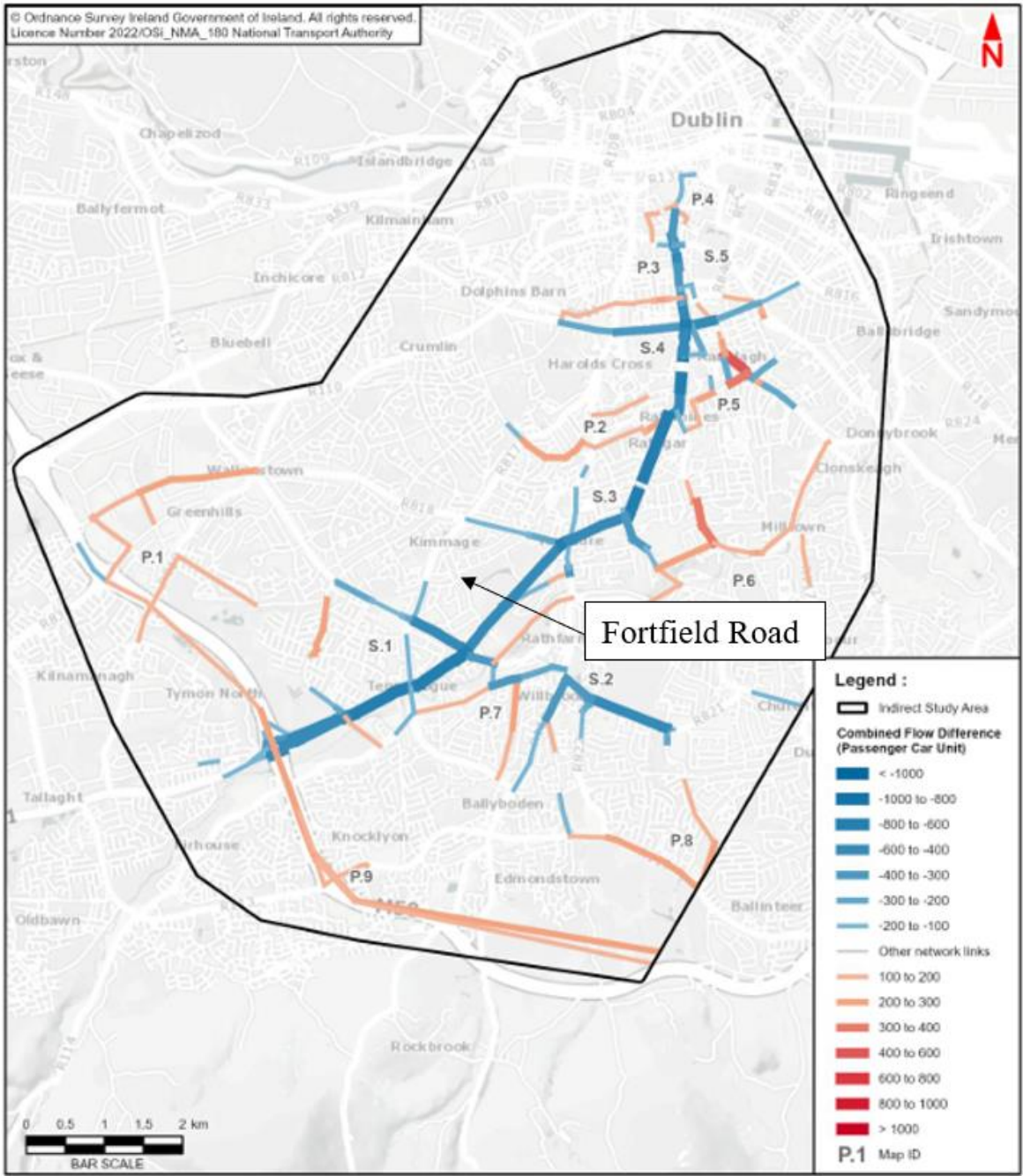


Figure 2.2.11 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken does not identify any material change in traffic volumes along Fortfield Road as a result of the Proposed Scheme, i.e., any changes in traffic volumes along Fortfield Road are less than 100 passenger car units per hour. As described in the following sections, it is noted that the proposed signage strategy, in combination with supplementary traffic management measures, ensure that traffic increases are limited to roads more suitable for dealing with increased traffic. It is also noted that in both peak periods, traffic is seen to divert more strategically as indicated by increases along the M50.

Inadequate advanced signage to divert through traffic away from Templeogue Road

The Traffic Signs and Road Markings Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR present the signage to be included as part of the Proposed Scheme. In order to reflect the required changes to vehicular traffic routing as a result of the proposed inbound bus gate on Templeogue Road, a number of changes are proposed to directional signage. These are described below.

On the western approach to the upgraded Spawell junction, it is proposed to update directional signage to direct city bound traffic right towards Firhouse Road and onwards to the city via Rathfarnham Road. Equally traffic arriving at the junction from Wellington Lane would be directed towards Firhouse Road. Figure 2.2.12 and Figure 2.2.13 present extracts from the Traffic Signs and Road Markings Drawings illustrating the proposed directional signage at the Spawell junction.

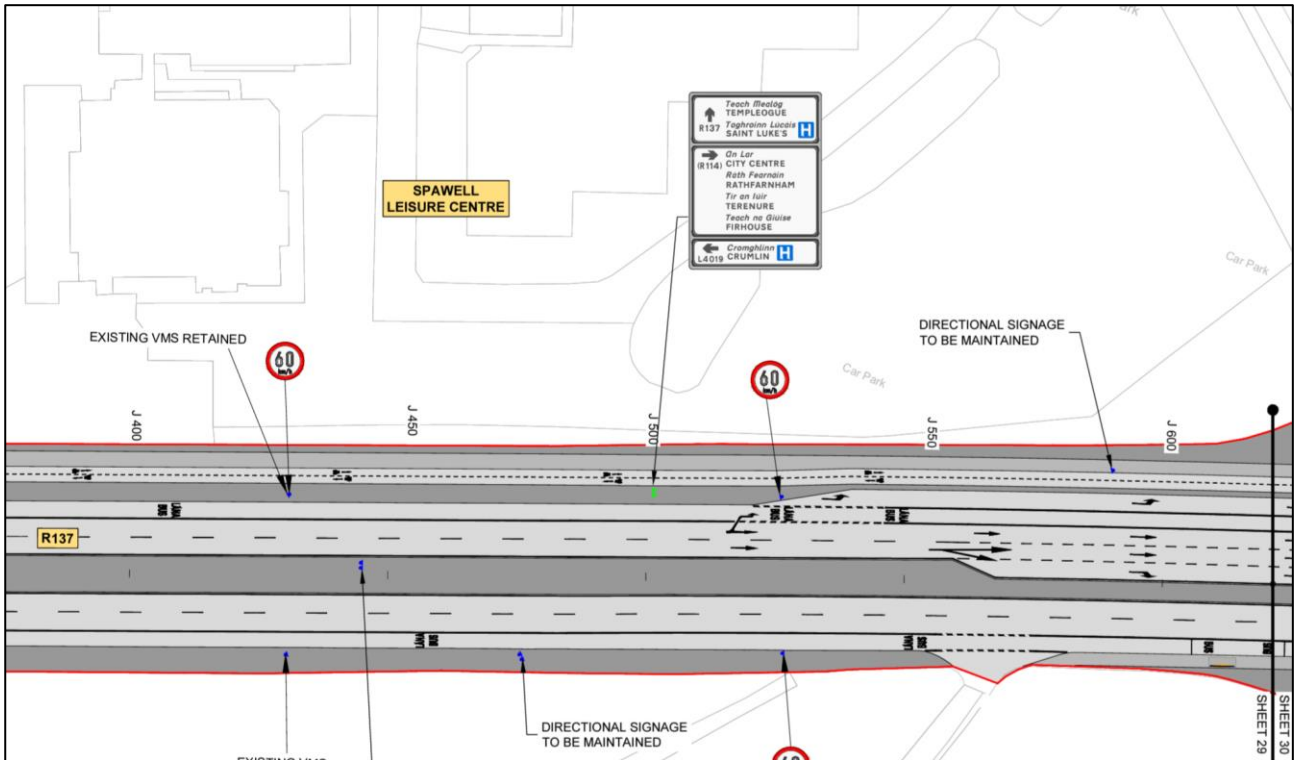


Figure 2.2.12 Extract from Traffic Signs and Road Markings Drawings (Sheet 29)

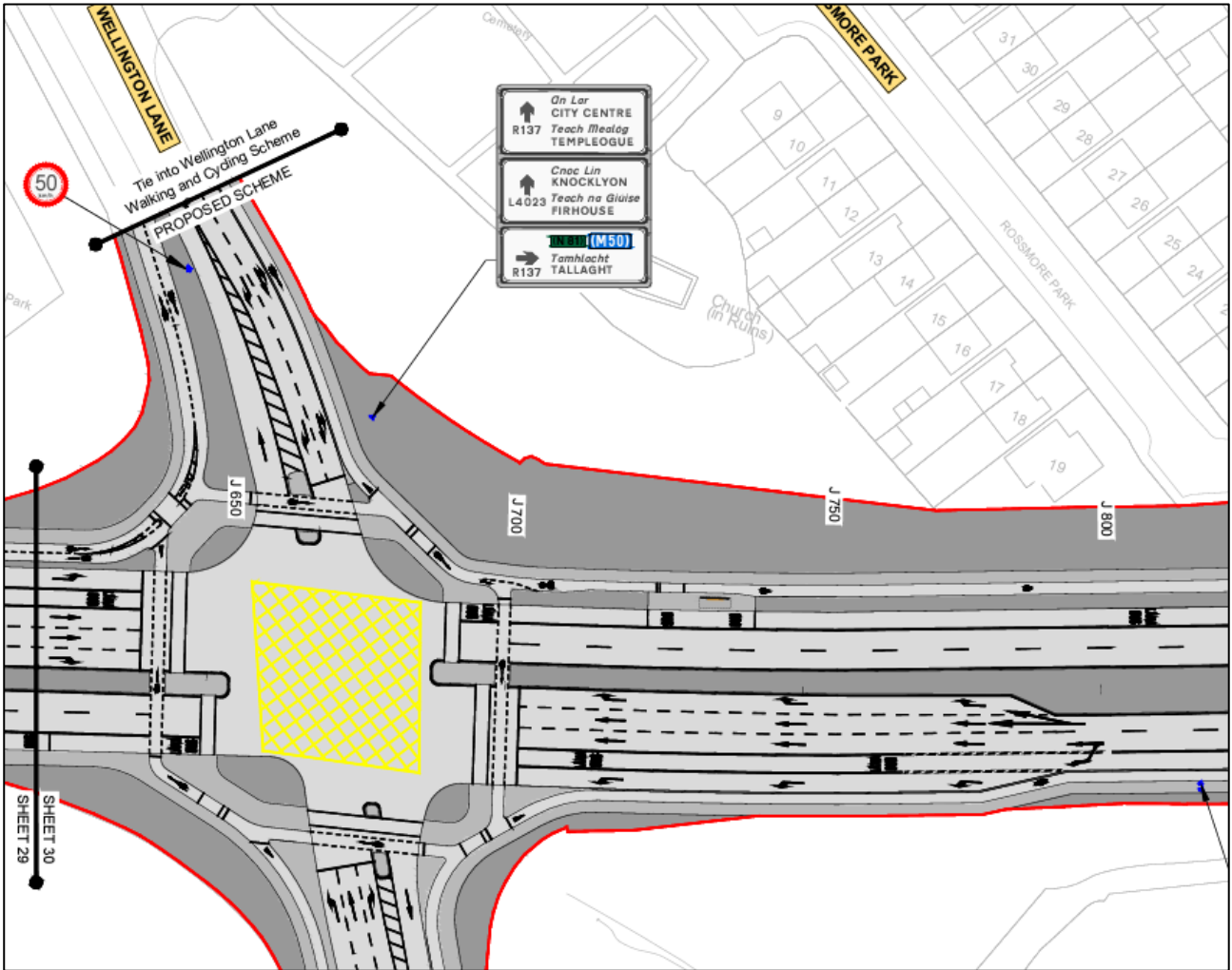
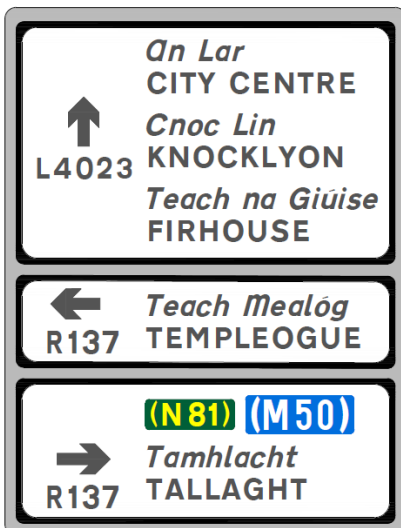


Figure 2.2.13 Extract from Traffic Signs and Road Markings Drawings (Sheet 30)

Note: A minor error is noted on this sign which should direct Templeogue traffic to the left as illustrated below



Similarly, at the Templeogue Road/Cypress Grove Road junction, directional signage is to be updated to direct traffic to turn right from Templeogue Road to Old Bridge Road where traffic can continue to the city centre via Rathfarnham Road. Figure 2.2.14 and Figure 2.2.15 present extracts from the Traffic Signs and Road Markings Drawings illustrating the proposed directional signage at the Templeogue Road/Cypress Grove Road junction.

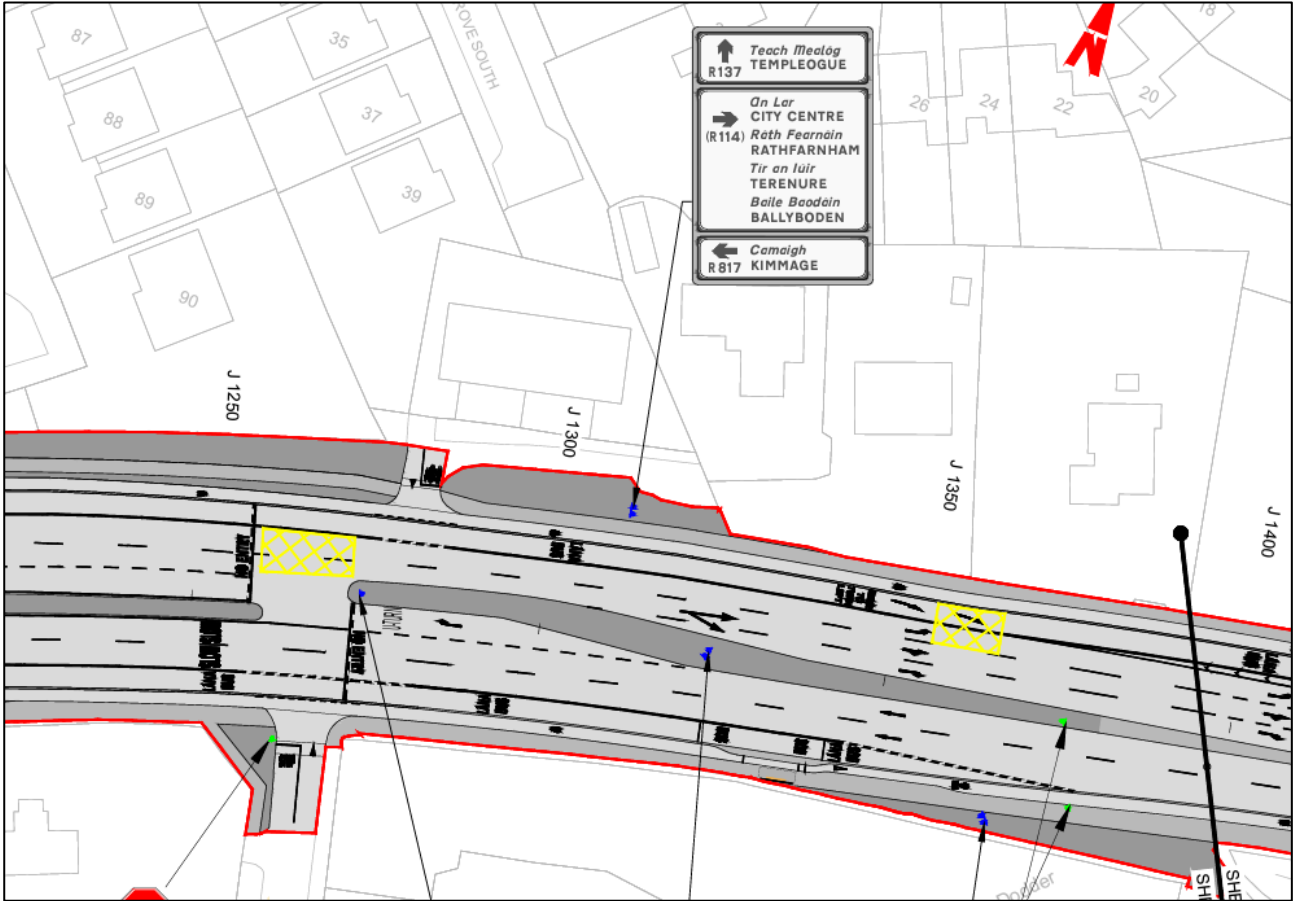


Figure 2.2.14 Extract from Traffic Signs and Road Markings Drawings (Sheet 31)

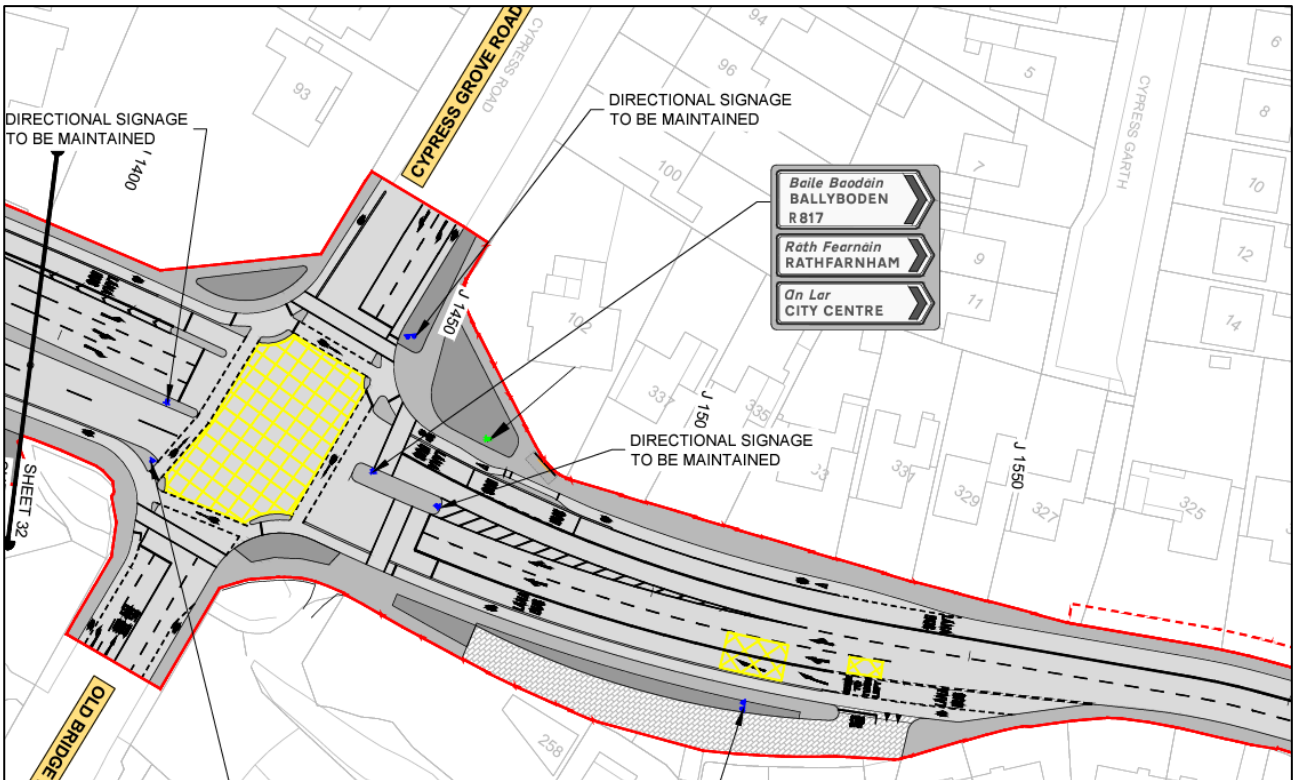


Figure 2.2.15 Extract from Traffic Signs and Road Markings Drawings (Sheet 32)

At the Templeogue Road / Templeville Road / Springfield Avenue junction, a similar strategy is proposed with all traffic bound for the city centre, Rathfarnham and Terenure being directed to Springfield Avenue. It is noted that this turn is currently prohibited but will be reinstated as part of the Proposed Scheme. As this is the last junction at which there is an opportunity to divert to an appropriate alternative route, Templeogue Road east of the junction is signed as 'Local Access'. Figure 2.2.16 presents an extract from the Traffic Signs and Road Markings Drawings illustrating the proposed directional signage at the Templeogue Road/Templeville Road/Springfield Avenue junction.

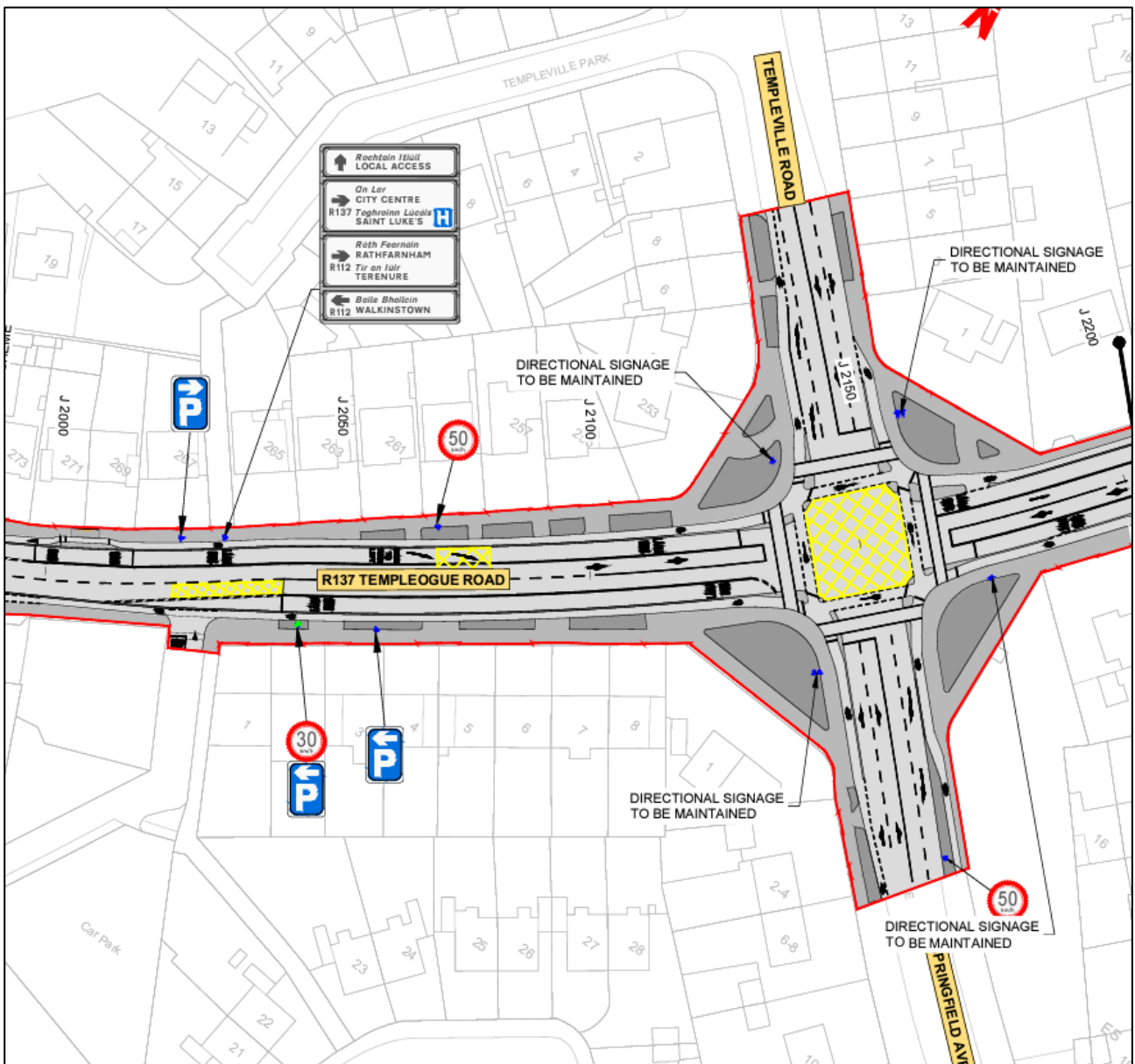


Figure 2.2.16 Extract from Traffic Signs and Road Markings Drawings (Sheet 33)

At this point, only local traffic should be travelling eastwards on Templeogue Road. As such, at the Fortfield junction a sign reinforcing 'Local Access' for traffic continuing east is proposed. There is no directional signage proposed for traffic turning to Fortfield Road as it is not intended as a through traffic route.

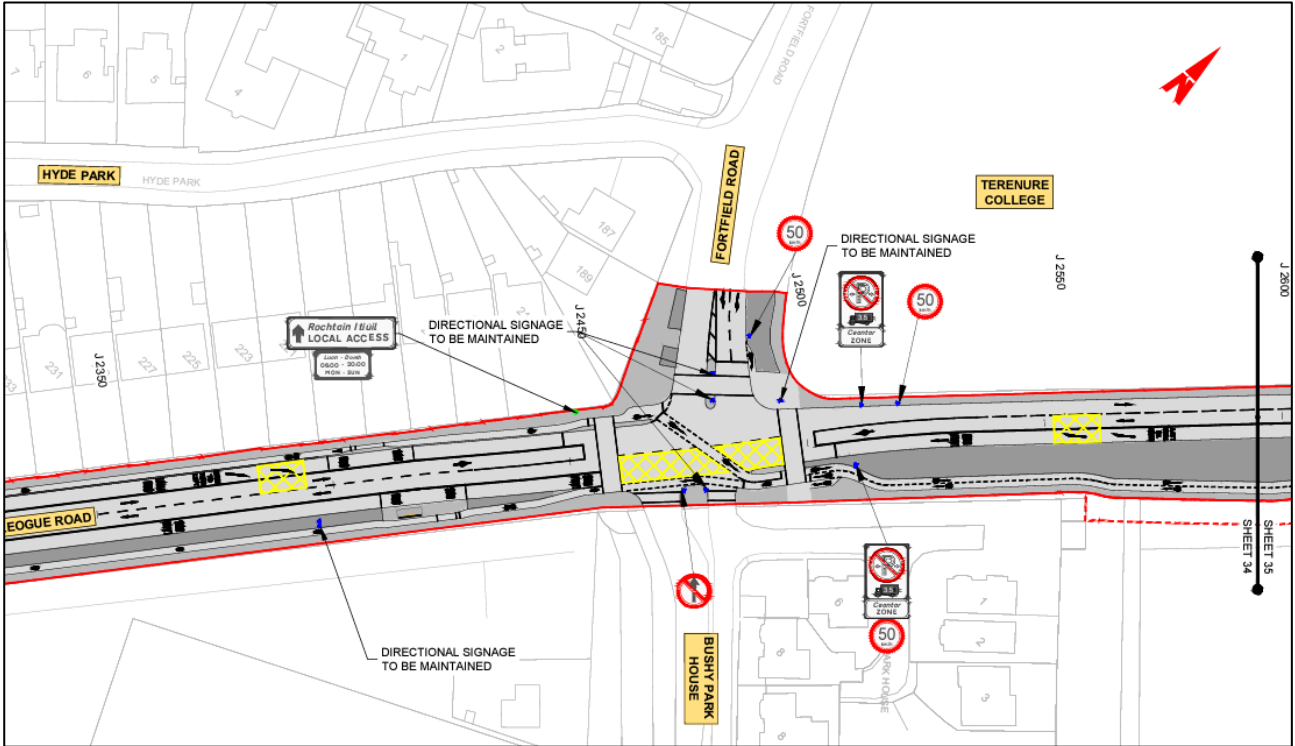


Figure 2.2.17 Extract from Traffic Signs and Road Markings Drawings (Sheet 34)

The proposed directional signage strategy ensures that traffic is given a number of opportunities to divert to alternative suitable routes towards the city centre and therefore reduces the potential for through traffic to divert via Fortfield Road. This is reflected in the traffic modelling as discussed earlier in this response which indicates no material change to traffic flows on Fortfield Road as a result of the Proposed Scheme.

Effect of Turn Bans from Fortfield Road on Local Access

A number of submissions raised concerns about the proposed turn bans from Fortfield Road to Greenlea Road and Lavarna Grove. Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic. Two turn bans are proposed from Fortfield Road as set out in table 4.25 of Chapter 4 of the Preliminary Design Report. An extract from this table is presented in Table 2.2.2.

Table 2.2.2 Extract from Table 4.25 of the Preliminary Design Report

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Fortfield Road/Greenlea Road	No Right turn onto Greenlea Road from Fortfield Road	To avoid general traffic travelling through the Greenlea area due to the proposed inbound Bus Gate on Templeogue Road	Risk of diverted through traffic using this route removed. New sign and pole required at the junction.
Fortfield Road/Lavarna Grove	No Right turn onto Lavarna Grove from Fortfield Road	To avoid general traffic travelling through the Lavarna area due to the proposed inbound Bus Gate on Templeogue Road	Risk of diverted through traffic using this route removed. New sign and pole required at the junction.

The above extract shows that both turn bans are proposed to minimise the risk of inbound through traffic utilising either Greenlea Road or Lavarna Grove to bypass the proposed inbound bus gate on Templeogue Road.

It is acknowledged that these turn bans may result in an inconvenience for those seeking to access business or residential premises on Lavarna Grove and Greenlea Road, it is noted that vehicular access will be retained via routes from all other directions (i.e. from the east and west along Terenure Road West and from the north on Fortfield Road). It is noted that no restrictions are proposed for traffic exiting either Lavarna Grove or Greenlea Road.

The following figure presents a sample of the alternative routes available from origins to the south/west of Templeogue Road which currently use a route to turn right into Lavarna Grove or Greenlea Road demonstrating that suitable alternative routes exist to provide vehicular access to these streets.



Figure 2.2.18 Alternative access routes to Lavarna Grove and Greenlea Road from the south/west

It is noted that some submissions suggested that the time periods during which the turn bans are in effect should be reviewed to match those of the proposed bus gate. 24 hour operation of turn bans at this location are preferred in order to provide road users with a road layout and network which is consistent at all times – and hence can be easily understood and safely used by car drivers, pedestrians and cyclists.

b. Impact on Access to Rathdown Area

A number of submissions raised concerns about the proposed turn bans from Templeogue Road to Rathdown Avenue and Rathdown Park. Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic. Two turn bans are proposed from Templeogue Road as set out in table 4.25 of Chapter 4 of the Preliminary Design Report. An extract from this table is presented in Table 2.2.3.

Table 2.2.3 Extract from Table 4.25 of the Preliminary Design Report

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Templeogue Road/Rathdown Avenue	No Right turns onto Rathdown Avenue from Templeogue Road	To avoid general traffic travelling through the Rathdown area due to the proposed inbound Bus Gate on Templeogue Road	No right turn inbound movements from Templeogue Road onto Rathdown Avenue
Templeogue Road/Rathdown Park	No Right turns onto Rathdown Park from Templeogue Road	To avoid general traffic travelling through the Rathdown area due to the proposed inbound Bus Gate on Templeogue Road	No right turn inbound movements from Templeogue Road onto Rathdown Park

The above extract shows that both turn bans are proposed to minimise the risk of inbound through traffic utilising either Rathdown Avenue or Rathdown Park to bypass the proposed inbound bus gate on Templeogue Road.

It is acknowledged that these turn bans may result in an inconvenience for those seeking to access residential premises in the Rathdown Estate or Bushy Park, it is noted that vehicular access will be retained via routes from all other directions (i.e. from the north along Templeogue Road and from the north and south along Rathfarnham Road).

The following figure presents a sample of the alternative routes available from origins to the south/west of Templeogue Road which currently use a route to turn right into Rathdown Avenue or Rathdown Park demonstrating that suitable alternative routes exist to provide vehicular access to these streets.



Figure 2.2.19 Alternative access routes to Lavarna Grove and Greenlea Road from the south/west

c. Impact of traffic management proposals on parking at Bushy Park and Terenure Rugby Club

A number of submissions note that the proposed traffic management measures will impact on access to car parking at Bushy Park (on-street within Rathdown) and Terenure Rugby Club. These submissions note that there is a risk of overspill parking onto Lakelands Park, Fortfield Road and neighbouring streets.

As noted in response to concerns around access routes, access to Bushy Park and Terenure Rugby Club will be retained along other routes as illustrated in Figure 2.2.18 and Figure 2.2.19. As such access to existing car parking facilities will still be accessible by car, albeit by alternative routes for some.

d. Effectiveness of proposed turn bans

The NTA acknowledges the comments raised in relation to enforcement of turn bans. With the State having incurred the very large expenditure required to deliver the BusConnects Programme, it is vital to ensure that sufficient enforcement is in place such that the benefits of that investment are not eroded by widespread breaches of the restrictions applying to bus lanes, cycle tracks and junctions. To effectively ensure this outcome, camera-based enforcement will be required to augment the on-street activities of An Garda Síochána. This type of arrangement is in place in many jurisdictions internationally, where camera detection of certain breaches of regulations is linked to the automatic issue of fixed penalty notices.

Action 67 in the Road Safety Strategy Phase 1 Action Plan 2021–2024 sets out the need to *“further develop camera-based enforcement by the Gardaí, including at junctions and for management of bus/cycle lanes, building on existing and recent legislation through establishing suitable cross-agency administrative arrangements; and, where any legislative issues are identified, to consider and develop agreed proposals to remedy them.”*

The Department of Transport has requested the National Transport Authority (NTA) to undertake the first phase of this action, namely to establish and chair a working group to explore this action and to bring forward recommendations on how it should be progressed. The subsequent steps for implementation, including addressing any legislative issues that may be identified, will be determined by the Department of Transport subsequent to the initial phase. It is expected that the report of the Working Group will be finalised and provided to the Department later this year.

2.2.3.3 Relocated bus stops on Templeogue Road

Summary of Issues Raised

a. Relocation of bus stop outside 217-219 Templeogue Road

A number of submissions raised concerns around the relocation of a bus stop from 239-237 Templeogue Road to 217-219 Templeogue Road citing the fact that the stop would be too close to the Fortfield Road junction and it would therefore create traffic issues. For example, traffic would not be able to continue straight if there was a bus stopped at the stop due to traffic turning right into Bushy Park House. It is also contended that there would be a high volume of left turning traffic due to the bus gate.

It was further stated that the removal of the bus stop north of Fortfield Road outside Terenure College effectively means a consolidation of two stops into one.

It was noted that the area outside 217 Templeogue Road is prone to flooding and has a narrow footpath.

b. Relocation of bus stops at Lakelands Park

A number of submissions raised concerns about the removal of bus stops at Lakelands Park impacting on residents in the vicinity.

Response to Issues Raised

a. Relocation of bus stop outside 217-219 Templeogue Road

As noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

The criteria that are considered when locating a bus stop are as follows;

- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

The Bus Stop Review Report notes the following in relation to the existing bus stops on Templeogue Road at this section of the Proposed Scheme:

Bus Stop 1158

Stop to be amended? Removed

Reason for decision: This stop is being consolidated with 1159 at a location just south of Fortfield Road to improve accessibility to Fortfield Road while providing more consistent stop spacings.

Bus Stop 1159

Stop to be amended? Yes – stop to be moved 150m west

Reason for decision: This location serves to consolidate stops 1158 and 1159 into one stop, located adjacent to the Fortfield Road junction, which improves accessibility to Fortfield Road while providing more consistent stop spacings. The proposed location is also within a bus lane rather than a traffic lane which will minimise its impact.

The proposal to move consolidate bus stop 1158 and 1159 into a single stop aligns with the bus stop location principles namely:

- It is located close to the Fortfield Road junction increasing accessibility from the large residential catchment along, and accessed off, Fortfield Road. It is noted that while there is a preference for a bus stop to be located on the exit side of a junction, as there is no bus lane on the exit side in this instance it is preferable to locate the stop at it's proposed location;
- It is located close to pedestrian crossings facilitating safe access to the eastern side of Templeogue Road, including Our Lady's School – existing stops are c. 120m from the nearest controlled crossing point;
- It facilitates better stop spacing with 400m between the prior and subsequent bus stops – existing distance between stops is 320m (between stop 1157 and 1158) and 260m (between stop 1158 and 1159);
- The same footpath width is available at proposed location as the current location.

b. Relocation of bus stops at Lakelands Park

The Bus Stop Review Report referenced above notes the following in relation to the existing bus stops on Templeogue Road at Lakelands Park:

Bus Stop 1161

Stop to be amended? Yes, stop to be moved 130m east, after pedestrian crossing.

Reason for decision: This location is closer to the proposed pedestrian crossing, and better serves the Rathdown Park catchment.

Bus Stop 1123

Stop to be amended? Yes - stop to be moved approx. 130m East.

Reason for decision: This location improves stop spacing, is located just after proposed pedestrian crossing and better serves the Rathdown Park Catchment.

The proposal to move these bus stops aligns with the bus stop location principles namely:

- It is located close to the Fortfield Road junction increasing accessibility from the large residential catchment along, and accessed off, Rathdown Crescent.
- It is located close to pedestrian crossings;

- It facilitates better stop spacing inbound with 430m between it and the prior stop and 315m between it and the subsequent bus stop – existing distance between stops is 260m (between stop 1161 and 1160) and 265m (between stop 1161 and 1162);
- It facilitates better stop spacing inbound with 400m between it and the prior stop and 360m between it and the subsequent bus stop – existing distance between stops is 225m (between stop 1122 and 1123) and 265m (between stop 1123 and 1124);

2.2.3.4 Reduction in number of buses on Templeogue Road

Chapter 2 in Volume 3 of the EIAR sets out the objectives of the Proposed Scheme:

The objectives of the Proposed Scheme are to:

- *Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movements over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland’s emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*
- *Ensure that the public realm is carefully considered in the design and development of transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.*

The objectives outlined above relating to enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of ‘People Movement’. People Movement is the concept of the optimisation of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.

For the purposes of the EIAR and the transport modelling undertaken in support of the EIAR, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios.

However, the Proposed Scheme will facilitate opportunities to change bus network capacity operating along the corridor due to the extensive priority provided. This will allow increases in service provision as demand increases.

As noted in 6.4.6.1.14 Increased Bus Frequency – Resilience Sensitivity Analysis of Chapter 6 states the following:

For the purposes of this EIAR and the transport modelling undertaken in support of the EIAR, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios. This rollout is currently underway. The rationale for undertaking this approach was that the planning consent being sought and which this EIAR supports is solely for the infrastructural improvements associated with providing bus priority and other sustainable modes measures along the Proposed Scheme.

This analysis, however, is conservative as the bus priority infrastructure improvements and indeed the level of protection it will provide to bus journey time consistency and reliability will provide a significant level of resilience for bus services that will use the Proposed Scheme from implementation into the future. The resilience provided by the Proposed Scheme will allow the service pattern and frequency of bus services to be increased into the future to accommodate additional demand without having a significant negative impact on bus journey time reliability or the operation of cycle and pedestrian facilities. In order to assess this resilience and the potential impacts of this resilience on carbon emissions, an additional analysis has been undertaken.....

2.2.3.5 Spawell Junction and environs

Summary of Issues Raised

- a. Proposals for additional inbound and outbound lanes
 - i. Increase in ped crossing lengths
 - ii. Potential for increased speeds

Submissions raised queries with regards to the design of the junction at Spawell. These submissions noted that the proposed design provided increased capacity at the junction for vehicular traffic by providing additional through lanes in each direction. It was noted that this would have the potential for increased speeds. It was also noted that increased number of lanes would increase the crossing distance for pedestrians which was not in line with the scheme objectives.

- b. Increased congestion at the Spawell Junction due to proposed changes

Some submissions noted that the proposed changes at the Spawell junction may result in increased congestion and result in queuing back to the M50 junction.

- c. Two-way cycle track between Spawell and Rossmore Greenway should be retained

A submission noted that the existing two-way cycle track on the northern side of Templeogue Road between Spawell and Rossmore Greenway was proposed to be removed and that this would significantly increase the journey length for a cyclist travelling between Rossmore and Spawell.

- d. Safety Audit does not Reflect the Latest Design at Spawell Roundabout

A submission noted that the safety audit for the Proposed Scheme did not include the final layout at the Spawell junction.

Response to Issues Raised

- a. Proposals for additional inbound and outbound lanes

The Junction Design Report, provided as Appendix A6.3 of EIAR Volume 4 Part 2 of 4, sets out the evolution of the junction design at this location. The report noted in the description for the change from a roundabout to a signalised junction, the reason for this change was:

1. *To improve safety for pedestrians and cyclists.*
2. *To improve junction operation.*

The Spawell junction is a major junction on the Templeogue Road and acts as a key location for the distribution of traffic to residential communities north and south of Templeogue Road. It's function as a key distribution node is enhanced as part of the Proposed Scheme due to the proposed inbound bus gate on Templeogue Road at Olney Crescent and need to divert through traffic away from there. The Spawell junction will therefore facilitate access to alternative routes to the north/west (to Kimmage/Crumlin/Terenure) and to the south/east (Rathfarnham/Harolds Cross/Rathgar). Given its proposed function it was necessary to cater for these movements in an appropriate manner. Equally, it was important to consider the potential impacts on the national road network, namely the M50 which is located c. 600m from the Spawell junction. Sufficient capacity would therefore be required to ensure there is no risk of queuing from this junction to the M50.

Finally, while the submission notes that the number of through lanes has increased, the number of through lanes along Templeogue Road has been retained as per the existing arrangement with 2 traffic lanes and a bus lane in each direction. However, turn lanes have been provided in each direction to better accommodate the high volumes of turning traffic at the junction and reduce the risk of traffic queuing back to the M50 while retaining good priority for buses, and high quality pedestrian and cycle facilities.

While it is acknowledged that the addition of turn lanes increases crossing widths for pedestrians, the length is still within the 19m threshold which would require a staged crossing and is hence considered acceptable.

Table 6.23 of Chapter 6 Traffic and Transport of EIA Volume 1 presents the significance of effects for pedestrian impact during the operational phase at junctions located in Section 1. This identifies an improvement in the pedestrian level of service from LoS D to LoS B upon implementation of the Proposed Scheme, with the significance rated as *Positive Significant*.

In terms of the potential for increased speeds, it is considered that the introduction of traffic signals will have the opposite effect with speeds dropping. The safety implications across the scheme have also been assessed by an independent auditor as part of the Road Safety Audit carried out on the Proposed Scheme and included in Appendix M of the Preliminary Design Report provided in the Supplementary Information. No concerns were raised relating to the junction arrangement during this audit (see response to item c. in this section for further response to comments the Road Safety Audit).

b. Increased congestion at the Spawell Junction due to proposed changes

In relation to this junction, the Junction Design Report, contained in Appendix A6.3 in Volume 4 of the EIA notes that the junction would operate above capacity both peak periods. This is illustrated in extracts from the Junction Design Report presented below.

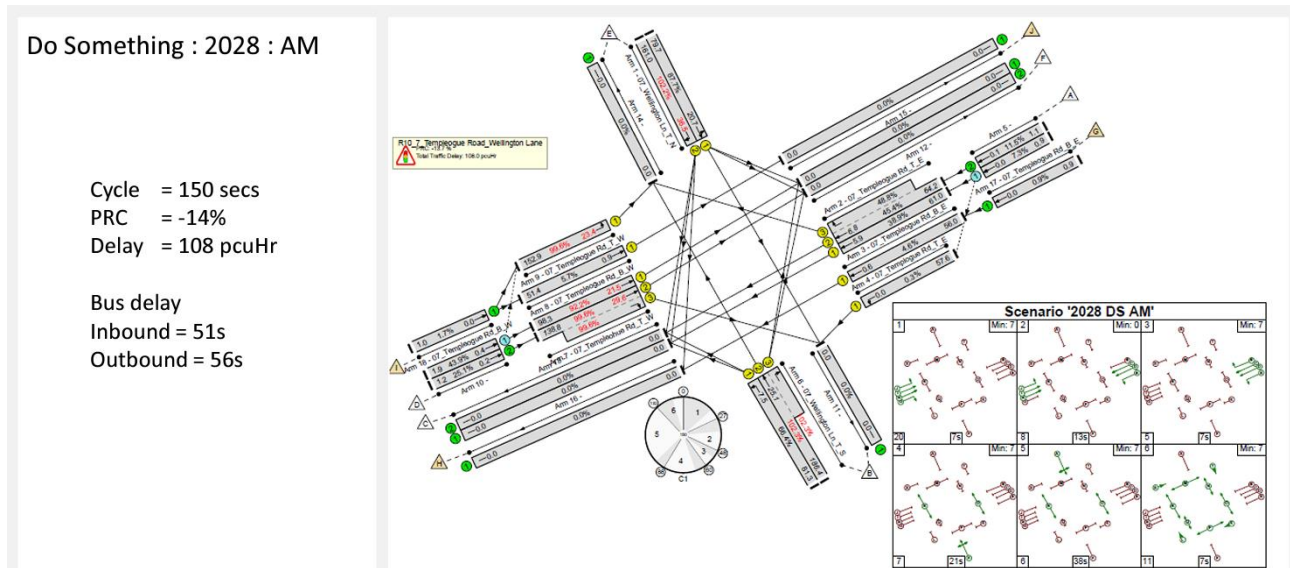


Figure 2.2.20 Extract from Junction Design Report (Appendix A6.3 in Volume 4 of the EIA)

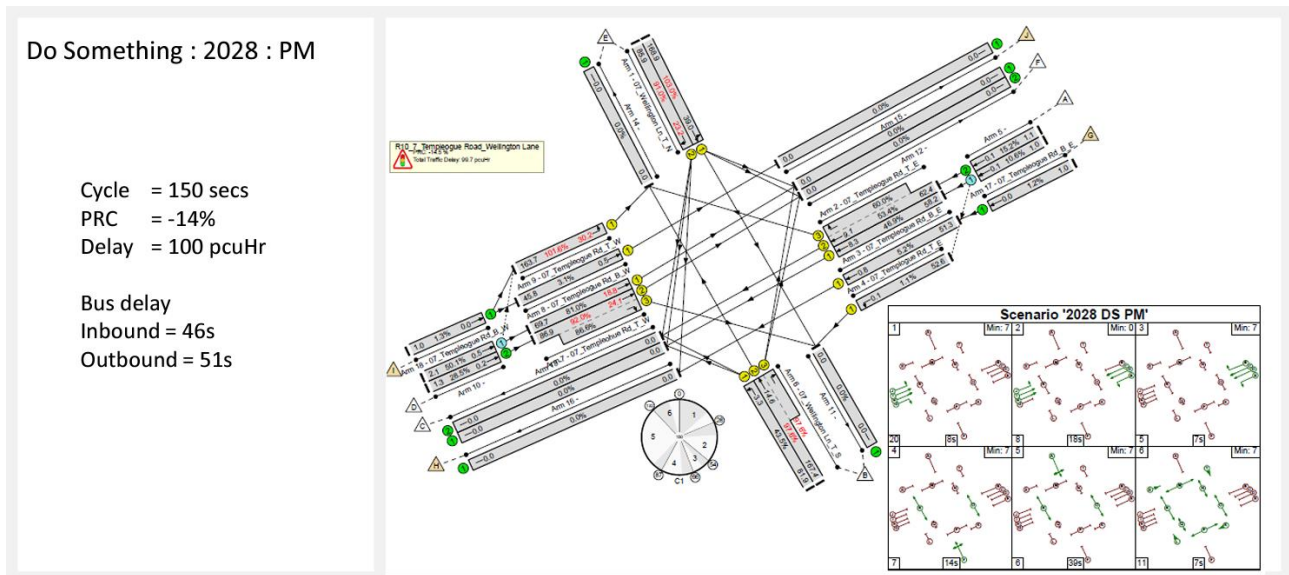


Figure 2.2.21 Extract from Junction Design Report (Appendix A6.3 in Volume 4 of the EIAR)

However, the proposed changes will significantly improve safety for pedestrians and cyclists moving through the junction through the provision of significantly improved crossing facilities for both. As detailed in response to Item a, the pedestrian level of service at the junction would improve from LoS D to LoS B upon implementation of the Proposed Scheme, with the significance rated as *Positive Significant*. It is also noted that proposed layout would facilitate physical bus priority up to and through the junction ensuring good journey times and reliability through this junction.

With respect to queuing to the M50, it is noted that the queue lengths identified in the modelling results presented above would extend to c. 180m from the junction and as such queues would not be expected to interfere with the M50.

c. Two-way cycle track between Spawell and Rossmore Greenway should be retained

A submission points out that the Proposed Scheme removes a section of two-way cycle track between Spawell and Rossmore Greenway (which connects Rossmore Lawns to Templeogue Road). It is noted that the existing two way facility along this section is substandard with a width of c. 2.4m and terminates in advance of the archway, meaning that pedestrians and cyclists are funnelled into a narrow shared space. While it would be possible to widen the cycle track, it was considered that an isolated section of 2-way cycle track introduced potential issues with legibility and may encourage cycling the wrong way on the one-way cycle track further east to which this section connects. Similarly the provision of a two-way cycle track on each side of the road would require additional land acquisition to facilitate. As a result, it was considered that the most appropriate solution that minimised impacts, improved legibility and maximised the provision of high quality segregated cycle facilities, was the provision of a one-way cycle track on each side of the road. It is noted that a widened toucan crossing is proposed across the Templeogue Road at this location to facilitate movements to and from the Rossmore Greenway and surrounding areas. It is further noted that no change is proposed to the pedestrian/cyclist entrance to Templeogue Wood.

d. Safety Audit does not Reflect the Latest Design and Spawell Roundabout

As noted in response to Item a above, the Junction Design Report, provided as Appendix A6.3 of EIAR Volume 4 Part 2 of 4, sets out the evolution of the junction design at this location. As can be seen on page 87 of this document, in the final stages of the design, this junction layout was amended to a junction type 4 (as defined in section 7.4.4 of the BusConnects Preliminary Design Guidance Booklet included as appendix A4.1 of the EIAR). The reason for this change is stated as:

To better tie in with proposals under the approved Dodder Greenway Phase 6 scheme to the south of the junction.

In addition to this, the proposed amendment overall provides a safer environment for both pedestrians and cyclists at the junction.

Due to the late stage at which this change occurred, it was not incorporated into the Stage 1 Road Safety Audit included as Appendix M2 of the Preliminary Design Report included in the Supplementary Information. However, a Stage 2 Road Safety Audit will be carried out at the next design stage. Any safety issues identified at this junction, or anywhere else along the Proposed Scheme will be addressed at this stage.

2.3 Proposed Scheme at Rathfarnham Road

2.3.1 Description of Proposed Scheme at this Location

The Proposed Scheme along this section of the corridor, is described in paragraph 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description:

"The Proposed Scheme will commence at the junction of Grange Road and Nutgrove Avenue, where it will tie into the Grange Road Cycle scheme. It is proposed to upgrade this junction through the provision of kerb protection for cyclists. This will require a limited amount of land take from the entrance to the Rathfarnham Wood development. It is also proposed to reconfigure the existing car park adjacent to this junction to facilitate the revised road arrangement and to install a new island bus stop layout in this location.

Between this junction and the Castleside Drive junction it is proposed to provide a single bus lane alongside general traffic lanes and cycle tracks in both directions. To accommodate the road layout, it is proposed to utilise limited land-take from adjacent properties, including setting back the existing boundary wall to Rathfarnham Castle Park. The existing boundary wall of Rathfarnham castle will be set back and reconstructed with a round capping roughcast render.

It is proposed to upgrade the junction of Rathfarnham Road and Willbrook Road through the provision of kerb protection for cyclists. It is also proposed to upgrade the junction of Rathfarnham Road and Butterfield Avenue through the provision of kerb protection for cyclists. This will require the removal of general traffic lanes on the Butterfield Avenue arm of this junction.

On the section of Rathfarnham Road between Castleside Drive and Dodder Park Road, it is proposed to provide an inbound bus lane, two general traffic lanes and a 1.5m wide outbound cycle track, with outbound bus priority provided through signal-controlled priority. Due to construction related constraints, the inbound cycle track will be curtailed over approximately 270m, with cyclists utilising the bus lane over this short section. A section of inbound cycle track will be provided at either end of this section, on approach to junctions. It is proposed to introduce a 30 kph speed limit on Rathfarnham Road at this point due to the fact that inbound cyclists will be sharing the bus lane through this section.

This 30 kph speed limit will continue from here to the City Centre, due to the presence of multiple urban villages along the route, as well as other sections where cyclists share the bus lane. This consistent speed limit is proposed to ensure legibility for road users along the route and to avoid frequent increases and decreases in speed limits.

To accommodate the new configuration on Rathfarnham Road between Castleside Drive and Dodder Park Road, it is proposed to utilise land-take from adjacent properties on the western side of the road, south of Brookvale Road.

To maintain bus priority through the Dodder Park Road and Rathfarnham Road junction, it is intended to provide signal-controlled priority on the southern and northern approaches to the junction. It is proposed to upgrade this junction through the provision of kerb protection for cyclists, which will tie into the proposed Dodder Greenway on Dodder View Road and Dodder Road Lower.

Between Dodder Park Road and Rathdown Park, it is proposed to provide bus priority through a combination of signal-controlled priority and partial bus lanes, with 1.5m wide cycle tracks provided. To accommodate the new configuration within this section it is proposed to utilise land-take from adjacent properties on the western side of the road.

Between Rathdown Park and Bushy Park Road, no bus lanes are proposed. It is proposed to maintain bus priority by providing signal-controlled priority in both directions and managing traffic queues in this area.

From Bushy Park Road to Terenure Road North it is proposed to provide 1.5m wide cycle tracks, bus lanes and traffic lanes in both directions. To accommodate these new bus lanes on this section of Rathfarnham Road, it is proposed to acquire land from adjacent properties on the eastern side of Rathfarnham Road."

Figure 2.3.1 to Figure 2.3.5 present extracts from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout from Nutgrove Avenue to Terenure Road North.

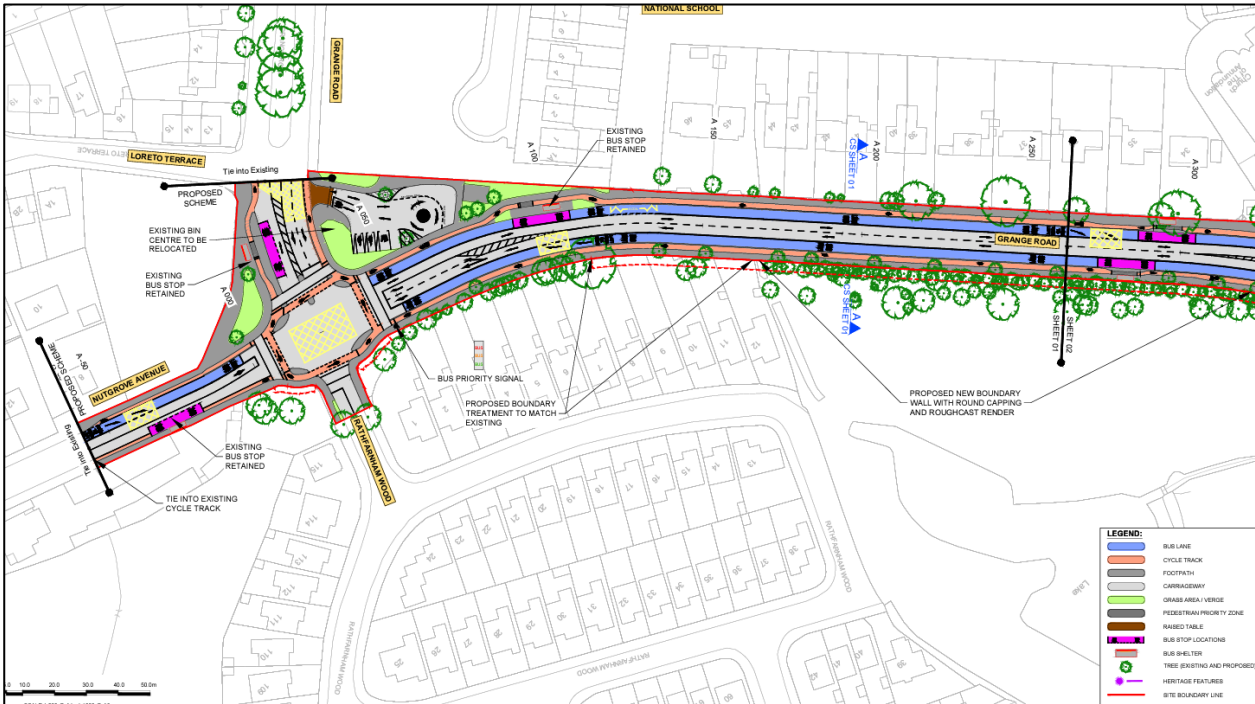


Figure 2.3.1 Extract from General Arrangement Drawings (Sheet 1)

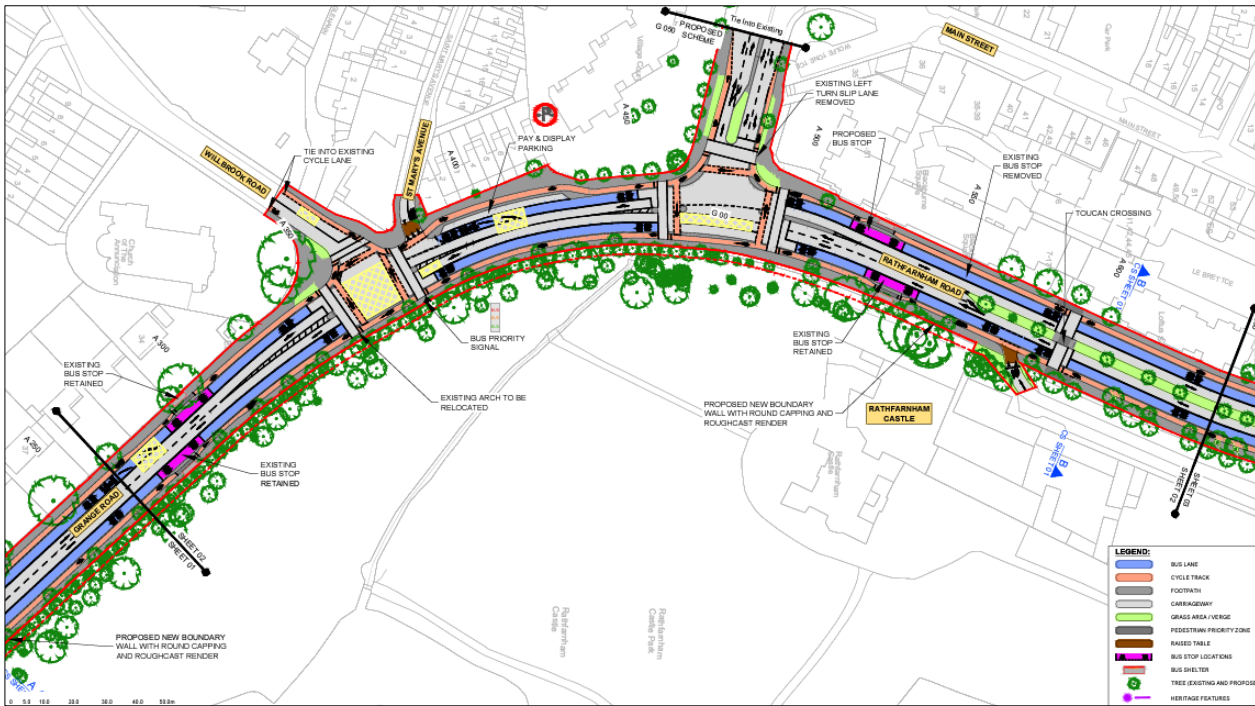


Figure 2.3.2 Extract from General Arrangement Drawings (Sheet 2)

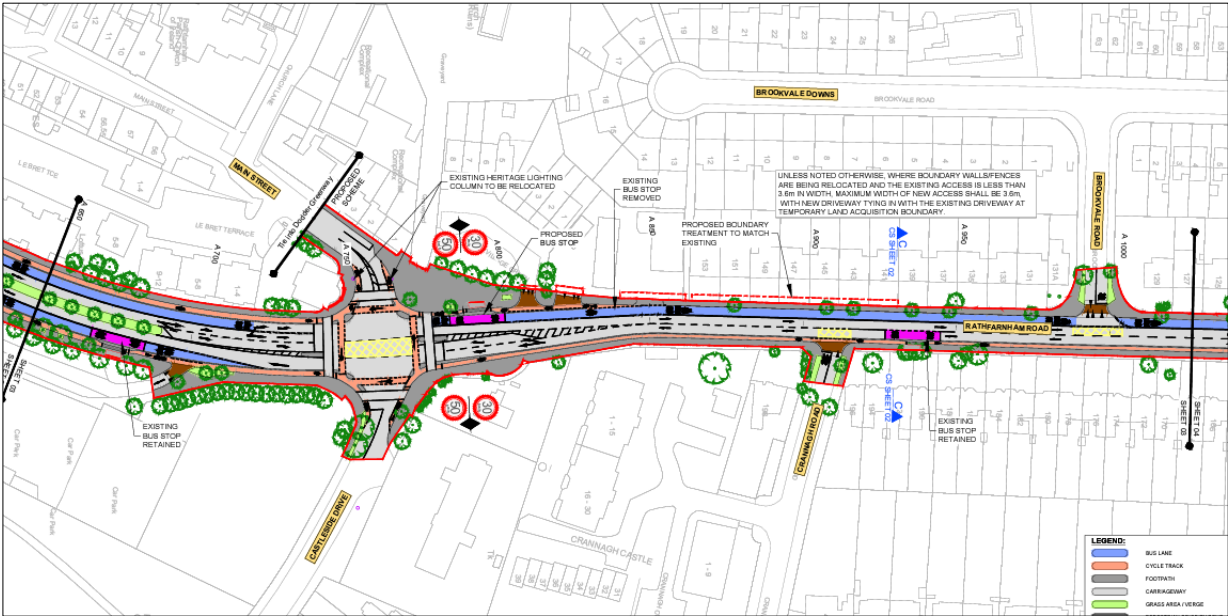


Figure 2.3.3 Extract from General Arrangement Drawings (Sheet 3)

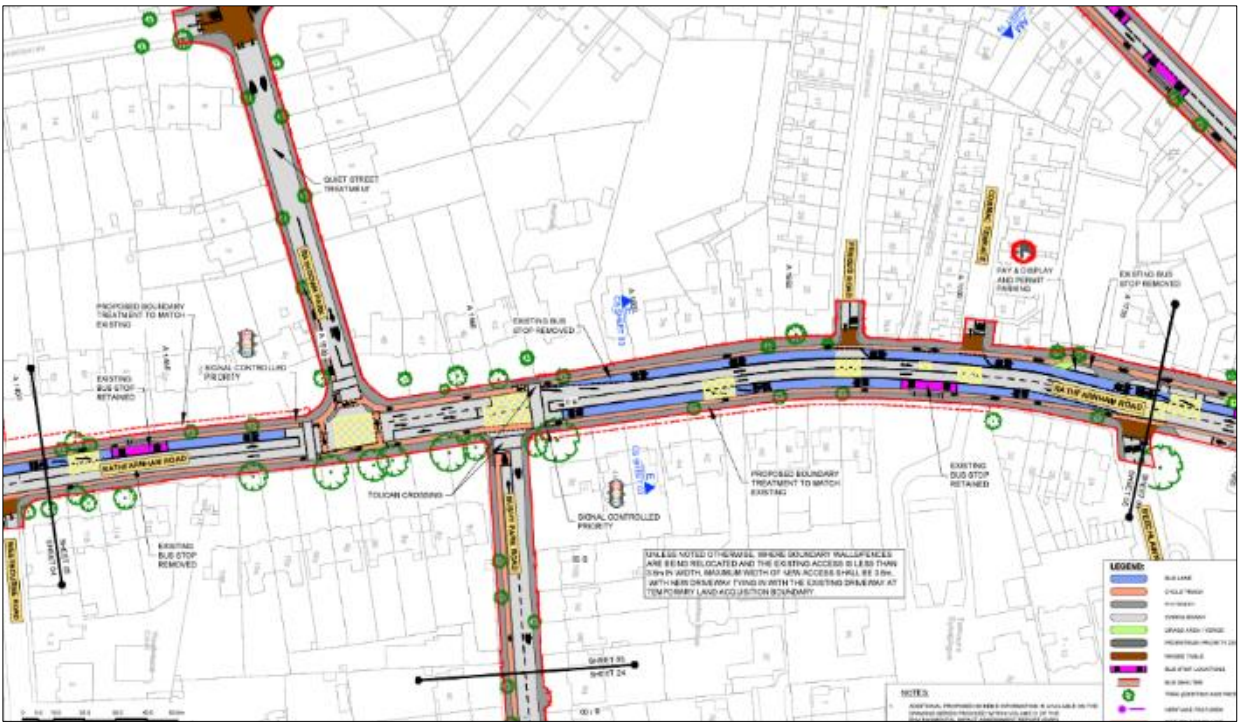


Figure 2.3.4 Extract from General Arrangement Drawings (Sheet 4)

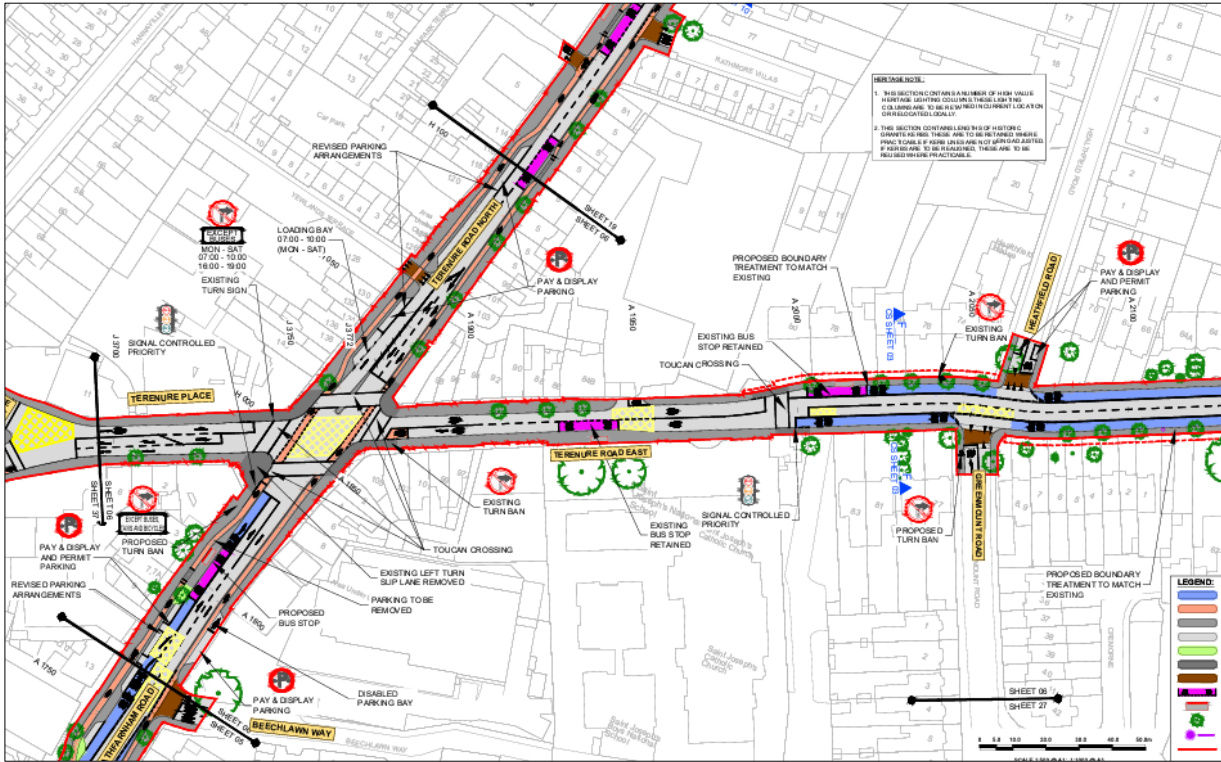


Figure 2.3.5 Extract from General Arrangement Drawings (Sheet 5)

2.3.2 Overview of Submissions Received

Table 2.3.1 below lists the 64 submissions within which issues were raised in respect of the Proposed Scheme at Rathfarnham Road.

Table 2.3.1 Submissions Made in Respect of Rathfarnham Road

No	Name	No	Name	No	Name
1	Adrian Young and Nicole Byrne	80	Deputy Francis Noel Duffy TD and Cllr Mark Lynch	157	Marcus Purcell & Family
3	Aislinn Collins	81	Derek Bradley, Mrs. Wallace & Mr. & Mrs Paul Jones	161	Maria Blair
4	Alan Murphy	84	Development Application Unit	165	Mark Fitzgerald
11	Anna, John and Sarah Meehan	90	Dublin Commuter Coalition	169	Mary O'Mahony
15	Anne Neville	92	Dylan Timbs	174	Melisa Kearney
22	Ballyboden Tidy Towns	97	Elaine Timbs	179	Michael McAuley
28	Beaufort Downs Residents' Association	99	Eoin & Liadh Ui Chinneide and Neil & Amy Adams	184	Mrs. Marian Pau
38	Brendan Timbs	100	Eve McMorow	190	Niamh Wilson & David O'Doherty
40	Brian & Ethna Healy	102	Fergus Bolster & others	192	Nora McCaul
42	Bridget O'Donoghue & Others	105	Fiona Burns	196	Pat & Eileen McMorow
43	Butterfield District Residents' Association	109	Fionnuala and Dick Blake	207	Peter Lynch
46	Catherine Gaffney	118	Involve Autism D6/D6W and Surrounds	215	Rathfarnham Castle Residents Association
51	Ciara McElinn	119	Ireland's National Autism Charity	216	Rathfarnham Wood Residents Association

No	Name	No	Name	No	Name
52	Ciarán Ahern	120	Ivana Bacik TD	229	Residents of Numbers 51-71, Rathfarnham Road
60	Cllr Pamela Kearns	126	Jason Devine and others	242	Rory and Margaret Crerar and others
61	Cllr. Lynn McCrave	127	Jean Murray	247	Seán Crowe TD
62	Cllr. Yvonne Collins	133	John Grant	254	Simon Harrison and Maire Redmond
65	Calm Brophy TD	134	John Lahart TD	264	Susan Kearney, Mary Duff & Iona Whelan
70	Councillor Carolyn Moore	139	Karen Lynch	265	Susan McNamara
72	Daria Sochacka and William Mc Elinn	142	Kathy Jacobs	279	Thomas Sexton
75	David O'Doherty and Niamh Tierney	146	Leah Donnelly and Others		
78	Denis O'Connell	153	Lorna Callanan		

A number of issues were raised, and these are listed below and described in Section 2.3.3 below.

Common Issues Raised

1. Impact on Rathfarnham Castle Park
 - a. Consider alternate bus signalling
 - b. Consider stopping scheme before Rathfarnham Castle
 - c. Climate impact of tree removal
 - d. Biodiversity impact
 - e. Replacement of the Castle Wall
 - f. No consideration of River Glinn
 - g. Landscape and visual
 - h. Impact on woodland playground
2. Option Assessment along Rathfarnham Road
3. Relocation of Bus Stops on Rathfarnham Road
4. Air and Noise Pollution on Rathfarnham Road
5. Increased Traffic and Congestion and consequential safety concerns
6. Impact on business in villages including Terenure due to loss of parking etc
7. Site Compound TR 3
 - a. Air, noise, vibration and light pollution
 - b. Visual Impact
 - c. Loss of public amenity
 - d. Character of the area
 - e. Biodiversity
 - f. Land use zoning
 - g. Flood Plain

- h. Risk of spillage, contamination
- i. Archaeological impact
- j. Architectural heritage Impact
- k. Compound Traffic and Overspill parking into residential areas
- l. Not compliant with SDCC Development Plan 2022-2028
- m. Construction traffic

2.3.3 Common Issues Raised and Responses

2.3.3.1 Impact on Rathfarnham Castle Park

Summary of Issues Raised

- a. Excessive landtake – consider alternate bus signalling

Submissions contend that sufficient bus priority for outbound buses could be achieved by utilising a bus priority signal at the end of the dual carriageway beside Rathfarnham Village (at the junction of Rathfarnham Road / Butterfield Avenue) in doing so would enable reduction of the landtake necessary and thereby reduce the impact on Rathfarnham Castle Park.

- b. Excessive landtake – consider stopping the scheme earlier

Submissions contend that by stopping the scheme at the Butterfield/Rathfarnham Road junction would result in not needing to widen Grange Road along the Rathfarnham Castle Park boundary and thereby reduce impact on the park.

- c. Climate impact of tree removal

Submissions contend that the tree/habitat removal proposed within Rathfarnham Castle Park to facilitate road widening will have a significant negative climatic impact given the carbon sequestration potential of trees.

- d. Biodiversity impact

Submissions contend that the tree/habitat removal proposed within Rathfarnham Castle Park to facilitate road widening will have a significant negative impact on flora and fauna within the Castle grounds.

- e. Replacement of the Castle Wall

Submissions contend that the replacement wall proposed along the Rathfarnham Castle Park boundary will be of inferior quality to the existing wall.

- f. No consideration of River Glin

A number of submissions note that the Proposed Scheme does not consider the impact on the Glin River (or Whitechurch Stream) that flows under the Grange Road and into Rathfarnham Castle Park.

- g. Landscape and visual

Submissions contend that the tree/habitat removal proposed within Rathfarnham Castle Park to facilitate road widening will have a significant negative landscape and visual impact on the park.

- h. Impact on woodland playground

Submissions contend that the tree/habitat removal proposed within Rathfarnham Castle Park to facilitate road widening will have a significant negative landscape on the woodland playground located within the park.

Response to Issue Raised

- a. Excessive landtake – consider alternate bus signalling

Section 4.5.2.1 in Chapter 4 of Volume 2 of the EIAR describes the Proposed Scheme along this section. *“The Proposed Scheme will commence at the junction of Grange Road and Nutgrove Avenue. Between this junction and the Castleside Drive junction it is proposed to provide a single bus lane alongside general traffic lanes and cycle tracks in both directions.*

To accommodate the road layout, it is proposed to utilise limited land-take from adjacent properties, including setting back the existing boundary wall to Rathfarnham Castle Park.”

Section 4.4.1.1 of the Preferred Route Options report describes 2 options considered for this section. Option RC1 which was selected for the purposes of the application would provide a general traffic lane in each direction along the entirety of this route section, as well as dedicated bus lanes and cycle tracks along the CBC for the entirety of this route section. This option is a version of the Emerging Preferred Route Option, refined to reflect issues identified upon review of the topographical survey. The other option RC2 would provide a general traffic lane in each direction along the entirety of this route section, as well a combination of dedicated bus lanes and signal controlled priority and cycle tracks along the CBC. This is graphically illustrated in the Image below. This option is quite similar to the option being suggested as part of the submissions.

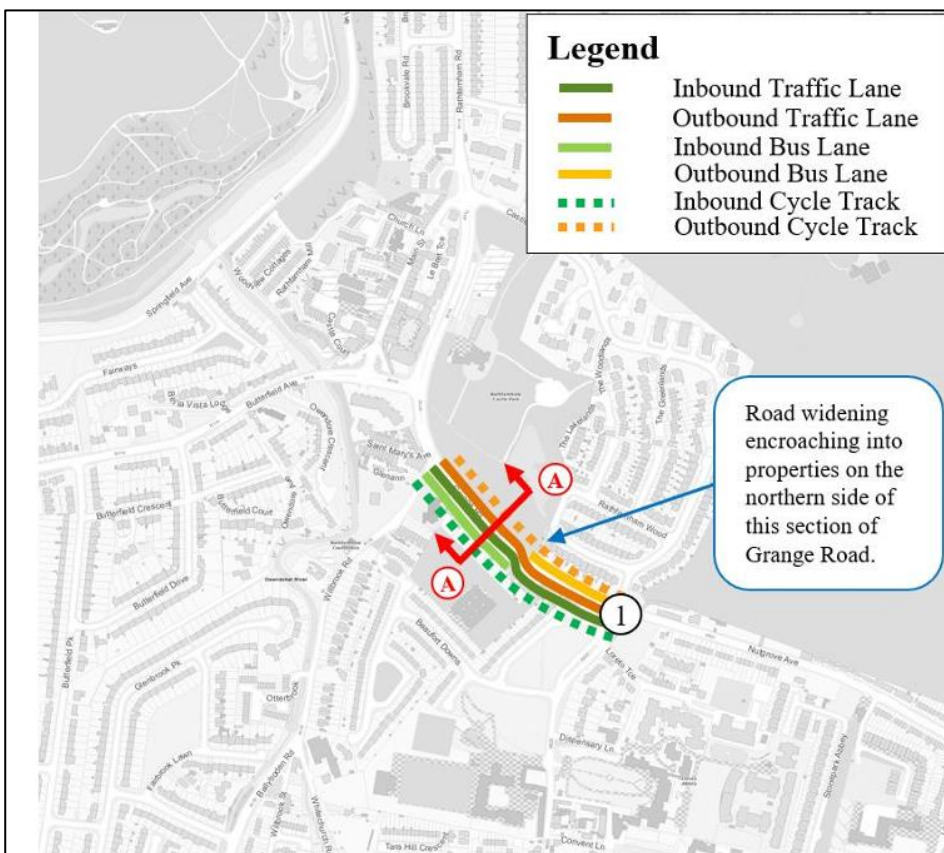


Figure 2.3.6 Route Option RC2 Indicative Scheme Design (Diagram 4.34 of the Preferred Route Option Report)

Both options were assessed using a Multi-criteria analysis. Based on that analysis and as described in Section 4.4.1.1.7 of the Preferred Route Options report, Option RC1 was selected for the following reasons:

Based on the assessment undertaken, route Option RC1 offers more benefits over other options. It performs favourably under the Economy and Integration criteria, while performing equally to other options under the Accessibility and Social Inclusion and Safety criteria. Option RC1 is the PRO for the Rathfarnham Road area for the following reasons:

1. It would provide segregated bus priority on the CBC throughout the entirety of this section of the scheme, supporting reliability of journey time for the bus;
2. It would deliver segregated online cycle facilities on Secondary Route S04 of the GDA cycle network plan; and

3. It would maintain existing general traffic provision along Grange Road.

b. Consider stopping scheme before Rathfarnham Castle

As stated in Chapter 3 of the EIAR Consideration of Alternatives “the Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report, it was determined that the route should stop at the junction of Nutgrove Avenue and Grange Road, as south of this point generally there are three principal routes between Marley Park and the Dodder crossing namely via Stone Mason’s Way, Grange Road and Ballyboden Road which currently carry less frequent bus services and which converge at Nutgrove Avenue in the vicinity of the junction with Grange Road.”

In addition the network redesign map below demonstrates how the A2, A4 and S6 services split at the Nutgrove junction which further supports the rationale to extend the scheme as far as Nutgrove junction.

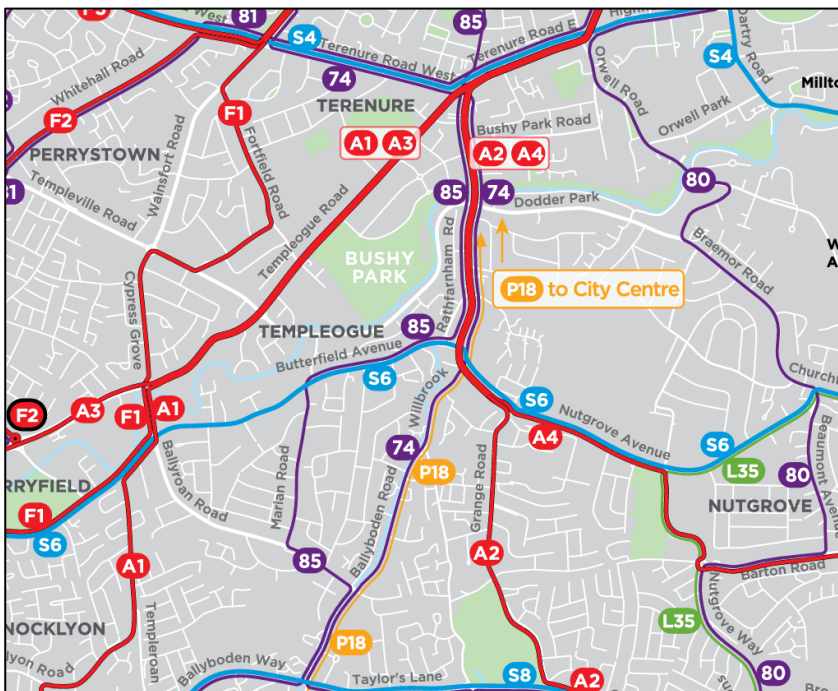


Figure 2.3.7 Extracts from the Dublin Area Bus Network Redesign Revised Proposal (2020)

c. Climate impact of tree removal

Details of the trees and vegetation to be removed are described in the Arboricultural Impact Assessment which is included as Appendix A17.1 in Volume 4 (Part 4 of 4) of the EIAR. See below extracts from the relevant Tree Protection Plan drawings included. Full details of the tree types proposed for removal along the relevant section are generally described on Pages A5-A10 of said report. It is proposed to remove circa 37 trees with the Rathfarnham Castle Demesne.

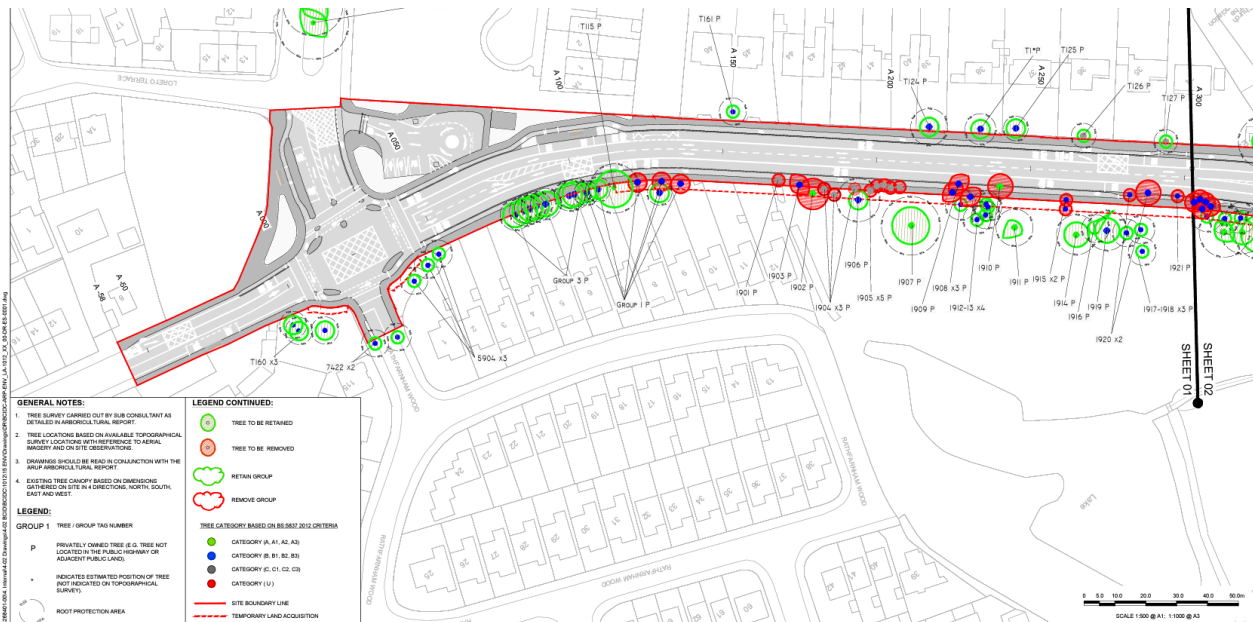


Figure 2.3.8 Extract from Tree Protection Plan in EIAR Appendix A17.1 (Sheet 01)

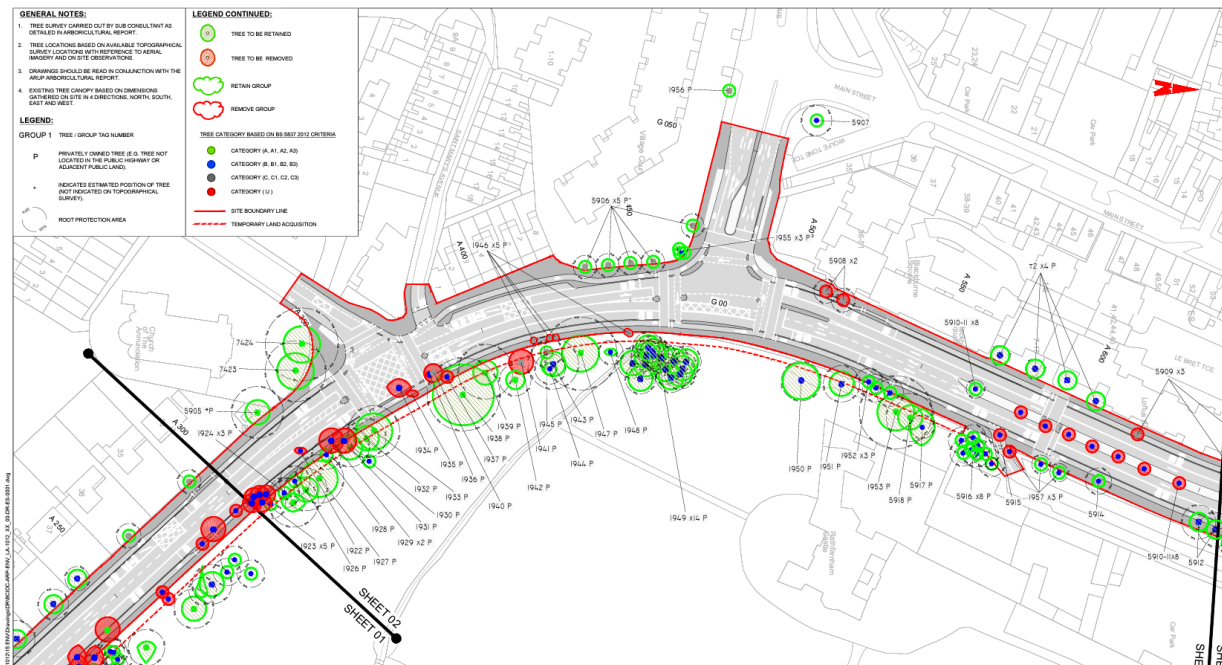


Figure 2.3.9 Extract from Tree Protection Plan in EIAR Appendix A17.1 (Sheet 02)

Section 8.3.4.1.2 of the EIAR describes that “trees are a natural carbon sink and absorb carbon dioxide (CO₂) from the atmosphere helping in the reduction of climate change. A default value for the amount of CO₂ which a mature tree can absorb is approximately 22 kg CO₂eq/annum (EEA 2011). Trees have the ability to sequester carbon with the peak CO₂eq (carbon dioxide equivalent) uptake rate for tree stands in the order of 5t CO₂eq/hectare/year (tonnes of carbon dioxide equivalent per hectare per year) to 20t CO₂eq/hectare/year with CO₂eq uptake rates declining with maturity and health (UK Forestry Commission 2012). Thus, based on these emission rates, a hectare will typically contain between 225 – 900 trees depending on tree type and maturity. Any felling of trees has the potential to result in a loss or reduction of this carbon sink thus increasing the levels of CO₂ in the atmosphere. In contrast, increased planting of trees on suitable lands will, over time, help to increase the carbon sink potential of the land and benefit climate. The change in land use associated with the Proposed Scheme, including the felling and planting of trees and vegetation, has been calculated using the methodology outlined in Chapter 4 (Forest Land) of the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (IPCC 2006). Land use change is also appropriately assessed using the same methodology”.

As described in Section 8.5.1.4 the “Construction Phase of the Proposed Scheme will result in the temporary removal of grassland to facilitate the construction compounds. However, overall, there will be a Negligible impact on carbon sequestration as a result of the Construction Phase of the Proposed Scheme”.

As described in Section 8.5.2.3 the “Operational Phase of Proposed Scheme will result in the permanent removal of some land to facilitate construction of the Proposed Scheme. However, overall, there will not be a significant change to land use as a result of the Proposed Scheme. Thus, there will be a negligible impact on carbon sequestration as a result of the Operational Phase of the Proposed Scheme”.

It is proposed to replace trees within the park, as per the Landscape General Arrangement drawings it is proposed to plant circa 80 new trees. See a relevant extract below.

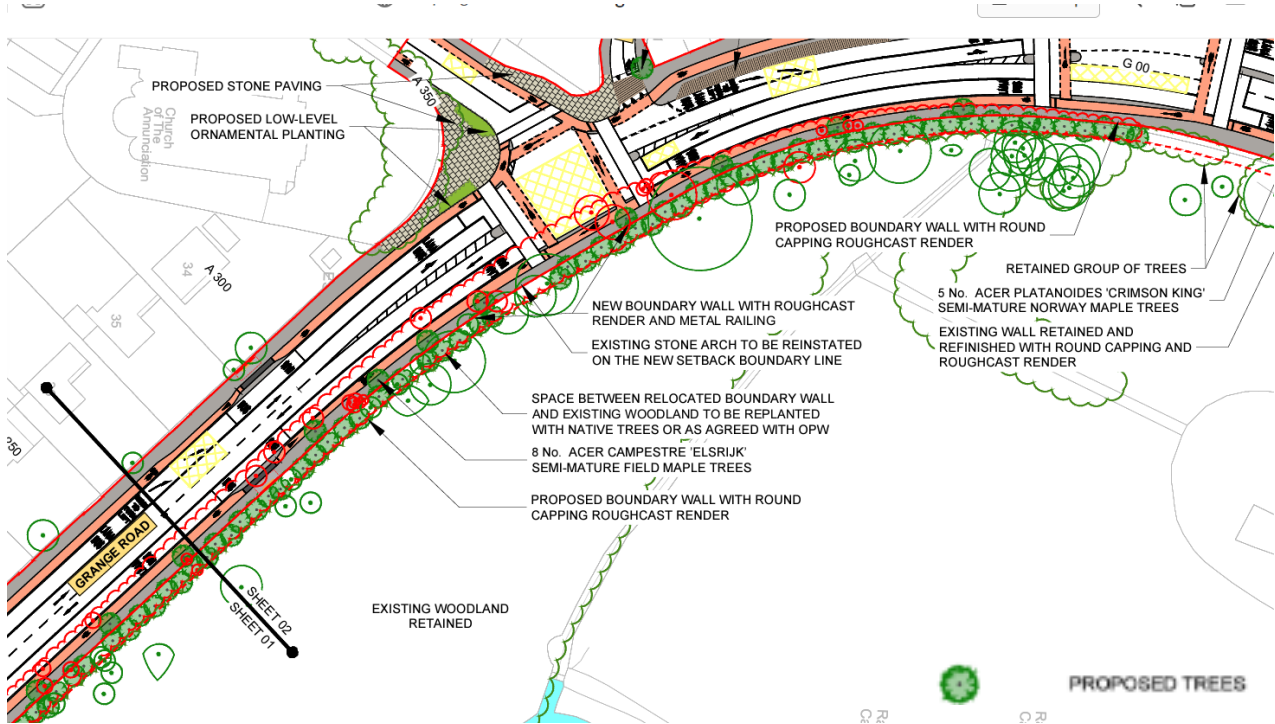


Figure 2.3.10 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR (Sheet 02)

d. Biodiversity impact

As described in the response to issue 1.2.3 details of the trees and vegetation to be removed are described in the Arboricultural Impact Assessment which is included within Volume 4 (Part 4 of 4) of the EIAR. The impact assessment on the flora and fauna is described in Chapter 12 Biodiversity in Volume 2 of the EIAR.

As per Figure 12.5 in Volume 3 of the EIAR the woodland on the Rathfarnham Castle grounds are designated as a WD1 woodland which is a mixed Broadleaf woodland. “Tree species recorded at these locations include maple species *Acer sp.*, birch species *Betula spp.*, alder, horse chestnut *Aesculus hippocastanum*, hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, cypress species *Cupressus spp.*, beech, copper beech *Fagus sylvatica f. purpurea*, ash *Fraxinus excelsior*, holly *Ilex aquifolium*, mallow *Malva sylvestris*, sycamore, aspen *Populus tremula*, cherry laurel, holm oak *Quercus ilex*, oak species *Quercus spp.*, willow species *Salix spp.*, Wilson’s honeysuckle *Lonicera nitida*, elder, rowan *Sorbus aucuparia*, small-leaved lime *Tilia cordata*, elm species *Ulmus spp.*, and cotoneaster species”. WD1 woodland is described as being locally important as per Table 12.3 of the EIAR.



Figure 2.3.11 Extract from Figure 12.5 in Volume 3 of the EIAR

As per Section 12.4.3.2.1 of the EIAR “a number of habitat types considered to be of Local Importance (Higher Value) will be lost as a result of the Proposed Scheme. These include relatively small areas of (mixed) broadleaved woodland (WD1), scattered trees and parkland (WD5), hedgerow (WL1), and treeline (WL2) habitats. The overall total areas of the habitat types which overlaps with the Proposed Scheme boundary and be directly lost as a result of the construction of the Proposed Scheme is provided in Table 12.14. It should be noted that the extent of tree loss is calculated across the length of the Proposed Scheme and is captured under treelines (WL2) as the majority of habitat loss affects this habitat type. However small numbers of these trees may be lost from the habitat classification (mixed) broadleaved woodland (WD1). This distinction is considered in the habitat loss impact assessment. The permanent loss of such habitat types which are considered to be of Local Importance (Higher Value) has the potential to affect the conservation status of each of these habitat types and, therefore, result in a significant negative effect at the local geographic scale. As per Section 12.5.1.2 of the EIAR Where practicable, areas of vegetation including habitats of Local Importance (Higher Value), (i.e. mixed broadleaved woodland (WD1), scattered trees and parkland (WD5), hedgerow (WL1) and treeline (WL2) habitat types), which lie within the footprint, or along the boundary of the Proposed Scheme, will be retained.

Vegetation to be retained is shown in further detail on the Landscape General Arrangement Drawings [BCIDC-ARP-ENV_LA1012_XX_00-DR-LL-9001] in Volume 3 of this EIAR. Proposed planting incorporated into the Proposed Scheme will be implemented by the appointed contractor, shown as design mitigation, is listed below and displayed on the Landscaping General Arrangement drawings [BCIDC-ARP-ENV_LA1012_XX_00-DR-LL-9001] in Volume 3 of this EIAR. These areas will be protected for the duration of construction works and fenced off at an appropriate distance. To mitigate loss of habitat, proposed planting incorporated into the Proposed Scheme will be implemented by the appointed contractor listed below and displayed on the Landscaping General Arrangement drawings [BCIDC-ARP-ENV_LA1012_XX_00-DR-LL-9001] in Volume 3 of this EIAR:

1. 400 trees planted;
2. 126.4m of proposed hedgerow;
3. 7,300 m² of proposed species rich grassland;
4. 932 m² of proposed ornamental planting; and,
5. 9,212 m² of proposed amenity grassland planting”

The mitigation strategy is prescribed in Chapter 12 Biodiversity at Section 12.5 and includes mitigation for both construction and operation as necessary in respect of protected species confirmed present or on a precautionary basis likely to occur based on desktop data search and professional judgement - Birds, Bats and other mammals as well as habitat replacement and – through the landscaping design (Section 12.5.1.2). The mitigation measures, which will be implemented on the Proposed Scheme will mitigate impacts on breeding birds, bats etc. to levels that are not significant at any geographic scale and that the flexibility provided in the mitigation measures in terms of timing of removal of vegetation are appropriate given the nature of most of the vegetation within the Proposed Scheme boundary –which comprises a narrow, albeit substantial band of wooded vegetation of early mature and mature tree with some and mixed scrub understorey as well as a limited area of open grassland alongside the existing RCP boundary wall. And as documented in the EIAR biodiversity chapter, there are no significant residual effects on protected species following adoption of the mitigation measures prescribed.

The protection of water quality is an integral element of the mitigation strategy across all Key Ecological Receptors (KERs) and across the entirety of the Proposed Scheme and further afield as documented in Chapter 12 Biodiversity for both construction and operation e.g., Protection of European sites (Sections 12.5.1.1.1 / 12.5.2.1.1) and , Habitats (Section 12.5.1.2 & 12.5.2.2), Protected species (Section, 12.5.1.3 & 12.5.2.3), fisheries (Section 12.5.1.8 & 12.5.2.8) and distal marine mammals (Section 12.5.1.4.4 & 12.5.2.4.4), as well as the mitigation measures provided for in Chapter 13 Water, (see Section 13.5).

In terms of significance with respect to Bats, the tree losses which are along the edge of an artificially lit roadway are not considered significant in terms of potential commuting//foraging territory except at a local scale. The loss of the linear strip of woodland habitat along a boundary of the RCP is locally significant in terms of impacts to wildlife. However, it must be recognised that the loss represents a narrow edge effect adjacent to the busy road, and that the bulk of the woodland and understorey vegetation inside the RCP is being retained. Mitigation has been prescribed for breeding birds (Section 12.5.1.5), preconstruction surveys for mammals – badger, bats, roost confirmation and or usage (Section 12.5.1.4), vegetation clearance during the bird nesting season (Section 12.5.1.5.1) and good site practices in demarcating the works area, as are prescribed in the CEMP Appendix A5.1.

In respect of otter, surveys were undertaken at all watercourses intersected by the Proposed Scheme, particularly given the well documented importance of the River Dodder and the Owendoher River (see Section 12.3.8.3 of the EIAR Chapter 12 Biodiversity). This included as where necessary additional instream surveys by surveyors undertaking the aquatic surveys. As earlier design iterations of the Proposed Scheme included direct impacts on the Owendoher River, with known otter activity, licenced trail camera monitoring of the holt was undertaken. A recent site visit on October 4th 2023 found no evidence of otter activity at this holt, which is outside the Proposed Scheme Boundary. Holts can be seasonally / temporarily abandoned (NRA 2006³, NPWS 2009⁴) and as such could be utilised at the time of construction. This eventuality is fully accounted for in the assessment and mitigation strategy presented in the Biodiversity Chapter and AA. Further investigation of the above ground mill race and its connectivity from the Whitechurch Stream and later discharge into the Owendoher River, was undertaken in October 2023 upstream of the previously identified holt location (which is described in Section 12.3.8.3 of the EIAR Chapter 12 Biodiversity). There was no evidence of otter activity nor usage within the aboveground section of the mill race within RCP nor evidence of suitable habitation features in accessible areas around the pond nor aquatic prey other than small fish – three spined stickleback. It is considered that there is little suitable habitat for otter to inhabit, and to access the RCP would involve a significant passage through a narrow culvert that spans a considerable distance from the potential nearest aboveground watercourse. The NRA Guidance notes that extensive culverts such as the mill race that enters RCP are avoided by otter (NRA 2006). The culverted length on the mill race along the indicative direction, illustrated in the RWRA submission is approximately 475m (as the crow flies), between its indicative diversion from the Whitechurch Stream and the ingress into RCP. Similarly the mill race egress culvert extends more than 145m underground from the egress point in RCP before discharging to the Owendoher River. The likely discharge pipe is situated approximately 1- 1.5m above the opt of the watercourse and is a narrow pipe whose dimensions are not suitable for otter passage. Given this, it is considered that otter have no practical way of arriving in RCP nor adequate accessible territory with which to roam.

³ NRA (2006). Guidelines for the treatment of Otters prior to the Construction of National Road Schemes

⁴ NPWS (2009). Threat Response Plan: Otter (2009-2011). National Parks & Wildlife Service, Department of the Environment, Heritage & Local Government, Dublin.

The approach to wintering birds was based on sites intersected by the Proposed Scheme coupled with an published analysis of known *ex-situ* wintering bird sites (Section 12.2.3.8 of Chapter 12 Biodiversity and Figure 12.1.1 of Volume 3 of the EIAR). Rathfarnham Castle Park has not previously been identified as an *ex-situ* site for Special Conservation Interest wintering birds, but does nonetheless support wintering birds such as ducks, moorhens and some SCI gulls. While the Proposed Scheme will remove a narrow section along the boundary of the RCP, the majority is comprised of wooded vegetation which is not ordinarily utilised by wintering birds, as it prevents easy take off in case of disturbance/predation. Ideally wintering birds like large open spaces such as the central parts of RCP, which are not being directly impacted by the Proposed Scheme.

The surveys for bat activity focused on accessible areas where likely bat potential could occur. An activity transect was conducted along the Rathfarnham Road which captures the edge of Rathfarnham Castle Park. As is noted in Section 12.3.8.1.8 of the Biodiversity chapter of the EIAR, no bat roosts were confirmed within the Proposed Scheme boundary. Rather two number trees were identified, based on standard guidance and typical features identified (Andrews 2018)⁵ as having the potential to support roosts. However, Chapter 12 (Section 12.5.1.4.1 sets out appropriate mitigation to address if:

- a roost is present and or used in advance of the construction phase;
- There is adjacent bat activity identified.

The Proposed Scheme will have no direct impact on the pond within Rathfarnham Castle Park. The typical birds noted from within RCP are considered habituated to disturbance given the volume of users of the urbanised park and a relative lack of similar territories across the wider area, e.g. Bushy Park ponds, River Dodder. The majority of the birds are largely associated with the pond, although they utilise adjacent areas including the open grassland in the centre of RCP. These areas open areas afford some protection, where direct predation is less likely or disturbance posed by existing parks users and/or predators is less likely.

While some of the parks birds can roam within the RCP woodland alongside the Rathfarnham Road boundary, given the volume of pedestrian traffic already traversing and/or using the play area, it affords relatively poor undisturbed habitat, unlike the presence of isolated islands in the pond. Notwithstanding this fact, the loss of a narrow area of vegetation could result in increased disturbance impacts at Construction (Sections 12.4.5.3.1.1, 12.4.3.5.1.3 and 12.4.3.5.2.1) and to a lesser degree operation (Section 12.4.4.5.1.1, and 12.4.4.5.2.1). The mitigation strategy proposed for all works areas in respect of birds includes the timely removal in as far as practical of vegetation and the isolation of working areas so that disturbance – construction lighting noise etc is reduced. Thus mitigation is specified at Sections 12.5.1.5 and 12.5.2.5 in Chapter 12 of the EIAR for all birds in terms of vegetation removal, noise reduction etc.

e. Replacement of the Castle Wall

Section 4.5.2.1 in Chapter 4 in Volume 2 of the EIAR describes the Proposed Scheme along this section. *“The Proposed Scheme will commence at the junction of Grange Road and Nutgrove Avenue. Between this junction and the Castleside Drive junction it is proposed to provide a single bus lane alongside general traffic lanes and cycle tracks in both directions. To accommodate the road layout, it is proposed to utilise limited land-take from adjacent properties, including setting back the existing boundary wall to Rathfarnham Castle Park. The existing boundary wall of Rathfarnham castle will be set back and reconstructed with a round capping roughcast render”*. The extent of the proposed wall reinstatement is shown on Drawing Nos. BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001 and BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001, relevant extract from one of those drawings below with the detail highlighted.

⁵ Andrews, H. (2018). Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-Care and Ecology Professionals. Bat Tree Habitat Key.

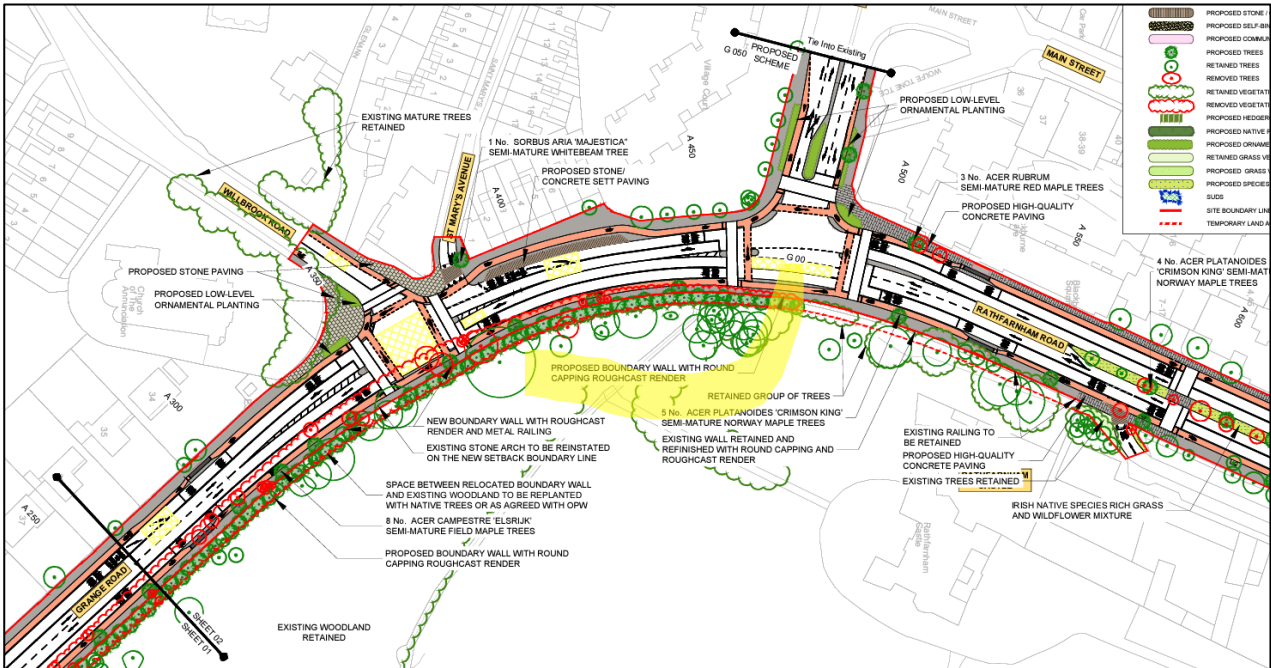


Figure 2.3.12 Extract from Landscaping General Arrangement Drawings (Sheet 2)

As per Section 16.5.1.5 in Chapter 16 in Volume 2 of the EIAR “the proposed land take to Grange Road directly impacts the boundary wall to the Rathfarnham Castle Demesne. Rathfarnham Castle is a 16th century Castle remodelled in the 18th century and is a National Monument (RMP DU022-014, Nat. Mon. No. 628, PO no. 2/1986, SDCC RPS 221) and therefore of High sensitivity. It is also located directly opposite the Rathfarnham Architectural Conservation Area. The Demesne (NIAH 2351) has been much reduced in size but is a public park around the Castle, preserving its setting. Some trees will be removed as a result of the land take and will be a temporary negative visual impact during construction. The pre-mitigation Construction Phase impact is Direct, Negative, Significant Temporary. The present boundary to Rathfarnham Castle on Grange Road and Rathfarnham Road are replacement boundaries built as part of the Rathfarnham Road bypass. The existing mix of boundary treatments on the Grange Road and Rathfarnham Road provides a poor and discordant street frontage and detracts from the streetscape, particularly in relation to the adjoining ACA and Protected Structures. The concrete block walling also detracts significantly from the Castle and its setting and is out of keeping with the Castle and its Demesne. The proposed land take presents an opportunity to reinstate a more consistent and sympathetic boundary treatment which is in keeping with the Castle, its Demesne landscape and the ACA. Consultations have been undertaken with SDCC, OPW, Dept. of Housing, Local Government and Heritage regarding the encroachment into the Rathfarnham Castle Demesne and the removal, set back and replacement of the existing boundary wall. The following boundary treatment is proposed as part of the Proposed Scheme.

The proposed wall will be 2.8m in height with a rounded capping detail. This is consistent with the existing wall and together with the proposed landscape treatment will provide the necessary buffer between the Proposed Scheme and the Castle and it’s Demesne and maintains and enhances the sense of enclosure.

It is noted that in their submission, South Dublin County Council indicate that proposed boundary wall details are acceptable stating ‘the new boundary wall required at this location will provide a boundary treatment that improves views from the Castle and allows the boundary treatment of the Castle Demesne to be more consistent and improve the overall visual impact and architectural detail’.

f. No consideration of River Glin

The NTA is satisfied that the River Glin and the catchment it forms part of are captured in the EIA assessments and the reasoning for this is set out below.

The Whitechurch Stream (locally known as the River Glin), is not itself directly impacted by the Proposed Scheme. It is important to note that the assessment as presented in the EIAR and AA documents, uses the correct water body name as per the Water Framework Directive (WFD) – this is the Owendoher_010. However, for the purposes of responding to this submission, the name of the Whitechurch Stream/River Glin and/or the Owendoher River are identified as appropriate in this response to address biodiversity issues raised in the Rathfarnham Wood Residents Association submission. A site walkover was conducted of this area on 4th October 2023 for the purposes of addressing the particular issues raised in the submission.

The historical mill race, is diverted underground, leading away from the Whitechurch Stream in the direction of the Rathfarnham Castle Park (RCP). The Whitechurch Stream, is itself culverted in areas and the locations where the historical mapping^[1] indicate it routing underground away in the direction of RCP cannot be confirmed. The mill race is not an EPA identified watercourse. Notwithstanding this fact, the diverted channel flows through the RCP to its ponds before continuing in a North-westerly direction along a narrow, largely vegetation-clogged channel before being culverted underground through the urban environment before discharging via a concrete pipe into the Owendoher River, due west of road bridge over the watercourse at Butterfield Avenue.

The assessment for the Proposed Scheme, while not explicitly identifying the mill race channel from the Whitechurch Stream was considered in both the Chapter 12 (Biodiversity) and Chapter 13 (Water) in Volume 2 of the EIAR, as well as the AA documents pertaining to the Proposed Scheme, in particular the NIS under the WFD named the Owendoher_010. Reference to the Whitechurch Stream is also captured in Appendix A of the flood risk assessment (which is contained Volume 4 of the EIAR).

The works proposed to the culvert which carries the mill race is as follows. At approximate chainage A160 it is proposed to extend an existing culvert under the Grange Road by circa 5m to facilitate road widening at the culvert location which is within the existing Rathfarnham Castle Park as documented in the Proposed Surface Water Drainage Works (Sheet 1, Part 2 of 3 in Volume 3 of the EIAR).

The extended culvert will be a precast reinforced concrete box culvert that will match the existing form and dimension which is circa 2.3m wide and 0.65m high. The culvert extension will be laid to retain the existing level and gradient of the stream. In order to construct the culvert the existing boundary wall will be removed. To minimise disruption to the immediate area the existing stream will be temporarily overpumped for a short period of time during a dry period to allow the footprint of the culvert extension to be prepared for receipt of the culvert section by excavation of the footprint to formation level and placement of a concrete blinding. A small crane will be used to lift the culvert extension into place from the roadside under suitable temporary traffic management measures. After completion of the culvert extension the new boundary wall can be constructed.

At approximate chainage A450 it is proposed to retain in place an existing culvert and headwall. At the location of the culvert it is proposed to widen the existing road by approximately 2m over the existing culvert. The existing culvert will be exposed during construction and surrounded with a suitable bedding material. A precast reinforced concrete protection slab will then be placed at a suitable level over the culvert to ensure that it is not damaged during construction and operation.

In accordance with the requirements of the WFD, all water features are assessed following the EPA river dataset within the WFD compliance assessment with respect to potential impacts of the Proposed Scheme, and the proposed impacts specifically to Whitechurch Stream (or locally known as the River Glin), as well as the Owendoher River (see Chapter 13 of the EIAR; Section 5.1 of the NIS; and the WFD compliance assessment).

The Rathfarnham Woods Residents Association submission, which is appended by a number of other submissions, considers that the mill race is a fragile water feature in terms of the support that it provides to the Rathfarnham Castle Park wildlife, including for frogs, and this is supported from correspondence in respect of a separate development (Appendix I of the Rathfarnham Woods Residents Association submission).

It is considered that there is potential for populations of frogs to occur in Rathfarnham Castle Park. Mitigation is included in Chapter 12 in Volume 2 of the EIAR, which sets out the mitigation measures which will be implemented for amphibians – refer to Section 12.5.1.7. Refer also to Section 12.5.2.2.1.1 in Chapter 12 which outlines the standard drainage design controls included in the Proposed Scheme to protect water quality.

However, the mill race, notwithstanding its potential diversion from the Whitechurch Stream is not considered of significant biodiversity value, given that it is culverted for much of its length (between the approximately diversion from the Whitechurch Stream and the discharge to the Owendoher River and only appears aboveground in Rathfarnham Castle Park. (a distance of approximately 300 metres, before it is culverted again under Rathfarnham Road). The species that use the pond are typical of such areas and indeed are habituated to urban settings. As the Proposed Scheme will not directly impact the pond, it is considered that there will be no likely change in use by these species.

^[1] 1st Edition 6 inch mapping and 25 inch mapping series both viewable at: <https://webapps.geohive.ie/mapviewer/index.html>

In terms of aquatic species, the Whitechurch Stream is known to be suitable in parts, as a brown trout nursery, however it is understood that these areas are typically limited to areas further upstream such as around St Enda's Park, or at the confluence with the Owendoher River. Long culverted watercourses such as the mill race diversion that leads to RCP are not considered desirable for fisheries (IFI 2016^[2]). On the October 2023 site visit at the millrace ingress into Rathfarnham Castle Park the presence of 3-spine stickleback was noted, a widespread species that is tolerant of a range of water quality. No other fish were observed.

The water entering the Rathfarnham Castle Park has for most parts an imperceptible flow and the aboveground channels are often stagnant, with vegetation clogging them, with the only noticeable flow observed where physical drops in channel corridor occurs, e.g., after a bridge or when the egress flow enters the culvert near Rathfarnham Road/Butterfield Avenue intersection.

But, based on the Proposed Scheme design and nature of the mill race, no perceptible impact in terms of blockage from the Proposed Scheme are likely, as the only alteration proposed is a short extension of the existing culvert, immediately inside the existing boundary wall where the mill race ingresses into Rathfarnham Castle Park. The imperceptible flow that emerges from the culvert, nor the short culvert extension will not alter the current situation at either construction or operation. Mitigation measures have been prescribed in the EIAR so as to avoid/prevent/reduce any significant impacts on the surface water environment, including the preparation of a Surface Water management Plan (SWMP) contained the CEMP (Appendix A5.1 on Volume 4 of the EIAR). The CEMP and SWMP will be implemented by the appointed contractor during the construction of the Proposed Scheme.

There are no substantive works proposed at the egress of the culvert and therefore the Proposed Scheme will not increase the likelihood of a blockage during the operational phase.

The development and assessment of the design of the Proposed Scheme considered the sensitivity of the surrounding watercourses. The Owendoher and Dodder Rivers under their respective WFD names are identified in both the Chapter 12 Water and Chapter 13 Biodiversity (e.g., Section 12.3; Section 13.3.1) and Appropriate Assessment Reports (e.g., Section 3.3 of the NIS)) have assessed and were fully cognisant of the connectivity of the Owendoher_010 and all up- and downstream connectivity. The mitigation strategies set out in the EIAR (e.g., the SWMP identified in CEMP Appendix A5.1 in Volume 4 of Chapter 4), which will be implemented during the construction of the Proposed Scheme are applicable to the watercourse within the Rathfarnham Castle Park.

The fisheries and biodiversity potential of the ingress channel is such that an approximate 5 metre extension of the existing box culvert is not considered to materially alter the current condition of the canalised mill race which is routed through the Rathfarnham Castle Park. The submission raises the potential for impact on frogs, however it is considered that the proposed works associated with the box culvert extension, will not alter the potential for frogs to be present nor result in loss of perceptible habitat that could be used by them. The remainder of the open mill race channel within the Rathfarnham Castle Park will remain unaffected by the Proposed Scheme.

With regard to potential impacts on Water Quality, there is a potential for some impacts associated with over pumping of the stream to allow the culvert extension. However, these impacts will be negligible following the implementation of the mitigation measures outlined in the SWMP (contained in Appendix A5.1 CEMP in Volume 4 of the EIAR). Mitigation for the operational phase has been built into the design of the Proposed Scheme. No additional mitigation will be required.

Reference is made in a submission to South Dublin County Council Development Plan Policies GI2 and GI3 which in essence relates to protecting natural watercourses and enhancing their biodiversity value. The assessments have been cognisant of this, but it is considered that the mill race is not a natural channel where it comes into the RCP, but rather a highly modified watercourse. The Proposed Scheme is not considered to result in significant potential effects to water quality in the mill race.

The NTA are satisfied that the issues raised in the submissions regarding the River Glin are adequately addressed in the EIAR and the above response and the follow-up site visit of the 4th October supports this.

^[2] Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries During Construction Works in and adjacent to Water. Available at: <https://www.fisheriesireland.ie/sites/default/files/migrated/docman/2016/Guidelines%20Report%202016.pdf>

g. Landscape and visual

As per Section 17.4.3.1.2 Nutgrove Avenue to Terenure Road North, Chapter 17 of Volume 2 of the EIAR, describes the impact of the scheme during the construction phase is described as follows:

“The baseline townscape is of high sensitivity and the Proposed Scheme involves the reconstruction and resurfacing of the roads, footpaths, and cycle track pavements. New kerbs will also be provided following the realignment of the existing kerb lines. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new road lighting, new street furniture (rubbish bins, seats, lighting, benches, planters, bollards, cycle racks, bus stop (including shelters and information displays etc.)), landscape works and substantial removal of sections of trees and planting. Sections of the existing boundary walls along the eastern side of Grange Road and Rathfarnham Road, adjacent to Rathfarnham Castle Park, will be realigned and reconstructed due to the proposed widening of the carriageway. The low height wall at the junction with Rathfarnham Wood will also be realigned and reconstructed to accommodate the upgrade of the traffic signalised junction. The Construction Phase involves substantial acquisition from residential properties along Rathfarnham Road, and from Rathfarnham Castle grounds with associated removal of a substantial section of mature woodland edge as well as garden hedges and other plantings. This element of works will result in considerable changes along this section of the Proposed Scheme.

The townscape / streetscape impact of the Construction Phase is assessed to be Negative, Very Significant and Temporary / Short-Term.”

Section 17.4.4.1.2 Nutgrove Avenue to Terenure Road North, describes the impact during the operation phase as follows:

“The sensitivity of this section is high. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme. Most notably there will be continuing negative effects from loss of trees removed during the Construction Phase at Rathfarnham Castle and along sections of residential properties along Rathfarnham Road. There will be the provision of a new boundary wall to the castle demesne in roughcast render which, while less aesthetically pleasing than the sections of existing stone boundary wall, will represent a neutral change when compared to the overall inharmonious boundary treatment which varies in quality and condition of materials used. There will be provision of substantial new tree planting within the castle demesne to consolidate the new edge to the woodland group and ensure the amenity of the open space is restored. There will also be substantial replacement and additional street tree planting throughout this section, including medians, footpaths and roadside spaces. There will be an improvement to the setting of the Yellow House and the Church of the Annunciation in Willbrook with provision of stone paving to existing concrete footpaths. There will be a notable improvement to an existing grassland space within the River Dodder corridor with provision of new tree planting and species-rich grassland. An enhanced paving scheme will be provided at numerous locations throughout this section, most notably with the provision of stone paving to the frontages of the Church of the Annunciation and the Yellow House public house, as well as the provision of concrete paving to footpaths at major junctions and sett paving to pedestrian crossing points at side roads. The Operational Phase will not alter the overall townscape character of this section but will result in substantial localised changes to the streetscape character of the section. The magnitude of change in the baseline environment is very high. The townscape / streetscape impact of the Operational Phase is assessed to be Negative, Very Significant and Short-Term becoming Neutral, Moderate and Long-Term.”

Refer to Volume 3 of the EIAR Figure 17.2 for photomontages which show the proposed changes to the trees and boundary wall at the Rathfarnham Castle boundary.



Figure 2.3.13 EIAR Figure 17.2.2.1 View from Grange Road at Willbrook Road - As Existing Photomontage



Figure 2.3.14 EIAR Figure 17.2.2.2 View from Grange Road at Willbrook Road - As Proposed Photomontage

h. Impact on woodland playground

There is an existing woodland playground within Rathfarnham Castle. Section 4.5.2.8 in Chapter 4 of the EIAR provides a description of the landscape and urban design works and it acknowledges that '*...the impacted woodland will be replanted with native species and the existing playground will be integrated with the new planting and setback wall alignment (refer to Image 4.2)*'. An extract of Image 4.2 from Section 4.5.2.8 on Chapter 4 is provided below:



Figure 2.3.15 Rathfarnham Castle (extract from Image 4.2 from Section 4.5.2.8 of Chapter 4)

As a consequence of the Proposed Scheme the vehicular traffic lanes will be circa 4.5m closer to the playground than the existing road.

The submission contends that the Proposed Scheme will result in negative impacts on the playground, including increased noise.

The Proposed Scheme will require widening into the park boundary, the closest elements of the Proposed Scheme to the new park boundary are the proposed footpaths and cycle lanes. A bus lane will move approximately 4.5 closer to the natural playground as a result of the Proposed Scheme.

Chapter 9 of the EIAR has undertaken a detailed impact assessment relating to both construction and operational phase noise and vibration impacts associated with the Proposed Scheme taking account of the realignment of all vehicular and active travel lanes and the resultants forecasted traffic flows along the adjoining road network with and without the Proposed Scheme in place. The resultant noise impacts associated with the Proposed Scheme once operational are determined to be neutral to minor positive within the Park. This is due to the overall reduction in traffic flows (cars and HGVs) along the Proposed Scheme.

It is noted that the existing boundary wall will be replaced with a wall of the same height along the park boundary and hence no change in the effectiveness of noise screening from the boundary wall treatment will occur. Whilst there will be a portion of trees removed from the park boundary, these do not provide any notable noise screening for road traffic and hence are not relied upon for noise reduction.

Finally it is important to note that all traffic noise calculations are based on full fleet using combustion engines. As noted in Section 9.4.4.1.1.4 in Chapter 9 in Volume 2 of the EIAR, during the proposed year of opening, 2028, the percentage of vehicles with combustion engines will be reduced compared to the existing scenario. The NTA forecast for the year 2028 is for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the design year 2043, the city bus fleet is forecast to be 100% electric. This will in turn reduce the operational traffic noise levels from buses along the adjacent bus lane.

2.3.3.2 Option Assessment Along Rathfarnham Road

Summary of Issue Raised

Several submissions expressed concerns about the proposed infrastructure works along Grange Road and Rathfarnham Road. Stating that alternative routes options have not been adequately assessed.

Response to Issue Raised

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives, Section 3.3 outlines the process that set out the route alternatives which were considered a part of the process to establish the Proposed Scheme. Development of the Proposed Scheme has evolved in the following stages:

Feasibility and Options Reports, which were associated with the Proposed Scheme (Rathfarnham to City Centre Core Bus Corridor (CBC) Feasibility Study and Options Assessment Report and Terenure to Tallaght CBC Feasibility Study and Options Assessment Report), were prepared in 2017 and set out the initial route options and concluded with the identification of the Emerging Preferred Route;

A first round of non-statutory **Public Consultation** was undertaken on the Emerging Preferred Route from 23 January 2019 to 30 April 2019;

Development of Draft Preferred Route Option (April 2019 to March 2020). Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered;

A second round of non-statutory **Public Consultation** was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year;

Further development of an updated **Draft Preferred Route Option** was undertaken subsequent to the second round of public consultation, which took account of submissions received, continuing stakeholder engagement and additional design information;

A third round of non-statutory **Public Consultation** was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020; and

Finalisation of the **Preferred Route Option**. Informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information, the Preferred Route Option, being the Proposed Scheme, was finalised.

Alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme, such as optimising the road layout in constrained locations including Rathfarnham Road, Rathgar Road, Rathmines Road Lower and Templeogue Road. The iterative development of the Proposed Scheme has also been informed by a review of feedback and new information received during each stage of public consultation and as data, such as topographical surveys, transport and environmental information was collected and assessed. In addition, the potential for climate impact was considered in all phases of the design process for the Proposed Scheme. As the design progressed climate was indirectly affected in a positive way by refining the design at each stage through reducing the physical footprint of the scheme coupled with the inclusion of technological bus priority measures.

Feasibility and Options Report (summarised in Chapter 3 of the EIAR)

The Feasibility and Options Reports identified feasible options along the corridor, assessed these options and arrived at an Emerging Preferred Route. Two reports were published for the Proposed Scheme; the Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report and the Tallaght to Terenure Core Bus Corridor CBC Feasibility Study and Options Assessment Report. These Reports formed the basis for the first phase of public consultation. A summary of the process is described below. The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route, comprising:

1. Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
2. Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Feasibility and Options Report – Stage 1

The study area for the Rathfarnham to City Centre corridor comprised of three main sections:

1. Section 1 examined feasible route options from Taylors Lane and Grange Road to the River Dodder.
3. Section 2 examined feasible route options from the River Dodder to the Grand Canal.
4. Section 3 examined feasible route options from the Grand Canal to the River Liffey.

At the start of the Stage 1 assessment, an initial ‘spider’s web’ of potential route options (consisting of 104 individual links), that could accommodate a Core Bus Corridor was identified for each study area section as shown in Image 3.3 (extracted from the Feasibility Study and Options Assessment Report).



Figure 2.3.16 Spider's Web of Route Options extracted from 'Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study

The initial 'spider's web' was narrowed down using a high level qualitative method based on professional judgement and a general appreciation for existing physical conditions / constraints within the study area. This exercise examined and assessed technically feasible route options, based upon specific objectives. In addition to being assessed on their individual merits, routes were also assessed relative to each other, enabling some routes to be ruled out if more suitable alternatives existed.

The Stage 1 assessment considered engineering constraints, high-level environmental constraints and an analysis of population catchments. Numerous links forming part of the 'spider's web' were not brought forward to the Stage 2 assessment due to space constraints, lack of appropriate adjacent linkages to form a coherent end to-end route, unsuitability of particular routes, in addition to other factors. For example along Rathgar Avenue the route is a narrow single carriageway 2 lane road with the building lines of residential and commercial properties in close proximity to the carriageway along much of this section and limited potential to widen the existing carriageway.

Following completion of stage 1 assessment Three options were brought forward to the stage 2 assessment between Nutgrove Avenue and Dodder View Road (Section 1 of the Rathfarnham to City Centre Corridor), SA1 to SA3. For the section between Dodder View Road and Grand Canal (Section 2 of the Rathfarnham to City Centre Corridor), Seven options were brought forward to the stage 2 assessment, CB1 to CB7.



Figure 2.3.17 Route Options from Initial Sift of Section 1 of the Rathfarnham to City Centre Corridor (Diagram 3.6 of EIAR Chapter 3)

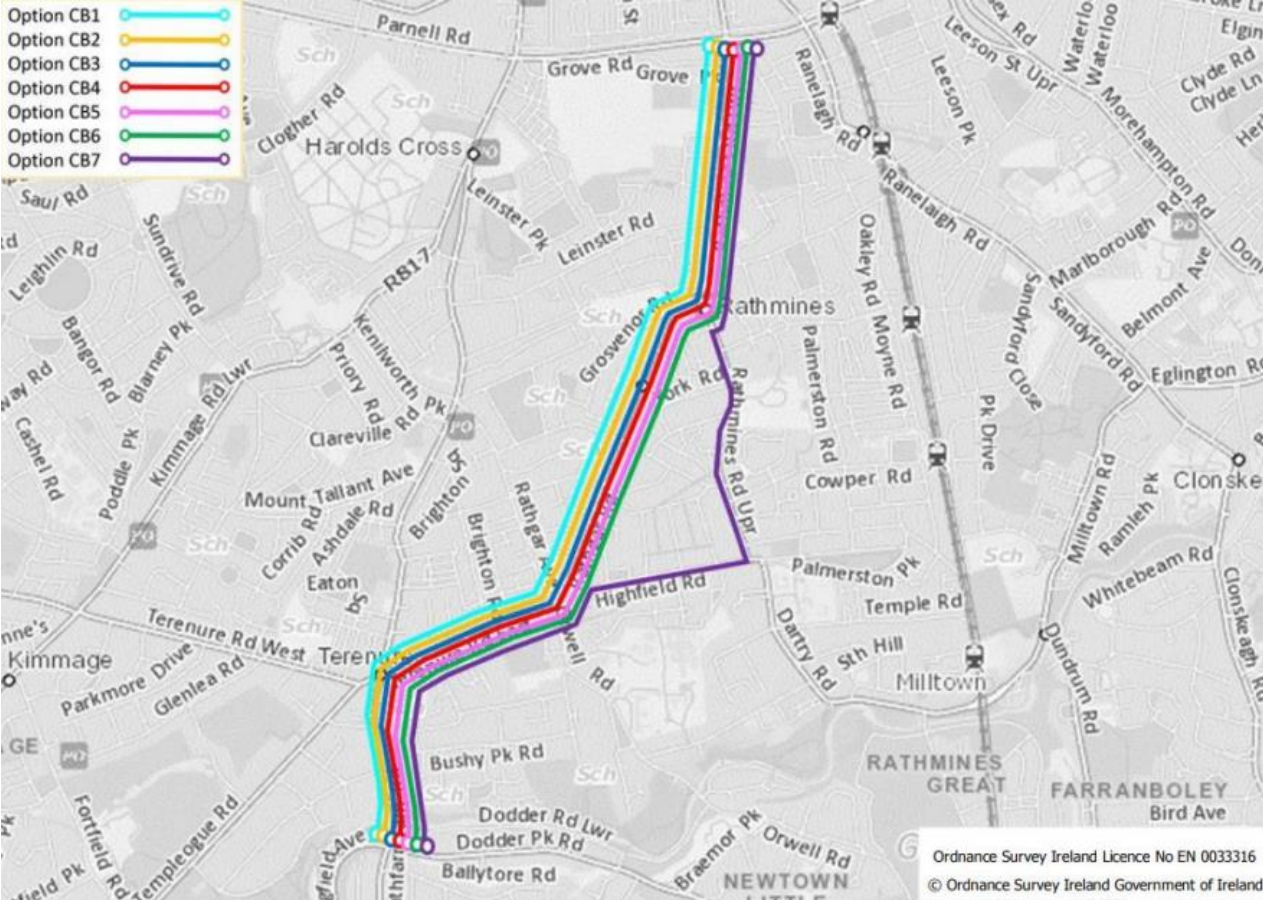


Figure 2.3.18 Route Options from Initial Sift of Section 2 of the Rathfarnham to City Centre Corridor (Diagram 3.7 in EIAR Chapter 3)

Feasibility and Options Report – Stage 2

Section 3.3.2 of EIAR Chapter 3 describes the stage 2 assessment process and the quantitative and qualitative assessment using criteria established to compare the route options:

The indicative scheme for each route option was progressed to a multi-criteria assessment. The 'Common Appraisal Framework for Transport Projects and Programmes' published by the Department of Transport, Tourism and Sport (DTTAS), March 2016, requires schemes to undergo a 'Multi-Criteria Analysis' (MCA) which evaluated the route options under the assessment criteria set out below:

1. *Economy;*
2. *Integration;*
3. *Accessibility & Social Inclusion;*
4. *Safety; and*
5. *Environment.*

Under each headline criterion, a set of sub-criteria were used to comparatively evaluate the options. For the Environment criterion the following sub-criteria were considered in the assessment to inform the Emerging Preferred Route:

Archaeological, Architectural and Cultural Heritage – there is the potential for impacts on archaeological, architectural and cultural heritage environment when providing CBC infrastructure. The assessment had regard to RMPs, Sites of Archaeological or Cultural Heritage and on buildings listed on the National Inventory of Architectural Heritage along or adjacent to the corridor;

Soils and Geology - Construction of infrastructure necessary for the provision of CBC infrastructure has the potential to impact on soils and geology. For example, through land acquisition and ground excavation. These considerations were compared for each scheme under this criterion;

Hydrology - The provision of CBC infrastructure has the potential to impact on surface water bodies as a result of land-take (with particular emphasis on floodplains and flood zones). Any such impacts were considered for each scheme under this criterion;

Landscape and Visual - Provision of CBC infrastructure has the potential to impact on the townscape/streetscape as well as the landscape and visual aspects of the area, for example, by the removal of front gardens or green spaces or the altering of streetscapes, character and features. Different schemes were compared and any negative effects considered under this criterion;

Air Quality - The provision of CBC infrastructure has the potential to impact the air quality along the route. These effects were compared for each scheme option under this criterion in relation to the volumes of traffic and on whether the road is moving closer to a sensitive receptor, for example road widening or new realignment;

Noise & Vibration - Provision of CBC infrastructure (e.g., the construction activities), has the potential to negatively impact on noise and vibration along a scheme. These effects were compared for each scheme option under this criterion. The impact was quantified in relation to the volumes of traffic and on whether the road is moving closer to a sensitive receptor, for example road widening or new realignment; and

Land Use Character - The provision of CBC infrastructure has the potential to impact on land use character through land-take, severance or reduction of viability which prevents or reduces it from being used for its intended use.

Feasibility and Options Report – Stage 2 (Section 1 – Nutgrove Avenue to Dodder View Road)

The Stage 2 Assessment for the Rathfarnham to City Centre scheme followed the same three sections as per the Stage 1 assessment. Following the Stage 1 Sifting process, three viable route options for Section 1 (Nutgrove Avenue to Dodder View Road) were taken forward for assessment and further refinement. The Route Option Assessment for section 1 is described in Section 3.3.2.2.1 of EIAR Chapter 3:

1. *Route Option SA1: A route option via Grange Road and Rathfarnham Road;*
2. *Route Option SA2: A route option via Grange Road and Rathfarnham Road with a parallel cycle route via Rathfarnham Wood and Castleside Drive;*

3. *Route Option SB1: A route option via Nutgrove Avenue, Nutgrove Way, Braemor Road and Dodder Park Road.*

Following the assessment of the two constrained sub-sections as outlined in section 3.3.2.2.1.2 of EIAR Chapter 3, an MCA was undertaken of the principal route options along this section of the scheme, in order to determine the most appropriate scheme for this section of the Proposed Scheme. These options are briefly summarised below:

1. **Option SA1** would involve the provision of segregated bus lanes between Grange Road/Nutgrove Avenue junction to the Dodder River crossing at Pearse Bridge. Segregated cycle facilities would be provided along the CBC route on Grange Road and Rathfarnham Road to just north of the Rathfarnham Main Street junction. A parallel cycle route would be provided via Brookvale Downs;
2. **Option SA2** would involve the provision of segregated bus lanes between Grange Road/Nutgrove Avenue junction to the Dodder River crossing at Pearse Bridge. Segregated cycle facilities would be provided along the CBC route on Grange Road and Rathfarnham Road to just north of the Rathfarnham Main Street junction. A parallel cycle route would be provided via Rathfarnham Wood, Castleside Drive and Brookvale Downs; and
3. **Option SB1** would involve the provision of segregated bus lanes between Grange Road/Nutgrove Avenue junction to Dodder Park Road/Rathfarnham Road junction via Churchtown. Segregated parallel cycle routes would be provided along Rathfarnham Wood/Castleside Drive and via Whitehall Road/Landscape Park.

Section 1 Summary Sub Criteria				
Grange Road/Nutgrove Avenue junction to Dodder River Crossing				
Appraisal Criteria	Sub-Criteria	Route Option SA1 Grange Road - Rathfarnham	Route Option SA2 Grange Road – Rathfarnham (Parallel cycle route via Rathfarnham Wood/Castleside Drive)	Route Option SB1 Grange Road – Rathfarnham via Churchtown
1 Economy	1A Capital Cost	Green	Green	Yellow
	1B Transport Quality & Reliability	Green	Green	Red
2 Integration	2A Land Use Policy	Yellow	Yellow	Yellow
	2B Residential Population and Employment Catchments	Yellow	Yellow	Green
	2C Transport Network Integration	Yellow	Yellow	Yellow
	2D Cycle Network Integration	Green	Red	Red
	2E Traffic Network Integration	Green	Green	Yellow
3 Accessibility & Social Inclusion	3A Key Trip Attractors	Yellow	Yellow	Green
	3B Deprived Geographic Areas	Yellow	Yellow	Green
4 Safety	4A Road Safety	Green	Green	Yellow
	4B Pedestrians Safety	Yellow	Yellow	Yellow
5 Environment	5A Archaeology & Cultural Heritage	Green	Green	Yellow
	5B Architectural Heritage	Yellow	Yellow	Green
	5C Flora & Fauna	Yellow	Green	Yellow
	5D Soils, Geology & Hydrology	Yellow	Yellow	Yellow
	5E Landscape and Visual	Yellow	Green	Yellow
	5F Air Quality	Yellow	Green	Yellow
	5G Noise & Vibration	Yellow	Green	Yellow
	5H Land Use Character	Yellow	Green	Red

Figure 2.3.19 Multi-criteria Assessment for Section 1 of Rathfarnham to City Centre Scheme (extract from Rathfarnham to City Centre Core Bus Corridor Feasibility and Options Assessment Report)

A multi-criteria assessment of all scheme options was undertaken. The assessment sub-criteria which were differentiators between scheme options included Capital Cost, Transport Reliability and Quality, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Deprived Geographic Areas, Road Safety, Archaeology & Cultural Heritage, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character.

Option SA1 was identified as having significant benefits over other options in relation to Transport Quality and Reliability and Cycle Network Integration. Option SA1 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route.

A full breakdown of the multi-criteria assessment is outlined in section 3.3.2.2.1.2 of EIAR Chapter 3.

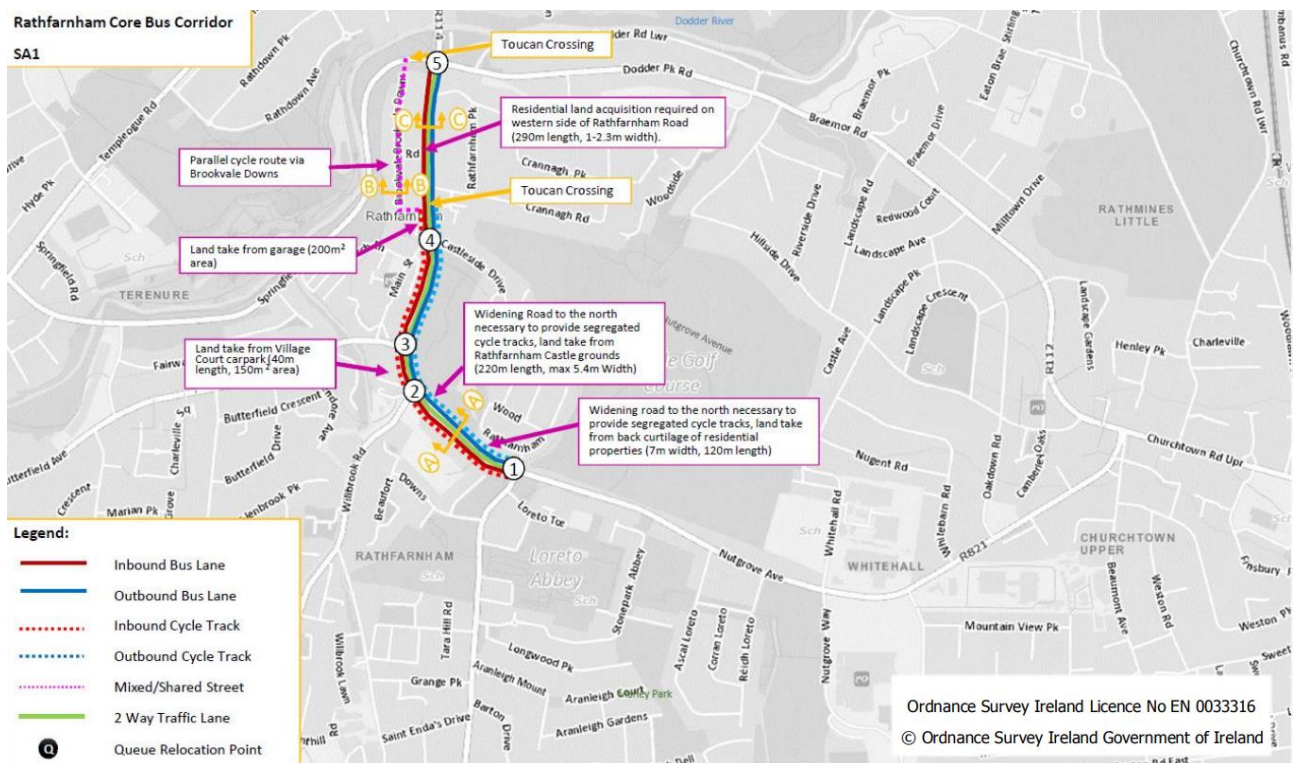


Figure 2.3.20 Principle Route Option for Section 1 of Rathfarnham to City Centre Scheme (Figure 6.18 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

Feasibility and Options Report – Stage 2 (Section 2 –Dodder View Road to Grand Canal)

The Stage 2 Assessment for the Rathfarnham to City Centre scheme followed the same Three sections as per the Stage 1 assessment. Following the Stage 1 Sifting process, seven viable route options for Section 2 (Dodder View Road to Grand Canal) were taken forward for assessment and further refinement. The Route Option Assessment for section 2 is described in Section 3.3.2.2.2 of EIAR Chapter 3:

1. *Route Option CB1 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound traffic only on Rathgar Road, Outbound traffic only Rathmines Road);*
2. *Route Option CB2 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound traffic only on Rathgar and Rathmines Road);*
3. *Route Option CB3 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Outbound traffic only on Rathgar and Rathmines Road);*
4. *Route Option CB4 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Parallel cycle route via Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks);*
5. *Route Option CB5 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound bus lane provided on Rathmines Road Lower from Rathmines Road Upper to Military Road junction and outbound bus lane provided from Grove Road to Military Road junction);*
6. *Route Option CB6 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Outbound traffic only on Rathmines Road Lower); and*
7. *Route Option CB7 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Bus lanes via Highfield Road/Rathmines Road Upper) (Parallel cycle route).*

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above. These constrained locations are as follows:

1. Terenure Village to Rathgar Village – TVR, as indicated on Image; and
2. Cycle Route options between Bushy Park Road junction and Grand Canal

Sub-section: Terenure Village to Rathgar – TVR

Section 3.3.2.2.1 of EIAR Chapter 3 describes the subsection between Terenure Village and Rathgar Village:



Figure 2.3.21 Terenure Village to Rathgar Village sub-section – TVR (Figure 6.9 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

There were eight scheme sub-options (TVR1 to TVR8) considered for the section along Rathfarnham Road and Terenure Road East to Rathgar Village which are discussed below.

1. **Sub-option TVR1:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided and a short section on Rathfarnham Road between Pearse Bridge and Bushy Park Road junction, where an outbound bus lane would not be provided. Segregated cycle facilities would be provided on Bushy Park Road and Orwell Road;
2. **Sub-option TVR2:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East. This would require the removal of one of the general traffic lanes in the outbound direction. A 3m wide two-way cycle bridge would be provided on the western side of Pearse bridge. Segregated cycle facilities would be provided on Bushy Park Road and Orwell Road;
3. **Sub-option TVR3:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided.

Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);

4. **Sub-option TVR4:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the west of Pearse Bridge) is proposed, to provide a parallel cycle route from Brookvale Downs to Rathdown Park. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;
5. **Sub-option TVR5:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the east of Pearse Bridge) is proposed to provide a parallel cycle route from the Dodder Greenway to Riversdale Avenue. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;
6. **Sub-option TVR6:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the east of Pearse Bridge) is proposed to provide a parallel cycle route from the Dodder Greenway to Laurelton. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;
7. **Sub-option TVR7:** This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided on a route via the Dodder Greenway, through Orwell Park and along Orwell Road to Rathgar Village; and
8. **Sub-option TVR8:** This route sub-option would include the provision of continuous bus priority in both directions but with different routes for the northbound (Bushy Park Road/Orwell Road) and southbound (Terenure Road/Rathfarnham Road), with the exception of the section on Rathfarnham Road from Westbourne Road junction to Bushy Park Road junction where bus priority signalling is proposed in the outbound direction at this pinch point. Segregated cycle facilities would also be split in terms of direction. These facilities would be provided in the opposite direction to the bus facilities on Bushy Park Road/Terenure Road East. There is also a 100m section of Terenure Road East at Terenure Cross where the inbound cycle lane would not be provided.

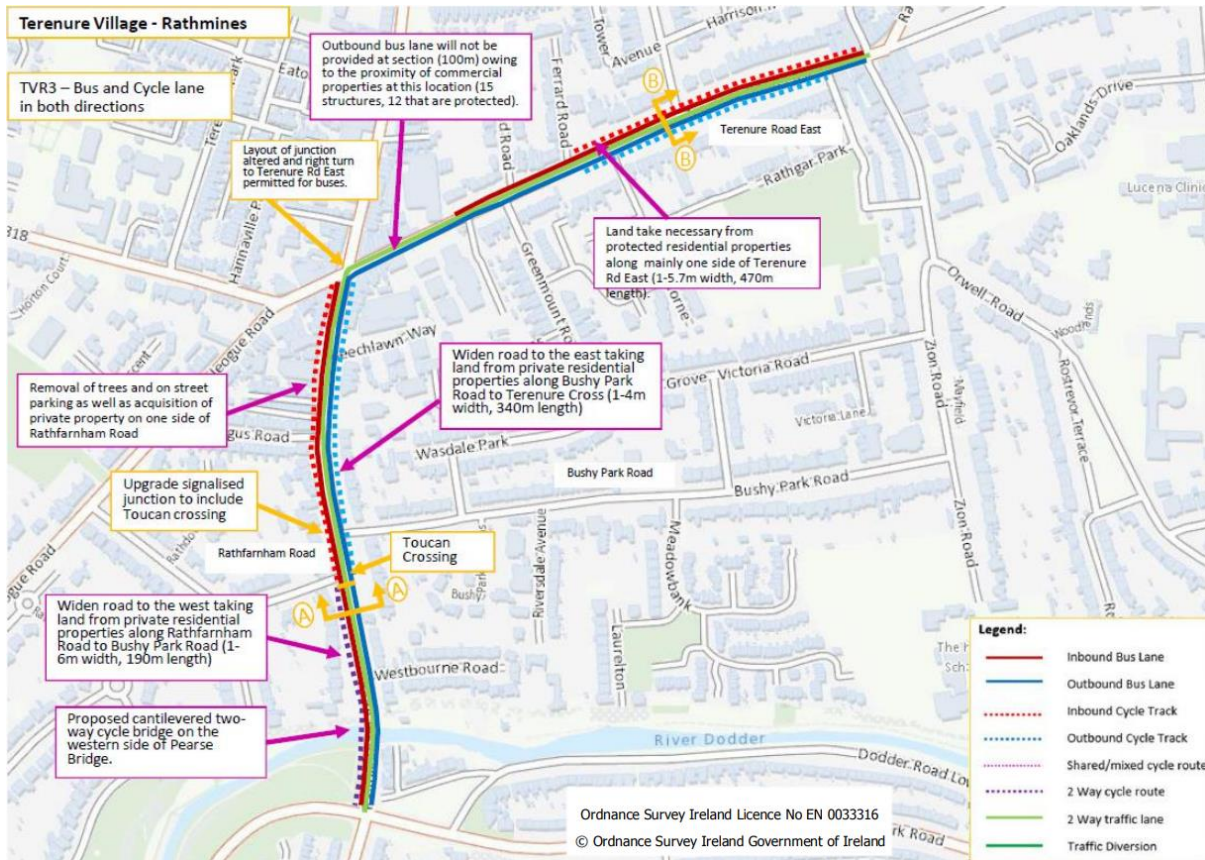
Section TVR Summary (main criteria)								
Terenure Village- Rathmines								
Appraisal Criteria	Option TVR1 Bus lane in both directions, parallel cycle route	Option TVR2 Inbound Traffic Lane on Terenure Rd East	Option TVR3 Bus lane and Cycle lane in both directions	Option TVR4 Cycle Route via Rathdown Park	Option TVR5 Cycle Route via Riversdale Avenue	Option TVR6 Cycle Route via Laurelton / Meadowbank	Option TVR7 Cycle Route via The Dodder Greenway and Orwell Road	Option TVR8 Inbound bus lane Bushy Park Rd & Outbound bus lane Terenure Rd East
1 Economy	Yellow	Green	Green	Green	Green	Green	Green	Red
2 Integration	Green	Yellow	Green	Green	Green	Green	Yellow	Yellow
3 Accessibility & Social Inclusion	Green	Green	Green	Green	Green	Green	Green	Yellow
4 Safety	Yellow	Green	Green	Green	Green	Green	Green	Yellow
5 Environment	Green	Yellow	Yellow	Yellow	Red	Red	Green	Yellow

Figure 2.3.22 Terenure Village to Rathgar Village sub-section Options Assessment Summary (Main Criteria) (Table 6.3 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3

was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character.

Following an MCA, **sub-option TVR3** was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.



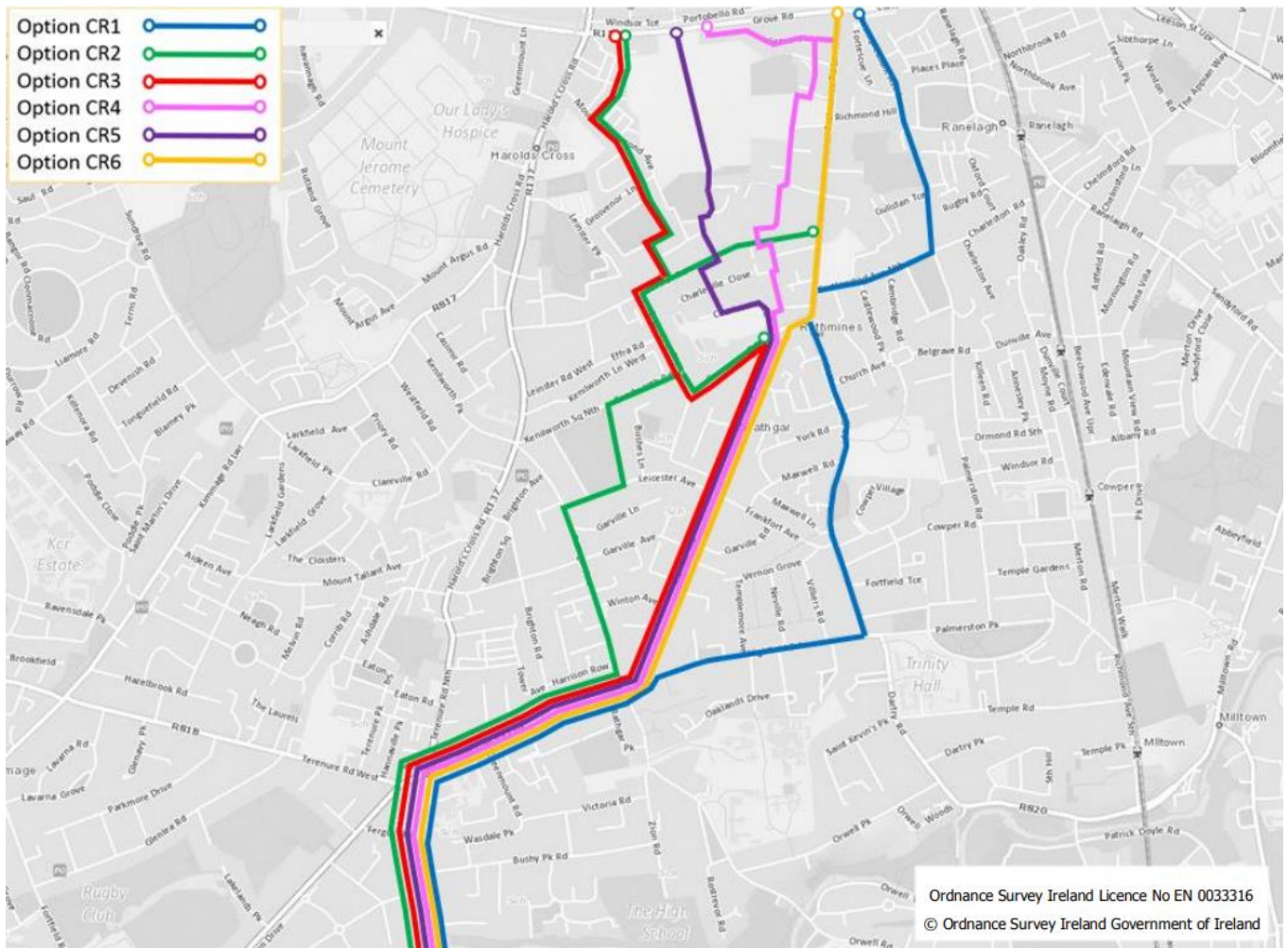


Figure 2.3.24 Parallel Cycle Route Options between the Dodder Crossing and the Grand Canal sub-section (Figure 6.28 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

There were six scheme sub-options (CR1 to CR6) considered for the section between the Bushy Park junction on Rathfarnham Road to the Grand Canal Crossing via Rathmines Village which are discussed below.

Sub-option CR1: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Highfield Road, Rathmines Road Upper, Castlewood Avenue and Mount Pleasant Avenue. The route would also include a new cycle bridge crossing the Grand Canal;

Sub-option CR2: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Rathgar Avenue, Kenilworth Square, Grosvenor Square, Mount Drummond Avenue, and O'Hara Avenue. The route would also include a new cycle bridge crossing the Grand Canal;

Sub-option CR3: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Rathgar Road, Grosvenor Road, Grosvenor Square, Mount Drummond Avenue, and O'Hara Avenue. The route would also include a new cycle bridge crossing the Grand Canal;

Sub-option CR4: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road, Charleville Road, Wynnefield Road, Prince Arthur Terrace, Leinster Square, Louis Lane, Ardee Road, Lissenfield, and Grove Park. The route would also include a new cycle bridge crossing the Grand Canal;

Sub-option CR5: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road, Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks. The route would also include a new cycle bridge crossing the Grand Canal; and

Sub-option CR6: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road and Rathmines Road Lower. Due to width constraints on La Touche Bridge a new cycle bridge is proposed to the west of the bridge, connecting with Martin Street.

Section 2 Summary Main Criteria
Cycle Routes – Rathfarnham to Rathmines

Appraisal Criteria	Route Option CR1 Cycle Route via Rathfarnham Road, Terenure Road East, Highfield Road, Rathmines Road Upper, Castlewood Avenue and Mount Pleasant Avenue.	Route Option CR2 Cycle route via Rathfarnham Road, Terenure Road East, Rathgar Avenue, Kenilworth Square, Grosvenor Square, Mount Drummond Avenue and O'Hara Avenue.	Route Option CR3 Cycle Route via Rathfarnham Road, Terenure Road East, Rathgar Road, Grosvenor Road, Grosvenor Square, Mount Drummond Avenue and O'Hara Avenue.	Route Option CR4 Cycle Route via Rathfarnham Road, Charleville Road, Wynnefield Road, Prince Arthur Terrace, Leinster Square, Louis Lane, Ardee Road, Lissenfield, and Grove Park.	Route Option CR5 Cycle Route via Rathfarnham Road, Terenure Road East, Rathgar Road Charleville Road, Grosvenor Lodge, and Cathal Brugha Barracks.	Route Option CR6 Cycle Route via Rathfarnham Road, Terenure Road East, Rathgar Road and Rathmines Road Lower.
1 Capital Cost						
2 Road Safety						
3 Coherence						
4 Directness						
5 Attractiveness						
6 Comfort						
7 Environmental						

Figure 2.3.25 Parallel Cycle Route Options between the Dodder Crossing and the Grand Canal sub-section Options Assessment Summary (Main Criteria) (Table 6.3 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report

*The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Road Safety, Coherence, Directness, Attractiveness, Comfort, and Environment. Sub-option CR5 was identified as having significant benefits over other sub-options in relation to Attractiveness and Comfort, and some benefits over other sub-options in relation to Road Safety, Coherence and Directness. Following an MCA, **sub-option CR5** was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.*

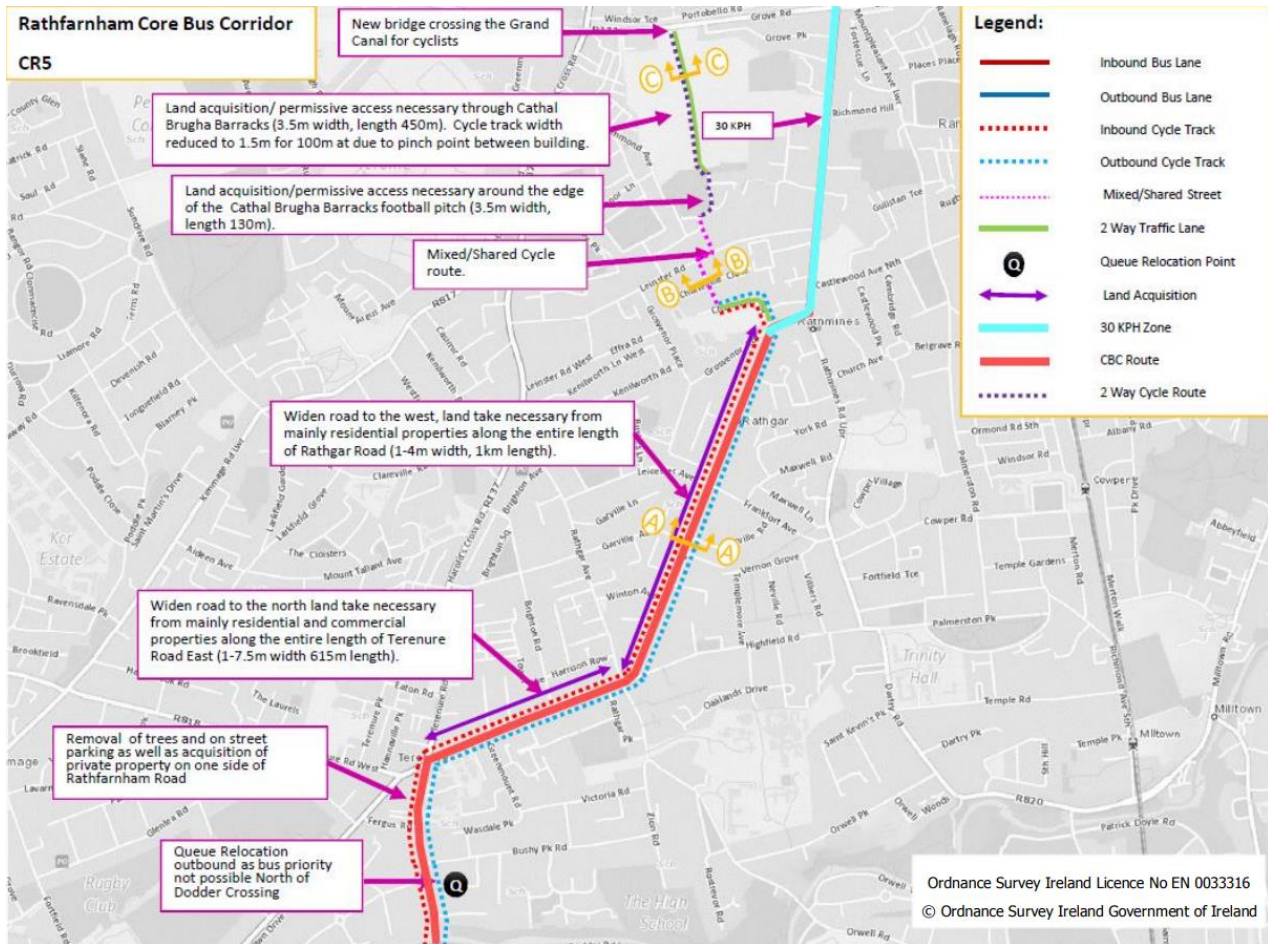


Figure 2.3.26 Parallel Cycle Route Options between the Dodder Crossing and the Grand Canal sub-section (Figure 6.14 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

Following the assessment of the two constrained sub-sections as outlined above, an MCA has been undertaken of the principal route options along this section of the scheme in order to determine the most appropriate scheme for this section of the Proposed Scheme. These options are briefly summarised below.

- Option CB1 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Outbound traffic would be removed from Rathgar Road and, inbound traffic would be removed from Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;
- Option CB2 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Outbound traffic would be removed from Rathgar Road and Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;
- Option CB3 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Inbound traffic would be removed from Rathgar Road and Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;
- Option CB4 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). It is proposed to provide segregated cycle facilities on Rathfarnham Road, Terenure Road East and Rathgar Road. Cyclists would be catered for via a parallel cycle route along Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks;

5. Option CB5 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and Rathmines Village (with exception of a 100m section at Terenure Cross). An inbound bus lane would be provided on Rathmines Road Lower from Rathmines Road Upper to the Military Road junction, whilst an outbound bus lane provided from Grove Road to the Military Road junction. Segregated cycle facilities would be provided along the majority of the CBC route;
6. Option CB6 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). It is proposed to remove general traffic in the northbound (inbound) direction along Rathmines Road Lower between Castlewood Avenue and Grove Road. It is also proposed to provide segregated cycle facilities along the majority of the CBC route; and
7. Option CB6 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). It is proposed to remove general traffic in the northbound (inbound) direction along Rathmines Road Lower between Castlewood Avenue and Grove Road. It is also proposed to provide segregated cycle facilities along the majority of the CBC route; and

Option CB4 was identified as having significant benefits over other options in relation to Transport Quality and Reliability, Traffic Network Integration, Road Safety and Land Use Character. Option CB4 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route.

A full breakdown of the multi-criteria assessment is outlined in section 3.3.2.2.2 of EIAR Chapter 3.

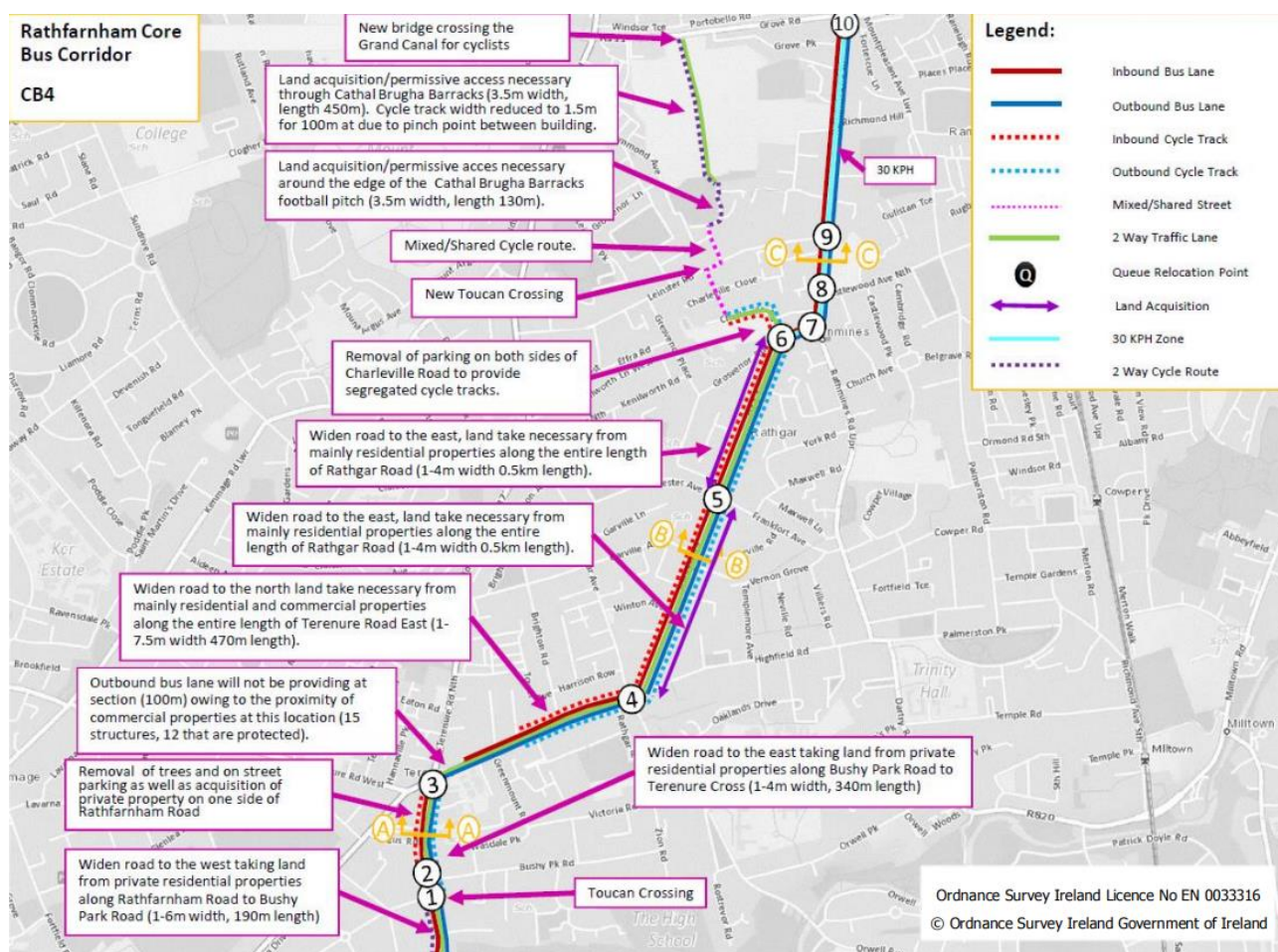


Figure 2.3.27 Route Option CB4 Proposal – Section 2 (Figure 6.57 of Rathfarnham to City Centre Core Bus Corridor Route Options Assessment Main Report)

Development of Emerging Preferred Route

Informed by the appraisal of options described in earlier section, the Emerging Preferred Routes were identified. A non-statutory public consultation on this Emerging Preferred Route was undertaken from 23 January 2019 to 30 April 2019, providing feedback which was then meaningfully considered in the further development of the scheme proposal.

Section 3.4.1 of EIAR Chapter 3 describes the development of the Draft Preferred Route Option:

Following the completion of the public consultation process in relation to the Emerging Preferred Route, various amendments were made to the scheme proposals to address a number of the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, and/or arising from the availability of additional information. These amendments were incorporated into the designs and informed a draft Preferred Route Option.

The main alternatives considered within the section along between Grange Road and Rathdown Park during the development of the draft Preferred Route Option are set out in section 3.4.1.1.2 of EIAR Chapter 3:

The EPR Option proposal within this section of the scheme included a proposed connection for cyclists to Brookvale Downs via a narrow laneway between an existing residential property and a petrol station. While it was proposed as part of the EPR Option to widen a section of this laneway, it is noted from a review of the topographical survey that this would require demolition of one or other of these buildings to accommodate a two-way cycle route as well as accommodating pedestrians. Concerns relating to the proposal from the public were coupled with the delivery of a compromised and potentially unattractive route for cyclists. As such, alternative cycle route options were explored in this area in determining the draft PRO.

Furthermore, based on a review of the topographical survey, it became more evident that a number of properties along Rathfarnham Road, between Brookvale Road and Dodder Park Road, as well as north of the Dodder, between Dodder Park Road and Rathdown Park, currently have steep driveways in excess of current standards. As part of the public consultation, the issue of compliance with Part M of the Building Regulations was highlighted. It was considered, that with the level of land acquisition proposed as part of the EPR Option, existing driveways would be made much steeper than they currently are and would not be compliant with the Regulations without substantial mitigation. As such, alternative design solutions were therefore explored in this area in determining the draft PRO.

Within this section of the CBC route, Rathfarnham Road is particularly constrained in terms of the available width. As such, this section of the route was brought through an initial assessment to determine the optimum alternative cycle route for this section.

In developing options for alternative cycle routes, it became evident that some options being considered would require a new pedestrian and cyclist bridge crossing the River Dodder. Two potential bridge sites were identified within this general location. In order to rationalise the number of parallel cycle route options to be assessed, an initial assessment of two potential bridge locations within this area was undertaken. The preferred bridge option was then incorporated into end-to-end parallel cycle route options for comparative assessment.

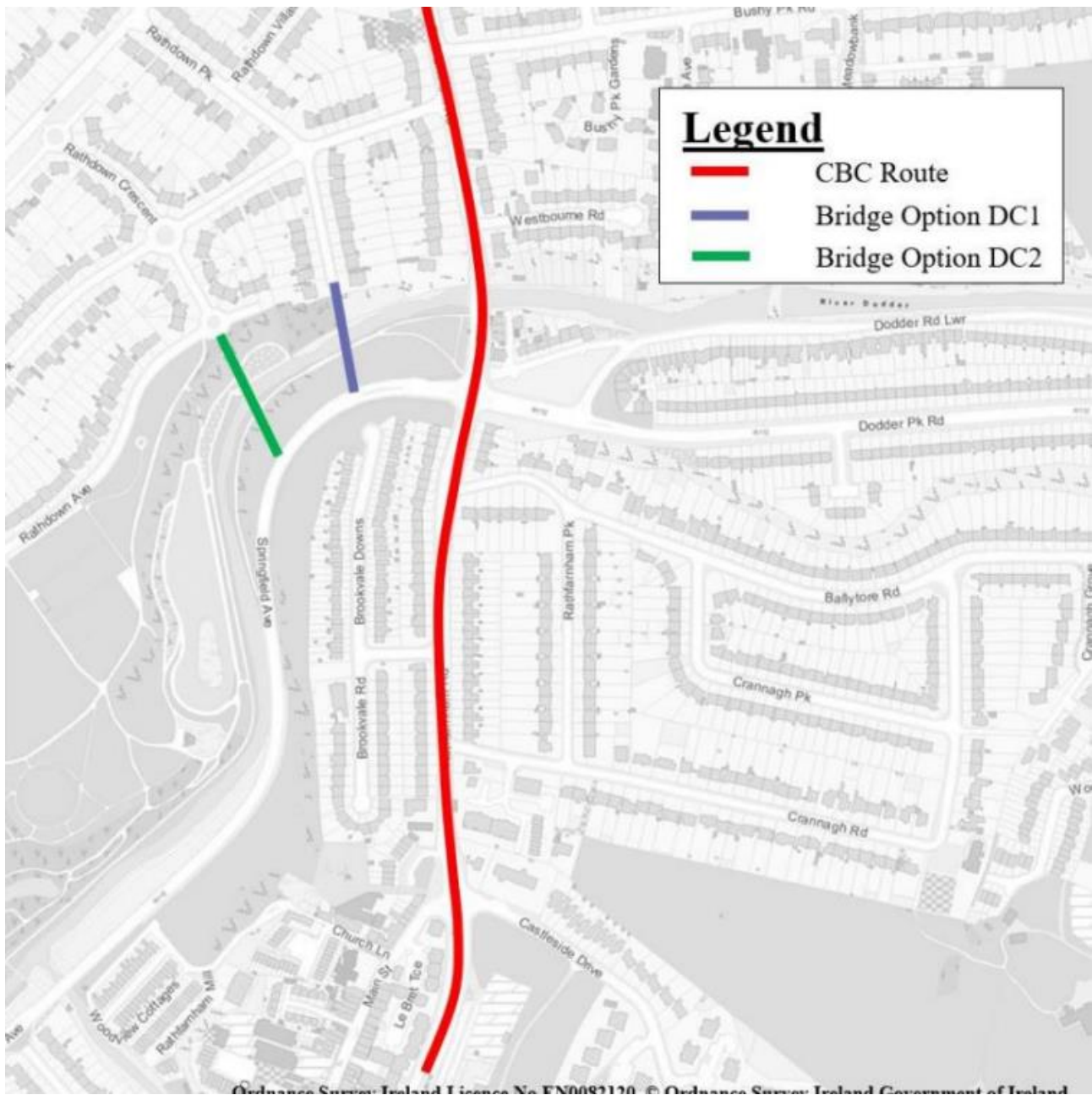


Figure 2.3.28 Locations of two bridge options developed (Diagram 3.17 of EIAR Chapter 3)

Bridge Option DC1 was found to be the preferred option for the provision of a pedestrian and cyclists bridge in this location as it was the more easily constructable option due to the reduced span compared to Option DC2 and it provided better cycling connectivity thus best aligning with the objectives of the Proposed Scheme.

Following the identification of the preferred bridge option, as outlined above, 10 alternative parallel cycle route options were developed along this section of the Proposed Scheme. These options are briefly summarised below:

1. Option PC1 (EPR Option) – Parallel cycle route via Brookvale Downs using laneway north of Texaco Station and crossing River Dodder via a new boardwalk at Pearse Bridge;
2. Option PC2 - Parallel cycle route via Brookvale Downs using laneway north of Texaco Station and crossing River Dodder via a new pedestrian/cycle bridge to Rathdown Park;
3. Option PC3 - Parallel cycle route via Brookvale Downs using Brookvale Road and crossing the River Dodder via a new boardwalk at Pearse Bridge;
4. Option PC4 - Parallel cycle route via Brookvale Downs using Brookvale Road and crossing River Dodder via a new pedestrian/cycle bridge to Rathdown Park;

5. Option PC5 - Parallel cycle route along Butterfield Avenue and the Owendoher River connecting to the Dodder Greenway and crossing the River Dodder via a new boardwalk at Pearse Bridge;
6. Option PC6 - Parallel cycle route along Butterfield Avenue and Owendoher River connecting to the Dodder Greenway and a new bridge to Rathdown Park;
7. Option PC7 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to the Dodder Greenway and a new boardwalk via a new boardwalk at Pearse Bridge;
8. Option PC8 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to the Dodder Greenway and new bridge to Rathdown Park;
9. Option PC9 - Parallel cycle route along Butterfield Avenue and the Owendoher River connecting to Bushy Park utilising the proposed Dodder Greenway bridge; and
10. Option PC10 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to Bushy Park utilising the proposed Dodder Greenway bridge.

These options were comparatively assessed in order to determine the draft preferred route option for a parallel cycle route in this section. This assessment was based on the same methodology presented in the 'Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' for cycle route options considered in Rathgar/Rathmines. Further detail on the assessment methodology and criteria used in the assessment of these alternative cycle facilities is included in Section 3.3.3 and Table 3.1.

Appraisal Criteria	Option PC1	Option PC2	Option PC3	Option PC4	Option PC5	Option PC6	Option PC7	Option PC8	Option PC9	Option PC10
1 Capital Cost	Green	Light Green	Light Green	Light Green	Yellow	Yellow	Red	Red	Light Green	Yellow
2 Road Safety	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Light Green	Light Green	Yellow	Light Green
3 Coherence	Light Green	Light Green	Light Green	Light Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
4 Directness	Light Green	Light Green	Light Green	Light Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
5 Attractiveness	Red	Red	Yellow	Yellow	Light Green	Light Green	Green	Green	Green	Green
6 Comfort	Yellow	Yellow	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Yellow	Yellow
7 Environmental	Light Green	Light Green	Light Green	Yellow	Light Green	Light Green	Yellow	Yellow	Light Green	Light Green

Figure 2.3.29 Grange Road to Rathdown Park - Parallel Cycle Routes Summary MCA (Table 4.9 of Preferred Route Option Report)

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Road Safety, Coherence, Directness, Attractiveness, Comfort, and Environmental. Sub-option PC8 was identified as having significant benefits over other sub-options in relation to Road Safety and Attractiveness. Following a detailed MCA, sub-option PC8 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

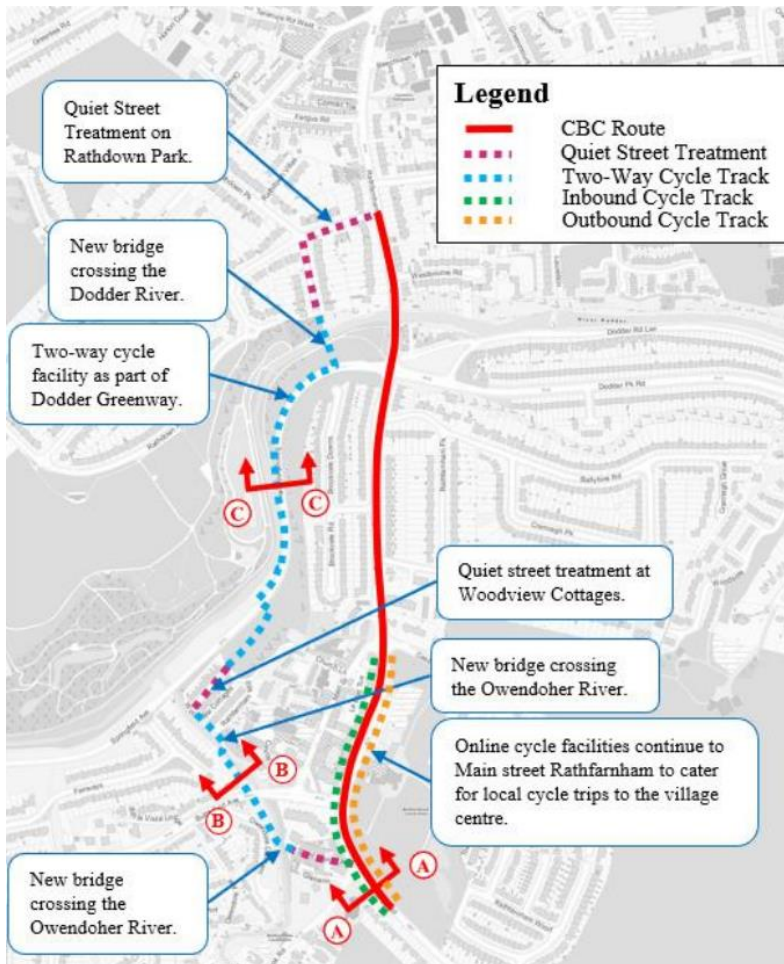


Figure 2.3.30 Cycle Route PC8 Scheme Proposals (Figure 4.62 in the Preferred Route Option Report)

Following the initial assessment of Parallel Cycle Route options, a number of principal route options for the delivery of the CBC scheme from Grange Road to Rathdown Park were developed. These are briefly described below:

1. Option RF1: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of the Dodder with cyclists diverted to Brookvale Downs. Two bus lanes, two general traffic lanes and two cycle tracks provided on Rathfarnham Road north of the Dodder. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey, namely the existing steep driveway gradients on Rathfarnham Road;
2. Option RF2: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of the Dodder with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process;
3. Option RF3: One-way inbound general traffic on Rathfarnham Road between Castleside Drive and Dodder Park Road with two bus lanes and online cycle tracks on the CBC. A combination of bus lanes and signal controlled priority two general traffic lanes and two cycle tracks provided north of the Dodder;
4. Option RF4: One-way inbound general traffic on Rathfarnham Road between Castleside Drive and Dodder Park Road with two bus lanes on the CBC with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process;
5. Option RF5: A combination of bus lanes and signal controlled priority provided on Rathfarnham Road south of the Dodder, with two-way general traffic and online cycle tracks on the CBC. A combination of bus lanes and signal controlled priority, two general traffic lanes and two cycle tracks provided north of the Dodder; and

- Option RF6: A combination of bus lanes and signal controlled priority provided on Rathfarnham Road south of the Dodder, with two-way general traffic and with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process.

Option RF2 – the provision of two bus lanes and two general traffic lanes Rathfarnham Road south of the Dodder with cyclists diverted to the draft preferred parallel route - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the section and minimising the impact on residential properties with steep existing driveways on Rathfarnham Road through the provision of an alternative cycle route linking to Rathdown Park. This option would provide bus priority, and while cycle facilities would not be provided along a short section of the CBC, the proposal included an attractive and safe alternative.

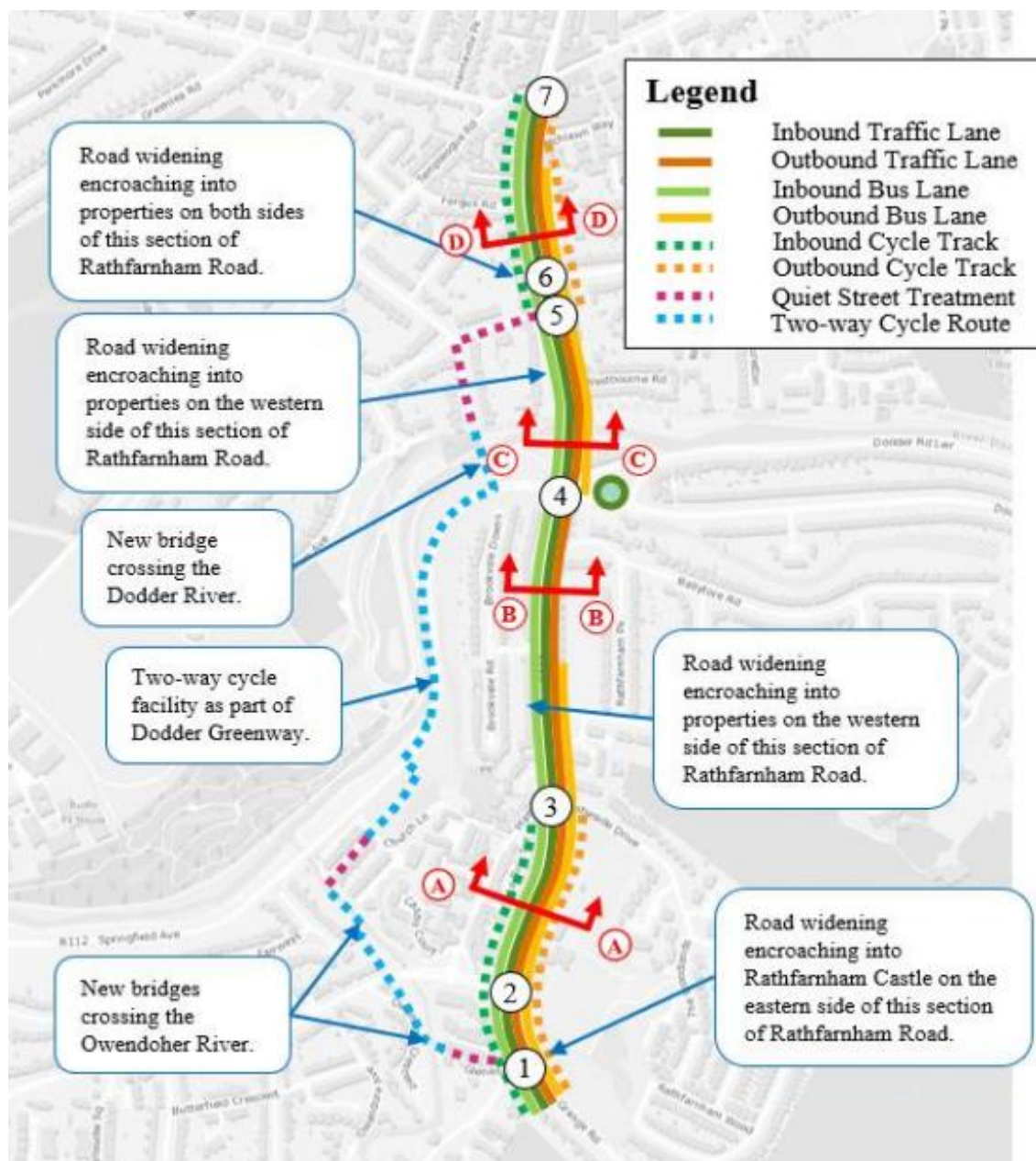


Figure 2.3.31 Route Option RF2 Indicative Scheme Design (Figure 4.75 in Preferred Route Option Report)

It is noted that a number of other options were also considered in the area but were not carried forward for the reasons briefly outlined below:

- Option of a bus gate along Rathfarnham Road between Castleside Drive and Dodder Park Road. This option was not considered feasible as through traffic would be required to undertake a diversion of up to 2km to continue beyond the bus gate, resulting in a route almost four times as long when compared to the most direct route.

Similarly, local access for residents along Rathfarnham Road could be increased by up to 2.5km resulting in a route almost 10 times as long for some residents compared to the most direct route. This diversion length was considered to be too disruptive in this area and as such a bus gate at this location was not considered further.

2. Option of a bus gate along Rathfarnham Road between Dodder Park Road and Rathdown Park. This option was not considered feasible as through traffic would be required to undertake a diversion of up to 3km to continue beyond the bus gate, resulting in a route almost six times as long when compared to the most direct route. Similarly, local access for residents along Rathfarnham Road could be increased by up to 2.5km resulting in a route over 10 times as long for some residents compared to the most direct route. Furthermore, the proposal to provide an inbound bus gate along Templeogue Road (where physical space is not available for other options) as part of the Tallaght to Terenure CBC would further restrict inbound traffic movements in this area. For these reasons, this option was not considered feasible.

Further Consideration following Updated Draft Preferred Route Option Consultation

The third round of public consultation on the updated draft Preferred Route Option took place from the 04 November to 16 December 2020 and was held virtually due to the continuing effect of the COVID-19 pandemic and associated restrictions. There was a total of 1,543 submissions received during this round of public consultation. Arising from the feedback received during this consultation process, a number of changes to the design were made based on feedback received during the third round of public consultation and dialogue with stakeholders.

Nutgrove Avenue to Willbrook Road

Section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application outlines the option assessment between Nutgrove Avenue to Willbrook Road:

Submissions received as part of the public consultation raised concerns about the impact of land acquisition along this section of the route as well as the removal of trees.

In addition, upon review of the EPR Option within this section it was noted that while a number of options were explored, alternative options could be feasible within this Section of the Proposed Scheme. For these reasons, alternative options have been considered in these areas.

A number of alternative options have been developed with the objective of addressing the issues noted above. These options are outlined in more detail below:

1. *Option RC1: Option RC1 would provide a general traffic lane in each direction along the entirety of this route section, as well as dedicated bus lanes and cycle tracks along the CBC for the entirety of this route section. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey.*
2. *Option RC2: Option RC2 would provide a general traffic lane in each direction along the entirety of this route section, as well as a combination of dedicated bus lanes and signal controlled priority and cycle tracks along the CBC.*

Route Option RC2 is described in additional detail in section 4.4.1.1.4 of the Preferred Route Option Report:

This section of the route would commence on Grange Road at the junction with Nutgrove Avenue. A general traffic lane, bus lane and 2.0m wide cycle track in each direction is proposed.

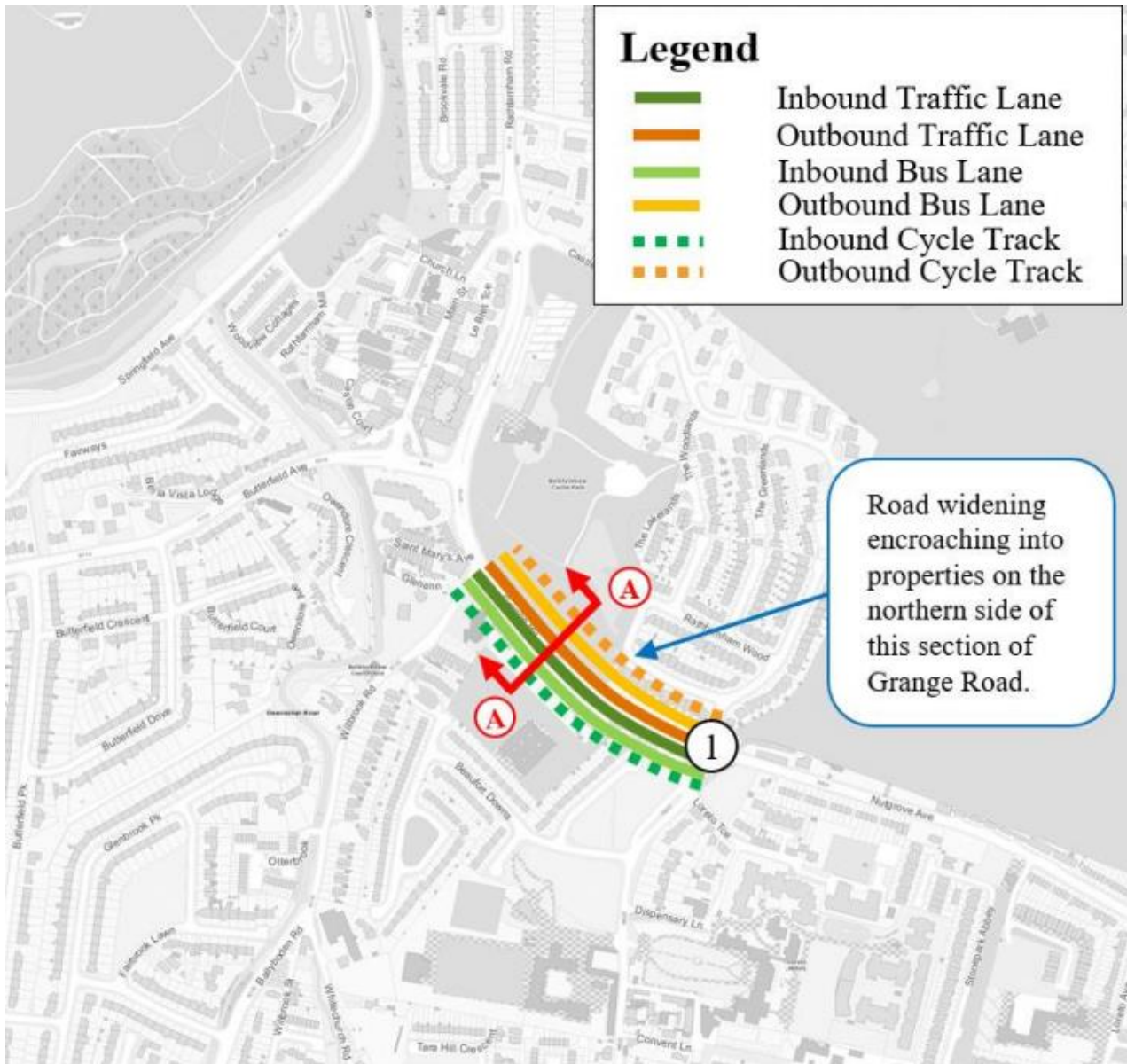


Figure 2.3.32 Route Option RC1 Indicative Scheme Design (Figure 4.31 of the Preferred Route Option Report)

Route Option RC2 is described in additional detail in section 4.4.1.1.5 of the Preferred Route Option Report:

This section of the route would commence on Grange Road at the junction with Nutgrove Avenue. A general traffic lane and 2.0m wide cycle track in each direction is proposed. An inbound bus lane would be provided on approach to the Willbrook Road junction and an outbound bus lane would be provided on approach to the Nutgrove Avenue junction.

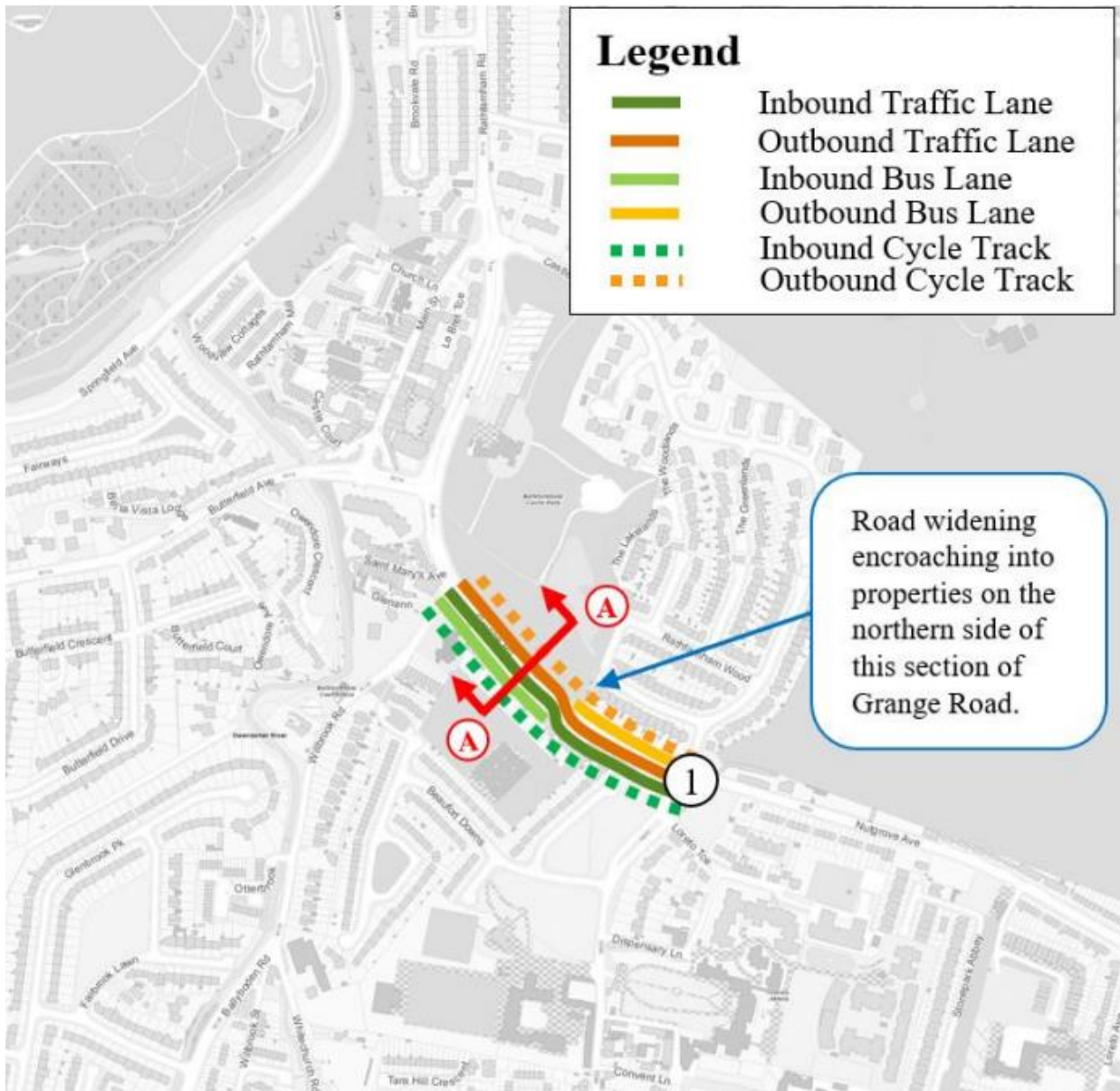


Figure 2.3.33 Route Option RC2 Indicative Scheme Design (Figure 4.34 in Preferred Route Option Report)

Based on the assessment undertaken, route **Option RC1** offers more benefits over other options. It performs favourably under the Economy and Integration criteria, while performing equally to other options under the Accessibility and Social Inclusion and Safety criteria. Option RF1 is the PRO for the Rathfarnham Road area for the following reasons:

1. It would provide segregated bus priority on the CBC throughout the entirety of this section of the scheme, supporting reliability of journey time for the bus;
2. It would deliver segregated online cycle facilities on Secondary Route S04 of the GDA cycle network plan; and
3. It would maintain existing general traffic provision along Grange Road.

Appraisal Criteria	Option RC1	Option RC2
1 Economy		
2 Integration		
3 Accessibility & Social Inclusion		
4 Safety		
5 Environment		

Figure 2.3.34 Nutgrove Avenue to Willbrook Road (Table 4.6 in Preferred Route Option Report)

Grange Road to Rathdown Park

Section 3.4.3.2 of EIAR Chapter 3 describes the additional assessment that was complete for the Grange Road to Rathdown Park section of the Proposed Scheme:

Following feedback received as part of the public consultation in addition to further environmental constraints identified through further environmental investigations, additional assessment was considered warranted for this section of the Proposed Scheme. Furthermore, between Brookvale Road and Dodder Park Road, the cross section is particularly constrained. The potential impacts of the construction works would include:

1. *Potential temporary closure of vehicular access to some properties during construction works;*
2. *Potential need to undertake significant utility works including raising of manhole covers/gullies, and potentially utility ducts;*
3. *Potential temporary closure of Rathfarnham Road to traffic during construction to facilitate works; and*
4. *Extended construction period when compared to sections where works are less complex.*

Upon review, the collective and individual impact of the required construction works were not considered to be practicably feasible due to significant disruption caused by the unique construction works required to deliver this option. Alternative design solutions have therefore been explored in this area in determining the PRO.

Based on the above a number of additional options were developed for consideration within this section. Given the significant changes to options explored within this section of the scheme at this stage, the assessment is described in its totality below. It is noted that the northern extent of the study area for this section was extended to Terenure Cross to allow for a more comprehensive assessment of scheme options along Rathfarnham Road.

The options assessed are briefly described below:

1. *Option RF1: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of Brookvale Road with cyclists diverted to Brookvale Downs. Between Brookvale Road and the River Dodder, two general traffic lanes and an inbound bus lane would be provided with outbound bus priority being maintained through use of signal-controlled priority. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road north of the River Dodder as far as Terenure Cross. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey, namely the existing steep driveway gradients on Rathfarnham Road;*
2. *Option RF2: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of Brookvale Road with cyclists diverted to the preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process. Between Brookvale Road and the River Dodder, two general traffic lanes and an inbound bus lane would be provided with outbound bus priority being maintained through use of signal-controlled priority.*

Two bus lanes, two general traffic lanes on Rathfarnham Road north of the River Dodder as far as Terenure Cross with two 1.5m wide cycle tracks provided north of Rathdown Park where the parallel cycle route re-joins the CBC;

3. Option RF3: A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Main Street Rathfarnham and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross;
4. Option RF4: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Main Street Rathfarnham and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross;
5. Option RF5: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross;
6. Option RF6: A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross;
7. Option RF7: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Main Street Rathfarnham and Terenure Cross. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. An outbound bus gate provided on Rathfarnham Road, north of Dodder Park Road;
8. Option RF8: One-way inbound general traffic, two bus lanes and two 1.5m wide cycle tracks on Rathfarnham Road south of the River Dodder. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross; and
9. Option RF9: One-way inbound general traffic and two bus lanes provided on Rathfarnham Road south of the River Dodder. Two bus lanes and two general traffic lanes provided on Rathfarnham Road between the River Dodder and Bushy Park Road. Cyclists diverted to the preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross.

Appraisal Criteria	Option RF1	Option RF2	Option RF3	Option RF4	Option RF5	Option RF6	Option RF7	Option RF8	Option RF9
1 Economy	Green	Orange	Orange	Orange	Green	Orange	Orange	Orange	Green
2 Integration	Orange	Green	Green	Green	Green	Green	Green	Green	Orange
3 Accessibility & Social Inclusion	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
4 Safety	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
5 Environment	Orange	Orange	Green	Green	Green	Green	Green	Green	Orange

Figure 2.3.35 Section 1 MCA Criteria Summary (Table 4.11 in Preferred Route Option Report)

Option RF5 - an inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by balancing the provision of physical bus priority and segregated cycle with engineering and construction constraints.

A summary of the MCA criteria for the section between Grange Road and Rathdown Park is depicted in Figure 2.3.35 above, additional information on the breakdown of the MCA is included in section 3.4.3.2 of EIAR Chapter 3.

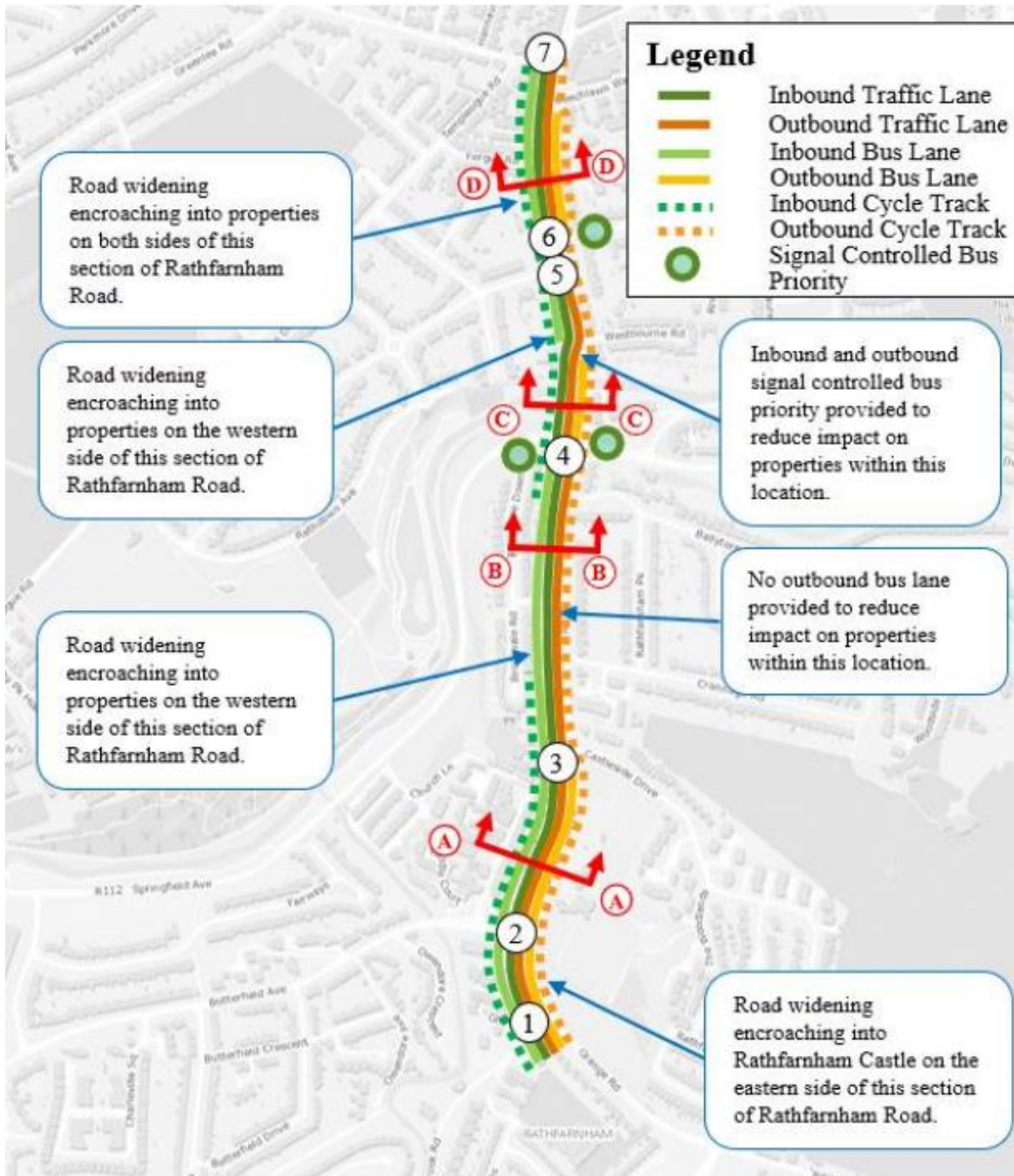


Figure 2.3.36 Route Option RC2 Indicative Scheme Design (Figure 4.85 in Preferred Route Option Report)

In addition to the above MCA's, a number of minor changes to the design were made based on feedback received during the second round of public consultation and dialogue with stakeholders. These changes made to the draft Preferred Route Option were relatively small scale and no further option assessments using the MCA described in Section 3.3.2 were required.

For the portion of the Proposed Scheme along Rathfarnham Road the following changes were made:

1. At the junction of Grange Road and Nutgrove Avenue, the scheme was extended slightly to tie into an existing cycle track;
2. At the junction of Grange Road and Nutgrove Avenue, the existing right turn general traffic lane which was proposed to be removed from the western arm of the junction, was reintroduced;
3. The redesign of the Rathfarnham Road/Willbrook Road junction to provide kerb protection for cyclists;

4. The redesign of the Rathfarnham Road/Castleside Drive junction to provide kerb protection for cyclists;
5. The redesign of the Rathfarnham Road/Dodder Park Road junction to provide kerb protection for cyclists;
6. The provision of a westbound cycle track on Bushy Park Road from Wasdale Park to Rathfarnham Road;

Summary

The Preferred Route Option, as described in the General Arrangement Drawings detailed in Volume 1 of the EIAR and Chapter 3 Proposed Scheme Description included in the EIAR Volume 2 has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. Furthermore, the design has also been significantly influenced by the feedback received from the public and other stakeholders, gathered through the three rounds of Public Consultation.

Initially, the Feasibility and Options Report was prepared which set out the initial set out the initial route options following a two-stage assessment process. Stage 1 was a high-level route options assessment, which appraised routes in terms of ability to achieve the scheme objectives and whether they could be practically delivered. Stage 2 appraised routes that passed the stage 1 assessment and a more detailed qualitative and quantitative assessment was complete. All options progress to this stage were compared against one another using a detail MCA in accordance with the Department of Transport Document 'Common Appraisal Framework for Transport Projects and Programmes.

The Feasibility and Options Report was concluded with the identification of the Emerging Preferred Route and formed the basis of the first round of non-statutory public consultation which was undertaken from 23 January 2019 to 30 April 2019. Following the first round of non-statutory public consultation the development of the Draft Preferred Route Option was complete between April 2019 and March 2020. Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered.

A second round of non-statutory Public Consultation was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year. Following the second round of consultation further development of an updated Draft Preferred Route Option was undertaken which took account of submissions received, continuing stakeholder engagement and additional design information.

A third round of non-statutory Public Consultation was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020. Finalisation of the Preferred Route Option was informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information.

2.3.3.3 Relocation of Bus Stops on Rathfarnham Road

Summary of Issue Raised

A submission relates to the relocation of bus stops along Rathfarnham Road, the submission contends that the new bus stop location is on a slope and not a good place for a bus stop. The submission suggests that bus stop 1334 remain where is.

Response to Issue Raised

Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR notes the following:

“To improve the efficiency of the bus service along the Proposed Scheme the positions and number of bus stops have been reviewed as part of a bus stop assessment. The criteria for consideration when locating a bus stop are as follows:

1. *Driver and waiting passengers are clearly visible to each other;*
2. *Location close to key facilities;*
3. *Location close to main junctions without affecting road safety or junction operation;*

4. Location to minimise walking distance between interchange stops;
5. Where there is space for a bus shelter;
6. Location in pairs, 'tail to tail' on opposite sides of the road;
7. Close to (and on exit side of) pedestrian crossings;
8. Away from sites likely to be obstructed; and
9. Adequate footway width.

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections on route, reducing to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided." As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above."

The Bus Stop Review Report notes the following in relation to the existing bus stops 1334 below:

Retain Bus stop 1334 instead of relocating to outside 95 Rathfarnham Road

As per Table 4.21 Inline Bus Stops of Appendix H of the Preliminary Design Report, "the location outside of 95 Rathfarnham Road was chosen as this location is closer to the junction with Dodder Park Rd and allows for this stop to be combined with existing stop 1334 thus improving bus stop spacing." Below is an extract from the general arrangement drawings showing the bus stop configuration in the immediate vicinity.

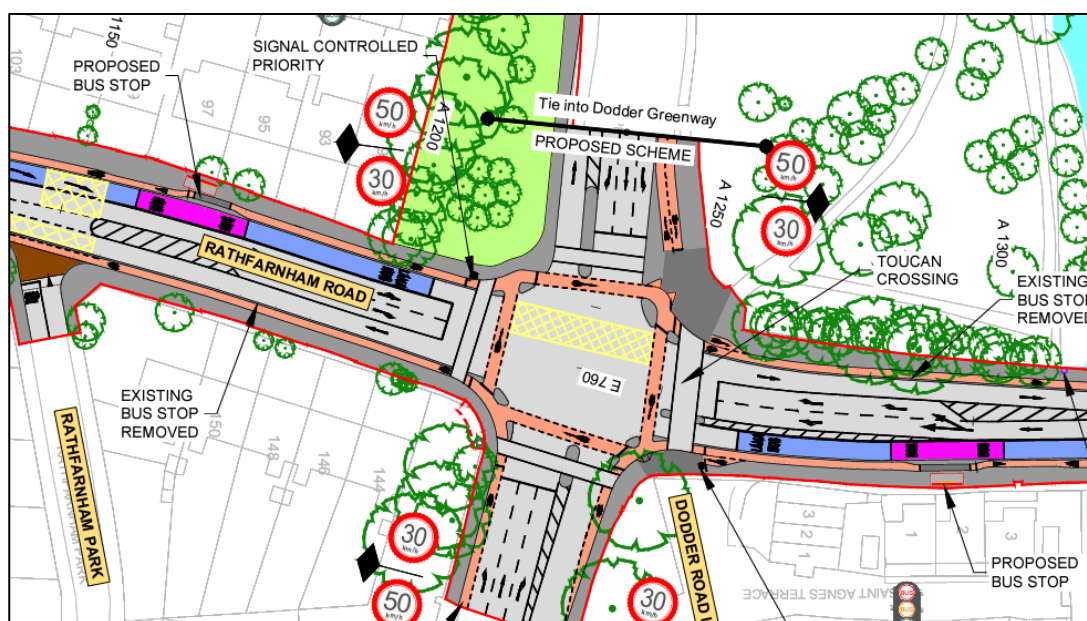


Figure 2.3.37 Bus Stop Layout in Vicinity of 95 Rathfarnham Road (extract from General Arrangement Drawings Sheet 4)

Below is an extract from the plan and profile drawings demonstrating that the existing gradients along the relevant section of Rathfarnham Road are generally being retained. The existing gradient of circa 3.5% is less than the desirable maximum of 5% stated for DMURS. The relocated bus is located at Chainage A1175 which is circled in red below.

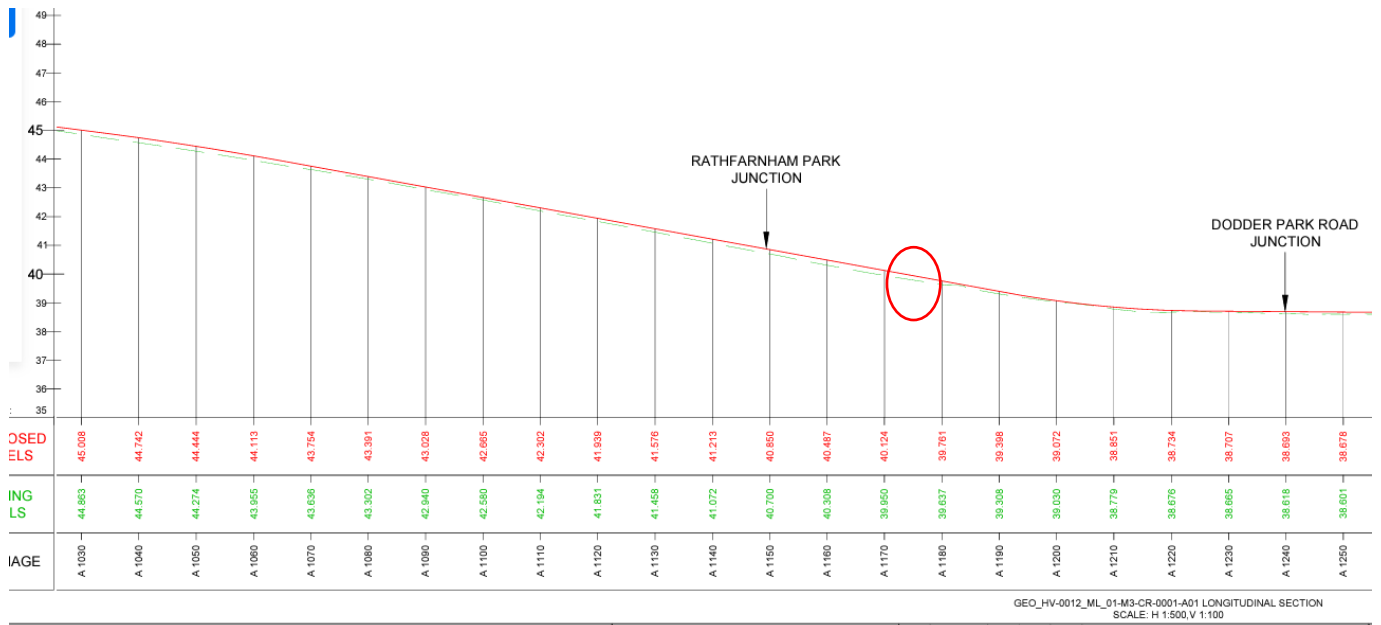


Figure 2.3.38 Extract from Mainline Plan and Profile Drawings included in EIAR Volume 3 (Sheet 4)

2.3.3.4 Air and Noise Pollution

Summary of Issue Raised

Submissions contend that the Proposed Scheme will result in increased air and noise pollution.

Response to Issue Raised

In relation to air quality, EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme's operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value.*

However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road. In all cases, the significance of the modelled change in the annual mean NO₂, PM₁₀, PM_{2.5} during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

In relation to noise levels, the impact of the Proposed Scheme on noise and vibration have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme.

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that “*Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.*” It goes on to state that “*There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.*”

Section 9.6.2 states that: *Once operational, there will be a direct, positive, imperceptible to slight impact along the Proposed Scheme due to a reduction in traffic volumes during both the year of Opening Year (2028) and the Design Year (2043).*

2.3.3.5 Increased Traffic and Congestion and consequential safety concerns

Summary of Issue Raised

The Proposed Scheme will result in increased traffic and congestion and consequential safety concerns along Rathfarnham Road, Rathdown Park and Dodder View Road.

Response to Issue Raised

- a. Increase in traffic on these roads

As set out in Section 2.1 of EIAR Chapter 2 Need for the Scheme, “*The Proposed Scheme is needed in order to enable and deliver efficient, safe and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region.*”

The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling on this key access corridor in the Dublin region. Section 6.4.6.2 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

*Overall, it has been determined that the impact of the reduction in general traffic flows along the Proposed Scheme will be a **Positive, Moderate and Long-term** effect whilst the impact of the redistributed general traffic along the surrounding road network will have a **Negative, Slight and Long-term** effect. Thus, overall, there will be no significant deterioration in the general traffic environment in the study area as a consequence of meeting the scheme objectives of providing enhanced sustainable mode priority along the direct study area.*

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate that one of the impacts of the proposed Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme is that there is a reduction of 30% in the number of people travelling via car along the Proposed Scheme towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 39% in the number of people travelling outbound via car, as shown in Figure 2.3.39 and Figure 2.3.40 (reproduced from diagrams 6.6 and 6.7 in Chapter 6).

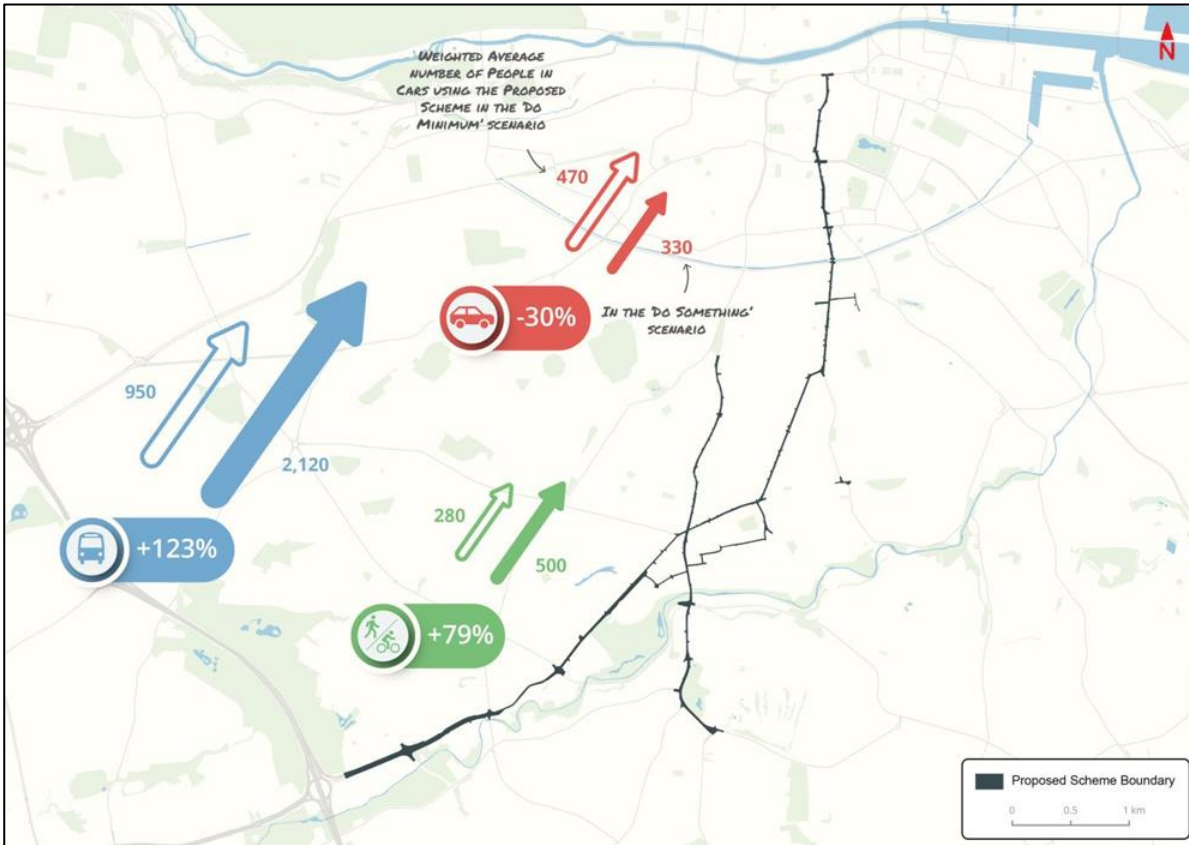


Figure 2.3.39 People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

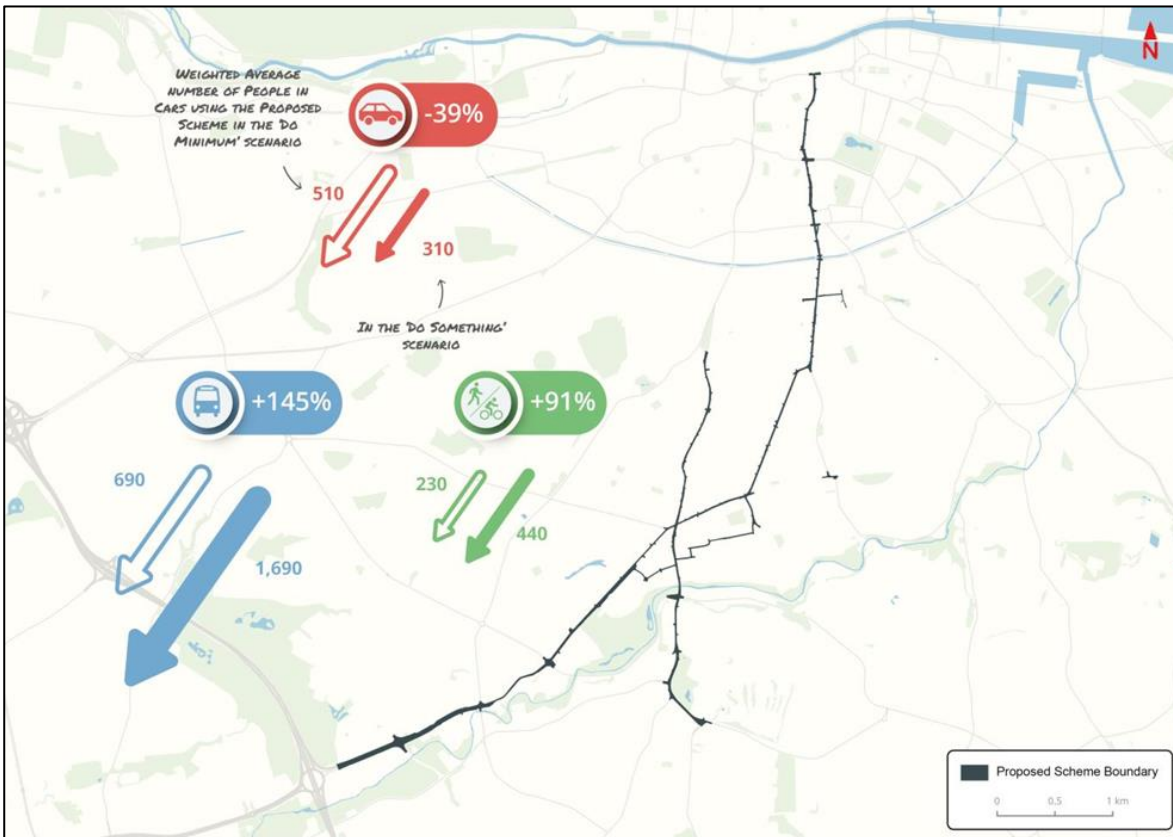


Figure 2.3.40 People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

Section 6.4.6.1.15.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 and the road links listed in Table 6.60 where there is a generally no change to traffic on most of Rathfarnham Road with a decrease in traffic on Grange Road and other roads adjoining Rathfarnham Road as shown in Figure 2.3.41 – Figure 2.3.42.

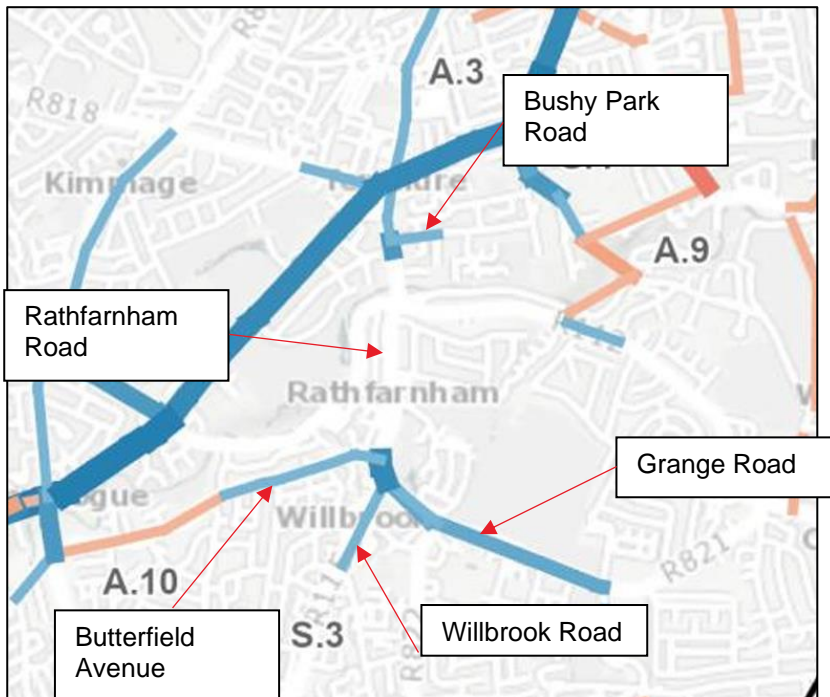


Figure 2.3.41 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

Table 6.60: Road Links that Experience a Reduction of ≥ 100 Combined Flows during AM Peak Hour (Direct Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	S.2	Cypress Grove Road	1,108	926	-182
		Old Bridge Road	1,333	983	-350
		Tallaght Road	1,675	1,400	-275
		Templeville Road	1,036	689	-348
		Wellington Lane	2,141	1,851	-291
	S.4	Templeogue Road	665	212	-453
Section 2 - R821 Nutgrove Avenue to R137 Terenure Road North	S.3	Butterfield Avenue	979	822	-158
		Grange Road	606	484	-122
		Nutgrove Avenue	1,275	995	-280
		Rathfarnham Road	1,336	843	-493
		Willbrook Road	798	602	-196
	S.4	Bushy Park Road	441	301	-141
	Rathfarnham Road	950	837	-114	

Figure 2.3.42 Extracts from EIAR Chapter 6: Table 6.60

The assessment shows that during the morning peak period, the Proposed Scheme will result in decreases to traffic on Grange Road, Rathfarnham Road and their adjoining roads, Butterfield Avenue (- 158 PCUs), Grange Road (-122 PCUs), Nutgrove Avenue (-280 PCUs), Rathfarnham Road (-493 PCU) and Willbrook (-196 PCUs).

Section 6.4.6.1.15.4 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the PM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.41 and the road links listed in Table 6.64 and Table 6.65 where there is a generally no change to traffic on most of Rathfarnham Road with a decrease in traffic on Grange Road and other roads adjoining Rathfarnham Road except for Rathdown Park and Dodder View Road as shown in Figure 2.3.43 – Figure 2.3.45.

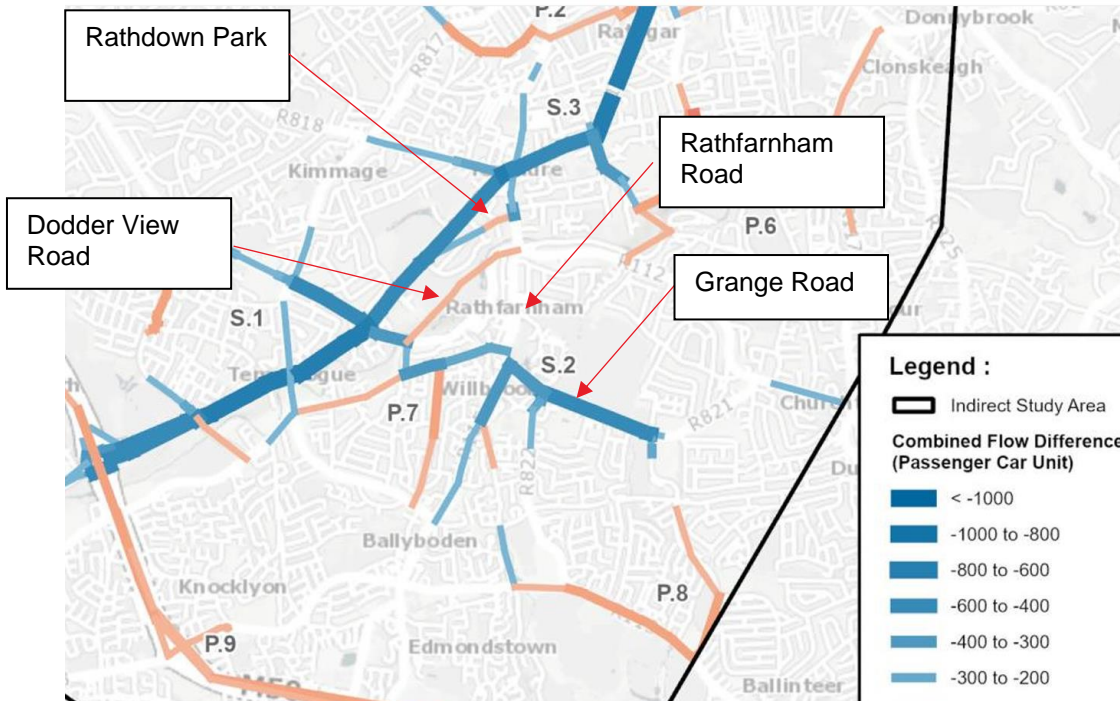


Figure 2.3.43 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

Table 6.64 Road Links that Experience a Reduction of ≥ 100 Combined Flows during PM Peak Hour (Direct Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	S.1	Cypress Grove Road	1,080	900	-180
		Old Bridge Road	1,242	1,087	-155
		Springfield Avenue	1,265	926	-339
		Tallaght Road	1,471	1,044	-427
		Templeogue Road	1,303	852	-451
		Templeville Road	972	558	-414
		Wellington Lane	2,241	1,960	-280
	S.2	Templeogue Road	864	462	-402
		S.3	Rathdown Park	171	30
	Section 2 - R821 Nutgrove Avenue to R137 Terenure Road North	S.2	Butterfield Avenue	894	630
Grange Road			711	496	-215
Nutgrove Avenue			1,279	736	-543
Rathfarnham Road			1,610	765	-845
Willbrook Road			979	667	-311
S.3	Rathfarnham Road	980	826	-154	
Section 3 - R137 Terenure Road	S.3	Harold's Cross	1,091	983	-107

Figure 2.3.44 Extracts from EIAR Chapter 6: Table 6.64

Table 6.65: Road Links that Experience an Increase of ≥100 Combined Flows during PM Peak Hour (Direct Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	P.7	Spawell Link Road	844	975	+131
		Templeogue Road	924	1,025	+100
Section 2 - R821 Nutgrove Avenue to R137 Terenure Road North	P.2	Rathdown Park	189	305	+116
	P.7	Dodderview Road	1,051	1,171	+120
		Rathdown Park	116	240	+124
Section 3 - R137 Terenure Road North to Charleville Road	P.2	Grosvenor Road	354	563	+209
		Kenilworth Park	719	893	+174
		Kenilworth Square North	330	498	+167

Figure 2.3.45 Extracts from EIAR Chapter 6: Table 6.65

The assessment shows that during the evening peak period, the Proposed Scheme will result in decreases to traffic on Grange Road, Rathfarnham Road and their adjoining roads, Butterfield Avenue (- 264 PCUs), Grange Road (-215 PCUs), Nutgrove Avenue (-543 PCUs), Rathfarnham Road (-845 PCU) and Willbrook (- 311 PCUs). The assessment also shows that there will be increases in traffic at Rathdown Park (+116 & +124) and Dodder View Road (+120).

Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the PM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 2.3.46.

Location					Peak Hour Traffic Flow		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
Orientation	Map ID	Road Name	Junction ID	Junction Name	Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC		
Butterfield Park	P.6	Butterfield Park	21146	Butterfield Park / Ballyroon Road	557	632	30	32	<85%	<85%	Negligible	
			21139	Butterfield Park / Butterfield Orchard	124	353	7	16	<85%	<85%	Negligible	
			6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1828	1532	82	76	<85%	<85%	Negligible	
	Western Side of Proposed Scheme	P.1	Leinster Road	11200	Castlewood Avenue / Castlewood Road	666	854	16	29	<85%	<85%	Negligible
				9144	Dodderview Road / Fairways / Springfield Avenue	1599	1362	89	91	85%-100%	85%-100%	Negligible
				10947	Dundrum Road / Milltown Bridge Road	997	1086	86	92	85%-100%	85%-100%	Negligible
				11327	Firhouse Road / Spawell Link Road	1542	1556	92	85	85%-100%	85%-100%	Negligible
				21204	Firhouse Road / Spawell Link Road	1542	1556	92	85	85%-100%	85%-100%	Negligible
				6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2480	2395	67	58	<85%	<85%	Negligible
				19436	Grange Road / Stonemason's Way	1338	1587	56	96	<85%	85%-100%	Low
				21175	Grange Road / Taylors Lane	865	1059	50	60	<85%	<85%	Negligible
				21144	Ballyboden Road / Whitechurch Road / Willbrook Road	951	791	47	31	<85%	<85%	Negligible
				11357	Belgrave Square East / Belgrave Square North / Charlestown Road / Mount Pleasant Avenue Upper	945	1036	68	47	<85%	<85%	Negligible
				61000	Belgrave Square North / Castlewood Avenue	0	810	0	23	<85%	<85%	Negligible
				11297	Braemar Road / Lower Dodder Road	1099	1129	59	68	<85%	<85%	Negligible
40073	Castlewood Avenue / Castlewood Park	518	678	15	28	<85%	<85%	Negligible				
11136	Leeson Street Upper / Leeson Street Upper	640	869	35	47	<85%	<85%	Negligible				
P.8	Charlestown Road	6100	Charlestown Road / Charlestown Mall	836	945	51	55	<85%	<85%	Negligible		
		11312	Charlestown Road / Cullinstown Road	691	1057	17	32	<85%	<85%	Negligible		
		11313	Leeson Street Upper / Dartmouth Road	1060	1228	60	64	<85%	<85%	Negligible		
P.2	Parnell Road	11287	Charleville Road / Leinster Road	378	450	18	18	<85%	<85%	Negligible		
		11160	Leinster Road / Leinster Road West	240	391	10	13	<85%	<85%	Negligible		
		9186	Limekiln Road / Limekiln Road	360	436	24	40	<85%	<85%	Negligible		
		7258	Dufferin Avenue / South Circular Road	1098	1248	46	58	<85%	<85%	Negligible		
		9195	Limekiln Road / Wellington Road	1422	1560	69	85	<85%	<85%	Negligible		
		6172	Bride Street / Peter Street	433	604	14	22	<85%	<85%	Negligible		
		6484	Emonville Avenue / South Circular Road	865	1079	32	46	<85%	<85%	Negligible		
		6134	South Circular Road / Bloomfield Avenue	846	1040	28	36	<85%	<85%	Negligible		
		6132	South Circular Road / Curzon Street	790	979	34	42	<85%	<85%	Negligible		
		6131	South Circular Road / Kingsland Park Avenue	946	1162	41	51	<85%	<85%	Negligible		
		7209	South Circular Road / Raymond Street	952	1109	35	40	<85%	<85%	Negligible		
		7208	South Circular Road / St Albans Road	1117	1267	32	37	<85%	<85%	Negligible		
7213	Washington Street / South Circular Road	1000	1141	40	46	<85%	<85%	Negligible				
P.4	Clareville Road	6332	Stephen Street Upper / Great Ship Street	216	326	17	27	<85%	<85%	Negligible		
		8133	Clareville Road / Larkfield Park	647	893	18	26	<85%	<85%	Negligible		
		6438	Chancery Lane / Golden Lane	504	648	20	21	<85%	<85%	Negligible		

Figure 2.3.46 Extracts from EIAR Appendix A6.4.4: Table 17

The assessment presented in Table 17 of Appendix A6.4.4 in Volume 4 of the EIAR, shows that the Proposed Scheme would result in negligible traffic impact on Dodder View Road as a result of the Proposed Scheme.

2.3.3.6 Impact on business in Villages include Rathfarnham and Terenure

Summary of Issue Raised

Submissions contend that the loss of parking etc at the villages of Rathfarnham and Terenure will have a negative impact on businesses.

Response to Issue Raised

As stated in Chapter 10 of the EIAR Section 10.4.3.2.2.2 “Commercial accessibility relates to the ability of users to access commercial businesses as customers or employees. The nature of the Proposed Scheme means that accessibility impacts will differ based on the mode of travel used. The assessment, similar to the community accessibility assessment (Section 10.4.3.1) has separately assessed accessibility impacts on pedestrians and cyclists, bus users and private vehicles. As the Construction Phase mitigation measures presented in Chapter 5 (Construction) and the residual impacts presented in Chapter 6 (Traffic & Transport) are the same for each mode of travel, the impacts on commercial accessibility are the same as those reported in Section 10.4.3.1.2 for community accessibility.

A parking assessment has been undertaken in Chapter 6 (Traffic and Transport). No significant impacts on parking along the Proposed Scheme route were identified.”

2.3.3.7 Site Compound TR3 on Dodder Road

Summary of Issues Raised

There were a number of submissions relating to the proposed site compound TR3. The submissions relate to a broad range of topics.

1. Air, noise, vibration and light pollution

Concern was raised in several submissions relating to noise, dust, dirt, vibration and light pollution issues resulting from locating the construction compound on the site and the impact on houses in the vicinity of the site compound TR3.

The submissions were concerned that the proposed construction compound will create loud noises and bright lights etc. potentially disrupting sleep patterns of residents resulting in an environment not conducive with a healthy environment for individuals.

2. Visual Impact

A number of submissions mentioned how the location of the proposed site compound on the existing green area between Dodder View Road, across the road from Bushy Park, would detrimentally impact the visual aspect of the location in general.

3. Loss of public amenity

The submission stated that the green area is used by resident and community members for recreational activities and exercise which is of particular importance given the small gardens in the adjacent houses and multiple apartments close by

4. Biodiversity

A number of submissions raise concerns about the impact of the proposed construction compound in the greenfield area. The submissions notes the presence of a number of wildlife types including bats, foxes, herons, kingfishers and fish in the Dodder.

5. Land use zoning

A number of submissions contend that the use of the green area as a site compound is not compliant with the zoning objectives set out in the SDCC Development Plan 2022-2028.

6. Flood Plain

The existing green area is within a flood plain and provides soakage and drainage during wet spells or heavy rain reducing flooding risk. Some submissions note that flooding in the area has occurred in the past.

One submission queries whether there would be compensation for a flood event.

7. Risk of spillage, contamination

Submissions contend that there is a risk of contamination from the site compound into the nearby River Dodder.

8. Archaeological impact

Submissions note the location of TR3 is in close proximity to a number of recorded monuments including Rathfarnham Church (DU022-013001), graveyard (DU022-013002), grave slab (DU033-01033 and (DU022-070) and there have been associated archaeology not has not been considered as part of the project.

9. Architectural heritage Impact

Submissions contend that the site compound is situated within the “Rathfarnham Architectural Conservation Area” as outlined in the SDCC Development Plan and that the location of the site compound contravenes this as the compound will detract from the architectural heritage and visual setting of the area.

10. Compound Traffic and Overspill parking into residential areas

A number of submission raised a concern that construction site staff will overspill park in residential areas.

11. Not compliant with SDCC Development Plan 2022-2028

Submissions contend that the construction of a site compound at the location of TR3 is not in compliance with land use zoning, as the land is zoned as Open Space to preserve and provide for open space and recreational amenities

12. Construction traffic

There were a number of concerns raised in relation to the safety of pedestrians, cyclists, children in the vicinity of the site compound.

Response to Issue Raised

1. Air, noise, vibration and light pollution

Air quality – Construction Traffic Dust Assessments

Section 5.7.3 in Chapter 2 of Volume 2 of the EIAR describes the construction compound services and states that appropriate environmental management measures will be implemented at the Construction Compounds.

Section 5.10 in Chapter 5 addresses the construction phase environmental management. A Construction Environmental Management Plan (CEMP) has been prepared and appended to the EIAR (Appendix A5.1 in Volume 4 of the EIAR). The CEMP includes the mitigation measures which will be implemented to mitigate the potential for dust impacts during the construction phase.

Section 7.4.2.1.2 in Chapter 7 of Volume 2 of the EIAR notes *“The dust emission magnitude for the proposed earthwork activities required for the Proposed Scheme is conservatively classified as large. The proposed Construction Compounds plus the Proposed Scheme construction site areas will have a total site area greater than 10,000m², while there would be between five and ten heavy earth moving vehicles in use at any one time during peak construction activities. The sensitivity of the area is combined with the dust emission magnitude for each dust generating activity to define the risk of dust impacts in the absence of mitigation. The sensitivity of the area would be described as high for dust soiling and medium for human health impacts. As outlined in Table 7.21, this results in an overall high risk of temporary dust soiling impacts and an overall medium risk of temporary human health impacts as a result of the proposed earthworks activities. In relation to ecological impact, as the receptor is of medium sensitivity, the risk associated with the proposed earthwork activities is described as medium. Overall, in order to ensure that no dust nuisance occurs during the proposed earthworks activities, a range of dust mitigation measures associated with a high risk of dust impacts must be implemented. When the dust mitigation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will not have a significant impact at nearby receptors.”*

Section 7.5.1.1 in Chapter 7 of Volume 2 of the EIAR sets out a series of mitigation measures that are applicable to the Construction Phase of the Proposed Scheme will be implemented by the appointed contractor in order to minimise dust nuisance impacts. The appointed is also required to keep the effectiveness of the mitigation measures under review:

“... The appointed contractor will keep the effectiveness of the mitigation measures under review and revise them as necessary. In the event of dust nuisance occurring outside the works boundary associated with the Proposed Scheme, movements of materials likely to raise dust will be curtailed and satisfactory procedures implemented to rectify the problem.”

Noise & Vibration

Table 9.33 of Section 9.4.3.2.4 Construction Compounds in Volume 2 of the EIAR notes the following at TR3:

TR3	Greenfield area between Dodder View Road, Woodview Cottages and Church Lane	C0+164	E0+300	Residential NSLs at Woodview Cottages (10m)	78	Potential exceedance of evening & weekend construction noise criteria without noise mitigation
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Figure 2.3.47 Extract from EIAR Chapter 9 (Table 9.33)

Table 9.38 further goes on to identify potential construction phase noise impacts at the construction compounds. See relevant extract below:

Construction Compounds	Monday to Friday: Daytime (07:00hrs – 19:00hrs)	<ul style="list-style-type: none"> Negative, moderate to significant and temporary at NSLs within 10m of the Construction Compounds. Negative, slight to moderate and temporary at NSLs between 15m and 40m from the Construction Compounds. Negative, not significant and temporary at NSLs at distances beyond 40m from the Construction Compounds. <p>All impacts noted above are in the absence of noise mitigation. Refer to Section 9.5.1.1 for the range of noise mitigation measures which will be adopted at specific working areas to reduce noise impacts at NSLs.</p>
	Monday to Friday: Evening: (19:00hrs – 23:00hrs) or Saturdays (08:00hrs – 16:30hrs)	<ul style="list-style-type: none"> Negative, significant to very significant and temporary at NSLs within 20m of the Construction Compounds. Negative, moderate to significant and temporary at NSLs between 30m to 40m from the Construction Compounds. Negative, not significant and temporary at distances greater than 50m from the Construction Compounds. <p>All impacts noted above are in the absence of noise mitigation.</p>

Figure 2.3.48 Extract from EIAR Chapter 9 (Table 9.38)

As per Section 9.5.1.1 in Volume 2 of the EIAR “The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR. These measures will ensure that:

1. During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and
2. The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations. BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:
3. Selection of quiet plant;
4. Control of noise sources;
5. Screening;
6. Hours of work;
7. Liaison with the public; and
8. Monitoring.”

Table 9.42 in Chapter 9 in Volume 2 of the EIAR provides a summary of predicted Construction Phase impacts following the implementation of mitigation measures at noise sensitive locations (NSLs). With regard

to Construction Compounds it states that for daytime periods (Monday – Friday 07.00 to 19.00hrs) the predicted impact is Negative, Not Significant and Temporary at distances within 10m of the Construction Compounds. For evening periods (Monday – Friday 19.00 to 23.00hrs) and Saturdays (08.00-16.30hrs) the predicted impacts are Negative, Moderate to Significant and Temporary at NSLs at distances within 10m of the Construction Compounds; and Negative, Not Significant and Temporary at NSLs at distances greater than 15m from the Construction Compounds respectively.

Section 5.10 in Chapter 5 addresses the construction phase environmental management. A Construction Environmental Management Plan (CEMP) has been prepared and appended to the EIAR (Appendix A5.1 in Volume 4 of the EIAR). The CEMP includes the mitigation measures which will be implemented to mitigate the potential for dust impacts during the construction phase.

Construction Lighting

In respect of any temporary lighting arrangements during construction, Section 5.2.3.7 of Chapter 5 Construction of Volume 2 of the EIAR states the following: *“The majority of the Proposed Scheme is already artificially lit. However temporary lighting will be required at times along the Proposed Scheme at certain locations during the Construction Phase, as necessary. Where it is necessary to disconnect public lighting during the construction works or to undertake works outside of daylight hours where existing lighting is low, appropriate temporary lighting will be provided. Temporary lighting will also be installed at the Construction Compounds for the duration of the Construction Phase.”*

The standard of temporary lighting installed during the Construction Phase will meet the standard of the existing carriageway and will be appropriate to the speed and volume of traffic during construction. Temporary construction lighting will generally be provided by tower mounted floodlights, which will be cowed and angled downwards to minimise spillage of light from the site.”

In addition, with regard to biodiversity, Section 12.5.1.4.1.4 in Chapter 12 in Volume 2 of the EIAR includes mitigation measures to reduce light spill.

The NTA is satisfied that the measures outlined above will ensure that any spillage of temporary construction lighting will be minimised.

2. Visual Impact

The land in question is the temporary land acquisition is to provide a contractor's site compound TR3.

As described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR, *“The Construction Compound locations have been selected due to the amount of Available space, their relative locations near to the majority of the Proposed Scheme major works, and access to the national and Regional Road network. Refer to Chapter 6 (Traffic & Transport) of this EIAR for an assessment of the construction traffic.”*

Figure 2.3.49 below shows the indicative layout of the construction compound TR3.

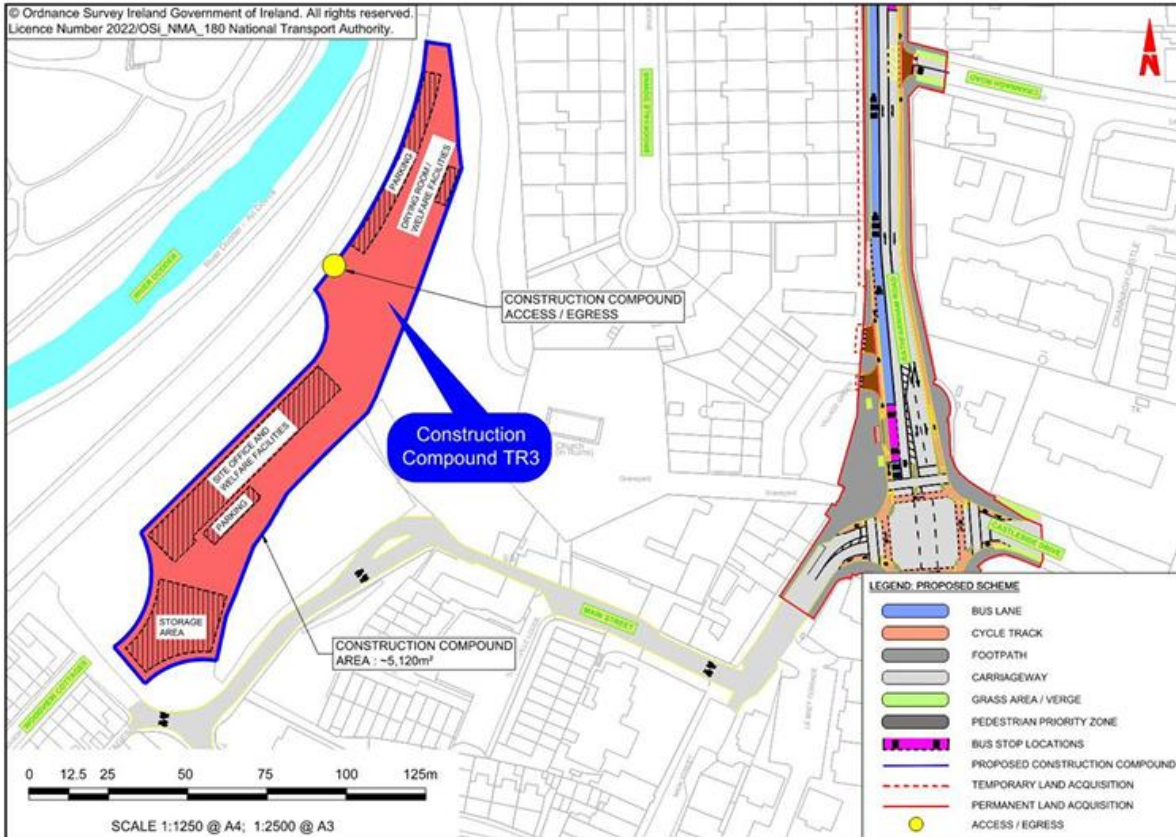


Figure 2.3.49 Location and Extent of Construction Compound TR3 (extract 1 from Image 5.3 of Chapter 5 Construction of Volume 2 of the EIAR)

Figure 2.3.50 is an aerial photography image at the greenfield area between Dodder View Road, Woodview Cottages and Church Lane with the outline of proposed layout of the site construction compound overlaid. This shows that the compound has been positioned to avoid impacting existing trees within the green area, it also retains the recently constructed car park, as well as utilising an area that has been previously used as a site compound.

The area of the compound has been kept to the smallest practicable extent to minimise the land take on this area.



Figure 2.3.50 Site Compound TR3 Aerial Image Overlay (Image Source: Google)

As per Section 5.7.2 of EIAR Chapter 5 Construction Compound TR3 will be the main construction compound for the Proposed Scheme, with construction compounds TR1, TR2, TR4, TR5 and TR6 act as satellite compounds serving the Proposed Scheme. As TR3 is proposed as being the main compound it will be in place for the full construction duration i.e. 2 years.

As stated in Section 5.5.5 of EIAR Chapter 5, “On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed”. In Section 5.7.3 of Chapter 5 it states that “...Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions.”

Section 17.4.3.1.2 in Chapter 17 of the EIAR states that “...Construction Compound TR3 will be located along Dodder View Road, across the road from Bushy Park, in the greenfield area between Dodder View Road, Woodview Cottages and Church Lane, and will result in some short-term removal of grassland but no impact on the surrounding mature trees or woodland The construction works will not alter the overall townscape character along this section of the Proposed Scheme, however, the works will detract from the streetscape character and amenity. The magnitude of change in the baseline environment is very high.”

Section 17.4.3.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the construction impact on various amenity designations along the Route of the Proposed Scheme, including the green area. It is concluded that there will be a direct construction impact on the open space area between Dodder View Road, Woodview Cottages and Church Lane Park, where TR3 will be sited. “The space comprises a sloping area of amenity grassland bounded by roads and groups of mature trees. There is no formalised access across the space and no amenity features are present. This location has previously been used as a construction compound area for construction of a nearby bridge by others, and a carparking area has since been introduced into a portion of the space. The sensitivity of this space is lesser than that of other nearby open spaces within the corridor of the River Dodder. The works will result in a temporary loss of the space to users and there will be a short-term loss of amenity until the site is reinstated. The sensitivity is medium / high, and the magnitude of change is high.

The potential townscape / streetscape and visual impact of the Construction Phase the open space area between Dodder View Road, Woodview Cottages and Church Lane Park is assessed to be Negative, Significant and Temporary / Short-Term.”

3. Loss of public amenity

As described above, The Construction Compound will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). As shown in Figure 2.3.49 and Figure 2.3.50, the temporary compound will occupy the south-western portion of the wider green area, the eastern portion of the of the green area will remain available to the community at all times.

As stated in Section 5.5.5 of EIAR Chapter 5, “On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed. In Section 5.7.3 of Chapter 5 it states that “...*Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions.*”

As noted above, the areas required for Construction Compounds TR1, TR2, TR3, TR4 and TR5 will be for a temporary period. Reinstatement works will be carried out following construction. All compounds will be located on sites which currently have no development. The Proposed Scheme will not prevent any long-term zoning objective for the land from being achieved.

4. Biodiversity

EIAR Chapter 12 Biodiversity outlines the methodologies for surveys and their results for the entire study area which comprised of all lands within the red line boundary of the Proposed Scheme, including the area of the proposed Construction Compound TR3.

Section 12.3.5.9 in Chapter 12 notes that amenity grassland was commonly recorded habitat across the Proposed Scheme. The largest areas of this habitat included at the proposed location of Construction Compound TR3) and at Rathfarnham Road. It is also noted that that this habitat type is of Local Importance (Lower Value) due to the low species diversity, which reflects regular management. The habitat types recorded at the location of Compound TR3 are shown in Figure 12.5 (Sheet 1 of 8) in Volume 3 of the EIAR.

Section 12.4.3.1.1 in Chapter 12 addresses the potential for habitat loss and fragmentation. A number of potential inland winter bird feeding sites within the footprint of the Proposed Scheme were surveyed to inform the assessment. One of these is located at land in close proximity to Bushy Park, (identified as CBC1012WB001 on Figure 12.1.2 in Volume 3 of the EIAR) which overlaps with proposed Construction Compound TR3 along the R112 Springfield Avenue. It is acknowledged that the Proposed Scheme will result in the loss of sites suitable to support breeding gull and wintering bird species at CBC1012WB001 for the duration of the Construction Phase. Section 12.4.3.5.2.1 states that the “*short-term loss of suitable amenity grassland (GA2) habitat at the proposed Dodder View Road Construction Compound TR3 is not deemed to have a significant impact on the wintering bird population at any geographical scale...*” and sets out the reasons for this. Once the construction compound is removed and reinstated at the end of the construction phase, there will be no loss of territory. Section 12.5.1.5.2.1 details the mitigation measures that will be implemented at Compound TR3 to prevent disturbance and displacement impacts during construction.

Section 12.4.3.4.3 notes with respect to otter: “*Multi-disciplinary surveys did not confirm any otter holts within the footprint of the Proposed Scheme, an inactive holt (at that time) was identified during 2020 field surveys 145m north-west of Construction Compound TR3...*”. It is also stated in the section that: “*Although it cannot be predicted if otter will establish new holt or couch sites within the ZoI of the Proposed Scheme, or if the previously inactive holt will be once again be utilised before construction works commence, it is a possibility and this scenario has been taken into account in the mitigation strategy (refer to Section 12.5.1.4.3)*”. Section 12.4.3.4.3.5 in Chapter 12 states that: “*Therefore, given that otter within the urban- suburban Dublin area are habituated to similar consistent background noise levels, no significant disturbance/ displacement effects on breeding/ resting otter in this location, are predicted*”. Section 12.5.1.2.2 sets put the mitigation measures that will be put in place during construction to protect surface water quality (see also the Surface Water Management Plan contained in the CEMP – Appendix A5.1 in Volume 4 of the EIAR).

Section 12.5.1 also set out comprehensive mitigation measures to be implemented during the construction phase to protect mammals such as bats, badgers etc.

5. Land use zoning

The Proposed Scheme will require temporary acquisition of a part of the green are for site Construction Compound TR3. The temporary land to be acquired is needed in order to allow the appointed contractor to manage the delivery of and construct the Proposed Scheme.

As stated in Section 5.5.5 of EIAR Chapter 5, “*On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed. The area which was occupied by the Construction Compounds will be reinstated.*”

Section 4.3.1 Zoning of EIAR Chapter 2 Appendix A2.1 Volume 4 Part 1 of 4 notes the following:

“The lands are within the functional area of DLRCC, SDCC and DCC and are zoned in the DLRCCDP 2022-2028 (DLR 2022) SDCCDP 2022 - 2028 (SDCC 2022) and DCDP (DCC 2022). For a detailed description of the zonings refer to Table 1.2 and Table 2.2 in Appendix 1 (Local Policy) of this Report.

Construction Compound TR3 for the Proposed Scheme will be located within the SDCC area on lands zoned within the SDCCDP 2022 – 2028 as follows:

9. OS – Open Space: *To preserve and provide for open space and recreational amenities.*

The application boundary that incorporates the Proposed Scheme works includes lands within the following zoning objectives outlined in Table 4.3

.....The areas required for Construction Compound TR3 will be for a temporary period. Reinstatement works will be carried out following construction. The Proposed Scheme will not prevent any long-term zoning objective for the land from being achieved.”

6. Flood Plain

The site compound is proposed in an area at moderate risk of flooding from the river, with an annual exceedance probability of flooding of 0.1% (1 in 1000 year event). This area is designated as Flood Zone B. As the location is not at high risk of flooding (1 in 100 year event), the site compound is considered an appropriate development within the zone (The Planning System and Flood Risk Management Planning Guidelines for Planning Authorities, 2009).

The area has been used before for the purposes of construction compound for a different project and as such there is no change in use or vulnerability. The area of land take of the proposed construction compounds within the 1 in 1000 year flood extents is approximately 520m². In the unlikely occasion of the flood event occurring within the 2 years the compound will be in place, the impact of the compound to the floodplain has been calculated and is considered negligible. It is estimated that during such an event, the compound could cause increase in flood levels across the local floodplain of less than 10mm.

Every effort has been made to minimise the impact of the compound to the locality. The areas around the site compound will be paved with a granular permeable material thus retaining similar permeability properties to the current greenfield situation during rainfall events.

On completion of works, the area will be reinstated to its existing condition and levels.

7. Risk of spillage, contamination

Section 13.5.2 in Chapter 13 of Volume 2 of the EIAR sets out that a Surface Water Management Plan (SWMP) has been prepared and included in the EIAR;

“In terms of mitigation, a Surface Water Management Plan (SWMP) has been prepared (provided in the CEMP, Appendix A5.1 in Volume 4 of this EIAR), which details control and management measures for avoiding, preventing, or reducing any significant adverse impacts on the surface water environment during the Construction Phase of the Proposed Scheme. It will be a condition within the Employer’s Requirements that the successful contractor(s), immediately following appointment, must detail in the SWMP how it is intended to effectively implement all the applicable measures identified in this EIAR and any additional measures required pursuant to conditions imposed by An Bord Pleanála to any grant of approval.....”

As stated in Section 5.4.4 of the CEMP in Appendix A5.1 in Volume 4 of the EIAR and Section 13.5.2.1 in Chapter 13 in Volume 2 of the EIAR *“Construction Compound TR3 at Dodder View Road is in close proximity to the Dodder_050. Whilst there is an existing low retaining wall which will provide some protection to the water body from contaminated surface water runoff during the set up and operation of the Construction Compound, the close proximity presents a risk for potential impacts from storage of materials and runoff. Silt curtains / bunding or infiltration trenches will be installed by the appointed contractor on the boundary inside the retaining wall, and higher than it, to prevent any silty water or spillages from reaching the water body. The appointed contractor will store fuels as far away as possible from the road to minimise the chances of an overland flow of spillages, especially via access and egress routes. All other potentially risk activities or storage of materials will similarly be located at the southern boundary of the site.”*

8. Archaeological impact

As per Chapter 15 in Volume 2 of the EIAR Archaeology and Cultural Heritage under Section 15.3.6 “TR3 – The Dodder Park Temporary Construction Compound is proposed within a large green and brownfield area to the west of Springfield Avenue/ Dodder View Road (R112) and to the north of Woodview Cottages, west of the River Dodder and Bushy Park. The Construction Compound is further detailed within Chapter 5 (Construction). The majority of the site is already a construction compound for the River Dodder Greenway Scheme and has been subjected to archaeological monitoring. No features of an archaeological nature were revealed as part of this monitoring regime (Deery 2022 21E0216). The proposed compound area falls to the northwest of the ZAP of a watermill (RMP DU022-070) and to the west of a ZAP for a church, graveyard and graveslab (RMP DU022013001/002/003). As part of the compound site lies within a greenfield area in proximity to archaeological sites, archaeological monitoring is recommended.”

As per Section 15.5.1.4.1.2 there are items of interest in proximity of TR3 as shown on Figure 15.1 Sheet 2 of 19 of Chapter 15 of Volume 3 below.

A slight impact as described in Section 15.4.3.2.1.2 “The site of a water mill (DU022-070), located at Woodview Cottages is located to the south of the proposed compound (TR3). The RMP site has a medium sensitivity value and the magnitude of impact is none, as there are no structural works taking place within the ZAP that surrounds the site, therefore there is no potential impact to the recorded monument. As the compound is located in a greenfield environment in proximity to this recorded monument, and DU022-013 (Church and graveyard) there is a potential that buried previously unrecorded features could be revealed from excavation works. Therefore, groundbreaking works have a low sensitivity value on the greenfield environment and the magnitude of impact is medium, resulting in a potential impact that is Negative, Slight and Permanent.”

The CEMP (Appendix A5.1 in Volume 4 of the EIAR Construction Management Plan Table 5.2 identifies the following mitigation measure at the location of TR3 “At the compound TR3 at Dodder Park Road (Figure 15.1, Sheet 2 of 19 in Volume 3 of this EIAR). It is in this area that there is a possibility to disturb intact archaeological layers and material. Licensed archaeological excavation, in full or in part, of any identified archaeological remains (preservation by record) or preservation in situ will be undertaken.”

9. Architectural heritage Impact

Chapter 16 of the EIAR Architectural Heritage Section 16.3.1.4.1 describes the Rathfarnham ACA as follows: “Rathfarnham ACA is centred on the village core and covers part of Grange Road, St Mary’s Avenue, Butterfield Avenue, Main Street, Woodview Cottages, Church Lane and Springfield Avenue. Although the 17th century church in the old churchyard (RMP DU022013001 to DU022013003) is built on a pre-Norman site, the development of Rathfarnham village is closely linked to Rathfarnham Castle (RMP DU022014, PO no. 2/1986), built c. 1583 by Adam Loftus, the then Archbishop of Dublin. The castle adjoins the ACA but is not in it. The village largely developed to serve the Castle as well as other large houses which were built in the vicinity. During the nineteenth century a series of mills were established on the Owendoher and Dodder Rivers including a woollen factory as well as paper and corn mills. During the eighteenth and nineteenth century, numerous villas and small country houses were built in the vicinity of Rathfarnham and the proximity of the village to Dublin made it a popular location for such residential development. In the later part of the nineteenth century, with the introduction of trams, Rathfarnham became a suburb of Dublin with residents commuting to the city for work. Terraces of houses were built to accommodate suburban dwellers and local workers. Civic buildings include the Court of Petty Sessions (SDCC RPS 215) built in 1912. It also includes the catholic Church of the Annunciation, (SDCC RPS 236) built in 1875 to the design of George Ashlin.”

As stated in Section 5.5.5 of EIAR Chapter 5, “On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed”. In Section 5.7.3 of Chapter 5 it states that “....Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions.”

As per Section 16.4.3.2, “There are no direct impacts on the ACA’s with the Proposed Scheme. The proposed paving, landscaping and urban realm works on the Grange Road and Rathfarnham Road will adjoin or will be within the Rathfarnham Architectural Conservation Area which is of medium sensitivity. The instillation of the proposed concrete paving carries a risk of accidental damage to protected and other heritage buildings or their boundary treatments during the Construction Phase. The proposals also have the potential to adversely impact the character of the ACA, the vistas along the road and the setting during the Construction Phase. The magnitude of impact is Medium. The potential Construction Phase impact will be Indirect, Negative, Moderate and Temporary.”

10. Compound Traffic and Overspill parking into residential areas

As per Appendix A5.1 in Voume 4 of the EIAR, Construction Environmental Management Plan (CEMP) under Section 5.2.2.4.2 “*The appointed contractor will prepare a Construction Stage Mobility Management Plan (CSMMP) to actively discourage personnel from using private vehicles to travel to the Proposed Scheme. The CSMMP will promote the use of public transport, cycling and walking by personnel. Private parking at the Construction Compounds will be limited. Vehicle-sharing will be encouraged, subject to public health guidelines, where travel by private vehicle is a necessity (e.g. for transporting heavy equipment). Typical work hours are envisaged between 07:00hrs and 23:00hrs with personnel working across early and late shifts. The adopted shift patterns help minimise travel by personnel during the peak hour periods of 08:00hrs to 09:00hrs and 17:00hrs to 18:00hrs. A combination of CSMMP measures, as well as work shift patterns, means that fewer than 10 trips by private vehicle are envisaged to and from site during peak periods.*”

Section 5.2.3.19 of the CEMP states:

The appointed contractor shall, through the NTA, ensure that close communication with the relevant local authorities and the emergency services shall be maintained throughout the Construction Phase.

As discussed in Section 5.1.6, the appointed contractor shall, through the NTA, also ensure that the local community, landowners, and strategic stakeholders are appropriately informed of proposed traffic management measures in advance of their implementation. Contact information for key points of contact will be provided for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures etc. which may conflict with proposed traffic management measures. The appointed contractor will liaise with landowners through the Communications Plan agreed with the NTA, where access to their property is temporarily affected by works.

11. Not compliant with SDCC Development Plan 2022-2028

Section 4.3.1 Zoning of EIAR Chapter 2 Appendix A2.1 Volume 4 Part 1 of 4 notes the following: “*Construction Compound TR3 for the Proposed Scheme will be located within the SDCC area on lands zoned within the SDCCDP 2022 – 2028 as follows: • OS – Open Space: To preserve and provide for open space and recreational amenities.*”

Section 5.3.1 further goes to state “*The areas required for Construction Compound TR3 will be for a temporary period. Reinstatement works will be carried out following construction. The Proposed Scheme will not prevent any long-term zoning objective for the land from being achieved.*”

12. Construction traffic

Appendix 5.1 Construction Environment Management Plan Volume 4 Appendices Part 1 of 4 provides a Construction Environmental Management Plan. Within this plan is a Construction Traffic Management Plan. As per Section 5.2.1.1 “*The purpose of this CTMP is to demonstrate that the residual impacts to the public road network during the Construction Phase of the Proposed Scheme which have been identified in the application documentation can be minimised and that transport related activities are carried out as safely as possible and with the minimum disruption to other road users. The CTMP has also been prepared for the purpose of identifying feasible, appropriate and safe methods of access for construction traffic to the Proposed Scheme.*”

2.4 Proposed Scheme at Terenure and Rathgar

2.4.1 Description of Proposed Scheme at this Location

The Proposed Scheme along this section of the corridor, is described in paragraph 4.5.1.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description:

On Terenure Road East, between the Terenure Road North junction and St. Joseph’s Church, due to the proximity of existing built form to the carriageway, it is proposed to provide a single general traffic lane in each direction. Bus priority will be provided through this section by signal-controlled priority.

It is also proposed to widen the footpaths within this section and to provide high-quality urban realm within Terenure Village.

Between St. Joseph's Church and the Rathgar Avenue junction it is intended to provide a bus lane and general traffic lane in both directions. To accommodate the proposed cross section, it is proposed to acquire land from adjacent properties on both sides of Terenure Road East.

It is also proposed to provide an alternative cycle facility consisting of cycle tracks in each direction along Terenure Road North and Harold's Cross Road, connecting to the Kimmage to City Centre Core Bus Corridor Scheme at Harold's Cross. An additional alternative cycle facility is proposed along Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road to provide a secondary east-west route for cyclists travelling between Rathfarnham Road and Rathgar Road.

At Rathgar Avenue, it is proposed to maintain bus priority through the junction with signal-controlled priority. Along Rathgar Road it is proposed to provide bus lanes and 1.5m wide cycle tracks in each direction and a oneway inbound general traffic lane only. Local access for residents on Rathgar Road and adjoining streets will be maintained through the surrounding road network via Rathgar Avenue or Rathmines Road Upper including Frankfort Avenue, Leicester Avenue, Garville Avenue, Garville Road and Highfield Road. It is proposed to upgrade the junction of Rathgar Road and Grosvenor Road through the provision of kerb protection for cyclists. It is proposed to remove the current right turn ban from Rathmines Road Upper to Highfield Road as well as the right turn ban from Highfield Road onto Rathgar Road to facilitate outbound general traffic movements.

Figure 2.4.1 to Figure 2.4.6 present extracts from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIA showing Proposed Scheme layout between Terenure and Rathmines along Terenure Road East and Rathgar Road.

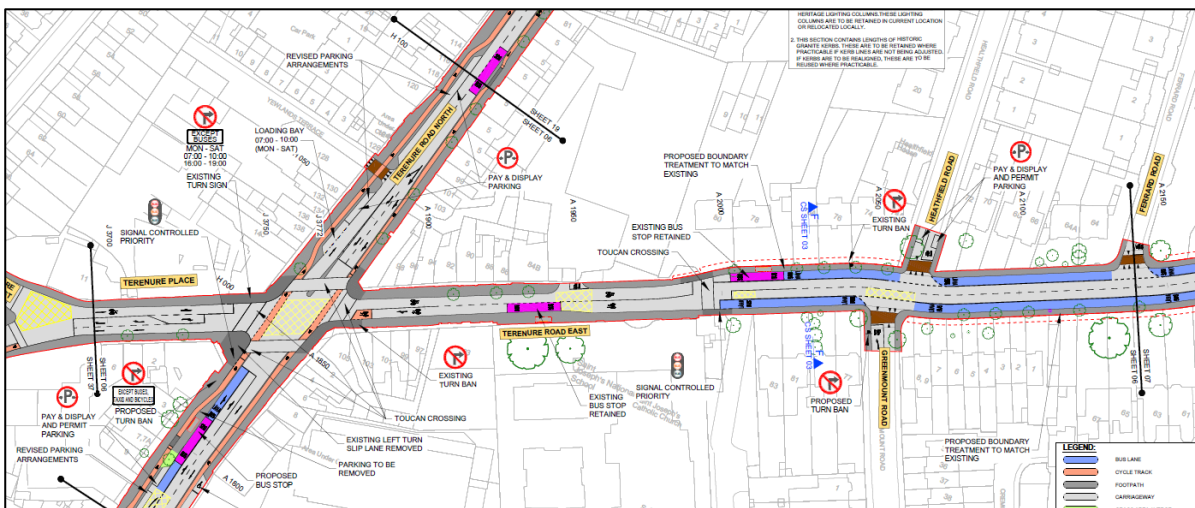


Figure 2.4.1 Extract from General Arrangement Drawings (Sheet 6)

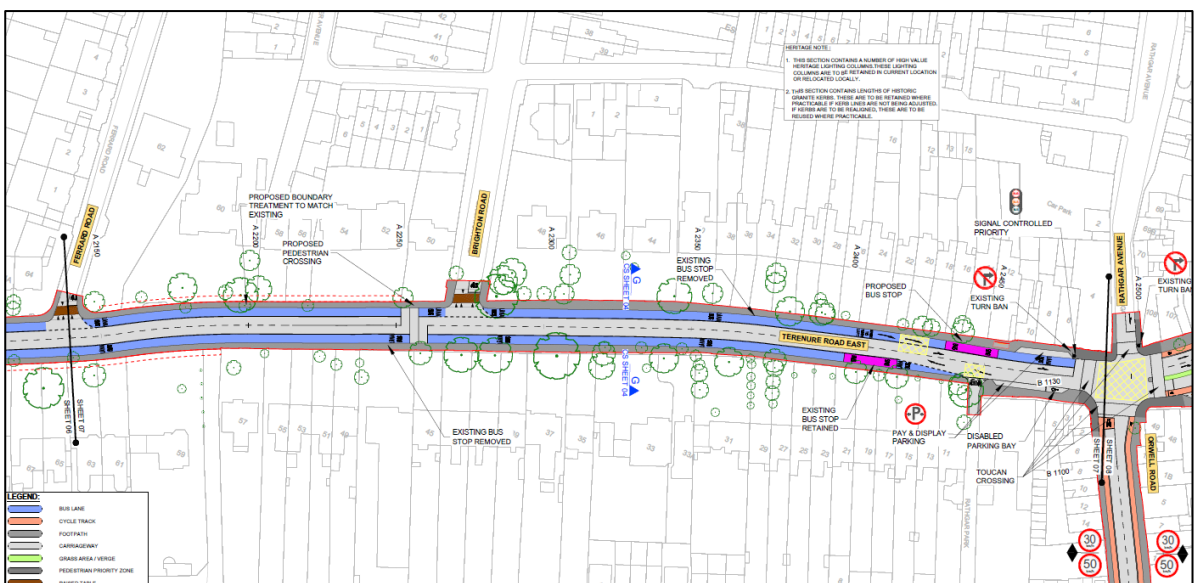


Figure 2.4.2 Extract from General Arrangement Drawings (Sheet 7)

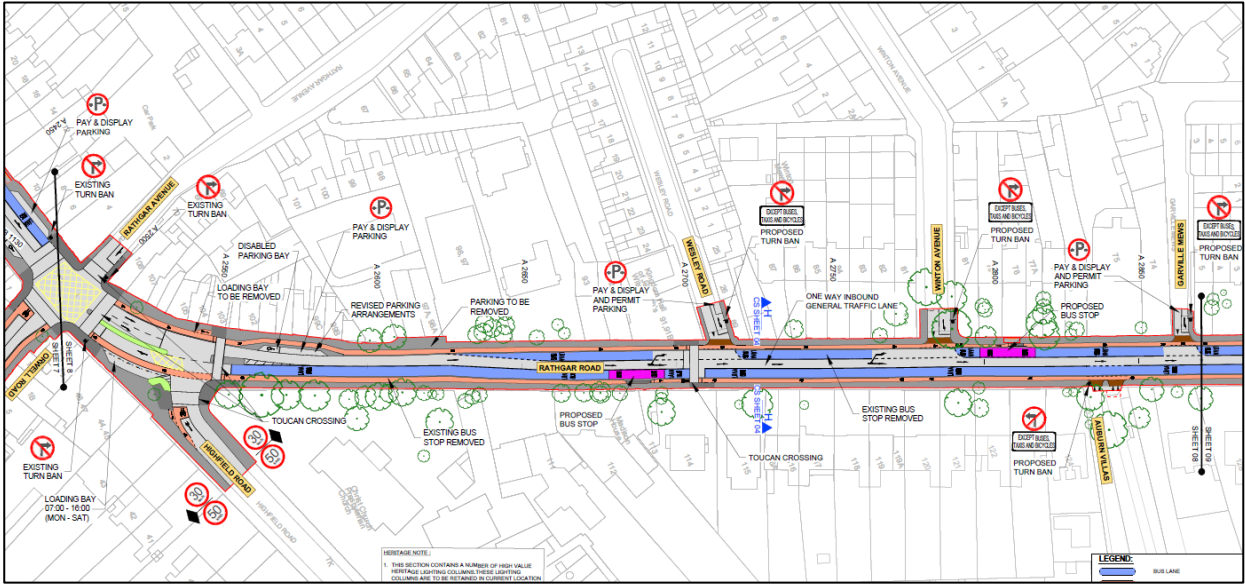


Figure 2.4.3 Extract from General Arrangement Drawings (Sheet 8)

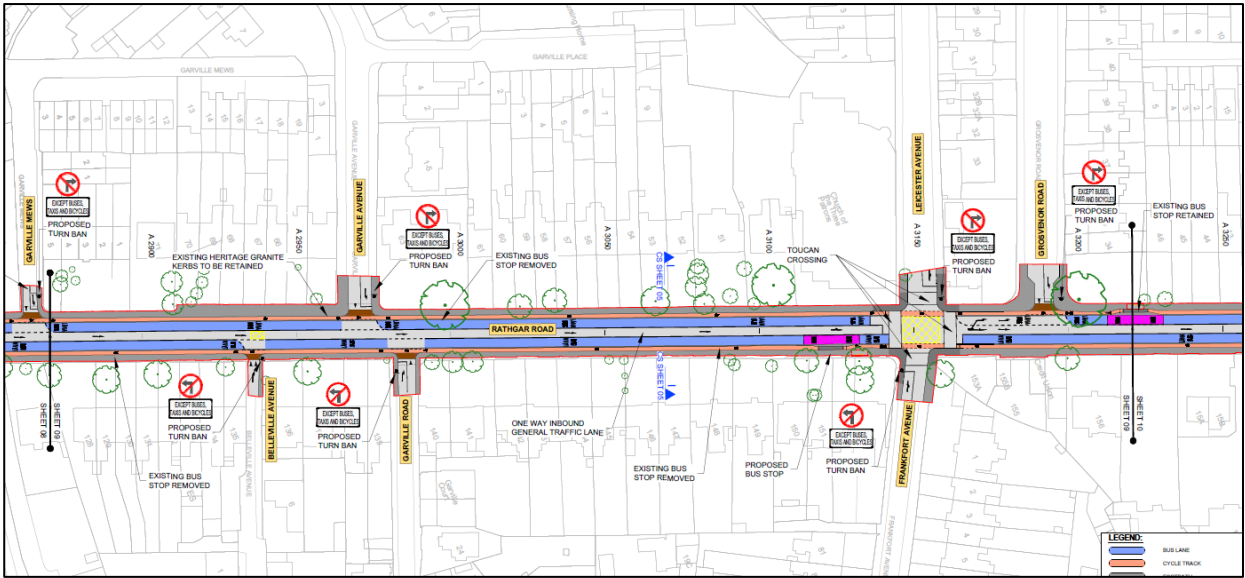


Figure 2.4.4 Extract from General Arrangement Drawings (Sheet 9)

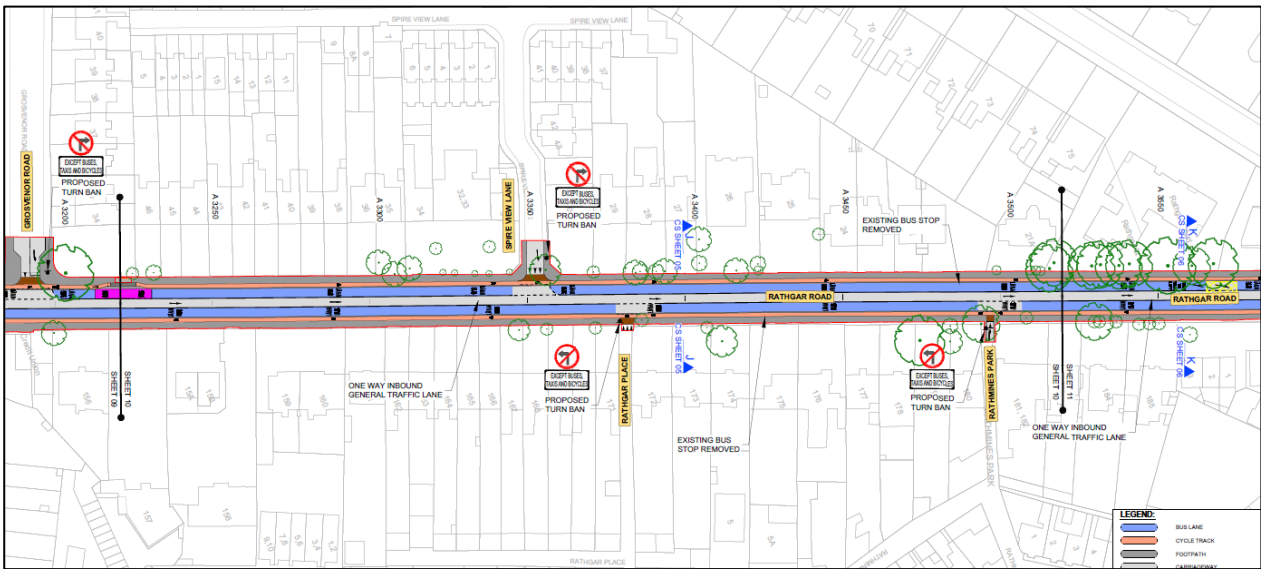


Figure 2.4.5 Extract from General Arrangement Drawings (Sheet 10)

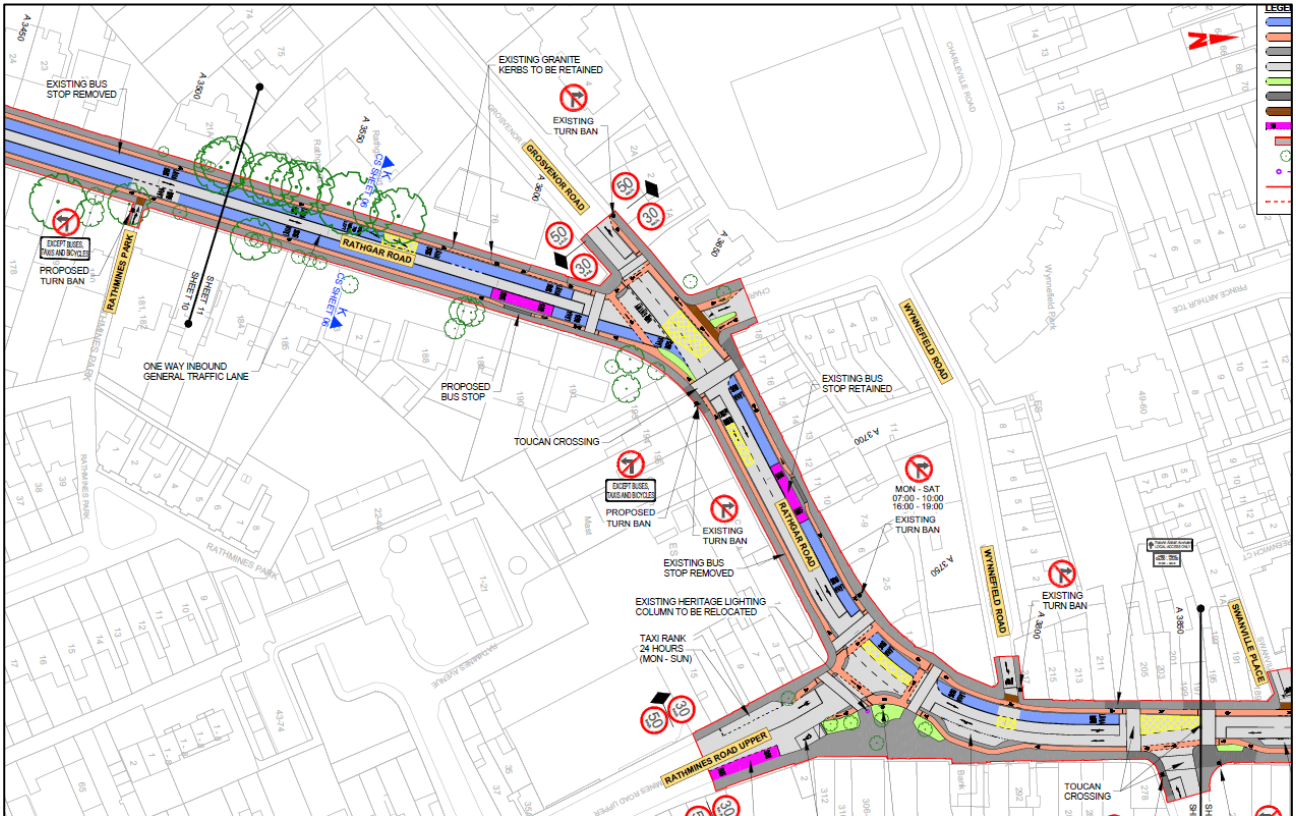


Figure 2.4.6 Extract from General Arrangement Drawings (Sheet 11)

2.4.2 Overview of Submissions Received

Table 2.4.1 below lists the 116 submissions within which issues were raised in respect of the Proposed Scheme the Terenure/Rathgar Area and the neighbouring vicinity.

Table 2.4.1 Submissions Made in Respect of Terenure and Rathgar

No	Name	No	Name	No	Name
6	Andrew Baird	104	Finola Connolly	202	Paul Jacobs
10	Ann Shanley and Ryan Stempniewicz	106	Fiona Daly	203	Paul Kavanagh
12	Ann Marie James	107	Fiona Eogan	204	Paula & Ray Moore
14	Ann Neary and Conor Farren	109	Fionnuala and Dick Blake	205	Pauline Wheatley
23	Barbara Atkinson	112	Graham Brooks and Jennifer Porter	206	Pete & Emma Smyth
24	Barbara Molloy	114	Greg and Audrey Turley	208	Peter Thornton & Helen Callanan
25	Barbara Smith	116	Helena McLaughlin	217	Rathgar Business Association
26	Barry & Bairbre Redmond and Leo and Marina Casey	117	I Love Terenure 2030	218	Rathgar Medical Practice
27	Barry & Patricia Devaney	120	Ivana Bacik TD	219	Rathgar Residents Association
30	Ben Costello	121	Jack Thornton	222	Residents of Brighton Road and Brighton Square
33	Bernard Colman & Mary Muldoon	125	James M Bourke & Ilona De Burgh	225	Residents of Greenlea Road
34	Bernardine Cantwell	132	John Gleeson and Christine Blessing	231	Residents of Terenure Road West

No	Name	No	Name	No	Name
37	Brendan Heneghan	134	John Lahart TD	232	Residents of The Cloisters and Maple Drive Area
38	Brendan Timbs	138	Judith Lunny	233	Residents of Upper Rathmines Road
41	Brian Walker, Carol Walker, Alison Walker	141	Kathryn & Eoin McVey	237	Rita O Cleirigh
43	Butterfield District Residents' Association	142	Kathy Jacobs	238	Robin Jones
44	Caitriona Holt & Ken Dolan	147	Leila Anglade	240	Ronan & Siobhan Garrigan
47	Cedar Court Residents Association	149	Liam Fitzgerald	241	Rory and Cliona Carton
49	Christian Schaffalitzky	150	Linda Hackett	244	Rosemary Ryan
53	Ciaran Mulligan & Bryan Mc Cormack	151	Linda Patton	248	Seán Leake and Morina Carr
55	Clare Sexton	153	Lorna Callanan	249	Seán Silke
56	Claudia Gentile	154	Macdara O Morain	251	Senator Michael McDowell
59	Cliona Mullen	159	Margaret Silke	252	Sharon McCaffrey
64	Colleen Feeley	160	Mari O'Leary	253	Shauna & Ray Clarke & others
68	Conor Ryan and Siobhan Ryan	163	Mark and Linda Smith	258	Stephanie Frame
69	Councillor Anne Feeney	170	Maura Byrne	259	Stephen Bailey
70	Councillor Carolyn Moore	171	Maureen O'Halloran	259	Stephen Bailey
73	Darren Twyford	172	Maurice Dorney & Dympna Dorney	262	Stonepark Investments Limited
75	David O'Doherty and Niamh Tierney	174	Melisa Kearney	269	Terenure College Rugby Football Club
76	David Phelan	176	Michael & Ann Maire Morris	270	Terenure Residents Association
77	Dearbhail Shannon	177	Michael and Colette Clarke and others	271	Terenure Road East Residents' Group
82	Derval O'Brien	178	Michael Bermingham	272	Terenure West Residents Association
83	Desmond Ryan	181	Mick and Miriam Dunne	273	Teresa & Vincent Lambe
87	Dolores (Dee) Gaffney	187	Neasa McGarrigle & Oisín Tobin	275	The Barber Family
88	Dr. Roderick Maguire and Dr. M. E. Maguire	188	Niall & Yvonne Gunne	280	Tom Kelly
90	Dublin Commuter Coalition	189	Niall Turley	282	Una Lyons
93	Eamon Kelly	191	Nigel Clerkin	284	Ursula Budd & Michael McArdle
94	Eileen Dolan	198	Pat and Theresa McCaffrey	285	Wainsfort and College Residents Association
101	Feidhlimidh Wrafter	200	Patrick O'Hagan		

A number of issues were raised, and these are listed below and described in Section 2.4.3 below.

Common Issues Raised

1. Justification for corridor routing along Rathgar Road

2. Proposed 1-way for general traffic on Rathgar Road
 - a. Impact on Highfield Road / Rathmines Road Upper
 - b. Reduced footpath widths on Rathgar Road
3. Removal of parking/loading in Rathgar Village
4. Removal of parking/loading in Terenure Village
5. Removal of trees on Terenure Road East
6. Impact on Heritage properties along Terenure Road East
7. Relocation of bus stops
 - a. Bus Stop 1 Relocated bus stop outside No.12 and 14 Terenure Road East
 - b. Relocated bus stop outside No.12 and 14 Terenure Road East
8. Existing Bus Priority Signal on Terenure Road East is Adequate
9. Impact on access to/from Rathgar Road from the north
10. Traffic impact of proposals at Terenure Cross

2.4.3 Common Issues Raised and Responses

2.4.3.1 Justification for corridor routing along Rathgar Road

Summary of Issue Raised

A number of submissions query the routing of the core bus corridor along Terenure Road East, Rathgar Road and Rathmines Road. These submissions suggest that the route should continue straight through Terenure Cross on Terenure Road North and continuing along Harold's Cross Road to connect to the Kimmage to City Centre Core Bus Corridor. It is noted in these submissions that this was the routing identified for the Clongriffin to Tallaght Bus Rapid Transit scheme. It is submitted that the optioneering carried out of the Proposed Scheme does not consider the routing of the corridor along Harold's Cross Road.

Submissions note that the routing through Terenure Road North / Harold's Cross Road is dismissed in brief text and graphics in the Preferred Route Option Report and that this dismissal is based on outdated data namely the 2011 Census and 2016 Dublin bus patronage figures.

Response to Issue Raised

Section 3.4.1.1.2.2 of Chapter 3 Reasonable Alternatives of Volume 2 of the EIAR identifies that consideration of the routing the corridor along Harold's Cross Road:

Option of the CBC following Harold's Cross Road and connecting to the Kimmage to City Centre CBC. The primary reason that this option has not been progressed is the significantly stronger demand for bus along the Rathgar Road / Rathmines Road when compared to Harold's Cross Road. This route corridor serves the urban village of Rathmines, which is a significant trip attractor on southern side of the city. The strength of the high demand for bus in Rathmines compared to Harold's Cross Road is clearly evident from the extracts from the Dublin Area Bus Network Redesign Revised Proposal (October 2019) presented in Image 3.18 and Image 3.19. The patronage shown in Image 3.18 is based on existing bus services.

This is elaborated upon in Section 4.3.4.1.1 of the Preferred Route Option Report provided in the Supplementary Information which sets out the rationale for the routing of the corridor along the Terenure Road/Rathgar Road/Rathmines Road corridor.

The primary route corridors considered in the assessment of Section 2 focussed on the Harold's Cross and the Rathgar/Rathmines corridors. The 'Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' concluded that the Rathgar/Rathmines corridor was preferred for a number of reasons, one of which being that the Harold's Cross corridor would have duplicated the then proposed Clongriffin to Tallaght Bus Rapid Transit (BRT) Route.

It is evident in section 5.5.4 of the previous revision of GDA Transport Strategy (2016-2035) which states:

"[a] number of the Core Radial Bus Corridors are proposed to be developed as Bus Rapid Transit routes, where the passenger numbers forecast on the routes are approaching the limits of conventional bus route capacity."

As design and planning work progressed, it became clear that the level of differentiation between the BRT corridors and the Core Bus Corridors would, ultimately, be limited, and that all of the Core Radial Bus Corridors should be developed to provide a BRT level of service.

The BRT routes shown in the GDA Transport Strategy (2016-2035) are indicative only. Section 5.5.4 of the strategy document states:

"The routes of these two BRT schemes are indicative and subject to design development. Such design development may include changes to the indicated alignments and /or terminal points of the schemes, including further extension of the routes."

Notwithstanding the fact that the BRT Route is no longer currently being progressed, the Rathgar/Rathmines Corridor remains the preferred corridor for the Rathfarnham to City Centre section.

The primary reason for this is the significantly stronger demand for bus along the Rathgar Road / Rathmines Road when compared to Harold's Cross Road. This route corridor serves the urban village of Rathmines, which is a significant trip attractor on southern side of the city. The strength of the high demand for bus in Rathmines compared to Harold's Cross Road is clearly evident from the extracts from the Dublin Area Bus Network Redesign Revised Proposal (October 2019) presented in Figure 4.27 and Figure 4.28. The patronage shown in Figure 4.27 is based on existing bus services.

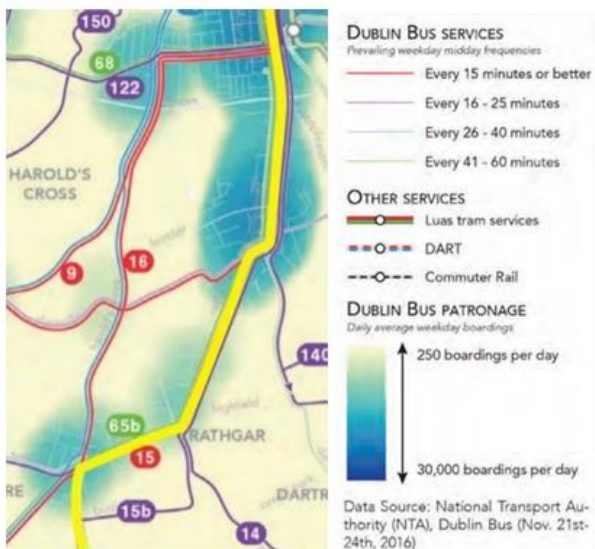


Figure 4.27: Average Daily Bus Patronage - Heatmap

(Source Dublin Area Bus Network Redesign Revised Proposal (October 2019) –the Rathfarnham to City Centre section highlighted yellow. Patronage based on existing bus services.)

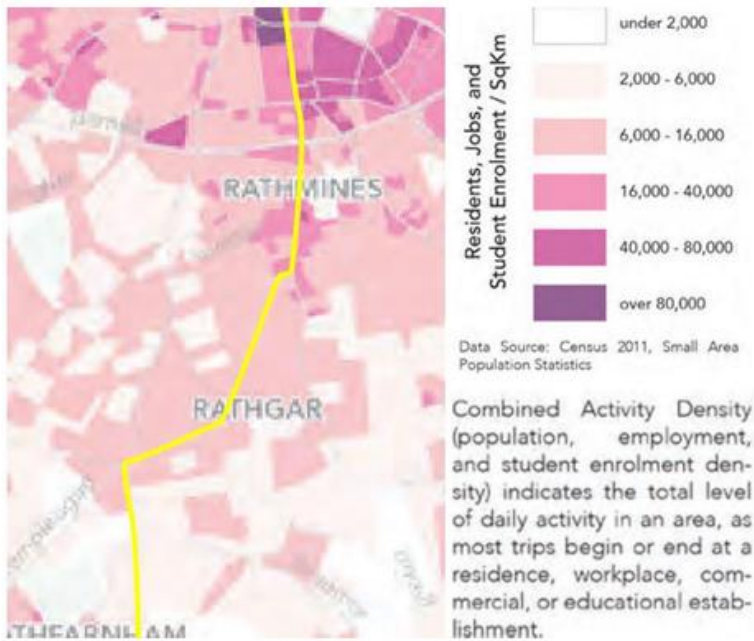


Figure 4.28: Combined Activity Density Map

(Source Dublin Area Bus Network Redesign Revised Proposal (October 2019) – the Rathfarnham to City Centre section highlighted yellow. Note darker colours represent areas with a higher density of activity)

The data presented above shows that the selected corridor through Rathmines will serve areas of higher density of activity (as demonstrated by the census data) as well as areas with already higher levels of bus patronage (as demonstrated by the Dublin Bus patronage data).

It is noted that the above graphic was based on the 2011 census. At the time of writing this response, the 2022 census data was not yet available, however an updated combined activity density map has been prepared based on the 2016 census and is presented below, confirming that the demand has not changed in any significant way.

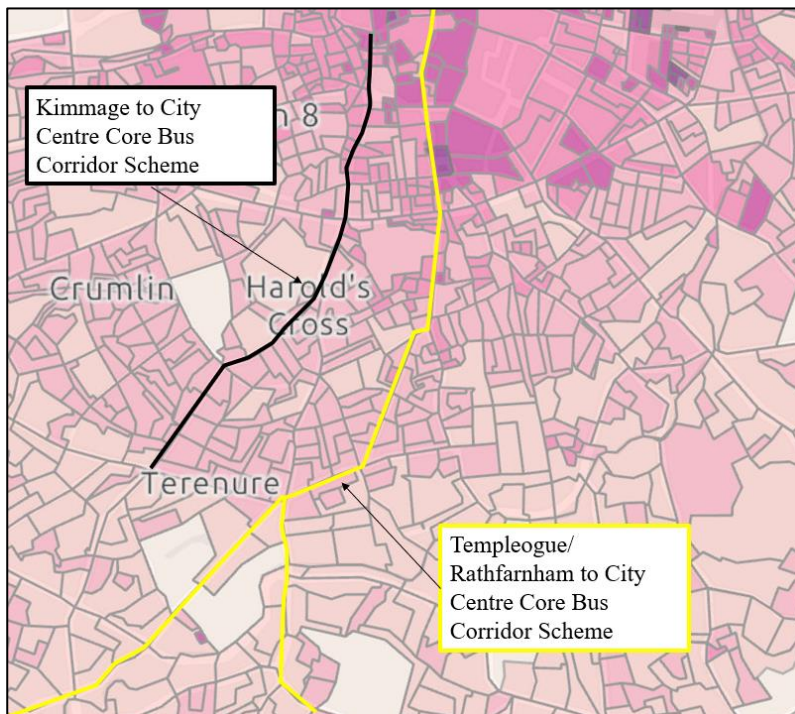


Figure 2.4.7 Combined Activity Density Map based on 2016 Census

Figure 2.4.7 shows that a higher density of activity is still present along the Rathgar Road /Rathmines Road Lower corridor than through Harold's Cross. It also demonstrates that bus service demand needs to be served along both the Rathgar Road / Rathmines Road Lower corridor, and along the Kimmage Road / Harold's Cross Road corridor, which is why the two 'Spines', as identified in the Dublin Area Bus Network Redesign Revised Proposal October 2019, are identified as major corridors extending out of the City Centre that require very high frequency service.

It is noted that a route via Rathgar Road and Rathmines Road is designated as a the A Spine route in the BusConnects Network Redesign. The Dublin Area Bus Network Redesign Revised Proposal October 2019 notes the following in relation to spine routes.

To locate the spines, we identified the major corridors extending out of City Centre that required very high frequency service. We then paired corridors on either side of the city, based on the following considerations:

- *Paired corridors should be on opposite sides of the City Centre, so that a spine combining them will form a reasonably direct line that is likely to be useful for many purposes.*
- *Paired corridors should support comparable levels of frequency off-peak, since the frequency on the core part of a spine will be the same on both sides of the City Centre.*

In practice, each spine is made up of several routes that join to form the spine on one side of the city, and then split up again on the other side. Each of these routes is a "branch" of the spine. The timetables of different spine branches would be staggered to ensure a consistently short time between buses on the main spine segment. We designed the branching structure using the following principles:

1. *Spines should split where the combined frequency of the spine is no longer justified by demand, preferably not too close to the City Centre to provide a long high-frequency segment.*
2. *Each branch should deliver the right frequency given the demand in the neighbourhoods it serves. In some cases, this means that a spine branches into two and then, further out, branches again.*
3. *The total travel time of a route should not exceed two hours from one end of the route to the other.*

The following is noted regarding the A Spine:

A Spine: Whitehall to Terenure

The A spine would combine the Swords Road corridor on the north side of the city with the Rathmines - Rathgar corridor on the south side. These are Dublin's busiest bus corridors, so service on the A spine would run every 3 minutes on weekdays.

On the north side, the A spine would split at Whitehall (Collins Avenue) into four branches, each with service every 12 minutes:

- *A1 would extend to Beaumont Hospital via Lorcan Avenue. This would add a new radial service to Beaumont Hospital via the Swords Road.*
- *A2 would extend on Swords Road to the Airport, similar to Route 16 but without a deviation into Beaumont.*
- *A3 would extend on Collins Avenue, going past DCU and continuing into Santry to the Santry Garda Station. This would provide a new radial service to DCU while also maintaining service currently provided by Route 1 in Santry.*
- *A4 would extend to Swords Main Street and Swords Manor, combining several existing segments of Routes 41 and 41c.*

In the south, the A spine services remain together to Terenure, then splits into the four 15-minute branches:

1. *A1 would extend past Templeogue to Knocklyon, similar to existing Route 15.*
2. *A2 would extend past Rathfarnham to Ballinteer and Dundrum, combining elements of existing Routes 16 and 14.*
3. *A3 would extent past Templeogue to Tallaght, providing a new high-frequency service to Tallaght via Rathmines - Rathgar.*
4. *A4 would extent past Rathfarnham to Nutgrove Shopping Centre, allowing direct travel to this centre from far more areas.*

On the segment between Terenure and Templeogue, the A1 and A3 would combine to provide a service every 6 minutes. The A2 and A4 do the same on the segment between Terenure and Rathfarnham.

It is noted that the proposed routing of the A Spine via Rathgar Road and Rathmines reflects the existing high frequency bus service provided along this corridor when compared to the Terenure Road North/Harold's Cross Road corridor, as shown in the Figure below. Equally the proposed routing of the F Spine via Kimmage Road / Harold's Cross Road reflects the existing high frequency bus service provided along that corridor when compared to the Terenure Road North/Harold's Cross Road corridor. The case for the BRT route option combining the Templeogue / Rathfarnham to City Centre CBC Scheme with the Kimmage to City Centre CBC Scheme at Harold's Cross area fell away once the high frequency bus service demand analysis was fully considered in the consideration of reasonable alternatives.

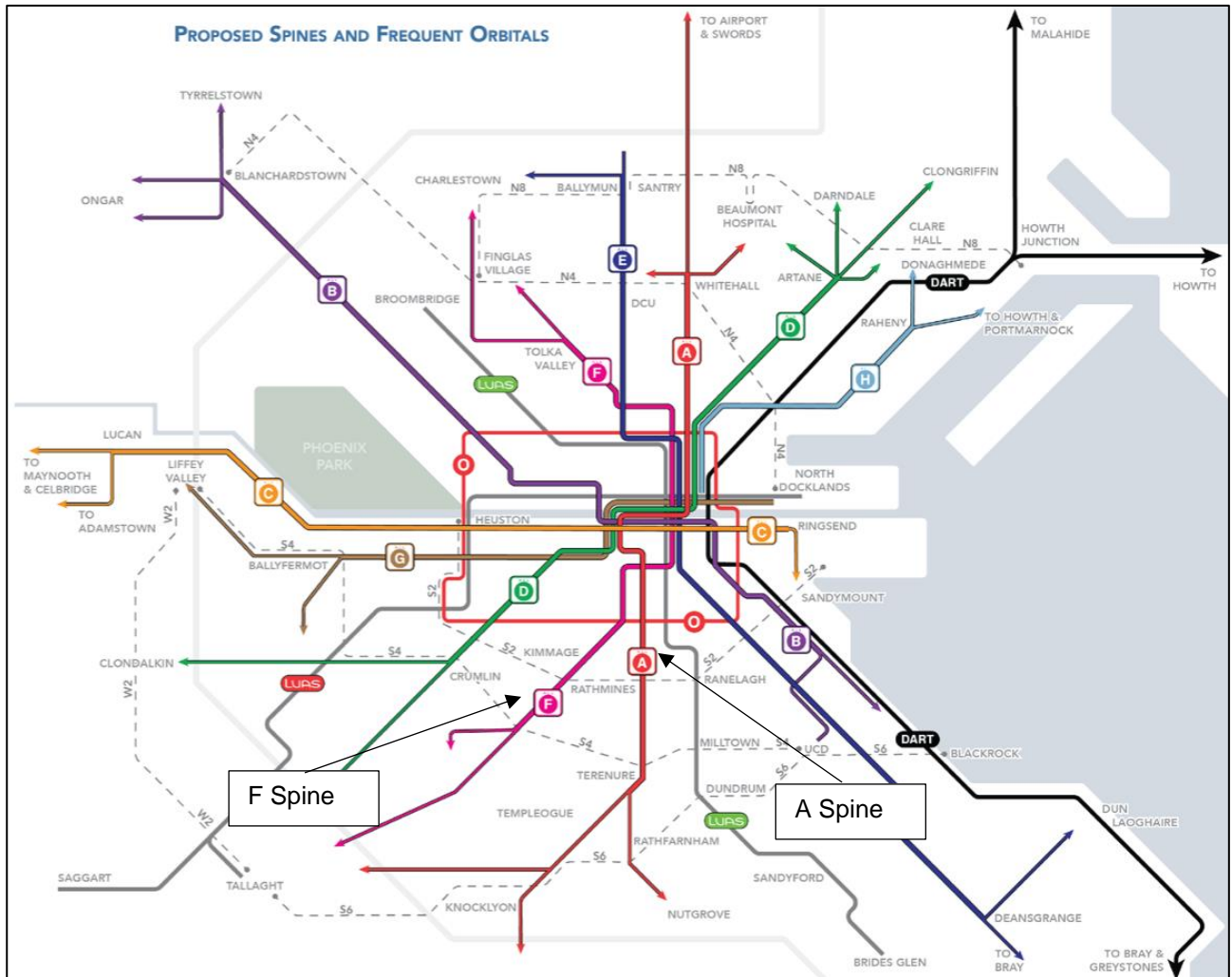


Figure 2.4.8 Extract from Revised Network Proposal Executive Summary (Figure 17)

2.4.3.2 Proposed 1-way for general traffic on Rathgar Road

Summary of Issue Raised

- a. Traffic Impact on Highfield Road / Rathmines Road Upper and surrounding roads

A number of submissions received raised concerns in relation to the impact that the proposed one-way regime for general traffic on Rathgar Road would have on roads in the vicinity of the Rathgar Road due to rerouting of traffic. These submissions included references to increases in traffic, congestion and potential safety issues on roads such as Highfield Road, Rathmines Road Upper, Palmerston Park and Palmerston Road. Some submissions noted that the introduction of the right turn from Rathmines Road Upper to Highfield Road would encourage traffic to use these routes. Many submissions noted that these roads were unsuitable for accommodating additional traffic.

b. Noise Increases on Highfield Road / Rathmines Road and surrounding Roads

Some submissions were concerned that due to the rerouting of traffic along Highfield Road, Rathmines Road Upper, Palmerston Park and Palmerston Road there would be a significant increase in noise along these streets.

c. Reduced footpath widths on Rathgar Road

A number of submissions received raised concerns about the proposal to reduce footpath widths along Rathgar Road and the impact this would have on pedestrian movement and safety.

Response to Issue Raised

a. Traffic Impact on Highfield Road / Rathmines Road Upper and surrounding roads

As set out in Section 2.1 of EIAR Chapter 2 Need for the Scheme, “*The Proposed Scheme is needed in order to enable and deliver efficient, safe and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region.*”

The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling on this key access corridor in the Dublin region. Section 6.4.6.2 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

*Overall, it has been determined that the impact of the reduction in general traffic flows along the Proposed Scheme will be a **Positive, Moderate and Long-term** effect whilst the impact of the redistributed general traffic along the surrounding road network will have a **Negative, Slight and Long-term** effect. Thus, overall, there will be no significant deterioration in the general traffic environment in the study area as a consequence of meeting the scheme objectives of providing enhanced sustainable mode priority along the direct study area.*

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate:

1. A significant decrease in people travelling to/from the city by car in each peak period with decreases of 30% and 39% in the AM and PM peak periods respectively;
2. A significant increase in people travelling by public transport in each peak period with increases of 123% and 145% in the AM and PM peak periods respectively;
3. A significant increase in people walking/cycling in each peak period with increases of 79% and 91% in the AM and PM peak periods respectively;

This is summarised in in Figure 2.4.9 and Figure 2.4.10 (reproduced from diagrams 6.6 and 6.7 in Chapter 6).

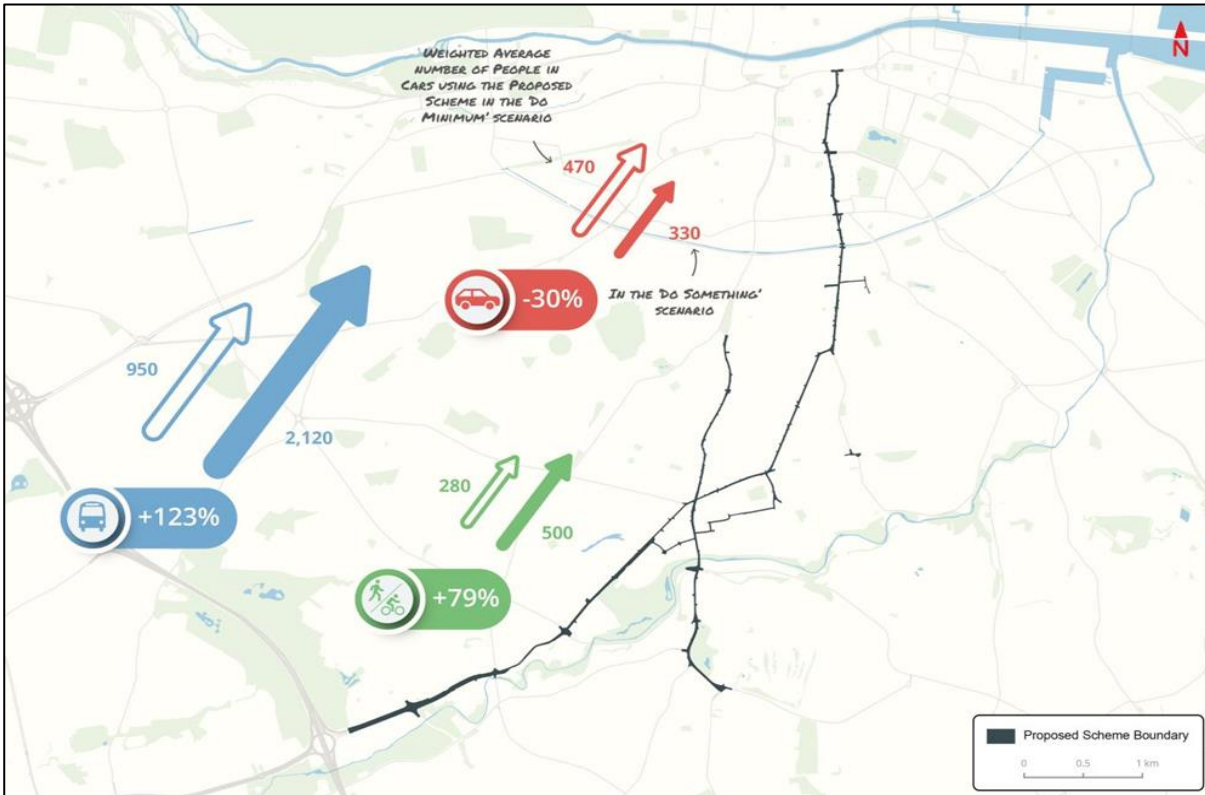


Figure 2.4.9 People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

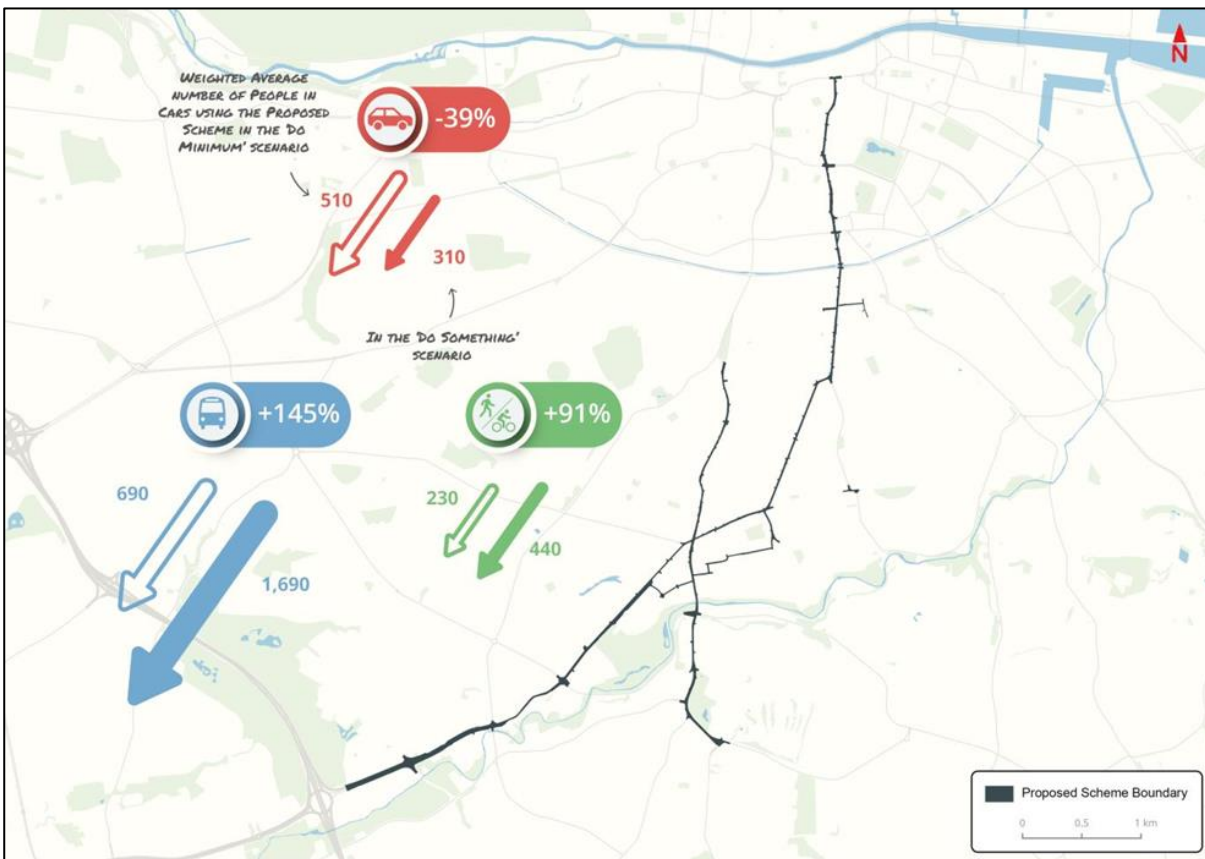


Figure 2.4.10 People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

Section 6.4.6.1.15.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 and the road links listed in Table 6.60 where there is a reduction in combined flow of >100 and in Table 6.61 where there is an increase in combined flow of >100. These are shown in Figure 2.4.11 – Figure 2.4.13.

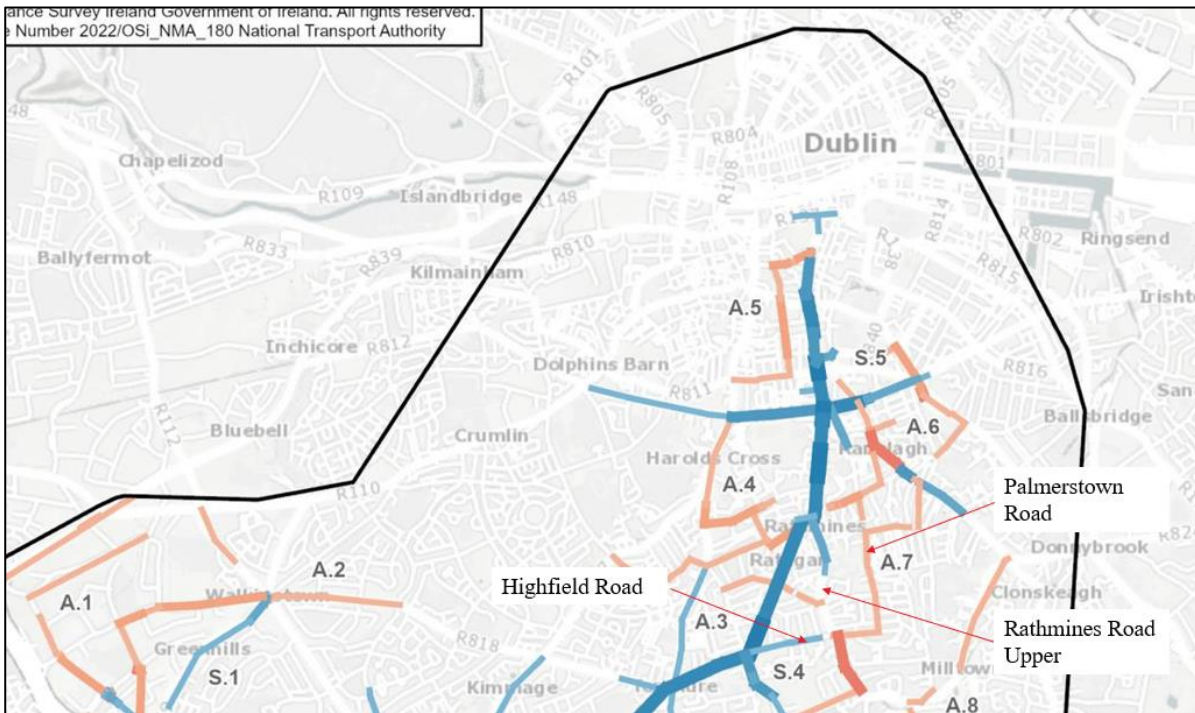


Figure 2.4.11 Extracts from EIAR Chapter 6: Diagram 6.40

Table 6.60: Road Links that Experience a Reduction of ≥ 100 Combined Flows during AM Peak Hour (Direct Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	S.2	Cypress Grove Road	1,108	926	-182
		Old Bridge Road	1,333	983	-350
		Tallaght Road	1,675	1,400	-275
		Templeville Road	1,036	689	-348
		Wellington Lane	2,141	1,851	-291
	S.4	Templeogue Road	665	212	-453
		Terenure Place	1,345	759	-586
		Terenure Road West	704	597	-107
Section 2 - R821 Nutgrove Avenue to R137 Terenure Road North	S.3	Butterfield Avenue	979	822	-158
		Grange Road	606	484	-122
		Nutgrove Avenue	1,275	995	-280
		Rathfarnham Road	1,336	843	-493
		Willbrook Road	798	602	-196
	S.4	Bushy Park Road	441	301	-141
		Rathfarnham Road	950	837	-114
Section 3 - R137 Terenure Road North to Charleville Road	S.4	Highfield Road	633	456	-177
		Orwell Road	1,175	876	-299
		Rathfarnham Road	1,025	875	-150
		Rathgar Road	603	109	-494
		Terenure Road East	838	436	-401
		Terenure Road North	977	824	-153
Section 4 - Charleville Road to R137 Dame Street	S.4	Charleville Road	144	30	-114
		Rathgar Road	817	672	-144
		Rathmines Road Lower	1,225	849	-376
		Rathmines Road Upper	578	328	-249

Figure 2.4.12 Extracts from EIAR Chapter 6: Table 6.60

Table 6.63: Road Links where the 100 Flow Additional Traffic Threshold is Exceeded (AM Peak Hour) (Indirect Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Belgrave Square East	122	228	+105
		Belgrave Square North	640	873	+232
		Castlewood Avenue	619	824	+206
		Dunville Avenue	357	510	+153
		Frankfort Avenue	120	311	+191
		Milltown Road	1,049	1,185	+136
		Palmerston Park	853	1,028	+175
		Palmerston Road	108	304	+196
		A.08	Churchtown Road Lower	764	877
		Dundrum Road	739	849	+111
		Milltown Road	1,312	1,488	+177
	A.09	Churchtown Road Lower	741	845	+105
		Dartry Road	896	1,296	+400
		Lower Dodder Road	448	556	+108
		Orwell Park	585	736	+151
		Orwell Road	1,307	1,507	+201
	A.10	Butterfield Avenue	788	933	+145
		Spawell Link Road	833	1,029	+195
		Taylor's Lane	841	992	+151
	A.11	Broadford Road	945	1,059	+114
		Grange Road	1,114	1,299	+185
		Stonemason's Way	811	948	+137
		Taylor's Lane	662	837	+175
	A.12	M50	5,714	6,023	+309
		M50 On-Ramp	1,352	1,482	+130

Figure 2.4.13 Extracts from EIAR Chapter 6: Table 6.63

Figure 2.4.12 and Figure 2.4.13 show that, the Proposed Scheme will result in an overall reduction in traffic along Highfield Road (-177 PCUs) and Rathmines Road Upper (-249 PCUs) in the morning peak period.

Figure 2.4.13 shows that traffic volumes along Palmerston Park and Palmerston Road are estimated to increase by 175 and 196 PCUs during the morning peak period. Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the AM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 16 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 2.4.14.

Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
			Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
Belgrave Square North	11357	Belgrave Square East / Belgrave Square North / Charleston Road / Mount Pleasant Avenue Upper	817	1025	56	37	<85%	<85%	Negligible
Butterfield Avenue	21132	Butterfield Avenue / Marian Road	834	942	58	66	<85%	<85%	Negligible
Churchtown Road Lower	19384	Churchtown Road Lower / Woodlawn Park	930	1016	71	74	<85%	<85%	Negligible
Dartry Road	11355	Dartry Road / Sunbury Gardens	993	1378	42	56	<85%	<85%	Negligible
Grange Road	21175	Grange Road / Taylors Lane	1105	1306	52	64	<85%	<85%	Negligible
Milltown Road	11316	Milltown Road / Dundrum Road	1574	1751	60	68	<85%	<85%	Negligible
Palmerston Park	11276	Palmerston Park / Palmerston Road	129	327	5	13	<85%	<85%	Negligible
Northbrook Road	11205	Northbrook Road / Cambridge Terrace	282	382	8	12	<85%	<85%	Negligible
Orwell Park	11228	Orwell Park / Orwell Road	1468	1611	72	92	<85%	85%-100%	Low
Taylors Lane	21162	Taylors Ln / Ballyboden Way Rbt	887	890	55	47	<85%	<85%	Negligible
M50	9226	M50 Jct 11	3400	3337	100	88	>100%	85%-100%	Low
Ashfield Road	11260	Ashfield Road / Beechwood Road	373	489	20	30	<85%	<85%	Negligible
Butterfield Avenue	21121	Butterfield Avenue / Firhouse Road / Old Bridge Road	1982	1728	51	58	<85%	<85%	Negligible
Dunville Avenue	11259	Dunville Avenue / Oakiev Road	293	443	13	22	<85%	<85%	Negligible
Dunville Avenue	11254	Dunville Avenue / Palmerston Road	353	512	24	53	<85%	<85%	Negligible
Firhouse Road	21204	Firhouse Road / Spawell Link Road	1557	1616	54	53	<85%	<85%	Negligible
Frankfort Avenue	11269	Garville Road / Frankfort Avenue	96	270	4	18	<85%	<85%	Negligible
Braemor Road	11297	Braemor Road / Lower Dodder Road	1238	1215	75	96	<85%	85%-100%	Low
Broadford Road	19305	Broadford Road / Stonemason'S Way	934	1054	65	75	<85%	<85%	Negligible
Canal Road	6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1676	1400	95	87	85%-100%	85%-100%	Negligible
Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	626	825	21	26	<85%	<85%	Negligible
	40073	Castlewood Avenue / Castlewood Park	549	764	20	25	<85%	<85%	Negligible
Charlemont Street	6100	Charlemont Street / Charlemont Mall	783	876	75	82	<85%	<85%	Negligible
Charleston Road	11257	Charleston Road / Oxford Road	729	926	27	60	<85%	<85%	Negligible
Frankfort Avenue	11270	Frankfort Avenue / Vernon Grove	168	304	6	15	<85%	<85%	Negligible
Broadford Road	19215	Barton Road East / Broadford Rd Rbt	924	1031	40	44	<85%	<85%	Negligible
Butterfield Avenue	21129	Anne Devlin Road / Butterfield Avenue	991	1095	67	76	<85%	<85%	Negligible
	21185	Butterfield Avenue / Fairways	1209	1185	70	98	<85%	85%-100%	Low
Chelmsford Road	11305	Chelmsford Road / Sallymount Avenue / The Appian Way	791	876	39	44	<85%	<85%	Negligible
Beechwood Road	11399	Beechwood Road / Dunville Avenue	335	449	11	17	<85%	<85%	Negligible
Churchtown Road Lower	11339	Churchtown Road Lower / Patrick Doyle Road	834	912	25	32	<85%	<85%	Negligible
Churchtown Road Upper	19396	Churchtown Road Lower / Churchtown Road Upper	1495	1483	48	56	<85%	<85%	Negligible
Dartry Road	11359	Dartry Road / Orwell Park	1393	1657	61	74	<85%	<85%	Negligible
Dundrum Road	19385	Bird Avenue / Dundrum Road	665	782	40	44	<85%	<85%	Negligible
	19386	Dundrum Road / Farrenboley Park	596	698	36	38	<85%	<85%	Negligible
Grand Parade	6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2368	2400	60	46	<85%	<85%	Negligible
Grange Road	19436	Grange Road / Stonemason'S Way	1595	1744	90	99	85%-100%	85%-100%	Negligible
Leeson Street Upper	11125	Leeson Street Upper / Burlington Road	1376	1510	51	55	<85%	<85%	Negligible
	11131	Leeson Street Upper / Dartmouth Road	996	1265	66	85	<85%	<85%	Negligible
	11136	Leeson Street Upper / Leeson Street Upper	877	1177	47	64	<85%	<85%	Negligible

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
A.7	Northbrook Road	11197	Northbrook Road / Dartmouth Terrace	221	332	8	13	<85%	<85%	Negligible
	Orwell Road	11315	Lower Dodder Road / Orwell Road	1340	1492	51	86	<85%	85%-100%	Low
	Leeson Street Lower	6266	Adelaide Road / Leeson Street Lower / Fitzwilliam Place	1672	1845	73	74	<85%	<85%	Negligible
		6265	Adelaide Road / Leeson Street Lower / Wilton Terrace	1775	2005	36	43	<85%	<85%	Negligible
		6268	Hatch Street Lower / Leeson Street Lower	1405	1600	37	37	<85%	<85%	Negligible
	Leeson Street Upper	11124	Leeson Street Upper / The Appian Way	1800	1864	95	84	85%-100%	<85%	Low Positive
	Lower Dodder Road	11246	Dodder Road Lower / Dodder Road Lower	444	556	15	21	<85%	<85%	Negligible
A.8	Palmerston Park	11311	Palmerston Park / Rathmines Road Upper	1084	1176	51	76	<85%	<85%	Negligible
		11329	Palmerston Park / Sunbury Gardens	952	1308	52	76	<85%	<85%	Negligible
	Palmerston Road	11290	Cowper Road / Palmerston Road	162	348	9	21	<85%	<85%	Negligible
	Ranelagh	11184	Mountpleasant Place / Ranelagh / Ranelagh Road	935	1392	59	91	<85%	85%-100%	Low
	Rathmines Road Upper	11295	Rathmines Road Upper / Frankfort Avenue	773	781	26	53	<85%	<85%	Negligible
	Taylors Lane	21148	Palmer Park / Taylors Lane	827	977	27	31	<85%	<85%	Negligible
		21149	Pearse Brothers Park / Taylors Lane	904	1041	25	29	<85%	<85%	Negligible
	M50	21225	M50 Jct 12	3941	4023	93	93	85%-100%	85%-100%	Negligible
	Ranelagh	11233	Ashfield Road / Ranelagh	1222	1244	78	79	<85%	<85%	Negligible
		11250	Cullenswood Road / Ranelagh	1324	1360	54	64	<85%	<85%	Negligible
A.9	Ranelagh Road	11185	Northbrook Road / Ranelagh Road	910	1192	51	75	<85%	<85%	Negligible
		11261	Ranelagh Road / Beechwood Avenue Lower	1142	1258	79	92	<85%	85%-100%	Low
	Leeson Street Upper	6300	Leeson Street Upper / Sussex Road (North)	1314	1597	45	60	<85%	<85%	Negligible
		11138	Leeson Street Upper / Sussex Road (South)	716	904	36	47	<85%	<85%	Negligible
	Ranelagh Road	11201	Ranelagh Road / Mountpleasant Place	948	1314	58	79	<85%	<85%	Negligible
		11338	Ranelagh Road / Mountpleasant Square / Orchard Lane	965	1338	54	77	<85%	<85%	Negligible
		11186	Ranelagh Road / Mountpleasant Terrace / Dartmouth Road	788	917	42	55	<85%	<85%	Negligible
	Taylors Lane	21153	Taylors Lane / Whitechurch Road	1256	1384	54	66	<85%	<85%	Negligible

Figure 2.4.14 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 16

Figure 2.4.14 shows that the Proposed Scheme would result in negligible impact on junctions along Palmerston Road and Palmerston Park as a result of the Proposed Scheme.

Section 6.4.6.1.15.4 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the PM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.41 and the road links listed in Table 6.64 where there is a reduction in combined flow of >100 and in Table 6.65 where there is an increase in combined flow of >100. These are shown in Figure 2.4.15– Figure 2.4.17.

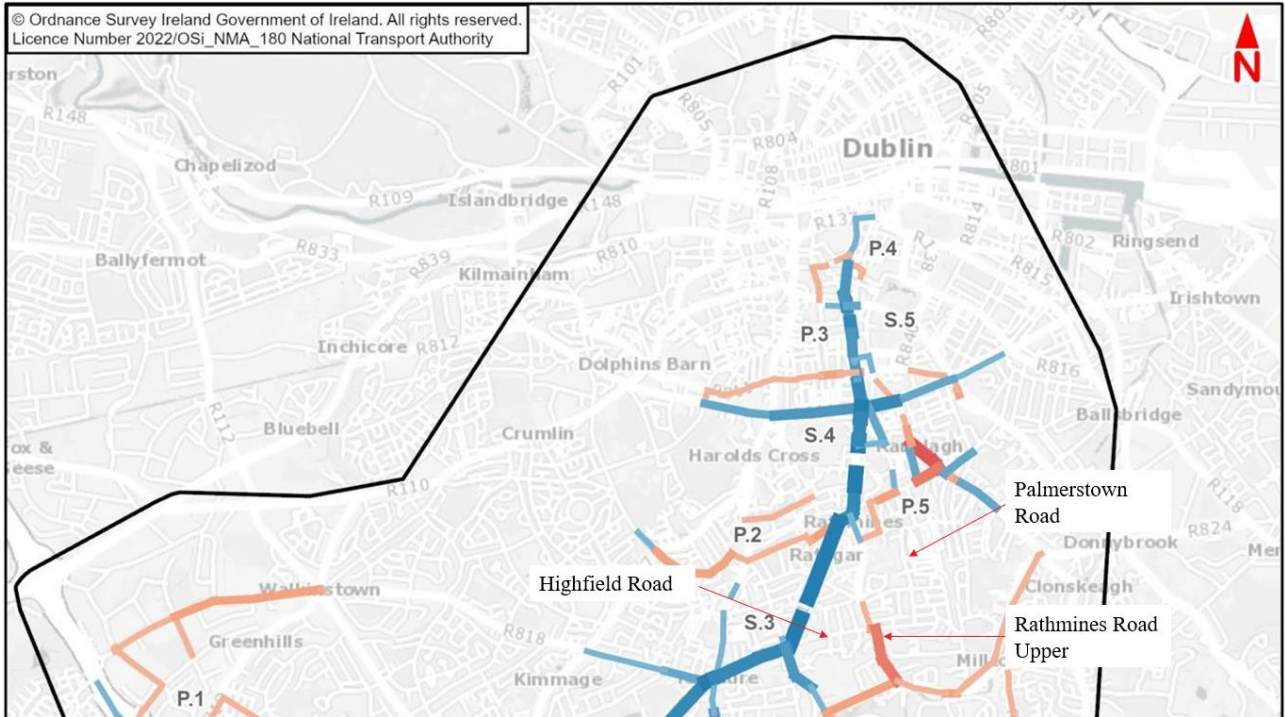


Figure 2.4.15 Extracts from EIAR Chapter 6: Diagram 6.41

Figure 2.4.15 shows that no material increase or decrease in traffic is anticipated along Highfield Road, Palmerston Road or Palmerston Park as a result of the Proposed Scheme.

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Mountpleasant Avenue Lower	300	58	-242
		Rathgar Road	1,072	581	-491
		Rathmines Road Lower	935	389	-546
		Rathmines Road Upper	521	331	-191
		Richmond Hill	319	149	-170
		Richmond Street South	314	116	-198
	S.5	Aungier Street	391	197	-194
		Camden Street Lower	532	246	-287
		Camden Street Upper	366	200	-166
		Charlotte Way	711	584	-127
		Cuffe Street	1,107	893	-214
		Kevin Street Lower	1,046	932	-113
		Redmond's Hill	837	324	-513
		South Great George's Street	472	366	-105
		Wexford Street	535	171	-364

Figure 2.4.16 Extracts from EIAR Chapter 6: Table 6.64

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Cullenswood Road	756	1,114	+358
		Leeson Street Upper	700	931	+232
		Milltown Road	868	1,037	+169
		Ranelagh	837	1,318	+480
		Ranelagh Road	1,227	1,442	+216
	P.6	Dartry Road	901	1,237	+337
		Dundrum Road	435	540	+105
		Lower Dodder Road	381	499	+118
		Milltown Road	1,188	1,448	+260
		Orwell Park	372	575	+204
		Orwell Road	1,326	1,457	+131
		Palmerston Park	802	1,040	+238
		Rathmines Road Upper	621	735	+113
	P.7	Butterfield Avenue	826	952	+126
		Butterfield Park	215	456	+241
		Dodderview Road	1,047	1,166	+119
		Spawell Link Road	885	1,016	+132
		Whitechurch Road	333	441	+108
	P.8	Broadford Road	712	899	+188
		Grange Road	884	1,086	+203
		Stonemason's Way	557	779	+223
		Taylors Lane	617	768	+150
	P.9	M50	4,281	4,567	+286
		M50 On-Ramp	583	710	+127
		Scholarstown Road	776	896	+120
		St Colmcille's Way	1,478	1,614	+136

Figure 2.4.17 Extracts from EIAR Chapter 6: Table 6.65

Figure 2.4.16 and Figure 2.4.17 show the Proposed Scheme will result in an overall reduction in traffic along Rathmines Road Upper (-191 PCUs) in the morning peak period. It is noted that this is along the northern section Rathmines Road Upper. Figure 2.4.17 shows that the majority of Rathmines Road Upper would see no material increase in traffic (+/- 100 PCU). An increase in traffic is projected on the southern part of Rathmines Road Upper (+113 PCUs). An increase in traffic is also projected along Palmerston Park (+238 PCU), although it is noted that this is just the portion in the middle of the Rathmines Road Upper/Palmerston Park/Dartry Road junction. Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the PM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 2.4.18.

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flow		Max. Volume over Capacity Ratio (%)		Ranges		Description of Impact	
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum	Do Something		
P.1	Leeson Street Upper	6300	Leeson Street Upper / Sussex Road (North)	1415	1594	44	46	≤85%	≤85%	Negligible	
	Longford Street Little	6327	Longford Street Little / Noel Purcell Walk	306	489	8	13	≤85%	≤85%	Negligible	
	Mercer Street Lower	6347	Mercer Street Lower / Mercer Street Lower / Glovers Alley	323	414	47	67	≤85%	≤85%	Negligible	
	Milltown Road	11299	Richmond Avenue South / Milltown Road	435	569	24	31	≤85%	≤85%	Negligible	
	Palmerston Park	11311	Palmerston Park / Rathmines Road Upper	920	1098	44	58	≤85%	≤85%	Negligible	
		11329	Palmerston Park / Sunbury Gardens	902	1204	64	96	≤85%	85%-100%	Low	
	Scholarstown Road	21192	Scholarstown Rd Rbt	620	739	104	105	>100%	>100%	Negligible	
	Whitechurch Road	21169	Grange Park / Whitechurch Road	309	417	10	22	≤85%	≤85%	Negligible	
	P.2	Milltown Road	11221	Churchtown Road Lower / Milltown Road	1500	1733	102	102	>100%	>100%	Negligible
			11166	Eglinton Road / Milltown Road / Sandford Road / Clonskeagh Road	1854	1861	92	90	85%-100%	85%-100%	Negligible
		11316	Milltown Road / Dundrum Road	1405	1622	44	50	≤85%	≤85%	Negligible	
		11400	Milltown Road / Milltown Road / Milltown Road	1185	1435	39	46	≤85%	≤85%	Negligible	
Ranelagh		11233	Ashfield Road / Ranelagh	1059	1284	59	66	≤85%	≤85%	Negligible	
		11251	Chelmsford Road / Ranelagh	1443	1219	63	97	≤85%	85%-100%	Low	
Ranelagh Road		11261	Ranelagh Road / Beechwood Avenue Lower	1082	1327	73	97	≤85%	85%-100%	Low	
		11201	Ranelagh Road / Mountpleasant Place	1122	1335	72	76	≤85%	≤85%	Negligible	
		11338	Ranelagh Road / Mountpleasant Square / Orchard Lane	1067	1274	71	69	≤85%	≤85%	Negligible	
		11186	Ranelagh Road / Mountpleasant Terrace / Dartmouth Road	854	926	46	55	≤85%	≤85%	Negligible	
Rathmines Road Upper		11303	Church Avenue / Rathmines Road Upper	584	536	17	23	≤85%	≤85%	Negligible	
		11296	Rathmines Road Upper / Cowper Road	651	751	24	26	≤85%	≤85%	Negligible	
P.3		Butterfield Avenue	21141	Butterfield Avenue / Butterfield Park	935	717	59	39	≤85%	≤85%	Negligible
		Lower Dodder Road	11246	Dodder Road Lower / Dodder Road Lower	352	463	10	14	≤85%	≤85%	Negligible
		M50	9226	M50 Jct 11	3354	3312	103	96	>100%	85%-100%	Low
		21225	M50 Jct 12	3481	3664	105	103	>100%	>100%	Negligible	
	Mercer Street Lower	6348	Mercer Street Lower / Noel Purcell Walk	265	380	8	12	≤85%	≤85%	Negligible	
	Noel Purcell Walk	6326	Noel Purcell Walk / Mercer Street Lower	247	431	23	38	≤85%	≤85%	Negligible	
	Ranelagh	11250	Cullenswood Road / Ranelagh	1346	1599	42	89	≤85%	85%-100%	Low	
		11184	Mountpleasant Place / Ranelagh / Ranelagh Road	1046	1258	52	77	≤85%	≤85%	Negligible	
	Ranelagh Road	11185	Northbrook Road / Ranelagh Road	1031	1233	45	60	≤85%	≤85%	Negligible	
	Taylor's Lane	21153	Taylor's Lane / Whitechurch Road	1272	1319	57	56	≤85%	≤85%	Negligible	
	Dartry Road	11359	Dartry Road / Orwell Park	1171	1496	64	75	≤85%	≤85%	Negligible	
	Orwell Park	11355	Dartry Road / Sunbury Gardens	964	1285	41	64	≤85%	≤85%	Negligible	
	11278	Orwell Park / Orwell Road	1360	1493	78	85	≤85%	≤85%	Negligible		

Figure 2.4.18 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 16

Figure 2.4.18 shows that the Proposed Scheme would result in negligible impact on junctions along Palmerston Park and Rathmines Road Upper as a result of the Proposed Scheme. One junction, Palmerston Park/Sunbury Gardens would see a low impact.

In summary, the assessment presented in the Chapter 6 in Volume 2 of the EIAR indicates that while there is some redistribution of traffic as a result of the Proposed Scheme, the traffic impact is considered to be negligible.

It is noted that a number of submissions raise concerns in relation to impact on access to St. Lukes Hospital. As noted above, it is not expected that there will be any increase in traffic along Highfield Road and as a result access to the hospital will not be affected.

b. Noise Increases on Highfield Road / Rathmines Road and surrounding Roads

Chapter 9 in Volume 2 of the EIAR has considered the potential noise and vibration impacts associated with the Construction and Operational Phases of the Proposed Scheme. During the Operational Phase, the potential noise and vibration impacts associated with altered traffic flows along the Proposed Scheme, realigned traffic lanes and displaced traffic flows are assessed.

Section 9.4.4.1.1.5 of the EIAR presents the results of the assessment as summarised below.

Along the Proposed Scheme, a Direct, Positive, Imperceptible to Slight, Short to Medium term impact to Direct, Negative, Slight to Moderate, Short to Medium impact is calculated (Reference to Table 9.17). This is as a result of reduction in overall traffic volumes through the incorporation of bus priority signals and junctions, restricted turning movements for private vehicles and the incorporation of dedicated bus lanes, cycle lanes and footpaths. The largest increases in traffic noise level are 1 dB along the Proposed Scheme.

Along the majority of roads off the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to be indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.

There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB. All roads with potential initial significant impacts are located off the Proposed Scheme and are indirectly impacted by redistributed traffic during daytime periods.

Further analysis of these roads was undertaken which involved the following:

- *For each identified road above the potential initial significance threshold, the location or presence of noise sensitive buildings was identified and distance from the road confirmed;*
- *The corrected traffic noise level at the closest NSL façade was calculated; and*

- The overall significance rating was determined taking account of the change in noise level during the short-term period and the noise level range, taking account of any distance corrections.

The specific operational noise impacts during the daytime period for these roads are summarised in Table 9.39.

Table 9.39: Summary of Potential Daytime Operational Phase Impacts – Opening Year

Road	Increase above Do Minimum Scenario, dB	DMRB Short term magnitude of Impact	Calculated Road Traffic Noise at Closest NSL, dB L _{Aeq,16hr}	Noise Level Category	Overall Significance Rating	Potential Impact
Grantham Street	+4	Moderate	59	Low - Medium	Slight - Moderate	Indirect, Negative, Slight - Moderate, Short-medium term
Orwell Road	+3	Moderate	53	Negligible - Low	Not Significant - Slight	Indirect, Negative, Not Significant - Slight, Short-medium term
Palmerstown Park	+4	Moderate	58	Low - Medium	Slight - Moderate	Indirect, Negative, Slight - Moderate, Short-medium term
Grove Park	+4	Moderate	59	Low - Medium	Slight - Moderate	Indirect, Negative, Slight - Moderate, Short-medium term
Palmerstown Road	+5	Moderate	57	Low - Medium	Slight - Moderate	Indirect, Negative, Slight - Moderate, Short-medium term
Castlewood Park	+6	Major	56	Low - Medium	Moderate	Indirect, Negative, Moderate, Short-medium term

In the year of opening, 2028, along Orwell Road, the short-term change in traffic noise is defined as moderate with a traffic noise level calculated at the closest NSLs along this road categorised as negligible to low. The overall impact is determined to be indirect, negative, not significant to slight and short to medium-term.

Along Grantham Street, Palmerstown Park, Grove Park and Palmerstown Road, the short-term change in traffic noise is defined as moderate with a traffic noise level calculated at the closest NSLs along these roads categorised as low to medium. The overall impact is determined to be indirect, negative, slight to moderate and short to medium-term.

Along Castlewood Park, the short-term change in traffic noise is defined as major with a traffic noise level calculated at the closest NSLs along this road categorised as low to medium. The overall impact is determined to be indirect, negative, moderate and short to medium-term.

The traffic noise levels of 53 to 59 dB LAeq, 16hr at the closest NSLs along the roads discussed in Table 9.39 are typical of the semi-urban to urban environments in which they are located, and are also in line with road traffic noise levels in the surrounding environment, as discussed in Section 9.3. The operational noise levels will be below and up to 4 dB above the desirable low noise threshold values set within the Dublin Agglomeration NAP 2018 – 2023 (DCC; FCC; SDCC; DL RCC 2018) and are significantly below the Undesirable High noise threshold.

For all other roads off the Proposed Scheme, impacts are determined to be indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term.

In addition to the above, section 9.4.4.1.1.6 comments on the future electric vehicle fleet and the impact this would have on overall noise levels.

For the roads assessed in Table 9.39 and Table 9.40, the majority of the fleet type is comprised of cars and light goods vehicles. Given that the same power type (ICE) has been assumed for both the Do Minimum and Do Something scenarios, the relative change in traffic noise remains the same for these roads, irrespective of the vehicle power.

The range of traffic noise levels calculated along these roads have the potential to be lower during the future year scenarios as a result of the conversion from ICE to EVs and HEVs, particularly along residential roads with speeds lower than 30km/hr. In addition, an overall reduction in engine noise will occur at junctions and roundabouts. The calculated traffic noise level for these roads is therefore considered a robust analysis and to be a worst case.

Along the Proposed Scheme, the fleet type is a mixture of buses, cars, LGVs with a portion of HGVs. The change in noise levels is determined to be positive to negative and slight along the Proposed Scheme for both Opening Year (2028) and the Design Year (2043) due to reduced overall traffic volumes. Given the same fleet type (ICE) has been assumed for both the Do Minimum and Do Something scenarios, the relative change in traffic noise remains the same for these roads irrespective of the vehicle power type.

It is likely that a further reduction in overall noise level will occur along the Proposed Scheme due to the transition towards a full EV and HEV bus fleet. This reduction will occur irrespective of the Proposed Scheme. An overall reduction in engine noise from buses will occur at junctions, roundabouts and bus stops. The calculated traffic noise level assuming ICEs for all fleet is therefore considered a robust analysis and to be a worst case. The overall noise impact remains Positive, Imperceptible to Slight, Long-Term impact to Direct, Negative, Slight, and Long-Term.

d. Reduced footpath widths on Rathgar Road

Section 4.5.3.1 of the EIAR sets out the Proposed Scheme along Rathgar Road

Along Rathgar Road it is proposed to provide bus lanes and 1.5m wide cycle tracks in each direction and a oneway inbound general traffic lane only. Local access for residents on Rathgar Road and adjoining streets will be maintained through the surrounding road network via Rathgar Avenue or Rathmines Road Upper including Frankfort Avenue, Leicester Avenue, Garville Avenue, Garville Road and Highfield Road.

In order to provide the Proposed Scheme cross-section within the existing road boundary, it is necessary to reduce the existing footpath widths slightly at various locations along Rathgar Road. These width reductions have been proposed in line with the BusConnects Preliminary Design Guidance Booklet (PDGB) presented in Appendix A4.1 of the EIAR. Sections 5.6 of the PDGB states the following:

2.0m is the desirable minimum width for a pedestrian footpath. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footway width for road sections as 1.8m based on the width required for two wheelchairs to pass each other (see Figure 10). At specific pinch points, Building for Everyone: A Universal Design Approach, defines acceptable minimum footpath widths as being 1.2m wide

It is acknowledged in section 4.5.3.1 that some sections of footpath along Rathgar Road have been reduced from published guidance at a number of constrained locations along the Proposed Scheme. These are detailed in Table 4.14 with relevant extracts presented below.

Location	Design Element	DMJRS/ NCM	Type	Design	Justification
					the provision of bus lane in both directions and the constraint nature of this section of Rathgar Road. Providing a standard width would require land acquisition of adjacent properties.
Ch. A2700 -A2775	Footway (Outbound)	2m	Relaxation	1.8-1.9m	It is proposed to reduce approximately 75m of footpath width at this location to provide a bus lane and cycle tracks in both directions and reduce impact on adjacent properties. This would reduce the footpath width to a minimum of 1.8m.
Ch. A2700-2725	Footway (Inbound)	2m	Relaxation	1.8-1.9m	It is proposed to reduce approximately 25m of footpath width at this location to provide a bus lane and cycle tracks in both directions and reduce impact on adjacent properties. This would reduce the footpath width to a minimum of 1.8m.
Ch. A2840 -A2860	Footway (Outbound)	2m	Departure	1.8-1.9m	It is proposed to reduce approximately 20m of footpath width at this location to provide a bus lane and cycle tracks in both directions and reduce impact on adjacent properties. This would reduce the footpath width to a minimum of 1.8m.
Ch. A2940 -A3125	Footway (Outbound)	2m	Departure/ Relaxation	1.5-1.95m	It is proposed to reduce approximately 185m of footpath width at this location to provide a bus lane and cycle tracks in both directions and reduce impact on adjacent properties. This would

Location	Design Element	DMURS/ NCM	Type	Design	Justification
					reduce the footpath width to a minimum of 1.5m.
Ch. A3520 -A3625	Footway (Outbound)	2m	Departure/ Relaxation	1.5-1.95m	It is proposed to reduce approximately 130m of footpath width at this location to provide a bus lane and cycle tracks in both directions and reduce impact on adjacent properties. This would reduce the footpath width to a minimum of 1.5m.
Ch. A3350-A3625	Footway	2m	Relaxation	1,8-1.95m	It is proposed to reduce approximately 275m of footpath width to provide a bus lane and cycle track in both directions. Narrowing of the footpath results in minimising impact on adjacent properties.
Ch. A2560-A2575	Footway (Inbound)	2m	Relaxation	1.8-1.95m	Approximately 15m of footpath width is retained.
Ch. H30 – H60	Cycle Track (Outbound)	2m	Departure	1.3m	Approximately 30m of narrowed cycle track. Providing a standard width would require narrowing the existing footpath at this location.

Figure 2.4.19 Extracts from EIAR Chapter 4: Table 4.14

Chapter 6 of the EIAR presents an assessment of pedestrian impacts of the Proposed Scheme. This is summarised in Table 6.32

Table 6.32: Section 3 – Significance of Effects for Pedestrian Impact during Operational Phase

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R114 Terenure Road East / Heathfield Road / Greenmount Road priority junction	A2050	D	B	Medium	Low	Positive Moderate
R114 Terenure Road East / Ferrard Road priority junction	A2150	D	B	Medium	Low	Positive Moderate
R114 Terenure Road East / Brighton Road priority junction	A2250	C	A	Medium	Low	Positive Moderate
R114 Terenure Road East / Rathgar Park priority junction	A2450	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Orwell Road / R114 Terenure Road East / Rathgar Avenue signalised junction	A2500	B	A	Low	Moderate	Positive Moderate
R114 Rathgar Road / Highfield Road priority junction	A2550	F	A	High	Medium	Positive Very Significant
R114 Rathgar Road / Wesley Road priority junction	A2725	D	A	Medium	Low	Positive Moderate
R114 Rathgar Road / Winton Avenue priority junction	A2775	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Auburn Villas priority junction	A2825	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Garville Mews priority junction	A2875	D	B	Medium	Low	Positive Moderate
R114 Rathgar Avenue / Belleville Avenue priority junction	A2950	C	B	Low	Low	Positive Slight
R114 Rathgar Avenue / Garville Avenue priority junction	A2975	D	B	Medium	Low	Positive Moderate
R114 Rathgar Avenue / Garville Road priority junction	A2975	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Frankfort Avenue / Leicester Avenue signalised junction	A3150	C	A	Medium	Low	Positive Moderate
R114 Rathgar Road / Grosvenor Road priority junction	A3200	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Spire View Lane priority junction	A3550	D	B	Medium	Medium	Positive Significant

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R114 Rathgar Road / Rathgar Place junction	A3375	D	B	Medium	Low	Positive Moderate
R114 Rathgar Road / Rathmines Park priority junction	A3500	C	B	Low	Low	Positive Slight
R114 Rathgar Road / Grosvenor Road / Charleville Road signalised junction	A3650	F	A	High	Medium	Positive Very Significant
R137 Terenure Road North / Yewlands Terrace priority junction	H050	C	B	Low	Low	Positive Slight
R137 Terenure Road North / Elm Park Terrace priority junction	H150	C	B	Low	High	Positive Moderate
R137 Terenure Road North / Rathmore Villas priority junction	H175	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / Eaton Road priority junction	H225	D	B	Medium	High	Positive Very Significant

Figure 2.4.20 Extracts from EIAR Chapter 4: Table 6.32

Table 6.32 of the EIAR shows, the Proposed Scheme along Rathgar Road will result in positive impacts on pedestrian infrastructure along Rathgar Road.

2.4.3.3 Removal of parking/loading in Rathgar Village

Summary of Issue Raised

A number of submissions raised concerns about the loss of car parking and loading bays within Rathgar Village and the impact this would have on businesses in the village.

Response to Issue Raised

As noted in section 6.4.6.1.1.4 of Chapter 6 of Volume 2 of the EIAR, the potential impacts of the Proposed Scheme on parking and loading provision have been assessed through a comparison of the availability of spaces or lengths of bay in the Do Minimum and Do Something scenarios. The assessment considers the impact of any changes on the general availability of parking and loading in the vicinity of the Proposed Scheme. This qualitative assessment has also taken into account nearby parking, which is defined as alternative parking locations along side roads within 200 – 250m of the Proposed Scheme.

As noted in section 6.4.6.1.6.4 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR:

*The removal of three pay and display and one loading bay space (three vehicles) on Rathgar Road, at Highfield Road. There are a large number of on-street spaces in the vicinity, this is considered to have a **Negligible and Long-term impact.***

The contents of Table 6.36 present a summary of the proposed changes to parking along Section 1 of the Proposed Scheme.

Table 6.36: Section 3 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Number of Parking Spaces		
		Do Minimum	Do Something	Change
R137 Terenure Road East (Northern Side);	Pay & display: commercial	6	6	0
	Disabled Bay	1	1	0
Terenure Road North between Terenure Place and Yewland's Terrace	Loading Bay	1 loading bay (2 spaces)	1 loading bay (2 spaces)	0
	Pay & display: commercial	2	2	0
Terenure Road North between Yewland's Terrace and Rathmore Villas	Pay & display: commercial	9	9	0
	Loading Bay	1 loading bay (2 spaces)	0	-1 loading bay (-2 spaces)
Terenure Road North between West Hampton Place and Ashdale Road	Permit Parking Pay & display	6	2	-4
Harold's Cross Road between Ashdale Road and Mount Tallant	Permit Parking Pay & display	15	0	-15
Harold's Cross Road between Kenilworth Lane West and Leinster Road	Pay & display	8	8	0
Terenure Road North between Eagle Hill Avenue and Whitton Road	Loading Bays	1 loading bay (2 spaces)	1 loading bay (2 spaces)	0
	Pay & display: commercial	2	2	0
Between Rathmore Villas and Eagle Hill Ave	Taxi Rank	4	4	0
	Pay & display	5	0	-5
Rathgar Road (between Rathgar Avenue and Rathmines Road Upper)	Permit Parking Pay & display	6	3	-3
	Loading Bays	2 loading bays (6 spaces)	1 loading bay (3 spaces)	-1 loading bay (-3 spaces)
Total		76	44	-32

As shown in Table 6.36, there are approximately 76 current parking spaces affected within the area of the Section 1 of the Proposed Scheme. Under the proposals, 32 parking spaces will be lost, mainly commercial parking spaces. This change is considered to have a **Negligible and Long-term** effect due to the presence of a large number of similar types of spaces within proximity to the affected locations. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.

Commercial Accessibility

Section 10.4.4.2.2 of Chapter 10 Population of Volume 2 of the EIAR notes:

Commercial accessibility relates to the ability of users and employees to access commercial businesses. The nature of the proposed works means accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

Chapter 6 (Traffic and Transport) assessed that people movement would significantly increase along the Proposed Scheme. It is therefore expected that all businesses along the Proposed Scheme will, to some extent, benefit from the increase in passing trade. Commercial businesses located along the Proposed Scheme are listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

In terms of the impact on commercial accessibility in Rathgar, the assessment is summarised in Table 10.15 and notes a Positive, Significant and Long-Term impact on pedestrians, a Positive, Moderate to Significant and Long-Term on cyclists, a Positive, Moderate to Very Significant and Long-Term on Bus Users and a Positive, Moderate and Long-Term on private vehicles.

Further extracts from section 10.4.4.2.2.2. of Chapter 10 Population of Volume 2 of the EIAR states:

Private Vehicles

Chapter 6 (Traffic and Transport) identified a Positive, Moderate and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from the redistribution of traffic in the surrounding road network.

Chapter 6 (Traffic and Transport) did not identify any localised capacity impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.

The impact on private vehicles passing through Terenure and Rathmines community area is considered Negative, Not Significant to Slight and Long-Term, this is due to the proposed introduction of the bus gates at Fergus Road on Templeogue Road and Lissenfield on Rathmines Road. The bus gates on are not expected to have a significant impact on private vehicles accessing commercial businesses along these stretches of roads due to the lack of on-street parking provision, however they will impact accessibility in terms of lengthened and re-routed journeys.

The impact on access to commercial businesses along the Proposed Scheme for private vehicles is considered to be Positive, Moderate and Long-Term. The community areas that are expected to experience this impact this are Willington, Templeogue, Rathfarnham, Terenure, Rathgar, Harolds Cross, Rathmines, Harrington Street, Whitefriar Street and Meath Street and Merchants Quay.

The impact on access to commercial businesses in the surrounding road network, a result of redistributed traffic, is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access to commercial businesses during the Operational Phase of the Proposed Scheme are those situated away from the Proposed Scheme, namely Knocklyon, Firhouse, Tallaght Tymon, Ballyroan, Churchtown and Francis Street.

A parking assessment has been undertaken in Chapter 6 (Traffic & Transport). No Significant impacts on parking were identified along the Proposed Scheme.

This should be considered in conjunction with the positive impacts to pedestrians, cyclists and bus users from the Proposed Scheme which will facilitate greater capacity along the corridor for users of sustainable modes of transport to access the commercial properties. Furthermore, an overall assessment of 'The Economic Impact of the Core Bus Corridors' is included in Appendix A10.2 in Volume 4 of the EIAR. The assessment indicates that evidence from case studies suggests that, in some cases, businesses overestimate the number of people arriving by car whilst the proposed enhancements to the walking, cycling and bus infrastructure along the route will increase use of sustainable transport and may positively impact on footfall to the business.

There is strong international evidence to suggest that the proposed improvements will lead to further increases in the use of sustainable transport. This should, in turn, more than compensates for reductions in visits by car users. Whilst spend per visitor may fall slightly, the overall spend rises due to the increased overall footfall. This effect should occur as soon as the new proposed routes open with shoppers choosing to make even more use of sustainable transport decisions. Whilst there is limited evidence of the impact during the construction work, none of the evidence suggested an increase in business insolvency or a departure of businesses from the area during construction works.

2.4.3.4 Removal of parking/loading in Terenure Village

Summary of Issue Raised

A number of submissions raised concerns about the loss of car parking and loading bays within Terenure Village and the impact this would have on businesses in the village.

Response to Issues Raised

As noted in section 6.4.6.1.1.4 of Chapter 6 of Volume 2 of the EIAR, the potential impacts of the Proposed Scheme on parking and loading provision have been assessed through a comparison of the availability of spaces or lengths of bay in the Do Minimum and Do Something scenarios. The assessment considers the impact of any changes on the general availability of parking and loading in the vicinity of the Proposed Scheme. This qualitative assessment has also taken into account nearby parking, which is defined as alternative parking locations along side roads within 200 – 250m of the Proposed Scheme.

The impact on parking in Terenure Village is covered in two scheme sections being Section 2 (R821 Nutgrove Avenue to R137 Terenure Road North) and Section 3 (R137 Terenure Road North to Charleville Road).

The impact on parking in Section 2 is described in Section 6.4.6.1.3.4 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR:

The removal of seven pay and display and permit spaces out of 14 on the R114 Rathfarnham Road between Cormac Terrace and Terenure Road East to provide a cycle lane for northbound traffic.

Table 6.31 presents a summary of the proposed on-street changes along Rathfarnham Section 2 of the Proposed Scheme. In addition to the above there will be changes to the car park at Grange Road adjacent to the R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction. Four off street parking spaces including two disabled bays and a set down area will be provided.

Table 6.31: Section 2 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Do Minimum	Do Something	Change
Grange Road/ Rathfarnham Road (between Grange Road and Dodder Park Road)	Permit Parking Pay & display: residential	7	7	0
R114 Rathfarnham Road: Between Cormac Terrace and R137 Terenure Road East	Permit Parking Pay & display: commercial	14	7	-7
	Disabled Bay	1	1	0
Total		22	15	-7

*As shown in Table 6.31 there are approximately 22 current on-street parking spaces affected within the area of the Section 2 of the Proposed Scheme. Under the proposals, seven parking spaces will be lost, all commercial spaces. This change is considered to have a **Negligible and Long-term effect**, due to the low numbers of spaces lost and the presence of a large number of similar types of spaces on side roads along Section 2. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.*

The impact on parking in Section 3 is described in Section 6.4.6.1.4.4 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR with the section relevant to Terenure Village summarised as follows:

*There are five pay and display parking spaces and four taxi rank spaces on Terenure Road North between Rathmore Villas and Eagle Hill Avenue. It is proposed that all five of the pay and display parking spaces are removed due to the presence of a bus stop and cycle lane. Due to the availability of parking on various side streets in the vicinity, this is considered to have a **Negligible and Long-term impact**.*

Table 6.36: Section 3 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Number of Parking Spaces		
		Do Minimum	Do Something	Change
R137 Terenure Road East (Northern Side);	Pay & display: commercial	6	6	0
	Disabled Bay	1	1	0
Terenure Road North between Terenure Place and Yewland's Terrace	Loading Bay	1 loading bay (2 spaces)	1 loading bay (2 spaces)	0
	Pay & display: commercial	2	2	0
Terenure Road North between Yewland's Terrace and Rathmore Villas	Pay & display: commercial	9	9	0
	Loading Bay	1 loading bay (2 spaces)	0	-1 loading bay (-2 spaces)
Terenure Road North between West Hampton Place and Ashdale Road	Permit Parking Pay & display	6	2	-4
Harold's Cross Road between Ashdale Road and Mount Tallant	Permit Parking Pay & display	15	0	-15
Harold's Cross Road between Kenilworth Lane West and Leinster Road	Pay & display	8	8	0
Terenure Road North between Eagle Hill Avenue and Whitton Road	Loading Bays	1 loading bay (2 spaces)	1 loading bay (2 spaces)	0
	Pay & display: commercial	2	2	0
Between Rathmore Villas and Eagle Hill Ave	Taxi Rank	4	4	0
	Pay & display	5	0	-5
Rathgar Road (between Rathgar Avenue and Rathmines Road Upper)	Permit Parking Pay & display	6	3	-3
	Loading Bays	2 loading bays (6 spaces)	1 loading bay (3 spaces)	-1 loading bay (-3 spaces)
Total		76	44	-32

As shown in Table 6.36, there are approximately 76 current parking spaces affected within the area of the Section 1 of the Proposed Scheme. Under the proposals, 32 parking spaces will be lost, mainly commercial parking spaces. This change is considered to have a **Negligible and Long-term** effect due to the presence of a large number of similar types of spaces within proximity to the affected locations. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.

Commercial Accessibility

Section 10.4.4.2.2 of Chapter 10 Population of Volume 2 of the EIAR notes:

Commercial accessibility relates to the ability of users and employees to access commercial businesses. The nature of the proposed works means accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

Chapter 6 (Traffic and Transport) assessed that people movement would significantly increase along the Proposed Scheme. It is therefore expected that all businesses along the Proposed Scheme will, to some extent, benefit from the increase in passing trade. Commercial businesses located along the Proposed Scheme are listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

In terms of the impact on commercial accessibility in Terenure, the assessment is summarised in Table 10.15 and notes a Positive, Significant and Long-Term impact on pedestrians, a Positive, Moderate to Significant and Long-Term on cyclists, a Positive, Moderate to Very Significant and Long-Term on Bus Users and a Positive, Moderate and Long-Term on private vehicles.

Further extracts from section 10.4.4.2.2.2. of Chapter 10 Population of Volume 2 of the EIAR states:

Private Vehicles

Chapter 6 (Traffic and Transport) identified a Positive, Moderate and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from the redistribution of traffic in the surrounding road network.

Chapter 6 (Traffic and Transport) did not identify any localised capacity impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.

The impact on private vehicles passing through Terenure and Rathmines community area is considered Negative, Not Significant to Slight and Long-Term, this is due to the proposed introduction of the bus gates at Fergus Road on Templeogue Road and Lissenfield on Rathmines Road. The bus gates on are not expected to have a significant impact on private vehicles accessing commercial businesses along these stretches of roads due to the lack of on-street parking provision, however they will impact accessibility in terms of lengthened and re-routed journeys.

The impact on access to commercial businesses along the Proposed Scheme for private vehicles is considered to be Positive, Moderate and Long-Term. The community areas that are expected to experience this impact this are Willington, Templeogue, Rathfarnham, Terenure, Rathgar, Harolds Cross, Rathmines, Harrington Street, Whitefriar Street and Meath Street and Merchants Quay.

The impact on access to commercial businesses in the surrounding road network, a result of redistributed traffic, is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access to commercial businesses during the Operational Phase of the Proposed Scheme are those situated away from the Proposed Scheme, namely Knocklyon, Firhouse, Tallaght Tymon, Ballyroan, Churchtown and Francis Street.

A parking assessment has been undertaken in Chapter 6 (Traffic & Transport). No Significant impacts on parking were identified along the Proposed Scheme.

This should be considered in conjunction with the positive impacts to pedestrians, cyclists and bus users from the Proposed Scheme which will facilitate greater capacity along the corridor for users of sustainable modes of transport to access the commercial properties. Furthermore, an overall assessment of 'The Economic Impact of the Core Bus Corridors' is included in Appendix A10.2 in Volume 4 of the EIAR. The assessment indicates that evidence from case studies suggests that, in some cases, businesses overestimate the number of people arriving by car whilst the proposed enhancements to the walking, cycling and bus infrastructure along the route will increase use of sustainable transport and may positively impact on footfall to the business.

There is strong international evidence to suggest that the proposed improvements will lead to further increases in the use of sustainable transport. This should, in turn, more than compensates for reductions in visits by car users. Whilst spend per visitor may fall slightly, the overall spend rises due to the increased overall footfall. This effect should occur as soon as the new proposed routes open with shoppers choosing to make even more use of sustainable transport decisions. Whilst there is limited evidence of the impact during the construction work, none of the evidence suggested an increase in business insolvency or a departure of businesses from the area during construction works..

2.4.3.5 Removal of trees on Terenure Road East

Summary of Issue Raised

A number of submissions raised concerns about the removal of trees along Terenure Road East and the impact that this would have on the streetscape. Many of these submissions also noted concern over potential for other trees in the vicinity to be impacted during the construction works.

Response to Issue Raised

Section 1.1 of Appendix A17.1 Arboricultural Impact Assessment of Volume 4 of the EIAR states:

The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained and to identify the trees that are to be removed to facilitate the Proposed Scheme. The survey was undertaken between the 10th and 13th August 2020. The survey commenced at the junction of Grange Road and Nutgrove Avenue, and at Junction 11 of the M50 and finished at Dame Street, including the Terenure Road North / Harold's Cross Road section and the of the Proposed Scheme. The below impact assessment report is based on the British standard BS 5837:2012 Trees in relation to design, demolition and construction recommendations. This standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the Proposed Scheme to identify trees that may be impacted on by the proposed development based on the proposed design.

Section 6 of Appendix A17.1 states: *This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.*

In Chapter 17 Landscape (Townscape) and Visual in Volume 2 of the EIAR, Section 17.1 confirms that the assessment has been carried out according to best practice and guidelines relating to landscape (townscape) and visual assessment, and in the context of similar large-scale infrastructural projects. In relation to the Terenure Road East, the following sections of Chapter 17 are relevant and demonstrate that a detailed and comprehensive assessment has been undertaken of the impacts associated with the Proposed Scheme.

Figure 2.4.21 and Figure 2.4.22 are extracts from the Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR which shows the proposed landscaping along Terenure Road East.

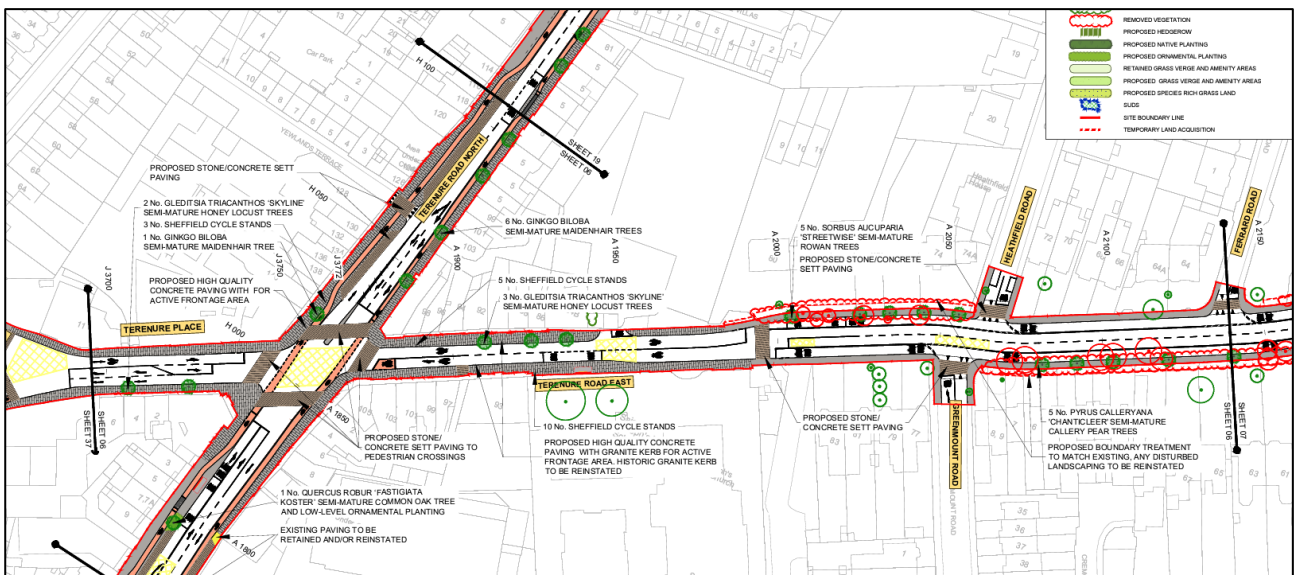


Figure 2.4.21 Extract from Landscaping General Arrangement Drawings (Sheet 6)

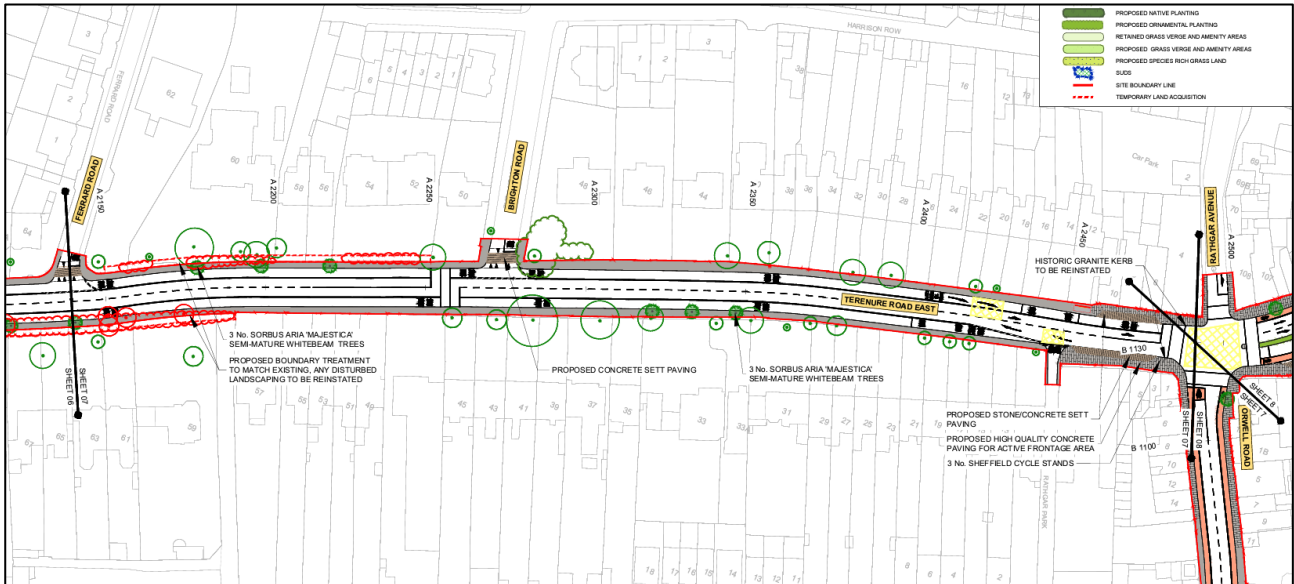


Figure 2.4.22 Extract from Landscaping General Arrangement Drawings (Sheet 7)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal.

Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme. As shown on the Landscape General Arrangement drawings in Volume 3 of the EIAR, it is noted that approximately 19 street trees are proposed along Terenure Road East between the Rathfarnham Road/Terenure Place/Terenure Road North junction and the Rathgar Road/Orwell Road junction, with the proposed removal of approximately 18 street trees, resulting in a net gain of approximately 1 tree along this section of the Proposed Scheme. Approximately 107 trees are being retained along this section.

Section 17.4.3.1 of the EIAR sets out the assessment of the impact on Townscape and Streetscape Character, with section 17.4.3.1.3 setting out the impact on Terenure Road East.

*The sensitivity of this section is **very high**. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme between Terenure and Rathgar. Although land take has been minimised through design iteration, Terenure Road East will be widened in parts which will require permanent land acquisition from sections of residential properties, some of which are protected structures, and others which have mature trees that are prominent features of the streetscape. There will be a change to the alignment of historic boundary features and loss of several prominent mature garden trees which are located on the edge of the street. There will be provision of several new street trees along Terenure Road which over time will neutralise the negative effects associated with loss of trees removed during the Construction Phase.*

There will be a substantial improvement of the junctions to each end of Terenure Road East; a new paving scheme will be provided to the junctions including high-quality concrete paving to active frontages, stone / concrete sett paving to pedestrian crossings, sett paving to formalised parking bays, as well as a narrowing of crossing distances to reduce crossing times and allow removal of detracting features such as pedestrian guardrails and traffic bollards. There will also be tree planting and some new ornamental planting areas provided.

*The Operational Phase will not alter the overall townscape character of this section but will result in both substantial localised negative and positive changes to the streetscape character. Despite the adverse impacts on trees and properties there will be a substantial localised improvement in some areas of streetscape and the effect across the overall section will become positive over the long-term as proposed planting matures. The magnitude of change in the baseline environment is **medium / high**.*

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Significant and Short-Term** becoming **Positive, Moderate and Long-Term**.*

Section 17.4.4.2 of the EIAR presents an assessment of the impact on Streetscape Elements and Visual Impacts, with 17.4.4.2.9 presenting the impact on trees.

The design of the Proposed Scheme has sought to avoid impacts on trees as far as practicable, however, some trees will have been removed during the Construction Phase. The most significant loss occurs from sections of streets and gardens of residential properties. In some locations the loss will be particularly evident such as on Terenure Road East, where trees are mature and visually prominent in the streetscape. The Operational Phase of the Proposed Scheme will not impact directly on additional trees but there will be continuing effects resulting from the loss of trees lost during construction. The effect will become positive over the long-term as proposed tree planting matures resulting in a net gain in tree canopy coverage. The sensitivity **high** and the magnitude of change is **medium**.

The townscape and visual impact of the Operational Phase on trees and plantings is assessed to be **Negative, Moderate and Short-Term** becoming **Positive, Moderate and Long-Term**.

As noted in section 17.5.2.1 Review of Photomontages of Chapter 17 Landscape and Visual of Volume 2 of the EIAR, photomontages have been prepared from key or illustrative viewpoints to give an indication of changes and potential effects resulting from the Proposed Scheme during the Operational Phase after the implementation of the scheme. The proposed views are shown with proposed planting at approximately 10 – 15 years post completion of the Construction Phase. This below text describes the Proposed Scheme changes as illustrated in the photomontage. The Photomontages are as included in Figure 17.2 in Volume 3 of the EIAR.



Figure 2.4.23 View 8 Existing: Terenure Road East at St. Joseph's Terenure



Figure 2.4.24 View 8 Photomontage as Proposed: Terenure Road East at St. Joseph's Terenure

Figure 2.4.24 shows the proposed view from Terenure Road East at St. Joseph's Church looking east. Section 17.5.2.1.8 states:

The primary change to the view is the widening of the road to the north, with land take from the residential properties, setting back of boundary alignment, like-for-like reinstatement of property boundaries and the loss of several trees. New street trees are provided within the footpath at similar location and size to those lost. The bus stop has been moved slightly along the road, and a new pedestrian crossing has been provided across the street in the foreground and surfaced with block paving. A small portion of the proposed paving scheme to Terenure centre is visible to the footpath in the bottom right of the view. There is a neutral change to the visual amenity of the view.



Figure 2.4.25 View 9 Existing: Terenure Road East at Healthfield Road



Figure 2.4.26 View 9 Photomontage as Proposed: Terenure Road East at Healthfield Road

Figure 2.4.26 shows the proposed view from Terenure Road East at Healthfield Road. Section 17.5.2.1.9 states:

The primary change to the view is the widening of the road to the south, with land take from the residential properties, setting back of boundary alignment, like-for-like reinstatement of property boundaries and the loss of several large mature trees. New street trees are provided at similar location to those lost but there is an overall loss of tree canopy volume in the view. A raised pedestrian crossing surfaced with sett paving is provided to the junction with Healthfield Road. There is a notable reduction to the visual amenity of the view, however, this will be negated through growth of the street trees over time.



Figure 2.4.27 View 10 Existing: Road East at Ferrard Road looking east



Figure 2.4.28 View 10 Photomontage as Proposed: Terenure Road East at Ferrard Road looking east

Figure 2.4.28 shows the proposed view from Terenure Road East at Ferrard Road. Section 17.5.2.1.10 states:

The primary change is the widening of the road corridor, land take from residential properties on the far (south) side of the road, with setting back and reinstatement of boundaries and removal of the large mature beech tree and other trees in the adjacent garden. There is a notable reduction in visual amenity of the view.

In relation to submissions which claimed that further trees would be impacted as a result of construction works, Section 17.5.1 in Chapter 17 in Volume 2 of the EIAR contains a series of mitigation and management measures to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. This includes the following:

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- *The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*
- *New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.*

- *Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*
- *Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- *Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- *The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- *All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

In terms of biodiversity, Section 12.4.2.5.1.1 acknowledges the loss of hedgerow habitat along Terenure Road East and states:

The primary consequence of habitat loss will be increased competition for resources (e.g., nesting habitat and / or prey / food source) both between and amongst breeding bird species. The magnitude of this effect will be largely defined by whether the local habitat resource has currently reached its carrying capacity or not in terms of breeding bird species. For species with larger home ranges during the breeding season, habitat loss at the scale of the Proposed Scheme is not likely to have any perceptible effects on breeding success or population dynamics. As the Proposed Scheme will be constructed within an already busy transport corridor, habitats suitable to support breeding birds are limited. Treelines and hedgerows are highly disturbed, and largely within the road median, therefore do not offer significant shelter for breeding bird species.

The habitat areas that will be lost as a result of the Proposed Scheme form a relatively small part of larger expanses of similar habitat types and mosaics in the wider locality. Parks and greenspaces form a vital resource for breeding birds within an urban setting. These areas of suitable breeding bird nesting and / or foraging habitat available in the wider locality of the Proposed Scheme (i.e., from approximately 0.3 to 2km from these existing sites located within the footprint of the Proposed Scheme) include:

- Parks and greenspaces with hedgerow, treeline and / or scrub boundaries such as Castle Golf Club, Milltown Golf Club, Bushy Park, Tymon Park, Dodder Riverbank Park, Orwell Park, Terenure College, Templeville Park, St. Mary's College RFC, Harold's Cross Park, Mount Argus Park, Eamonn Ceannt Park, Kenilworth Square, Palmerstown Park, Templeogue Synge Street GAA Club, Iveagh Gardens and St. Stephens Green;
- Woodland such as that present along the River Dodder at Bushy Park, Dodder Riverbank Park and Orwell Park;
- Wildfowl and waterbird habitat within the Upper Liffey Estuary, Lower Liffey Estuary and wider Dublin Bay area; and,
- Sections of the River Dodder both upstream and downstream of the Proposed Scheme

None of the habitat areas to be lost are unique to the locality and, either individually or collectively, are not likely to support a significant proportion, or the only population, of any given breeding bird species locally. Although a temporary decline in overall breeding bird abundance could potentially occur at a very local level (i.e, the footprint of the Proposed Scheme), this is unlikely to affect the local range of the breeding bird species present nor is it likely to affect the ability of these breeding bird populations to maintain their local populations in the long-term.

2.4.3.6 Impact on Heritage properties along Terenure Road East

Summary of Issue Raised

A number of submissions highlight that the Proposed Scheme will have impacts on properties of significant heritage and architectural significance. Submissions reference the impact on properties, and in particular the relocation of boundary walls/railings along Terenure Road East and state that the Proposed Scheme will have a significant impact on the character of the street.

Response to Issue Raised

Chapter 16 in Volume 2 of the EIAR has considered the potential architectural heritage impacts associated with the Construction and Operational Phases of the Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme (hereafter referred to as the Proposed Scheme).

During the Construction Phase, the potential architectural heritage impacts associated with the development of the Proposed Scheme have been assessed. This includes impacts on the boundary treatments of Protected Structures and other architectural heritage features including street furniture and historic paving, as a result of land take, road resurfacing and road realignments.

During the Operational Phase, the potential architectural heritage impacts associated with changes to the physical layout of the street as a result of road resurfacing and road realignments, the installation of new street furniture, changes to the urban realm and the impact on character and setting and vistas of architectural heritage features and streetscapes have been assessed.

In terms of the Construction Phase on Terenure Road East, section 16.4.3.1 Protected Structures states the following:

Land take at 74a to 80 Terenure Road East will result in the removal of the boundary treatments to 74, 76 and 78 Terenure Road East (DCC RPS 8118, 8119, 8121) Protected Structures of Medium Sensitivity. The boundary to 76 consists of a cement rendered wall with dressed granite capping. The entrance piers are similarly constructed. Railings are reproduction electric gates. The boundary to 78 is like that to 76 except that it retains its original entrance gates. Boundary treatments to 74 and 74a have been replaced with a 20th century yellow brick boundary and reproduction railings. The magnitude of Impact is High. The potential Construction Phase impact will be Direct, Negative, Significant, Temporary.

The boundary treatments to 59 to 69 Terenure Road East (odd number only) will be directly impacted by the proposed land take. 59, 61, 63, 65, 67 and 69 to 71 Terenure Road East are Protected Structures (DCC RPS 8106, 8107, 8109, 8111, 8113, 8116) of Medium Sensitivity. Features which will be affected by the proposal include the boundary treatment to 59 including the tree, boundaries to 61 and 63, boundary to 67 and 69 including the tooled granite pier, and the trees to be removed as they contribute to the vista down the road and the character of the streetscape.

The boundary to No. 65 has been rebuilt in modern red brick, and has been rendered and painted at some point in the past. The magnitude of Impact is High. The potential Construction Phase impact will be Direct, Negative, Significant, Temporary.

The boundaries to the Protected Structures at 50 to 62 Terenure Road East (DCC RPS 8097, 8099, 8101, 8103, 8105, 8108) will be impacted by the proposed land acquisition. The houses are of Medium Sensitivity. Significant features which will be affected by the proposal are as follows, the boundary to No. 50, 52, 54, 58. The boundary treatment and piers to 56 has been rebuilt and consists of a modern brick wall with concrete plinth and capping. It is a poor replacement and not in keeping with its neighbours. The boundary treatment to No. 62 is also a reconstructed boundary treatment as evident from the concrete capping, pointing, reproduction railings, and modern brick to piers. The magnitude of Impact is High. The potential Construction Phase impact will be Direct, Negative, Significant and Temporary.

Section 16.4.3.4 discusses the impact of the Proposed Scheme in terms of Designed Landscapes:

Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes, and where an adverse visual impact is anticipated during construction. Six designed landscapes of Medium sensitivity were identified in the study area where there is potential for damage during the construction phase, these include the Demesne wall (CBC1012BTH389) to Beaufort House/ Loreto House, Grange Road (NIAH 2350), Cremorne 69 Terenure Road East (DCC RPS 8116, CBC1012BTH147), Spawell House (SDCC RPS 260), Cheeverstown House (SDCC RPS 242), Templeogue House (NIAH 2313), and Terenure House (NIAH 2332). They are listed in Table: 16.10 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. The magnitude of impact is Medium. The potential Construction Phase impact is Indirect, Negative, Moderate and Temporary.

Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes or their surviving features or where an adverse visual impact is anticipated during construction. Three designed landscapes of Low sensitivity were identified in the study area where there is potential for damage during the construction phase, these include demesne walls or lodges associated with Westbourne House, 1 to 2 Westbourne Road (CBC1012BTH043) Greenmount House, 85 Terenure Road East (CBC1012BTH145) and Templeogue Lodge, 231 Templeogue Road (CBC1012BTH003) They are listed in Table: 16.10 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. The magnitude of impact is Medium. The potential Construction Phase impact is Indirect, Negative, Slight and Temporary.

Section 16.4.3.6 discusses the impact of the Proposed Scheme in terms of Other Structures:

The proposed land take on Terenure Road East will directly impact the boundary treatments to 74a (CBC1012BTH143) and 80 Terenure Road East (CBC1012BTH144) both houses are of medium sensitivity. The boundary treatments to 74 and 74a have been replaced with a 20th century yellow brick boundary and reproduction railings. The boundary wall to number 80 has been radically altered in the 20th century. The removal of these boundaries has the potential to have a negative impact. the magnitude of which is low. The potential Construction Phase impact is Direct, Negative, Slight Temporary.

The proposed land take on Terenure Road East will directly impact the boundary treatments to 60 Terenure Road East (CBC1012BTH148). Number 60 Beaumont House is a 20th century apartment block which replaced a house of the same name. The boundary treatment survives, however and is of medium sensitivity. It consists of a randomly coursed granite rubble wall with a cut granite plinth and dressed granite capping. An iron milestone plaque is located in the wall. The boundary treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries has the potential to have a negative impact. The magnitude of Impact is High. The potential Construction Phase impact is Direct, Negative, Moderate and Temporary.

Section 16.4.3.7 discusses the impact of the Proposed Scheme in terms of Street Furniture, with sections relevant to Terenure Road East quoted below:

The cast iron pillar style post box at 50 Terenure Road East (CBC1012PB007) will be directly impacted necessitating its temporary removal. The post boxes will be reinstated. There is the potential for loss or damage to the post boxes during removal, transportation, storage, and reinstatement. The magnitude of impact is High. The potential Construction Phase impact is Direct, Negative, Significant and Temporary.

Land take will directly impact on a vent pipe on Terenure Road East (CBC1012BTH146) necessitating its removal and relocation. The vent pipe is of regional importance and medium sensitivity. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The magnitude of this impact is High. The predicted Construction Phase impact is Direct, Negative, Significant and Temporary.

A Mile Stone at 69 Terenure Road East (CBC1012MS002) will be directly impacted by the proposed land take. The milestone is of regional importance and medium sensitivity. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The magnitude of this impact is High. The predicted Construction Phase impact is Direct, Negative, Significant and Temporary.

The boundaries to 50-62 Terenure Road East will be impacted by the proposed land take. Number 60 Beaumont House is a 20th century apartment block which replaced a house of the same name. An iron milestone plaque (CBC1012MS04) located in the wall of 60 Terenure Road East will be directly impacted by the proposed land take. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The magnitude of this impact is High. The predicted Construction Phase impact is Direct, Negative, Significant and Temporary.

Section 16.5.1.1 presents mitigation measures for Protected Structures:

Three locations were identified where the Proposed Scheme will directly impact on the boundaries of Protected Structures during the Construction Phase. These include the boundaries to 74, 76 and 78 Terenure Road East (DCC RPS 8118, 8119, 8121), 59 to 69 Terenure Road East (DCC RPS 8106, 8107, 8109, 8111, 8113, 8116) and 50 to 62 Terenure Road East (DCC RPS 8097, 8099, 8101, 8103, 8105, 8108). The boundaries are to be repositioned to facilitate the proposed bus and cycle lanes. The pre-mitigation Construction Phase impact will be Direct, Negative, Significant, Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced from High to Low. The predicted residual impact is Direct, Negative, Slight, Temporary.

Section 16.5.1.5 presents mitigation measures for Designed Landscapes:

Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes, and where an adverse visual impact is anticipated during construction. Six designed landscapes of Medium sensitivity were identified in the study area where there is potential for damage during the construction phase, these include the Demesne wall (CBC1012BTH389) to Beaufort House/ Loreto House, Grange Road (NIAH 2350), Cremorne 69 Terenure Road East (DCC RPS 8116, CBC1012BTH147), Spawell House (SDCC RPS 260), Cheeverstown House (SDCC RPS 242), Templeogue House (NIAH 2313), and Terenure House (NIAH 2332). They are listed Section 16.3.1.6 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary.

The proposed mitigation is the recording, protection and monitoring of demesne features such as boundaries and entrance features prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight and Temporary.

Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes or their surviving features or where an adverse visual impact is anticipated during construction. Three designed landscapes of Low sensitivity were identified in the study area where there is potential for damage during the construction phase, these include demesne walls or lodges associated with Westbourne House, 1 to 2 Westbourne Road (CBC1012BTH043) Greenmount House, 85 Terenure Road East (CBC1012BTH145) and Templeogue Lodge, 321 Templeogue Road (CBC1012BTH003) They are listed Section 16.3.1.6 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR The pre-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary. The proposed mitigation is the recording, protection and monitoring of demesne features such as boundaries and entrance features prior to, and for the duration of the Construction Phase.

Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Not Significant and Temporary.

Section 16.5.1.6 presents mitigation measures for Other Structures:

The proposed land take on Terenure Road East will directly impact the boundary treatments to 74a (CBC1012BTH143) and 80 Terenure Road East (CBC1012BTH144) both houses are of medium sensitivity. The boundary treatments to 74 and 74a have been replaced with a 20th century yellow brick boundary and reproduction railings. The boundary wall to number 80 has been radically altered in the 20th century. The removal of these boundaries would have a negative impact. The pre-mitigation Construction Phase impact will be Direct, Negative, Slight, Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which faithfully reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Not Significant and Temporary.

The proposed land take on Terenure Road East will directly impact the boundary treatments to 60 Terenure Road East (CBC1012BTH148). Number 60 Beaumont House is a 20th century apartment block which replaced a house of the same name. The boundary treatment survives, however and is of medium sensitivity. It consists of a randomly coursed granite rubble wall with a cut granite plinth and dressed granite capping. An iron milestone plaque is located in the wall. treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries would have a negative impact. The premitigation Construction Phase impact will be Direct, Negative, Moderate Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstates the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Slight and Temporary.

Section 16.5.1.7 discusses the impact of the Proposed Scheme in terms of Street Furniture, with sections relevant to Terenure Road East quoted below:

The cast iron pillar style post box at 50 Terenure Road East (CBC1012PB007) will be directly impacted by a proposed land take necessitating its temporary removal. It is envisaged that the post boxes will be reinstated. There is the potential for loss or damage to the post boxes during removal, transportation, storage, and reinstatement. The pre-mitigation Construction Phase impact is Direct, Negative, Significant and Temporary. The proposed mitigation is the recording of the post box in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and its reinstatement in a new position in close proximity (within 20m) of its existing position. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. The kerb alterations and the proposed cycle lanes will mean that the relocated post box will be set back from the traffic helping to protect it into the future. With mitigation, the magnitude of impact is reduced from High to Low. The predicted residual impact is Direct, Negative, Slight and Temporary.

Land take will directly impact on a vent pipe on Terenure Road East (CBC1012BTH146) necessitating its removal and relocation. The Vent Pipe is of Regional Importance and Medium Sensitivity. It will be temporarily removed to ensure its protection, before being reinstated within the vicinity of the existing.

There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary.

The proposed mitigation is the recording of the Vent Pipe in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the Vent Pipe. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor.

The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 in Volume 4 of the EIAR. The predicted residual Construction Phase impact is Direct, Negative, Slight and Temporary.

A Mile Stone at 69 Terenure Road East (CBC1012MS002) will be directly impacted by the proposed land take. The milestone is of regional importance and medium sensitivity. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary. The proposed mitigation is the recording of the milestone plaque in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the milestone. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 in Volume 4 of the EIAR. The predicted residual Construction Phase impact is Direct, Negative, Slight and Temporary.

The boundaries to 50-62 Terenure Road East will be impacted by the proposed land take Number 60 Beaumont House is a 20th century apartment block which replaced a house of the same name. An iron milestone plaque (CBC1012MS04) located in the wall of 60 Terenure Road East will be directly impacted by the proposed land take. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary. The proposed mitigation is the recording of the milestone in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the milestone. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 in Volume 4 of the EIAR. The predicted residual Construction Phase impact is Direct, Negative, Slight and Temporary.

Table 16.17 summarises the residual construction phase impacts which generally notes the impact to heritage features along Terenure Road east as Direct, Negative, Slight, Temporary.

2.4.3.7 Relocation of bus stops

Summary of Issue Raised

- a. Relocated bus stop outside No.12 and 14 Terenure Road East

A number of submissions raised concerns around the relocation of a bus stop from outside 34 Terenure Road East to outside 12/14 Terenure Road East. These submissions note concerns with the potential impact on safety, congestion and loading activity for businesses in the village as a result of the proposed bus stop relocation.

- b. Relocated bus stop outside No.77 - 80 Terenure Road East

A number of submissions raised concerns around the relocation of a bus stop from outside 84/85 Rathgar Road to outside 77-80 Terenure Road East. These submissions note concerns with the potential impact on safety and suggests an alternative location outside 95-96 Rathgar Road.

Response to Issue Raised

- a. Relocated bus stop outside No.12 and 14 Terenure Road East

As noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

- *The criteria that are considered when locating a bus stop are as follows;*

- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

The Bus Stop Review Report notes the following in relation to the existing bus stops on Terenure Road East at this section of the Proposed Scheme:

Bus Stop 1165

Stop to be amended? Yes - stop to be moved 70m East. Closer to Junction

Reason for decision: This location brings the stop closer to Rathgar Village thus providing better access to the village and improving potential for interchange with Route 80

The proposal to relocate bus stop 1165 aligns with the bus stop location principles namely:

- It is located closer to the Rathgar Village and the junction with Rathgar Avenue, Orwell Road and Highfield Road increasing accessibility from the large residential catchment along, and accessed off, these roads as well as providing more direct access to the village centre. It is noted that while there is a preference for a bus stop to be located on the exit side of a junction, as there is no bus lane on the exit side in this instance it is preferable to locate the stop at its proposed location;
- It is located closer to pedestrian crossings (30m) facilitating safe access to the southern side of Terenure Road East – the existing stop is c. 110m from the nearest controlled crossing point;
- It minimises distance for a passenger interchanging between the A Spine and Route 80.
- It facilitates better stop spacing with 415m between it and the prior stop, 350m between it and the subsequent bus stop – existing distance between stops is 367m (between stop 1164 and 1165) and 362m (between stop 1165 and 1166);
- The footpath width is available at proposed location is approximately 0.7m greater than at the current location.

In terms of impact on heritage, the impact of the bus shelter on Architectural Heritage is considered in section 16.4.4.1 of Chapter 16 Architectural Heritage.

Bus shelters are proposed at:

- *12 Terenure Road East (DCC RPS 8063);*
- *78 Rathgar Road (DCC RPS 7072);*
- *153 Rathgar Road (DCC RPS 7120); and*

- 46 Rathgar Road (DCC RPS 7046).

All four buildings are Protected Structures of Regional importance and of Medium sensitivity. The magnitude of impact of the Bus shelters will be low as in each case the Protected Structures are set back from the road behind existing, or in the case of 78 Rathgar Road (DCC RPS 7072) a reinstated boundary treatment, limiting the visual impact of the proposed bus shelters. The potential Operational Phase impact is Indirect, Negative, Slight, Longterm visual impact.

Vehicular access will be retained to properties adjacent the proposed bus stop, namely No. 14 Terenure Road East. While access may be intermittently prevented by a bus loading/unloading at the bus stop, these instances will be short lived. In terms of safety, the safety implications of the Proposed Scheme have been assessed by an independent auditor as part of the Road Safety Audit carried out on the Proposed Scheme and included in Appendix M of the Preliminary Design Report provided in the Supplementary Information. It is noted that no concerns were raised relating to the arrangement at the proposed bus stop or layout of the adjacent Rathgar Road/Rathgar Avenue/Orwell Road/Highfield Road junctions.

In terms of concerns around congestion at the junction, Page 37 of the Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 presents the junction assessment results at the Rathgar Road / Highfield Road / Orwell Road / Terenure Rd East junction in each peak period where it is demonstrated that the junction will operate at capacity in each peak hour. However, it is noted that the junction will be safer for pedestrians and cyclists and ensure that buses have priority through the junction.

b. Relocated bus stop outside No.77 - 80 Terenure Road East

As noted in response to item a, as part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

The Bus Stop Review Report notes the following in relation to the bus stop being relocated to outside No.77 – 80 Terenure Road East:

Bus Stop 1166

Stop to be amended? Yes - stop to be moved 50m North

Reason for decision: There is very limited space between the two garden entrances in the existing location. The proposed location lies in front of gardens with no vehicular entrances, allowing more space for the stop to be located here.

As noted above, the primary reason for the relocation of this bus stop is the available space between driveways which at only c. 5m currently is insufficient to accommodate the proposed bus stop layout. The proposed bus stop location provides c. 9.5m between driveways providing adequate space to accommodate the bus stop design.

The proposal to relocate bus stop 1165 aligns with the bus stop location principles namely that it facilitates better stop spacing with 367m between it and the prior stop, 400m between it and the subsequent bus stop – existing distance between stops is 280m (between stop 1165 and 1166) and 235m (between stop 1166 and 1167). It is noted that if stop 1165 was retained in its current location the distance would extend to 450m between stops.

It is further noted that positioning the bus stop in the suggested location outside 95-96 Rathgar Road would leave only 200m between it and the prior stop and c. 600m to the next stop just north of Grosvenor Road.

In terms of safety, the safety implications of the Proposed Scheme have been assessed by an independent auditor as part of the Road Safety Audit carried out on the Proposed Scheme and included in Appendix M of the Preliminary Design Report provided in the Supplementary Information. It is noted that no concerns were raised relating to the arrangement at the proposed bus stop.

2.4.3.8 Existing bus priority signal on Terenure Road East is adequate

Summary of Issue Raised

The submission notes that there is an existing bus priority signal in operation along Terenure Road East that combined with reduced traffic volumes in future, will continue to operate in a satisfactory manner. It is

submitted that retaining the existing situation would negate the need for land acquisition from any properties along Terenure Road East.

Response to Issue Raised

The submission notes that there is an existing bus priority signal in operation along Terenure Road East that combined with reduced traffic volumes in future, will continue to operate in a satisfactory manner. It is submitted that retaining the existing situation would negate the need for land acquisition from any properties along Terenure Road East.

Terenure Road East consists of c.615m of road between the junction with Rathfarnham Road/Terenure Road North and the junction with Rathgar Avenue/Orwell Road. Currently a general traffic lane is provided in each direction along its length. A 150m inbound bus lane is provided on approach to the Rathgar Avenue junction, with the remaining 430m shared with general traffic. A 210m outbound bus lane is provided on the exit from the Rathgar junction as far as 55 Terenure Road East. A bus priority signal is in place at this location which is used to provide further outbound bus priority along Terenure Road East over the 340m where buses share with general traffic. Advisory cycle lanes are provided on sections where no bus lane is provided. The existing arrangement is presented in Figure 2.4.29.



Figure 2.4.29 Existing Arrangement on Terenure Road East

As outlined in Section 3.3.2.2.2.1 and Section 3.4.1.1.3 of Chapter 3 of the EIAR a large number of options were considered along Terenure Road East. Given the physical constraints along the road, particularly on the western end, full physical priority was not possible.

As such it is proposed to deploy a system of Signal Controlled Bus Priority. This is defined in the BusConnects Preliminary Design Guidance Booklet provided in Appendix A4.1 of the EIAR as follows:

Bus priority traffic signals providing queue relocation should be considered in areas where physical constraints cannot be overcome, and physical bus priority cannot be provided through the delivery of a bus lane such as village centre areas where the built form is close to the carriageway edge. Bus Priority Traffic Signals allow the bus to achieve virtual priority through a section where the bus shares a lane with general traffic through the management of queues within this section and providing priority to the bus on approach.

The scenarios in which a bus priority traffic signals can operate effectively requires assessment on a case-by-case basis, however, designers should consider the following factors:

- 1. The corridor length through which the bus will share the lane with general traffic should be reasonably clear from potential disruption. A bus priority traffic signal is not likely to operate effectively over a long distance with a large number of accesses for instance, or where a major junction is contained within this area.*
- 2. The availability and appropriateness of stacking space for traffic upstream should be considered as queues will be relocated to this area.*

3. Downstream queue detection will be used to ensure a clear route for the bus through the section without a bus lane.

Giving consideration to the above criteria, as well as the interaction with upstream and downstream measures, the optimum design arrangement for a Signal Controlled Bus Priority solution was determined. It is worth noting that given the physical constraints at Terenure Cross, the reduction in length over which signal controlled priority is required to be maintained is important to the successful maintenance of journey times and reliability through this area.

This layout would provide a general traffic lane in each direction along its length. A 480m inbound bus lane would be provided on approach to the Rathgar Avenue junction, with the remaining 120m shared with general traffic. A bus priority signal is proposed on Rathfarnham Road to provide inbound priority over this section where a bus lane is not present.

A 425m outbound bus lane is provided on the exit from the Rathgar junction as far as 85 Terenure Road East. A bus priority signal is in place at this location which is used to provide further outbound bus priority along Terenure Road East over the 120m where outbound buses share with general traffic. The proposed arrangement is presented in the General Arrangement Drawings in Appendix B of the EIAR and reproduced below with notes highlighting the proposed infrastructure elements.

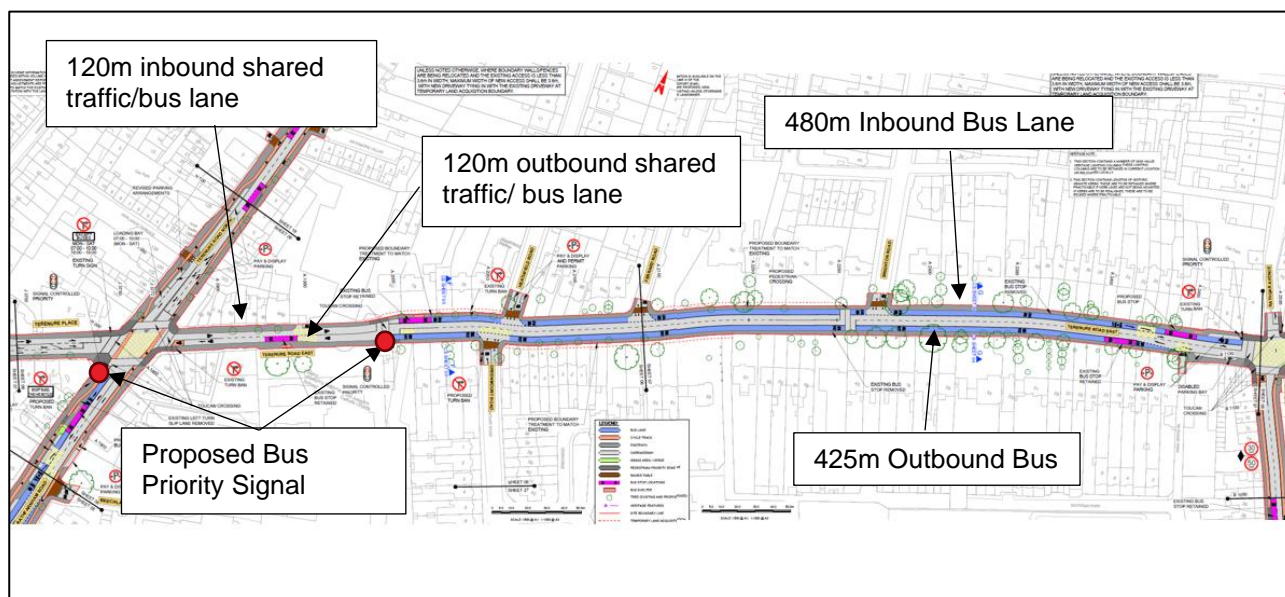


Figure 2.4.30 Proposed Scheme on Terenure Road East

Comparing the existing and Proposed Scheme arrangements, the Proposed Scheme better meets the scheme objectives for the following reasons:

- Significant increase in physical inbound priority of 330m (+220% on Terenure Road East) and an increase in physical outbound priority of 215m (+200% on Terenure Road East);
- Reduction in the distance over which signal controlled bus priority operates by 310m inbound (-350%) and 220m outbound (-280%). Combined with the increased bus lane provision, this will improve bus speeds and journey time reliability through this area;
- The increase in bus lane provision results in an increased length over which cyclists will not be required to share with general traffic, instead sharing with buses and taxis only. This proposal is complemented by a reduced speed limit of 30kph.

This provides further resilience to the cycle network in the area in combination with the proposed alternative cycle route along Harolds Cross Road and as well as the alternative east-west route via Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road, linking back to the CBC at Rathgar Village

In terms of traffic volumes, Table 6.60 and 6.64 of Chapter 6 of the EIAR present the road links that would experience a reduction of ≥ 100 Combined Flows during AM and PM peak hours respectively. These tables show that along Terenure Road East, traffic volumes would reduce to 436 PCU and 386 PCU in the AM and

PM Peak hours respectively. While this does represent a reduction in traffic volumes compared to the existing situation, this level of traffic would still provide considerable interference to the movement of buses along Terenure Road East should the existing arrangement be retained.

2.4.3.9 Impact on access to/from Rathgar Road

Summary of Issue Raised

A number of submissions raised concerns about the impact on access to Rathgar Road from the north as a result of the proposed one-way system on Rathgar Road.

Response to Issue Raised

It is acknowledged that the proposed one-way on Rathgar Road may result in an inconvenience for those seeking to access business or residential premises along Rathgar Road or the immediate vicinity when arriving from the north. However, it is noted that vehicular access will be retained via routes from other directions (i.e. from the east along Harolds Cross Road and from the west on Rathmines Road Upper). It is further noted, as set out in section 4.5.3 of Chapter 4 of the EIAR that it is proposed to reintroduce the right turn movement from Rathmines Road Upper to Highfield Road, and the right turn from Highfield Road to Rathgar Road to better facilitate access to properties along the southern end of Rathgar Road.

The following figure presents a sample of the alternative routes available from origins to the north of Rathgar Road, demonstrating that suitable alternative routes exist to provide vehicular access to these streets.



Figure 2.4.31: Alternative access routes to Rathgar Road from the north

The following figure presents a sample of the alternative routes available from Rathgar Road or adjacent it, to the south, demonstrating that suitable alternative routes exist to provide vehicular access to the south from these streets.



Figure 2.4.32: Alternative access routes from Rathgar Road to the south

2.4.3.10 Traffic impact of proposals at Terenure Cross

Summary of Issue Raised

A number of submissions notes concern around the operation of the Terenure Cross junction with the Proposed Scheme in place. In particular, the introduction of a right turn for buses/taxis from Rathfarnham Road to Terenure Road East is considered to be unsafe and it is submitted that it will create traffic congestion.

Response to Issue Raised

Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets traffic management measures which will be implemented on the route to facilitate the Proposed Scheme. An extract from this table is presented in Figure 2.4.33.

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathfarnham Road/Castleside Drive/Main Street Junction	Bus Priority Signals at Rathfarnham Road/Castleside Drive/Main Street Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Dodder Park Road Junction	Bus Priority Signals at Rathfarnham Road/Dodder Park Road Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Rathdown Park Junction	Inbound Bus Priority Signal at Rathfarnham Road/Rathdown Park	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Terenure Road East/Terenure Road West Junction	Right turn for buses from Rathfarnham Road to Terenure Road East introduced through bus priority signal	To allow for bus movements in this direction as per the A spine in the New Dublin Area Bus Network	Buses allowed to turn right from Rathfarnham Road onto Terenure Road East.
Terenure Road East/Greenmount Road Junction	No Right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
Rathgar Road/Highfield Road Junction	Inbound Bus Priority Signal	To allow for bus priority on Rathgar Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.

Figure 2.4.33: Extract from Table 4.25 of the Preliminary Design Report

As can be seen in the Junction System Design drawings included in Volume 3 of the EIAR, it is proposed that buses turning right from Rathfarnham Road would do so in its own stage to remove any potential safety issues. An extract from the staging diagrams is presented below with the relevant stage highlighted.

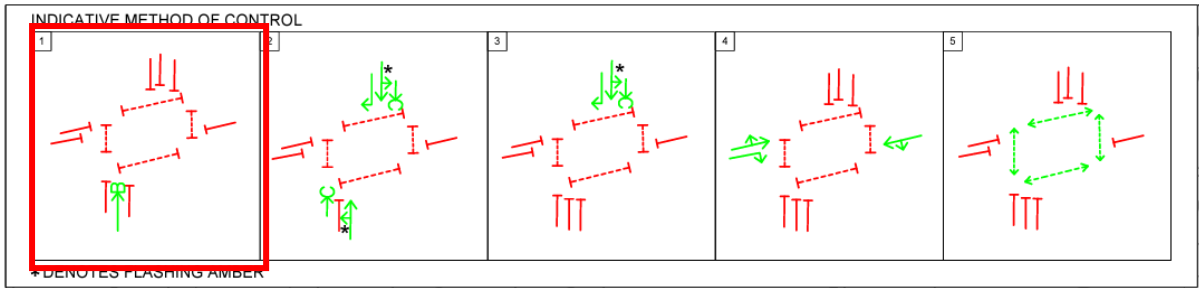


Figure 2.4.34 Extract from Junction Systems Design drawings included in EIAR Volume 3 (Sheet 8)

The Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 presents a LinSig analysis for all major junctions along the Proposed Scheme with the assessment for Terenure Cross presented on page 34. This illustrates that the junction would be operating at capacity in both the morning and evening peaks. While the junction may be congested during the peak periods, it will be safer for pedestrians and cyclists through the introduction of shorter, more direct pedestrian crossings as well as upgrading crossings to toucan crossings. The proposed arrangement will also ensure that buses have priority through the junction.

2.5 Proposed Scheme at Rathmines

2.5.1 Description of Proposed Scheme at this Location

The Proposed Scheme along this section of the corridor, is described in paragraph 4.5.4 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description:

On Rathgar Road and Rathmines Road Lower between Charleville Road and Castlewood Avenue it is proposed to provide an inbound bus lane, an inbound and outbound traffic lane and cycle tracks in each direction. Outbound bus priority will be provided through signal-controlled priority. It is proposed to upgrade the junction of Rathmines Road Upper with Rathmines Road Lower/Rathgar Road through the provision of kerb protection for cyclists. An upgraded public realm will be provided at this junction through the reallocation of road space.

Between Castlewood Avenue and Grove Road, a general traffic lane and a cycle track in each direction are proposed, with the provision of a Bus Gate between Richmond Hill and Lissenfield which will restrict general traffic movements during the hours of operation of the Bus Gate (06:00 – 20:00 - 7 days a week). This proposal also allows for some increase to footpath widths through Rathmines and the provision of 2m wide cycle tracks in each direction through the village.

It is proposed to reverse the existing one-way traffic regime on Williams Park to facilitate traffic to turn off of the Proposed Scheme main corridor at Military Road in advance of the Bus Gate and return via Williams Park. It is proposed to provide a mini roundabout outside of St Mary's College to facilitate school drop off.

It is proposed to restrict movements on Mountpleasant Street Lower, north of the junction with Richmond Hill to pedestrians and cyclists only through the introduction of planted buildouts. Due to the restricted road width at this location, a traffic light shuttle system is proposed to safely manage these traffic movements.

Figure 2.5.1 to Figure 2.5.5 present extracts from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout along Rathmines Road Lower.

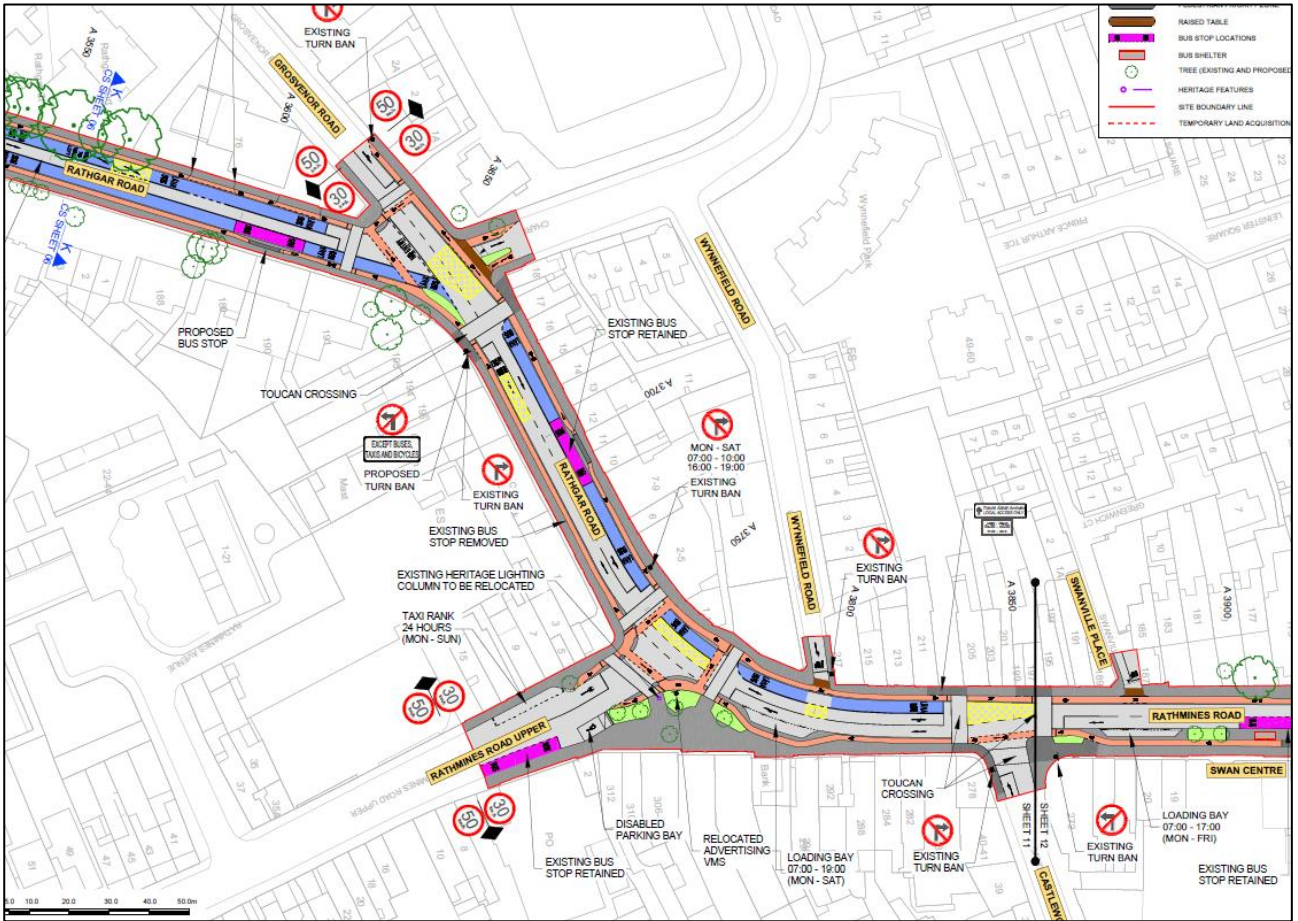


Figure 2.5.1 Extract from General Arrangement Drawings (Sheet 11)

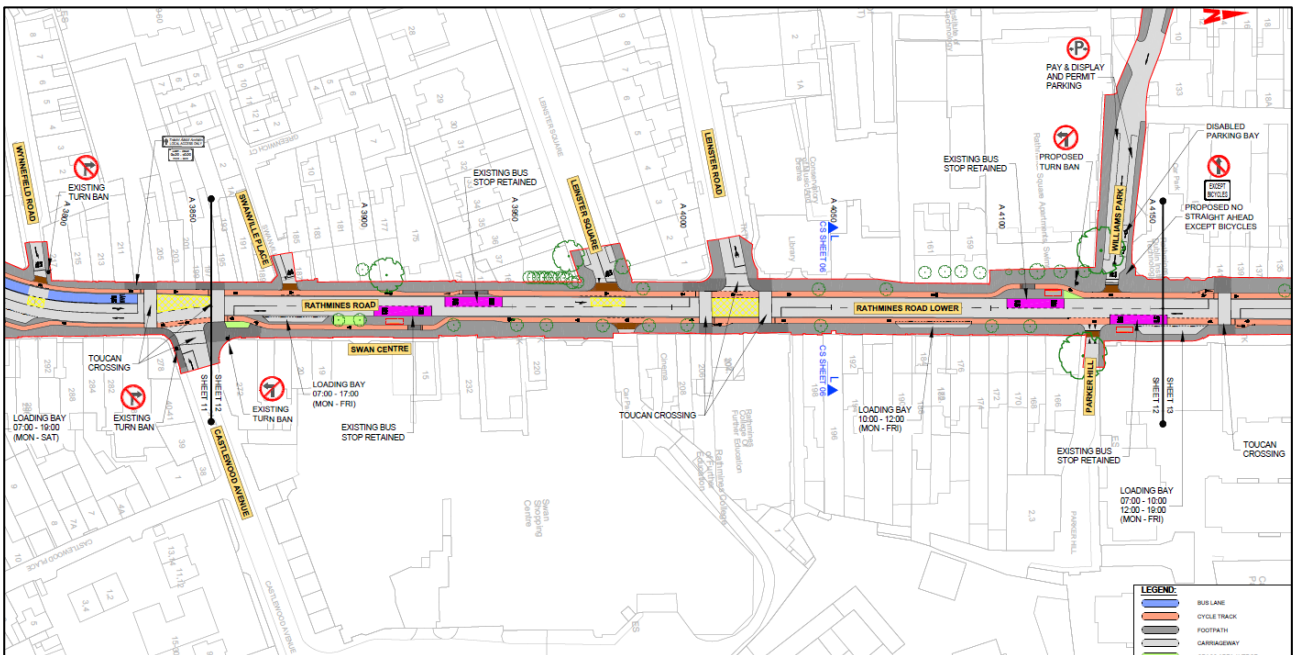


Figure 2.5.2 Extract from General Arrangement Drawings (Sheet 12)

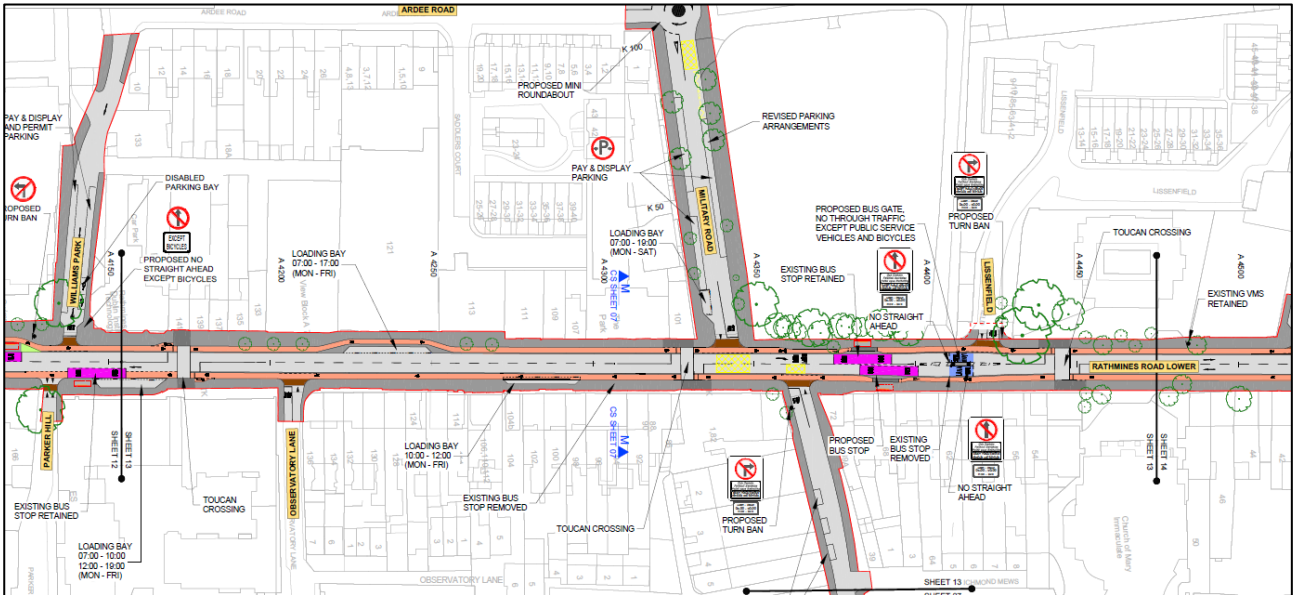


Figure 2.5.3 Extract from General Arrangement Drawings (Sheet 13)

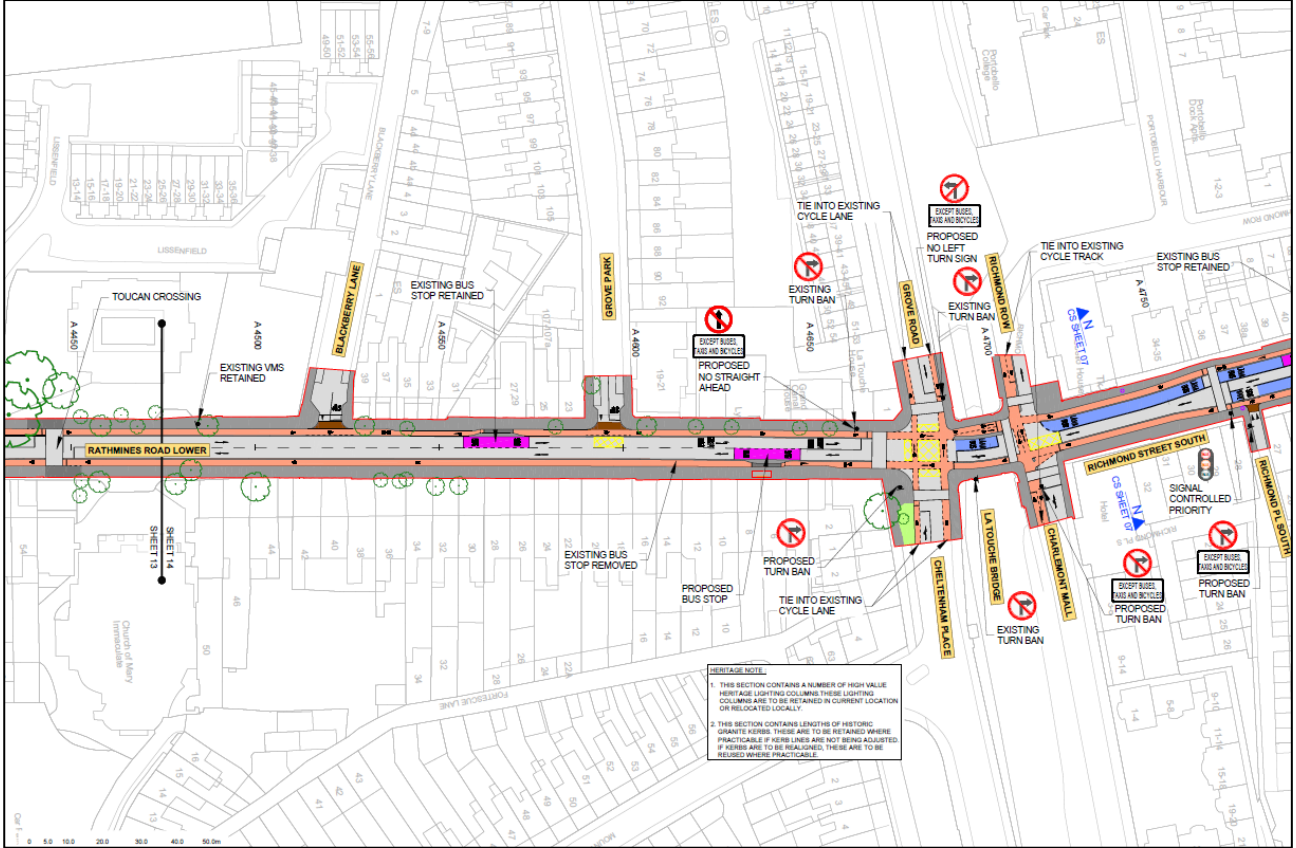


Figure 2.5.4 Extract from General Arrangement Drawings (Sheet 14)

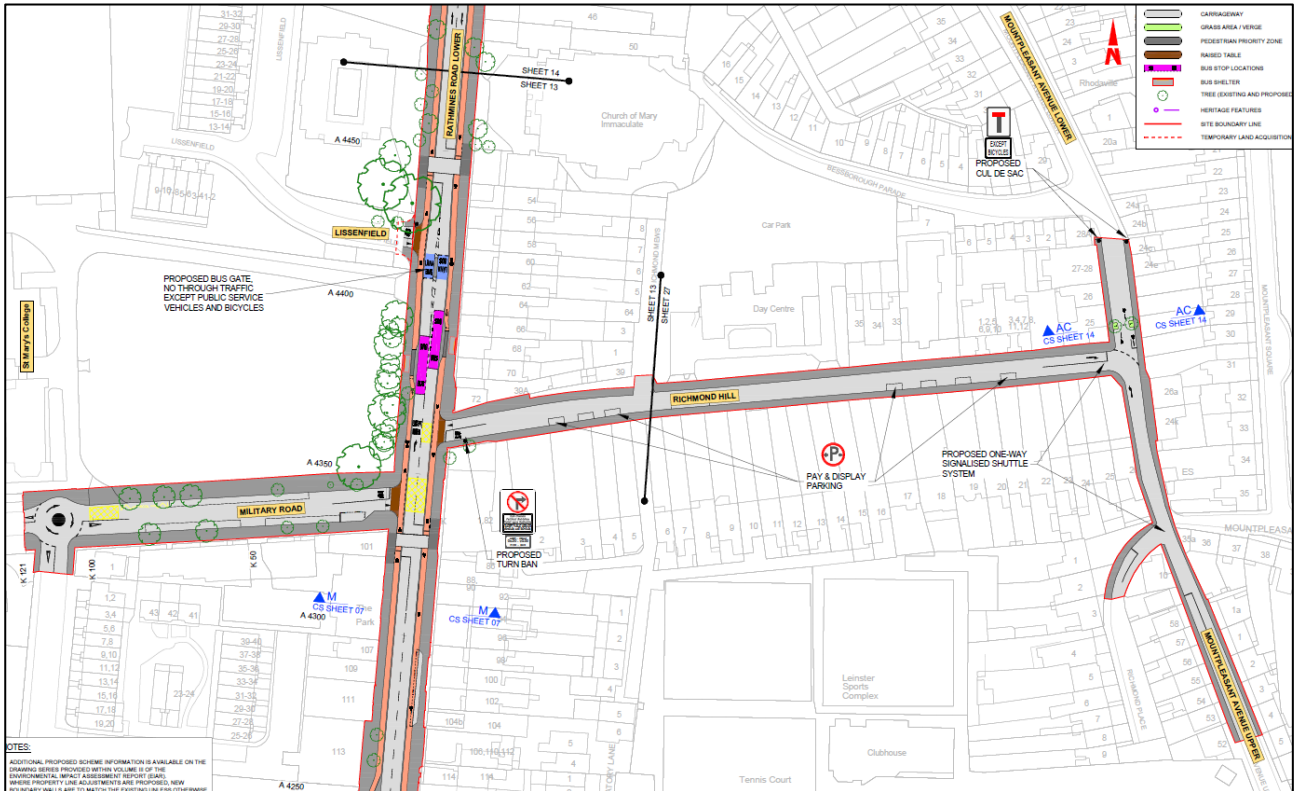


Figure 2.5.5 Extract from General Arrangement Drawings (Sheet 27)

2.5.2 Overview of Submissions Received

Table 2.5.1 below lists the 55 submissions within which issues were raised in respect of the Proposed Scheme at Rathmines Road.

Table 2.5.1 Submissions Made in Respect of Rathmines Road

No	Name	No	Name	No	Name
2	Aidan Brennan	128	Jim Byrne	202	Paul Jacobs
16	Anthony Gorman	130	Joan Kelly	204	Paula & Ray Moore
17	Antonio Autorita	131	Joe Davitt	214	Ranelagh Village Improvement Group
18	Aoidhben ó Curraoin	137	John Walsh	220	Rathmines Parish
20	Arran Timms and Others	140	Karen Quirk	227	Residents of Mountpleasant Area
29	Belgrave Residents Association	145	Kieran Comerford	228	Residents of Mountpleasant Avenue Lower
31	Bernadette Behan	152	Lissonfield Management Company CLG	234	Ria Duignan
37	Brendan Heneghan	155	Maire O Kelly	236	Rita Delahunty
45	Catherine and Brendan Garvan	156	Malachy & Jackie Farrell	239	Róisín Kennedy and Andrew Folan & Others
49	Christian Schaffalitzky	157	Marcus Purcell & Family	243	Rosemary & Roger Conan
56	Claudia Gentile	158	Margaret and Patrick Kelly	245	Rosemary Steen
57	Cliona Hickey	160	Mari O'Leary	251	Senator Michael McDowell
69	Councillor Anne Feeney	168	Mary O'Farrell	257	St. Louis High School

No	Name	No	Name	No	Name
70	Councillor Carolyn Moore	170	Maura Byrne	272	Terenure West Residents Association
83	Desmond Ryan	173	Meals on Wheels Rathmines	276	The Rathmines Initiative
103	Filipa Allen Egan	175	Mery Fenton, Olwyn Callaghan & Mary Rose Callaghan	277	The Richview Residents Association
115	Grove Park Residents Group	191	Nigel Clerkin	278	Thomas Michael Larkin
120	Ivana Bacik TD	198	Pat and Theresa McCaffrey		
122	Jacqueline Murphy	199	Patrick & Anne Fletcher		

A number of issues were raised, and these are listed below and described in Section 2.5.3 below.

Common Issues Raised

1. Impact on access to Rathmines Village as a result of the proposed bus gate
 - a. Need for the proposed bus gate and alternative options
 - b. Impact on access to / egress from other areas north of Lissenfield, Church of Mary Immaculate Refuge of Sinners, Blackberry Lane and Grove Road
 - c. Impact on businesses as a result of bus gate, including impact on deliveries.
 - d. Suggestion to reduce bus gate hours of operation to 6-9am and 4-8pm
2. Traffic increases on surrounding roads including Castlewood Avenue, Dunville Avenue, Belgrave Square North
 - a. Increase in traffic on these roads and potential for congestion
 - b. Impact on noise and air quality as a result of redistributed traffic in the Rathmines / Ranelagh area
 - c. Effect of Turn Bans on Access in Ranelagh – RT from Cullenswood to Ranelagh Rd
3. Proposed Shuttle Arrangement at Mountpleasant Avenue Upper
 - a. Need for the proposed shuttle arrangement at Mountpleasant Avenue Upper
 - b. Increase in traffic on Richmond Hill/Mountpleasant Avenue as a result of shuttle system
 - c. Inadequacy of Mountpleasant Avenue Lower to accommodate two-way traffic movement, including where traffic would be waiting at a red light at the shuttle system.
 - d. Impact of proposals on cycle facilities
 - e. Alternative measures could be introduced to improve access without impacting on Mountpleasant Avenue Upper.
4. Insufficient Improvements to Public Realm in Rathmines

2.5.3 Common Issues Raised and Responses

2.5.3.1 Impact on access to Rathmines Village as a result of the proposed bus gate

Summary of Issues Raised

A number of submissions raised concerns around the proposed bus gate in Rathmines Village which would be located between Richmond Hill and Lissenfield.

- a. Need for the proposed bus gate and alternative options

A number of submissions raised queries over the need for the bus gate and suggests alternative options including alternative locations for the bus gate (such as LaTouche Bridge) and technology solutions.

- b. Impact on access to / egress from other areas north of Lissenfield, Church of Mary Immaculate Refuge of Sinners, Church Blackberry Lane and Grove Road

Local residents raised a number of concerns around the impact of the proposed bus gate on local access routes, in particular to/from areas north of the bus gate. Of particular concern was access to and from the Church of Mary Immaculate Refuge of Sinners and the impact the bus gate would have on access to the Church from the parish.

Residents in Lissenfield, Blackberry Lane and Grove Road. Submissions noted that the bus gate would detach them from the village and impact on vehicular routes for tasks not possible by public transport, on foot or by bike.

Some submissions suggest that access through the bus gate would be permitted for residents through the use of technology, e.g., number plates registered and added to a safe list for passage through the bus gate.

- c. Impact on businesses as a result of bus gate, including impact on deliveries.

A number of submissions raised concerns about the impact the bus gate would have on businesses in Rathmines village noting that inability to drive to these businesses would reduce activity for them. It was further noted that the bus gate would restrict access to loading bays and therefore further impact on business activity.

- d. Suggestion to reduce bus gate hours of operation to 6-9am and 4-8pm

A number of submissions requested that the hours of operation of the bus gate were reduced to peak times only. Many of these submissions suggested hours of operation from 6-9am and 4-8pm.

Response to Issues Raised

- a. Need for the proposed bus gate and alternative options

Need for the bus gate

At present, bus priority along Rathmines Road is intermittent as described in section 6.3.5.3.1 of Chapter 6 Traffic and Transport in Chapter 6 of Volume 2 of the EIAR:

Bus lanes are intermittent along this route, but are present at the following locations:

- *Northbound from Swanville Place to Lennox Street, operating Monday to Saturday between 07:00 – 10:00 and 12:00 – 19:00;*
- *Southbound between the R114 Harcourt Road and Camden Place, operating Monday to Saturday between 07:00-10:00 and 12:00-19:00;*
- *Northbound between Grantham Street and Camden Row, operating Monday to Saturday between 07:00-10:00 and 12:00-19:00;*
- *Southbound between the R110 Cuffe Street and Longford Street Lower, operating Monday to Saturday between 07:00 – 19:00; and*
- *Northbound between Stephen Street Upper and the R137 Dame Street, operating Monday to Saturday between 07:00 – 19:00.*

Given the intermittent nature of the bus priority measures in each direction, as well as the absence of safe, segregated cycle facilities, it is considered that the existing situation will not deliver the aim and objectives to provide enhanced walking, cycling and bus infrastructure on this key corridor, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

As such, options were developed and evaluated using a sifting process and multi-criteria assessment (MCA), with the route and scheme along Rathmines Road identified as the preferred option to deliver the aim and objectives of the scheme. Alternative options considered could not meet the objectives to enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through provision of bus lanes and other measures to provide priority to bus movements over general traffic movements, and to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

A comprehensive options assessment process was undertaken for the scheme and is summarised in Section 3.3.2.2.2 of Chapter 3 Consideration of Reasonable Alternatives in Volume 2 of the EIAR as presented below:

Following the Stage 1 sifting process, seven viable route options for Section 2 were taken forward for assessment and further refinement:

- *Route Option CB1 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound traffic only on Rathgar Road, Outbound traffic only Rathmines Road);*
- *Route Option CB2 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound traffic only on Rathgar and Rathmines Road);*
- *Route Option CB3 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Outbound traffic only on Rathgar and Rathmines Road);*
- *Route Option CB4 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Parallel cycle route via Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks);*
- *Route Option CB5 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Inbound bus lane provided on Rathmines Road Lower from Rathmines Road Upper to Military Road junction and outbound bus lane provided from Grove Road to Military Road junction);*
- *Route Option CB6 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Outbound traffic only on Rathmines Road Lower); and*
- *Route Option CB7 - A route option via Rathfarnham Road, Terenure Road East, Rathgar Road, Rathmines Road Lower (Bus lanes via Highfield Road/Rathmines Road Upper) (Parallel cycle route).*

These routes are presented in Image 3.13.

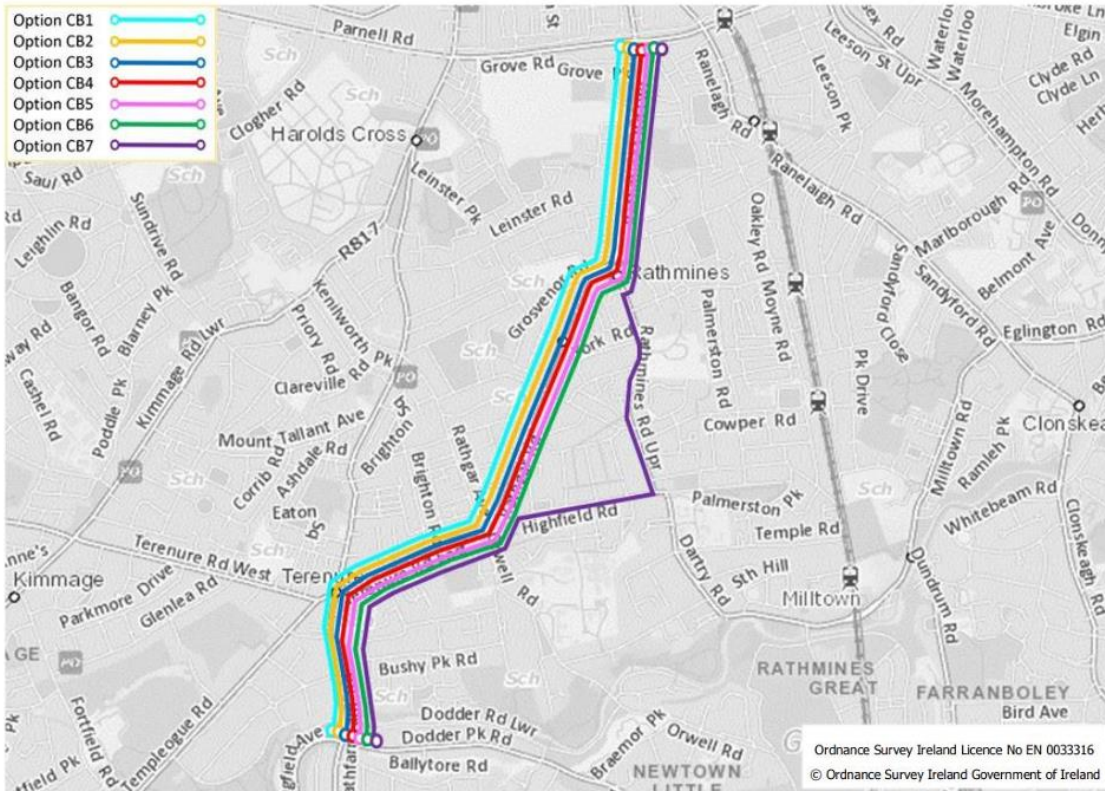


Image 3.13: Section 2 Route Options extracted from 'Rathfarnham to City Core Bus Corridor CBC Feasibility Study and Options Assessment Report'

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above. One of these subsections explored alternative cycle route options between Bushy Park Road junction and Grand Canal – as indicated on Figure 2.5.6 below which is included in Chapter 3 of the EIAR as Image 3.15.

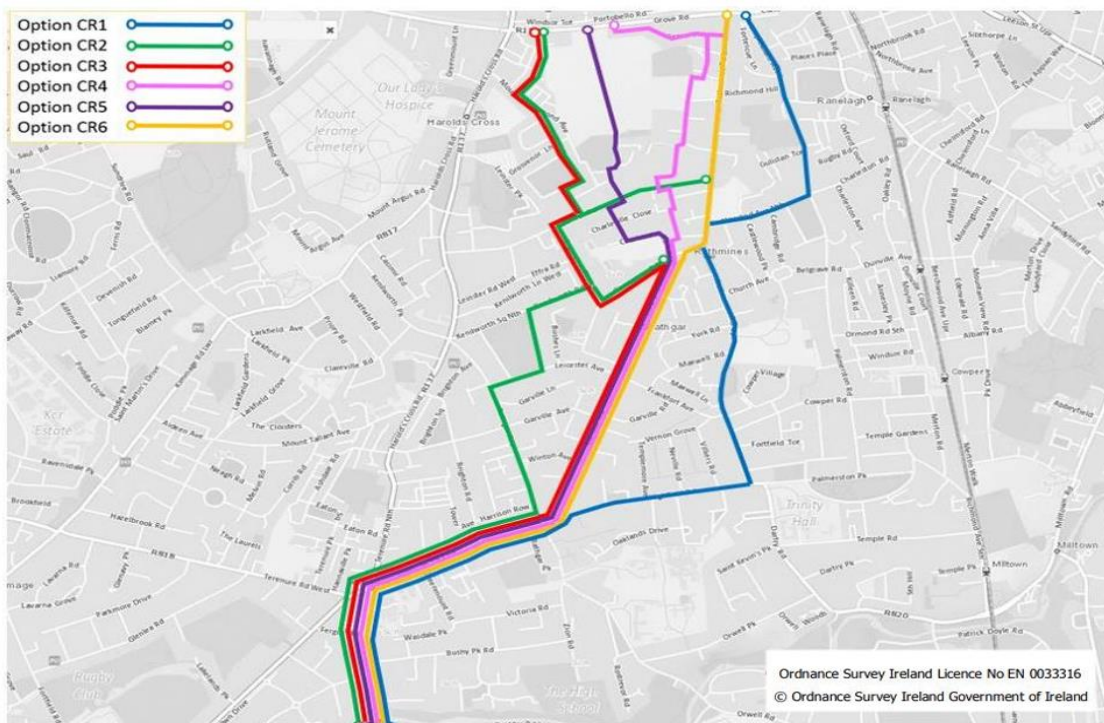


Image 3.15: Section 2 constrained sub-section Parallel Cycle Route Options between the Dodder Crossing and the Grand Canal extracted from 'Rathfarnham to City Core Bus Corridor CBC Feasibility Study and Options Assessment Report'

Figure 2.5.6 Parallel Cycle Route options between the Dodder and Grand Canal (Image 3.15 in EIAR Chapter 3)

As set out in section 3.3.2.2.2 in Chapter 3 there were six scheme sub-options (CR1 to CR6) considered for the section between the Bushy Park junction on Rathfarnham Road to the Grand Canal Crossing via Rathmines Village:

- *Sub-option CR1: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Highfield Road, Rathmines Road Upper, Castlewood Avenue and Mount Pleasant Avenue. The route would also include a new cycle bridge crossing the Grand Canal;*
- *Sub-option CR2: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Rathgar Avenue, Kenilworth Square, Grosvenor Square, Mount Drummond Avenue, and O'Hara Avenue. The route would also include a new cycle bridge crossing the Grand Canal;*
- *Sub-option CR3: This route sub-option would include the provision of a cycle route via Rathfarnham Road, Terenure Road East, Rathgar Road, Grosvenor Road, Grosvenor Square, Mount Drummond Avenue, and O'Hara Avenue. The route would also include a new cycle bridge crossing the Grand Canal;*
- *Sub-option CR4: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road, Charleville Road, Wynnefield Road, Prince Arthur Terrace, Leinster Square, Louis Lane, Ardee Road, Lissenfield, and Grove Park. The route would also include a new cycle bridge crossing the Grand Canal;*
- *Sub-option CR5: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road, Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks. The route would also include a new cycle bridge crossing the Grand Canal; and*
- *Sub-option CR6: This route sub-option would include the provision of a cycle route via Terenure Road East, Rathgar Road and Rathmines Road Lower. Due to width constraints on La Touche Bridge a new cycle bridge is proposed to the west of the bridge, connecting with Martin Street.*

A specific set of criteria were used to assess the relative merits of each of the cycle routes outlined above. The 'Five Needs of a Cyclist' outlined in the National Cycle Manual Guidelines along with Capital Cost and Environmental Impacts were the criteria used to compare the cycle routes. Further detail on the assessment methodology relating to alternative cycle facilities is included in Table 3.1.

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Road Safety, Coherence, Directness, Attractiveness, Comfort, and Environment. Sub-option CR5 was identified as having significant benefits over other sub-options in relation to Attractiveness and Comfort, and some benefits over other sub-options in relation to Road Safety, Coherence and Directness. Following an MCA, sub-option CR5 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

Following the assessment of the two constrained sub-sections as outlined above, an MCA has been undertaken of the principal route options along this section of the scheme in order to determine the most appropriate scheme for this section of the Proposed Scheme. These options are briefly summarised below.

- *Option CB1 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Outbound traffic would be removed from Rathgar Road and, inbound traffic would be removed from Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;*
- *Option CB2 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Outbound traffic would be removed from Rathgar Road and Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;*
- *Option CB3 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a*

100m section at Terenure Cross and a 70m section along Rathmines Road Lower between Rathmines Road Upper and Castlewood Avenue). Inbound traffic would be removed from Rathgar Road and Rathmines Road. Segregated cycle facilities would be provided along the majority of the CBC route;

- Option CB4 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). It is proposed to provide segregated cycle facilities on Rathfarnham Road, Terenure Road East and Rathgar Road. Cyclists would be catered for via a parallel cycle route along Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks;
- Option CB5 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and Rathmines Village (with exception of a 100m section at Terenure Cross). An inbound bus lane would be provided on Rathmines Road Lower from Rathmines Road Upper to the Military Road junction, whilst an outbound bus lane provided from Grove Road to the Military Road junction. Segregated cycle facilities would be provided along the majority of the CBC route;
- Option CB6 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). It is proposed to remove general traffic in the northbound (inbound) direction along Rathmines Road Lower between Castlewood Avenue and Grove Road. It is also proposed to provide segregated cycle facilities along the majority of the CBC route; and
- Option CB7 would include the provision of segregated bus facilities between the Dodder River crossing at Pearse Bridge and the Grand Canal crossing at La Touche Bridge (with exception of a 100m section at Terenure Cross). This option would be routed via Highfield Road and Rathmines Road Upper. It is proposed to provide segregated cycle facilities along Rathfarnham Road and Terenure Road East. Cyclists would also be catered for via parallel cycle routes via Rathgar Road, Charleville Road, Grosvenor Lodge and Cathal Brugha Barracks.

Section 3.3.2.2.2 concludes:

Option CB4 was identified as having significant benefits over other options in relation to Transport Quality and Reliability, Traffic Network Integration, Road Safety and Land Use Character. Option CB4 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route.

It is noted that subsequent to the preparation of the 'Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report', it was decided that an option which provided online bus and cycle lanes along the route and one-way traffic outbound through Rathmines should be given further consideration. As a result, both Option CB4 and Option CB6 were presented for consideration by the public in the first non-statutory public consultation.

As set out in Section 3.4.1, following the completion of the public consultation process in relation to the Emerging Preferred Route, various amendments were made to the scheme proposals to address a number of the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, and/or arising from the availability of additional information. These amendments were incorporated into the designs and informed a draft Preferred Route Option.

Section 3.4.1.1.4 sets out the subsequent optioneering carried out at this stage as summarised below.

As noted in Section 3.3.2.2.2, the EPR Option identified two potential options for Rathmines Village, both taken forward to public consultation and for more detailed assessment as part of this process. Option A proposed keeping cyclists on Rathmines Road Lower with bus lanes provided in each direction and only a single traffic lane to accommodate outbound traffic. Option B proposed diverting cyclists to an alternative cycle route to the west of Rathmines Road Lower with bus and traffic lanes provided in each direction along Rathmines Road Lower. The responses to the public consultation showed a clear preference for Option A on the basis that the cycle route proposed in Option B was indirect and unattractive compared to Option A. However, a review of Option A showed that this option would require reductions to footpath width along Rathmines Road Lower that could impact on the public realm within Rathmines Village. More detailed alternative design solutions have therefore been explored in this area in determining a draft PRO.

These options are briefly outlined below:

- *Option RM1: Two Bus lanes, one outbound traffic lane and two 1.5m wide cycle tracks through Rathmines Village. (Previously EPR Option A);*
- *Option RM2: Two Bus lanes and two general traffic lanes through Rathmines Village with an alternative offline cycle route provided. The offline route commences by directing cyclists down Charleville Road and Wynnefield Road. It is proposed to run a cycleway access through Wynnefield Park connecting to Prince Arthur Terrace and on to Leinster Square. The cycle route would cross Leinster Road and down Louis Lane through a proposed entry point to the lands at the rear of DIT Conservatory of Music and Drama into William Park and Ardee Road. The proposed cycleway would then cross Military Road and across the sports ground in front of St. Mary's College Rathmines Senior School. The cycle lane would then be routed through Cathal Brugha Barracks around the boundary with the Lissenfield Development and the rear of the Grove Park properties. The proposed cycle route then crosses Grove Road onto a new canal crossing and continues on other streets to the city centre. (Previously EPR Option B); and*
- *Option RM3: Two general traffic lanes and two 2m wide cycle tracks through Rathmines Village with a bus gate located between Richmond Hill and Military Road.*

Option RM3 – the provision of two general traffic lanes and two 2m wide cycle tracks through Rathmines Village with a bus gate located between Richmond Hill and Military Road – was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing the appropriate level of bus priority and fully segregated cycle tracks throughout this section of the Proposed Scheme, while acknowledging the urban village function of Rathmines Village through proposed footpath widening.

In terms of the sub-criteria under the Environment criterion, the preferred option performed marginally better than other options in terms of Flora and Fauna due to the reduced impacts on trees along Rathmines Road. In terms of Air Quality and Noise and vibration the preferred option performed marginally better than other options due to the fact that traffic would be redirected away from the CBC. The preferred option performed equally to other options under all other environmental criteria.

As noted in section 3.4.2, a number of changes to the design were made based on feedback received during the second round of public consultation and dialogue with stakeholders. This included the positioning of the Bus Gate in Rathmines just north of Richmond Hill, instead of south of it. The primary reason for this was to facilitate better access to Richmond Hill and provide an alternative route for local traffic to travel to/from south/east via Mount Pleasant Avenue.

Alternative options

A number of submissions suggest alternative locations for the bus gate with a suggestion to move the bus gate further north to the junction of Rathmines Road Lower / Grove Road. A variation of this proposes two sets of bus gates, one at the current location and one at the alternative suggested location at Grove Road, the premise of which is that local traffic could pass the first bus gate to access local properties, but not pass through the second bus gate hence restricting access to local traffic only.

Careful consideration has been given to the location of the bus gate such that it meets the objectives of the Proposed Scheme while balancing this with vehicular access and egress to Rathmines Village. Of particular importance to the environment around the bus gate, is the provision of an opportunity for traffic to divert away from the bus gate in close proximity to the restriction. This minimises the risk of vehicles reaching the bus gate and not having an appropriate and safe means to turn around to divert away from the bus gate. The identified location provides this turn around opportunity via Richmond Hill and Military Road to the south, and Lissenfield to the north. Locating the bus gate at the suggested location at the junction with Grove Road would not provide an appropriate opportunity for vehicle turnaround when approaching from the south. Furthermore, Grove Park would need to be closed to traffic in order to remove the potential for traffic to continue northbound along Rathmines Road Lower and bypass the bus gate by travelling along Grove Park onto Grove Road. This could severely impact on inbound bus journey times.

Some other submissions, including that on behalf of Lissenfield, suggested moving the bus gate to south of Richmond Hill. This proposal would likely require the closure of Mount Pleasant Avenue Upper to through traffic to remove the potential for traffic to use this route to bypass the bus gate. This would therefore not provide any improved accessibility to/from the south compared to the Proposed Scheme.

In terms of the variation on the location suggested, and the use of technology to permit local access north of the bus gate but not through traffic, it is noted that the above commentary is equally valid to this option.

- b. Impact on access to / egress from other areas north of Lissenfield, Church of Mary Immaculate Refuge of Sinners, Blackberry Lane and Grove Road

Chapter 10 Population of Volume 2 of the EIAR has considered the potential community and economic impacts on the human population associated with the Construction and Operational Phases of the Proposed Scheme as summarised in the following sections.

Community Accessibility

Section 10.4.4.1.2.2 of Chapter 10 Population of Volume 2 of the EIAR notes:

Community accessibility relates to the ability of users to access community facilities, recreational resources, and residential properties. The nature of the Proposed Scheme means that accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

The significant improvements to the walking, cycling and bus facilities included within the Proposed Scheme will encourage sustainable modes of transport, therefore reducing the demand for private vehicles / parking along the Proposed Scheme. Improved accessibility is also expected to increase social cohesion within the local community as discussed further in Appendix A10.2 (The Economic Impact of the Core Bus Corridors) (EY 2021) in Volume 4 of this EIAR.

In terms of the impact on commercial accessibility in Rathmines, the assessment is summarised in Table 10.15 and notes a Positive, Significant and Long-Term impact on pedestrians, a Positive, Moderate to Significant and Long-Term on cyclists, a Positive, Moderate to Very Significant and Long-Term on Bus Users and a Positive, Moderate and Long-Term on private vehicles.

Further extracts from section 10.4.4.1.2.2. of Chapter 10 Population of Volume 2 of the EIAR states:

Private Vehicles Chapter 6 (Traffic and Transport) identified a Positive, Moderate and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from redistributed traffic in the surrounding road network. Chapter 6 (Traffic and Transport) did not identify any localised impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.

The two bus gates in the community areas of Terenure and Rathmines are designed to restrict access to private vehicles and prioritise buses. The impact on private vehicles passing through Templeogue Road at Fergus Road in an inbound direction and Rathmines Road Lower at junction with Lissenfield will require minor local rerouting but will not change the ability to access community facilities in the area.

Access Routes

It is noted that while the proposed bus gate may result in an inconvenience for those seeking to access businesses, community or residential premises in Rathmines by car, vehicular access will be retained via routes from all directions. The following figure presents a sample of the alternative routes available from origins to the north of the proposed bus which would currently travel straight through Rathmines demonstrating that variety of alternative routes will continue to exist to provide vehicular access to these streets from all directions.

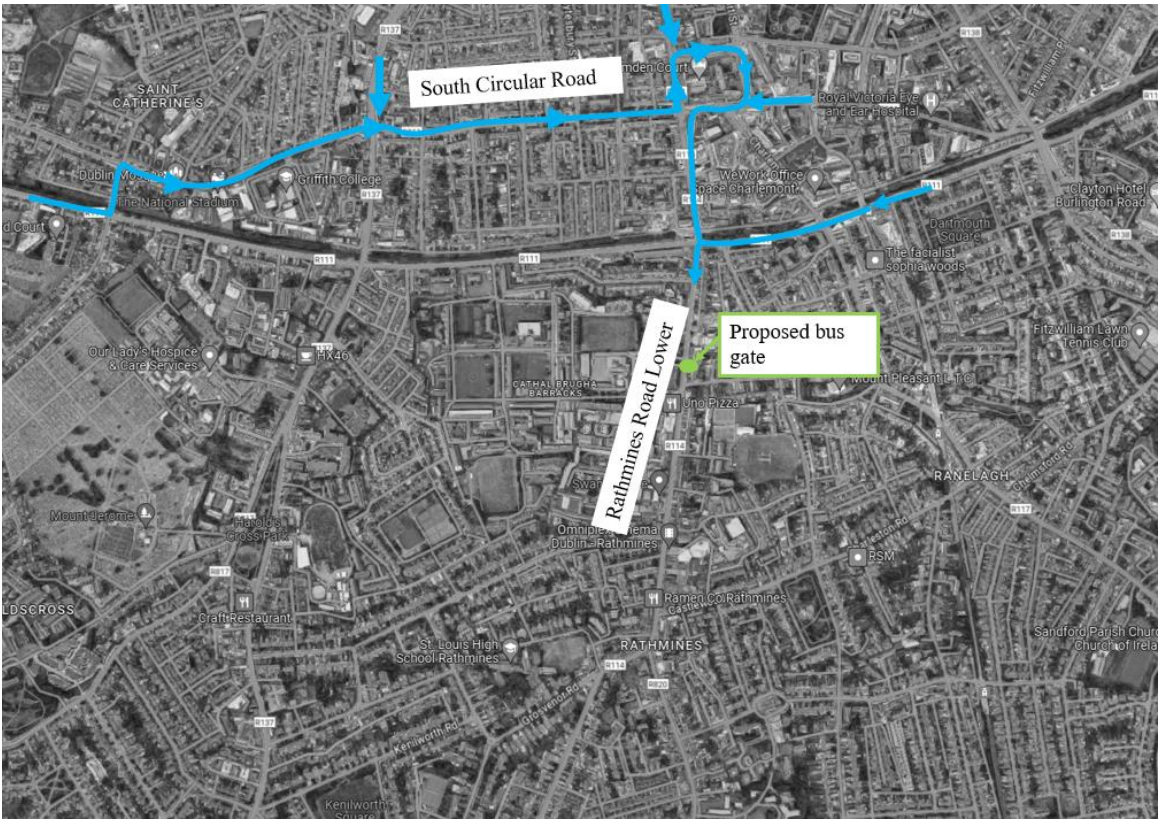


Figure 2.5.7 Alternative access routes to north of the bus gate from the east, west or north

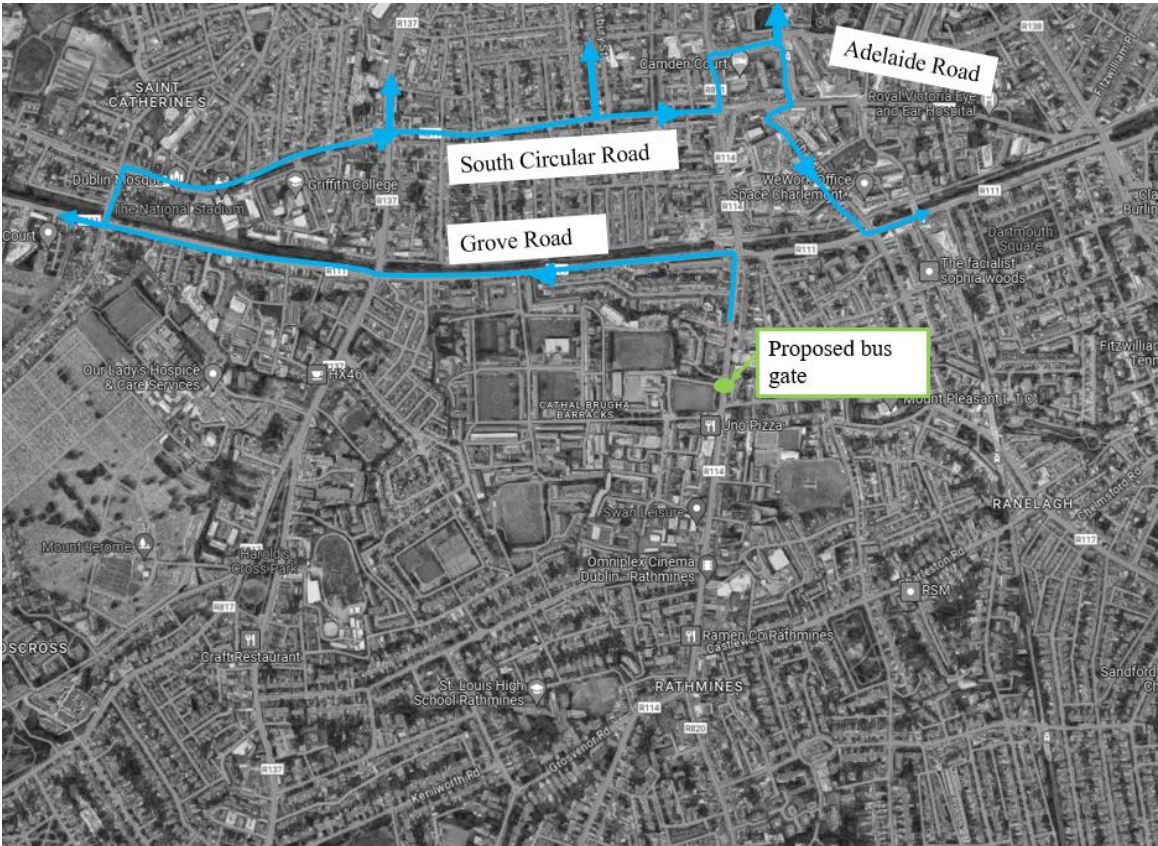


Figure 2.5.8 Alternative egress routes from north of the bus gate to the east, west or north

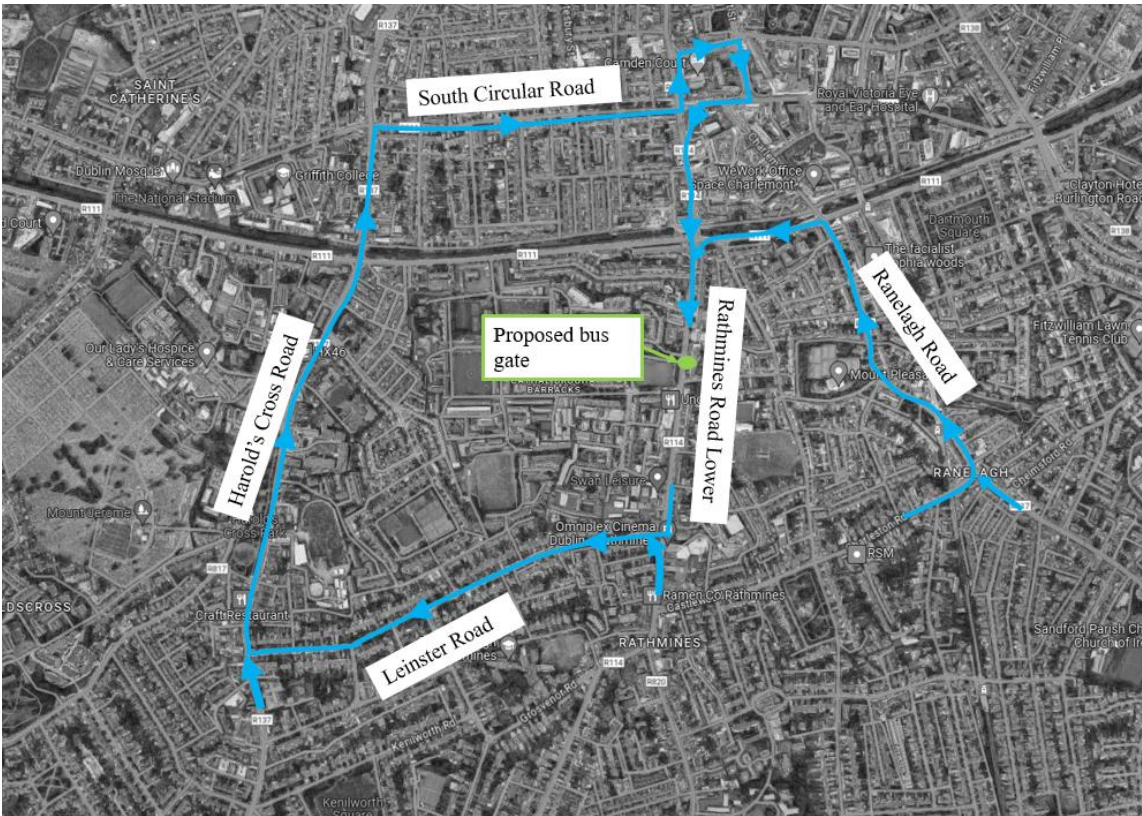


Figure 2.5.9 Alternative access routes to north of the bus gate from the south

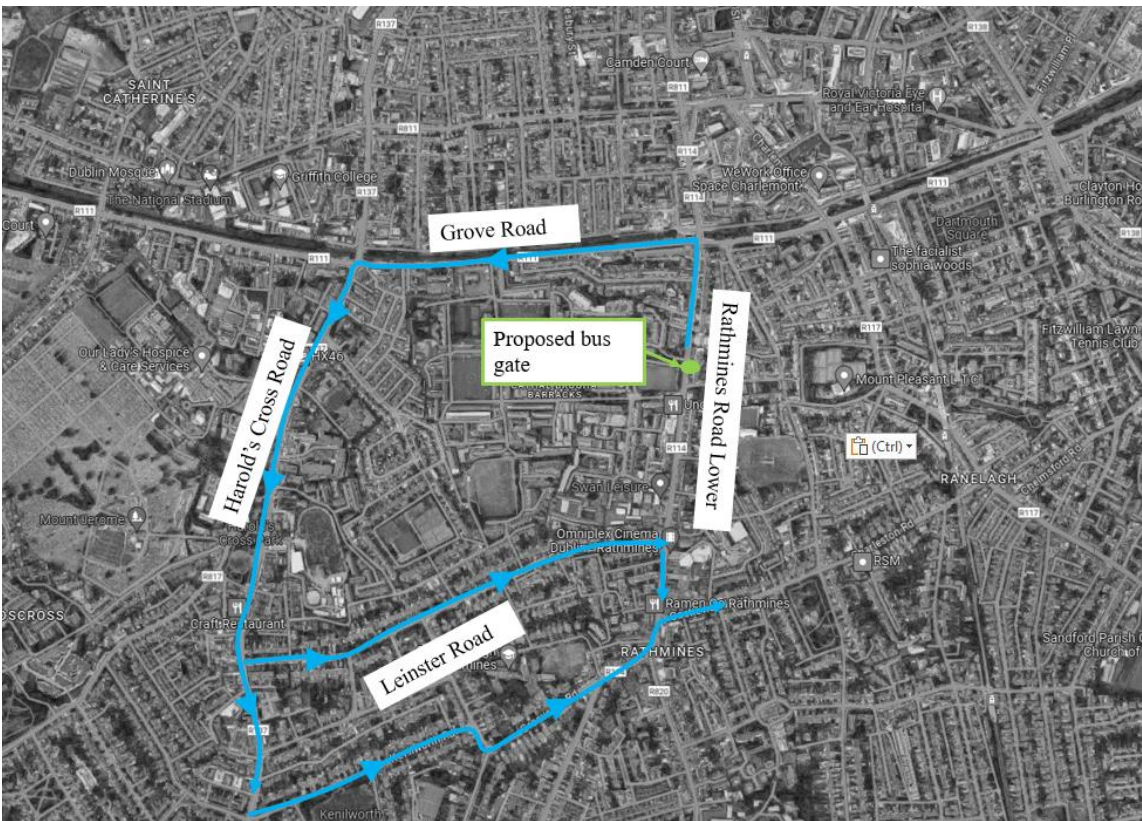


Figure 2.5.10 Alternative egress routes from north of the bus gate to the south

In terms of access to the Church of Mary Immaculate Refuge of Sinners, it is noted that the primary car park associated with the church is accessed off Richmond Hill. Access/egress to this car park from the south will remain as per the existing situation. Access to the smaller car park (c. 8 spaces) in front of the church on Rathmines Road Lower will be accessible from north of the bus gate.

- c. Impact on businesses as a result of bus gate, including impact on deliveries.

Chapter 10 Population of Volume 2 of the EIAR has considered the potential community and economic impacts on the human population associated with the Construction and Operational Phases of the Proposed Scheme as summarised in the following sections.

Commercial Accessibility

Section 10.4.4.2.2.2 of Chapter 10 Population of Volume 2 of the EIAR notes:

Commercial accessibility relates to the ability of users and employees to access commercial businesses. The nature of the proposed works means accessibility impacts will differ based on the mode of travel used. The assessment has therefore separately assessed accessibility impacts on pedestrians, cyclists, bus users and private vehicles.

Chapter 6 (Traffic and Transport) assessed that people movement would significantly increase along the Proposed Scheme. It is therefore expected that all businesses along the Proposed Scheme will, to some extent, benefit from the increase in passing trade. Commercial businesses located along the Proposed Scheme are listed in Appendix A10.1 (Schedule of Commercial Businesses) in Volume 4 of this EIAR.

In terms of the impact on commercial accessibility in Rathmines, the assessment is summarised in Table 10.15 and notes a Positive, Significant and Long-Term impact on pedestrians, a Positive, Moderate to Significant and Long-Term on cyclists, a Positive, Moderate to Very Significant and Long-Term on Bus Users and a Positive, Moderate and Long-Term on private vehicles.

Further extracts from section 10.4.4.2.2.2. of Chapter 10 Population of Volume 2 of the EIAR states:

Private Vehicles

Chapter 6 (Traffic and Transport) identified a Positive, Moderate and Long-Term impact from the reduction in general traffic along the Proposed Scheme and a Negative, Slight and Long-Term impact from the redistribution of traffic in the surrounding road network.

Chapter 6 (Traffic and Transport) did not identify any localised capacity impacts during the AM and PM peak period at any junctions in the surrounding network of the Proposed Scheme as a result of displaced traffic.

The impact on private vehicles passing through Terenure and Rathmines community area is considered Negative, Not Significant to Slight and Long-Term, this is due to the proposed introduction of the bus gates at Fergus Road on Templeogue Road and Lissenfield on Rathmines Road. The bus gates on are not expected to have a significant impact on private vehicles accessing commercial businesses along these stretches of roads due to the lack of on-street parking provision, however they will impact accessibility in terms of lengthened and re-routed journeys.

The impact on access to commercial businesses along the Proposed Scheme for private vehicles is considered to be Positive, Moderate and Long-Term. The community areas that are expected to experience this impact this are Willington, Templeogue, Rathfarnham, Terenure, Rathgar, Harolds Cross, Rathmines, Harrington Street, Whitefriar Street and Meath Street and Merchants Quay.

The impact on access to commercial businesses in the surrounding road network, a result of redistributed traffic, is considered to be Negative, Slight and Long-Term. The community areas that are expected to experience this impact as a result of changes in access to commercial businesses during the Operational Phase of the Proposed Scheme are those situated away from the Proposed Scheme, namely Knocklyon, Firhouse, Tallaght Tymon, Ballyroan, Churchtown and Francis Street.

A parking assessment has been undertaken in Chapter 6 (Traffic & Transport). No Significant impacts on parking were identified along the Proposed Scheme.

This should be considered in conjunction with the positive impacts to pedestrians, cyclists and bus users from the Proposed Scheme which will facilitate greater capacity along the corridor for users of sustainable modes of transport to access the commercial properties. Furthermore, an overall assessment of 'The Economic Impact of the Core Bus Corridors' is included in Appendix A10.2 in Volume 4 of the EIAR. The assessment indicates that evidence from case studies suggests that, in some cases, businesses overestimate the number of people arriving by car whilst the proposed enhancements to the walking, cycling and bus infrastructure along the route will increase use of sustainable transport and may positively impact on footfall to the business.

There is strong international evidence to suggest that the proposed improvements will lead to further increases in the use of sustainable transport. This should, in turn, more than compensate for reductions in visits by car users. Whilst spend per visitor may fall slightly, the overall spend rises due to the increased overall footfall. This effect should occur as soon as the new proposed routes open with shoppers choosing to make even more use of sustainable transport decisions. Whilst there is limited evidence of the impact during the construction work, none of the evidence suggested an increase in business insolvency or a departure of businesses from the area during construction works.

Access routes

It is noted that while the proposed bus gate may result in an inconvenience for those seeking to access businesses, community or residential premises in Rathmines by car, vehicular access will be retained via routes from all directions. Similar routes to those presented in f

Figure 2.5.9 to Figure 2.5.10 above, are available to/from areas south of the bus gate and as such access to loading facilities within Rathmines will be accessible from all directions. It is further noted that as set out in section 4.5.4.1 of Chapter 4 in Volume 2 of the EIAR, the bus gate will restrict general traffic movements during the hours of operation of the Bus Gate (06:00 – 20:00 - 7 days a week). Outside of these hours, access to and from Rathmines Village will be similar to the existing situation.

Parking and loading

Section 6.4.6.1.5.4 of Chapter 6 in Volume 2 of the EIAR assesses the impact of changes to parking and loading facilities in Rathmines Village as a result of the Proposed Scheme. The overall changes in the Rathmines area are presented in Table 6.41, an extract of which is presented below.

Table 6.41: Section 4 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Number of Parking Spaces		
		Do Minimum	Do Something	Change
Rathmines Road Lower, between Rathmines Road Upper and Grove Road.	Loading Bay	4 loading bays (14 spaces)	6 loading bays (20 spaces)	+ 2 loading bays (+6 spaces)
Military Road	Loading Bay	1	1	0
	Informal Parking: pay and display residential	21	17	-4

In terms of loading facilities, it is proposed to increase the number of loading bays in Rathmines from 4 to 6 bays, an increase of 2 loading bays. In terms of parking, it is proposed to reduce the number of spaces by 4 on Military Road. The impact of the proposed changes is summarised in section 6.4.6.1.5.4:

- *Increase from four loading bays (14 spaces) to six loading bays (20 parking spaces) on Rathmines Road Lower, between Rathmines Road Upper and Grove Road. Therefore, the impact of this increase in parking is considered to have a **Positive, Slight and Long-term effect**.*
 - *Removal of four spaces on Military Road, out of 21 residential pay and display spaces. There are a number of side streets which can be used by local residents. The removal of four spaces is minor and is therefore considered to have a **Negligible and Long-term effect**.*
- d. Suggestion to reduce bus gate hours of operation to 6-9am and 4-8pm

The Proposed Scheme along the Rathmines Road Lower proposes a bus gate which will be operational between 06:00 and 20:00 seven days a week. An analysis of existing traffic flow levels on the corridor do not show a significant reduction in traffic volumes through the day (relative to peak hours), and hence bus gate operation during the hours noted above is necessary to provide fast, reliable bus journey times for all services.

2.5.3.2 Traffic increases on surrounding roads including Castlewood Avenue, Dunville Avenue, Belgrave Square North

Summary of Issues Raised

- a. Increase in traffic on these roads

A number of submissions raised concerns around the impact of the proposed bus gate on Rathmines Road Lower on traffic movement in the area.

Some submissions stated that the proposed arrangement would see increases in traffic volumes along a number of roads in the area including Castlewood Avenue, Dunville Avenue, Belgrave Square North, Ashfield Road.

Castlewood Avenue is identified as this is the last opportunity for inbound traffic to divert in advance of the proposed bus gate. Residents were concerned that this would lead to congestion along Castlewood Avenue and the impact on safety of all road users. Submissions were also concerned about the impact the rerouting would have on Ranelagh.

b. Impact on noise and air quality as a result of redistributed traffic in the Rathmines / Ranelagh area

A number of submissions raise concerns about the impact of increased traffic on roads adjacent to the scheme in relation to air quality and noise, stating that increased traffic levels will result in a deterioration in Air Quality and Noise.

c. Effect of Turn Bans on Access to/from Ranelagh – RT from Cullenswood to Ranelagh Rd

A number of submissions raised concerns around the impact of the proposed bus gate on Rathmines Road Lower on access in Ranelagh. It was noted that many of the turn bans proposed as part of the scheme will add further restrictions on vehicular traffic travelling to/from Ranelagh.

Response to Issues Raised

b. Increase in traffic on these roads

As set out in Section 2.1 of EIAR Chapter 2 Need for the Scheme, *“The Proposed Scheme is needed in order to enable and deliver efficient, safe and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region.”*

The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling on this key access corridor in the Dublin region. Section 6.4.6.2 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

*Overall, it has been determined that the impact of the reduction in general traffic flows along the Proposed Scheme will be a **Positive, Moderate and Long-term** effect whilst the impact of the redistributed general traffic along the surrounding road network will have a **Negative, Slight and Long-term** effect. Thus, overall, there will be no significant deterioration in the general traffic environment in the study area as a consequence of meeting the scheme objectives of providing enhanced sustainable mode priority along the direct study area.*

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate:

- A significant decrease in people travelling to/from the city by car in each peak period with decreases of 30% and 39% in the AM and PM peak periods respectively;
- A significant increase in people travelling by public transport in each peak period with increases of 123% and 145% in the AM and PM peak periods respectively;
- A significant increase in people walking/cycling in each peak period with increases of 79% and 91% in the AM and PM peak periods respectively;

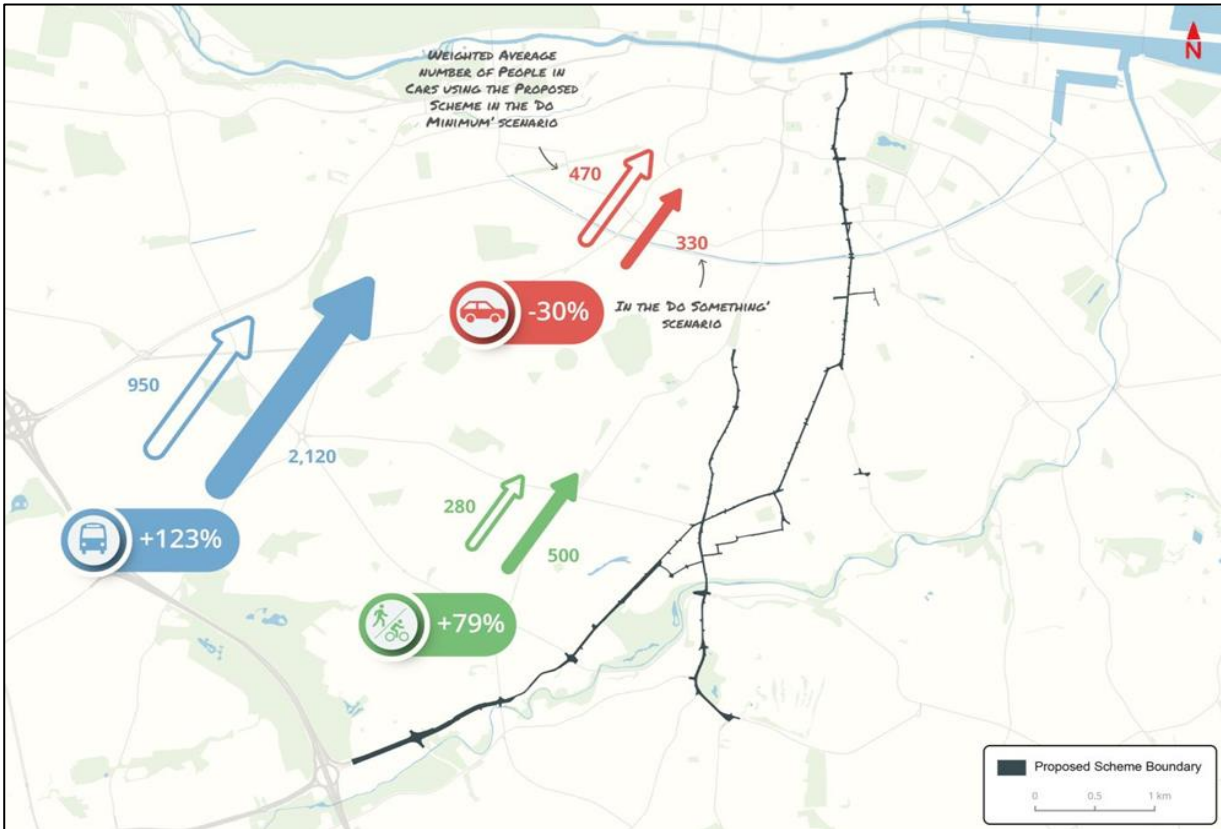


Figure 2.5.11 People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

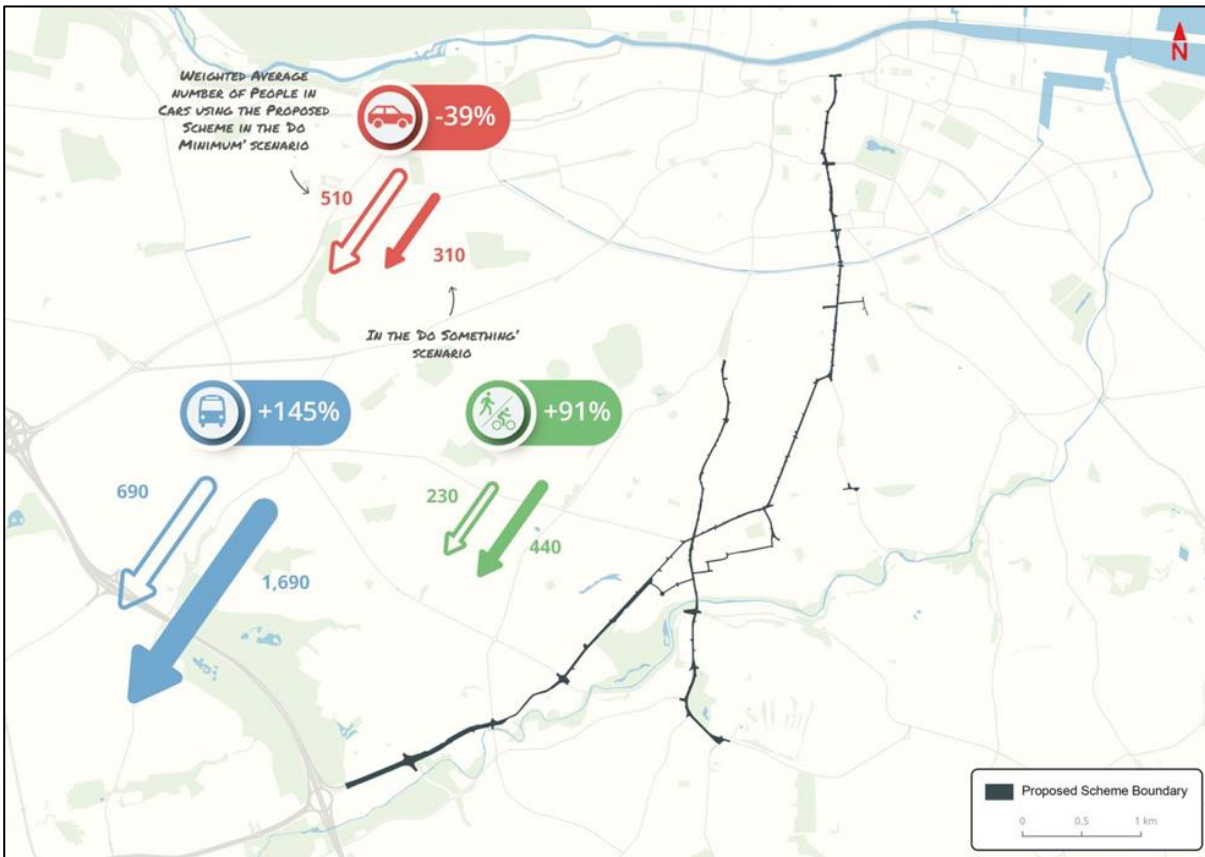


Figure 2.5.12 People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

Section 6.4.6.1.15.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 and the road links listed in Table 6.63 where there is an increase in combined flow of >100. These are shown in Figure 2.5.13 – Figure 2.5.14.

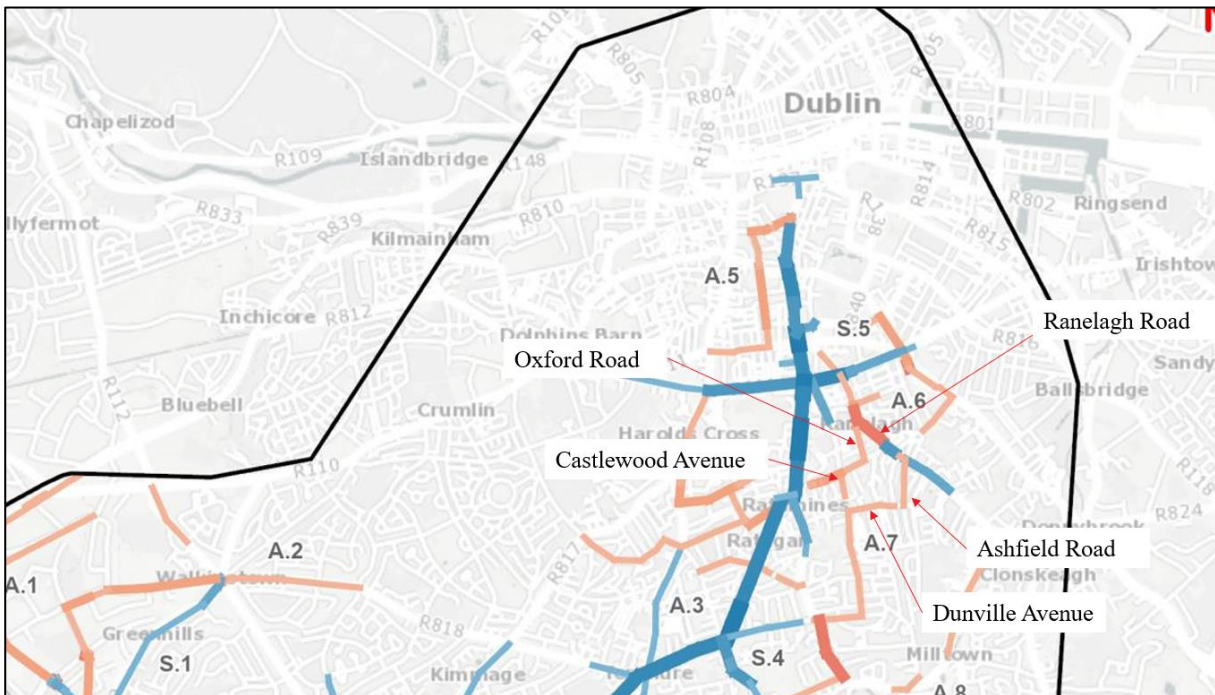


Figure 2.5.13 Extracts from EIAR Chapter 6: Diagram 6.40

Table 6.63: Road Links where the 100 Flow Additional Traffic Threshold is Exceeded (AM Peak Hour) (Indirect Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Eastern Side of Proposed Scheme	A.06	Ashfield Road	363	495	+132
		Charlemont Street	762	874	+112
		Charleston Road	779	971	+192
		Hatch Street Lower	421	521	+100
		Leeson Street Lower	1,604	1,846	+241
		Leeson Street Upper	937	1,238	+301
		Mountpleasant Place	147	354	+207
		Northbrook Road	260	369	+109
		Oxford Road	155	270	+115
		Ranelagh	885	1,230	+345
		Ranelagh Road	970	1,349	+379
	The Appian Way	691	802	+112	
	A.07	Ashfield Road	330	458	+128
		Beechwood Road	426	543	+117

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Belgrave Square East	122	228	+105
		Belgrave Square North	640	873	+232
		Castlewood Avenue	619	824	+206
		Dunville Avenue	357	510	+153
		Frankfort Avenue	120	311	+191
		Milltown Road	1,049	1,185	+136
		Palmerston Park	853	1,028	+175
		Palmerston Road	108	304	+196
	A.08	Churchtown Road Lower	764	877	+114
		Dundrum Road	739	849	+111
		Milltown Road	1,312	1,488	+177

Figure 2.5.14 Extracts from EIAR Chapter 6: Table 6.63

The assessment shows that during the morning peak period, the Proposed Scheme will result in increases to traffic on a number of roads to the east of the Proposed Scheme in Ranelagh including Castlewood Avenue/Charleston Road (+206 PCUs), Belgrave Square North (+232 PCUs), Oxford Road ((+115 PCUs), Ashfield Road (+128 PCU) and Dunville Avenue (+153 PCUs).

Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the AM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 16 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 2.5.15.

Hour Junction Analysis

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Rangus		Description of impact
				Do Minimum Flow	Do Something Flow	Do Minimum V/C	Do Something V/C	Do Minimum V/C	Do Something V/C	
A.1	Belgrave Square North	11357	Belgrave Square East / Belgrave Square North / Charleston Road / Mount Pleasant Avenue Upper	817	1025	56	37	<85%	<85%	Negligible
	Butterfield Avenue	21132	Butterfield Avenue / Matran Road	834	942	58	66	<85%	<85%	Negligible
	Churchtown Road Lower	19384	Churchtown Road Lower / Woodlawn Park	930	1016	71	74	<85%	<85%	Negligible
	Dartry Road	11355	Dartry Road / Sunbury Gardens	993	1378	42	56	<85%	<85%	Negligible
	Grange Road	21175	Grange Road / Taylors Lane	1105	1306	52	64	<85%	<85%	Negligible
A.10	Milltown Road	11316	Milltown Road / Dundrum Road	1574	1751	60	68	<85%	<85%	Negligible
	Palmerston Park	11276	Palmerston Park / Palmerston Road	129	327	5	13	<85%	<85%	Negligible
A.11	Northbrook Road	11205	Northbrook Road / Cambridge Terrace	282	382	8	12	<85%	<85%	Negligible
	Orwell Park	11228	Orwell Park / Orwell Road	1468	1611	72	92	<85%	85%-100%	Low
	Taylors Lane	21162	Taylors Ln / Ballypoden Way Rbt	887	890	55	47	<85%	<85%	Negligible
A.12	M6	6336	M6 Jct 11	3426	3337	100	96	>100%	85%-100%	Low
A.2	Ashfield Road	11260	Ashfield Road / Beechwood Road	373	489	20	30	<85%	<85%	Negligible
	Butterfield Avenue	21121	Butterfield Avenue / Finhouse Road / Old Bridge Road	1982	1728	51	58	<85%	<85%	Negligible
	Dunville Avenue	11259	Dunville Avenue / Oakley Road	293	443	13	22	<85%	<85%	Negligible
	Dunville Avenue	11254	Dunville Avenue / Palmerston Road	353	512	24	53	<85%	<85%	Negligible
	Finhouse Road	21204	Finhouse Road / Spower Cnk Road	1597	1616	54	55	<85%	<85%	Negligible
A.3	Frankfort Avenue	11269	Garville Road / Frankfort Avenue	96	270	4	18	<85%	<85%	Negligible
	Braemor Road	11297	Braemor Road / Lower Dodder Road	1238	1215	75	96	<85%	85%-100%	Low
	Broadford Road	19305	Broadford Road / Stonemason'S Way	934	1054	65	75	<85%	<85%	Negligible
	Canal Road	6316	Canal Road / Charleston Road / Grand Parade / Ranelagh Road	1676	1400	95	87	85%-100%	85%-100%	Negligible
	Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	626	825	21	26	<85%	<85%	Negligible
	Castlewood Avenue	40073	Castlewood Avenue / Castlewood Park	549	764	20	25	<85%	<85%	Negligible
	Charlemont Street	6100	Charlemont Street / Charlemont Wall	783	876	75	82	<85%	<85%	Negligible
A.4	Charleston Road	11257	Charleston Road / Oxford Road	729	926	27	60	<85%	<85%	Negligible
	Frankfort Avenue	11270	Frankfort Avenue / Vernon Grove	168	304	6	15	<85%	<85%	Negligible
A.4	Broadford Road	19215	Barton Road East / Broadford Rd Rbt	924	1031	40	44	<85%	<85%	Negligible
	Butterfield Avenue	21129	Anne Devlin Road / Butterfield Avenue	991	1095	67	76	<85%	<85%	Negligible
	Butterfield Avenue	21185	Butterfield Avenue / Fairways	1209	1185	70	98	<85%	85%-100%	Low
	Cheimsford Road	11305	Cheimsford Road / Sallymount Avenue / The Applan Way	791	876	39	44	<85%	<85%	Negligible
A.5	Beechwood Road	11399	Beechwood Road / Dunville Avenue	335	449	11	17	<85%	<85%	Negligible
	Churchtown Road Lower	11339	Churchtown Road Lower / Patrick Doyle Road	834	912	25	32	<85%	<85%	Negligible
	Churchtown Road Upper	19396	Churchtown Road Lower / Churchtown Road Upper	1495	1483	48	56	<85%	<85%	Negligible
	Dartry Road	11359	Dartry Road / Orwell Park	1393	1657	61	74	<85%	<85%	Negligible
	Dundrum Road	19385	Bird Avenue / Dundrum Road	665	782	40	44	<85%	<85%	Negligible
	Dundrum Road	19386	Dundrum Road / Farrenboley Park	596	698	36	38	<85%	<85%	Negligible
	Grand Parade	6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2368	2400	60	46	<85%	<85%	Negligible
A.6	Grange Road	19436	Grange Road / Stonemason'S Way	1595	1744	90	99	85%-100%	85%-100%	Negligible
	Leeson Street Upper	11125	Leeson Street Upper / Burlington Road	1376	1510	51	55	<85%	<85%	Negligible
	Leeson Street Upper	11131	Leeson Street Upper / Dartmouth Road	996	1265	66	85	<85%	<85%	Negligible
	Leeson Street Upper	11136	Leeson Street Upper / Leeson Street Upper	877	1177	47	64	<85%	<85%	Negligible
	Milltown Road	11221	Churchtown Road Lower / Milltown Road	1717	1810	101	101	>100%	>100%	Negligible
	Milltown Road	11166	Eginton Road / Milltown Road / Sandford Road / Clonskeagh Road	1946	1962	91	91	85%-100%	85%-100%	Negligible
	Milltown Road	11400	Milltown Road / Milltown Road / Milltown Road	1335	1502	44	50	<85%	<85%	Negligible
Mountpleasant Place	11241	Mountpleasant Place / Oxford Road	829	943	44	51	<85%	<85%	Negligible	

Figure 2.5.15 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 16

The assessment presented in Table 16 of Appendix A6.4.4 in Volume 4 of the EIAR, shows that the Proposed Scheme would result in negligible traffic impact on Ashfield Road, Dunville Avenue, Castlewood Avenue and Oxford Road as a result of the Proposed Scheme.

Section 6.4.6.1.15.4 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the PM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.41 and the road links listed in Table 6.66 where there is a reduction in combined flow of >100 and in Table 6.67 where there is an increase in combined flow of >100.

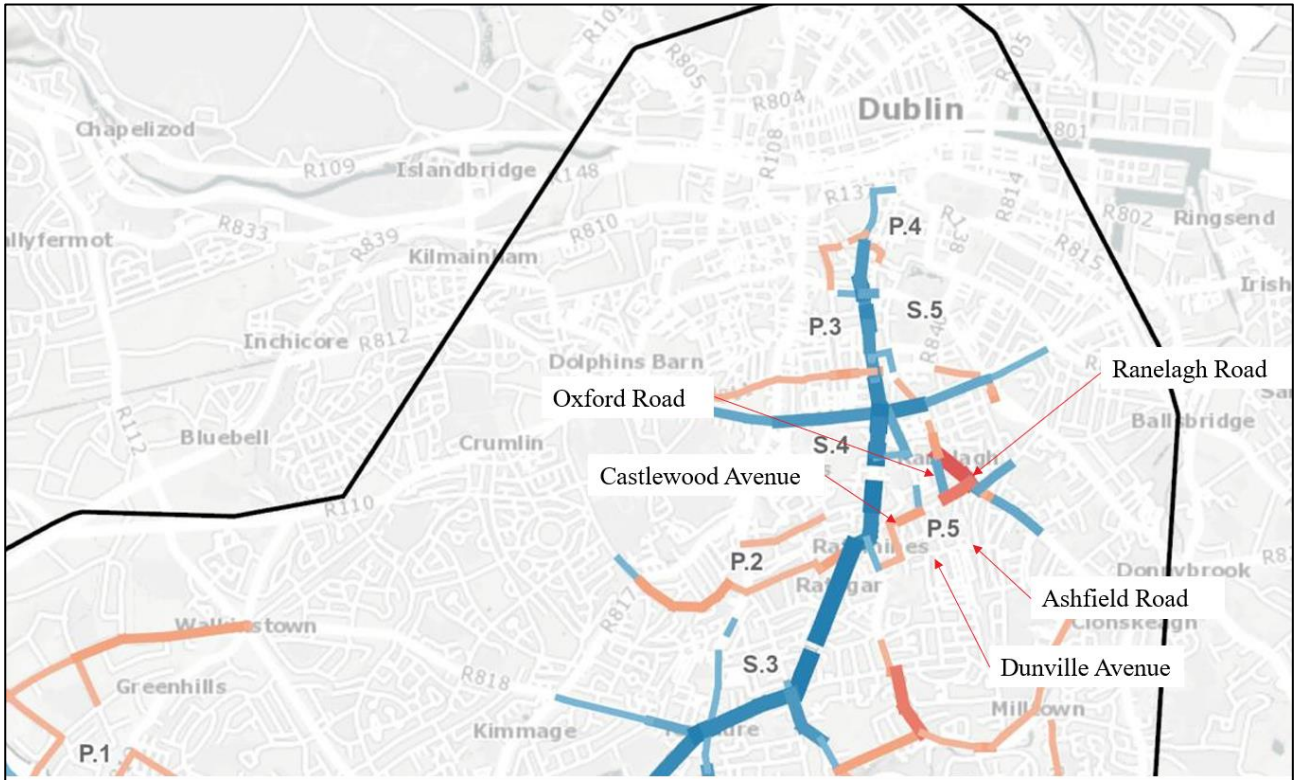


Figure 2.5.16 Extracts from EIAR Chapter 6: Diagram 6.41

Table 6.66: Road Links that Experience a Reduction of ≥ 100 Combined Flows during PM Peak Hour (Indirect Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Eastern Side of Proposed Scheme	S.1	Firhouse Road	988	872	-116
		Old Bridge Road	1,249	1,096	-153
		Springfield Avenue	1,331	987	-344
	S.2	Ballyboden Road	839	715	-124
		Butterfield Avenue	934	643	-290
		Churchtown Road Upper	1,222	1,098	-124
		Fairways	1,030	857	-173
		Grange Road	734	557	-177
		Nutgrove Avenue	754	612	-141
		Nutgrove Way	689	554	-135
		Whitechurch Road	613	512	-100
	S.3	Orwell Road	1,190	1,072	-118
	S.4	Canal Road	1,144	645	-499
		Chelmsford Road	648	404	-243
		Mount Pleasant Avenue Upper	299	189	-110
		Mountpleasant Place	315	49	-266
		Oxford Road	303	38	-266
		Ranelagh	1,301	1,009	-291
		Rathmines Road Upper	514	323	-190
		Sandford Road	1,336	1,071	-265
	S.5	Dame Street	574	440	-134
		Grand Parade	961	693	-268
		Harcourt Street	594	477	-116

Figure 2.5.17 Extracts from EIAR Chapter 6: Table 6.66

Table 6.67: Road Links Where Link Threshold of 100 Combined Flows is Exceeded (PM Peak Hour) (Indirect Study Area)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Eastern Side of Proposed Scheme	P.3	Adelaide Road	753	858	+105
		Charlemont Street	835	955	+120
	P.4	Mercer Street Lower	463	576	+113
		Noel Purcell Walk	290	471	+182
	P.5	Anglesea Road	1,346	1,491	+146
		Belgrave Square North	614	894	+280
		Castlewood Avenue	614	836	+222
		Castlewood Park	23	144	+122
		Charleston Road	694	1,058	+365
		Church Avenue	185	290	+105

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Cullenswood Road	756	1,114	+358
		Leeson Street Upper	700	931	+232
		Milltown Road	868	1,037	+169
		Ranelagh	837	1,318	+480
		Ranelagh Road	1,227	1,442	+216
	P.6	Dartry Road	901	1,237	+337
		Dundrum Road	435	540	+105
		Lower Dodder Road	381	499	+118
		Milltown Road	1,188	1,448	+260
		Orwell Park	372	575	+204
		Orwell Road	1,326	1,457	+131
		Palmerston Park	802	1,040	+238
		Rathmines Road Upper	621	735	+113

Figure 2.5.18 Extracts from EIAR Chapter 6: Table 6.67

The tables presented above show that during the evening peak period, the Proposed Scheme will result in increases to traffic on a number of roads to the east of the Proposed Scheme in Ranelagh including Castlewood Avenue/Charleston Road (+365 PCUs) and Belgrave Square North (+280 PCUs).

It is noted that during the evening peak, no material increase or decrease (+/- 100 PCUs) is observed on Ashfield Road or Dunville Avenue. Furthermore, the assessment shows that traffic volumes would reduce along Oxford Road (-266 PCUs) as presented

Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the PM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 2.5.19.

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flow		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
				Do Minimum Flow	Do Something Flow	Do Minimum VOC	Do Something VOC	Do Minimum VOC	Do Something VOC		
P.1	Leeson Street Upper	6300	Leeson Street Upper / Sussex Road (North)	1415	1594	44	46	<85%	<85%	Negligible	
	Longford Street Little	6327	Longford Street Little / Noel Purcell Walk	306	489	8	13	<85%	<85%	Negligible	
	Mercer Street Lower	6347	Mercer Street Lower / Mercer Street Lower / Clovers Alley	323	414	47	67	<85%	<85%	Negligible	
	Milltown Road	11299	Richmond Avenue South / Milltown Road	435	569	24	31	<85%	<85%	Negligible	
	Palmerston Park	11311	Palmerston Park / Rathmines Road Upper	920	1098	44	58	<85%	<85%	Negligible	
		11329	Palmerston Park / Sunbury Gardens	902	1204	64	96	<85%	85%-100%	Low	
	Scholarstown Road	21192	Scholarstown Rd Rbt	620	739	104	105	>100%	>100%	Negligible	
P.2	Whitechurch Road	21169	Grange Park / Whitechurch Road	309	417	10	22	<85%	<85%	Negligible	
		11221	Churchtown Road Lower / Milltown Road	1500	1733	102	102	>100%	>100%	Negligible	
		11166	Eginton Road / Milltown Road / Sandford Road / Clonskeagh Road	1854	1861	92	90	85%-100%	85%-100%	Negligible	
	Ranelagh	11316	Milltown Road / Dundrum Road	1405	1622	44	50	<85%	<85%	Negligible	
		11400	Milltown Road / Milltown Road / Milltown Road	1185	1435	39	46	<85%	<85%	Negligible	
		11233	Ashfield Road / Ranelagh	1059	1284	59	66	<85%	<85%	Negligible	
		11251	Chelmsford Road / Ranelagh	1443	1219	63	97	<85%	85%-100%	Low	
		11261	Ranelagh Road / Beechwood Avenue Lower	1082	1327	73	97	<85%	85%-100%	Low	
		11201	Ranelagh Road / Mountpleasant Place	1122	1335	72	76	<85%	<85%	Negligible	
	Rathmines Road Upper	11338	Ranelagh Road / Mountpleasant Square / Orchard Lane	1067	1274	71	69	<85%	<85%	Negligible	
		11186	Ranelagh Road / Mountpleasant Terrace / Dartmouth Road	854	926	46	55	<85%	<85%	Negligible	
		11303	Church Avenue / Rathmines Road Upper	584	536	17	23	<85%	<85%	Negligible	
		11296	Rathmines Road Upper / Cowper Road	651	751	24	26	<85%	<85%	Negligible	
		11241	Butterfield Avenue / Butterfield Park	935	717	59	39	<85%	<85%	Negligible	
		11246	Dodder Road Lower / Dodder Road Lower	352	463	10	14	<85%	<85%	Negligible	
P.3	MSO	9226	MSO Jct 11	3354	3312	103	96	>100%	85%-100%	Low	
		21225	MSO Jct 12	3481	3664	105	103	>100%	>100%	Negligible	
		6348	Mercer Street Lower / Noel Purcell Walk	265	380	8	12	<85%	<85%	Negligible	
	Ranelagh	6326	Noel Purcell Walk / Mercer Street Lower	247	431	23	38	<85%	<85%	Negligible	
		11250	Cullenswood Road / Ranelagh	1346	1599	42	89	<85%	85%-100%	Low	
		11184	Mountpleasant Place / Ranelagh / Ranelagh Road	1046	1258	52	77	<85%	<85%	Negligible	
		11185	Northbrook Road / Ranelagh Road	1031	1233	45	60	<85%	<85%	Negligible	
		21153	Taylor's Lane / Whitechurch Road	1272	1319	57	56	<85%	<85%	Negligible	
		11359	Dartry Road / Orwell Park	1171	1496	64	75	<85%	<85%	Negligible	
	P.4	Orwell Park	11355	Dartry Road / Sunbury Gardens	964	1285	41	64	<85%	<85%	Negligible
			11228	Orwell Park / Orwell Road	1360	1493	78	85	<85%	<85%	Negligible
			11315	Lower Dodder Road / Orwell Road	1332	1422	44	54	<85%	<85%	Negligible
		Adelaide Road	6211	Adelaide Road / R811	725	831	43	55	<85%	<85%	Negligible
			11109	Allesbury Drive / Anglesea Road	1337	1464	40	43	<85%	<85%	Negligible
			11107	Allesbury Rd / Anglesea Rd Jct	1323	1454	101	101	>100%	>100%	Negligible
P.5	Broadford Road	11381	Anglesea Road / Simmons Court Road	1337	1464	46	50	<85%	<85%	Negligible	
		19215	Barton Road East / Broadford Rd Rbt	646	832	37	43	<85%	<85%	Negligible	
		19305	Broadford Road / Stonemason's Way	626	817	30	41	<85%	<85%	Negligible	
	Butterfield Avenue	21129	Anne Devlin Road / Butterfield Avenue	972	1060	62	64	<85%	<85%	Negligible	
		21121	Butterfield Avenue / Fithouse Road / Old Bridge Road	1820	1719	46	50	<85%	<85%	Negligible	
		21132	Butterfield Avenue / Marian Road	857	926	73	84	<85%	<85%	Negligible	
	Castlewood Park	11235	Castlewood Park / Church Avenue	157	266	8	22	<85%	<85%	Negligible	
	Charleston Road	11257	Charleston Road / Oxford Road	903	1000	66	34	<85%	<85%	Negligible	

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flow		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact		
				Do Minimum Flow	Do Something Flow	Do Minimum VOC	Do Something VOC	Do Minimum VOC	Do Something VOC			
P.6	Butterfield Park	21146	Butterfield Park / Ballyroan Road	557	632	30	32	<85%	<85%	Negligible		
		21139	Butterfield Park / Butterfield Orchard	124	353	7	16	<85%	<85%	Negligible		
		6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1828	1532	82	76	<85%	<85%	Negligible		
		Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	602	824	18	25	<85%	<85%	Negligible	
	Dundrum Road	9144	Dodderview Road / Fairways / Springfield Avenue	1599	1362	89	91	85%-100%	85%-100%	Negligible		
		19385	Bird Avenue / Dundrum Road	594	697	32	39	<85%	<85%	Negligible		
		11327	Dundrum Road / Milltown Bridge Road	997	1086	86	92	85%-100%	85%-100%	Negligible		
		21204	Firhouse Road / Spawell Link Road	1542	1556	92	85	85%-100%	85%-100%	Negligible		
		6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2480	2395	67	58	<85%	<85%	Negligible		
		19436	Grange Road / Stonemason's Way	1338	1587	56	96	<85%	85%-100%	Low		
		21175	Grange Road / Taylor's Lane	866	1059	50	60	<85%	<85%	Negligible		
		21144	Ballyboden Road / Whitechurch Road / Willbrook Road	951	791	47	31	<85%	<85%	Negligible		
			Belgrave Square North	11357	Belgrave Square East / Belgrave Square North / Charleston Road / Mount Pleasant Avenue Upper	945	1036	68	47	<85%	<85%	Negligible
		61000	Belgrave Square North / Castlewood Avenue	0	810	0	23	<85%	<85%	Negligible		
		Braemor Road	11297	Braemor Road / Lower Dodder Road	1099	1129	59	68	<85%	<85%	Negligible	
	Castlewood Avenue	40073	Castlewood Avenue / Castlewood Park	516	678	15	28	<85%	<85%	Negligible		
P.8	Leeson Street Upper	11136	Leeson Street Upper / Leeson Street Upper	610	869	35	47	<85%	<85%	Negligible		
	Charlemont Street	6100	Charlemont Street / Charlemont Mall	836	945	51	55	<85%	<85%	Negligible		
	Charleston Road	11312	Charleston Road / Cullenswood Road	691	1057	17	32	<85%	<85%	Negligible		
	Leeson Street Upper	11131	Leeson Street Upper / Dartmouth Road	1060	1228	60	64	<85%	<85%	Negligible		

Figure 2.5.19 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIA: Table 17

The assessment presented in Table 17 of Appendix A6.4.4 in Volume 4 of the EIA, shows that the Proposed Scheme would result in negligible traffic impact Castlewood Avenue/Charleston Road and Belgrave Square North as a result of the Proposed Scheme.

In summary, the assessment presented in the Chapter 6 of the EIA indicates that while there is some redistribution of traffic as a result of the Proposed Scheme, the traffic impact is considered to be negligible.

- c. Impact on noise and air quality as a result of redistributed traffic in the Rathmines / Ranelagh area

Air Quality

In accordance with Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (TII 2011), only the assessment of nitrogen dioxide, oxides of nitrogen, PM10 and PM2.5 are relevant for the assessment of road schemes.

In terms of operational impacts, Section 7.4.3.3 of Chapter 7 Air Quality of Volume 2 of the EIA provides the operational phases predicted change in and impact on pollutant concentrations in 2028 as a result of the Proposed Scheme.

The significance of the changes in the concentration of each of the ambient receptors has been determined in the context of the TII significance criteria (TII 2011) and are summarised as follows:

- As shown on figure 7.3 of Volume 3 of the EIAR, the receptors in the Rathmines/Ranelagh area will experience between a negligible to moderate beneficial impact in terms of the annual mean NO₂ concentration.
- As shown on figure 7.4 of Volume 3 of the EIAR, the receptors in the Rathmines/Ranelagh area will experience a negligible impact in terms of the annual mean PM₁₀ concentrations.
- As shown on figure 7.5 of Volume 3 of the EIAR, the receptors in the Rathmines/Ranelagh area will experience a negligible impact in terms of the annual mean PM_{2.5} concentration.

The impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Noise

Section 9.4.4 of Chapter 9 'Noise and Vibration' of Volume 2 of the EIAR assesses the potential impacts of the Operational Phase on noise and vibration levels of the Proposed Scheme.

As noted in section 9.4.4.1.1 of Chapter 9 the output of the traffic modelling has been used to undertake a detailed analysis of traffic noise levels changes.

As noted in Figure 9.4 (Opening Year 2028 Traffic Noise Impact Summary) of Volume 3 of the EIAR, an impact ranging between "Imperceptible/Positive" and "Moderate" (Castlewood Park only) is forecast in the Rathmines/Ranelagh area as a result of the Proposed Scheme. An extract from Figure 9.4 is reproduced as Figure 2.5.20 below.

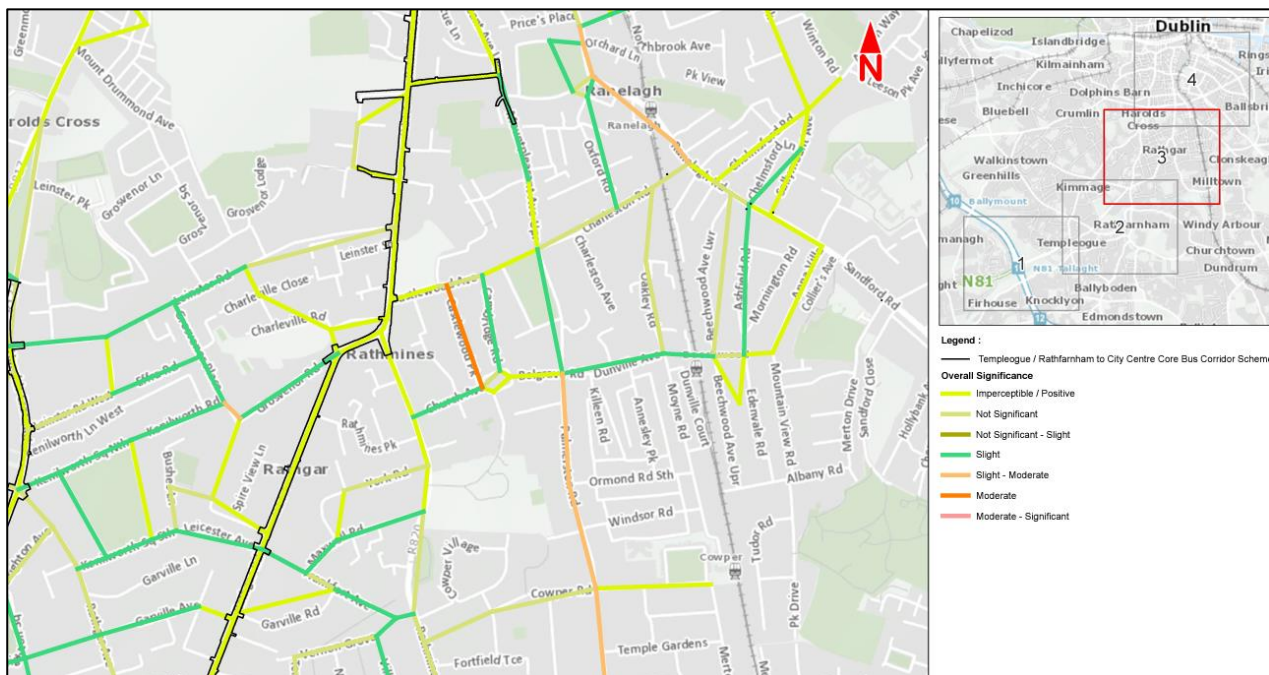


Figure 2.5.20 Extracts from Figure 9.4 in Volume 3 of the EIAR

As noted in Figure 9.5 (Design Year 2043 Traffic Noise Impact Summary) of Volume 3 of the EIAR, an impact ranging between "Imperceptible/Positive" and "Slight-moderate" (Castlewood Park only) is forecast in the Rathmines/Ranelagh area as a result of the Proposed Scheme.

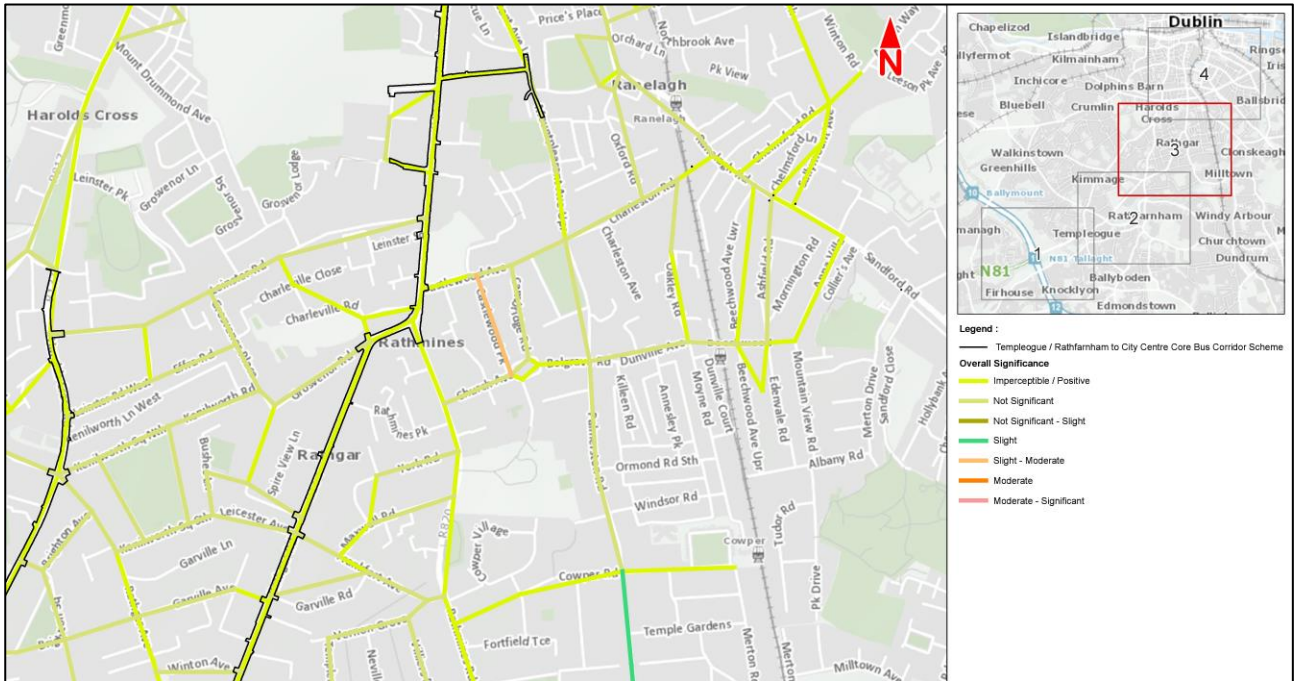


Figure 2.5.21 Extracts from Figure 9.5 in Volume 3 of the EIAR

d. Effect of Turn Bans on Access in Ranelagh

A number of submissions raised concerns about the proposed turn bans in Ranelagh namely:

- Right turn ban from Cullenswood Road to Ranelagh Road
- Right turn ban from Ashfield Road to Ranelagh Road
- Left turn ban from Chelmsford Lane to Ranelagh Road
- Left turn ban from Sallymount Avenue to Ranelagh Road
- Right turn ban from Merton Drive to Ranelagh Road

Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic.

Table 4.25 of Chapter 4 of the Preliminary Design Report details all traffic management measures proposed as part of the Proposed Scheme. An extract from this table is presented in Figure 2.5.22 describing the proposed turn bans in the Ranelagh Area.

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
			Minor amendments to the junction physical layout and staging operation required.
Cullenswood Avenue/Ranelagh Road	No Right turn for general traffic onto Cullenswood Avenue to Ranelagh Road	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to provide a bus gate on Rathmines Road Lower.	Risk of diverted through traffic using this route reduced by removal of ability to travel west-east along Cullenswood Rod and Chelmsford Avenue.
Ashfield Road/Ranelagh Road	No Right turn onto Ranelagh Road from Ashfield Road. No straight ahead onto Chelmsford Lane from Ashfield Road.	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to ban the right turn from Cullenswood Avenue onto Ranelagh Road for General Traffic.	Risk of diverted through traffic using this route mitigated. New sign and pole required at the junction.
Chelmsford Lane/Ranelagh Road	No Left turn onto Ranelagh Road from Chelmsford Lane.	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to ban the right turn from Cullenswood Avenue onto Ranelagh Road for General Traffic.	Risk of diverted through traffic using this route mitigated. New sign and pole required at the junction.
Sallymount Avenue/Ranelagh Road	No Left turn onto Ranelagh Road from Sallymount Avenue.	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to ban the right turn from Cullenswood Avenue onto Ranelagh Road for General Traffic.	Risk of diverted through traffic using this route mitigated. New sign and pole required at the junction.
Merton Drive/Ranelagh Road	No Right turn onto Ranelagh Road from Merton Drive.	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to ban the right turn from Cullenswood Avenue onto Ranelagh Road for General Traffic.	Risk of diverted through traffic using this route mitigated. New sign and pole required at the junction.

Figure 2.5.22 Extract from Table 4.25 of the Preliminary Design Report

It is noted that the right turn ban from Cullenswood Road to Ranelagh Road is proposed to mitigate against potential increases in traffic volumes making this manoeuvre due to the proposed bus gate on Rathmines Road Lower. This turn ban would mitigate the risk of potential increase in traffic volumes on Cullenswood Road/Castlewood Avenue as well as Chelmsford Road. It is further noted that all additional traffic management measures are proposed to mitigate against increase volumes of general traffic redirected as a result of the right turn ban from Cullenswood Road to Ranelagh Road.

It is acknowledged that these turn bans may result in an inconvenience for those living in the area, in particular those on streets such as Ashfield Road, Beechwood Avenue Lower, Mountain View Road, Edenvale Road seeking to access areas to the south or east of Ranelagh.

Figure 2.5.23 presents a sample of the alternative routes available from these areas to the south or east who currently turn right from Ashfield Place or left from Chelmsford Road or Sallymount Avenue.

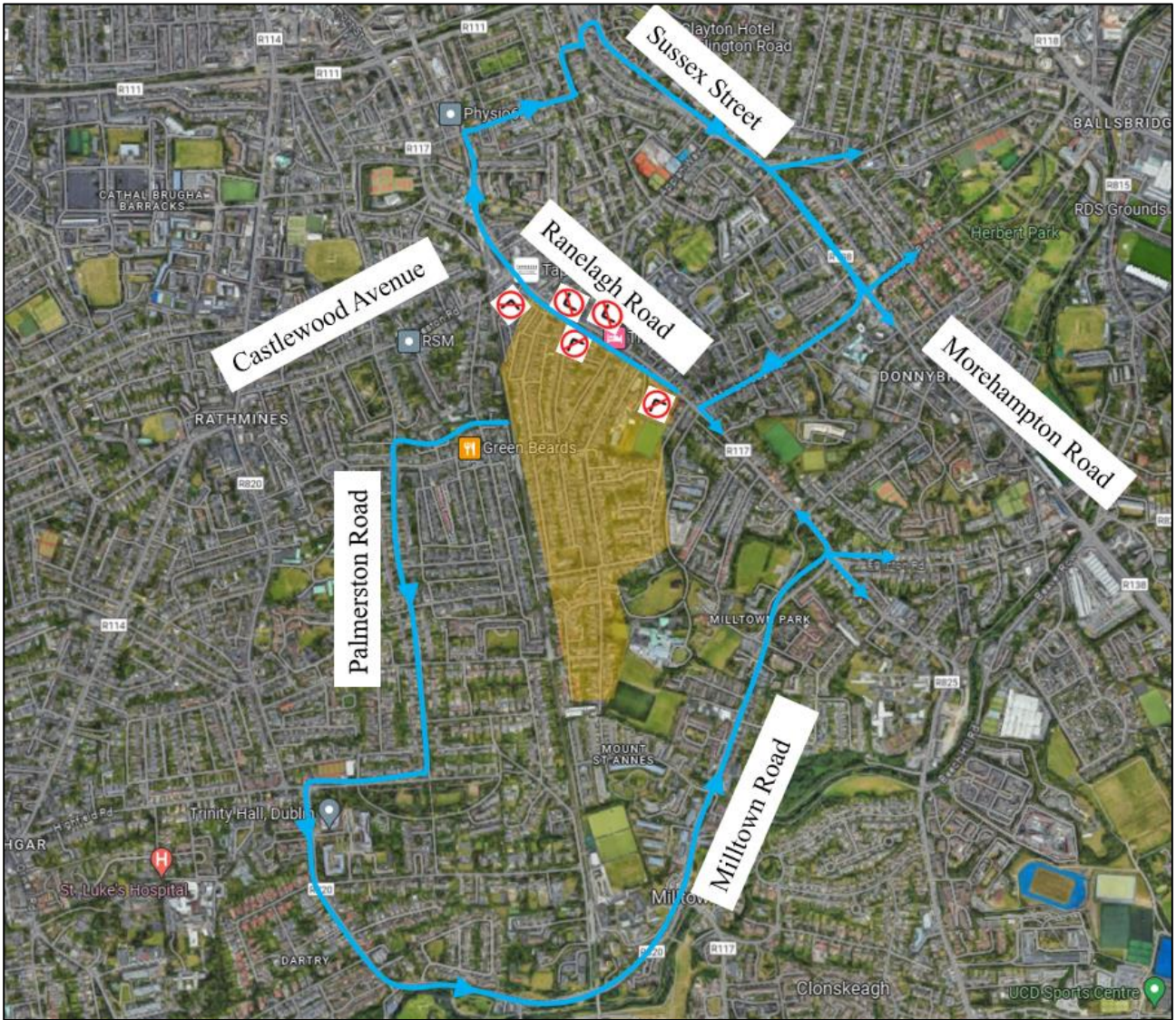


Figure 2.5.23 Alternative access routes from Ashfield Road and surrounds to areas to the east/south

2.5.3.3 Proposed Shuttle Arrangement at Mountpleasant Avenue Upper

Summary of Issues Raised

- a. Need for the proposed shuttle arrangement at Mountpleasant Avenue Upper

A number of submissions note that Mountpleasant Avenue Upper was made one-way over the short section south of Richmond Hill in recent times to improve safety and prevent the practice of cars mounting footpaths to pass oncoming cars. These submissions query why it is necessary to now reintroduce two-way traffic.

- b. Increase in traffic on Richmond Hill/Mountpleasant Avenue Upper as a result

Submissions noted that the proposed shuttle system and subsequent reintroduction of more frequent two-way movement of traffic on Mountpleasant Avenue Upper resulting in previous safety issues being reintroduced.

- c. Inadequacy of Mountpleasant Avenue Lower to accommodate two-way traffic movement, including where traffic would be waiting at a red light at the shuttle system.

Submissions noted concern that the Proposed Scheme would result in cars once again mounting footpaths to pass each other. Some submissions noted that insufficient space exists at the stop lines for two cars to pass making the shuttle system unworkable.

d. Impact of proposals on cycle facilities

Submissions noted that the proposed shuttle arrangement would provide an inferior arrangement for cyclists given the removal of a short section of contraflow protected cycle track (c. 35m in length) just south of Richmond Hill

- e. Alternative measures could be introduced to improve access without impacting on Mountpleasant Avenue Upper.

Some submissions noted that access to/from Rathmines could be improved by permitting the right turn from Castlewood Avenue onto Rathmines Road Upper and the left turn from Rathmines Road Upper onto Castlewood Avenue.

Response to Issues Raised

- a. Need for the proposed shuttle arrangement at Mountpleasant Avenue Upper

Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic. This also lists other traffic management measures proposed to facilitate improved access as a result of other proposed measures. An extract from Table 4.25 of Chapter 4 of the Preliminary Design Report is presented in Table 2.5.2.

Table 2.5.2 Extract from Table 4.25 of the Preliminary Design Report

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Richmond Hill/Mountpleasant Avenue Upper	Right turn reintroduced from Richmond Hill onto Mountpleasant Avenue Upper with new signalised shuttle arrangement.	To mitigate long local diversions required due to the proposal to provide a bus gate on Rathmines Road Lower.	Local diversions mitigated. New shuttle traffic arrangement required at this junction, including signalisation of Richmond Place.
Mountpleasant Avenue Lower	Modal Filter provided on Mountpleasant Avenue Lower north of the junction with Richmond Hill, restricting general traffic while facilitating cyclists.	To mitigate against increased volumes of inbound general traffic redirected as a result of the proposal to provide a bus gate on Rathmines Road Lower.	Risk of diverted through traffic using this route mitigated. New kerb build outs signage required at the junction.

Table 4.25 shows that the proposed shuttle arrangement on Mountpleasant Avenue is to mitigate against long local diversions required due to the proposal to provide a bus gate on Rathmines Road Lower. This is particularly the case for residents in Rathmines and the immediate environs. It is noted that access to/from the area is further restricted by the proposed modal filter on Mountpleasant Avenue Lower which is proposed to mitigate against increase volumes of inbound general traffic redirected as a result of the proposed bus gate.

The proposed shuttle system is intended to provide more route choice for traffic arriving to or departing from Rathmines, whilst noting the restrictions imposed by the proposed bus gate. Without this, traffic leaving Rathmines and travelling to the east/north would be restricted to a route of Rathmines Road Upper, to Church Avenue, to Castlewood Park and east/north via Castlewood Avenue. A similar route would be required for traffic entering Rathmines from the east/north.

The proposed shuttle system facilitates this two-way movement while respecting the restricted geometry along the street, in particular in the vicinity of Richmond Hill.

b. Increase in traffic on Richmond Hill/Mountpleasant Avenue as a result of shuttle system

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

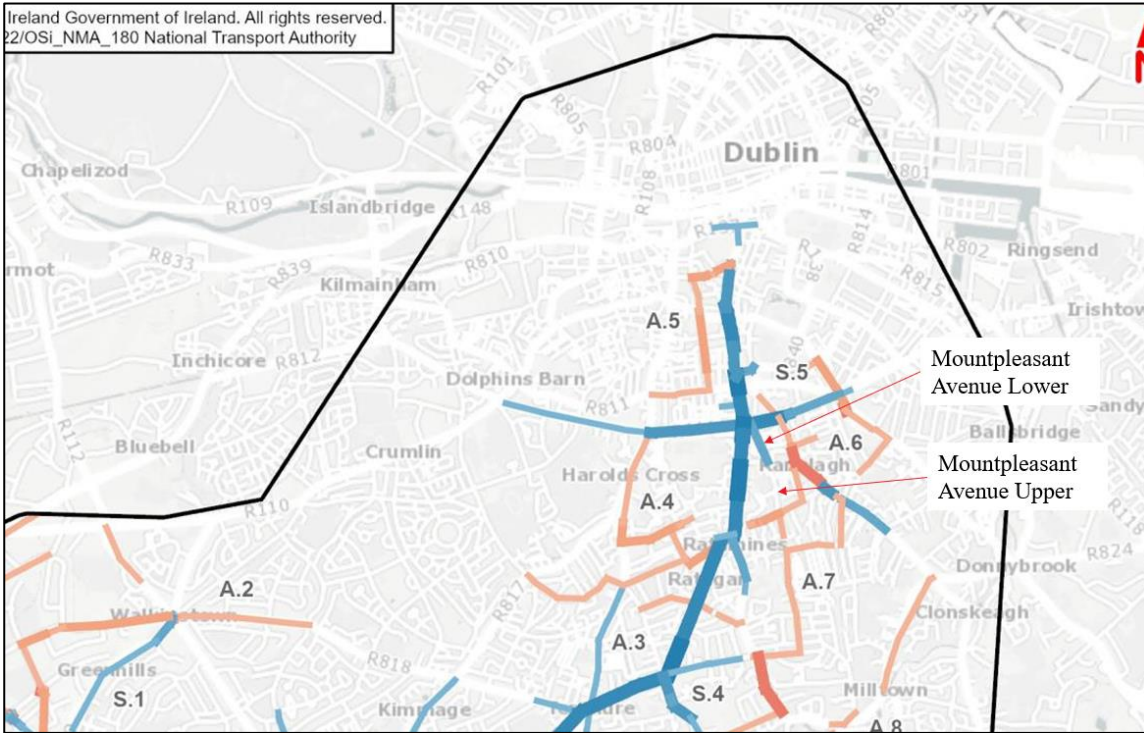


Figure 2.5.24 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

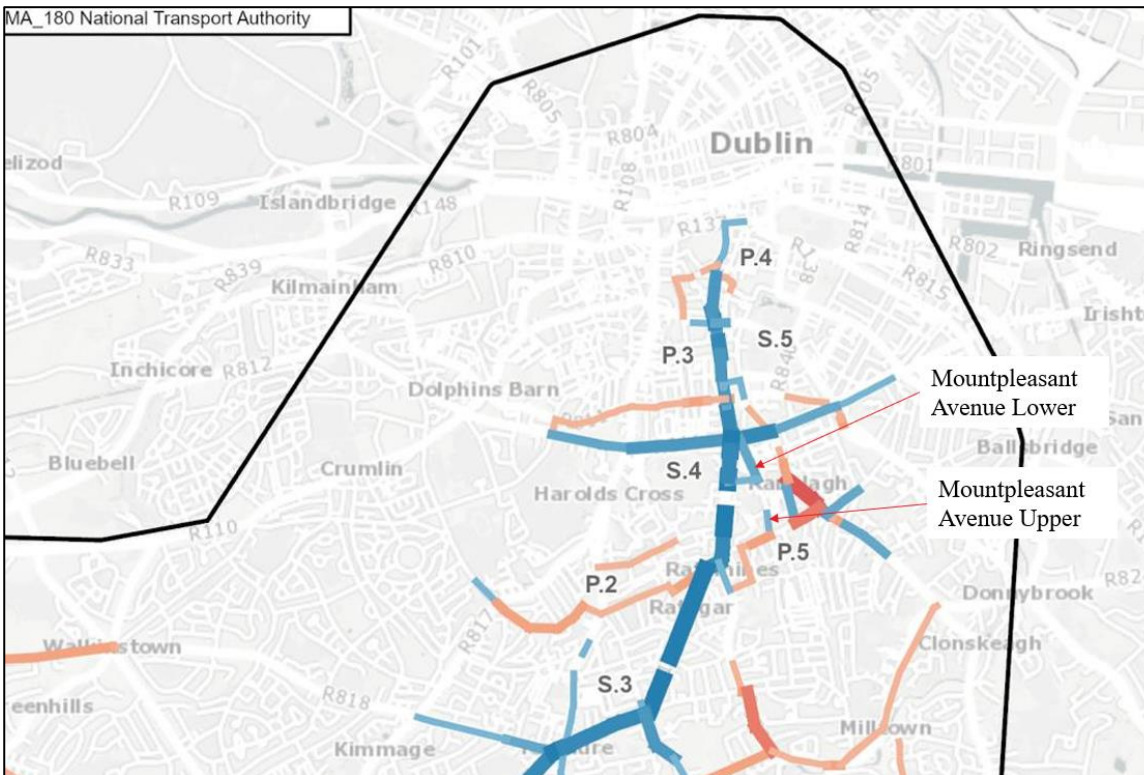


Figure 2.5.25 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken does not identify any material change in traffic volumes along Mountpleasant Road Upper in the morning peak period as a result of the Proposed Scheme i.e. any changes are less than 100 passenger car units per hour.

In the PM Peak period, a small reduction is observed along the southern part Mountpleasant Avenue Upper.

It is further noted that the Proposed Scheme results in a reduction in traffic on Mountpleasant Avenue Lower in both the AM (-252 PCUs) and PM (-243 PCUs) peak periods.

- c. Inadequacy of Mountpleasant Avenue Lower to accommodate two-way traffic movement, including where traffic would be waiting at a red light at the shuttle system.

Mountpleasant Avenue Upper is a residential street which ranges in width along its length from c. 3.9m to 6.3m. The effective carriageway width is reduced to c. 3.4m over short distances to facilitate on-street car parking. Except for a section c. 50m in length between Richmond Hill and Richmond Place which is one-way northbound, Mountpleasant Avenue Upper currently operates as a two-way street.

The Proposed Scheme proposes managing two-way movement over the most restricted section of Mountpleasant Avenue Upper, currently one-way northbound, where forward visibility is restricted and as a result traffic is unable to position itself adequately to pass an oncoming vehicle where space exists. In order to manage two-way traffic through this area in a safe manner a signalised shuttle arrangement is proposed which would only allow traffic in one-direction over this section at any one time. The arrangement presented in the extract from the general arrangement presented earlier as Figure 2.5.5. No changes are proposed elsewhere on Mountpleasant Avenue Upper where two-way movement will continue to be facilitated as per the existing arrangement of an informal uncontrolled shuttle arrangement past pinch points.

In terms of the available width at the proposed stopline location, further consideration will be given to the precise positioning to this stop line at the detailed design stage to ensure there is no risk of vehicles mounting the footpath and if considered appropriate, the stop line may be moved slightly further south where additional road width is available.

In terms of the stopline on Richmond Hill, the carriageway width is 5.8m which is sufficient for traffic turning left to Richmond Hill without the need to mount the footpath. It is noted that vehicles can use the entire width of Mountpleasant Avenue at this location to make this manoeuvre which was not the case prior to the one-way being introduced and when mounting of the footpath at this location was observed (as referenced in some submissions).

- d. Impact of proposals on cycle facilities

Some submissions are concerned that the proposed amendments at Mountpleasant Avenue Upper results in the removal of a protected contraflow cycle lane. It is noted that this facility is provided over a short distance at present and that either side of this no dedicated cycle facilities are provided along Mountpleasant Avenue Upper or Lower. While the Proposed Scheme does remove this section of protected cycle lane, the proposal continues to allow for safe movement of cyclists through the signalised shuttle system. It is further noted that the modal filter proposed on Mountpleasant Avenue Lower, in combination with the high quality cycle facilities proposed on Rathmines Road Lower will result in a significant improvement to cycle facilities in the area. This is reflected in the assessment of cycle infrastructure presented in Table 6.38 of Chapter 6 of the EIAR where cycle infrastructure is identified to improve from a Level of Service C to a Level of Service A upon completion of the scheme.

- e. Measures could be introduced to improve access without impacting on Mountpleasant Avenue Upper.

As noted earlier in this response, the proposed shuttle arrangement on Mountpleasant Avenue is to mitigate against long local diversions required due to the proposal to provide a bus gate on Rathmines Road Lower. A number of submissions suggested that the mitigation could be achieved by permitting the left turn from Rathmines Road Lower to Castlewood Avenue and the right turn from Castlewood Avenue to Rathmines Road Lower, both of which are currently banned. It is noted that the current bans in this location are to remove the Leinster Road – Castlewood Avenue routing which is a continuation of an east-west/west-east connection via Chelmsford Road and Waterloo Road further to the east that acts as an alternative to a route along the canal via Mespil Road – Grand Parade-Canal Road – Grove Road. The introduction of the right turn movement from Castlewood Avenue would reconnect this east-west route and result in a further increase in traffic along Castlewood Avenue which would in turn increase inbound volumes on Rathmines Road Lower and affect the movement of inbound buses through this area between the Castlewood Avenue and Leinster Road junctions. For this reason, it was not considered to be an appropriate mitigation measure.

In terms of the left turn from Rathmines Road Lower, the introduction of this movement would be difficult to achieve safely given the acute angle at which Castlewood Avenue joins Rathmines Road Lower. It would also potentially impact on safety for southbound cyclists travelling through the junction. Furthermore, the proposed removal of the right turn ban from Leinster Road to Rathmines Road Lower to improve vehicular access to the south of Rathmines from the north (including Swan Centre), in combination with the removal of the left turn ban onto Castlewood Avenue would reinstate the Leinster Road – Castlewood Avenue west-east road resulting in an increase in traffic on Castlewood Avenue.

Given the above, it is considered the proposed mitigative traffic management measures in Rathmines, namely the shuttle system on Mountpleasant Avenue, provides a more appropriate means of facilitating access to/from the east of Rathmines.

2.5.3.4 Insufficient Improvements to Public Realm in Rathmines

Summary of Issue Raised

Some submissions note that the proposals do not include enough improvements to the public realm in Rathmines.

Response to Issue Raised

Section 4.5.4.8 of Chapter 4 in Volume 2 of the EIAR sets out the design rationale the streetscape in Rathmines:

Rathmines village will be re-configured and rationalised to reduce the overall carriageway widths, remove slip lanes and provide substantial additional public realm space that will incorporate high quality hard and soft landscaping interventions to establish a much stronger and more appealing pedestrian environment in the core of the village. Materials will be high quality reflecting those of the existing built context, and pavements and kerbs will be rebuilt to unify the core of the village in a manner that reinforces its distinct local character (Refer to Image 4.4).



Image 4.4: Rathmines Village, Rathgar Road and Rathmines Upper Road Junction

Along Rathmines Road, the carriageway will be re-allocated to eliminate general through traffic and thereby reduce the overall vehicular demand and provide opportunities for improving pedestrian and cycle facilities

along the road. The wider pavements and cycle tracks will combine visually to substantially widen the pedestrian zone along both side of the street and to reduce the perception of carriageway to the minimum. New footpaths and cycle lanes will be built using high quality materials to enhance the character and presentation of the streetscape and to provide greater pedestrian facilities and amenity that will in turn underpin the vitality of the retail and services business along the street. There will be some new street tree planting together with localised soft landscaping interventions to soften and add diversity and amenity to the streetscape. A bus gate between Richmond Hill and Lissenfield will substantially reduce traffic volumes along Rathmines Road and contribute to the establishment of a much stronger pedestrian streetscape.

North of the Grand Canal, changes will mostly relate to the re-allocation of roadway to widen footpaths where practicable and to upgrade the build quality of footpaths and kerbs using high quality materials that will improve streetscape presentation and pedestrian amenity. As the street varies locally in width, there are locations where new street trees will be introduced to soften the streetscape and provide and provide localised passive amenity spaces along the busy street. Additionally, the localised variations in width will facilitate the provision of loading bays to serve the retail and commercial uses together with localised on-street parking

Section 17.4.1.4.4 of Chapter 17 of the EIAR presents a further summary of the proposed landscape measures in Rathmines:

- *Provision of enhancements to junctions of Rathgar Road with Grosvenor Road, Rathmines Road / Rathmines Road Upper, including provision of a new public plaza space to the front of 302 to 312 Rathmines Road. There will be provision of high-quality stone paving to the plaza area, high-quality concrete paving to active frontage areas, block paving to parking bays, new tree and ornamental planting, as well as provision of new Sheffield cycle stands. Existing granite kerbs are to be reinstated (Ch.A3600 to Ch.A3800);*
- *Provision of enhancements to the streetscape along Rathmines Road with new street tree planting to footpaths, as well as improvements to paving to footpaths, at side junctions, parking spaces and sections of footpath using high quality concrete paving. Sections of stone paving to be provided to match existing to frontage of Church of Mary Immaculate Refuge of Sinners (Ch.A3800 to Ch.A4670);*

As noted in section 17.5.2.1 Review of Photomontages of Chapter 17 Landscape and Visual of Volume 2 of the EIAR, photomontages have been prepared from key or illustrative viewpoints to give an indication of changes and potential effects resulting from the Proposed Scheme during the Operational Phase after the implementation of the scheme. The proposed views are shown with proposed planting at approximately 10 – 15 years post completion of the Construction Phase.

Figure 17.2.12.2 shows the proposed view from Rathgar Road at Rathmines Road junction looking north-east. The primary change is the rearrangement of the junction to accommodate new cycle tracks, and the creation of a new plaza space on the far side of the junction, including seating, ornamental planting and tree planting. The traffic islands are removed and there is a reduction in street clutter. There is a notable positive change in the visual amenity of the view.



Figure 2.5.26 View 12 Photomontage as Proposed: Rathgar Road at Rathmines Road

Further details of the landscape design proposals in Rathmines are presented in the Landscaping General Arrangement drawings (Sheets 11 to 14).

2.6 Institutional/Lobby Groups

2.6.1 Overview of Submissions Received

Submissions relating to the whole scheme are listed below and detailed in the following sub-sections:

- 084 Development Applications Unit
- 089 Dublin City Council
- 090 Dublin Commuter Coalition
- 091 Dublin Cycling Campaign
- 255 South Dublin County Council
- 281 Transport Infrastructure Ireland

2.6.2 084 Development Applications Unit

2.6.2.1 Overview of submission

The submission noted that the EIAR included a desk based Archaeological Impact Assessment, and the Development Applications Unit (DAU) noted they are broadly in agreement with the findings of the Archaeology and Cultural Heritage. However given the proximity of the Proposed Scheme to Rathfarnham Castle, which is a National Monument, the DAU noted that any works associated with the Proposed Scheme at the boundary of the National Monument will require Ministerial Consent under Section 14 of the Act.

The DAU requested that the following conditions be attached to planning consent:

1. All mitigation measures in relation to Archaeology and Cultural Heritage as set out in Chapter 15 of the EIAR shall be implemented in full, except as may otherwise be required in order to comply with the conditions of the Order.
2. The CEMP shall clearly identify and highlight the location of all archaeological and cultural heritage constraints located in proximity to the proposed works, as identified in Chapter 15 of the EIAR or any subsequent archaeological investigations. The submission went on to state that the CEMP shall clearly describe all identified archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or cultural heritage environment during site preparation and construction works.
3. A Project Archaeologist shall be appointed to oversee and advise on all aspects of the scheme from design to completion.
4. All works at or in the immediate vicinity of Rathfarnham Castle shall be carried out subject to ministerial consent under Section 14 of the National Monuments Act.
5. The Planning Authority and the DAU shall be furnished with a final archaeological report describing the results of the archaeological monitoring and any archaeological investigative work required, following the completion of all archaeological work and any necessary post-excavation specialist analysis. The DAU also stated that all resulting and associated archaeological costs be borne by the NTA.

The reason is to ensure the continued preservation (either in-situ or by record) of places, caves, sites, features or other objects of archaeological interest.

2.6.2.2 Response to Issues

As part of the EIAR, a CEMP has been prepared for the Proposed Scheme and is included as Appendix A5.1 in Volume 4 of the EIAR. The CEMP will be updated by the NTA prior to finalising the Construction Contract documents for tender, so as to include any additional measures required pursuant to conditions attached to An Bord Pleanála's decision. The CEMP comprises the construction mitigation measures, which are set out in the EIAR and NIS.

All of the measures set out in this CEMP will be implemented in full by the appointed contractor and its finalisation will not affect the robustness and adequacy of the information presented and relied upon in the EIAR and NIS.

Chapter 15 in Volume 2 of the EIAR sets out the archaeological baseline in which the Proposed Scheme is located, assesses the potential for archaeological impacts as a result of the Proposed Scheme and sets out the mitigation measures which will be implemented.

In Section 5.1.1.2 of the CEMP (Appendix A5.1 in Volume 4 of the EIAR) outlines that the CEMP is part of the EIAR and should be read in conjunction with it:

"The CEMP has been prepared as part of this EIAR and the NIS, and should be read in conjunction with the following Proposed Scheme specific documents:

- *The EIAR, with particular reference to Chapter 5 (Construction) in Volume 2 of this EIAR;*
- *The NIS;*
- *The Construction Contract; and*
- *Copies of An Bord Pleanála's Order, Inspector's Report and associated documentation....."*

Archaeological mitigation to be implemented is set out in Table 5.2 of the CEMP and it is noted that Table 5.2 should be read in conjunction with the relevant technical assessment chapter (in this case Chapter 15).

Table 5.2 of the CEMP (refer to entries relating to Chapters 15 and 16 within the table) list out the locations of all archaeological and cultural heritage constraints which require monitoring, along with proposed actions associated with each location.

The NTA note the proposed condition to appoint a Project Archaeologist and confirm that section 15.5.1.1 of Chapter 15 of the EIAR sets out that:

"The NTA will procure the services of a suitably-qualified archaeologist as part of its Employer's Representative team administering and monitoring the works. The appointed contractor will make provision

to allow for archaeological monitoring, inspection and excavation works that may arise on the site during the Construction Phase.”

Mitigation related to archaeological management is outlined in Chapter 15 of the EIAR (section 15.5.1.1.1) and also summarised in Chapter 22 of the EIAR and Table 5.2 of the CEMP. The issue of funding with respect to archaeological excavation is acknowledged by the NTA:

“As part of the licensing requirement and in accordance with the funding letter, adequate funds to cover excavation, post-excavation analysis, and any testing or conservation work required will be made available.”

The submission notes the status of Rathfarnham Castle as a National Monument, and notes that all works at or in the vicinity of the National Monument should be carried out under Ministerial Consent under Section 14 of the National Monuments Act.

The NTA welcomes the engagement of the DAU in this regard. Section 15.5.1.4.1.1 of Chapter 15 of the EIAR notes the following:

“With regard to ground-breaking works (as defined in Section 15.5.1.1) in the environs of Rathfarnham Castle and shown on Sheet 1 of 19, Figure 15.1 in Volume 3 of this EIAR), archaeological consent is required from the Minister of DHLGH. Archaeological site investigation and monitoring of the works will require Ministerial Directions from the Minister under the terms of the National Monuments (Amendment) Act 2004:

- Within the landscaped park grounds that surround Rathfarnham Castle, a National Monument, at the preconstruction and post planning stage of works should planning be granted. Test excavation will take place once vegetation and scrub have been cleared along the 3m working corridor proposed for the establishment of a new boundary treatment for the castle.*
- Archaeological monitoring along the Rathfarnham Road (R115) that lies to the west of Rathfarnham Castle and in the vicinity of the possible remains of an underground passageway that was revealed through archaeological excavation previously (Excavations 1994; Carroll 1994; Carroll 1995) will take place.”*

The NTA intend to fully comply with the requirements of Section 14 and 14A of the 1930 act to obviate the need for the type of condition proposed by DAU at Point No. 4 of their submission.

This is further noted in Table 5.2 of the CEMP as mitigation measure reference ACH19 as follows:

“Ground-breaking works in the environs of national monuments will require archaeological consent from the Minister of Housing, Local Government and Heritage. National monuments on or in the vicinity of the Proposed Scheme are Rathfarnham Castle, and the sites of the City Defences (Kevin’s Gate) on Wexford Street and an unmanned gate at Redmond’s Hill. Mitigation measures, in these instances, will be archaeological test excavation and archaeological monitoring at Rathfarnham Castle and archaeological monitoring at the city defences of all ground-breaking, excavation or earth-moving works, under Ministerial Directions from the Minister, under the terms of the National Monuments (Amendment) Act 2004.”

With regard to the provision of a final archaeology report, it is acknowledged in Section 15.5.1.1 in Chapter 15 of Volume 2 the EIAR that when archaeological excavation takes place, there will be a paper and digital archive of the works:

“Archaeological excavation ensures that the removal of any archaeological soils, features, finds and deposits is systematically and accurately recorded, drawn and photographed, providing a paper and digital archive and adding to the archaeological knowledge of a specified area (i.e. preservation by record).....”

It is the intention of the NTA that liaison continues with the relevant bodies including the Department of Housing, Local Government and Heritage and the conservation departments of SDCC / DCC in advance of, and during, the subsequent construction stage of the Proposed Scheme. This engagement will continue to take their requirements into consideration, where aligned with and consistent with the EIAR.

The NTA are aware that the Archaeological Heritage and Miscellaneous Provisions Act 20023 (Act 26 of 2023) was signed into law on the 13 of October 2023 by the President of Ireland, but are cognisant that it has yet to be commenced by the Minister.

The NTA acknowledge the changes being brought on by this piece of legislation but are satisfied that such changes will not affect the assessment nor the findings of the archaeology assessment as presented in Chapter 15 in Volume 2 of the EIAR.

2.6.3 089 Dublin City Council

2.6.3.1 Overview of submission

Dublin City Council's (DCC) submission comprised of 63 pages and is sectionalised numerically. For ease of reference the DCC section numbering and sub-section numbering conventions have been retained throughout the NTA's response as set out in the following paragraphs.

The NTA's response to the submission is set out as follows:

- A. Role of NTA & Liaison with DCC
- B. Support for the Scheme
- C. Certain Observations Raised/Clarification Sought by DCC
 - C1 – Response to Section 2.1 Relevant Planning History
 - C2 – Response to Section 2.2 Policy Context
 - C3 – Response to Section 2.3 Departmental Reports, including reference to the Appendix
 - C4 – Response to Section 2.4 Planning Assessment (sub-sections 2.4.1 to 2.4.11)
 - C5 – Response to Section 2.5 Conclusion
 - C6 – Response to Appendix to DCC Submission

2.6.3.2 Introduction

The Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (hereinafter referred to as the "Proposed Scheme") within the Dublin City Council area is one of 12 schemes to be delivered under the BusConnects Dublin - Core Bus Corridors Infrastructure Works (hereinafter referred to as the "CBC Infrastructure Works"). The CBC Infrastructure Works is one of the initiatives within the NTA's overall BusConnects Programme.

2.6.3.3 A - Role of the National Transport Authority (NTA) and Liaison with Dublin City Council (DCC)

For context, the Environmental Impact Assessment Report (EIAR) Chapter 1 Introduction, Section 1.4, Role of the National Transport Authority, of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme EIAR (Volume 2 of 4) states:

"The NTA is responsible for the development and implementation of strategies to provide high quality, accessible and sustainable transport across Ireland.

The NTA has a number of statutory functions including the following which are relevant to the Proposed Scheme:

Develop an integrated, accessible public transport network;

Provide bus infrastructure and fleet and cycling facilities and schemes; and

Invest in all public transport infrastructure.

Specifically, under Section 44(1) of the 2008 Act (as amended), 'in relation to public transport infrastructure in the GDA, the Authority shall have the following functions:

- a. to secure the provision of, or to provide, public transport infrastructure;*
- b. to enter into agreements with other persons in order to secure the provision of such public transport infrastructure, whether by means of a concession, joint venture, public private partnership or any other means; and*
- c. to acquire and facilitate the development of land adjacent to any public transport infrastructure where such acquisition and development contribute to the economic viability of the said infrastructure whether by agreement or by means of a compulsory purchase order made by the Authority in accordance with Part XIV of the Act of 2000.*

The Board of the NTA, at its meeting on 18 October 2019, considered whether the function of providing the public transport infrastructure comprising of the CBC Infrastructure Works should be performed by the NTA itself under the provisions of Section 44(2)(b) of the 2008 Act. Following consideration, the Board of the NTA decided that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA.

The NTA established a dedicated BusConnects Infrastructure team to advance the planning and construction of the CBC Infrastructure Works, including technical and communications resources and external service providers procured in the planning and design of the 12 Proposed Schemes.”

In early 2019, as indicated by Dublin City Council (DCC) in its submission, a multi-disciplinary corporate team (the DCC BusConnects Liaison Office) was established to provide a liaison role with the NTA. The purpose of this team/office is to effectively manage the communications and act as the primary conduit for information exchange between DCC and the NTA in relation to the BusConnects Programme.

As DCC states in its submission, this dedicated DCC BusConnects Liaison Office has facilitated the exchange of information and engagement with other departments and sections within DCC regarding the design of the Proposed Scheme.

The NTA is grateful for the positive and constructive liaison that has occurred with the DCC BusConnects Liaison Office throughout the design and planning process to date, and through that liaison office with other Departments and Sections within DCC regarding the progression of the Proposed Scheme.

2.6.3.4 B - Support for the Scheme

In its submission, DCC confirmed its support for the Proposed Scheme, and stated in their conclusion on page 53 of the submission:

“The proposed Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme is supported and welcomed by Dublin City Council as it will ensure the delivery of a number of key policies and objectives of the Dublin City Development Plan 2022-2028. ”

DCC further confirmed (at page 53 of its submission) that the development of the Proposed Scheme will provide an upgraded and expanded bus network and quality of service together with better quality cycling and pedestrian facilities and DCC acknowledged that these improvements will make it easier for people to access and use public transport.

It also acknowledged that the Proposed Scheme will, in turn, promote modal shift from the private car to more sustainable forms of transport including walking, cycling and public transport, ultimately contributing to the creation of a greener and more sustainable city.

In relation to planning policy, the NTA welcomes the acknowledgement by DCC (at page 12 of its submission) that, in terms of Regional Policy, the Proposed Scheme is supported by the Regional Spatial and Economic Strategy (RSES) and that DCC is of the view that the Proposed Scheme will contribute to, and support, continued improved integration of transport with land use planning and the delivery of improved high-capacity Core Bus Corridors will enable and support the delivery of both residential and economic development opportunities, facilitating the sustainable growth of Dublin City and its metropolitan area, not only seeking an improved and enhanced bus network but also places cycling at the core of its transport objectives.

In relation to the Dublin City Development Plan 2022-2028, the DCC submission (page 10) notes:

“Dublin City Council (DCC) supports the improvement of public transport and cycling which will allow for higher density development, thereby creating a more sustainable interaction between land-use and transport.”

In relation to the EIAR, DCC stated (at page 13 of its submission) that: *“A comprehensive EIAR is provided with the application examining the project under all relevant impacts and finds generally that the development would not adversely impact on existing environmental amenities” and they go on to say that “the content [of the EIAR] points generally to the development having negligible impact on the existing environment”.*

In relation to the Natura Impact Statement (NIS), DCC stated (at page 14 of its submission) that the NIS submitted is generally satisfactory in terms of identifying the relevant European sites and the potential adverse impacts on the integrity of designated European sites along the Dublin coastline in view of their conservation objectives. DCC go on to state in its submission that: *“the avoidance, design requirements and*

mitigation measures set out in the NIS will ensure that any impacts on the conservation objectives of European sites will be avoided during the construction and operation of the Proposed Scheme such there will be no adverse effects on any European sites.”

In relation to zoning, the NTA notes that DCC set out the view on page 14 of its submission that the Proposed Scheme is compatible with the Z1, Z2, Z3, Z4, Z5, Z6, Z9, Z10 and Z15 zones along its route.

On page 15 of its submission, in relation to amenities, DCC stated: *“Dublin City Council is satisfied that the elements of the proposed development which fall within the Council boundary would not have any excessive or undue impact on the amenities of the area”.*

In fact, DCC goes on to state: *“Once complete, the Proposed Scheme will create attractive, functional and accessible places for people alongside the core bus and cycle facilities which will enhance the amenities of the area.”*

The Environment and Transportation Department of DCC set out (at page 16 of its submission) that: *“The Department is generally supportive of the improvements to bus and cycling infrastructure proposed in the overall context of encouraging a shift to sustainable mobility. In this regard the proposal generally aligns with the policies expressed in the Dublin City current and draft Development Plans”.*

DCC stated further that, *“The commitment by the NTA within the BusConnects project to increase the level of priority afforded to the bus service is very much welcomed. The introduction of, for the most part, separated and segregated cycle ways is again welcomed”.* Dublin City Council goes on to state that this will provide better and safer cycling environment and help the bus maintain a steady speed and achieve its journey times.

Also, on page 16 of its submission, DCC stated: *“The Traffic Section is supportive of the integrated sustainable transport proposals and recognises the significant improvements that they will bring in terms of safe cycling measures and in enabling an efficient public transportation service along these routes”.*

On page 18 of the DCC submission, the Roads Department stated: *“The Roads Department is generally supportive of the scheme and its intention to improve bus and cycling provision”.*

On page 43 of the DCC submission, the City Architects Department welcomed in principle the objectives of the Proposed Scheme to support integrated sustainable transport use through infrastructure improvements for active travel (both walking and cycling), and the provision of enhanced bus priority measures. It goes on to state that the Proposed Scheme will facilitate the modal shift from car dependency through the provision of walking, cycle, and bus infrastructure enhancements thereby contributing to an efficient, integrated transport system and facilitating a shift to a low carbon and climate resilient city.

This Department also noted that proposals for public realm upgrades, including widened footpaths, high quality hard and soft landscaping contributing towards a safer, more attractive environment for pedestrians, are included, and that the Scheme has been developed having regard to relevant accessibility guidance and universal design principles so as to provide access for all users.

2.6.3.5 C - Certain Observations Raised/Clarification Sought by DCC

While, as is evidenced from the DCC submission itself, and from the extracts from the DCC submission as outlined above in section B - DCC's support for the Scheme, DCC is supportive of the Proposed Scheme and its improvements to public transport and the shift to sustainable mobility, DCC has also raised certain queries and observations that the NTA has now considered and responds to below.

These queries and observations are enclosed in section 2.0 of the DCC submission, (entitled “Description of the Proposed Development”). The queries and observations are included under a number of sub-headings and for ease of reference the DCC sub-section numbering convention has been retained throughout the following paragraphs.

2.6.3.6 Section 2.1 Relevant Planning History

C1 - Response to Section 2.1

DCC, in this section 2.1 of its submission, listed 11 significant planning applications along, and adjacent to, the Proposed Scheme.

The NTA are aware of these applications and six of them have been included in the cumulative impact assessment in Chapter 21 of Volume 2 of the EIAR. The remaining 5 (planning references: 2550/19; WEB1610/22; 2412/20; 2546/18; 4763/22) have been considered but have been screened out of the cumulative assessment, for reasons such as the developments may have been constructed/completed or that the applications were considered minor in nature/scale.

As acknowledged in Section 5.9 in Chapter 5 in Volume 2 of the EIAR, interface liaison will take place on a case-by-case basis through the NTA, as will be set out in the Construction Contract. This is to ensure that there is coordination between projects, that construction access locations remain unobstructed by the Proposed Scheme works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately.

2.6.3.7 Section 2.2 Policy Context

C2 - Response to Section 2.2

The NTA acknowledges the commentary in Section 2.2 of the DCC Submission in relation to Policy Context and notes that it generally aligns with the policy context set out within the application documents namely EIAR Volume 4 Appendices Part 1 of 4, A2.1 Planning Report for the Proposed Scheme.

Further, some additional observations by DCC over and above those already provided within Table 3.13 of the Planning Report in relation to the Dublin City Development Plan 2022-2028 are welcomed, including that the Proposed Scheme is consistent with Policy SMT11 of the Development Plan, which sets out the necessity to protect, improve and expand on the pedestrian network, linking key public buildings, shopping streets, public transport points and tourist and recreational attractions whilst ensuring accessibility for all, which directly aligns with the Proposed Scheme objectives.

Similarly, it is acknowledged that Policy SC9 of the Development Plan has a direct correlation with the Proposed Scheme's objectives given the various improvements to Key Urban Villages, Urban Villages and Neighbourhood Centres, to support the sustainable consolidation of the city, to align with the principles of the 15 minute city, to provide for the essential economic and community support for local neighbourhoods and to promote and enhance the distinctive character and sense of place of these areas.

2.6.3.8 Section 2.3 Departmental Reports (including reference to the Appendix):

C3 - Response to Section 2.3

The NTA responses to Departmental Reports are set out in the following sections including reference, as appropriate, to the submission's Appendix: "Departmental Recommendations/Conditions". The NTA is grateful for the positive and constructive liaison that has occurred with the DCC BusConnects Liaison Office throughout the design and planning process to date, and through that liaison office with the other Departments and Sections within DCC regarding the progression of the Proposed Scheme.

2.6.3.9 Section 2.4 Planning Assessment

C4 - Response to Section 2.4

2.4.1. Planning Policy

Response to Section 2.4.1:

Note this is responded to in Section 2.2 above.

2.4.2. Environmental Impact Assessment Report (EIAR)

Response to Section 2.4.2:

The NTA notes that DCC state that a comprehensive EIAR is provided with the application documents examining the Proposed Scheme under all relevant impacts.

2.4.3. Natura 2000

Response to Section 2.4.3:

In relation to the NIS, the NTA notes that DCC stated (at page 14 of its submission) that the Natura Impact Statement submitted is generally satisfactory in terms of identifying the relevant Natura 2000 sites and the potential adverse impacts on the integrity of designated Natura 2000 sites along the Dublin coastline in view of their conservation objectives. DCC went on to state in its submission that: *“There is considered to be sufficient distance from the intended route of the bus corridor to SAC and SPA sites, and the avoidance, design requirements and mitigation measures set out in the NIS will ensure that any impacts on the conservation objectives of European Sites will be avoided during the construction and operation of the Proposed Scheme such there will be no adverse effects on any European Sites.”*

The NTA note that the North-West Irish Sea candidate Special Protection Area (cSPA, site code 004236) has recently been announced. Whilst it was announced after submission of the current planning application, it nonetheless adjoins existing SPAs from along the eastern seaboard, the majority of which e.g. South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Baldoyle Bay SPA, Howth Head Coast SPA, Ireland’s Eye SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Lambay Island SPA, Skerries Islands SPA, Rockabill SPA are included within the assessment for the Proposed Scheme. While the bulk of the listed SCIs for the cSPA are largely coastal, a number can venture inland. However, their inclusion as part of the Appropriate Assessment would not alter the outcome of the assessment presented in respect of the Proposed Scheme, as the SCI’s and potential impacts from within the vicinity of the Proposed Scheme have effectively been captured in the NIS submitted in support of the planning application.

2.4.4. Zoning and other designations

Response to Section 2.4.4:

In relation to zoning, the NTA notes that DCC sets out the view on page 17 of its submission that the Proposed Scheme is compatible with the Z1, Z2, Z3, Z4, Z5, Z6, Z9 and Z15 zones along its route.

2.4.5. Impact on amenity

Response to Section 2.4.5:

On page 17 of its submission, in relation to amenities, DCC stated: *“Dublin City Council is satisfied that the elements of the proposed development which fall within the Council Boundary would not have any excessive or undue impact on the amenities of the area”.*

In fact, DCC went on to state (at page 18): *“Once complete, the Proposed Scheme will create attractive, functional and accessible places for people alongside the core bus and cycle facilities which will enhance the amenities of the area.”*

2.4.6. Strategic Observation from the Forward Planning Department of Dublin City Council

Response to Section 2.4.6:

The DCC submission noted that the Templeogue/Rathfarnham to City Centre Core Bus Corridor scheme is fundamental to achieving the strategic objectives envisaged in the Dublin City Development Plan 2022-2028, pertaining to: compact and sustainable urban growth; sustainable mobility and permeability; and placemaking, while significantly contributing towards climate action.

DCC further note that: *“the Proposed Scheme is supported by the high level policies in place in the Dublin City Development Plan 2022-2028.”*

2.4.7. Environment and Transportation Department Comments

2.4.7.1 General Comments

The Environment and Transportation Department of DCC set out (on page 16 of its submission) that:

“The Department is generally supportive of the improvements to bus and cycling infrastructure proposed in the overall context of encouraging a shift to sustainable mobility. In this regard the proposal generally aligns with the policies expressed in the Dublin City current and draft Development Plans”.

DCC stated further that:

“[t]he commitment by the NTA within the BusConnects project to increase the level of priority afforded to the bus service is very much welcomed. The introduction of, for the most part, separated and segregated cycle ways is again welcomed”.

Dublin City Council went on to state that this will provide better and safer cycling environment and help the bus maintain a steady speed and achieve its journey times.

2.4.7.2 Traffic Department (including reference to the Appendix):

On page 16 of its submission, DCC stated:

“The Traffic Section is supportive of the integrated sustainable transport proposals and recognises the significant improvements that they will bring in terms of safe cycling measures and in enabling an efficient public transportation service along these routes”.

DCC’s Traffic Department acknowledged that the modelling work, which was carried out on the corridor of the real-life operation of a full corridor management system using an adaptive traffic control system, allows for a firm basis for how the corridor can be evaluated and to determine its benefits. As set out in the EIAR Volume 2 - Main Chapters - Section 6.4.6.2 of Chapter 6 Traffic and Transport, the micro-simulation modelling demonstrates that bus journey times will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening and 2043 Design Year. On an annual basis this equates to 5,600 hours of bus vehicle savings in 2028 and 7,700 hours in 2043.

Similarly, bus network resilience is a key performance criteria as set out in the EIAR Section 6.4.6.1.14.2 of Chapter 6 Traffic and Transport wherein the Proposed Scheme was tested with an additional 10 buses per hour (from 45 to 55) at the busiest section. Table 6.58 and Diagram 6.38 of the above referenced chapter show that the results indicate that a high level of journey time reliability is maintained. This highlights the benefit that the Proposed Scheme infrastructure improvements can provide in protecting bus journey time reliability and consistency, as passenger demand continues to grow into the future.

The approach to incorporating the SCATS (Sydney Coordinated Adaptive Traffic System) bus priority measures is set out in Section 12.5.3 of the Preliminary Design Report in the Supplementary Information. Through the very positive and constructive liaison with the DCC BusConnects Liaison Office throughout the design and planning process, DCC’s Traffic Department is confirming that DCC will utilise its adaptive traffic control system SCATS to undertake the required traffic management on the corridor to enable the public transport corridor to perform as per the requirements.

Because of the use of a real-world system which has multiple inputs from the Bus AVL system, cycle and pedestrian detection as well as vehicle actuated sensors, the signals will be running multiple sets of timings across the day rather than a fixed set of timings and the use of this technology will facilitate improved corridor operation. This digital infrastructure along with the proposed civil infrastructure combine for the Proposed Scheme to meet its objectives.

The NTA notes that DCC’s Traffic Department recognised that the *“NTA is taking over the role of the Road Authority for the purposes of obtaining planning permission for the corridors and that the subsequent construction of the corridors will be undertaken directly by the NTA via their contractors”.*

The NTA notes the comment from DCC’s Traffic Department that the design of this scheme is complex and refers specifically to the proposed use of bus priority signals, bus gates and a combination of one way systems and turn bank. DCC further went on to state that due to this complexity, in order to achieve the required level of priority for buses and the provision of safe cycling facilities, that it is proposed to remove some existing parking and loading bays. The impact on parking and loading is detailed in Chapter 6 of the EIAR, Traffic and Transport.

This impact has been categorised as a Negligible and Long-term effect in Section 2 and Section 3 and a Negative, Slight and Long-term effect in Section 4 of the Proposed Scheme. This slight effect is considered acceptable in the context of the planned outcome of the Proposed Scheme, which is to improve accessibility to this local area (on foot, by bicycle and bus) for residents and visitors to local shops and businesses.

DCC further noted that the enhanced data garnered by DCC from the next Generation AVL system and the next generation Bus priority system currently being specified will play a key role in how the corridor is dynamically managed to ensure that the bus journey times and headways are met. The bus gates proposed as part of the Proposed Scheme balance the provision of bus priority and cycle infrastructure through sections where the available space is limited while minimising impacts on the surrounding environment and limiting through traffic in tandem with facilitating local access for residents and businesses; and acknowledging the urban village function of Rathmines Urban Village. This enables the objectives of the Proposed Scheme and the NTA welcomes DCCs comments in relation to the ever-improving dynamic traffic management systems.

The NTA notes the additional comments from the Transport Division (Department) provided in the Appendix. The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Transport Division additional comments provided in the Appendix as these matters were the subject of extensive liaison throughout the design development process including consideration of the traffic management equipment that is necessary for the safe and efficient operation of this Public Transport corridor, and including all traffic signal equipment, and the relevant DCC specification. The NTA is aware of, and acknowledges, the important role of the relevant DCC maintenance contractor, and their continued role on both the existing and new traffic signals.

2.4.7.3. Roads Department

Response to Section 2.4.7.3 (including reference to the Appendix):

The NTA welcomes the comment by DCC that the Roads Department is generally supportive of the scheme and its intention to provide bus and cycling provision.

With regard to ensuring Pedestrian Priority, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

The NTA welcomes DCC's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops and notes that the EIAR Chapter 4, Proposed Scheme Description Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridor Section 11, sets out the key measures to address the concerns raised in relation to vulnerable users at these locations which is further elaborated in Section 4.14 of the Preliminary Design Report in the Supplementary Information.

These details were developed as a result of direct consultation between the NTA and representative mobility groups.

These measures will reduce the potential for conflict between pedestrians, cyclists and stopping buses by deflecting cyclists behind the bus stop, thus creating an island area for boarding and alighting passengers. On approach to the bus stop island the cycle track is intentionally narrowed with yellow bar markings also used to promote a low-speed single file cycling arrangement on approach to the bus stop. Similarly, a 1 in 1.5 typical cycle track deflection is implemented on the approach to the island to reduce speeds for cyclists on approach to the controlled pedestrian crossing point on the island. To address the potential pedestrian/cyclist conflict, a pedestrian priority crossing point is provided for pedestrians accessing the bus stop island area.

At these locations a 'nested Pelican' sequence similar to what has been provided on the Grand Canal Cycle Route will be introduced so that visually impaired or partially sighted pedestrians may call for a fixed green signal when necessary and the cycle signal will change to red. Where the pedestrian call button has not been actuated the cyclists will be given a flashing amber signal to enforce the requirement to give way to passing pedestrians. A 1:20 ramp is provided on the cycle track to raise the cycle track to the level of the footpath/island area onto a wide crossing. Suitable tactile paving is also provided at the crossing point in addition to a series of LED warning studs provided at the crossing location which are actuated by bus detector loops in the bus lane. The exit taper for the bus stop has been nominated at 1 in 3 to provide for a gradual transition to the cycle track.

The NTA notes DCC's comments in relation to impact on loading and servicing and the challenge to balance a wide range of competing demands with public transport, pedestrians, cyclists and the private car.

This challenge directly correlates to the Proposed Scheme objectives as set out in Section 1.2 of Chapter 1 in Volume 2 of the EIAR. The 15-Minute City policy QHSN10 set out in Chapter of 5 of the Dublin City Development Plan 2022-2028 is also supported by the Proposed Scheme objectives. Movement of people is a core design philosophy of the Proposed Scheme as described in the EIAR Volume 2 (Chapter 6, Traffic & Transport), which is centred around positioning active modes and public transport at the top of the modal hierarchy, in line with the principles of the National Investment Framework for Transport in Ireland (NIFTI). Improvements to the urban realm, pedestrian and cycle infrastructure between urban centres and neighbourhoods along the Proposed Scheme including Templeogue, Rathfarnham, Terenure, Rathgar and Rathmines benefit from the 15-Minute City principles. The NTA notes that DCC specifically raise concern in relation to the adequacy of loading provision in busy commercial areas of Rathmines and South Great George's Street in their submission.

Where there are changes to parking and loading arrangements proposed, these are set out in Chapter 4 in Volume 2 of the EIAR. The assessment of impacts on loading and parking for the Proposed Scheme is set out in Chapter 6 Traffic and Transport in Volume 2 of the EIAR and Appendix A6 Traffic Impact Assessment Report in Volume 4 of the EIAR.

Sections 6.4.6.1.3.4, 6.4.6.1.4.4 and 6.4.6.1.5.4 of Chapter 6 in Volume 2 of the EIAR summarise the changes to the parking and loading provisions as a result of the Proposed Scheme within the DCC area. This will result in impacts on commercial and residential parking in this area which are reported in the above referenced sections as follows:

"As shown in Table 6.31 there are approximately 22 current on-street parking spaces affected within the area of the Section 2 of the Proposed Scheme. Under the proposals, seven parking spaces will be lost, all commercial spaces.

This change is considered to have a Negligible and Long-term effect, due to the low numbers of spaces lost and the presence of a large number of similar types of spaces on side roads along Section 2. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor."

"As shown in Table 6.36, there are approximately 76 current parking spaces affected within the area of the Section 1 of the Proposed Scheme. Under the proposals, 32 parking spaces will be lost, mainly commercial parking spaces. This change is considered to have a Negligible and Long-term effect due to the presence of a large number of similar types of spaces within proximity to the affected locations. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor."

and

"As shown in Table 6.41, there are currently approximately 122 parking spaces affected along Section 4 of the Proposed Scheme and it is proposed that 20 of these spaces are removed. The Proposed Scheme will formalise the parking arrangements at these locations to improve the environment, particularly for pedestrians and cyclists.

Given the local number of parking spaces being removed and availability of equivalent types of parking along adjacent streets within 200m of these locations (and typically within under 100m), the overall impact of this loss of parking is considered to have a Negative, Slight and Long-term effect. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor."

As set out in the Traffic Impact Assessment Report under Sections 6.2.2.1.5.4, 6.2.2.1.6.4, 6.2.2.1.7.4 and 6.2.2.1.8.4, the Proposed Scheme will formalise the parking arrangements to improve facilities for

pedestrians and cyclists. Given the availability of equivalent types of parking along adjacent streets within 200m of these locations, the overall impact of this loss of parking is considered to have a Negligible to Low Negative effect overall along the Proposed Scheme. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.

Section 6.4.6 of Chapter 6 of Volume 2 of the notes that parking and loading facilities, including disabled parking bays, have been retained in critical areas, such as on in Terenure Village, on Rathmines Road Lower, Camden Street, and on South Great George's Street. It is further noted that increased provision of cycle parking is proposed as part of the Proposed Scheme. A large number of these proposed cycle parking facilities will be located close to urban villages and areas of commercial activity such as on in Terenure Village, in Rathmines and on Camden Street.

The NTA commissioned a report to assess the economic impact of the infrastructure works, which was based on international published evidence (EIAR Volume 4 Appendices Part 3 of 4 Appendix A10.2 The Economic Impact of the Core Bus Corridors). The evidence examined indicates that the removal of parking spaces is unlikely to have a negative impact on businesses.

Through the very positive and constructive liaison relationship with the DCC BusConnects Liaison Office throughout the design and planning process there has been consultation with the DCC Roads Department in regard to necessary changes to the Pay and Display parking and associated infrastructure to ensure adequate set down/loading for potentially impacted commercial units. As set out above, the design process has balanced the competing needs to achieve the Proposed Scheme objectives. The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Department inputs regarding Pay and Display parking and associated infrastructure for set down/loading for potentially impacted commercial units as these matters were the subject of extensive liaison throughout the design development process.

With regard to access and egress to properties during the Construction Stage, Section 5.5.3.2 of Chapter 5 of the EIAR noted the following:

“When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times.”

As part of the Accommodation Works process with impacted property owners, the final details of such access arrangements will be agreed.

In relation to the proposed width of relocated/altered accesses there are no locations where existing driveways have been altered and a width greater than 3m is proposed.

DCC make reference to the proposed traffic management proposals, which include long stretches of one way traffic and long stretches with banned right turns, which DCC assert may give way to rat running through residential areas. As detailed in Chapter 6 of the EIAR, extensive network level traffic modelling has been carried out to determine the redistribution effect on traffic of the proposed traffic management measures. Mitigation measures have been put in place to prevent rat running through residential areas.

DCC roads department make a number of location specific comments on pages 19 to 26 of their submission. A number of these comments are repeated in various locations across the Proposed Scheme, and as such, for ease of responding, these common comments have been summarised below:

DCC Comment: DCC notes that the width of the proposed cycle track in a number of locations is narrow.

NTA Response: Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4%

following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

DCC Comment: DCC notes that trees are shown within the footpath in a number of locations. DCC state that 2m minimum unobstructed footpath width should be provided.

NTA Response: Section 14 of the PDR outlines the proposed Landscape and Urban Realm design approach. The following is noted in relation to urban trees:

“The overarching planting strategy is to retain established trees and vegetation wherever practicable for their arboricultural, amenity and biodiversity value.

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.”

The significant benefits that urban street trees can provide is noted by the Proposed Scheme, not only in relation to urban design but also in terms of supporting biodiversity and urban stormwater management through the provision of SuDS features.

Figure 4.1 in Section 4.3.1 of the PDR outlines the optimum CBC Infrastructure Works Cross-Section, which includes for street trees within the proposed footpath. While a typical desirable minimum footpath width of 2.0m is desirable, it is noted that Figure 4.2, which is an extract from ‘Building for Everyone: A Universal Design Approach’, notes that over short distances (<2m) a reduced footpath width of 1.2m is feasible. The example presented in this image is of an urban street tree within the footpath. As such, the provision of street trees within proposed footways is considered feasible and appropriate.

DCC Comment: DCC notes that proposed temporary land acquisition shows the acquisition of driveways and gardens from a number of properties adjacent to the Proposed Scheme. DCC request clarity on the impact on access and parking for these properties.

NTA Response: Temporary land acquisition is proposed in a number of locations to facilitate the construction of the Proposed Scheme. Chapter 10 of the EIAR considered the potential community and economic impacts on the human population associated with the Construction and Operational Phases of the Proposed Scheme, including the impacts associated with temporary land acquisition on residential properties. The following is noted in Section 10.4.3.1.2.1 of this chapter:

“A total of 94 community receptors (75 residential properties and 19 community facilities) are impacted by temporary land take as a result of the Proposed Scheme...”

Table 10.8 shows that 12 residential properties are expected to experience significant temporary land take impacts during the construction phase. Of the residential properties that experience significant impacts, seven are located along Rathfarnham Road (67 and 153 – 141), all of which require temporary land take from a large part of the driveways. Two properties at Rathfarnham Wood (10 and 11 – demolition of garden sheds and acquisition of a proportion of rear gardens)) and three at Fortrose Park (11 – acquisition of a proportion of rear garden, 14 and 15 - demolition of garden sheds and acquisition of a proportion of rear gardens)) are expected to experience significant impacts.”

In relation to parking and access during the Construction stage, Section 5.5.3.2 of Chapter 5 of the EIAR notes the following:

“When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times. The location of temporary land acquisition, proposed gates, and the relocation of existing gates are

shown in the Fencing and Boundary Treatment Drawings (BCIDC-ARP-SPW_BW-1012_XX_00-DR-CR-9001) in Volume 3 of this EIA.”

DCC Comment: DCC notes that parking and loading bay widths in a number of locations are narrow. DCC further notes that buffer widths between parking and loading are also narrow.

NTA Response: The Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors is included in Appendix A4.1 in Volume 4 of the EIA. Section 6 of this document outlines the desirable minimum width of parallel parking spaces as 2.1m, and the minimum buffer width between parking spaces and adjacent cycle tracks as 0.75m. Section 6.3 of the PDGB notes that dimensions for loading bays should be the same as for parking bays with a similar buffer zone. These dimensions have been applied in the design of the Proposed Scheme.

In particularly constrained locations, where existing parking bays are being retained, it is proposed to maintain the existing parking bay width, noting that in some cases this may result in parking bays which are narrower than the desirable minimum width of 2.1m.

DCC Comment: DCC notes that raised tables are provided at side roads in a number of locations but are not denoted with typical ramp markings.

NTA Response: Section 8 of the Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors is included in Appendix A4.1 in Volume 4 of the EIA and outlines the preferred design for priority junctions at side roads along the Proposed Scheme. It is noted that this design includes for a continuous footpath and cycle track crossing of the side road on a raised entry treatment. In lieu of a more traditional ramp, it is proposed to provide a step level change between the carriageway and the cycle track through the provision of a splayed kerb. A second splayed kerb will be provided between the cycle track and the footpath. A ramp will be provided at the back of the proposed footpath to ramp back down to carriageway level on the side road and will be marked in accordance with standards (sharks teeth markings). An extract from the PDGB illustrating the proposed layout is included in Figure 2.6.1 below for clarity.

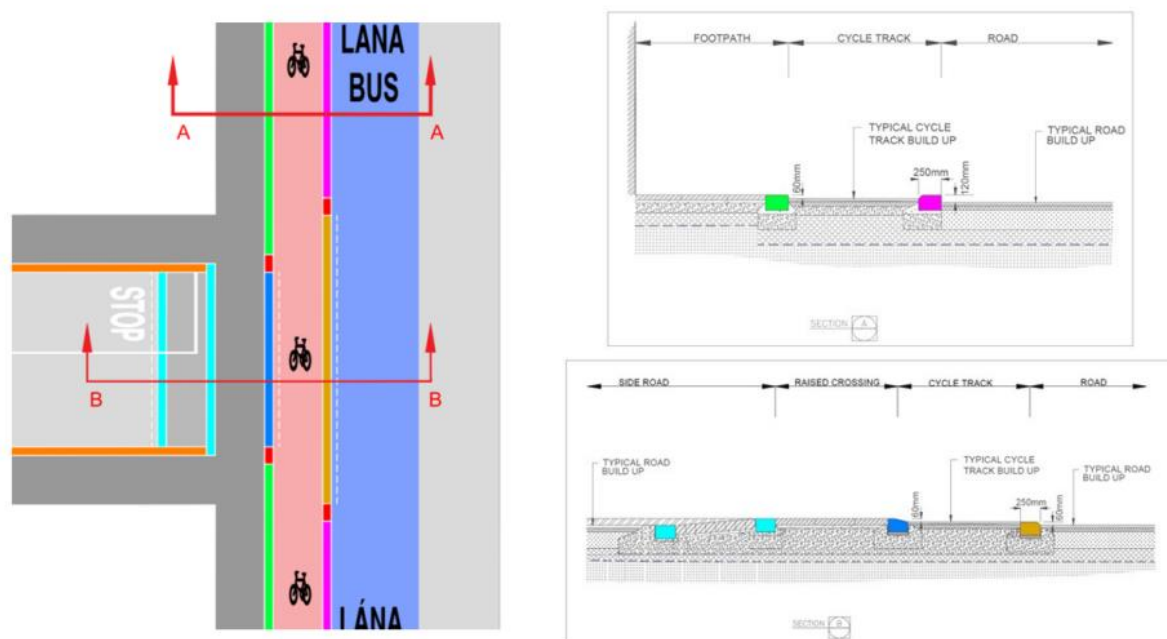


Figure 2.6.1 Extract from PDGB illustrating proposed continuous side road treatment

DCC Comment: DCC notes that proposed trees may impact on junction sightlines and pedestrian desire lines in a number of locations.

NTA Response: Section 4.8.1 of the PDR notes the following in relation to junction visibility:

“An assessment of visibility at major and minor junctions has been completed along the route. In accordance with DMURS, the SSD parameters for relevant design speeds has been adopted as the Y-Distance visibility to be achieved while an X-Distance of 2.4m (reduced to 2.0m as a relaxation) has been implemented.

An assessment of the junction visibility at accesses serving individual properties and single dwellings has been undertaken, ensuring that the existing visibility splay “X” and “Y” are maintained or improved.”

It is further noted that section 4.4.5 of the Design Manual for Urban Roads and Streets (DMURS) states the following in relation to the provision of street trees in the vicinity of priority junctions:

“In general, junction visibility splays should be kept clear of obstructions, however, objects that would not be large enough to wholly obscure a vehicle, pedestrian or cyclist may be acceptable providing their impact on the overall visibility envelope is not significant.

Slim objects such as signs, public lighting columns and street trees may be provided, but designers should be aware of their cumulative impact.”

DCC Comment: DCC notes that the distance between bus stops is longer than existing in some locations.

NTA Response: Section 4.6.5.5 of Chapter 4 of the EIAR sets out the design approach in relation to the positioning of bus stops. The following is noted:

“To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment. The criteria that have been considered when locating a bus stop are as follows;

- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, ‘Tail to Tail’ opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres.

It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.”

Appendix H of the Preliminary Design Report includes a detailed description of the bus stop review undertaken for the Proposed Scheme and outlines the rationale for the relocation of bus stops in line with the above principles, where this is proposed.

DCC Comment: DCC notes the presence of heritage features which may cause pinch points within the footpath and/or cycle track.

NTA Response: The heritage features which are highlighted for retention within the footpath consist of heritage granite paving/kerbing and heritage lighting columns. Paving and kerbing is to be incorporated into the proposed footpaths, so will not create pinch points. Heritage lighting columns are proposed to be relocated where their existing position would create a pinch-point. Mitigation measures for the protection of heritage assets is set out in Chapter 16 of Volume 2 of the EIAR.

DCC Comment: DCC seek clarity on the ‘Left turn to merge’ road marking in the bus lane on approach to a number of junctions.

NTA Response: Section 7.3.1 of the Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors is included in Appendix A4.1 in Volume 4 of the EIAR notes the following in relation to the proposed operation of signal controlled junctions within the Proposed Scheme:

“Taxis and other bus types wishing to turn left will need to exit the bus lane and merge with general traffic in advance of the stop line. In some cases, a separate left-turn lane may be provided with a red signal while other straight movements progress on a green signal. Designers should specify appropriate road markings and signage to inform road users of the requirement for taxis and buses to merge with general traffic to turn

left. A sample of such road markings is shown in Figure 19 where taxis and buses/coaches are advised to exit the bus lane and merge with general traffic in advance of CBC bus priority traffic signals. Merging traffic blocking the buses in the bus lane should be mitigated against through careful design. A nominal distance of 50m from the junction stop line is suggested for locating the merge point.”

This layout is illustrated below in Figure 2.6.2 which is an extract from the PDGB.

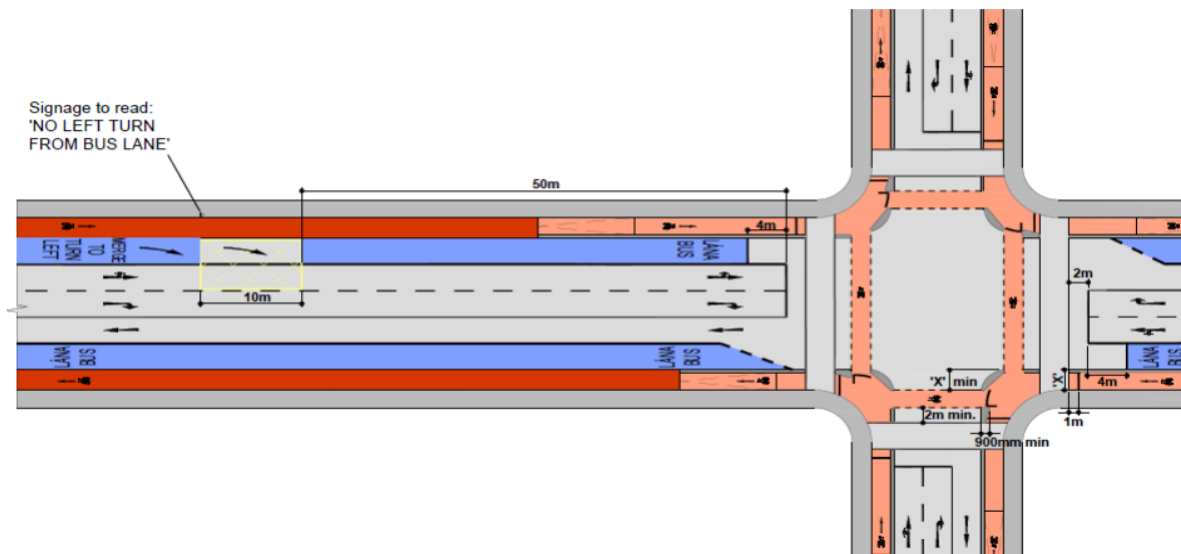


Figure 2.6.2 Merge to Turn Left Road Marking (PDGB Extract)

In addition to the comments above, several comments raised by DCC were specific to a single specific location. These comments are listed and responded to below.

DCC Comment: DCC notes that the accessible parking bay is located too close to the Castlewood/Rathmines Road junction.

NTA Response: The NTA understands that this comment refers to the accessible parking bay on Rathmines Road Upper outside of number 2 Rathmines Road Upper. This accessible parking bay is proposed to be retained in its existing location.

DCC Comment: DCC notes that the bus stop cage at 42 Richmond Street is offset from the bus shelter. DCC have raised concern that bus users will wait for the bus within the cycle track.

NTA Response: The proposed bus stop layout in this location is a Shared Bus Stop Landing Zone arrangement. As noted in section 11.2 of the Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors is included in Appendix A4.1 in Volume 4 of the EIAR:

“In particularly constrained locations within urban centres, where the provision of a bus shelter at the rear of the footpath is not possible due to the presence of frontages, a variation of the Shared Bus Stop Landing Zone arrangement may be considered. This option is presented in Figure 36. This option provides a cantilever bus shelter adjacent to the carriageway, to maintain access to frontages at the back of the footpath.”

Given the presence of a number of business frontages along Richmond Street, the offset bus shelter is considered the most appropriate design response, which provides a bus shelter for waiting passengers without impacting on adjacent businesses. The bus shelter has been placed downstream of the bus stop location to ensure waiting passengers have sufficient visibility to approaching buses.

DCC Comment: DCC query whether the proposed cul de sac Lennox Street has been checked for emergency access requirements.

NTA Response: The proposed cul de sac has been checked for emergency access requirements. It is noted that access to Lennox Street will remain feasible via Synge Street and other side streets connecting to Harrington Street. Richmond Row is in close proximity to the proposed modal filter on Lennox Street, and this road provides a facility for emergency vehicles to turn about if necessary.

DCC Comment: DCC query whether traffic lights will be put in place to cater for cyclists travelling east on Harrington Street and turning onto Camden Street Lower.

NTA Response: It is proposed to provide signal control for cyclists at the Harrington Street/Camden Street junction. Appendix B10 of the PDR outlines the proposed junction system design at this junction. Figure 2.6.3 below is an extract from the design at this junction with the relevant cycle signals circled in orange.

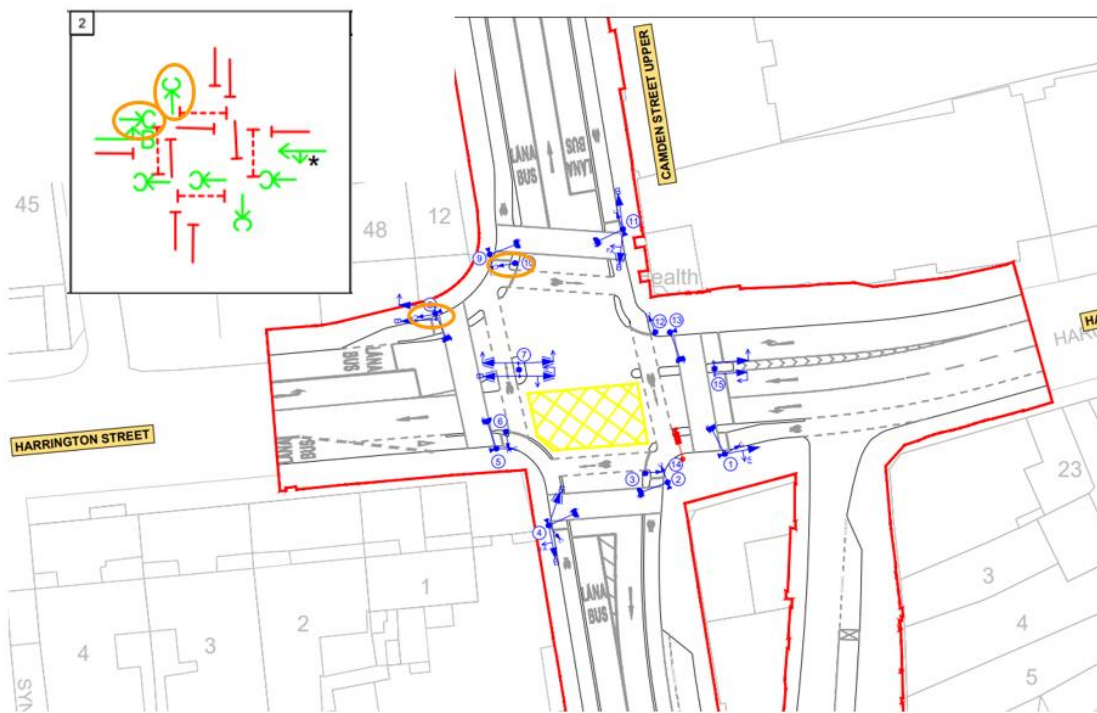


Figure 2.6.3 Extract from Appendix B10 of the PDR highlighting proposed cycle signals from Harrington Street to Camden Street

DCC Comment: DCC request more detail in relation to the proposed traffic shuttle system on Mountpleasant Street Upper.

NTA Response: Section 4.5.4.1 of Chapter 4 of the EIAR notes the following in relation to the proposed general traffic shuttle system on Mountpleasant Street:

“It is proposed to restrict movements on Mountpleasant Street Lower, north of the junction with Richmond Hill to pedestrians and cyclists only through the introduction of planted buildouts. It is also proposed to reintroduce the right turn from Richmond Hill to Mountpleasant Avenue Upper, to facilitate general traffic to turn off of the Proposed Scheme main corridor at Richmond Hill in advance of the Bus Gate and return via Mountpleasant Avenue Upper. Due to the restricted road width at this location, a traffic light shuttle system is proposed to safely manage these traffic movements.”

Sheet 38 of 47 within Appendix B10 of the PDR includes the junction systems design at the proposed shuttle system, including the proposed signal infrastructure as well as the proposed staging.

It is further noted in Section 5.3.5 of the PDR that:

“It is also noted that it is proposed to provide a signalised shuttle arrangement for traffic on Mountpleasant Avenue Upper between Richmond Hill and Richmond Place. This arrangement has not been modelled in LinSig, however has been assessed using traffic modelling first principles and has been found to operate satisfactorily.”

It is noted that a number of similar traffic shuttle systems operate within the DCC area including one on Philipsburgh Avenue in Marino and one at London Bridge on Bath Avenue in Dublin 4. It is anticipated that the proposed shuttle system would operate in a similar manner to these existing shuttle systems.

DCC Comment: DCC seeks clarity on the relocation of the bus stop on Sheet 35 closer to the junction. DCC raised concern that the proposed location may impact on adjacent properties.

NTA Response: Appendix H of the Preliminary Design Report includes a detailed description of the bus stop review undertaken for the Proposed Scheme and outlines the rationale for the relocation of bus stops. The

bus stop referred to in this comment is bus stop number 1160 – Terenure College. The reason for the relocation of this bus stop is noted as:

“This location is closer to the pedestrian crossing better serving the Rathdown Area. Stop is also closer to the Terenure College Entrance.”

The proposed location of the bus shelter is between two residential accesses and the NTA is satisfied that it will not adversely impact on these adjacent properties.

DCC Comment: DCC queries the buildability of the proposed informal path proposed adjacent to Rathdown Park, noting the presence of tree roots in this area.

NTA Response: It is proposed to utilise no-dig construction method for this proposed path in order to minimise the impact on the adjacent tree roots. The Arboricultural Impact Assessment carried out on the Proposed scheme is included in Appendix A17.1 within Volume 4 Appendices: Part 4 of 4. This assessment has considered the potential impact of the Proposed Scheme on the existing trees within the area. The trees requiring removal are clearly identified on the Tree Protection Plan drawings included in Appendix C of the report, as well as documented within the Tree Survey Schedule in Appendix A. The assessment has concluded that the existing trees in this location will not be impacted by formalisation of the path in this location.

DCC Comment: DCC query the viability of the proposed bus shelter outside of 93 Templeogue Road due to the reduced footpath width available here.

NTA Response: It is proposed to widen the existing footpath in this location to approximately 2.2m width. As such, the design team is confident that there is sufficient width in this location to provide the bus shelter as proposed.

2.4.7.4 Environmental Protection Division Comments and Recommended Conditions

Response to Section 2.4.7.4 (including reference to the Appendix):

Through the very positive and constructive liaison relationship with the DCC BusConnects Liaison Office throughout the design and planning process there has been consultation with the DCC Environmental Protection Division in regard to the need for Sustainable Environmental Infrastructure as part of the development of the Proposed Scheme.

The NTA has, in consultation with DCC, followed the principles of integrating Sustainable Urban Drainage Systems with all other environmental aspects of the Proposed Scheme using best practice solutions appropriate to the Proposed Scheme. This has included consideration of a softer engineered approach as applicable to manage surface water at source as a greener, more environmentally effective approach for managing storm water. Section 13.4.1.1 of Chapter 13 of Volume 2 of the EIAR outlines the key design principles for the proposed surface water management design for the scheme.

In regard to the Recommendations/Conditions of the Environmental Protection Division set out in the Appendix, NTA is satisfied as set out above that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Environmental Protection Division inputs regarding criteria and processes as these matters were the subject of extensive liaison throughout the design development process.

These points can be grouped under three general headings, which are responded to below:

Sustainable Drainage and Permeability

The drainage design is based on a number of general principles, which are set out in the document ‘BusConnects Core Bus Corridor Drainage Design Basis’ which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality.

In areas where the catchment is proposed to remain unchanged as no additional impermeable areas are proposed, the design consists of relocating existing gullies (where possible) to new locations.

The details of drainage measures proposed for each catchment and subsequently each water body are provided in Figure 2.6.4 below which is a reproduction of Table 13.13 in Chapter 13 of Volume 2 of the EIAR. It is noted that no new outfalls are proposed as part of the Proposed Scheme.

Table 13.13 Additional Impermeable areas

Existing Catchment Reference (Refer to Table 9.2)	Approx. Impermeable Surface Area			Possible SuDS solution/attenuation measure
	Water Body	Existing (m ²)	Change (m ²)	
Catchment 1	Dodder_050	807	447	RG
Catchment 1	Dodder_050	1,593	181	RG, FD
Catchment 1	Dodder_050	1,533	291	TP, FD, SD
Catchment 2	Owendoher_010	879	904	TP, FD, SD
Catchment 2	Owendoher_010	588	464	TP, FD, OSP
Catchment 2	Owendoher_010	355	37	FD, TP
Catchment 3	Dodder_050	500	30	FD, TP
Catchment 3	Dodder_050	322	61	FD
Catchment 4	Dodder_050	203	97	FD
Catchment 5	Ringsend	1,216	204	TP, FD, SD, OSP
Catchment 7	Ringsend	1,533	317	TP, FD, SD
Catchment 7	Ringsend	495	205	FD, TP
Catchment 9	Ringsend	288	379	TP, FD
Catchment 9	Ringsend	1,726	194	TP, FD, SD
Catchment 13	Dodder_040	483	174	FD, SW
Catchment 13	Dodder_040	292	192	FD
Catchment 13	Dodder_040	348	214	FD, SW
Catchment 13	Dodder_040	576	494	FD, SW
Catchment 13	Dodder_040	1,735	798	AP, OGPR
Catchment 14	Dodder_040	678	404	FD
Catchment 14	Dodder_040	1,759	386	FD
Catchment 14	Dodder_040	1,141	309	FD, RG
Catchment 14	Dodder_040	1,887	174	FD, RG
Catchment 14	Dodder_040	1,888	170	FD, RG
Catchment 15	Dodder_040	157	93	RG
Catchment 15	Dodder_040	1,660	265	FD, RG
Catchment 17	Ringsend	178	42	RG
Catchment 17	Ringsend	2,069	153	OSP
Catchment 17	Ringsend	2,491	239	RG, FD, OSP
Catchment 17	Ringsend	1908	282	OSP

Note: Filter Drains (FD) Tree Pits (TP) Sealed Drains (SD) Oversized pipes (OSP).

Figure 2.6.4 Extract from EIAR Chapter 13 detailing change in impermeable surface area and proposed SuDS features

It is noted that the Dublin City Council Sustainable Drainage Design and Evaluation Guide was being developed while this planning application was in preparation and was, therefore, not available during that stage of the overall design process. However, subsequent to this the Evaluation Guide has been reviewed and the NTA are satisfied that the scheme proposal is compatible with the guide.

The NTA also confirms that it will liaise with and develop the detailed design of the scheme drainage in collaboration with DCC Drainage Planning, Policy and Development Section and will similarly liaise and collaborate in relation to connections and diversions. Any additional required surveys on the location and condition of surface water infrastructure sewers will be undertaken by the NTA.

Drainage Details

A number of comments refer to the proposed drainage details included in the ‘BusConnects Core Bus Corridor Drainage Design Basis’ which is noted in section 4.6.14.1 of Chapter 4 of the EIAR as one of the

relevant guidance documents for drainage design. This document is included as Appendix K of the Preliminary Design Report in the Supplementary Information. In this regard it is noted that the Proposed Scheme, and indeed the BusConnects Dublin Infrastructure Works as a whole, interacts with numerous local authorities, who have differing requirements in relation to drainage details.

The BusConnects Core Bus Corridor Drainage Design Basis document includes options for consideration that have been developed with regard to the necessary standards and good industry practice.

The NTA will continue to liaise closely with Dublin City Council Environmental Protection Department and will take their requirements into consideration where aligned with the EIAR.

In relation to the specific Items raised in the submission, the following is noted:

Item 1: Preference has been given to nature-based SuDS solutions (tree pits/rain gardens interlinked by filter drains) however the following constraints were experienced in the design:

1. The SuDS solution did not provide sufficient storage to attenuate the discharge down to the allowable discharge rates. In these situations, oversized pipes were used to augment the storage capacity of the SuDS solutions.
2. There was insufficient space available in the public realm in some locations to accommodate the SuDS solution due to the presence of existing underground utilities in the proposed/existing footpath. In these situations, the practicable solution was to employ oversized pipes.

Item 2: This information is provided on the layout drawings within the text leaders.

Item 3: A hierarchical approach was used to select SuDS drainage solutions for the Proposed Scheme which drew upon the SuDS management train approach in the CIRIA SuDS Manual. The selected SuDS drainage solutions recognised the scheme constraints which included land availability, public realm constraints, constraints imposed by the presence of underground services & also followed the SuDS management where possible.

Item 4: Noted. Liaison with DCC will continue during the development of the detailed design of the Proposed Scheme.

Item 5: Manholes have been provided for all flow control structures prior to connecting into the existing networks in-line with GDR COP.

Item 6: The filter drains, pipes & oversized pipes have sufficient storage volume to deliver scheme drainage design criteria, this has been confirmed through preliminary hydraulic models. The pipe diameters & length are listed in Table 9.5 of the Preliminary Design Report.

Item 7: This information is provided on the layout drawings within the text leaders.

Item 8: This design check has been carried out and the design team is confident that the design as proposed is viable with all levels working.

Item 9: Yes, clash detections have been carried out.

Item 10: SDCC has made an allowance in both the Templeogue Village Drainage Network & attenuation Tanks for the BusConnects catchments that drain to it.

Item 11: The bio retention area across the road could potentially provide the storage required however it is worth mentioning that said SuDS feature is already treating a significant impermeable area & is further constrained by the public realm & underground utilities. Any further increases in impermeable area could be beyond its capacity.

Item 12: Preliminary hydraulic models were created for each & every network to ensure that they all conform to drainage design criteria thus providing the volume of attenuation required. The pipe diameters & length are listed in Table 9.5 of the preliminary design report.

Item 13: The description is correct, there is a short filter drain (20m long) in the proposed footpath.

Item 14: The rodding is proposed to be specified with a D400 rated cover however the comment is noted and during the detailed design development it will be investigated whether the rodding eye can be moved out of the entrance & into the footpath.

Item 15: The new tree is proposed to be planted in a tree pit with the filter drain located underneath. This is a common detail used across the scheme & forms part of the SuDS drainage philosophy.

Item 16: Noted, the note can be amended to reflect that it is just one tree pit with a filter drain underneath & not a series of tree pits.

Item 17: This is a steep section of roadway therefore multiple flow control structures were required to utilize proposed pipes/SuDS features to their full capacity.

Item 18: The number of tree pits was maximized through a coordination process with the underground services.

Item 19: The network alignment was selected to minimize the number of connections into the existing network. It is also worth noting that the level difference across the high & low points is not extreme, therefore the proposed network does not significantly deep.

Item 20: Yes, the proposed drainage network has been clash checked at this location & throughout the Proposed Scheme.

Item 21: In line with Irish Water requirements, the design minimises the number of connections to the existing combined sewer in this location.

Item 22: Clash detection has been carried out.

Item 23: The proposed network flows away from the low point to minimize the number of connections into the combined sewer & also to avoid a potential clash with large existing rectangular surface water sewer.

Item 24: Noted, during the detailed design development this manhole could potentially be moved out of the pedestrian crossing if there is no clash with the existing underground services.

Item 25: Yes, it has been confirmed that there is sufficient horizontal clearance between the proposed & existing infrastructure.

Item 26: This was investigated during the design development however the design team had to adopt the current alignment due to the presence of underground utilities.

Item 27: A clash detection exercise has been carried out on the entire scheme.

Item 28: Arup liaised with SDCC during the development of the said SDCC (Templeogue Village drainage) scheme, providing them with the catchment & additional impermeable areas. The Templeogue Village drainage scheme including attenuation structures was designed within this information in mind. The Templeogue Village Drainage Scheme was constructed in the year 2022.

Item 29: Yes, see response above

Flood Risk

The flood risk associated with the Proposed Scheme is dealt with within the Flood Risk Assessment included in Appendix A13.2 in EIAR Volume 4 Appendices Part 3 of 4. The FRA has been prepared in accordance with the Department of the Environment, Heritage and Local Government (DEHLG) and the Office of Public Works (OPW) Planning System and Flood Risk Management - Guidelines for Planning Authorities (hereafter referred to as the FRM Guidelines) (DEHLG and OPW 2009). The Flood Risk Assessment covers three stages of a Site Specific Flood Risk Assessment (Identification of flood risk, initial flood risk assessment and detailed assessment supported by CFRAM hydraulic modelling). The Flood Risk Assessment also includes the 'Development Management Justification Test' (box 5.1 of the 2009 Planning System Flood Risk Management Guidelines), and concludes that the development satisfies the requirements of the Development Management JT (Justification Test). Refer to section 7.5 of the Flood Risk Assessment report.

In relation to pluvial flood risk, it should be noted that all of the proposed networks have been modelled independently of their length. The proposed networks are attenuated to existing runoff rates before discharging to the existing network. Where possible, SuDS and Green Infrastructure measures have been incorporated, preference has been given to nature based SuDS solutions (tree pits/rain gardens interlinked by filter drains) however the following two constraints were experienced in the design

The SuDS solution will not provide sufficient storage to attenuate the discharge down to the allowable discharge rates. In these situations, oversized pipes will be used to augment the storage capacity of the SuDS solutions

There is no space available in the public realm to accommodate the SuDS solution due to the presence of existing underground utilities in the proposed/existing footpath. In these situations, the only practicable solution will be to utilise oversized pipes.

A separate surface water network will not be provided in areas where there is no space for it due to the presence of existing underground utilities

2.4.7.5 Water Framework Directive

Section 13.1 of EIAR Chapter 13 Water states the following: *“An assessment of Proposed Scheme’s compliance with the Water Framework Directive (WFD) (Directive 2000/60/EC) requirements is provided in Appendix A13.1 WFD Assessment in Volume 4 of this EIAR; the status of WFD water bodies and protected areas within the Study Area are provided in Section 13.3.3 and a summary of the conclusions of the WFD assessment is provided in Section 13.6.3.”*

Section 13.2.2 of Chapter 13 details the relevant guidelines, policy and legislation and the WFD is listed as the first item in Section 13.2.2.1. In the final paragraph of Section 13.2.2.1, it is stated that: *“In the absence of WFD assessment guidance specific to Ireland, the assessment has been carried out using the UK Environment Agency’s ‘Water Framework Directive assessment: Estuarine and Coastal waters’ 2016 (updated 2017) (Environment Agency 2016). No specific guidance exists for freshwater waterbodies. However, this guidance was used as the basis of the UK’s Planning Inspectorate (PINS) Advisory Note 18 ‘Water Framework Directive’ June 2017 (PINS 2017) in which it sets out the stages of an assessment. On this basis it is considered appropriate to use for the assessment of the Proposed Scheme.”*

Appendix A13.1 (Water Framework Directive Compliance Assessment) of the EIAR Volume 4 Part 3 of 4 documents that the design of the Proposed Scheme has taken account of the primary requirements of the EU Water Framework Directive to protect and improve water quality in all waters, including surface waters. These contiguous waterbodies are protected waterbodies under Article 4 of the Water Framework Directive. To support the achievement of the legislative obligations the Proposed Scheme is designed to ensure no deterioration of the status of any waterbody to which it is contiguous with downstream and will not jeopardise the attainment of good ecological and good surface water chemical status. The assessment has been produced in support of the application using publicly available data. It is an assessment in its own right, independent of the EIAR but using the same scheme detail and data, in addition to that which is WFD specific.

In Section 13.3.9.1 of Chapter 13 (Water) of the EIAR, the Dodder_040 and Dodder_050 were assigned high sensitivity given the presence of salmonid species in the river from the IFI. In Section 13.3.9.2 the Owendoher_010 was assigned high sensitivity given the presence of salmonid species. In Section 13.3.9.3 the Liffey Estuary Upper was assigned very high sensitivity as it is upstream of Dublin Bay which is a Special Area of Conservation (SAC) and a Special Protection Area (SPA).

In Section 13.3.9.4 the Grand Canal was assigned high sensitivity due to its direct connection to the Liffey Estuary Lower, which is a Nutrient Sensitive Area and the confirmation of fish species in the canal. To ensure compliance with WFD obligations, Sustainable Urban Drainage Systems have been incorporated into these catchment areas to protect and improve the water quality of the surface water bodies.

An interpretation of the likely effects of the Proposed Scheme with regard to these data is included in the impact assessment section of the WFD compliance (Section 13.6.3 and Table 13.20) which detail the compliance of the Proposed Scheme with the environmental objectives of the WFD.

For chemical status, the evidence-based Compliance Assessment concludes that during construction there is potential for accidental release of chemicals which are on the Environmental Quality Standards Directive (EQSD) list (for example, hydrocarbons); however, with the implementation of control and mitigation measures outlined in the SWMP there will be no significant impacts. No substances on the EQSD list will be released during operation (Table A13.6). Further, it has been concluded that the study area is known to contain sources of known pressures including UWWTP SWOs and a number of Industrial Licensed Emissions. The Proposed Scheme does not include any new discharge points and will not impact the flow or volume of current surface water drainage. A CEMP and a SWMP (Appendix A5.1 in Volume 4 of the EIAR) will also be implemented to mitigate potential impacts in relation to surface water contamination.

The evidence-based Compliance Assessment records that for ecology, habitats and fish were assessed in line with all relevant guidance, as outlined in Tables A13.4 and A13.5 of the Assessment. Risks to ecology under WFD include loss of habitat, loss of protected species and prey species. The assessment concludes that the potential for these impacts will not be significant. WFD Assessment primarily considers the operation of a scheme, however, for biological elements, potential construction impacts are often considered as they have the potential for long-term change if a potential impact is considered to be significant. Therefore, the

Compliance Assessment notes that a CEMP (Appendix A5.1) which includes a SWMP in Volume 4 of the EIAR will be implemented for construction management and sediment control measures, respectively.

The evidence-based Compliance Assessment records that for fish, the risks to the receptor are due to noise from construction and operation; potential release of suspended sediment concentrations, and the creation of plumes as a result; and contaminated surface water runoff.

Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR has determined that, with the incorporation of the various mitigation measures outlined in that Chapter, there are no significant residual noise or vibration impacts during construction or operation. As above, a CEMP and SWMP (Appendix A5.1 in Volume 4 of the EIAR) will be adhered to, to reduce any risk of suspended solid release. In the unlikely event of an accidental spillage, the emergency response plan will be activated, and onsite spill kits utilised. In-stream works will not take place during the closed season (for fish). The bunding of the water body will be carefully monitored and any fish caught within it will be rescued and released downstream. The Proposed Scheme does not propose to increase the current flow or volume of surface water runoff. Overall, the WFD assessment concludes there is no risk of deterioration to fish (ecology) as a result.

The evidence-based assessment completed comprises an appropriately-scoped and comprehensive evaluation of the Proposed Scheme with regard to the WFD, and it concludes that the Proposed Scheme is consistent with the objectives of the WFD.

2.4.8. Archaeology Section Observations

Response to Section 2.4.8 (including reference to the Appendix):

Background

The City Archaeologist sets out that the Proposed Scheme traverses the Zone of Archaeological Constraint for Recorded Monument DU018-020 (Historic City) from Camden Street Lower until the termination of the scheme at Dame Street.

This is acknowledged in baseline environment description contained in Section 15.3.1.1 in Chapter 15 of Volume 2 of the EIAR and the potential impacts are assessed in Section 15.4.3.

The City Archaeologist goes on to reference policies in the Dublin City Development Plan 2022 – 2028 (specifically policy BHA26 related to the protection and preservation of monuments and policy BHA16 related to Industrial Heritage). The Dublin City Development Plan has been considered in the EIAR. It is acknowledged as a data source in Section 15.2.4.1 of Volume 2 of the EIAR.

The policies referenced by the City Archaeologist have been considered in the EIAR and have been set out in Appendix A15.4 in Volume 4 of the EIAR.

The City Archaeologist summarises the findings of the EIAR and goes on to state that “...*A detailed proposed archaeological mitigation is provided in the EIAR for all groundworks that may impact National Monuments, Recorded Monuments, Non-Designated Archaeological Sites and sites of cultural heritage....*”.

EIAR

The NTA notes DCC’s summary of Chapter 15 of the EIAR.

The NTA acknowledges that DCC’s Archaeology Section states that the EIAR chapter provides a desk study of published and unpublished documentary and cartographic sources, supported by a field study.

The NTA notes that DCC acknowledge that as per Section 15.5.1 of the EIAR archaeological monitoring under licence will take place, where any preparatory ground breaking or ground reduction works are required (as defined in section 15.4.1), at all sites of archaeological and cultural heritage along the proposed route, including National Monuments, Recorded Monuments and sites listed in the DCIHR.

The NTA notes DCC’s comment that: “*It is in these areas that there is possibility to disturb intact archaeological layers and material. Licensed archaeological excavation, in full or in part, of any identified archaeological remain(preservation by record) or preservation in situ will be undertaken.*”

Archaeology Department Recommendations

This item is responded to in response to Section C6 of the DCC submission later in this response document.

2.4.9. Conservation Assessment

Response to Section 2.4.9 (including reference to the Appendix):

The Conservation Section references a number of policies from the Dublin City Development Plan 2022-2028:

- *BHA2: Regarding Development of Protected Structures*
- *BHA7: Regarding Architectural Conservation Areas*
- *BHA8: Regarding Demolition in an ACA*
- *BHA9: Regarding Conservation Areas*
- *BHA10: Regarding Demolition in a Conservation Area*
- *BHA 15: Regarding Twentieth Century Buildings and Structures*
- *BHA16: Regarding Industrial Heritage*
- *BHA18: Regarding Historic Ground Surfaces*
- *BHA24: Regarding the Reuse and Refurbishment of Historic Buildings*
- *BHA26: Regarding Archaeological Heritage.*

Section 16.3.1 in Volume 2 of the EIAR sets out summary of the architectural heritage assets in the receiving environment of the Proposed Scheme and references the relevant policy from the DCC Development Plan as appropriate. All of the above policies (except BHA24) mentioned by the Conservation Section in their response are referenced in Section 16.3.1 of the EIAR. BHA24 relates to the reuse and any refurbishment of historic buildings. It is not considered that the works proposed as part of the scheme will give rise to non-compliance with this policy.

Dublin City Tree Strategy 2016 to 2020

DCC quotes the Dublin City Tree Strategy 2016 to 2020. This document is referenced in Chapter 17 Landscape (Townscape) and Visual (in Section 17.2.2.2 and 17.2.3), in Volume 2 of the EIAR.

The Conservation section says that where there is an unavoidable loss of historic trees, the NTA shall ensure that these are replaced with new semi-mature trees to the satisfaction of DCC.

Section 4.6.13.4 states that an Arboricultural Impact Assessment (AIA) Report is included in Appendix A17.1 in Volume 4 of the EIAR. This identifies the likely direct and indirect impacts to trees of the Proposed Scheme along with suitable mitigation measures, as appropriate to allow for the successful retention of significant trees, or to compensate for trees to be removed.

Section 4.6.13.5 describes the typical planting typologies that will be employed on the Proposed Scheme. With regard to new street trees, in Section 4.6.11.5.1, it states that: *“Typically, trees will be semi-mature and where appropriate, selected for having a clear stem height to facilitate visual permeability.”* With regard to new woodland/parkland areas and tree groups, Section 4.6.11.5.2 states: *“.....Elsewhere along the Proposed Scheme, there are smaller areas of existing and proposed woodlands and tree groups that will be retained, reinstated or established in order to provide appropriate landscaping connectivity and design interventions at a range of different spaces, including carriageway boundaries, new landscape spaces arising from junction reconfiguration, reinforcement of established vegetation areas, and also establishing new public realm and landscape opportunity areas. Tree species will be determined by location and will comprise either native woodland trees as set out above, or selected street trees. Additionally, understory planting, long grass and swathes of bulbs will be provided to reinforce the character of landscaped areas along the scheme corridor. A number of different landscaped central median areas exist along the Proposed Scheme, including those within high-capacity dual carriageway and smaller scale medians within suburban and urban settings. Landscaping proposals respond to the different localities and may include grass planting, hedgerows and trees as appropriate in medians within the larger scale roadways, and grasses, ornamental planting, hedgerows and trees within the suburban and urban medians....”*

Architectural Heritage Protection Guidelines for Planning Authorities 2011

The Conservation Section references the Architectural Heritage Protection Guidelines for Planning Authorities 2011 with regard to consideration of proposals affecting boundary features.

These guidelines are referenced in the EIAR Volume 2 (Main Chapters, Chapter 16 Architectural Heritage). For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with the above guidelines.

Department of Culture, Heritage and the Gaeltacht – Technical Advice Series

The Conservation Section references the following guidelines - Paving: The Conservation of Historic Ground Surfaces (2015) and that these should be used to guide any interventions.

These guidelines are referenced in EIAR Volume 2 Main Chapters, Chapter 16 Architectural Heritage. For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with these guidelines.

The Conservation Section also references the guidelines: Iron – the repair of wrought and cast iron. These guidelines are included in the reference list in Appendix A16.3 (Methodology for Works Affecting Sensitive Fabric) and have informed the preparation of the appendix.

Assessment

General Response

The NTA acknowledge that the Conservation Section submission generally welcomes the “*comprehensive assessment of architectural heritage, streetscape and urban environment submitted as part of the EIAR and the proposed mitigation measures across the scheme*”. It is noted that the Conservation Section finds the inventory of architectural heritage sites recorded in Appendix A16.2 in Volume 4 of the EIAR to be comprehensive and accurately describes the quality and status of the heritage structures along the proposed route. The NTA further acknowledge the finding of the Conservation Section that a very thorough study of the receiving environment has been carried out.

The Conservation Section generally agrees with the EIAR findings regarding mitigation and protection measures and that once these measures have been carried out there will be no significant adverse residual impacts on the architectural heritage resource.

Key Impacts

Protected Structures and their Setting

The NTA notes that DCC made specific reference to a number of protected structures:

- a) DCC noted that the Terenure to City Road is bounded by numerous Protected Structures which are included on the subject map sheets. DCC state that all Protected Structures in close proximity to construction works are to be adequately protected and all proximate works are to be supervised by a conservation professional.

The NTA acknowledge the importance of protected structures and their setting and note DCCs comments in relation to the number of protected structures present on Terenure Road East and Rathgar Road. These protected structures have been noted and assessed in Chapter 16 of the EIAR. Section 16.5.1.1 notes the following in relation to potential Construction Stage impacts on Protected Structures:

“Indirect physical Construction Phase impacts are anticipated in six locations, where Protected Structures of National Importance and High Sensitivity share a boundary with the Proposed Scheme. These include Rathfarnham Castle (RMP DU022-014), 21 Aungier Street (RMP DU018-020184), 20 Aungier Street (RMP DU018-386), 10 and 10a Aungier Street (RMP DU018-385), 9 and 9a Aungier Street (RMP DU018-384) and the South City Markets (DCC RPS 3214 to 3223). There is potential for damage during construction. The pre mitigation Construction Phase impact is Indirect, Negative, Significant and Temporary. The proposed mitigation is the recording, protection and monitoring of the Protected Structures prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic

Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight, Temporary.”

- b) DCC highlights that the principal direct impact of works will be to a number of boundaries to Protected Structures during the Construction phase. DCC list the following locations

74, 76 and 78 Terenure Road East, 59 to 69 Terenure Road East and 50 to 62 Terenure Road East. DCC highlights that the proposal is to reposition the boundaries to these properties to facilitate the proposed bus and cycle facilities.

It is noted that the land acquisition at front boundaries of some protected structures will require the deconstruction and relocation of boundary walls and entrance gates, as well as a permanent impact on mature gardens and trees. DCC notes the proposed mitigation which is set out in Section 16.5.1.1 of the EIAR as follows:

“The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR.”

DCC notes that where boundaries to protected structures are to be impacted in this manner that they shall be reinstated at setback location, pending agreement on more detailed design with the Planning Authority’s Conservation Section and having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the relevant DHLGH Advice Series publications.

The NTA welcomes the positive engagement with the DCC Conservation Section NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process including in relation to the final detailing of new street furniture.

The NTA welcomes the positive engagement with the DCC Conservation Section and will continue the very positive and constructive liaison with DCC throughout the detailed design, procurement and construction process including in relation to the final detailing new boundary treatments. It is noted that Accommodation Works discussions will be held with the relevant property owners in order to agree appropriate reinstatement details. The NTA note that the publications mentioned by DCC have been referenced in Chapter 16 in Volume 2 of the EIAR – see responses provided above.

- c) DCC notes that proposed land take will impact the setting and boundary of some protected structures. They specifically mention proposed paving works at Cranford Lodge on Rathgar Road and 48 Harrington Street which DCC notes may also indirectly impact the gates and railing.

DCC notes that no works are proposed to these features but highlight that there is potential for damage of these features during construction. DCC notes the proposed mitigation which is outlined in Section 16.5.1.1 of the EIAR as follows:

“The proposed mitigation is the recording, protection and monitoring of the Protected Structures prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR.”

- d) DCC notes that there is potential for indirect physical impact to high sensitivity nationally important protected structure, including 21 Aungier Street, 20 Aungier Street, 10 and 10a Aungier Street, 9 and 9a Aungier Street. This is highlighted in Section 16.4.3.1 of the EIAR as follows:

“Indirect physical Construction Phase impacts are anticipated in six locations, where Protected Structures of National Importance and High Sensitivity share a boundary with the Proposed Scheme. These include Rathfarnham Castle (RMP DU022-014), 21 Aungier Street (RMP DU018-020184), 20 Aungier Street (RMP DU018-386), 10 and 10a Aungier Street (RMP DU018-385), 9 and 9a Aungier Street (RMP DU018-384) and the South City Markets (DCC RPS 3214 to 3223). There is potential for damage during construction. The premitigation Construction Phase impact is Indirect, Negative, Significant and Temporary. The proposed mitigation is the recording, protection and monitoring of

the Protected Structures prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight, Temporary.”

- e) DCC also highlight the potential for damage during construction to the South City Markets. This is also highlighted in Section 16.4.3.1 of the EIAR, as outlined in the response to item d) above.
- f) DCC notes that bus shelters are to be erected at four protected structures, namely 12 Terenure Road East, 78 Rathgar Road, 153 Rathgar Road and 46 Rathgar Road. This is noted in section 16.4.4.1 as follows:

“Bus shelters are proposed at:

- *12 Terenure Road East (DCC RPS 8063);*
- *78 Rathgar Road (DCC RPS 7072);*
- *153 Rathgar Road (DCC RPS 7120); and*
- *46 Rathgar Road (DCC RPS 7046).*

All four buildings are Protected Structures of Regional importance and of Medium sensitivity. The magnitude of impact of the Bus shelters will be low as in each case the Protected Structures are set back from the road behind existing, or in the case of 78 Rathgar Road (DCC RPS 7072) a reinstated boundary treatment, limiting the visual impact of the proposed bus shelters. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact.”

- g) DCC notes that proposed kerb realignments at 48 Harrington Street and 12 Camden Street Upper, 61-73 Camden Street Lower, 83-87 Camden Street Lower and on the east side of Redmond’s Hill will directly impact granite kerbs on the west sides of Camden Street Upper and Camden Street Lower and on the east side of Redmond’s Hill. DCC further states that the removal of kerbs will carry the potential risk of loss or damage.

This impact is noted in section 16.4.3.7.4 of the EIAR. The assessment notes:

“The magnitude of impact is High. The potential Construction Phase impact will be Direct, Negative, Significant and Temporary.”

Non-Protected Structures and their settings

The NTA notes that DCC made specific reference to a number of locations under this heading:

1. DCC notes that there are a number of additional sites recorded by the NIAH on the subject map sheets. DCC notes that structures/sites in close proximity to construction works are to be adequately protected and all proximate works are to be supervised by a conservation professional.

Section 16.3.1.6 sets out the assessment in relation to National Inventory of Architectural Heritage (NIAH) Structures. It is noted that in addition to those that are Protected Structures, a further 51 buildings or structures of groups of buildings or structures are included in the NIAH survey and are included in Table: 16.9 of the EIAR. Section 16.5.1.4 sets out the proposed construction phase mitigation measures for these structures as follows:

“51 NIAH Structures or groups of NIAH structures of Regional Importance and Medium Sensitivity will front directly onto the Proposed Scheme. These are indicated in Table: 16.9. None of these features will be directly impacted by the Proposed Scheme, but there is the potential for damage during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. The proposed mitigation includes the protection and monitoring of sensitive NIAH features during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from Medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight and Temporary.”

2. The NTA notes that the Conservation department state that coal holes at 44 & 45 Richmond Street will be directly impacted by a proposed land take necessitating their removal and relocation. The Conservation department further note that the impact assessment does not fully discuss the potential impact on the subterranean coal cellars associated with the cover.

In relation to the potential for impact on the subterranean cellars, the following is noted in Section 5.5.3.4 of Chapter 5 of the EIAR:

“Excavations within the City Centre will be minimal, thereby reducing the risk of interference with existing cellars along the Proposed Scheme. At certain locations, cellars extend outwards from buildings into adjoining footpaths or streets.

Cellars, coal holes and light wells have been identified at Section 4b and Section 4c. Cycle track construction works at these locations will impact two coal holes to a cellar on Richmond Street South, involving the relocation of the access chambers to the coal chutes further back from the proposed cycle track and into the footway. Building condition surveys will be completed immediately prior to any works by the appointed contractor, and proposed works will be subject to discussion with identified property owners. Remedial and preventative measures may need to be undertaken to facilitate construction of the Proposed Scheme.

In the unlikely event that works are required to a cellar, works would comprise of lowering the cellar roof, blocking up and backfilling a portion of the cellar or blocking up and backfilling the entire extent of the cellar. Such cellar works would generally commence with the excavation of the footpath. A concrete block wall would then be constructed within the cellar at the location of what is to be the new external wall of the cellar before infilling.”

Section 15.4.3.4.2 in Chapter 15 of Volume 2 of the EIAR notes the following with regard to impact on the cellars:

“...The coal hole covers (CBC1012CH007) at Richmond Street South have a low sensitivity value and the magnitude of impact is medium due to having to relocate them as part of the cycle track proposal. This level of impact is due to a permanent loss of function and a loss of connection with subsurface coal cellars should they exist. This will result in a Negative, Moderate and Permanent impact. The coal hole cover (CBC1012CH008) at Richmond Street South has a low sensitivity value and the magnitude of impact is medium due to having to relocate it as part of the cycle track proposal.

This level of impact is due to a permanent loss of function and a loss of connection with the subsurface coal cellar should it exist. This will result in a Negative, Moderate and Permanent impact....”

3. DCC notes that the proposed land take at 44 & 45 Richmond Street will be in close proximity to a cellar hatch of regional importance, and that there is potential for damage during construction. This impact has been assessed in Section 16.5.1.7.4 of the EIAR where the following is noted:

“The proposed land take at 44 & 45 Richmond Street will be in close proximity to a cellar hatch (CBC1012BTH426) of regional importance. There is potential for damage during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary.

Mitigation consists of the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR, reducing the magnitude of the risk from Medium to Low. The predicted post-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary.”

4. DCC noted that bus shelters are proposed at non-protected structures of regional and local importance including 190 Rathfarnham Road which is of Regional Importance, 59 Rathfarnham Road which is of local importance, 34 Grosvenor Place which is of Regional importance and 32 Camden Street Lower which is of Regional importance.

This impact is documented and assessed in Section 16.4.4.4 of the EIAR as follows:

“Bus Shelters are proposed at:

- 190 Rathfarnham Road (CBC1012BTH037) which is of Regional importance and Medium sensitivity;

- 59 Rathfarnham Road (CBC1012BTH040) which is of Local importance and Low sensitivity;
- 3 Rathfarnham Road (CBC1012BTH058) which of Local importance and Low sensitivity;
- 34 Grosvenor Place (CBC1012BTH174) which is of Regional importance and Medium sensitivity; and
- 32 Camden Street Lower (CBC1012BTH283) which is of Regional importance and Medium sensitivity.

The Magnitude of impact is Low as these architectural heritage structures will be set back from the road behind their boundary treatments which will limit the visual impact of the shelters. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact on the structures.”

Architectural Conservation Areas and Conservation Areas

South Great George’s Street ACA

DCC notes that the proposed paving, landscaping and urban realm works on South Great George’s Street will be within the South City Retail Quarter Architectural Conservation Area which is of medium sensitivity. DCC state that the installation of the proposed paving carries a risk of accidental damage to boundary treatments of protected and other heritage buildings during the Construction Phase. DCC refer to the proposed mitigation which is outlined in Section 16.5.1.2 of the EIAR as follows:

“The proposed paving, landscaping and urban realm works on the Grange Road and Rathfarnham Road will adjoin or will be within the Rathfarnham Architectural Conservation Area which is of medium sensitivity. The installation of the proposed paving carries a risk of accidental damage to protected and other heritage buildings or their boundary treatments during the construction stage. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. The proposed mitigation is the protection and monitoring of sensitive architectural heritage features within the affected areas of the ACA prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from Medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight and Temporary.”

Conservation Areas

DCC notes that three conservation areas (CAs) are located within the route of the bus corridor, including the Grand Canal CA, the Richmond Street to Aungier Street CA and the Dame Street CA. DCC notes that the EIAR states that there will be no direct impacts on any of the conservation areas, but that the installation of paving is described as carrying a risk of accidental damage to Protected Structures and other heritage buildings or their boundary treatment during the construction phase. This potential impact is noted within Section 16.5.1.3 of the EIAR as follows:

“The installation of the proposed paving carries a risk of accidental damage to protected and other heritage buildings or their boundary treatments during the Construction Phase. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. The proposed mitigation is the for the protection and monitoring of sensitive architectural heritage features within the affected areas of the Conservation Areas prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from Medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight and Temporary.”

Designed Landscape

DCC notes that there are designed landscapes of medium sensitivity within the DCC area where there is potential for damage during the Construction Phase, including Cremorne 69 Terenure Road East and Terenure House. This impact is addressed in Section 16.5.1.5 of the EIAR which states the following:

“Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes, and where an adverse visual impact is anticipated during construction. Six designed landscapes of Medium sensitivity were identified in the study area where there is potential for damage during the construction phase, these include the Demesne wall (CBC1012BTH389) to Beaufort House/ Loreto House, Grange Road (NIAH 2350), Cremorne 69 Terenure Road East (DCC RPS 8116, CBC1012BTH147), Spawell House (SDCC RPS 260), Cheeverstown House (SDCC RPS 242), Templeogue House (NIAH 2313), and

Terenure House (NIAH 2332). They are listed Section 16.3.1.6 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. The proposed mitigation is the recording, protection and monitoring of demesne features such as boundaries and entrance features prior to, and for the duration of the Construction Phase.

Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight and Temporary.”

DCC also note that there is potential for damage to designed landscapes of low sensitivity during the Construction Phase, including demesne walls or lodges associated with Westbourne House, 1 to 2 Westbourne Road, Greenmount House 85 Terenure Road East. This impact is addressed in Section 16.5.1.5 of the EIAR which states the following:

“Indirect Construction Phase impacts are anticipated where there is potential for damage to the designed landscapes or their surviving features or where an adverse visual impact is anticipated during construction. Three designed landscapes of Low sensitivity were identified in the study area where there is potential for damage during the construction phase, these include demesne walls or lodges associated with Westbourne House, 1 to 2 Westbourne Road (CBC1012BTH043) Greenmount House, 85 Terenure Road East (CBC1012BTH145) and Templeogue Lodge, 321 Templeogue Road (CBC1012BTH003) They are listed Section 16.3.1.6 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR The pre-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary. The proposed mitigation is the recording, protection and monitoring of demesne features such as boundaries and entrance features prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Not Significant and Temporary.”

Industrial Heritage Sites

DCC notes that there are 13 Industrial Heritage sites identified in the study area, four of which are Protected Structures. These include Pearse Bridge, St. Pancras works, Grand Canal House and the South City Markets. DCC notes that a further two were also identified in the NIAH building inventory. DCC further note that the circular line of the Grand Canal itself has not been assessed by the NIAH but features such as La Touche bridge, Canal Locks and Grand Canal Dock are rated as being of regional importance by the NIAH.

Section 16.3.1.8 in Chapter 16 of the EIAR outlines the Industrial Heritage Sites within the study area. These are listed in Table: 16.11 in the chapter.

Paving

DCC notes that proposed kerb realignments at 48 Harrington Street and 12 Camden Street Upper, 61-73 Camden Street Lower, 83-87 Camden Street Lower and on the east side of Redmond's Hill will directly impact granite kerbs on the west sides of Camden Street Upper and Camden Street Lower and on the east side of Redmond's Hill. DCC further states that the removal of kerbs will carry the potential risk of loss or damage.

This impact is noted in section 16.4.3.7.4 of the EIAR. The assessment notes:

“The magnitude of impact is High. The potential Construction Phase impact will be Direct, Negative, Significant and Temporary.”

DCC further note that the changes in the alignment of the footpaths and proposed paving treatments will be in close proximity to 102 surface treatments identified in Table 2.3 in Appendix 4 of the EIAR. DCC notes that these include granite kerbs, cellar lights and grilles, granite paving, cobbles, coal holes and areas of Regional Importance and Medium Sensitivity. The NTA understands that DCC refer to Table 2.3 in Appendix 16.2 in Volume 4 of the EIAR. The following is noted in Section 16.3.1.10.4 of the EIAR:

“109 paving and surface treatments were identified in the study area and are largely confined to the south inner city. Some kerbs and cobbles were also identified in Rathgar and Rathmines. These predominantly consisted of granite kerbs to the footpaths but cobbles to gutters were identified in Rathgar Road. Because some are located within South City ACA, some are protected. They are summarised in a table and are

described in more detail in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. The descriptions are based on information obtained from site inspections. They are shown on Image 16.1 in Volume 3 of this EIAR. These structures have been assessed using the assessment methodology contained in the NIAH Handbook (NIAH 2021). They are of Local to Regional Importance and of Low to Medium sensitivity.”

Signal Poles

DCC noted that cantilever signal poles are proposed at various locations including mid-20th century houses at 144 to 152 Rathfarnham Road at the junction of Rathfarnham Road and Dodder Park Road, the Church of the Three Patrons on Rathgar Road and at 49 Camden Street Lower.

DCC request that careful consideration be given to the siting of associated utilities and traffic management signage in relation to protected structures and conservation areas, historic paving and historic street furniture. DCC notes that signage should be kept to the necessary minimum and request that consideration is given to the rationalisation of all signage across the BusConnects routes to reduce visual clutter.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable. In relation to the specific locations referenced by DCC the NTA note that the proposed it is noted that these locations have been documented and their impact considered in Section 16.4.4.4 of Chapter 16 of the EIAR as follows:

“Cantilever signal poles are proposed at:

- The mid 20th century houses at 144 to 152 Rathfarnham Road (CBC1012BTH038) on the junction of the Rathfarnham Road and Dodder Park Road. The houses are of Local Importance and Low Sensitivity.*
- The Church of the Three Patrons on Rathgar Road (CBC1012BTH173). The Church is of Regional Importance and Medium Sensitivity.*
- At 49 Camden Street Lower (CBC1012BTH258). The house is of Regional Importance and Medium Sensitivity.*

There are no cantilevers in these locations currently. They have a potential negative visual impact on the Architectural Heritage Structures, the magnitude of impact is Low. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term.”

Street Furniture

Post Boxes: DCC notes that the impact assessment indicates that the cast iron pillar style post box at 50 Terenure Road East will be directly impacted necessitating its temporary removal.

DCC notes that the remaining 13 cast iron post boxes will be retained in situ and will not be directly impacted during the construction phase, however indirect impacts are anticipated during the construction phase.

The NTA notes that the impact described by DCC above is documented in Section 16.5.1.7.1 of the EIAR as follows:

“The cast iron pillar style post box at 50 Terenure Road East (CBC1012PB007) will be directly impacted by a proposed land take necessitating its temporary removal. It is envisaged that the post boxes will be reinstated. There is the potential for loss or damage to the post boxes during removal, transportation, storage, and reinstatement. The pre-mitigation Construction Phase impact is Direct, Negative, Significant and Temporary. The proposed mitigation is the recording of the post box in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and its reinstatement in a new position in close proximity (within 20m) of its existing position. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. The kerb alterations and the proposed cycle lanes will mean that the relocated post box will be set back from the traffic helping to protect it into the future. With mitigation, the magnitude of impact is reduced from High to Low. The predicted residual impact is Direct, Negative, Slight and Temporary.

The remaining 13 cast iron post boxes are of Regional Importance and Medium Sensitivity as outlined in Table: 16.12. They will be retained in position and will not be directly impacted by the Proposed Scheme

during the Construction Phase. Indirect impacts are anticipated during the Construction Phase due to the potential for disruption of the use of the post boxes, the potential for damage of the fabric of the post boxes, and the adverse visual impact of the construction works on their settings. The pre-mitigation Construction Phase Impact is Indirect, Negative, Moderate and Temporary. The proposed mitigation is the recording, protection and monitoring of the 12 post boxes prior to and during the Construction Phase.

Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR. With mitigation, the magnitude of impact is reduced from Medium to Negligible. The predicted residual Construction Phase impact is Indirect, Negative, Not Significant and Temporary.”

Lamp Posts: DCC notes that the lamp post on the traffic island of Rathmines Road Upper is proposed to be moved. DCC further note that eight other lamp posts will be retained in their positions and not impacted directly by the scheme.

The NTA notes the comments from DCC above. In relation to the lamp post to be relocated on the traffic island of Rathmines Road Upper, the following is noted in Section 16.5.1.7.2 of the EIAR:

“Lamp posts of Regional Importance and Medium Sensitivity will be directly impacted during the Construction Phase, where it is proposed that they will be moved to accommodate urban realm improvements, road realignments and cycle lanes. This includes the Lamp post on traffic island at junction of Rathmines Road Upper, Rathmines Road Lower and Rathgar Road (CBC1012LP044). There is the potential for loss or damage to the lamp posts during their removal, transportation, storage, and reinstatement. The pre-mitigation Construction Phase impact is Direct, Negative, Significant and Temporary. The proposed mitigation is the recording of the lamp posts in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the magnitude of impact is reduced from High to Low. The predicted residual Construction Phase impact is Direct, Negative, Slight and Temporary.”

It is noted that two groups of lamp posts of Local Importance, which are not referenced by DCC in their submission, will also be directly impacted during the construction phase. The following is noted in Section 16.5.1.7.2 of the EIAR:

“Two groups of lamp posts (CBC1012LP010 to CBC1012LP013, CBC1012LP041) of Local Importance and Low Sensitivity will be directly impacted during the Construction Phase, where it is proposed that they will be moved to accommodate urban realm improvements, road realignments and cycle lanes. There is the potential for loss or damage to the lamp posts during their removal, transportation, storage, and reinstatement. The pre-mitigation Construction Phase impact is Direct, Negative, Moderate and Temporary. The proposed mitigation is the recording of the lamp posts in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions.

Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the magnitude of impact is reduced from High to Low. The predicted residual Construction Phase impact is Direct, Negative, Slight and Temporary.”

DCC notes that eight lamp posts will not be directly impacted by the Proposed Scheme, however the EIAR notes that eight groups of lamp posts of Region Importance and Medium Sensitivity, and two groups of lamp posts of Local Importance and Low Sensitivity, will not be directly impacted. The following is noted in Section 16.5.1.7.2 of the EIAR:

“Eight groups of lamp posts (CBC1012LP118, CBC1012LP119, CBC1012LP026, CBC1012LP028, CBC1012LP029, CBC1012LP030, CBC1012LP031, CBC1012LP032, CBC1012LP045 to CBC1012LP054, CBC1012LP121, CBC1012LP055 to CBC1012LP057, CBC1012LP059, CBC1012LP060, CBC1012LP061, CBC1012LP062, CBC1012LP064 to CBC1012LP066, CBC1012LP068 to CBC1012LP072, CBC1012LP074 to CBC1012LP080, CBC1012LP081 to CBC1012LP087, CBC1012LP088 to CBC1012LP091, CBC1012LP092 to CBC1012LP101, CBC1012LP103, CBC1012LP104, CBC1012LP105 to CBC1012LP116) were identified where lamp posts of Regional Importance and Medium Sensitivity will be retained in position

and will not be directly impacted by the Proposed Scheme. The proximity of the construction works, including the replacement of the ground surfaces on which the lamp posts sit means that there is the potential for damage to the lamps during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary.

The proposed mitigation is the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 in Volume 4 of the EIA. With mitigation, the magnitude of impact is reduced from Medium to Negligible. The predicted residual Construction Phase impact is Indirect, Negative, Not Significant and Temporary.

Two groups of lamp posts (CBC1012LP014 to CBC1012LP023, CBC1012LP042, CBC1012LP043) were identified where lamp posts of Local Importance and Low Sensitivity will be retained in position and will not be directly impacted by the Proposed Scheme. The proximity of the construction works, including the replacement of the ground surfaces on which the lamp posts sit means that there is the potential for damage to the lamps during construction.

The pre-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary. The proposed mitigation is the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 in Volume 4 of the EIA. With mitigation, the magnitude of impact is reduced from Medium to Negligible. The predicted residual Construction Phase impact is Indirect, Negative, Not Significant and Temporary.”

Coal Hole Covers: DCC notes that coal holes at 44 and 45 Richmond Street will be directly impacted by a proposed land take necessitating their removal and relocation. DCC notes that the removal of the granite surrounds and covers will carry the potential risk of loss or damage, and that the proposal also removed the connection with the cellars beneath. DCC further notes that the proposed land take in this location will be in close proximity to a cellar hatch of regional importance. DCC note that the reports do not indicate if the works pose a direct or indirect impact to the integrity of the underlying cellars.

The NTA notes the comments by DCC. The impact on the coal hole covers and their proximity to the cellar hatch is documented in Section 16.5.1.7.4 of the EIA as follows:

“Coal holes at 44 & 45 Richmond Street (CBC1012BTH425, CBC1012BTH427, CBC1012BTH428) will be directly impacted by a proposed land take necessitating their removal and relocation. The removal of the granite surrounds and covers will carry the potential risk of loss or damage. The proposal also removed the connection with the cellars beneath. The pre-mitigation Construction Phase impact is Direct, Negative, Significant and Temporary. Mitigation will be to record the coal holes in position prior to the works, labelling the affected fabric prior to their removal to safe storage, and the reinstatement of the coal hole surrounds and covers on the new line. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, careful removal, storage and reinstatement of the affected kerbs. Works to coal holes will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIA. The proposed mitigation reduces the magnitude of impact from High to medium. The proposed mitigation will retain the relationship of the coal holes to the associated buildings and streetscape post mitigation but the connection to the associated cellars will be lost. The predicted residual Construction Phase impact is Direct, Negative, Moderate and Temporary.

The proposed land take at 44 & 45 Richmond Street will be in close proximity to a cellar hatch (CBC1012BTH426) of regional importance. There is potential for damage during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. Mitigation consists of the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIA, reducing the magnitude of the risk from Medium to Low. The predicted post-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary.”

In relation to the potential for impact on the subterranean cellars, the following is noted in Section 5.5.3.4 of Chapter 5 of the EIA:

“Excavations within the City Centre will be minimal, thereby reducing the risk of interference with existing cellars along the Proposed Scheme. At certain locations, cellars extend outwards from buildings into

adjoining footpaths or streets. Cellars, coal holes and light wells have been identified at Section 4b and Section 4c. Cycle track construction works at these locations will impact two coal holes to a cellar on Richmond Street South, involving the relocation of the access chambers to the coal chutes further back from the proposed cycle track and into the footway.

Building condition surveys will be completed immediately prior to any works by the appointed contractor, and proposed works will be subject to discussion with identified property owners. Remedial and preventative measures may need to be undertaken to facilitate construction of the Proposed Scheme.

In the unlikely event that works are required to a cellar, works would comprise of lowering the cellar roof, blocking up and backfilling a portion of the cellar or blocking up and backfilling the entire extent of the cellar. Such cellar works would generally commence with the excavation of the footpath.

A concrete block wall would then be constructed within the cellar at the location of what is to be the new external wall of the cellar before infilling.”

Section 15.4.3.4.2 in Chapter 15 of Volume 2 of the EIAR notes the following with regard to impact on the cellars:

“...The coal hole covers (CBC1012CH007) at Richmond Street South have a low sensitivity value and the magnitude of impact is medium due to having to relocate them as part of the cycle track proposal. This level of impact is due to a permanent loss of function and a loss of connection with subsurface coal cellars should they exist. This will result in a Negative, Moderate and Permanent impact. The coal hole cover (CBC1012CH008) at Richmond Street South has a low sensitivity value and the magnitude of impact is medium due to having to relocate it as part of the cycle track proposal. This level of impact is due to a permanent loss of function and a loss of connection with the subsurface coal cellar should it exist. This will result in a Negative, Moderate and Permanent impact....”

Compounds: DCC notes that three temporary compounds have been proposed within the Dublin City Council area during the construction phase. DCC notes that it appears that there will be no direct impact to the architectural heritage by these works, however indirect impacts to adjacent or nearby protected structures may result from plant/vehicular egress or ingress.

The NTA notes DCC's comments in this regard. Section 5.7 of the EIAR outlines the proposed Construction Compounds in detail. Section 16.5.1.1 of the EIAR notes the following in relation to the potential for indirect Construction Stage impacts on protected structures:

“Indirect physical Construction Phase impacts are anticipated in six locations, where Protected Structures of National Importance and High Sensitivity share a boundary with the Proposed Scheme. These include Rathfarnham Castle (RMP DU022-014), 21 Aungier Street (RMP DU018-020184), 20 Aungier Street (RMP DU018-386), 10 and 10a Aungier Street (RMP DU018-385), 9 and 9a Aungier Street (RMP DU018-384) and the South City Markets (DCC RPS 3214 to 3223). There is potential for damage during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, Significant and Temporary. The proposed mitigation is the recording, protection and monitoring of the Protected Structures prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR, reducing the magnitude of the risk from medium to Low. The predicted residual Construction Phase Impact is Indirect, Negative, Slight, Temporary.”

Recommended Conditions

Refer also to the response to Section C6 of the DCC submission later in this response document.

In regard to the recommended measures relating to Conservation Issues in the Appendix, the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Conservation Department comments and recommendations as these matters were the subject of extensive liaison throughout the design development process. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

These issues raised are addressed within the planning application documents as follows:

The proposed approach to safeguarding architectural interest of affected Architectural Heritage across the Proposed Scheme is covered in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

Best conservation practice, specifications, and method statements for the careful and sensitive relocation and reinstatement of historic fabric is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The proposed engagement of an architectural heritage specialist and the duties is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The NTA will continue to engage with the relevant local authority departments in accordance with the relevant guidelines, policy and legislation outlined in section 16.2.4 of Chapter 16 in Volume 2 of the EIAR.

Best conservation practice and the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the Advice Series issued by the Department of Housing, Local Government and Heritage are referenced in 16.2.4 Chapter 16 in Volume 2 of the EIAR.

The proposed protection measures for all existing original architectural heritage features in the vicinity of the works are outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

The requirement of the appointed contractor relating to the Architectural Heritage is outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

The Conservation Section states that the treatment of new kerbing and paving associated with the provision of bus stops/shelters/information boards should be appropriate in materials and colour to the location, particularly where adjacent sections of historic stone paving and kerbing exist in situ.

The NTA notes this comment and acknowledge that the site context will be considered in selection of materials, in particular where adjacent sections of historic stone paving and kerbing.

The Conservation Section states that consideration should be given to providing alternative high quality cycle lane surfaces in lieu of red tarmac, where cycle ways are located in proximity to protected structures and within ACAs.

The NTA notes this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included EIAR Appendix A4.1 in Volume 4 Part 1 of 2 states the following in relation to the proposed cycle track material:

“As illustrated in Figure 8, the use of machine laid asphalt for the cycle track has proven to be an effective way of providing a high level of service with a safe, smooth and continuous surface.

This, however, offers very little contrast to the adjacent carriageway, and depends on the type of edge kerb and the presence of road markings to offer a visual differentiation between the carriageway and the cycle track. Consideration should be given to including an additional colour contrast to the cycle track in the form of an alternative-coloured asphalt (e.g. red, buff, etc) or adding coloured chips to the asphalt surface during installation (e.g. red chip). Designers should refer to section 5.6 of the NCM for further guidance on appropriate cycle track materials.

At junctions, the chosen cycle track material should be continued (as a surface course layer) through the junction for consistency. Alternatively, coloured epoxy resin (cold-applied anti-skid layer) is a robust alternative measure in terms of longevity and maintenance for making cycle lanes more conspicuous at junctions.”

In summary, the use of red coloured asphalt, or red coloured epoxy resin has been specified for all cycle tracks across the BusConnects Infrastructure Works to ensure legibility and conspicuity of the proposed cycle tracks and to ensure safety for vulnerable road users.

2.4.10. City Architects Department Comments

Response to Section 2.4.10 (including reference to the Appendix):

On page 43 of the DCC submission, the City Architects Department welcomed the objectives of the Proposed Scheme to support integrated sustainable transport use through infrastructure improvements for active travel (both walking and cycling), and the provision of enhanced bus priority measures. It went on to state that the Proposed Scheme will facilitate the modal shift from car dependency through the provision of walking, cycle, and bus infrastructure enhancements thereby contributing to an efficient, integrated transport system and facilitating a shift to a low carbon and climate resilient City. This Department also noted that proposals for public realm upgrades, including widened footpaths, high quality hard and soft landscaping contribute towards a safer, more attractive environment for pedestrians are included, and that the Proposed Scheme has been developed having regard to relevant accessibility guidance and universal design principles so as to provide access for all users.

The City Architects Department goes on to provide commentary on a number of specific elements, as listed below:

1. Footpath Widths

DCC notes that the provision of footpaths designed to the minimum width may not be sufficient in areas of high pedestrian traffic, in urban villages and along tourist routes where large groups of tourists may congregate. The submission makes reference to Section 4.3 of the EIAR which refers to wider footpaths and urban realm improvements through the village of Rathmines. DCC notes that the reconfiguration of the junction of Rathmines Road and Rathgar Road creates an opportunity for place-making but that the footpaths in the commercial village area are reduced or maintained in width by the Proposed Scheme.

NTA Response: The NTA notes this comment from DCC. Rathmines urban village is a key area of commercial and pedestrian activity and the scheme design in this location has taken due consideration of this important function. As highlighted by DCC, the junction of Rathmines Road and Rathgar Road has been redesigned to remove general traffic slip lanes and to provide more space for pedestrians and urban realm enhancements, in particular at the south-eastern corner of the junction. The NTA also notes that the Proposed Scheme proposes to widen footpaths along Rathmines Road Lower, within the urban village of Rathmines where significant commercial activity takes place. Chapter 3, Consideration of Reasonable Alternatives, in Volume 2 of the EIAR outlines the options selection process carried out to inform the design of the Proposed Scheme. A number of options were considered for this section of the Proposed Scheme, however the following is noted:

“Option RM3 – the provision of two general traffic lanes and two 2m wide cycle tracks through Rathmines Village with a bus gate located between Richmond Hill and Military Road – was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing the appropriate level of bus priority and fully segregated cycle tracks throughout this section of the Proposed Scheme, while acknowledging the urban village function of Rathmines Village through proposed footpath widening.”

Typical Sections L-L and M-M, reproduced in Figure 2.6.5 and Figure 2.6.6 below, contained within Appendix B4 of the Preliminary Design Report in the Supplementary Information show the proposed footpath widening within Rathmines Urban Village.

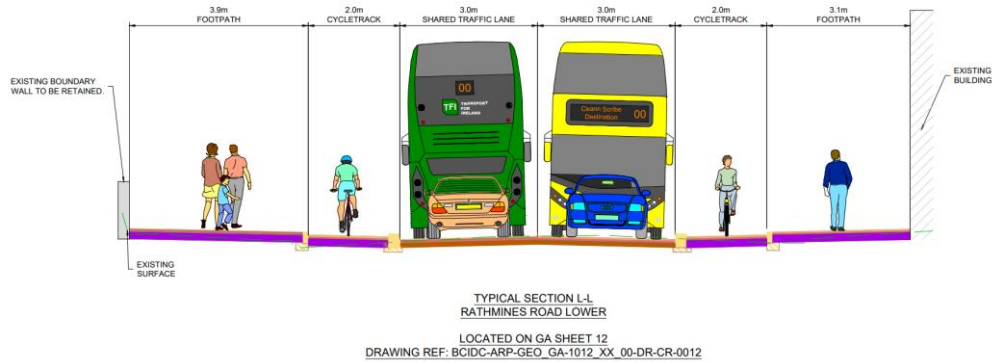


Figure 2.6.5 Typical Section L-L on Rathmines Road Lower

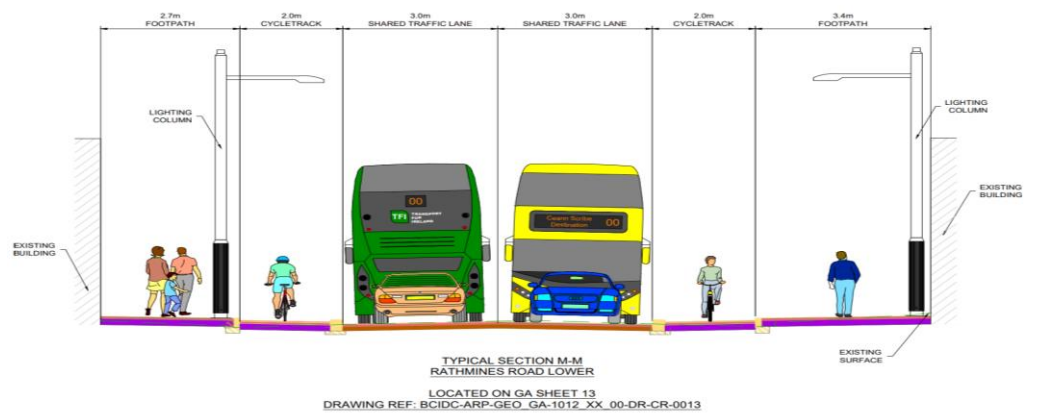


Figure 2.6.6 Typical Section M-M on Rathmines Road Lower

DCC further note that the footpath on the east side of Terenure Village and Camden Street are reduced in width by the Proposed Scheme. DCC notes that the proposed cycle path will impact on the existing character of the streets therefore the width of the cycle path should be reduced to the minimum.

NTA Response: The NTA notes this comment. It is proposed to widen footpaths on Terenure Road East from Terenure Cross to St Joseph’s boys national school within the commercial area of Terenure to provide additional space for pedestrians and businesses. On Terenure Road North it is proposed to maintain the existing footpath widths on the eastern side of the road, to facilitate pedestrians and businesses. Footpath widths on Camden Street are proposed to generally be retained or increased. In some localised areas it is proposed to reallocate some of the existing footpath width to provide a new cycle track and retain existing parking and loading facilities. Typical Section P-P contained within Appendix B4 of the Preliminary Design Report in the Supplementary Information show the proposed footpath widths on Camden Street. It is noted that cycle track widths have been reduced below the desirable minimum of 2.0m wide in this location due to the significant pedestrian demand on this busy commercial street, and to balance the provision of high quality pedestrian and cyclist facilities while maintaining commercial loading and parking where practicable.



Figure 2.6.7 Typical Section P-P on Camden Street Lower

DCC also refer to the Proposed Scheme layout within Bushy Park which includes a 2-way cycle track along the existing footpath in Bushy Park, reducing the pedestrian footpath to 1.5m in width. DCC notes that this is the main path in the park and 1.5m is not sufficient width to accommodate pedestrians along this route.

NTA Response: The NTA notes this comment. Section 3.3.2.1.2 of Chapter 3 of the EIAR, Consideration of Reasonable Alternatives, documents the options assessment process carried out for this section of the Proposed Scheme. Given the significant constraints along Templeogue Road, an option consisting of a segregated cycle facility within Bushy Park was considered the Preferred Route Option. In order to minimise impacts on existing mature trees within this location, the width of the proposed cycle and pedestrian facilities was minimised to utilise the existing path through Bushy Park. The provision of segregated pedestrian and cycling facilities in this location is considered preferable to the existing shared surface treatment, in order to provide a legible arrangement for all road users. On balance it is considered that the Proposed Scheme in this location provides an appropriate balance between meeting the objectives of the Proposed Scheme while minimising the impact on the receiving environment.

DCC notes that footpath widths need to account for congregations of pedestrians waiting in the vicinity of bus stops. DCC request by condition, confirmation that pedestrian traffic counts have been undertaken to ensure that footpath widths along the Proposed Scheme are sufficient to cater for anticipated pedestrian volumes.

NTA Response: The NTA notes this comment. As set out in the BusConnects Preliminary Design Guidance Booklet (PDGB) included in Appendix A4.1 of the EIAR, the preferred bus stop arrangement is the island bus stop. The island bus stop arrangement provides a minimum 3.0m wide dedicated area for passengers boarding and alighting from buses, and segregates bus passengers from cyclists, who are deflected behind the island. The island bus stop arrangement is shown below in Figure 2.6.8.

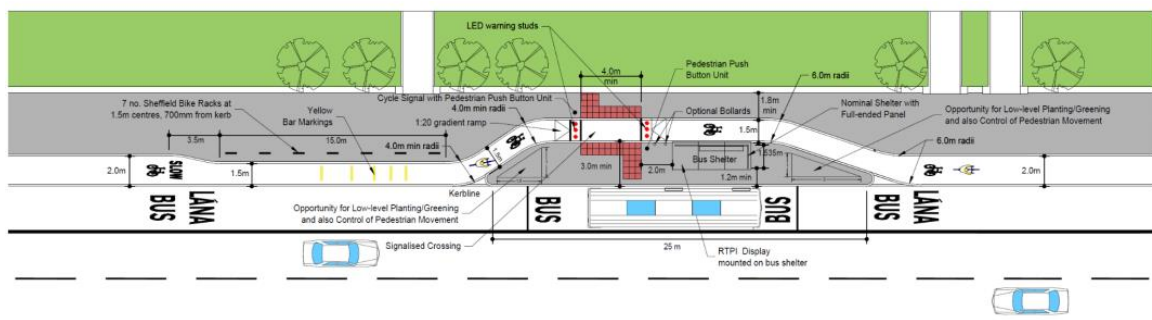


Figure 2.6.8 Island Bus Stop layout

Where space constraints do not allow for the island bus stop arrangement to be provided, an alternative share bus stop landing zone arrangement has been provided. This layout is shown below in Figure 2.6.9.

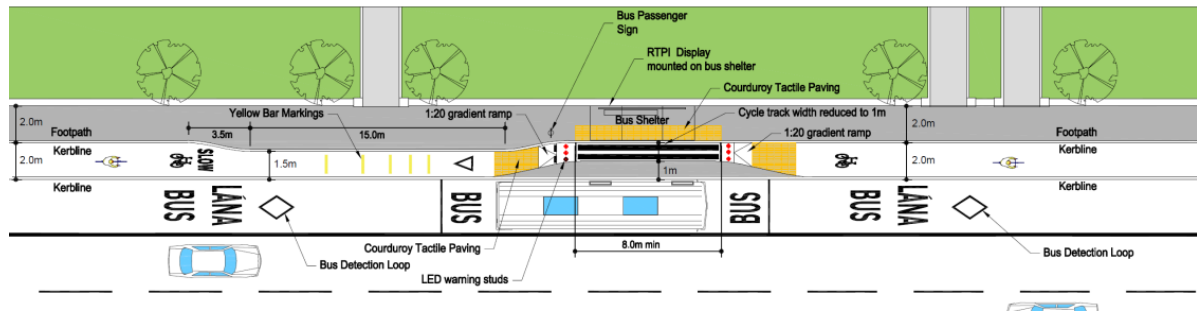


Figure 2.6.9 Shared Bus Stop Landing Zone layout

The NTA confirms that pedestrian counts have been undertaken along the route of the Proposed Scheme. These counts are available for download at: <https://busconnects.ie/cities/dublin/core-bus-corridors/background-information/traffic-count-data-2019-2020/>.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

*“**Pedestrian Infrastructure:** The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C/ D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a **Positive, Significant and Long-term effect** in all four sections of the Proposed Scheme.”*

2. Local Public Realm improvement Schemes

DCC noted that the Proposed Scheme includes images of proposed public realm improvements at the following locations:

- 1) Rathgar Village; and
- 2) Rathmines Village.

DCC noted that limited information is provided to facilitate proper assessment of the proposals.

The NTA notes this comment. Section 4.6.13 of Chapter 4 of Volume 2 of the EIAR outlines detail in relation to the proposed Landscape and Urban Realm Design, including at the specific locations referenced by DCC above. Reference should also be made to the Landscaping General Arrangement drawings in Volume 3 of the EIAR.

3. Land Acquisition by NTA and Taking in Charge

DCC requests confirmation as to whether ownership of the lands to be acquired to deliver the Proposed Scheme are to be transferred to the relevant local authority or whether ownership is to be retained by the NTA and the lands taken in charge by the relevant local authority for maintenance purposes.

The NTA notes the above comments. Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored – it does not require the operation of the conventional “taking-in-charge” arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being Dublin City Council. As

such, lands acquired to deliver the Proposed Scheme will be transferred to the relevant local authority upon completion of the works.

Notwithstanding the above, the NTA intends to continue the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, during and throughout the subsequent construction stage. This will include engaging and collaborating on the construction arrangements, the road maintenance arrangements during construction and the standard to which the Proposed Scheme will be completed prior to transfer back to DCC, together with record retention, all in full accordance with the EIAR. Given the legislative framework that is in place, these are matters that can, and will, be successfully addressed between DCC and the NTA, in the absence of any approval condition.

4. **Bus Shelter Design**

DCC notes that bus shelter locations are indicated on drawings but information is not provided on their proposed design, and whether there is sufficient capacity on the footpaths to accommodate them. The submission notes that proposed bus stops in the vicinity of buildings of architectural importance and in residential conservation areas need to be carefully considered. The submission specifically references bus shelters proposed on Rathgar Road and Terenure Road East, where currently none exist, and note that bus stops only, with no shelters, would be preferable in these locations. It is noted that the vistas and settings of Protected Structures will be impacted by the siting of proposed bus shelters. The submission goes on to state that in the interest of visual amenity and having regard to protected structures and their settings, advertisements should not be permitted on bus shelters in Architectural Conservation Areas, Red lined conservation areas or special planning control schemes.

The NTA notes these comments. Section 4.14.3 of the Preliminary Design Report, included in the Supplementary Information, outlines the proposals for bus shelters, as follows:

“Bus shelters provide an important function in design of bus stops. The shelter will offer protection for people from poor weather, with lighting to help them feel more secure. Seating will be provided to assist ambulant disabled and older passengers and accompanied with Real Time Passenger Information (RTPI) signage to provide information on the bus services. The locations of the bus shelters are presented on the General Arrangement drawing series in Appendix B.

The optimum configuration that provides maximum comfort and protection from the elements to the travelling public is the 3-Bay Reliance ‘mark’ configuration with full width roof. This shelter is a relatively new arrangement which has been developed by JCDecaux in conjunction with the NTA. The shelter consists mainly of a stainless-steel structure with toughened safety glass and extruded aluminium roof beams. Figure 4.10 provides an example image of the preferred full end panel shelter arrangement. The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 3.3m with an absolute minimum width of 3m to facilitate a minimum 1.2m clearance at the end panel for pedestrians. Alternative arrangements for more constrained footpath widths are considered below.



Figure 4.10: Example of a 3-Bay Reliance full end panel bus shelter (Source: JCDecaux)

The cantilever shelter using full width roof and half end panel arrangement provides a second alternative solution for bus shelters in constrained footpath locations. Figure 4.11 provides an example of this type of shelter. Advertising panels in this arrangement are normally located on the back façade of the shelter compared to the full end panel arrangement. The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 2.75m with an absolute minimum width of 2.4m to facilitate a minimum 1.2m clearance at the end panels for pedestrians.

Two alternative narrow roof shelter configurations (Figure 4.12) are also available which offer reduced protection against the elements compared to the full width roof arrangements. These shelter configurations are not preferred but do provide an alternative solution for particularly constrained locations where cycle track narrowing to min 1m width has already been considered and 2.4m widths cannot be achieved to facilitate the full width roof with half end panel shelter. The desirable minimum footpath widths for the narrow roof configuration are 2.75m (with end panel) and 2.1m (no end panel). The absolute minimum footpath widths for these shelters are 2.4m (with end panel) and 1.8m (no end panel) to allow for boarding and alighting passengers in consideration of wheelchair, pram, luggage and other such similar spatial requirements.”



Figure 4.12: Example of a 3-Bay Reliance Cantilever shelter with narrow roof configuration with and without half end panels (Source: JCDecaux)

The provision of bus shelters in proximity to buildings of architectural significance, has been assessed in EIAR Volume 2, Chapter 16 Architectural Heritage. Section 16.4.4.1 notes the following with respect to protected structures:

“Bus shelters are proposed at:

- 12 Terenure Road East (DCC RPS 80);
- 78 Rathgar Road (DCC RPS 7072);
- 153 Rathgar Road (DCC RPS 7120); and
- 46 Rathgar Road (DCC RPS 7046).

All four buildings are Protected Structures of Regional importance and of Medium sensitivity. The magnitude of impact of the Bus shelters will be low as in each case the Protected Structures are set back from the road behind existing, or in the case of 78 Rathgar Road (DCC RPS 7072) a reinstated boundary treatment, limiting the visual impact of the proposed bus shelters. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact.

A bus shelter is proposed in front of 68 Rathmines Road Lower (DCC RPS 7193) a Protected Structure of Regional importance and of Medium sensitivity and will be moved from number 60. The Magnitude of impact is Low as the Protected Structure is set back from the road behind its boundary treatment which will limit the visual impact of the shelter. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape.

A bus shelter is proposed in front of Templeogue Church and Cemetery (RMP DU022009001, DU022009002) a Protected Structure and Recorded Monument of Regional importance and Medium sensitivity. The magnitude of impact will be Negligible as the churchyard is over 30m from the proposed bus shelter. The potential Operational Phase impact is Indirect, Negative, Not Significant, Long-term visual impact on the structures and the streetscape.”

Section 16.4.4.2 notes the following with respect to Conservation Areas:

“A bus shelter is proposed to the rear of 1 to 3 St Agnes Terrace Rathfarnham Road (NIAH 11211020, 11211021, 11211022) which is of Regional importance and Medium sensitivity. The houses are below the road level therefore the magnitude of impact is Low. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape.”

Section 16.4.4.4 notes the following with respect to Other Structures:

“Bus Shelters are proposed at:

- *190 Rathfarnham Road (CBC1012BTH037) which is of Regional importance and Medium sensitivity;*
- *59 Rathfarnham Road (CBC1012BTH040) which is of Local importance and Low sensitivity;*
- *3 Rathfarnham Road (CBC1012BTH058) which of Local importance and Low sensitivity;*
- *34 Grosvenor Place (CBC1012BTH174) which is of Regional importance and Medium sensitivity; and*
- *32 Camden Street Lower (CBC1012BTH283) which is of Regional importance and Medium sensitivity.*

The Magnitude of impact is Low as these architectural heritage structures will be set back from the road behind their boundary treatments which will limit the visual impact of the shelters. The potential Operational Phase impact is Indirect, Negative, Slight, Long-term visual impact on the structures.”

5. Siting of utility cabinets and above-ground utility infrastructure

DCC noted that the siting of utility cabinets, poles and other above-ground utility infrastructure may have significant impacts on the space, visual impact and quality of the public realm.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

6. On-Street Parking

DCC notes that electric vehicle charging points should be implemented as part of the Proposed Scheme in order to meet national carbon emissions plans.

The NTA notes this comment. The aim and objectives of the Proposed Scheme are set out in Section 1.2 of Chapter 1 of the EIAR as follows:

“The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The objectives of the Proposed Scheme are to:

- *Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland’s emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*

- *Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.”*

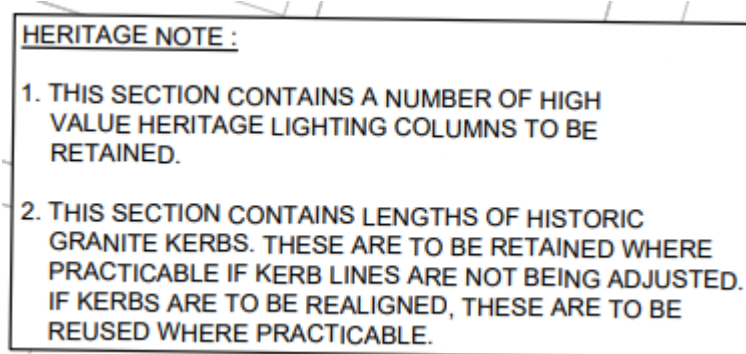
As such, it is not within the remit of the scheme to provide for electric vehicle charging points. Notwithstanding this, the Proposed Scheme does not preclude the delivery of such infrastructure.

7. Palette of Materials

DCC noted that the Landscape general arrangement drawings indicate that all existing hardscaping along the route of the Proposed Scheme is to be replaced as the ‘Existing Surface retained’ symbol is not present on any of the drawings. DCC state that this may not be necessary or financially feasible or sustainable. DCC further note that concrete sett paving is proposed for raised tables at side road entries, and request that all materials be agreed with DCC prior to commencement. DCC further noted that the ‘Typical Material Typologies’ in Section 4.6.12.2.1 of Volume 2, Chapter 4 Proposed Scheme Description and the Landscape General Arrangement Drawings, do not appear to include or refer to existing historic fabric such as historic granite paving and historic granite kerbs within the Proposed Scheme.

The NTA notes these comments from DCC. It is noted that the Landscape General Arrangement drawings do include areas where the existing surface is to be retained. These areas appear on Sheets 03, 05, 06, 11, 12, 15, 16, 24, 25, 28, 34, 35 and 36 of the drawings.

Heritage features to be retained are noted on the General Arrangement Drawings in Volume 3 of the EIAR, where applicable. The following note is included on drawing sheets where heritage features are to be retained or relocated:



The Landscaping General Arrangement drawings in Volume 3 of the EIAR includes notes relating to existing stone setts and existing historic granite kerbing and paving.

Section 17.4.1.4.4 of Chapter 17 Landscape and Visual notes the following:

“In addition to the above works, the following specific landscape / townscape and visual measures are included within the Proposed Scheme:

Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements.”

Section 4.10 of the Preliminary Design Report included in the Supplementary Information notes the following:

“Along sections of the route where heritage granite kerbing exists (e.g. Richmond Street South, Camden Street), it is proposed to maximise the retention of the existing kerbing where practicable as the outside edge of the footpath, with proposed cycle track being constructed alongside. This is the case in the Camden Street Lower and George’s Street sections.”

8. Palette of street furniture

DCC noted that a full palette of street furniture is required, and seek confirmation as to whether an identical palette is to be used for the Proposed Scheme across all local authority areas or whether

each local authority, or even each urban village, will have a specific palette. It is further requested that confirmation be provided on whether there will be uniformity in the palette of street furniture across all BusConnects Core Bus Corridor Schemes.

The NTA notes this comment. Section 16.5.1.7 of EIAR Volume 2 Chapter 16 Architectural Heritage includes details of the impacts on existing street furniture of heritage value due to the Proposed Scheme, including post boxes, lamp posts and statuary and other street furniture. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process. It is further noted that section 14.5 of the Preliminary Design Report included in the Supplementary Information states:

Throughout the design process, a palette of materials has been developed to create a consistent yet locally relevant design response appropriate to different locations along the route. The proposed materials are based on the existing materials and treatments along various parts of the route to match existing material treatments, while also identifying areas of opportunity for enhancement through the use of higher quality materials.

The NTA will continue the very positive and constructive liaison with DCC throughout the procurement and construction process including in relation to the final detailing of new street furniture.

9. Boundary Treatments

DCC noted that where property boundaries are to be relocated to facilitate land acquisition, the fabric of existing boundaries should be assessed for their architectural conservation value and cultural value. DCC notes that this assessment should consider whether the fabric, which may include railings, walls etc. is suitable for repair and reuse for sustainability reasons in the new boundaries rather than replaced with new.

The NTA note this comment. Section 4.6.19.1 of Chapter 4 of Volume 2 of the EIAR notes the following:

“There are a number of areas along the extents of the route where the Proposed Scheme will result in the requirement for accommodation works and boundary treatments. Specific accommodation works are considered on a case-by-case basis.

To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a ‘like for like’ basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area.”

Section 13.5 of the Preliminary Design Report notes the following:

“Final details of boundary walls, gates, driveways and grassed areas where affected, will be agreed between the directly impacted landowners and the NTA. Final details of boundary walls, gates and driveways will be agreed between the affected landowners and NTA during the accommodation works negotiations.”

Proposed boundary modifications have been assessed as part of the Architectural Heritage assessment outlined in Chapter 16 of the EIAR, with appropriate mitigation measures outlined where necessary.

10. Per Cent for Arts Strategy

DCC notes that it is not clear where the per cent for arts strategy has been incorporated into the Proposed Scheme. NTA will continue the very positive and constructive liaison with DCC throughout the procurement and construction process to ensure that the Per cent for Arts Strategy is accommodated.

11. Water Drinking Fountains

The DCC submission describes a recently adopted new policy to provide public drinking water fountains across the city, which could potentially be included in the Proposed Scheme.

The NTA can liaise further with DCC on this matter to explore the possibility of inclusion of public drinking water fountains in the Proposed Scheme where appropriate.

12. Street Trees and Planting

1. DCC notes that new trees are proposed within footpaths that appear to be below the minimum width, referencing an example on Terenure Road East at Healthfield Road. DCC notes that the inclusion of new street trees is welcome however they should only be provided on footpaths with sufficient width to accommodate them.

The NTA notes this comment and is satisfied that there is sufficient width to accommodate new street trees where they are proposed. In relation to the example referenced on Terenure Road East at Healthfield Road, the footpath width in this location is 2.0m wide and as such is considered sufficient to provide a new street tree.

2. DCC notes that the proposed planting scheme along Camden Street should be reconsidered. DCC notes that trees should be provided within parking bays rather than within the footpath as proposed. DCC also note that regular spacing of trees should be incorporated to create a canopy effect.

The NTA notes this comment. Existing parking and loading bays have been retained along Camden Street where practicable, given the importance of the street for commercial activity. It is considered that the available footpath width where trees are proposed is sufficient.

13. Traffic Signal Poles

DCC notes that the number of traffic signal poles at junctions should be rationalised to the minimum required in order to reduce the visual impact.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground infrastructure, including traffic signal poles, where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

14. Gantry Signage – Traffic Signals

DCC notes that Section 4.6.10 of Chapter 4 of the EIAR states that: “No gantry signage exists along the route, and the Proposed Scheme has no requirement for any new gantry signage”. DCC notes that gantry signage is not considered suitable for low speed residential areas, particularly Residential Conservation Areas due to their high visual impact.

The NTA notes this comment. This statement relates to traffic signage, rather than traffic signal infrastructure.

DCC notes that gantry traffic signage is shown at a number of junctions which are in Residential Conservation Areas, namely:

- 1) The junction of Rathfarnham Road at Bushy Park Road;
- 2) The junction of Rathfarnham Road and Terenure Road North;
- 3) The junction of Leicester Avenue and Rathgar Road; and
- 4) The junction of Grosvenor Road and Rathgar Road.

The NTA notes this comment. As outlined above, the infrastructure shown in these photomontages is traffic signal cantilever poles, rather than gantry traffic signage. The impact of the Proposed Scheme on Residential Conservation Areas during the Construction Stage is documented in Section 17.4.3.2.3 of Chapter 17 of the EIAR as follows:

“Residential conservation areas are located along significant sections of Templeogue Road west of Terenure, along Rathfarnham Road north of the River Dodder and along the Proposed Scheme from Terenure through Rathgar and Rathmines. The construction of the Proposed Scheme will directly impact on properties located within residential conservation areas with impact on garden boundaries, entrances, gardens, loss of trees and other plantings. The buildings will not be impacted. The sensitivity is very high and the magnitude of change in the baseline environment is high.

The potential townscape / streetscape and visual impact of the Construction Phase on residential conservation areas is assessed to be Negative, Very Significant and Temporary / Short-Term.”

The impact of the Proposed Scheme on Residential Conservation Areas during the Operational Stage is documented in Section 17.4.4.2.3 of Chapter 17 of the EIAR as follows:

“Residential conservation areas are located along significant sections of Templeogue Road west of Terenure, along Rathfarnham Road north of the River Dodder and along the Proposed Scheme from Terenure through Rathgar and Rathmines. There will be continued effects during operation from impacts on properties located within residential conservation areas – particularly from loss of trees and other plantings which were removed during the Construction Phase. However, there will be like-for-like reinstatement of boundaries, planting and, in most cases, the planting of new street trees in similar locations to those removed, which will negate negative effects over the long-term. The sensitivity is very high and the magnitude of change in the baseline environment is medium / high.

The potential townscape / streetscape and visual impact of the Operational Phase on residential conservation areas is assessed to be Negative, Significant and Short-Term becoming Neutral, Moderate and Long-Term.”

15. Village Signage

DCC noted that existing ‘Welcome to Village xxx’ signage should be retained, in agreement with the local authority and community.

It is the intention of the Proposed Scheme to retain all such signage.

The NTA notes the general comments on the Proposed Scheme in this section and the recommendations in the Appendix. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

Section 2.4.11 Parks Department Comments

The submission raises a number of specific points as follows:

1. DCC makes reference to the proposal to provide a segregated cycle track and footpath within Bushy Park, on the route of the existing shared path. The parks department raises concerns about the potential for impact on existing trees within the park and also raises concerns about potential conflicts between cyclists and pedestrians.

NTA Response: The NTA notes this comment. Section 3.3.2.1.2 of Chapter 3 of the EIAR, Consideration of Reasonable Alternatives, documents the options assessment process carried out for this section of the Proposed Scheme. Given the significant constraints along Templeogue Road, an option consisting of a segregated cycle facility within Bushy Park was considered the Preferred Route Option. In order to minimise impacts on existing mature trees within this location, the width of the proposed cycle and pedestrian facilities was minimised to utilise the existing path through Bushy Park.

2. DCC raise concerns about the proposed bound gravel path within the green area adjacent to Rathdown Park, and the potential impact on tree roots due to the construction of this path.

NTA Response: The NTA notes this comment. It is proposed to utilise no-dig construction method for this proposed path in order to minimise the impact on the adjacent tree roots. The Arboricultural Impact Assessment carried out on the Proposed scheme is included in Appendix A17.1 within Volume 4 Appendices: Part 4 of 4. This assessment has considered the potential impact of the Proposed Scheme on the existing trees within the area. The trees requiring removal are clearly identified on the Tree Protection Plan drawings included in Appendix C of the report, as well as documented within the Tree Survey Schedule in Appendix A. The assessment has concluded that the existing trees in this location will not be impacted by formalisation of the path in this location.

2.6.3.10 Section 2.5 Conclusion

C5 - Response to Section 2.5

DCC is supportive of the Proposed Scheme and stated in their conclusion on page 53 of the submission:

“The proposed Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme is supported and welcomed by Dublin City Council as it will ensure the delivery of a number of key policies and objectives of the Dublin City Development Plan 2022-2028.”

DCC further confirmed that the development of the Proposed Scheme will provide an upgraded and expanded bus network and quality of service together with better quality cycling and pedestrian facilities and DCC acknowledged that these improvements will make it easier for people to access and use public transport. It also acknowledged that the Proposed Scheme will, in turn, promote modal shift from the private car to more sustainable forms of transport including walking, cycling and public transport, ultimately contributing to the creation of a greener and more sustainable city.

C6 - Summary Response to Appendix:

Dublin City Council and the National Transport Authority

DCC have set out at the start of their appendix a number of suggested conditions.

Proposed Condition 1:

The first recommended condition requested by DCC states:

1. That a comprehensive agreement is put in place between DCC and the NTA regarding how the corridor is to be handed over to the NTA and its contractors, what pre-inspection and recording of the corridor is necessary and how the corridor is to be maintained during construction activities and by whom. The agreement shall also address the handback process, the treatment of all relevant records treated and how the corridor is to be accepted back by DCC following construction.

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored – it does not require the operation of the conventional “taking-in-charge” arrangements provided for elsewhere in legislation.

Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being Dublin City Council.

Notwithstanding the above, the NTA intends to continue the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, during and throughout the subsequent construction stage. This will include engaging and collaborating on the construction arrangements, the road maintenance arrangements during construction and the standard to which the Proposed Scheme will be completed prior to transfer back to DCC, together with record retention, all in full accordance with the EIAR. Given the legislative framework that is in place, these are matters that can, and will, be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Proposed Condition 2:

The second recommended condition requested by DCC states:

2. Following handback, a separate agreement shall be put in place between DCC and the NTA regarding the costs of maintenance of the corridor as a high quality public transport corridor with agreed levels of performance and how the performance of the public transport corridor is not eroded in the future.

This proposed condition seeks the enactment of an agreement between DCC and the NTA, subsequent to the completion of the construction of the Proposed Scheme, addressing issues related to maintenance costs.

The Proposed Scheme upon its completion reverts to the status of a public road under the management of the relevant local authority, in this case Dublin City Council. The funding of costs associated with the maintenance of public roads can involve a number of parties depending on the status of the road – for instance, in the case of a national road Transport Infrastructure Ireland would have an involvement. As the Proposed Scheme does not encompass any section of national road, its components constitute

regional and/or local roads only. Funding of regional and local roads fall under the ambit of the relevant local authority and the Department of Transport.

The Exchequer does not currently provide the NTA with funds for dispersal to local authorities for maintenance activities and the NTA does not have a role in overseeing or organising general public road maintenance activities. However, the NTA does retain responsibility for bus fleet, bus stops and bus shelters, and maintenance of these elements falls within its remit.

The NTA agrees with the objective stated in the draft condition, namely to ensure “maintenance of the corridor as a high quality public transport corridor with agreed levels of performance”. To achieve that objective, the NTA anticipates continuing its collaboration with DCC to ensure the delivery of an appropriate maintenance regime. As part of this collaboration, the NTA will support the provision of the necessary funding by the relevant parties to ensure that the benefits of the Proposed Scheme are not inappropriately eroded. These are matters that can be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Proposed Condition 3:

The third recommended condition requested by DCC states:

3. All relevant DCC departments involved with the development of the Scheme shall be consulted during the detailed design development process for the Scheme and the NTA shall incorporate the requirements of the DCC departments into the final detailed design of the Scheme.

The NTA acknowledges the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within the Council. The Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of the Council and taking their requirements into consideration, where aligned with and consistent with the EIAR. These are matters that can be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Traffic Division

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Traffic Division comments provided in the Appendix regarding consideration of the traffic management equipment that is necessary for the safe and efficient operation of this Public Transport corridor, and including all traffic signal equipment, and the relevant DCC specification. NTA is aware of, and acknowledges, the important role of the relevant DCC maintenance contractor, and their continued role on both the existing and new traffic signals. These matters were the subject of extensive liaison throughout the design development process.

Roads Division

In regard to the Recommendations/Conditions of the Environmental Protection Division set out in the Appendix NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division inputs as these matters were the subject of extensive liaison throughout the design development process.

Public Lighting Department

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Public Lighting Department inputs regarding the required light level design and the relevant EN certification as these matters were the subject of extensive liaison throughout the design development process.

Environmental Protection Division

In regard to the Recommendations/Conditions of the Environmental Protection Division set out in the Appendix NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Environmental Protection Division inputs regarding criteria and processes as these matters were the subject of extensive liaison throughout the design development process.

Air and Noise Pollution Control Unit

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Air and Noise Pollution Control Unit inputs regarding the Construction Environmental Management Plan (located in Volume 4 Appendix 5.1) submitted with the application and the Unit's Good Practice Guide for Construction and Demolition as these matters were the subject of extensive liaison throughout the design development process.

Archaeology Department

The NTA notes the recommendation set out in the DCC Report Appendix 1, from the DCC Archaeology Section that the NTA appoint a Project Archaeologist to oversee the delivery of the archaeological strategy (and it goes on to set out the archaeological aspects that the Project Archaeologist would manage). In Section 15.5.1.1 in Chapter 15 (Archaeological and Cultural Heritage) it states that: *"The NTA will procure the services of a suitably-qualified archaeologist as part of its Employer's Representative team administering and monitoring the works. The appointed contractor will make provision for archaeological monitoring to be carried out under licence to the DHLGH and the NMI, and will ensure the full recognition of, and the proper excavation and recording of, all archaeological soils, features, finds and deposits which may be disturbed below the ground surface."*

Section 15.5.1.1.1 addresses archaeological management.

"An experienced and competent licence-eligible archaeologist will be employed by the appointed contractor to advise on archaeological and cultural heritage matters during construction, to communicate all findings in a timely manner to the NTA and statutory authorities, to acquire any licenses/ consents required to conduct the work, and to supervise and direct the archaeological measures associated with the Proposed Scheme.

Licence applications are made by the licence-eligible archaeologist on behalf of the client to the National Monuments Service at the DHLGH. In addition to a detailed method statement, the applications must include a letter from the client on client letterhead that confirms the availability of adequate funding. There is a prescribed format for the letter that must be followed. Other consents may include a Detection Device licence to use a metal detector or to carry out a non-invasive geophysical survey.

A construction schedule will be made available to the archaeologist, with information on where and when the various elements and ground disturbance will take place.

As part of the licensing requirements, it is essential for the client to provide sufficient notice to the archaeologist/s in advance of the construction works commencing. This will allow for prompt arrival on site to undertake additional surveys and to monitor ground disturbances. As often happens, there may be down time where no excavation work is taking place during the Construction Phase. In this case, it will be necessary to inform the archaeologist/s as to when ground breaking works will recommence.

In the event of archaeological features or material being uncovered during the Construction Phase, all machine work will cease in the immediate area to allow the archaeologist/s time to inspect and record any such material.

Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation will be recommended. The extent and duration of excavation will be advised by the client's archaeologist and will be a matter for discussion between the client and the licensing authorities.

Secure storage for artefacts recovered during the course of the monitoring and related work will be provided.

As part of the licensing requirement and in accordance with the funding letter, adequate funds to cover excavation, post-excavation analysis, and any testing or conservation work required will be made available..."

The Archaeology Section requests that there is publication and/or dissemination as appropriate of the archaeological results of the project and that the Archaeology Section is copied with all Section 26 method statements and any reports arising and provide regular updates on finds and mitigation. The Archaeology Section also recommends that the primary archaeological paper archive for all archaeological site investigations be prepared and deposited with the Dublin City Archaeological Archives within a timeframe to be agreed with the planning authority.

The NTA will liaise with DCC in regard to the publication and/or dissemination of archaeological results etc., archival processes to be followed.

Conservation Department

In regard to the recommended measures relating to Conservation Issues in the Appendix, the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Conservation Department comments and recommendations as these matters were the subject of extensive liaison throughout the design development process. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

These issues raised are addressed within the planning application documents as follows:

The proposed approach to safeguarding architectural interest of affected Architectural Heritage across the Proposed Scheme is covered in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

Best conservation practice, specifications, and method statements for the careful and sensitive relocation and reinstatement of historic fabric is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The proposed engagement of an architectural heritage specialist and the duties is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The NTA will continue to engage with the relevant local authority departments in accordance with the relevant guidelines, policy and legislation outlined in section 16.2.4 of Chapter 16 in Volume 2 of the EIAR.

Best conservation practice and the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the Advice Series issued by the Department of Housing, Local Government and Heritage are referenced in 16.2.4 Chapter 16 in Volume 2 of the EIAR.

The proposed protection measures for all existing original architectural heritage features in the vicinity of the works are outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

The requirement of the appointed contractor relating to the Architectural Heritage is outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

The Conservation Section states that the treatment of new kerbing and paving associated with the provision of bus stops/shelters/information boards should be appropriate in materials and colour to the location, particularly where adjacent sections of historic stone paving and kerbing exist in situ.

The NTA notes this comment and acknowledge that the site context will be considered in selection of materials, in particular where adjacent sections of historic stone paving and kerbing.

The Conservation Section states that consideration should be given to providing alternative high quality cycle lane surfaces in lieu of red tarmacadam, where cycle ways are located in proximity to protected structures and within ACAs.

The NTA notes this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included EIAR Appendix A4.1 in Volume 4 Part 1 of 2 states the following in relation to the proposed cycle track material:

“As illustrated in Figure 8, the use of machine laid asphalt for the cycle track has proven to be an effective way of providing a high level of service with a safe, smooth and continuous surface.

This, however, offers very little contrast to the adjacent carriageway, and depends on the type of edge kerb and the presence of road markings to offer a visual differentiation between the carriageway and the cycle track. Consideration should be given to including an additional colour contrast to the cycle track in the form of an alternative-coloured asphalt (e.g. red, buff, etc) or adding coloured chips to the asphalt surface during installation (e.g. red chip). Designers should refer to section 5.6 of the NCM for further guidance on appropriate cycle track materials.

At junctions, the chosen cycle track material should be continued (as a surface course layer) through the junction for consistency. Alternatively, coloured epoxy resin (cold-applied anti-skid layer) is a robust alternative measure in terms of longevity and maintenance for making cycle lanes more conspicuous at junctions.”

In summary, the use of red coloured asphalt, or red coloured epoxy resin has been specified for all cycle tracks across the BusConnects Infrastructure Works to ensure legibility and conspicuity of the proposed cycle tracks and to ensure safety for vulnerable road users.

City Architects Department

Response

The NTA notes the general comments on the Proposed Scheme in the recommendations in the Appendix. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process.

2.6.4 090 Dublin Commuter Coalition

2.6.4.1 Overview of submission

The submission raised the following points and issues:

1. Advocate for the Proposed Scheme

The submission sets out that the Dublin Commuter Coalition is a voluntary advocacy group for public transport users, cyclists, and pedestrians in Dublin and surrounding counties. The submission noted that the Dublin Commuter Coalition support the Proposed Scheme and are glad to see that more than four years of public engagement has resulted in a planning application.

Dublin Commuter Coalition believe the project will be a catalyst for greater usage of public transport and active travel. However, they stated that the proposed design requires significant changes for this to happen.

2. Provide enforcement cameras

The submission outlined its views in relation to the importance of enforcement for lawful use of bus lanes, cycle lanes and other measures such that the benefits of the Proposed Scheme will be realised by bus passengers. Without a plan for camera enforcement, the submission states that the effects of the improvements proposed in the scheme will not be seen by bus users.

3. Provide 24/7 bus lane operation

The submission outlined its view that all proposed bus lanes and bus gates should be operational on a 24/7 basis.

4. Pedestrian crossings

The submission stated that two-stage pedestrian crossings should be avoided in line with DMURS Section 4.4.3 and Section 4.3.2 of DMURS.

Additionally, the submission noted that many three and four-way junctions are missing pedestrian crossings entirely on one or more arms.

5. Junction design

The submission has queried the design approach undertaken by the NTA in relation to adopting international best practice. The submission requested that Dutch-style junctions be used throughout the Proposed Scheme.

6. Bus stop design

The submission raised concerns about the proposed width of bus stop islands and noted that they will lead to conflict between bus passengers and cyclists.

7. Shared space

The submission noted that the Proposed Scheme includes for the provision of shared space for pedestrians and cyclists at several junctions and asserted that this is an unsuitable arrangement for busy urban junctions.

The submission strongly recommended that alternatives to the proposed design are considered and that pedestrians and cyclists be segregated at all junctions for the safety and comfort of everyone.

8. Bicycle parking

The submission states the Proposed Scheme does not state where bike parking will be located, nor does it appear in the general arrangement drawings. The submission suggests that to encourage a significant modal shift for walking and cycling, that in addition to the proposed cycle infrastructure, it is important to provide for the best quality bicycle cycle parking facilities at bus stops and public transport interchanges.

The submission recommends that conditions be set to provide for additional identified areas of dedicated cycle parking and inclusion of stands and storage locations which complement the provided cycle lanes and interface with public transport stops and interchanges.

9. Nutgrove Avenue / Rathfarnham Wood Junction

The submission notes that the proposed bus stop on Nutgrove Avenue is being retained with the cycle track positioned between the bus shelter and the boarding/alighting zone and notes that the preferred arrangement would be for the bus shelter to be relocated closer to the carriageway edge, with the cycle track running behind it.

10. Grange Road / Willbrook Road Junction

The submission states that the cycle lane on Willbrook Road does not extend to the junction and that this could lead to conflict between cyclists and general traffic entering Willbrook Road from the junction.

11. Rathfarnham Road / Main Street Junction

The submission notes that the proposed bus stop at the junction of Rathfarnham Road and Main Street proposes that the cycle track be positioned between the bus shelter and the boarding/alighting zone and notes that the preferred arrangement would be for the bus shelter to be relocated closer to the carriageway edge, with the cycle track running behind it. The submission also notes that the proposed width of the island in this location is too narrow.

12. Rathfarnham Road / Dodder Park Road Junction

The submission requests that priority signals be installed for cyclists at this junction to allow cyclists to fully clear the junction before left turning traffic arrives to make a turn. The submission states that this could be mitigated by providing a 'dutch-style' junction. The submission also states that the shared space provided may lead to conflict. The submission requests that greater segregation be provided between cyclists and pedestrians at this location

13. Rathdown Park / Rathfarnham Road Junction

The submission notes that there is no pedestrian crossing on the eastern arm of the Rathdown Park / Rathfarnham Road junction, despite their being a cyclist crossing leading to longer crossing distances for pedestrians. The submission highly recommends installing a pedestrian crossing in this location.

14. Fergus Road Modal Filter

The submission requests that a modal filter be installed on Fergus Road to discourage rat-running to and from Templeogue Road. The submission states that this would allow cyclists to avoid the much busier junction at Terenure Cross, where cycle tracks are not provided on Terenure Place.

15. New pedestrian crossing at Beechlawn Way

The submission requests a new pedestrian crossing at Beechlawn Way, given the proximity to both Lidl and St. Joseph's School. The submission also requests that the footpath across Beechlawn Way should be raised to provide pedestrian priority.

16. Cycle Lanes on Terenure Place and Terenure Road East

The submission notes that the Proposed Scheme does not propose to retain the existing cycle lanes on Terenure Place and Terenure Road East. The submission states that it is not in favour of this proposal.

17. Terenure Road East / Aldi Entrance

The submission requests that a continuous footpath is provided at the entrance to Aldi on Terenure Road East to prioritise pedestrians over vehicular traffic at this junction.

18. Camden Street Upper / Charlotte Way Junction

The submission states that pedestrian islands should be avoided wherever possible and that this junction should be redesigned to remove the traffic island, and allow pedestrians to cross the junction in a single movement.

19. South Great George's Street Bus Stop

The submission states that the location of the proposed bus shelter on South Great George's Street does not align with the pedestrian island in this location, which may lead to pedestrians walking in the cycle track to access the bus stop. The submission requests that the bus shelter be relocated to align with the island.

20. Bushy Park Quiet Neighbourhood

The submission states that there is a risk that vehicles will not adhere to the proposed 30 kph speed limit on the proposed quiet streets linking Bushy Park Road to Orwell Road. The submission requests that chicanes and other traffic calming measures be installed on this section.

21. Templeogue Road / Old Bridge Road Junction

The submission states that the absence of pedestrian crossings on the western arm of this junction is a significant oversight which should be corrected.

22. Templeogue Road Quiet Street

The submission states that it would be preferable to see better road markings or signage indicating the crossing for east bound active travel users so that cyclists don't end up in dead ends. Additionally, the submission requests that traffic calming measures be installed on this section.

2.6.4.2 Response to submission

1. Advocate for the Proposed Scheme

The NTA recognises the benefit of the continued engagement with the Dublin Commuter Coalition and other advocacy groups through the three rounds of non-statutory public consultation, community forums and one to one meetings in developing the Proposed Scheme. The NTA welcomes the support from the Dublin Commuter Coalition for the Proposed Scheme. Requests to modify particular detailed design aspects of the Proposed Scheme are noted and the NTA provides responses to those requests as set out in the following sections. The NTA looks forward to continuing to collaborate with the Dublin Commuter Coalition in achieving the Proposed Scheme objectives which have many synergies with the Dublin Commuter Coalition members vision in creating a Dublin that works for all users of sustainable transport.

2. Provide enforcement cameras

The NTA acknowledges the comments raised in relation to camera enforcement. Whilst enforcement for the lawful use of bus lanes is currently a matter for An Garda Síochána, the NTA is separately exploring proposals and methods for bus lane enforcement as set out under Measure INT24 – Enforcement of Road Traffic Laws of the Greater Dublin Area Transport Strategy 2022-2042.

With the State having incurred the very large expenditure required to deliver the BusConnects Programme, it is vital to ensure that sufficient enforcement is in place such that the benefits of that investment are not eroded by widespread breaches of the restrictions applying to bus lanes, cycle tracks and junctions. To effectively ensure this outcome, camera-based enforcement will be required to augment the on-street activities of An Garda Síochána.

This type of arrangement is in place in many jurisdictions internationally, where camera detection of certain breaches of regulations is linked to the automatic issue of fixed penalty notices.

Action 67 in the Road Safety Strategy Phase 1 Action Plan 2021–2024 sets out the need to “further develop camera-based enforcement by the Gardaí, including at junctions and for management of bus/cycle lanes, building on existing and recent legislation through establishing suitable cross-agency administrative arrangements; and, where any legislative issues are identified, to consider and develop agreed proposals to remedy them.”

The Department of Transport has requested the National Transport Authority (NTA) to undertake the first phase of this action, namely to establish and chair a working group to explore this action and to bring forward recommendations on how it should be progressed. The subsequent steps for implementation, including addressing any legislative issues that may be identified, will be determined by the Department of Transport subsequent to the initial phase. It is expected that the report of the Working Group will be finalised and provided to the Department later this year

Notwithstanding this, specific measures have been considered in the development of the Proposed Scheme that will help deter inappropriate and unlawful use of bus lanes including advanced bus signal detection systems which will activate green signals at traffic lights for authorised vehicles only.

3. Provide 24/7 bus lane operation

All bus lanes will operate 24 hours a day 7 days a week.

The Proposed Scheme along the Rathmines Road Lower proposes a bus gate which will be operational between 06:00 and 20:00 seven days a week.

The Proposed Scheme along the Templeogue Road proposes an inbound bus gate which will be operational between 06:00 and 20:00 seven days a week.

The above hours of operation attempt to balance the need for accommodating vehicular access to these locations outside of peak hours while providing fast and reliable services during peak periods.

4. Pedestrian crossings

The NTA acknowledges the comments raised in the submission and note that the Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the existing to 106 in the Proposed Scheme, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the existing to 105 in the Proposed Scheme, representing a 250% increase.

The summary level design rationale for each of the junctions on the Proposed Scheme is set out in Appendix A6.3 Junction Design Report of the Traffic Impact Assessment Report of Volume 4 Part 2 of 4 of the EIAR. For the pedestrian crossings at the junctions of Camden Street Upper / Charlotte Way and Highfield Road / Palmerstown Road, direct single movement crossings were explored in accordance with the approach set out in Section 5.6 of the Preliminary Design Guidance Booklet (PDGB) (in Appendix A4.1 in Volume 4 of the EIAR). However, at these locations the retention of the traffic island was required for traffic safety reasons, due to the geometry and permitted movements at these junctions. At the Templeogue Road / Old Bridge Road junction, direct single movement crossings were explored in accordance with the approach set out in Section 5.6 of the PDGB. However, at this locations two stage crossings are the preferred design as a straight-across would result in a crossing distance of greater than 19m. As such the overall junction performance and people movement would be reduced by introducing direct single stage crossings on all arms which is not desirable at these locations.

5. Junction design

i. Principles of Protected Junction Design for BusConnects

It is important to note that no two junctions are the same. Junctions on the Proposed Scheme have broadly been categorised into 4 types of junction as set out in Appendix A4.1 BusConnects PDGB in Volume 4 of the EIAR and specifically set out at each location in the Junction Design Report which have been included in Appendix A6.3 of Volume 4 Part 2 of 4 of the EIAR and summarised in Table 4.6, Table 4.11, Table 4.17 and Table 4.24 in Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR. A more detailed description of the junction types on the Proposed Scheme is provided in Sections 5.3.3.1, 5.3.3.2, 5.3.3.3 and 5.3.3.4 of the Preliminary Design Report with a detailed summary of the junction types along the Proposed Scheme also provided in Table 5.1 and Table 5.2 of the Preliminary Design Report.

The junction types set out in the PDGB directly align to the Proposed Scheme core aim and objectives. One of the core aims of the Proposed Scheme is to:

“Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.”

The proposed scale of the BusConnects CBC Infrastructure Works will be transformational for cycling in Dublin, delivering a large number of the primary cycling routes identified in the Greater Dublin Area Cycle Network plan. With proposals of this scale, it is critical that the overall design approach matches the stated ambition and can achieve a longevity that such investment deserves. With this in mind, the NTA set about developing ‘Design Principles’ for the project. These principles would complement existing documents and standards such as the National Cycle Manual and DMURS. The PDGB was developed to outline the agreed design principles and to enable consistency of design.

Documents such as the National Cycle Manual and DMURS continue to serve the engineering and development industry well and over the past 7-10 years and have played an important role in allowing Ireland to follow international best practice. The PDGB, like all guidance documents, was developed to be cognisant of the everchanging nature of society, including commuting patterns and behaviours. To acknowledge the expected increase in cycling numbers and to set about achieving the necessary ‘step change’ to cater for this increase, international best practice from countries which have already experienced this transition successfully was consulted. The ambition of the PDGB was to take the benefits of the

traditional junction layout from the National Cycle Manual and supplement this with a range of measures aimed at increasing protection for cyclists and reducing uncontrolled conflict with pedestrians.

The Netherlands has one of the highest rates of bicycle use in the world, provides the widest range of cycling know-how and is famous worldwide for its cycling infrastructure. The 'Ontwerpwijzer Fietsverkeer' (Dutch Cycle Design Guide) was used during the development of the PDGB. Of particular interest to the NTA, was how the design of junctions could be improved to offer better protection to cyclists.

The typical protected junction layout, as shown in Figure 2.6.10, offers significant safety improvements compared to the traditional junction layout. The deflection of the cycle track at the junction allows the protection kerb (Note 4) to be positioned on the corner of the junction. In urban locations subject to spatial constraints, the protection kerb provides a tighter turning radius for vehicles and will force the left-turning motorist to reduce speed before making the tighter turn. This design layout also keeps straight-ahead and right-turning cyclists on the raised-adjacent cycle track as far as the junction, avoiding any cyclist-vehicle conflict at weaving and merging lanes on all approaches; for example, where access to a dedicated left-turn lane would previously have necessitated a vehicle to cross the cycle lane. Right-turning cyclists will navigate the cycle lane on the junction and turn right (in a controlled manner) after it crosses the side arm. Other benefits to this junction design include:

- a) Traffic Signal arrangement removes any uncontrolled pedestrian-cyclist conflict;
- b) Raised and protected cycle track approaching junction;
- c) Reduced risk of side-swipe due to the removal of cyclist-vehicle conflict at weaving and merging lanes on all approaches;
- d) Improved right-turning safety; and
- e) Improved sight lines for left turning traffic.

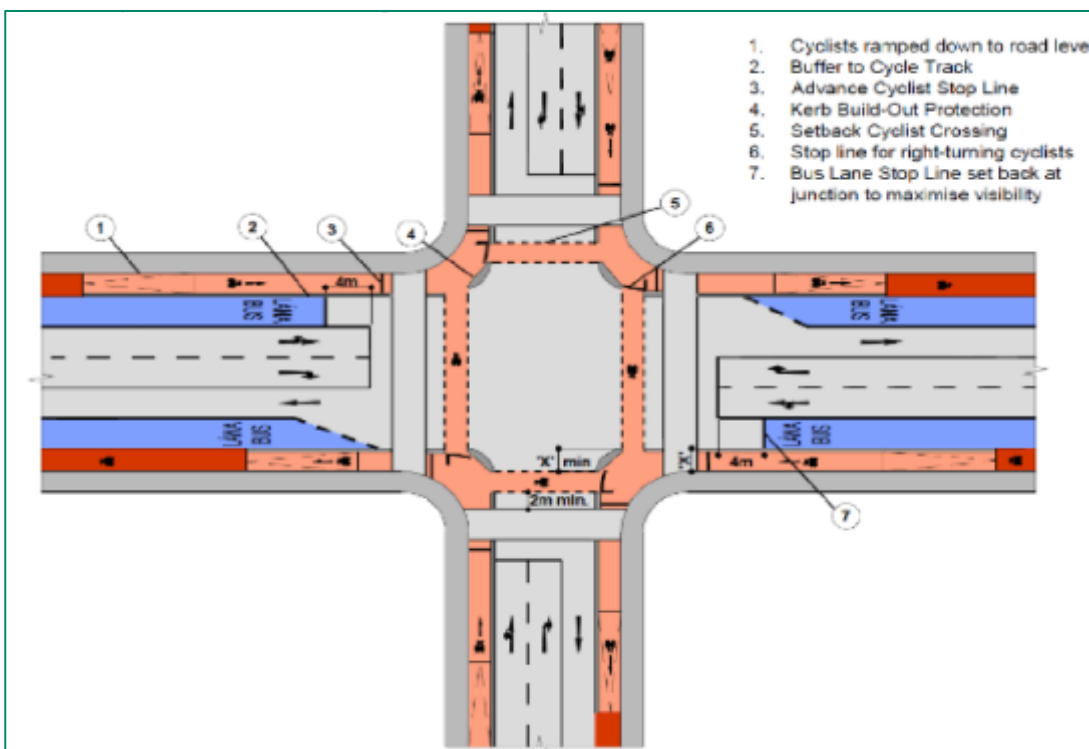


Figure 2.6.10 Typical Junction layout from BusConnects Design Guidance Booklet

ii. Pedestrian-cyclist conflict

Spatial constraints are an important factor in determining any junction design. This is especially the case in urban settings. Where possible, the protected junction has been proposed to be retrofitted into all existing junctions, taking into consideration the best practice from international settings including the Netherlands. The NTA notes the Dublin Commuter Coalition has set out their preference for the 'Dutch style' junction type as described within the submission. There are, however, legislative, behavioural and other practical considerations that need to be taken into account when looking at these international examples.

Consideration for all of these elements has led to the development of the four junction types described in the PDGB.

An important consideration during the development of the PDGB was implementation of measures to mitigate pedestrian-cyclist conflict. The 'dutch-style' junction described in the submission is typical of many junctions in the Netherlands and it allows for a potential un-signalised conflict between pedestrians and cyclists, which depends on a level of courtesy to ensure that collisions are avoided. Following discussions with Irish disability groups, the issue of this potential conflict was raised as a significant concern along the core bus corridors for the visually impaired and for the mobility impaired, based on their members' experiences. Pedestrians are the most vulnerable of road users, and the addition of disability exacerbates this vulnerability. The four junction types within the PDGB have specifically been set out to mitigate these potential conflicts insofar as is reasonably practicable.

Similarly, the layout of the 'dutch style' junctions described in the submission can result in a reduced level of service for pedestrians. The layout of these junctions requires a multi-movement, sometimes multi-directional, non-continuous crossings for pedestrians required with at least 3 crossing movements (2 x cycle track crossing, 1x carriageway) to cross a side road of a typical junction. The intermediate landing area for pedestrians between the cycle track and carriageway requires a suitably sized holding area for pedestrians to wait before crossing the road, this can require a significant space for urban locations.

Junction types 1-3 in the PDGB aim to consolidate and segregate/confine this waiting area to within the footpath, thus creating a more legible and functional use of the available space for all users with direct crossing facilities that align to the principles of DMURS.

It is for these reasons that the layout of the 'dutch style' junctions described in the submission have not been adopted for junctions on the Proposed Scheme.

iii. Use of traffic signals to yield to cyclists

The concept of allowing both cyclists and general traffic to proceed together in the same direction is not uncommon and the same traffic signals arrangement also caters for left-turning traffic. In the Netherlands, there are scenarios where the equivalent right-turn movement can be green whilst cyclists are also green. There is, however, an additional requirement to yield to cyclists in this Dutch scenario, see Figure 2.6.11.



Figure 2.6.11 Example from the Netherlands of traffic signals + give way signage controlling turning traffic and cyclists (Source: Dutch Design Guide Ontwerpwijzer Fietsverkeer)

The arrangement depicted above from the Netherlands is beneficial for cyclists in that it minimises delay time but should be subject to design thresholds such as heavy turning volumes, HGV movements (difficulty with blind spots), high speed environments etc. which have been considered during the design of junctions as part of the Proposed Scheme. The PDGB also includes guidance on appropriate signage to be provided to reinforce the requirement for motorists to yield to straight ahead traffic in such locations.

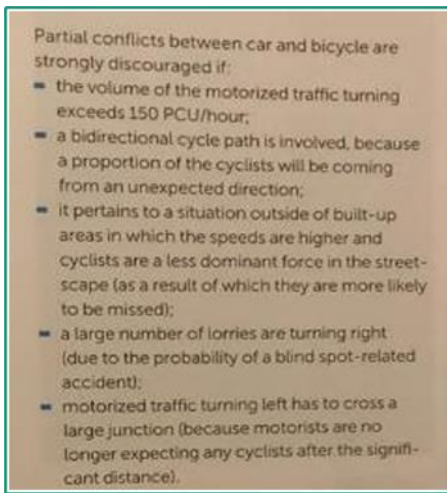


Figure 2.6.12 Extract from Dutch Design Guide Ontwerpwijzer Fietsverkeer

Dutch authorities have a suite of solutions for different scenarios – no one solution works everywhere. For junctions to operate safely and effectively, it is critical that the control of all movements is considered. All road users can have their own traffic signals at junctions (pedestrians, cyclists, buses, vehicles). To achieve optimum operational efficiency including the efficient movement of cyclists, it is also possible for some movements to occur safely at the same time. To assist with these design decisions, thresholds for turning movements have been used. Chapter 6 (Page 153) of the Dutch Design Guide Ontwerpwijzer Fietsverkeer discourages partial conflicts between cyclists and vehicles if the volume of turning vehicular traffic exceeds 150 PCUs per hour. See the above extract from Ontwerpwijzer Fietsverkeer which identifies the above threshold in Figure 2.6.12.

To put the above turning thresholds into context, 150 PCUs per hour equates to approximately 5 cars on average turning per 120 second cycle, or between 3 and 4 cars turning on average per 90 second cycle. The Proposed Scheme also provides other measures such as kerb segregation, advanced position cycle stop lines and early starts for cyclists which will further segregate and reduce the number of interactions between cyclists and vehicles. All these elements form the basis of a typical junction design and operation, thus no one element of a junction design should be considered in isolation.

19 of the 32 key junctions on the Proposed Scheme have implemented this approach to achieve optimum operational effectiveness including the efficient movement of cyclists. Introducing separate signal phases will increase delay for cyclists at junctions. This arrangement will promote the sustainable mode hierarchy for cyclists at junctions by providing priority to ahead cyclists over left turning vehicles.

At each of these junctions the left turning vehicle traffic volumes in these locations are estimated to be less than the 150PCU threshold and similarly low HGV volumes are estimated in line with the principles established by international guidance. In addition to specific signage such as that presented in Figure 39 and Figure 40 of the PDGB, at each of the 19 locations a three to five second early start for cyclists is typically provided to further mitigate the potential for the number of interactions with vehicles/cyclists at these locations. The Proposed Scheme has also been subject to Road Safety Audits at different stages that have informed the design development of the Proposed Scheme.

13 of the 32 key junctions on the Proposed Scheme have implemented junctions where cyclists have a separate signal phase to vehicles.

Separately, the NTA, South Dublin County Council and Dublin City Council will continue to promote the already established driver awareness campaign that seeks to promote driver awareness in line with the Road Safety Authority rules of the road as noted below.

“When turning left, or right, all drivers must watch out for cyclists going ahead or turning. When making a turn, watch out for cyclists in front of you or coming up on your left or right. Do not overtake a cyclist as you approach a junction if you are turning left or right, as the cyclist may be continuing straight ahead.”

It is noted that the Cycle Design Manual was published in 2023 and replaced the previous National Cycle Manual, published by the NTA in 2011. This document includes provision for use of flashing amber for left turning vehicles as presented in TL503.

6. Bus stop design

The NTA welcomes Dublin Commuter Coalition's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops. Section 11 of the Preliminary Design Guidance Booklet (PDGB) within Chapter 4 Proposed Scheme Description Appendix A4.1 of Volume 4 of the EIAR sets out the key measures to address the concerns raised in relation to vulnerable users at these locations which is further elaborated in Section 4.14 of the Preliminary Design Report in the Supplementary Information. These details have evolved as a result of direct consultation between the NTA and representative mobility groups, accessibility audits and road safety audits which have been carried out during the development of the Proposed Scheme.

As described in PDGB Section 11.1 Island Bus Stop, these types are the preferred bus stop option to be used as standard on the BusConnects Infrastructure Works where space constraints allow. Island bus stops reduce the potential for conflict between pedestrians, cyclists and stopping buses by deflecting cyclists behind the bus stop, thus creating an island area for boarding and alighting passengers. On approach to the bus stop island the cycle track is intentionally narrowed, with yellow bar markings also used to promote a low-speed single file cycling arrangement on approach to the bus stop. Similarly, a horizontal cycle track deflection is proposed on the approach to the island to reduce cyclists' speed on approach to the controlled pedestrian crossing point on the island. To address the potential pedestrian/cyclist conflict, a pedestrian priority crossing point is provided for pedestrians accessing the bus stop island area.

Where space constraints do not allow for an island bus stop, PDGB Section 11.2 Shared Bus Stop Landing Zone provides an option consisting of a shared bus stop landing zone that may be considered. This proposed arrangement will remove the conflict between cyclists and stopping buses by ramping cyclists up to the footpath level where they continue through the stop.

Section 11.2 goes on to explain that to address the pedestrian/cyclist conflict, which would apply to wheelchair users also, the cycle track should be narrowed on approach to the bus stop and yellow bar markings should be provided to alert cyclists to the potential conflict ahead. In addition to this, at the bus stop, the cycle track should be deflected to provide a 1.0m wide boarding/alighting zone for bus passengers, including wheelchair users. Also, appropriate tactile kerbing should be provided to ensure that visually impaired users are aware of crossing areas.

7. Shared space

The Cycle Design Manual notes that where practicable, the segregation of pedestrians and cyclists is desirable, and shared facilities should not be considered as a first option. The Cycle Design Manual recognises, however, that in some cases, shared facilities are appropriate. The design of the Proposed Scheme has been undertaken such that pedestrians and cyclists are segregated wherever practicable and shared spaces are only used in specifically constrained locations, typically at junctions where there is insufficient space to provide a protected junction thereby requiring cyclists to make turning movements via toucan crossings.

Provision of signage and road markings will encourage cyclists to carefully negotiate these areas such that safety of pedestrians is not compromised.

8. Bicycle parking

As noted in Section 4.6.4 of Chapter 4 of Volume 2 of the EIAR, bike racks will generally be provided, where practicable, at Bus Stops and key additional locations as noted in the Landscaping General Arrangement drawings (BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-9001) in Volume 3 of the EIAR.

Section 6.4.6.1.6.1 of Chapter 6 of Volume 2 of the EIAR notes the following in relation to the provision of cycle parking:

"With regards to cycle parking, 220 spaces are provided in the Do Minimum scenario. The Proposed Scheme will increase provision by 49% to a total of 328 spaces across the entire corridor in the Do Something scenario."

9. Nutgrove Avenue / Rathfarnham Wood Junction

The Proposed Scheme has been designed to tie into the Grange Road Walking and Cycling Scheme at this location, which was completed in 2022. As such, the layout of the bus stop in this location, which was constructed as part of the Grange Road Walking and Cycling Scheme, has been retained in the Proposed Scheme design, in order to minimise abortive works.

10. Grange Road / Willbrook Road Junction

The Proposed Scheme in this location has been designed to reflect the existing arrangement on Willbrook Road, where the southbound cycle track does not extend as far as the junction.

11. Rathfarnham Road / Main Street Junction

It is noted that public realm improvements consisting of high quality paving, landscaping and public lighting have been delivered in the vicinity of the proposed bus stop in this location by South Dublin County Council. As such, the design approach has been to minimise the impacts on this high quality public realm where practicable, and retain the existing arrangement. As such, the shared landing zone bus stop arrangement was considered the most appropriate design response in this location.

12. Rathfarnham Road / Dodder Park Road Junction

It is noted that priority signals for cyclists are provided at this junction and that the junction has been designed as a protected junction for cyclists. The following is noted in the Junction Design Report:

“A four stage signal operation is proposed. Mainline buses and cyclists will operate in the same stage through the junction, to be followed by mainline traffic in both directions. Traffic from side roads will operate together. Cyclists crossing from the side roads will operate with pedestrians due to the high volume of left turning traffic.”

Shared space has been provided at this junction to cater for two way movements for cyclists connecting to the Dodder Greenway on Dodder Road Lower.

13. Rathdown Park / Rathfarnham Road Junction

Given the proximity of the junctions of Rathfarnham Road / Rathdown Park and Rathfarnham Road / Bushy Park Road these junctions have been modelled as a single linked junction. In order to facilitate bus priority and maintain people movement through these junctions, the provision of a pedestrian crossing between the two junctions has not been considered practicable. New signalised pedestrian crossings are proposed on the southern and western arms of the Rathfarnham Road / Rathdown Park junction which will improve pedestrian crossing opportunities in this location.

14. Fergus Road Modal Filter

The NTA notes this comment in relation to a proposed modal filter on Fergus Road. It is noted that it is proposed to provide a right turn ban from Fergus Road onto Templeogue Road to avoid traffic attempting to bypass the proposed bus gate on Templeogue Road via Fergus Road. It is noted that the traffic modelling carried out and presented in Chapter 6 of the EIAR does not predict a significant increase in general traffic on Fergus Road.

It is noted that a quiet street treatment is proposed on Rathdown Drive, Rathdown Crescent and Rathdown Park linking Templeogue Road to Rathfarnham Road and providing an alternative facility for inbound cyclists to access Terenure Village and beyond.

15. New pedestrian crossing at Beechlawn Way

The location suggested for the inclusion of a new pedestrian crossing at Beechlawn Way is a busy commercial area, with a number of accesses, accessible parking bays, parking bays and a bus stop. As such, a pedestrian crossing in this location, with the requisite visibility splays, would require the removal of some of these existing facilities. A signalised pedestrian crossing is provided on the southern arm of the junction of Rathfarnham Road / Terenure Road East, approximately 50m from Beechlawn Way. As such, it is considered appropriate for pedestrians to utilise the crossing at the junction.

It is noted that the footpath across Beechlawn Way is proposed to be raised as part of the Proposed Scheme to prioritise pedestrians.

16. Cycle Lanes on Terenure Place and Terenure Road East

The NTA notes this comment and acknowledges that the existing advisory cycle lanes on Terenure Place and Terenure Road East are not included in the Proposed Scheme design. It is noted that the existing cycle lanes referred to are advisory cycle lanes which are marked by a broken white line which allows motorists to enter or cross the lane. These existing lanes range in width from approximately 1.0m to 1.2m.

Advisory cycle lanes were an option available to designers under the National Cycle Manual, however, are not included in the recently published Cycle Design Manual which notes the following in Section 4.2.8:

“The use of narrow advisory cycle lanes with dashed edge lines are no longer recommended.”

While the scheme design was carried out in advance of the publication of the Cycle Design Manual, this statement reflects a recent move in the industry away from the provision of narrow, advisory cycle lanes, which the Proposed Scheme design has taken account of.

It is further noted that alternative cycle facilities have been provided on Rathdown Drive, Rathdown Crescent and Rathdown Park linking Templeogue Road to Rathfarnham Road as well as segregated cycle tracks proposed on Terenure Road North and Harold's Cross Road providing an alternative route for cyclists accessing the city centre.

17. Terenure Road East / Aldi Entrance

A continuous footpath at the entrance to Aldi would require acquisition of private lands to construct, due to the existing levels at the entrance. As such, it has been decided that a continuous footpath in this location would not be appropriate.

18. Camden Street Upper / Charlotte Way Junction

As outlined in the response to Item 4 above, the retention of the central traffic island at this junction is required for traffic safety reasons. Due to the geometry and permitted movements at the junction, the traffic island is required to direct traffic to Charlotte Way.

19. South Great George's Street Bus Stop

Given the presence of a significant number of shop fronts along South Great George's Street, it is not possible to provide a bus shelter at the back of the footpath. As such an alternative layout, which is included as Figure 36 the Preliminary Design Guidance Booklet (PDGB), is proposed. The following is noted in Section 11.2 of the PDGB:

"In particularly constrained locations within urban centres, where the provision of a bus shelter at the rear of the footpath is not possible due to the presence of frontages, a variation of the Shared Bus Stop Landing Zone arrangement may be considered. This option is presented in Figure 36. This option provides a cantilever bus shelter adjacent to the carriageway, to maintain access to frontages at the back of the footpath."

20. Bushy Park Quiet Neighbourhood

The NTA acknowledges the comments raised in relation to camera enforcement. Enforcement of speed limits is a matter for an Garda Síochána, however it is considered that sufficient traffic calming measures are provided which will encourage slower speeds on this section of the Proposed Scheme. It is noted that the existing ramps are maintained.

There is also parking along this section of the Scheme which narrows the available carriageway width, as well as street trees which provide a sense of enclosure which will further contribute to a traffic calmed environment.

21. Templeogue Road / Old Bridge Road

The comments in relation to the pedestrian crossings at the junction of Templeogue Road and Old Bridge Road are noted. It is noted that there is no existing pedestrian crossing on the western or southern arms of this junction. It is proposed to install a new signalised pedestrian crossing on the southern arm of the junction, which will significantly improve facilities for pedestrians at this junction. Due to the geometry of the junction, the provision of an additional crossing on the western arm would require vehicular stop lines to be set back significantly, which would lead to delayed people movement at the junction.

22. Templeogue Road Quiet Street

The proposed toucan crossing will be visible to cyclists utilising the roundabout. It is considered that the proposed signage is suitable. The quiet streets are narrow, residential streets with limited volumes of traffic. It is noted that existing traffic calming features, including speed ramps, will be retained.

2.6.5 091 Dublin Cycling Campaign

2.6.5.1 Overview of submission

The submission raised the following points and issues:

1. Introduction

The introduction of the submission outlines that the Dublin Cycling Campaign supports the Proposed Scheme, though they do request a few minor modifications.

The submission sets out that the Dublin Cycling Campaign is a registered charity that advocates for better cycling conditions in Dublin. The submission notes that the Dublin Cycling Campaign has been engaging with the NTA through all stages of the project including multiple rounds of public consultation, community forums, and through one to one meetings.

Dublin Cycling Campaign requested an oral hearing to discuss these issues.

2. Achieving National Mobility Policy Targets

The submission set out the views of the Dublin Cycling Campaign in relation to categorising different cyclists into four types including Strong and Fearless, Enthused and Confident, Interested but Concerned, and No Way, No How.

The submission stated that the outer sections of the Proposed Scheme will fall below the standards and quality of service required and will not attract people in the 'Interested but Concerned' category to provide the modal shift necessary to fulfil the goals of the NSMP.

3. Universal Design

The submission stated that the design should comply with Universal Design principles to ensure access for disabled cycling and non-standard or adapted cycles, as well as disabled persons.

The submission noted the seven principles of Universal Design.

4. Welcome Design Interventions

The submission expressed support for the following proposed design aspects:

- The proposed bus gate and segregated cycle tracks through Rathmines Village;
- Removal of Owendoher and Brookvale elements proposed during the third round of non-statutory public consultation and instead introducing cycling facilities along the main CBC corridor;
- Improved island bus stops along the scheme;
- The conversion of the Spawell Roundabout to a signalised junction;
- The locating of the footpath on Templeogue Road to the back of the stone arch and the cycle track to the front of it; and
- The introduction of cycle facilities on Terenure Road North and Harold's Cross Road.

5. Elements of the Scheme for consideration

The submission notes a number of elements of the Proposed Scheme which Dublin Cycling Campaign believe need to be addressed, as follows.

5.1. Cycle Track Widths

The submission states that cycle tracks should be a minimum of 2.0m wide, which would allow for overtaking of regular cycles and accommodate larger cycles such as tricycles and cargo bikes. The submission lists the following locations which have proposed cycle tracks of less than 2.0m wide:

- Rathfarnham Road
- Rathgar Road; and
- Camden Street Lower.

The submission goes on to state that cycle tracks proposed to be constructed at less than 2.0m width are not being built for the envisaged future capacity required. It is noted that stated dimensions on cross-sections include the width of permanent separator kerbs, but that no dimensions are provided for these kerbs. The submission notes, that if constructed in accordance with the National Cycle Manual, these kerbs would be 0.25m wide, which would reduce the usable width of a 1.5m wide cycle track to 1.25m of usable width.

5.2. Cycle Track Continuity

The submission notes that the plans show gaps in cycle track on Rathfarnham Road and Templeogue Road in order to provide sections of bus lanes. Dublin Cycle Campaign suggest that the scheme would be improved by providing a continuous cycle track over providing short sections of bus lane.

5.3. Filtered Permeability

The submission notes that the use of filtered permeability on Mountpleasant Avenue Lower and Lennox Street are welcomed, however notes that further away from the city centre the scheme relies more upon signage and enforcement. Dublin Cycle Campaign suggest that filtered permeability should be utilised more extensively, including at (but not limited to) Rathdown, Wasdale Road, Greenmount Road and Fortfield Road, to negate the possibility of rat-running on these streets.

5.4. Quiet Street Treatment

The submission suggests where 'Quiet Street' measures are proposed the design should consider Dutch guidance (CROW) measures such as:

- Coloured surfacing
- No carriageway road marking
- Vehicle path width of 4.5m
- Safe and comfortable for cyclists
- Clarity for motorists that route is a cycle route.

Quiet street should have a distinct uniform surfacing where vehicle parking is limited with build-outs and chicanes.

The submission makes specific reference to Rathdown Drive, which is heavily trafficked at the weekend due to the proximity of Bushy Park, and which also has a considerable amount of parking (included illegal parking), as well as Wasdale Park, which the submission noted has an 8.5m wide cross section for two traffic lanes.

5.5. Speed Limits

The submission welcomes the 30 km/hr speed limit proposed within the scheme, however it queries how this will be executed from a legislative perspective, as speed limit changes are in the remit of local authorities. The submission raises further concerns about enforcement and request that driver behaviour with respect to speed limits is cultivated through engineering design.

Appendix 1.0

The submission contains an appendix which outlines a number of location specific comments and observations, which are outlined below.

Sheet 01 – Nutgrove Avenue Rathfarnham Wood

- The submission notes that Dublin Cycling Campaign has commented at length, particularly in previous submissions, on safety aspects of the junction design at Grange Road. The submission states that combining straight-ahead cyclists with left-turning motor vehicles on the same green light phase, presents a grave risk.
- The submission notes that cycle track widths are minimal, being 2.0m at most, including the width of the proposed separator kerbs.

Sheet 02 – Rathfarnham Road past Yellow House

- The submission notes that junctions should be redesigned in accordance with the comments on the Grange Road junction on Sheet 01.

- The submission notes that at Butterfield Avenue there is a reference to linking into existing scheme. Dublin Cycle Campaign note that they are unaware of any scheme proposed here.

Sheet 03 – Rathfarnham Road

- The submission notes that it is disappointing to see that there is no inbound cycle lane from Rathfarnham Village.
- The submission requests clarity on how the 30 km/h speed limit on this section will be enforced/

Sheet 05 – Rathdown Park and Bushy Park Road

- The submission notes that the Quiet Street treatment proposed requires additional measures as set out in section 5.4 of the submission.
- The submission notes that the design encourages cyclists to use Bushy Park Road and no southbound protected facility for cyclists is proposed, while speeds of motorists are likely to be high. It further notes that protected junctions to join or exit Bushy Park Road would ameliorate these concerns.

Sheet 06 – Terenure Village

- The submission notes that there are no cycle tracks on Terenure Road East or West.
- The submission notes that the removal of slip lanes is a positive step, and also suggests that slip lanes for cyclists from Terenure should be considered.

Sheet 07 – Rathgar Village

- The submission notes that the location of the proposed inbound bus stop is very close to the junction.
- The submission states that there is a risk of cyclists being 'doored' due to pay and display parking on both sides of the road.
- The submission notes that the Campaign welcomes cycle tracks on both side of Orwell Road.

Sheet 12 – Rathmines

- The submission notes that Local Access from 6:00-20:00 Monday to Sunday is proposed and queries the definition of local access and how it will be enforced. The submission queries whether this encompasses access to St. Mary's School.

Sheet 14 – Richmond Street South and Rathmines Road Lower

- The submission notes that the creation of a part-time bus gate along Rathmines Road Lower is a positive step.
- The submission also notes that the addition of bypassed bus stops is welcome.
- The submission notes that cycle track widths are not sufficient to cater for the anticipated demand along this corridor which already experiences congestion across La Touche Bridge and along Rathmines Road Lower, despite the existing low quality of service for cyclists.
- The submission notes that raised crossing markings are not shown at the junctions with Blackberry Lane and Grove Road.
- The submission states that the added widths of cycle tracks and turning lanes at the La Touche Bridge are to be commended.
- The submission notes that the unprotected cycle lanes through the junction between Grove Road and Rathmines Road Lower fail to provide an adequate quality of service. It is noted that although public service vehicles only will be using the junction between 6am and 8om, the lack of segregation for cyclists provides a hostile environment and represents a weak line in a very important cycle route.
- The submission notes that the filtered permeability at the junction of Lennox Street with Richmond Stret South is welcome, as currently this street is used as a rat run. The submission recommends that Richmond Row should also be closed to stop rat-running through Portobello and turning traffic at

a very busy junction for pedestrians and cyclists. The submission notes that Dublin City Council are proposing to close Richmond Row as part of the regeneration of Portobello Harbour.

Sheet 15 – Camden Street and Charlotte Way

- The submission notes that cycle track widths are inadequate, being 2.0m at most, including the width of the kerbs.
- The submission notes that converting Lennox Street to a cul-de-sac will provide a substantial improvement for cyclists heading westwards along this road.
- The submission notes that the Charlotte Way junction presents a complex crossing for pedestrians and cyclists. It is noted that provision for outbound cyclists on Camden Street Lower to go to Camden Street Upper is inadequate.
- The submission notes that there is an unnecessary left-turn lane from Harcourt Road to Richmond Street South, and that there is a road that acts as a slip lane for the same route immediately east of the junction.

The submission suggests that the left turn lane is removed and left turning traffic filter from the straight ahead lane, and that the slip lane be closed to through traffic. If the slip lane is retained, the submission states that it needs a crossing at the junction with Harcourt Road as this junction is currently taken at high speed by motorists.

Sheet 16 – Camden Street

- The submission notes that Cross-Section P-P appears to have a lack of consistency in cycle lane widths. Inbound and outbound cycle lane widths appear and scale equally on GA drawings however are differently dimensioned on the cross-section.
- The submission notes that there is a 4.5m wide footpath inbound but the cycle track is only 1.75m or 1.3m usable width outbound. The Cycle campaign states that this is inadequate for such a busy route.
- The submission queries which there is a 1.5m wide cycle track (including kerb width) and 0.8m buffer outbound.
- The submission notes that the jug/pocket turn to Grantham Street, combined with toucan crossings, is inadequate.

Sheet 17 – Camden Street to Aungier Street

- The submission states that cycle track widths are inadequate, being 2.0m at most including kerb widths.
- The submission notes that the removal of slip turns at the Kevin Street junction will substantially improve the pedestrian and cyclists experience.

Sheet 18 – South Great George's Street and small part of Aungier Street

- The submission notes that this is one of the busiest cycle links in the country
- The submission notes that the cycle lane widths are minimal, being 1.8m at most, which is the indicated 2.0m width minus kerb widths.
- The submission notes that the presence of 3 loading bays on South Great George's Street and one on Aungier Street, some of which turn into taxi ranks at night, on the footpath side of cycle lanes, makes a hostile passing point for cyclists.
- The submission notes that the use of shared space and toucan crossings at the junction with Stephens Street Lower is substandard.
- The submission notes that standard bus shelter designs leave little space on footpaths for pedestrians in this city centre location.

Sheet 19 – Terenure Road North

- The submission notes that there is no bus stop bypass at one inbound bus stop.

Sheet 24 – Wasdale Park

- The submission notes that filtered permeability could be utilised at Wasdale Park to truly cultivate a quiet street environment as well as negate the need for plates. The submission further states that given that this is intended to be a quiet street for cycling that the Campaign would recommend the removal of the ramps.

Sheet 25 – Zion Road

- The submission notes the slip lane removal is welcomed but that it would be preferable for the slip lane to be retained for cyclists.

Sheet 28 & 29

- The submission notes that there are currently desire lines on the southern side of the R137 and pedestrians are seen using the petrol station. The submission states that it is disappointing to not have further pedestrian and cycle infrastructure provided here, especially given the connection further on connecting into the M50 underpass scheme.

Sheet 30 – R137 Spawell Junction

- The submission notes that the proposed conversion of the existing roundabout to a signalised junction is welcomed, however if there are separate cycle/pedestrian crossings the junction waits will be very long. It is noted that waiting times re currently unacceptable even with toucan crossing timings.

Sheet 31 – R137 Templeogue Road

- The submission notes that cycle track widths are very narrow at bus stops.
- The submission states that given the speed of the road and its proximity to the M50 it would be preferable to have a buffer between the cycle tracks and carriageway.

Sheet 32 – R137 Templeogue Road

- The submission notes that the Templeogue Bridge junction needs Dutch geometry to ensure it is a fully protected junction. It is noted that there appears to be no continuous cycling infrastructure provided on the southbound lane of the Old Bridge Road and this is an important link for the southern connection of the Ballyroan/Knocklyon and Firhouse areas as well as connectivity to the Dodder Greenway.
- It is noted that currently on the southern side of Templeogue Road there is shared space. The submission queries whether this is proposed to be removed, and notes that if so further segregated protected cycling infrastructure should be provided.
- The submission notes that cycle tracks stop before Templeogue Village

Sheet 33 – Springfield Road, Templeville Road, R137

- The submission states that the cycle track widths are only 1.5m wide with 4.4m wide footpaths on one side, so more equitable distribution should be considered.
- The submission notes that the junction should be upgraded to a fully protected Dutch style r cyclops junction

Sheet 35 – Rathdown Drive

- The submission notes that there is currently excessive parking on Rathdown Drive, and that ramps are not preferable for cyclists. The submissions suggests that a 'true' quiet street treatment is provided as outlined in Section 5.4 of the submission.
- The submission also notes that there is lots of green space to create a cycle track.

Sheet 36 – Rathdown Crescent

- The submission notes that the roundabout at Rathdown Crescent and Park junction is superfluous.
- It is further notes that the reduction of the speed limit to 30 km/h is welcomed

Sheet 37

- The submission states that Terenure Place presents a hostile environment for vulnerable road users and requests that An Bord Pleanála requires by condition consideration of removal of one of the general traffic lanes.

Sheet 38, 39, 40, 41 and 42

- The submission notes that filtered permeability to comply with DMURS would provide better protection for vulnerable road users compare to turn-ban signage that necessitates active enforcement to be effective.

2.6.5.2 Response to submission

1. Introduction

The NTA recognises the benefit that the continued engagement with the Dublin Cycling Campaign and other advocacy groups through the three rounds of non-statutory public consultation, community forums and one to one meetings, has had in developing the Proposed Scheme. The NTA notes that the Dublin Cycling Campaign are generally supportive of the Proposed Scheme, apart from certain elements, and welcomes the support from the charity for implementing the Proposed Scheme. Requests to modify particular detailed design aspects of the Proposed Scheme are noted and the NTA has provided responses to those requests as set out in the following sections. The NTA looks forward to the continuation of collaboration with the Dublin Cycling Campaign in achieving the Proposed Scheme objectives which have many synergies with the Dublin Cycling Campaign's vision for a vibrant city where people of all ages and abilities can choose to cycle as part of their everyday life.

2. Achieving National Mobility Policy Targets

The NTA acknowledges the submission's approach to categorising cyclists by characteristic type and notes that there are multiple industry studies that have taken a similar approach, however, the Proposed Scheme has not set out to target any particular cycling cohort. The Proposed Scheme will provide a safe, sustainable transport corridor that can provide a sustainable alternative mode of transport for all ages and abilities. Comments raised in relation to the recently published National Sustainable Mobility Policy are noted and the Proposed Scheme's aim and objectives as set out in Section 1.2 of Chapter 1 of Volume 2 of the EIAR have a direct alignment to the objectives that underpin this policy.

3. Universal Design

As noted in section 4.6.5 Accessibility for Mobility Users of Chapter 4 of Volume 2 of the EIAR:

"The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure. In achieving this aim, the Proposed Scheme has been developed using the PDGB and in accordance with the principles of DMURS and Building for Everyone: A Universal Design Approach (NDA 2020).

The following non exhaustive list of relevant standards and guidelines have informed the approach to Universal Design in developing the Proposed Scheme:

- *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors (NTA 2020);*
- *Building for Everyone: A Universal Design Approach (NDA 2020);*
- *How Walkable is Your Town? (NDA 2015);*
- *Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland (NDA 2012);*
- *Best Practice Guidelines, Designing Accessible Environments. Irish Wheelchair Association (IWA) (IWA 2020).;*
- *UK DfT Inclusive Mobility (UK DfT 2005);*
- *UK DfT Guidance on the use of tactile paving surfaces (UK DfT 2007); and*
- *BS8300:2018 Volume 1 Design of an accessible and inclusive built environment. External Environment- code of practice (BSI 2012).*

The Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. An Accessibility Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken. The Accessibility Audit provided a description of the key accessibility features and potential barriers to mobility impaired people based on the Universal Design standards of good practice. The Accessibility Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Accessibility Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has implemented the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes.”

As noted in section 4.2 Accessibility for Mobility Impaired Users of the Preliminary Design Report:

“The assessment of the existing street infrastructure and its ability to support access for disabled users have been based mainly on the Irish Wheelchair Association [IWA] ‘Best Practice Guidelines, Designing Accessible Environments’ and The National Disability Authority’s [NDA] ‘Building for Everyone: A Universal Design Approach”.

4. Welcome Design Interventions

The NTA welcomes the comments noted in the submission and notes that the proposed measures will meet the aim and objectives of the Proposed Scheme, as set out in section 1.2 of Chapter 1 of Volume 2 of the EIAR.

5. Elements of the Scheme for Consideration

The NTA notes the comments from the Dublin Cycle Campaign in relation to the various elements of the scheme, as set out below. A response to each issue is outlined below:

5.1. Cycle Track Widths

One of the main outcomes of the Proposed Scheme is safe, segregated cycling facilities which are accessible to all along the corridor. As set out in the PDGB and in accordance with the NCM width calculator, the desirable minimum width for a single-direction, with-flow, raised adjacent cycle track is 2.0m, to provide a high Quality of Service and allow for overtaking within the cycle track, as well as to cater for larger cycles. Notwithstanding this aspiration, it is acknowledged that the Proposed Scheme is to be delivered in constrained urban environments, and the delivery of a 2.0m+ wide cycle track may not always be practicable. As such, the cycle track widths have been reduced to typically 1.8m or 1.5m wide where the provision of 2.0m wide cycle tracks is not practicable.

Whilst cycles can come in a range of shapes and sizes (for example standard, tandem, recumbent, cargo, handcycle, wheelchair user tricycle, articulated bikes with additional child trailer or trailer bikes), these cycles are typically less than 1m in width and will be accommodated by the Proposed Scheme.

The submission notes three locations in particular where cycle tracks of less than 2.0m wide are proposed, namely:

- Rathfarnham Road;
- Rathgar Road; and
- Camden Street Lower.

The NTA note that each of these locations are particularly constrained in terms of the available cross-sectional width and an extensive options selection has been carried out to determine the preferred cross-section. This option selection is documented in Chapter 3 – Consideration of Reasonable Alternatives, in Volume 2 of the EIAR.

Section 3.4.3.2 notes the following in relation to the Preferred Option on Rathfarnham Road:

“Option RF5 - an inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by balancing the provision of physical bus priority and segregated cycle with engineering and construction constraints.

In terms of the sub-criteria under the Environment criterion, Option RF5 performed marginally better than other options in terms of Archaeology and Cultural Heritage due to fact that this option would not impact on Pearse Bridge. In terms of Architectural Heritage, RF5 performed marginally better than other options as it would not impact on Pearse Bridge or Rathfarnham War Memorial Hall. Option RF5 performed significantly better than other options under the Flora and Fauna criterion due to the significantly fewer number of trees impacted.

In terms of Landscape and Visual, Option RF5 performed significantly better than other options due to the impacts associated with the construction of a new bridge crossing the River Dodder. In terms of Air Quality and Noise and Vibration, Option RF5 performed marginally worse than other options due to the fact that traffic is not diverted from the main CBC. Under all other criteria, Option RF5 performed equally to the other options.”

Section 3.4.1.1.3 notes the following in relation to the Preferred Option on Rathgar Road:

“Option RG2 – the provision of bus lanes and general traffic lanes on Terenure Road East, a one-way outbound regime on Rathgar Road and alternative cycle facilities on Terenure Road North/Harold’s Cross Road and Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the majority of this section and would minimise the impact the curtilage of protected structures and private gardens and trees on Terenure Road East and Rathgar Road through the provision of alternative cycle routes. This option would provide bus priority, and while cycle facilities would not be provided along a section of the CBC, the proposal included an attractive and safe alternative.

In terms of the sub-criteria under the Environment criterion, the preferred option performed significantly better than other options in terms of Architectural Heritage as fewer protected structures would be impacted. In terms of Flora and Fauna the preferred option performed significantly better than other options due to the reduced impacts on existing trees along Rathgar Road. In terms of Landscape and Visual, the preferred option performed significantly better than other options due to the reduced impacts on adjacent residential properties. In terms of Air Quality and Noise and vibration the preferred option performed marginally better than other options due to the fact that traffic would be redirected from the CBC. In terms of Land Use Character the preferred option performed marginally worse than other options due to the fact that a number of car parking spaces would be removed to facilitate the alternative cycle facility on Terenure Road North/Harold’s Cross Road.”

Section 3.4.1.1.5 notes the following in relation to the Preferred Option on Camden Street:

“Option CS3 – a one-way outbound traffic arrangement on Camden Street and Wexford Street with online bus lanes and cycle tracks in this section, with inbound traffic diverted to Harcourt Street - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing physical bus priority and fully segregated cycle tracks throughout the majority of this section of the Proposed Scheme.

In terms of the sub-criteria under the Environment criterion, the preferred option performed marginally better than other options in terms of Air Quality and Noise and vibration the preferred option performed marginally better than other options due to the fact that traffic would be redirected from the CBC. The preferred option performed equally to other options under all other criteria.”

Further details of the extensive options assessment process carried out are contained within the Preferred Route Options Report contained in the Supplementary Information within the Application documents.

The submission states that the quoted width of the cycle track includes for the separator kerb, but that the width of this kerb is not stated. Section 4.10 of the Preliminary Design Report notes the following:

“The kerbing type selected along the Proposed Scheme is primarily dependent upon the presence of a cycle track alongside the carriageway. Where cycle tracks will be present adjacent to the carriageway, the cycle track will be separated by the typical 250mm wide BusConnects kerb, which will have a 120mm upstand to

the carriageway and a 60mm upstand to the cycle track (120mm upstand where cycle track is not raised) as shown in Figure 4.3.”

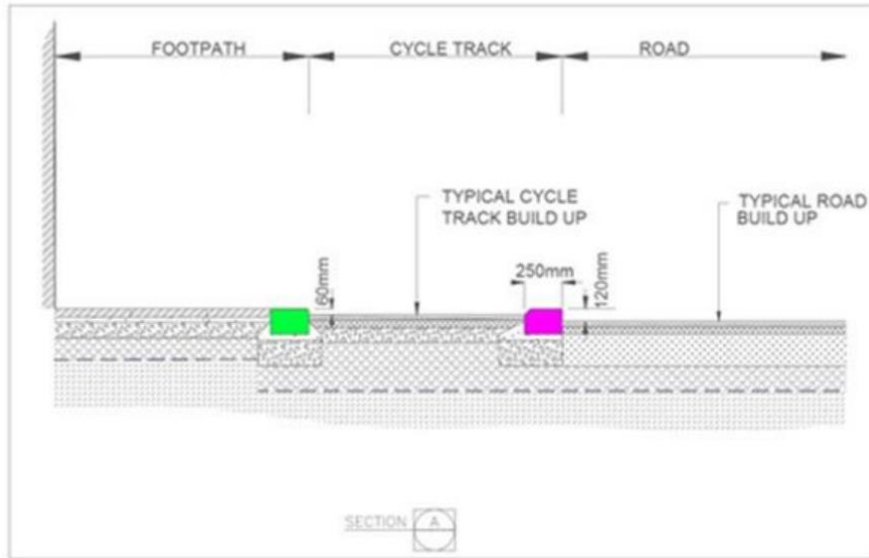


Figure 4.3: Typical Kerb Arrangement

Figure 2.6.13 Extract from PDR showing typical kerb arrangement

5.2. Cycle Track Continuity

The GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 2.6.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

5.3. Filtered Permeability

The NTA notes the support for the proposed filtered permeability measures at Lennox Street and Mountpleasant Avenue Lower.

Filtered permeability has not been used in all locations in order to maintain an appropriate level of access for local residents. Closer to the city centre, where the road network is dense, there are often multiple alternative routes which residents can take to get to their properties, however further out of the city centre the provision of filtered permeability would result in excessive diversions for local residents. Proposed turn bans will mitigate through traffic from making these turns, while still allowing local residents to access their properties by alternative routes, and to exit their properties.

The NTA acknowledges the comments raised in relation to enforcement. Whilst enforcement is currently a matter for An Garda Síochána, the NTA is separately exploring proposals and methods for bus lane/turn ban enforcement as set out under Measure INT24 – Enforcement of Road Traffic Laws of the Greater Dublin Area Transport Strategy 2022-2042.

With the State having incurred the very large expenditure required to deliver the BusConnects Programme, it is vital to ensure that sufficient enforcement is in place such that the benefits of that investment are not eroded by widespread breaches of the restrictions applying to bus lanes, cycle tracks and junctions. To effectively ensure this outcome, camera-based enforcement will be required to augment the on-street activities of An Garda Síochána.

This type of arrangement is in place in many jurisdictions internationally, where camera detection of certain breaches of regulations is linked to the automatic issue of fixed penalty notices.

Action 67 in the Road Safety Strategy Phase 1 Action Plan 2021–2024 sets out the need to *“further develop camera-based enforcement by the Gardaí, including at junctions and for management of bus/cycle lanes, building on existing and recent legislation through establishing suitable cross-agency administrative arrangements; and, where any legislative issues are identified, to consider and develop agreed proposals to remedy them.”*

The Department of Transport has requested the National Transport Authority (NTA) to undertake the first phase of this action, namely to establish and chair a working group to explore this action and to bring forward recommendations on how it should be progressed. The subsequent steps for implementation, including addressing any legislative issues that may be identified, will be determined by the Department of Transport subsequent to the initial phase. It is expected that the report of the Working Group will be finalised and provided to the Department later this year

Notwithstanding this, specific measures have been considered in the development of the Proposed Scheme that will help deter inappropriate and unlawful use of bus lanes including advanced bus signal detection systems which will activate green signals at traffic lights for authorised vehicles only.

5.4. Quiet Street Treatment

Section 4.6.4.3 of the Chapter 4 of the EIAR notes the following in relation to Quiet Street Treatments:

“Where roadway widths cannot facilitate cyclists without significant impact on bus priority, alternative cycle routes are explored for short distances away from the Proposed Scheme route. Such offline options may include directing cyclists along streets with minimal general traffic other than car users who live on the street. They are called Quiet Streets due to the low amount of general traffic and are deemed suitable for cyclists sharing the roadway with the general traffic without the need to construct segregated cycle tracks or painted cycle lanes. The Quiet Street Treatment would involve appropriate advisory signage for both the general road users and cyclists.”

Rathdown Park

The submission notes that the cross sectional width of Wasdale Park has a cross-section of 8.5m. It is noted that this includes for informal residential parking on either side of the roadway and as such the available carriageway width is approximately 4.5m, which is aligned with the guidance included in the CROW manual.

5.5. Speed Limits

The NTA acknowledges the comments raised in relation to enforcement. Enforcement of road traffic laws is a matter for An Garda Síochána.

There are a number of traffic calming measures that have been implemented in the Proposed Scheme that will reduce speeds including improved junction layouts with reduced corner radii, narrow carriageway lane widths, raised table crossings on side roads. The additional landscaping and enhanced pedestrian/ cyclist priority measures along the Proposed Scheme will also lend themselves to the principles of self-regulating streets as set out in DMURS to encourage lower driving speeds.

With respect to adoption of speed limit changes, the NTA will continue with the very positive and constructive liaison with local authorities to ensure that speed limit changes as proposed are adopted.

Appendix 1.0

The NTA notes the detailed comments provided by the Dublin Cycling Campaign within the Appendix. Responses to each issue raised are outlined below:

Sheet 01 – Nutgrove Avenue Rathfarnham Wood

- The NTA notes the comments of the Campaign in relation to junction design.
 - i. Principles of Protected Junction Design for BusConnects

It is important to note that no two junctions are the same. Junctions on the Proposed Scheme have broadly been categorised into 4 types of junction as set out in Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) in Volume 4 of the EIAR and specifically set out at each location in the Junction Design Report which have been included in Appendix A6.3 of Volume 4 Part 2 of 4 of the EIAR and summarised in Table 4.6, Table 4.11, Table 4.17 and Table 4.24 in Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR. A more detailed description of the junction types on the Proposed Scheme is provided in Sections 5.3.3.1, 5.3.3.2, 5.3.3.3 and 5.3.3.4 of the Preliminary Design Report with a detailed summary of the junction types along the Proposed Scheme also provided in Table 5.1 and Table 5.2 of the Preliminary Design Report.

The junction types set out in the PDGB directly align to the Proposed Scheme core aim and objectives. One of the core aims of the Proposed Scheme is to:

“Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.”

The proposed scale of the BusConnects CBC Infrastructure Works will be transformational for cycling in Dublin, delivering a large number of the primary cycling routes identified in the Greater Dublin Area Cycle Network plan. With proposals of this scale, it is critical that the overall design approach matches the stated ambition, and can achieve a longevity that such investment deserves. With this in mind, the NTA set about developing ‘Design Principles’ for the project. These principles would complement existing documents and standards such as the National Cycle Manual and DMURS. The PDGB was developed to outline the agreed design principles and to enable consistency of design.

Documents such as the National Cycle Manual and DMURS continue to serve the engineering and development industry well and over the past 7-10 years and have played an important role in allowing Ireland to follow international best practice. The PDGB, like all guidance documents, was developed to be cognisant of the everchanging nature of society, including commuting patterns and behaviours. To acknowledge the expected increase in cycling numbers and to set about achieving the necessary ‘step change’ to cater for this increase, international best practice from countries which have already experienced this transition successfully was consulted. The ambition of the PDGB was to take the benefits of the traditional junction layout from the National Cycle Manual and supplement this with a range of measures aimed at increasing protection for cyclists and reducing uncontrolled conflict with pedestrians.

The Netherlands has one of the highest rates of bicycle use in the world, provides the widest range of cycling know-how and is famous worldwide for its cycling infrastructure. The ‘Ontwerprijzer Fietsverkeer’ (Dutch Cycle Design Guide) was used during the development of the PDGB. Of particular interest to the NTA, was how the design of junctions could be improved to offer better protection to cyclists.

The typical protected junction layout, as shown in Figure 2.6.10, offers significant safety improvements compared to the traditional junction layout. The deflection of the cycle track at the junction allows the protection kerb (Note 4) to be positioned on the corner of the junction. In urban locations subject to spatial constraints, the protection kerb provides a tighter turning radius for vehicles and will force the left-turning motorist to reduce speed before making the tighter turn. This design layout also keeps straight-ahead and right-turning cyclists on the raised-adjacent cycle track as far as the junction, avoiding any cyclist-vehicle conflict at weaving and merging lanes, for example, where access to a dedicated left-turn lane would previously have necessitated a vehicle to cross the cycle lane. Right-turning cyclists will navigate the cycle lane on the junction and turn right (in a controlled manner) after it crosses the side arm. Other benefits to this junction design include:

- Traffic Signal arrangement removes any uncontrolled pedestrian-cyclist conflict;
- Raised and protected cycle track approaching junction;
- Reduced risk of side-swipe due to the removal of cyclist-vehicle conflict at weaving and merging lanes on all approaches;
- Improved right-turning safety; and
- Improved sight lines for left turning traffic.

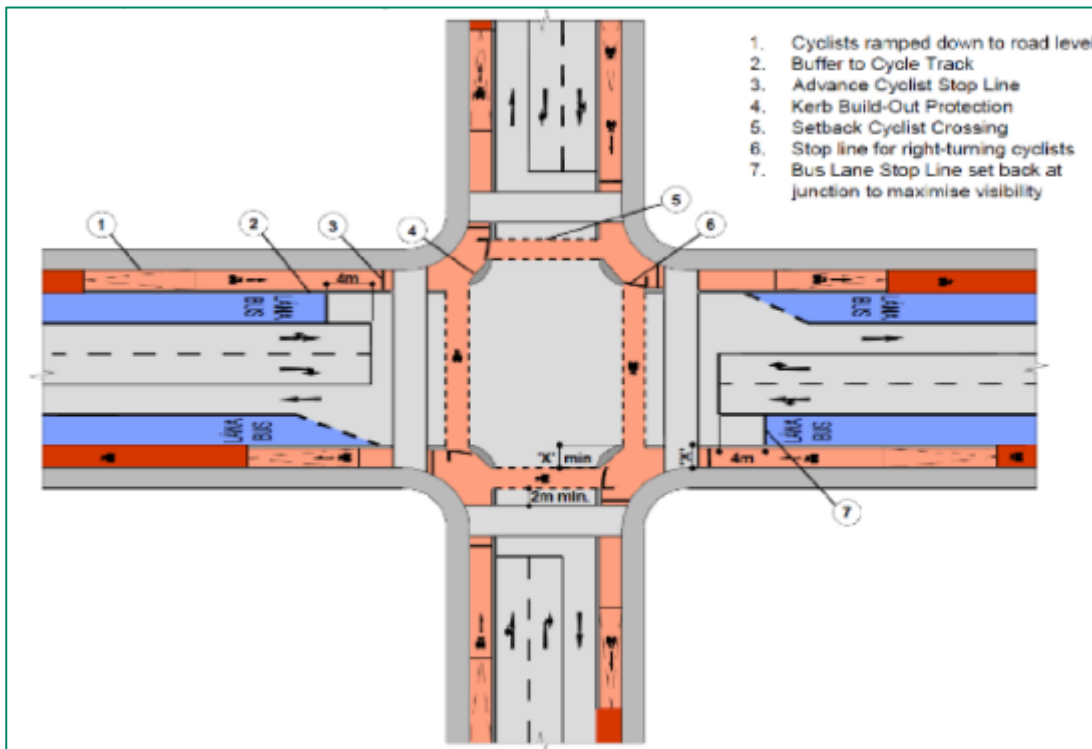


Figure 2.6.14 Typical Junction layout from BusConnects Design Guidance Booklet

ii. Pedestrian-cyclist conflict

Spatial constraints are an important factor in determining any junction design. This is especially the case in urban settings. Where possible, the protected junction has been proposed to be retrofitted into all existing junctions, taking into consideration the best practice from international settings including the Netherlands. The NTA notes the Dublin Commuter Coalition has set out their preference for the ‘Dutch style’ junction type as described within the submission. There are, however, legislative, behavioural and other practical considerations that need to be taken into account when looking at these international examples. Consideration for all of these elements has led to the development of the four junction types described in the PDGB.

An important consideration during the development of the PDGB was implementation of measures to mitigate pedestrian-cyclist conflict. The ‘dutch-style’ junction described in the submission is typical of many junctions in the Netherlands and it allows for a potential un-signalised conflict between pedestrians and cyclists, which depends on a level of courtesy to ensure that collisions are avoided. Following discussions with Irish disability groups, the issue of this potential conflict was raised as a significant concern along the core bus corridors for the visually impaired and for the mobility impaired, based on their members’ experiences. Pedestrians are the most vulnerable of road users, and the addition of disability exacerbates this vulnerability. The four junction types within the PDGB have specifically been set out to mitigate these potential conflicts insofar as is reasonably practicable.

Similarly, the layout of the ‘dutch style’ junctions described in the submission can result in a reduced level of service for pedestrians. The layout of these junctions requires a multi-movement, sometimes multi-directional, non-continuous crossings for pedestrians required with at least 3 crossing movements (2 x cycle track crossing, 1x carriageway) to cross a side road of a typical junction. The intermediate landing area for pedestrians between the cycle track and carriageway requires a suitably sized holding area for pedestrians to wait before crossing the road, this can require a significant space for urban locations. Junction types 1-3 in the PDGB aim to consolidate and segregate/confine this waiting area to within the footpath, thus creating a more legible and functional use of the available space for all users with direct crossing facilities that align to the principles of DMURS.

It is for these reasons that the layout of the ‘dutch style’ junctions described in the submission have not been adopted for junctions on the Proposed Scheme.

iii. Use of traffic signals to yield to cyclists

The concept of allowing both cyclists and general traffic to proceed together in the same direction is not uncommon and the same traffic signals arrangement also caters for left-turning traffic. In the Netherlands, there are scenarios where the equivalent right-turn movement can be green whilst cyclists are also green. There is, however, an additional requirement to yield to cyclists in this Dutch scenario, see Figure 2.6.15.



Figure 2.6.15 Example from the Netherlands of traffic signals + give way signage controlling turning traffic and cyclists (Source: Dutch Design Guide Ontwerprijzer Fietsverkeer)

The arrangement depicted above from the Netherlands is beneficial for cyclists in that it minimises delay time but should be subject to design thresholds such as heavy turning volumes, HGV movements (difficulty with blind spots), high speed environments etc. which have been considered during the design of junctions as part of the Proposed Scheme. The PDGB also includes guidance on appropriate signage to be provided to reinforce the requirement for motorists to yield to straight ahead traffic in such locations.

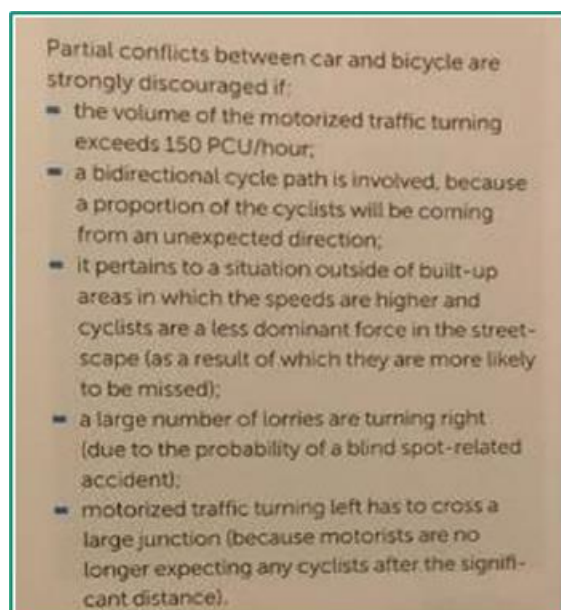


Figure 2.6.16 Extract from Dutch Design Guide Ontwerprijzer Fietsverkeer

Dutch authorities have a suite of solutions for different scenarios – no one solution works everywhere. For junctions to operate safely and effectively, it is critical that the control of all movements is considered. All road users can have their own traffic signals at junctions (pedestrians, cyclists, buses, vehicles). To achieve optimum operational efficiency including the efficient movement of cyclists, it is also possible for some movements to occur safely at the same time. To assist with these design decisions, thresholds for turning movements have been used. Chapter 6 (Page 153) of the Dutch Design Guide Ontwerprijzer Fietsverkeer discourages partial conflicts between cyclists and vehicles if the volume of turning vehicular traffic exceeds 150 PCUs per hour. See the above extract from Ontwerprijzer Fietsverkeer which identifies the above threshold in Figure 2.6.16.

To put the above turning thresholds into context, 150 PCUs per hour equates to approximately 5 cars on average turning per 120 second cycle, or between 3 and 4 cars turning on average per 90 second cycle. The Proposed Scheme also provides other measures such as kerb segregation, advanced position cycle stop lines and early starts for cyclists which will further segregate and reduce the number of interactions between cyclists and vehicles. All these elements form the basis of a typical junction design and operation, thus no one element of a junction design should be considered in isolation.

19 of the 32 key junctions on the Proposed Scheme have implemented this approach to achieve optimum operational effectiveness including the efficient movement of cyclists. Introducing separate signal phases will increase delay for cyclists at junctions. This arrangement will promote the sustainable mode hierarchy for cyclists at junctions by providing priority to ahead cyclists over left turning vehicles. At each of these junctions the left turning vehicle traffic volumes in these locations are estimated to be less than the 150PCU threshold and similarly low HGV volumes are estimated in line with the principles established by international guidance. In addition to specific signage such as that presented in Figure 39 and Figure 40 of the PDGB, at each of the 19 locations a three to five second early start for cyclists is typically provided to further mitigate the potential for the number of interactions with vehicles/cyclists at these locations. The Proposed Scheme has also been subject to Road Safety Audits at different stages that have informed the design development of the Proposed Scheme.

13 of the 32 key junctions on the Proposed Scheme have implemented junctions where cyclists have a separate signal phase to vehicles.

Separately, the NTA, South Dublin County Council and Dublin City Council will continue to promote the already established driver awareness campaign that seeks to promote driver awareness in line with the Road Safety Authority rules of the road as noted below.

“When turning left, or right, all drivers must watch out for cyclists going ahead or turning. When making a turn, watch out for cyclists in front of you or coming up on your left or right. Do not overtake a cyclist as you approach a junction if you are turning left or right, as the cyclist may be continuing straight ahead.”

It is noted that the Cycle Design Manual was published in 2023 and replaced the previous National Cycle Manual, published by the NTA in 2011. This document includes provision for use of flashing amber for left turning vehicles as presented in TL503.

- The comments in relation to cycle track width are noted. As set out in Section 5.3 of the Preliminary Design Guidance Booklet:

“The desirable minimum width for a single-direction, with-flow, raised-adjacent cycle track is 2.0m. This arrangement allows for two-abreast cycling.”

Sheet 02 – Rathfarnham Road past Yellow House

- Refer to the response to bullet point 1 on Sheet 01 above.
- The General Arrangement drawing at Butterfield Avenue notes ‘Tie into Existing’ as shown in Figure 2.6.17 below:

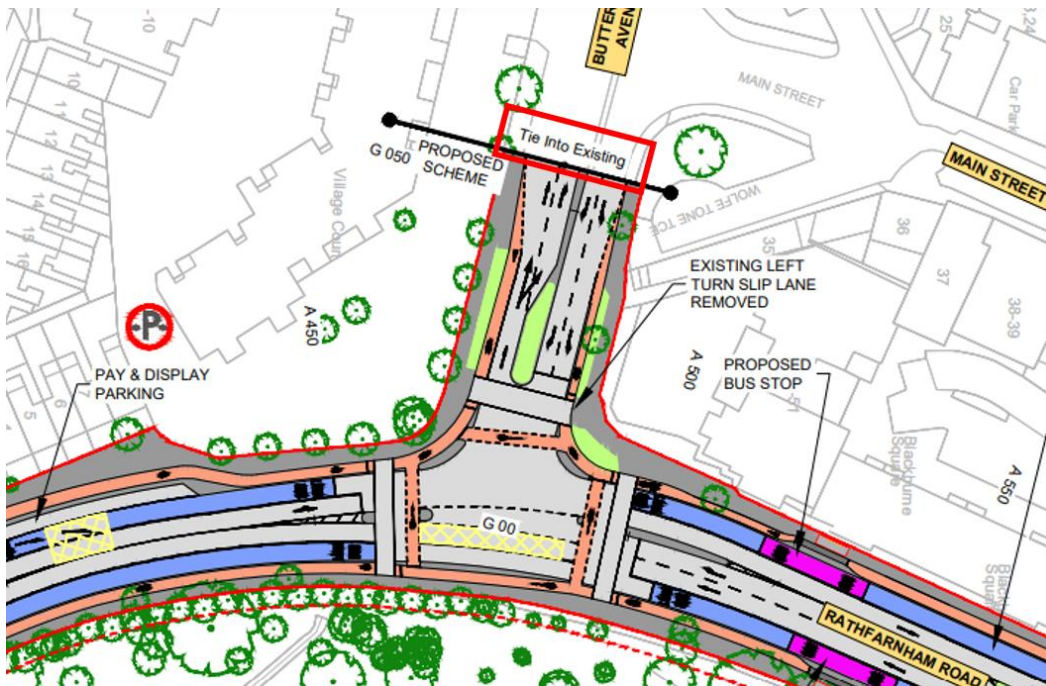


Figure 2.6.17 Extract from General Arrangement drawing at Butterfield Avenue

Sheet 03 – Rathfarnham Road

- Refer to the response to Item 5.2 above.
- Refer to the response to Item 5.5 above.

Sheet 05 – Rathdown Park and Bushy Park Road

- Refer to response to Item 5.4 above.
- This junction and Bushy Park Road are particularly constrained which makes a fully protected junction and a cycle track in each direction on Bushy Park Road difficult. The design represents a balanced approach which provides good improvements to cycle facilities while minimising impact on adjacent landowners.

Sheet 06 – Terenure Village

- The NTA notes this comment, and acknowledges that the existing advisory cycle lanes on Terenure Place and Terenure Road East are not included in the Proposed Scheme design. It is noted that the existing cycle lanes referred to are advisory cycle lanes which are marked by a broken white line which allows motorists to enter or cross the lane. These existing lanes range in width from approximately 1.0m to 1.2m.

Advisory cycle lanes were an option available to designers under the National Cycle Manual, however are not included in the recently published Cycle Design Manual which notes the following in Section 4.2.8:

“The use of narrow advisory cycle lanes with dashed edge lines are no longer recommended.”

While the scheme design was carried out in advance of the publication of the Cycle Design Manual, this statement reflects a recent move in the industry away from the provision of narrow, advisory cycle lanes, which the Proposed Scheme design has taken account of.

It is further noted that alternative cycle facilities have been provided on Rathdown Drive, Rathdown Crescent and Rathdown Park linking Templeogue Road to Rathfarnham Road as well as segregated cycle tracks proposed on Terenure Road North and Harold’s Cross Road providing an alternative route for cyclists accessing the city centre.

- The NTA notes the comment in support of the removal of slip lanes for general traffic. Slip lanes for cyclists have not generally been provided as part of the Proposed Scheme, as managing the conflict between cyclists and pedestrians in these locations would be challenging.

Sheet 07 – Rathgar Village

- The existing inbound bus stop on Terenure Road East has been relocated closer to Rathgar Village as part of an assessment of the bus stops along the route. This assessment is documented in the Bus Stop Review Report contained in Appendix H of the Preliminary Design Report included in the Supplementary Information of the application. The following is noted in relation to the relocation of this bus stop:

“This location brings the stop closer to Rathgar Village thus providing better access to the village and improving potential for interchange with Route 80.”

The NTA is satisfied that the bus stop is sufficiently far from the junction.

- The parking in this location is proposed to be retained as existing. It is noted that cycle facilities are provided on alternative routes including Terenure Road North and Harolds Cross Road, and Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road.
- The NTA notes the support for the proposed cycle tracks on Orwell Road.

Sheet 12 – Rathmines

- The sign on Sheet 12 which states ‘Local Access – 06:00 – 20:00 Mon – Sun’ provides advance warning for northbound motorists of the bus gate on Rathmines Road Lower. Motorists approaching from the south will be able to access St Mary’s College via Military Road.

Sheet 14 – Richmond Street South and Rathmines Road Lower

- The NTA note the comment that the creation of a part-time bus gate along Rathmines Road Lower is a positive step.
- The NTA note that the Dublin Cycle Campaign welcome the addition of bypassed bus stops
- The comments in relation to cycle track width are noted. As set out in Section 5.3 of the Preliminary Design Guidance Booklet:

“The desirable minimum width for a single-direction, with-flow, raised-adjacent cycle track is 2.0m. This arrangement allows for two-abreast cycling.”

- Blackberry Lane and Grove Park have been designed in accordance with the preferred arrangement for uncontrolled side roads as set out in Section 8.1 Preliminary Design Guidance Booklet. The following is noted.

“The preferred priority junction arrangement for the CBC project consists of a single-direction, with-flow cycle track continuing with priority across the front of the side road on a raised entry treatment. This will avoid a change in level for the cycle track.”

The key design features and considerations relating to this junction type are listed below:

- *The minor arm stop/yield line is located behind the raised table and footpath crossing to encourage a “courtesy crossing” for pedestrians.*
- *Splayed kerbs provide a step change between the carriageway and cycle track and the cycle track and footpath.*
- *Cycle symbol markings are to be used on the cycle track across the junction.*
- *Consideration must also be given to cyclists crossing the mainline to enter or exit the side road. Where a significant demand is found for these movements then consideration should be given to provision of a signal crossing.*
- *Tactile paving may be required to alert visually impaired persons of the crossing point at busier side streets. However, the preferred arrangement is for the footpath to continue across the junction without a break and for pedestrian priority to be maintained (as shown in The National Cycle Manual on Page 136).*
- *There is the potential for conflict between turning traffic yielding to cyclists and buses continuing on the mainline.*

- Consideration must also be given to cyclists crossing the mainline to enter or exit the side road. Where a significant demand is found for these movements then consideration should be given to signalising the junction.”

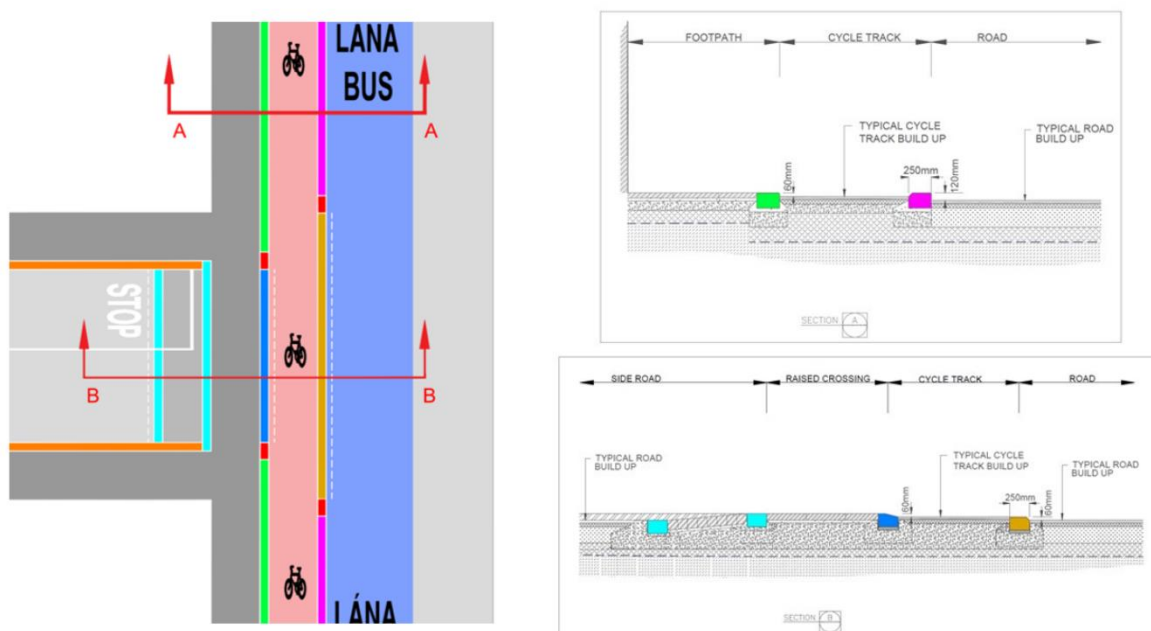


Figure 30: Raised Table Priority Junction Treatment

Figure 2.6.18 Extract from the PDGB showing the preferred side road treatment

- The NTA notes the commendation from the Dublin Cycle Campaign in relation to the added widths of cycle tracks and turning lanes at the La Touche Bridge.
- The NTA notes the comments in relation to the lack of protected facilities for cyclists at the Rathmines Road / Grove Road junction. A protected junction is not practicable at this junction due to the constrained widths.
- The NTA notes the support for the proposed filtered permeability at the junction of Lennox Street and Richmond Street South. The NTA also notes that the submission suggests that Richmond Row should also be closed to stop rat running through Portobello and reduce turning traffic at the junction of Richmond Row and Richmond Street South

Sheet 15 – Camden Street and Charlotte Way

- Refer to the response to Item 5.1 above.
- The NTA notes the Dublin Cycle Campaigns support of the proposal to make Lennox Street into a cul de sac.
- The NTA notes the comments here in relation to southbound cyclists. A separate signal stage is provided for southbound cyclists to make a direct movement from the cycle track on Camden Street Lower to the cycle track on Camden Street Upper. Buses travelling to Camden Street Upper will be permitted to make this movement at the same time, but conflicting left turning traffic will be held at the junction. The proposed junction staging is illustrated in Figure 2.6.19.



Figure 2.6.19 Proposed junction staging at Camden Street / Charlotte Way junction

- The left turn lane in this location is provided to allow vehicles to access the existing parking and loading bays on Richmond Street South, which otherwise would be inaccessible. The cross-section of Harcourt Road in this location has been reduced from four general traffic lanes to three, to facilitate the introduction of cycle tracks. The closure of the slip road from Harcourt Road would restrict access to and from properties that are accessed from this narrow, one way street. Consideration may be given to providing a raised entry treatment at this junction at the next design stage.

Sheet 16 – Camden Street

- The NTA has reviewed the width of cycle tracks on Camden Street and is confident that the information presented in cross-section P-P is consistent with that shown on the General Arrangement Drawings in this location. As illustrated in Figure 2.6.20, cross-section P-P shows a 1.75m wide inbound cycle track which includes the width of the upstand kerb. The outbound cycle track proposed is 1.5m wide and has a 0.8m wide buffer to the adjacent parking bay. Figure 2.6.21 is an extract from the General Arrangement drawings showing the layout in the location of cross-section P-P, which demonstrates that the inbound cycle track, inclusive of the upstand kerb, is wider than the outbound cycle track.

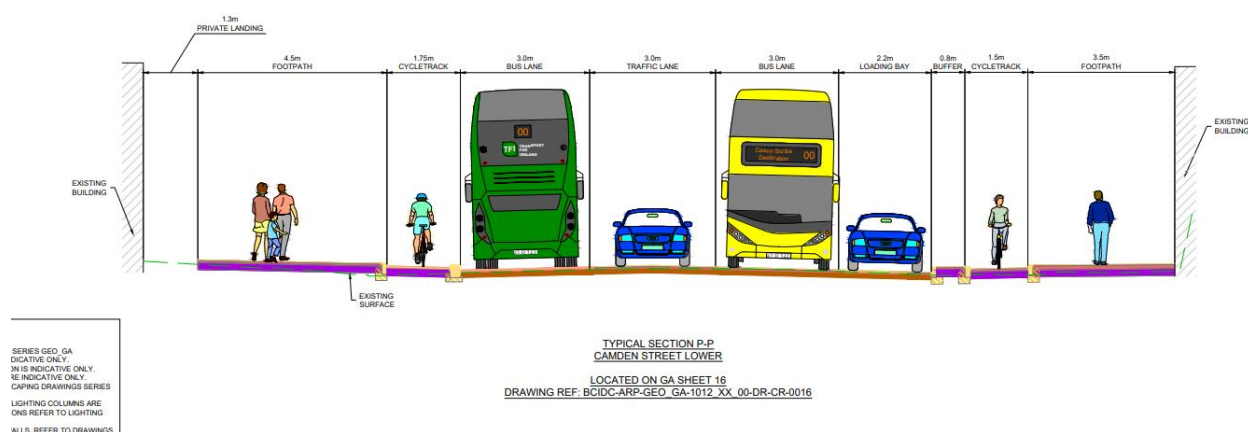


Figure 2.6.20 Cross-section P-P

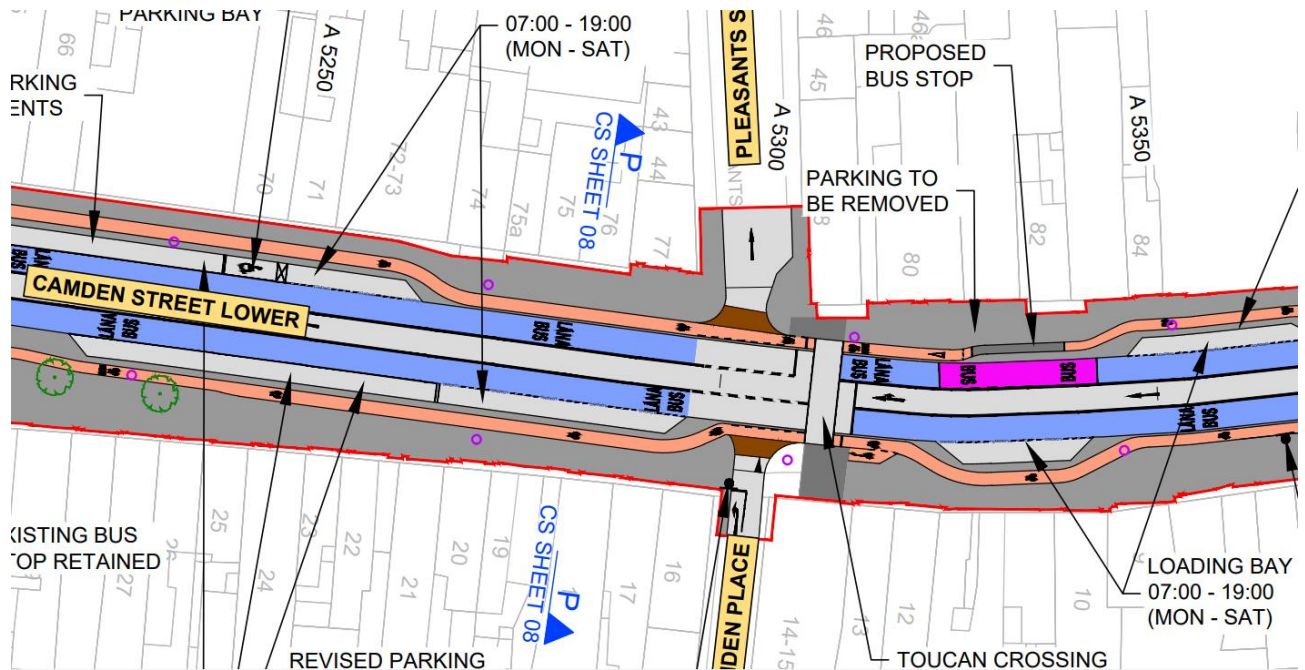


Figure 2.6.21 Extract from General Arrangement Drawings at location of cross-section P-P

- The available footpath width on Camden Street varies along its length due to the presence of parking and loading, bus stops and private landings, as well as the variation in building lines. An options assessment was carried out to determine the optimum cross-section along Camden Street, considering the objectives of the Proposed Scheme and the context of Camden Street as a busy commercial area with significant volumes of pedestrians and business frontages. The following is noted in Section 3.4.1.1.5 of Chapter 3 in Volume 2 of the EIAR:

“The previous MCA undertaken determined that a route along Richmond Street, Camden Street and Wexford Street was the EPR Option. The EPR Option proposed that Camden Street/Wexford Street between Harrington Street and Cuffe Street would be upgraded to include bus lanes in each direction along its length except for a short section on Wexford Street where only an inbound bus lane would be provided. No cycle tracks were proposed in this area and the published drawings stated that ‘Additional cycle facilities along Camden Street (secondary cycle route 10) to be considered as part of next design development stage’. More detailed alternative design solutions have therefore been explored in this area in determining a draft PRO. These options are briefly outlined below:

- *Option CS1: Option CS1 would consist of providing a traffic lane in each direction along the entirety of this scheme section, as well as dedicated bus lanes in each direction, with the exception of a short section between Cuffe Street and Montague Street where no outbound bus lane would be provided. No dedicated cycle facilities would be provided along the CBC under this option (previously EPR Option A);*
- *Option CS2: Option CS2 would consist of providing a traffic lane in each direction along the entirety of this scheme section, as well as dedicated bus lanes in each direction, with the exception of a short section between Cuffe Street and Montague Street where no outbound bus lane would be provided. A parallel cycle route would be provided along Martin Street, Lennox Street, Stamer Street, Heytesbury Street and New Bride Street (previously EPR Option B); and*
- *Option CS3: Option CS3 would consist of a one-way outbound traffic arrangement on Camden Street and Wexford Street in this section, with inbound traffic diverted to Harcourt Street. 1.5m wide cycle tracks would be provided along the CBC, as well as dedicated bus lanes in each direction, with the exception of a short section between Cuffe Street and Montague Street where no outbound bus lane would be provided.*

Option CS3 – a one-way outbound traffic arrangement on Camden Street and Wexford Street with online bus lanes and cycle tracks in this section, with inbound traffic diverted to Harcourt Street - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing physical bus priority and fully segregated cycle tracks throughout the majority of this section of the Proposed Scheme.

In terms of the sub-criteria under the Environment criterion, the preferred option performed marginally better than other options in terms of Air Quality and Noise and vibration the preferred option performed marginally better than other options due to the fact that traffic would be redirected from the CBC. The preferred option performed equally to other options under all other criteria.”

- Refer to the response to the point above.
- The proposed Toucan crossing connecting to Grantham Street is an improvement on the existing situation where southbound cyclists must cross a bus lane and general traffic lane, and wait in the middle of the carriageway to access Grantham Street. The proposed jug turn and toucan crossing provides an alternative for vulnerable cyclists to make this movement safely.

Sheet 17 – Camden Street to Aungier Street

- Refer to the response to Item 5.1 above.
- The support for the removal of the slip lanes at the Kevin Street junction is noted.

Sheet 18 – South Great George’s Street and small part of Aungier Street

- The comment in relation to the business of this cycle route is noted.
- Refer to the response to Item 5.1 above.
- South Great George’s Street is a busy commercial area with a significant number of businesses which require loading bays, as well as a busy night time economy whereby taxis are required. As such, the Proposed Scheme has sought to maintain these existing facilities where practicable while balancing these with the needs of cyclists.
- The provision of a protected junction for cyclists in this location was not considered to be practicable due to the constrained width. The proposed design provides safe crossing facilities for cyclists at the junction.
- The NTA notes these comments. Section 4.14.3 of the Preliminary Design Report, included in the Supplementary Information, outlines the proposals for bus shelters, as follows:

“Bus shelters provide an important function in design of bus stops. The shelter will offer protection for people from poor weather, with lighting to help them feel more secure. Seating will be provided to assist ambulant disabled and older passengers and accompanied with Real Time Passenger Information (RTPI) signage to provide information on the bus services. The locations of the bus shelters are presented on the General Arrangement drawing series in Appendix B.

The optimum configuration that provides maximum comfort and protection from the elements to the travelling public is the 3-Bay Reliance ‘mark’ configuration with full width roof. This shelter is a relatively new arrangement which has been developed by JCDecaux in conjunction with the NTA. The shelter consists mainly of a stainless-steel structure with toughened safety glass and extruded aluminium roof beams. Figure 4.10 provides an example image of the preferred full end panel shelter arrangement. The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 3.3m with an absolute minimum width of 3m to facilitate a minimum 1.2m clearance at the end panel for pedestrians. Alternative arrangements for more constrained footpath widths are considered below.



Figure 4.10: Example of a 3-Bay Reliance full end panel bus shelter (Source: JCDecaux)

The cantilever shelter using full width roof and half end panel arrangement provides a second alternative solution for bus shelters in constrained footpath locations. Figure 4.11 provides an example of this type of shelter. Advertising panels in this arrangement are normally located on the back façade of the shelter compared to the full end panel arrangement. The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 2.75m with an absolute minimum width of 2.4m to facilitate a minimum 1.2m clearance at the end panels for pedestrians.

Two alternative narrow roof shelter configurations (Figure 4.12) are also available which offer reduced protection against the elements compared to the full width roof arrangements. These shelter configurations are not preferred but do provide an alternative solution for particularly constrained locations where cycle track narrowing to min 1m width has already been considered and 2.4m widths cannot be achieved to facilitate the full width roof with half end panel shelter. The desirable minimum footpath widths for the narrow roof configuration are 2.75m (with end panel) and 2.1m (no end panel). The absolute minimum footpath widths for these shelters are 2.4m (with end panel) and 1.8m (no end panel) to allow for boarding and alighting passengers in consideration of wheelchair, pram, luggage and other such similar spatial requirements.”



Figure 4.12: Example of a 3-Bay Reliance Cantilever shelter with narrow roof configuration with and without half end panels (Source: JCDecaux)

Sheet 19 – Terenure Road North

- The provision of an island bus stop arrangement on Terenure Road North was not considered practicable due to the constrained cross-sectional width.

Sheet 24 – Wasdale Park

- Refer to the response to Item 5.4 above.

Sheet 25 – Zion Road

- The NTA notes the comment in support of the removal of slip lane for general traffic. Slip lanes for cyclists have not generally been provided as part of the Proposed Scheme, as managing the conflict between cyclists and pedestrians in these locations would be challenging.

Sheet 28 & 29

- The NTA notes this comment. The provision of a footpath in this location was not considered to be within the remit of the Proposed Scheme.

Sheet 30 – R137 Spawell Junction

- The NTA notes the Cycle Campaign's support for the conversion of the Spawell Roundabout into a signalised junction. While the pedestrian and cycle crossings are physically separate, they will run in the same stage in order to minimise wait times as indicated in stage 6 in Figure 2.6.22. In addition to this, pedestrian crossings across the mainline will run with non-conflicting traffic movements as shown in stages 4 and 5 in Figure 2.6.22.

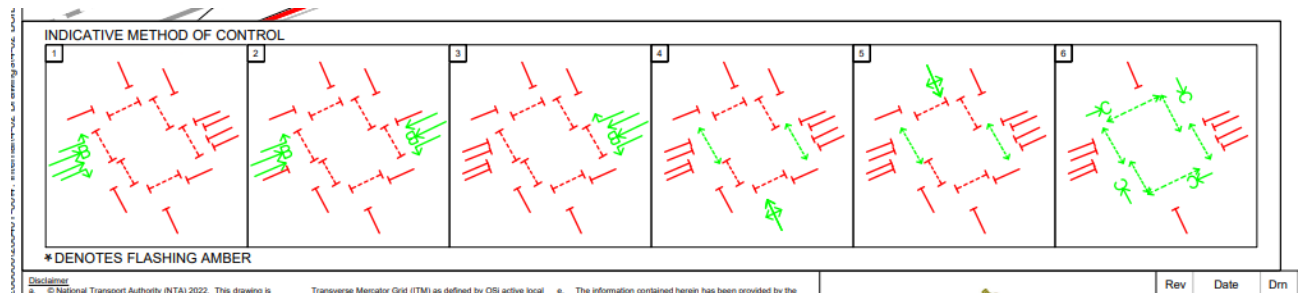


Figure 2.6.22 Proposed junction staging (Templeogue Road / Wellington Road Junction)

Sheet 31 – R137 Templeogue Road

- Refer to the response to Item 5.1 above.
- This comment is noted.

Sheet 32 – R137 Templeogue Road

- The Templeogue Road / Old Bridge Road junction has been designed as a protected junction for cyclists. There is limited space available on Old Bridge Road and providing cycle facilities on this constrained link is not within the remit of the Proposed Scheme.
- It is intended that cyclists would continue on road through this section sharing with general traffic for c.170m.
- Refer to the response to Section 5.2 above.

Sheet 33 – Springfield Road, Templeville Road, R137

- The cycle tracks have been locally narrowed in this location to retain existing mature trees.
- Refer to response above regarding junction design.

Sheet 35 – Rathdown Drive

- Refer to response in Section 5.4 above.
- Consideration was given to utilising the green space adjacent Rathdown Drive to provide segregated facilities however this would have had a significant impact on trees in this area. Through the optioneering process, on balance it was determined that the most suitable arrangement in this area was a quiet street treatment on Rathdown Drive.

Sheet 36 – Rathdown Crescent

- This comment is noted. Removal of the roundabout would require extensive re-engineering of the carriageway and the removal of existing an existing mature tree in the central island. As such, it's retention is considered appropriate.

- The NTA notes the comment in relation to the speed limit reduction being welcomed.

Sheet 37

- Terenure Cross is a strategic junction for general traffic which is currently operating above capacity. The removal of one of the general traffic lanes on Terenure Place would create further delay for all road users, including buses.

Sheet 38, 39, 40, 41 and 42

Refer to the response in Section 5.3 above.

2.6.6 255 South Dublin County Council

2.6.6.1 Overview of submission

South Dublin County Council's (SDCC) submission comprised of 46 pages. For ease of reference the section titles and order have been retained throughout the NTA's response as set out in the following paragraphs.

Advocate for the Proposed Scheme

Development Management Section

- i. Support for the scheme
- ii. South Dublin County Council Development Plan 2022-2028 Policy Context

Traffic and Transport Section

- i. Support for the scheme
- ii. Comments on Spawell Roundabout to Fortfield Road Section
 - a) Junction Improvements
 - b) Preservation of existing stone arch
 - c) Cycle Track alignment
 - d) Traffic Safety at Corrybeg Junction
 - e) Traffic Safety at Old Bridge Road Junction
 - f) Proposed Shared Area
 - g) Cycle Track Alignment
- iii. Comments on Nutgrove Avenue to Dodder Park Road Section
 - a) Rathfarnham Castle Wall
 - b) Possible Traffic Congestion at peak times
 - c) Construction Management Plan
 - d) Scheme Tie-In
 - e) Temporary Construction Compound
 - f) Land Management
 - g) Construction Traffic Management

Roads Maintenance Section

- 1) Construction specification.
- 2) Precast kerbing
- 3) Road structure bus bay specification.

- 4) Drainage system / SuDS.
- 5) Signage
- 6) Maintenance costs
- 7) Universal design principles

Public Realm Section

- i. Parks and Landscape Section Comments
 - a) Trees within Rathfarnham Castle Park
 - b) Natural SuDS
 - c) Construction Compounds
 - d) Other CPO Locations
 - e) Rathfarnham Castle Park
 - f) Dodder Greenway Tie-in at Pearse Bridge
 - g) Proposed Boundary Treatment at Rathfarnham Castle Park
 - h) Biodiversity and Ecology
 - i) Feasibility of Proposed Street Tree Planting
 - j) Lighting
 - k) IE8 Objective 6
 - l) Landscape Character Type: Green Space e.g. Tymon Park and Bancroft Park
 - m) Protection of Habitats and Species
 - n) Public Realm Enhancement

Water Services Section

Architectural Conservation Section

Conclusion

2.6.6.2 Advocate for the Proposed Scheme

Observations raised / clarifications sought

The submission outlines the numerous policy objectives within the County Development Plan 2022-2028 and confirms its support for the Proposed Scheme.

It is noted that SDCC Development Management Section (DMS) makes a series of positive comments in its conclusion including that the Proposed Scheme would be *“very welcome....provide a good balance servicing existing communities.....it is also delivering on the wider remit of smarter travel”*

It also notes that *“Issues such as tree loss and the loss in carriageway width dedicated to cars are decisively outweighed by improved sustainable transport opportunities”*.

The DMS also notes that the Proposed Scheme:

- *“will support more efficient and intensive use of brownfield serviced urban sites, sustainable and vibrant communities, as well as housing delivery”;*
- *“will provide a good balance between servicing existing communities while not seriously and adversely affecting residential amenities, given its proposed routing”*

- Will deliver the “wider remit of smarter travel given proposed improvements to walking and cycling infrastructure”
- SDCC notes from page 9 of their submission: “SDCC Traffic and Transportation Section are broadly supportive of the proposal and are of the view that it aligns with the policies County Development Plan (2022 – 2028) The scheme supports the National Development Plan, RSES and the Transport Strategy for the Greater Dublin Area, (2022 – 2042). In particular the scheme supports the sustainable movement policies within this strategic plan.”
- Also from page 9 of their submission SDCC notes: “[T]he proposed Templeogue / Rathfarnham core bus corridor scheme supports the actions contained in the latest Climate Action Plan 2023”

The Traffic Department concludes their section of the submission by stating: “The comments provided in this SDCC submission are mainly focussed on the construction management controls and minor design details of the scheme, To date many of our concerns have been addressed through the extensive consultation process that has been conducted by the NTA with the various stakeholders in our Local Authority area.

This Bus Connects project represents a big step forward in the delivery of sustainable transport alternatives in the South Dublin Local Authority Area.”

Response

The support for the scheme is noted and welcomed by the NTA.

2.6.6.3 Development Management Section

Observations raised / clarifications sought

- Support for the scheme
- South Dublin County Council Development Plan 2022-2028 Policy Context

Response

i. Support for the scheme

See 2.6.6.2 above.

ii. South Dublin County Council Development Plan 2022-2028 Policy Context

In their submission SDCC sets out the Policy Context of the Proposed Scheme.

In its submission, SDCC confirmed its support for the Proposed Scheme, and stated in their conclusion on page 40 of the submission:

“SDCC welcomes the proposed Templeogue/Rathfarnham to City Centre Core Bus Corridor route which will provide high quality public transport infrastructure.”

In relation to planning policy, the NTA welcomes at page 9 of their submission: “SDCC are broadly supportive of the proposal and are of the view that it aligns with the policies of the County Development Plan (2022 – 2028) The scheme supports the National Development Plan, RSES, and the Transport Strategy for the Greater Dublin Area, (2022 – 2028). In particular, the scheme supports the sustainable movement policies within this strategic plan.

In addition, the proposed Templeogue /Rathfarnham core bus corridor scheme supports the action contained in the latest Climate Action Plan 2023.”

2.6.6.4 Traffic and Transport Section

Observations raised / clarifications sought

- i. Support for the scheme
- ii. Comments on Spawell Roundabout to Fortfield Road Section
 - a) Junction Improvements
 - b) Preservation of existing stone arch
 - c) Cycle Track alignment
 - d) Traffic Safety at Corrybeg Junction
 - e) Traffic Safety at Old Bridge Road Junction
 - f) Proposed Shared Area
 - g) Cycle Track Alignment
- i. Comments on Nutgrove Avenue to Dodder Park Road Section
 - a) Rathfarnham Castle Wall
 - b) Possible Traffic Congestion at peak times
 - c) Construction Management Plan
 - d) Scheme Tie-In
 - e) Temporary Construction Compound
 - f) Land Management
 - g) Construction Traffic Management

Response to Issue

i. Support for the scheme

SDCC sets out (at page 9 of its submission) that: *“SDCC are broadly supportive of the proposal and are of the view that it aligns with the policies of the County Development Plan (2022 – 2028). The scheme supports the National Development Plan, RSES, and the Transport Strategy for the Greater Dublin Area, (2022 – 2024). In particular, the scheme supports the sustainable movement policies within this strategic plan.*

In addition, the proposed Templeogue / Rathfarnham core bus corridor scheme supports the actions contained in the latest Climate Action Plan 2023. Contained within this document is the statement “the NDP continues the Programme for Government commitment to rebalance the share of capital expenditure to favour new public transport schemes over road projects”.

South Dublin County Council went on to state: *“The comments provided within this SDCC submission report are mainly focused on the construction management controls and minor design details of the scheme. To date many of our concerns have been addressed through the extensive consultation process that has been conducted by the NTA with the various stakeholders in our Local Authority area.”*

Response

The NTA notes the view expressed by the submission.

The NTA is grateful for the positive and constructive liaison that has occurred with the SDCC throughout the design and planning process to date, and through that liaison with other Departments and Sections within SDCC regarding the progression of the Proposed Scheme.

ii. Comments on Spawell Roundabout to Fortfield Road Section

a) Junction Improvements

In their submission SDCC notes that they welcome the conversion of the Spawell roundabout on the R137 to a traffic-light controlled junction with marked improvements for bus priority, and active travel movements.

Response

The NTA notes and welcomes the support for the proposed junction improvements at the Spawell roundabout.

b) Preservation of Existing Stone Arch

SDCC in their submission notes that the traffic section welcome the preservation of the stone arch on Sheet 30 of 42 of the General Arrangement Drawings, and the opening of this amenity to the public.

Response

The NTA notes and welcomes the support for the proposed preservation of the existing stone arch on Templeogue Road. The NTA also acknowledges the extensive consultation which SDCC has facilitated in relation to this proposal.

c) Cycle Track Alignment

The SDCC submission states that there are quite severe changes in direction of the cycle track around the back of the proposed inbound bus stop on Sheet 31 of 42 of the General Arrangement Drawings.

Response

The proposed inbound bus stop on Sheet 31 of 42 of the General Arrangement drawings is an island bus stop arrangement. Section 4.6.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, sets out the proposed arrangement for Island bus stops as follows:

“Where sufficient space allows, Island Bus Stops are the preferred bus stop option for the Proposed Scheme.

This option will reduce conflict between cyclists and stopping buses by deflecting cyclists behind the bus stop. To address the pedestrian/cyclist conflict, a pedestrian priority crossing point is provided for pedestrians accessing the bus stop area. Part-time signals will enable controlled crossing when. Visually impaired pedestrians may call for a fixed green signal when necessary and the cycle signal will change to red. The cycle track will narrow from 2.0m to 1.5m for single file cycling through the bus stop, as overtaking is not required in this area.

An example of an Island Bus Stop is showed in Image 4.8 (One-way Cycle Track) and Image 4.9 (Two-way Cycle Track).

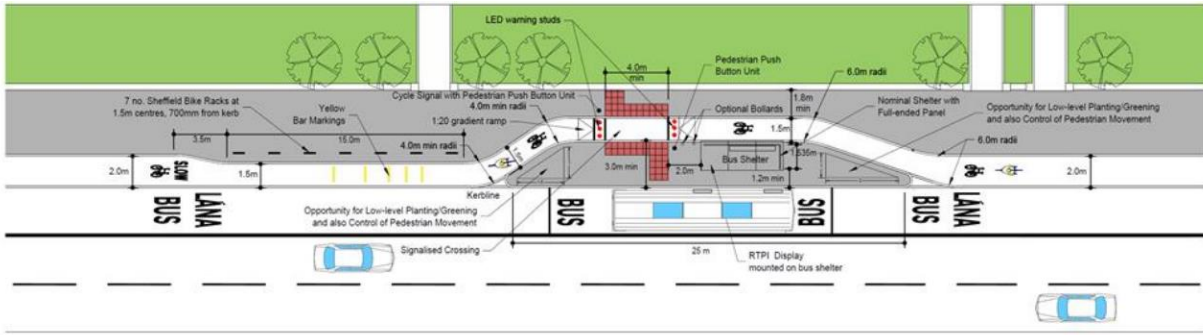


Image 4.8: Island Bus Stop – One Cycle Track

Figure 2.6.23 Island Bus stop arrangement

The cycle track is deflected behind the bus shelter in order to remove the potential for conflict between cyclists and bus passengers boarding/alighting. Minimum radii and suggested angle of deflection are outlined in Figure 2.6.23. The bus stop on Sheet 31 has been designed in accordance with the principles set out in the Preliminary Design Guidance Booklet.

d) Traffic Safety at Corrybeg Junction

SDCC comment that there is an existing no right turn existing out of the Corrybeg estate, and state that this no right turn must be maintained for traffic safety reasons.

Response

The NTA notes this comment. The Proposed Scheme does not propose any change to the existing traffic management measures at the Corrybeg junction. There is an existing no right turn sign, located outside of the red line boundary of the Proposed Scheme as shown in Figure 2.6.24, which will be retained.



Figure 2.6.24 Existing no right turn sign on Corrybeg

e) Traffic Safety at Old Bridge Road Junction

The SDCC submission notes that the traffic section is pleased that the existing right turn ban for all vehicles coming from the Old Bridge Road except buses, is retained as part of the Proposed Scheme.

Response

The support for this element of the Proposed Scheme is noted and welcomed by the NTA

f) Proposed Shared Area

SDCC notes in their submission that the traffic section is supportive of the shared area in front of no. 258 to no. 252 Templeogue Road being retained for access to these dwellings.

Response

The support for this element of the Proposed Scheme is noted and welcomed by the NTA.

g) Cycle Track Alignment

The SDCC submission states that there are sharp changes in direction of the cycle track in the vicinity of the Springfield Road junction on Sheet 34 of 42 of the General Arrangement Drawings.

Response

The NTA notes this comment. The alignment of the cycle track in this location has been designed to retain the existing mature trees in this location where practicable. The NTA is satisfied that the cycle track as designed will provide a high level of service for cyclists.

iii. Comments on Nutgrove Avenue to Dodder Park Road Section

a) Rathfarnham Castle Wall

The submission notes the following: *“The Traffic Section have received significant negative feedback in relation to the Nutgrove Avenue / Grange Road set back of the existing wall and possible loss of mature trees as illustrated in Figure 2 and detailed in (General Arrangement drawing: 1 of 42).*

Significant mitigation measures are required to make up for the loss in biodiversity at this location.”

Response

Refer to detailed response in Section 2.6.6.6.

b) Possible Traffic Congestion at peak times

SDCC notes that the proposal involves loss of the left turning lane northbound into Butterfield Avenue, and that traffic which currently queues within two lanes will now only have one lane to queue. The submission further notes that the traffic signal timings at the Butterfield Avenue junction need careful consideration to avoid long tail backs past the previous junction at St. Marks Avenue and Willbrook Road.

Response

The NTA notes SDCCs comments in relation to the removal of an existing general traffic turning lane at the junction of Rathfarnham Road and Butterfield Avenue. This general traffic lane is proposed to be converted to an inbound bus lane, to provide priority for inbound buses on approach to this junction, in line with the

objectives of the Proposed Scheme. In relation to the potential for impact on the surrounding road network, extensive traffic modelling has been undertaken, as detailed in Chapter 6 of the EIAR, to determine the likely impacts of the Proposed Scheme on the surrounding road network.

Section 6.3.2 of Chapter 6 of the EIAR notes the following in relation to the Proposed Scheme impact assessment modelling tools:

“This section summarises the various transport modelling tools that have been developed and used to inform the preparation of the TIA and this chapter of the EIAR. The purpose of each tool has been detailed and its use for each element of the Proposed Scheme assessment has been defined.

The modelling tools that have been developed as part of the assessment, do not work in isolation, but instead work as a combined modelling system driven by the NTA’s East Regional Model (ERM) as the primary source for multi-model demand and trip growth. Demand information is passed from the ERM to the cordoned Local Area Model (LAM), corridor micro-simulation models and junction models which have been refined and calibrated to represent local conditions to a greater level of detail than that contained in the ERM.

In summary, there are four tiers of transport modelling which have been used to assess the impacts of the Proposed Scheme:

- **Tier 1 (Strategic Level):** *The NTA’s East Regional Model (ERM) is the primary tool which has been used to undertake the strategic modelling of the Proposed Scheme and has provided the strategic multi-modal demand outputs for the proposed forecast years;*
- **Tier 2 (Local Level):** *A Local Area Model (LAM) has been developed to provide a more detailed understanding of traffic movement at a local level. The LAM is a subset model created from the ERM and contains a more refined road network model used to provide consistent road-based outputs to inform the TIA, EIA and junction design models. This includes information such as road network speed data and traffic redistribution impacts for the Operational Phase. The LAM also provides traffic flow information for the micro-simulation model and junction design models and has been used to support junction design and traffic management plan testing;*
- **Tier 3 (Corridor Level):** *A micro-simulation model of the full ‘end to end’ corridor has been developed for the Proposed Scheme. The primary role of the micro-simulation model has been to support the ongoing development of junction designs and traffic signal control strategies and to provide bus journey time information for the determination of benefits of the Proposed Scheme; and*
- **Tier 4 (Junction Level):** *Local junction models have been developed, for each junction along the Proposed Scheme to support local junction design development. These models are informed by the outputs from the above modelling tiers, as well as the junction designs which are, as discussed above, based on people movement prioritisation.”*

In relation to this junction in particular, the Junction Design Report, contained in Appendix A6.3 in Volume 4 of the EIAR notes that the junction referenced operates within capacity within both the AM and the PM peaks, with 32% Practical Reserve Capacity, which is the available spare capacity at the junction, in the AM peak and 16% Practical Reserve Capacity in the PM peak. This is illustrated in Figure 2.6.25 below.



Figure 2.6.25 Extract from junction design report showing Practical Reserve Capacity (PRC) at Rathfarnham Road/Butterfield Avenue junction

The NTA notes SDCCs comment in relation to the careful consideration required for traffic signal timings at this junction. The modelling undertaken, which was carried out on the corridor of the real-life operation of a full corridor management system using an adaptive traffic control system, allows for a firm basis for how the corridor can be evaluated and to determine its benefits. Through the very positive and constructive liaison with the SDCC BusConnects Liaison Office throughout the design and planning process, SDCC’s Traffic Department is confirming that SDCC will utilise its adaptive traffic control system to undertake the required traffic management on the corridor to enable the public transport corridor to perform as per the requirements.

Because of the use of a real-world system which has multiple inputs from the Bus AVL system, cycle and pedestrian detection as well as vehicle actuated sensors, the signals will be running multiple sets of timings across the day rather than a fixed set of timings and the use of this technology will facilitate improved corridor operation. This digital infrastructure along with the proposed civil infrastructure combine for the Proposed Scheme to meet its objectives.

c) Scheme Tie In

SDCC notes that the Proposed Scheme should tie in seamlessly with the Dodder Greenway Scheme.

Response

The NTA notes this comment. Significant liaison has been carried out during the design of the Proposed Scheme with the Dodder Greenway design team. Section 3.2.3 of the Preliminary Design Report outlines the co-ordination which has been carried out to ensure that the Proposed Scheme is integrated with the Dodder Greenway Scheme, noting the following regarding the Dodder Greenway Scheme:

“This scheme involves the provision of cycle facilities adjacent to Dodder Park Road as well as the provision of cycle facilities on Spawell Road. The Proposed Scheme has been coordinated with the proposals.”

The NTA is satisfied that the Proposed Scheme as submitted will tie in with the Dodder Greenway at all interfaces.

d) Temporary Construction Compound

SDCC notes that there are concerns about the proposed construction compound in Woodview Cottage Green. SDCC state that the location of the proposed compound is believed to be too close to residential properties and note that the location has been a well-used amenity area for a long time. SDCC further note that residents have raised safety concerns in relation to the proposed siting of a construction compound with the associated HGV traffic, in close proximity to a busy residential area. SDCC goes on to state, that if no alternative location can be identified, that the NTA should propose upgrade works to improve the amenity value of the green space in compensation for its temporary loss to residents.

Response

The NTA notes SDCCs comment in relation to the proposed Construction Compound in this location. The EIAR documents reflect the sensitivity of the site with its surrounds and records the impacts on the proposed temporary use of the site as a compound. Section 5.7.1 of Chapter 5 of the EIAR notes the following in relation to the proposed siting of Construction compounds:

“The location of the Construction Compounds in relation to the Proposed Scheme are shown in Figure 5.1 in Volume 3 of this EIAR. The Construction Compound locations have been selected due to the amount of available space, their relative locations near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. Refer to Chapter 6 (Traffic & Transport) of this EIAR for an assessment of the construction traffic.”

The construction compound referred to by SDCC is compound TR3, which is illustrated in Figure 2.6.26.

“Construction Compound TR3 will be located along Dodder View Road, across the road from Bushy Park, in the greenfield area between Dodder View Road, Woodview Cottages and Church Lane, as shown in Image 5.3. The area of Construction Compound TR3 is approximately 5,120m².”

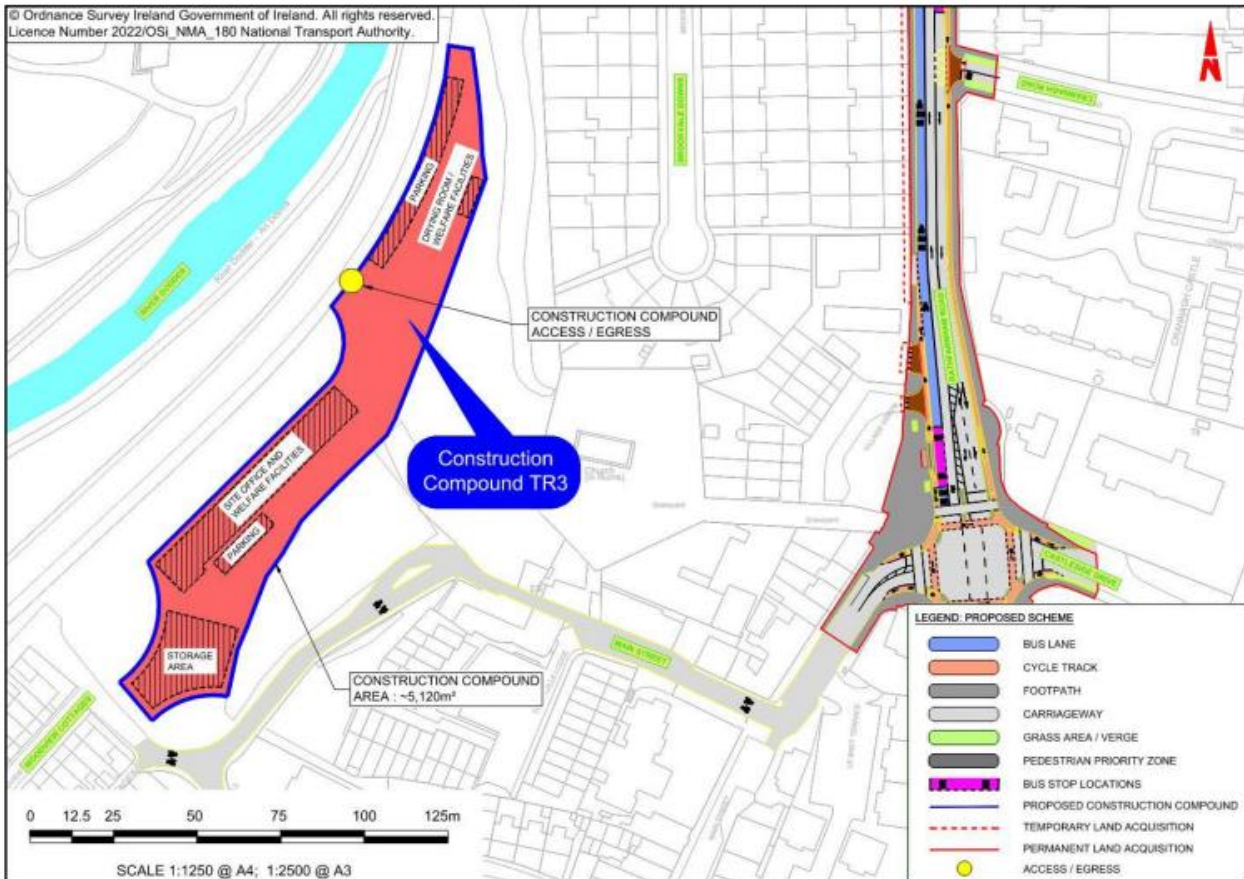


Image 5.3: Location and Extent of Construction Compound TR3

Figure 2.6.26 Construction Compound TR3 layout

Section 5.7.3 notes the following in to the mitigation measures which will be implemented to minimise potential impacts at Construction Compounds:

“Appropriate environmental management measures will be implemented at the Construction Compounds, for example, to minimise the risk of fuel spillage, and to ensure that the Construction Compounds and the approaches to it are appropriately maintained. Further information on the air quality, noise and vibration and water related mitigation measures that will be implemented is included in Chapter 7 (Air Quality), Chapter 9 (Noise & Vibration) and Chapter 13 (Water) of this EIAR.

Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions.”

A Construction Environmental Management Plan (CEMP) has been prepared and submitted as part of the planning application, and is included as Appendix A5.1 in Volume 4 of the EIAR. A Construction Traffic Management Plan has been prepared to inform the CEMP, to demonstrate the manner in which the interface between the public and construction-related traffic will be managed and how vehicular movement will be controlled.

It is further noted that a construction compound has been located at this site, during recent construction works carried out for the Dodder Greenway Scheme.

e) Land Management

SDCC notes that further engagement between SDCC and the NTA is encouraged as to the exact parcels of public land identified within the Proposed Scheme. SDCC further notes that they would like discussion on the hand on of lands identified as CPO plots into Local Authority management, and the particular maintenance implications of such additional infrastructure and land bank. In summary, SDCC notes that they need complete clarity on what land will become public realm after the scheme is completed and the maintenance implications of such land.

Response

The NTA notes the above comments. Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of SDCC as the relevant road authority is automatically restored – it does not require the operation of the conventional “taking-in-charge” arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being South Dublin County Council.

Notwithstanding the above, the NTA intends to continue the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, during and throughout the subsequent construction stage. This will include engaging and collaborating on the construction arrangements, the road maintenance arrangements during construction and the standard to which the Proposed Scheme will be completed prior to transfer back to SDCC, together with record retention, all in full accordance with the EIAR. Given the legislative framework that is in place, these are matters that can, and will, be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

f) Construction Traffic Management

SDCC notes that detailed construction traffic management plans are required to ensure the efficient and safe delivery of the Proposed Scheme and sets out in detail their requirements in respect of same.

Response

The Construction Environmental Management Plan (CEMP) for the Proposed Scheme is included as Appendix A5.1 of EIAR Volume 4 Part 1 of 4. In Section 5.1.1 of Appendix A5.1 it states that *“The CEMP will be updated by the National Transport Authority (NTA) (the Employer for the construction works) prior to the commencement of the Construction Phase, so as to include any additional measures required pursuant to conditions attached to any decision to grant approval. The NTA shall set out the Employer’s Requirements in the Construction Contract including all applicable mitigation measures identified in this EIAR, as well as additional measures required pursuant to conditions attached to any decision to grant approval.”*

Section 5.2 of the CEMP relates to the required Construction Traffic Management Plan, and Section 5.2.3 notes that the appointed contractor will be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme. Section 5.2.3 also lists a number of aspects that the appointed contractor will address during the preparation of the CTMP. Further details of the aspects listed are provided in Section 5.2.3.1 to Section 5.2.3.19 of the CEMP. It is also noted that Chapter 6 of the EIAR considers the impact of construction traffic on the road network.

In addition, Table 5.2 of the CEMP summarises the Construction Phase mitigation (i.e. which the appointed contractor will implement), outlined in the relevant EIAR technical assessment chapters.

Section 5.5 of the CEMP provides a Construction and Demolition Resource and Waste Management Plan and Section 5.5.1 states that: *“This Construction and Demolition Resource and Waste Management Plan (CDRWMP) has been prepared to ensure that waste arising during the Construction Phase and Demolition Phase of the Proposed Scheme, will be managed and disposed of in a way that ensures compliance with the provisions of the Waste Management Act, as amended, and associated Regulations to ensure that optimum levels of reduction, reuse and recycling are achieved. The purpose of this CDRWMP is to facilitate reuse and recycling and divert waste from landfill.*

The CDRWMP is consistent with best practice management practices and any relevant mitigation measures as contained within the EIAR. The content and headings used in this CDRWMP comply with the EPA Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects (EPA 2021a).

This CDRWMP is based on the estimated quantities of waste generation and the proposed management measures from the Proposed Scheme at planning stage.”

Table 2.6.2 below presents the list of aspects that the appointed contractor will address and identifies where each of the 12 points raised by SDCC is covered.

Table 2.6.2 Summary of where SDCC Points are Addressed by the CEMP

Aspect Listed in CEMP Section 5.2	SDCC Point Raised
<i>Access and egress;</i>	(ix) Access arrangements (x) Measures to obviate queuing on adjoining road network
<i>Construction Compounds;</i>	(ii) on-site car parking (v) Location of materials compound (vi) Security fencing
<i>Routing of construction vehicles;</i>	(ix) Routes to be used by construction traffic
<i>Pedestrian (including able-bodied pedestrians, wheelchair users, mobility impaired pedestrians, pushchair users etc.) and cyclist provisions;</i>	(xii) Arrangements for pedestrians
<i>Public transport provisions;</i>	
<i>Parking and access;</i>	
<i>Lighting;</i>	
<i>CSMMP;</i>	
<i>Traffic management signage;</i>	
<i>Timings of material deliveries;</i>	
<i>Traffic management speed limits;</i>	
<i>Vehicle cleaning;</i>	(i) Vehicle cleansing / wheel washing
<i>Road cleaning;</i>	(iv) Road sweeper
<i>Road condition;</i>	
<i>Road closures and diversions;</i>	
<i>Enforcement of Construction Traffic Management Plan;</i>	
<i>Interface with other projects;</i>	
Other Sections of CEMP	SDCC Point Raised
<i>Table 5.2 Mitigation and Monitoring</i>	(ii) Dust suppression measures (xi) Measures to protect watercourses
<i>CDRWMP</i>	(viii) Use and control of spoil
Other Comments	SDCC Point Raised
<i>Details of Contractor not yet known</i>	(vii) Name and address of site manager

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

It is noted that Section 6.5.4 of Chapter 6 of Volume 2 of the EIAR considers the potential temporary traffic and transport impacts that construction of the Proposed Scheme will have on the direct and indirect study areas during the construction phase.

g) Summary of Traffic & Transport views on the proposal

The submission states that SDCC Traffic and Transport Section are broadly supportive of the proposal and notes that *“the comments provided are mainly focussed on the construction management controls and minor design details of the scheme.”*

Response

The support for the scheme is noted and welcomed by the NTA.

2.6.6.5 Road Maintenance Section

Observations raised

The submission makes 7 points; the first 3 relating to construction and the next 4 relating to design.

Construction observations

1. SDCC request that all works are be constructed as per TII Specifications unless agreed separately with SDCC Road Maintenance.
2. SDCC request that precast kerbing is not permitted.
3. SDCC requests that the road structure of the bus bay should be 300mm thick reinforced concrete slab with a geogrid overlapping the joints, a 60mm binder course and 40mm surface course.

Response

The NTA notes the comments in items 1 and 2.

In relation to point 3, Section 7.1.3.1 of the Preliminary Design Report, included in the Supplementary Information, notes the following:

“At Specimen Design stage, the selection of appropriate pavement materials will be made with the following considerations:

- *Which pavement structure is the most appropriate and compatible with the existing pavement? (i.e. Fully flexible vs. Flexible Composite vs. Rigid pavement);*
- *Which materials are most appropriate from a noise, permeability, colour, texture, etc. perspective?; and*
- *Which materials, from a lifecycle perspective, provide the best value in terms of environmental impact, durability, maintainability, repairability, recyclability, cost, etc.?*

Specific materials will be selected for specific loading areas. The ambition in terms of pavement materials is to reuse or recycle all of the excavated materials. The specification of materials and processes with a reduced environmental impact will be prioritised.”

It is noted that material selection and construction details will be developed in the next design stage.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Design observations

1. Drainage system to be design using SuDS
2. Signage to be kept to minimum
3. The proposals will present an increased financial management issue for SDCC
4. Universal Design principle should be employed in the design

Response

Drainage system designed using SuDS.

The response to this observation is set out in the response to drainage requirements/ SuDS strategy from DCC Environmental Protection Division. See section 2.6.3.7 for further information.

Signage kept to minimum.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure/ signage where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

Section 17.4.1.4.4 of Chapter 17 Landscape and Visual notes that, inter alia, the following specific landscape / townscape and visual measures are included within the Proposed Scheme:

“Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements.”

Maintenance costs.

As noted, the Proposed Scheme upon its completion reverts to the status of a public road under the management of the relevant local authority, in this case South Dublin County Council. The funding of costs associated with the maintenance of public roads can involve a number of parties depending on the status of the road – for instance, in the case of a national road Transport Infrastructure Ireland would have an involvement. As the Proposed Scheme does not encompass any section of national road, its components constitute regional and/or local roads only. Funding of regional and local roads fall under the ambit of the relevant local authority and the Department of Transport.

The Exchequer does not currently provide the NTA with funds for dispersal to local authorities for maintenance activities and the NTA does not have a role in overseeing or organising general public road maintenance activities. However, the NTA does retain responsibility for bus fleet, bus stops and bus shelters, and maintenance of these elements falls within its remit.

The NTA anticipates continuing its collaboration with SDCC to ensure the delivery of an appropriate maintenance regime. As part of this collaboration, the NTA will support the provision of the necessary funding by the relevant parties to ensure that the benefits of the Proposed Scheme are not inappropriately eroded. These are matters that can be successfully addressed between SDCC and the NTA.

Universal design principles should be employed in design

Accessibility for mobility impaired users is a core element of the Proposed Scheme design. As set out in Section 4.5 of Chapter 4 (Proposed Scheme Description), in Volume 2 of the EIAR, “....*The assessment of the existing street infrastructure and its ability to support access for disabled users has been based mainly on the Irish Wheelchair Association [IWA] ‘Best Practice Guidelines, Designing Accessible Environments’ and The National Disability Authority’s [NDA] ‘Building for Everyone: A Universal Design Approach’.*”

Accessibility for mobility impaired users is a core element of the Proposed Scheme design and it has been informed by the principles of Best Practice Guidelines, Designing Accessible Environments (Irish Wheelchair Association 2020) and Building for Everyone: A Universal Design Approach (NDA 2020). Accessibility is also addressed in Chapter 12 of the PGDB. Further detail on accessibility for mobility impaired users is given in Section 4.6.5.”

Accessibility is also addressed in Chapter 12 of the PGDB (Appendix A4.1 in Volume 4 of the EIAR).

Further detail on accessibility for mobility impaired users is given in Section 4.6.5 in Chapter 4 of Volume 2 of the EIAR. It acknowledges that *“the Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. A Disability Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken. The Audit provided a description of the key accessibility features and potential barriers to disabled people based on the Universal Design standards of good practice. The Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.*

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has prioritised, where possible, the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes.”

In Chapter 10 (Population), the assessment has had cognisance of vulnerable groups such as people with disabilities. In Section 10.2.4.1.2.1 addressing landtake, a high sensitivity has been applied to residential properties which; *“...ensures that all populations are considered in the assessment including vulnerable groups such as young children, elderly, and people with disabilities.....”*

Section 11.3.2 in Chapter 11 (Human Health) addresses deprivation, disability and health inequalities. Table 11.5 sets out the population, disability and relative deprivation within the study area. The data in Table 11.4 shows that approximately 2% of people within the study area have at least one disability. This is a substantially lower proportion of the population than average for Dublin (14.9%) but nevertheless equates to 2,054 people. An analysis of 2016 Census data by Disability Federation Ireland (DFI) identified that 44% of people in Dublin City and 21% of people in South Dublin who have a disability do not have access to a car, compared to 31% of the general population.

Section 11.4.4.6 addresses impacts on health inequalities. It states in the section that the Proposed Scheme: *“...may help to reduce inequalities by improving access to employment for those dependent on public transport. Groups that would benefit most are the socially disadvantaged and some people with disabilities, noting that there is often an interrelationship between disability and deprivation and that car ownership among disabled people is lower (see Section 11.3.2).*

The Proposed Scheme has been designed following the guidelines Building for Everyone – A Universal Design Approach (Centre for Excellence in Universal Design 2020) ensuring it will meet current Universal Design good practice standards, or at least make it no worse than the current situation. An accessibility audit identified several issues with the existing urban environment and the audit report sets out recommendations for the Proposed Scheme to address these issues. The recommendations include issues such as accessible parking, accessible routes (including use of tactile paving), appropriate changes in levels, appropriate surface materials, use of street furniture and management of shared spaces. Assuming these design measures are correctly installed the urban environment will be easier and safer for a wider variety of pedestrians including visually impaired, wheelchair users and people with mobility difficulties, parents with young children and pushchair users.

Details of provision or mobility impaired are set out in Chapter 4 (Proposed Scheme Description). This would help to reduce health inequalities in terms of access in the urban environment particularly for people with disabilities (see Section 11.3.2).

The introduction of a reliable public transport corridor, with improved accessibility for public transport users and pedestrians, would have a likely positive effect in the short to medium term for reducing health inequalities associated with accessibility for disabled people in particular. The potential impact will be Positive and Significant in the Short to Medium-Term on the basis that the study area has a smaller

proportion of disabled residents and lower levels of deprivation than average for Dublin, so the benefits may influence health inequalities for some individuals.”

Section 11.6.2 in Chapter 11 sets out the predicted operational phase residual impacts. It states that: “...*The Proposed Scheme is expected to have a significantly positive contribution to health outcomes related to increased physical activity, equitable access to services and improved safety for vulnerable road users...*”.

Providing accessibility for mobility impaired users is a core element of the Proposed Scheme and the potential impact on people with disabilities has been appropriately considered in both the scheme design and the impact assessment.

2.6.6.6 Public Realm Section

Overview of observations raised / clarifications sought

The submission from the Public Realm Section covers the following aspects:

- i. Parks and Landscape Section Comments
 - a) Trees within Rathfarnham Castle Park
 - b) Natural SuDS
 - c) Construction Compounds
 - d) Other CPO Locations
 - e) Rathfarnham Castle Park
 - f) Dodder Greenway Tie-in at Pearse Bridge
 - g) Proposed Boundary Treatment at Rathfarnham Castle Park
 - h) Biodiversity and Ecology
 - i) Feasibility of Proposed Street Tree Planting
 - j) Lighting
 - k) IE8 Objective 6
 - l) Landscape Character Type: Green Space e.g. Tymon Park and Bancroft Park
 - m) Protection of Habitats and Species
 - n) Public Realm Enhancement

In the introduction to their submission SDCC Public Realm Section notes that the Proposed Scheme is delivering on a remit of smarter travel with proposed improvements to walking and cycling infrastructure. SDCC notes that the loss in carriageway width for private cars is decidedly outweighed by improved sustainable travel opportunities and a knock-on increase in scope to accommodate higher density development in the vicinity of the Proposed Scheme. SDCC notes that the decrease in space allocated to private cars could be viewed as advantageous in promoting modal shift.

SDCC go on to state however, that the same cannot be said of the proposed loss of existing trees, and the lack of a comprehensive new tree planting proposal. SDCC notes that the low level of new tree planting is a concern and note that increased retention of existing trees and the provision of additional replacement trees is recommended to improve the scheme.

Response

The NTA notes the support for the objective of the Proposed Scheme to provide greater opportunity for sustainable travel, and in facilitating modal shift to more sustainable modes. SDCCs comments are noted in relation to the potential for higher density development in the vicinity of the Proposed Scheme.

The NTA also notes SDCCs comments in relation to the loss of existing trees and the provision of new trees.

The following sections of EIAR Chapter 4 Proposed Scheme Description provides a description of specific landscape and urban realm design works in the sections of the Proposed Scheme with South Dublin County Council's area.

Section 4.5.1.8, Section 1: *"The designed areas of the Proposed Scheme will incorporate the mid-18th century stone archway at Templeogue Road. The old archway is part of the wider planned Baroque landscape of Templeogue House Demesne and is designated as a Protected Structure (SDD RPS 244). Following conservation and repair works, soft and hard landscaping with tree planting, the old archway will be opened to the public and will substantially contribute to the character of the area through the reintegration of this historic landmark into the urban realm. Proposals include a high-quality paving scheme which is sympathetic to the aesthetic of the arch. Areas of seating and ornamental planting will be provided to enhance sense of place and provide opportunities for passive recreation (refer to Image 4.1).*

Templeogue Road is narrow and variable in width and will require realignment of a number of private property boundaries to establish continuous facilities along the street. Realigned boundaries will be rebuilt along the new alignment and landscaping re-established so that higher quality footpaths will be continuous either side of the village and will tie into the permitted Part 8 village upgrade scheme and will incorporate new street tree planting. The existing junction with Springfield Road will be rationalised to eliminate slip lanes and to create pocket park areas at each corner of the revised junction with increased soft landscaping and tree planting and better-quality pedestrian and amenity facilities. Cycle traffic and pedestrians along Templeogue Road will be catered for off road within the perimeter of Bushy Park and along Rathdown Drive where a more attractive and safer environment for cyclists and pedestrians can be provided and leaving the adjoining roadway principally for vehicular use."

Section 4.5.2.8, Section 2: *"The Grange Road junction is to be rationalised to reduce the overarching vehicular dominance and to provide additional landscape areas that will enhance pedestrian amenity and public realm. Grange Road will be widened further, requiring encroachment into the grounds of Rathfarnham Castle however the realigned boundary will facilitate planting street trees in the new footpath to soften and enhance the appearance of the existing roadway and to provide a sense of separation between the pedestrian space and roadway. The existing poor quality boundary wall will be replaced with a new boundary wall finished in roughcast render, which will be more in keeping with the construction of the castle. The impacted woodland will be replanted with native species and the existing playground will be integrated with the new planting and setback wall alignment (refer to Image 4.2).*

Similarly, the junction at Butterfield Avenue will be rationalised to introduce better pedestrian and cycle facilities with widened footpaths facilitating provision of additional landscaping and tree planting. Rathfarnham Road, either side of the Dodder River, will require encroachment into private front gardens. There will be loss of existing trees and vegetation, both on street and with front garden boundaries, however, the proposals include for reinstatement of garden boundaries and landscaping and the provision of new street trees along the public footpath. Leading into Terenure Village, the roadway will be rationalised to provide continuous pedestrian and cycle facilities with refurbishment and re-building footpaths so as to upgrade the appearance and integrity of the public realm. New tree planting will be incorporated to replace existing trees felled and the overall quality of the public realm will be upgraded as it leads into the village core beyond."

Section 4.5.3.8, Section 3: *"Terenure Road East will incorporate wider footpaths within the village core and reduced carriageways so as to enhance pedestrian facilities. Widened footpaths will be built using quality material commensurate with that of the built context of the village so as to enhance the character of the village locality. Immediately east of the village, bus lanes are proposed on Terenure Road East, and this will require encroachment into private properties, including associate tree felling and realignment of boundary walls and gates. New tree planting will be provided post construction to mitigate the loss of existing trees. Further east, the majority of interventions are related to re-allocation of existing carriageway in order to provide dedicated bus lanes and physical changes comprising rebuilding of kerbs and upgrade of footpaths to match those existing.*

At Rathgar Village, the carriageway at the adjoining junction is to be rationalised to reduced vehicular space and to provide additional pedestrian and public realm space. The slip lane from Highfield Road will be removed and this will facilitate the provision of a greatly increased public realm amenity space, with hard and soft landscaping along the shop frontages, that will incorporate seating, tree planting and low-level planting to encourage passive amenity. Medians will be introduced and will incorporate low level planting to further reduce the apparent width of the carriageways. Pavement and kerbs will be re-built using high quality materials sympathetic to the form of the surrounding traditional buildings and the character of the village setting. Importantly, the emerging design avoids impacting the boundary of Christ Church and the mature trees within the grounds and the distinctive focal point of the village will be retained as existing (refer to Image 4.3)."

Section 4.5.4.8, Section 4: *“Along Rathmines Road, the carriageway will be re-allocated to eliminate general through traffic and thereby reduce the overall vehicular demand and provide opportunities for improving pedestrian and cycle facilities along the road. The wider pavements and cycle tracks will combine visually to substantially widen the pedestrian zone along both side of the street and to reduce the perception of carriageway to the minimum. New footpaths and cycle lanes will be built using high quality materials to enhance the character and presentation of the streetscape and to provide greater pedestrian facilities and amenity that will in turn underpin the vitality of the retail and services business along the street. There will be some new street tree planting together with localised soft landscaping interventions to soften and add diversity and amenity to the streetscape.”*

Section 4.6.12.1 states: *“The landscape and urban realm proposals are derived from analysis of the existing urban realm, including existing character, any heritage features, existing boundaries, existing vegetation and tree planting, and existing materials. For each section of the route, the design took a broad overview of typical dwelling age and style, extents of vegetation and tree cover. The predominant mixes of paving types, appearance of lighting features, fencing, walls, and street furniture was considered. The purpose of this analysis was to assess the existing character of the area and how the Proposed Scheme may alter this. The outcome of the analysis allowed the designers to consider appropriate enhancement opportunities along the route. The enhancement opportunities include key nodal locations which focus on locally upgrading the quality of the paving materials, extending planting, decluttering of streetscape and general placemaking along the route. Where possible, a SuDS approach has been taken to assist with drainage along the route.”*

Section 4.6.13.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *“The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme.”

Section 4.6.13.4 of EIAR Chapter 4 Proposed Scheme Description states that an Arboricultural Impact Assessment (AIA) Report is included in Appendix A17.1 in Volume 4 of the EIAR. This identifies the likely direct and indirect impacts to trees of the Proposed Scheme along with suitable mitigation measures, as appropriate to allow for the successful retention of significant trees, or to compensate for trees to be removed.

Section 14.6.2 of the Preliminary Design Report (PDR), included in the Supplementary Information, states that “Despite the best efforts to protect trees, especially trees of a mature and significant stature there will be inevitable impacts on local trees. In total it is estimated that there will be 720 trees lost, refer to Table 14-1 below. This loss has been addressed through mitigation and replanting efforts as outlined in the planting strategy (Section 14.6.3) below resulting in a substantial tree planting plan with a net increase of 231 additional semi-mature trees along the Proposed Scheme.”

Table 14-1 of the Preliminary Design Report (PDR), included in the Supplementary Information provides a summary of the tree removal and proposed tree planting, as shown in Figure 2.6.27.

Templeogue / Rathfarnham to City Centre Scheme Core Bus Corridor Scheme	
Trees	
Existing Tree to be removed	169
New Trees to be planted (comprising as follows:)	400

Figure 2.6.27 Table 14-1 of the Preliminary Design Report

As shown in Figure 2.6.27, 169 trees are to be removed and 400 are to be planted, which represents a 237% re-provision. The number of trees to be replanted is also stated in Section 12.5.1.2 in Chapter 12 Biodiversity in Volume 2 of the EIAR.

Section 4.6.13.5 of EIAR Chapter 4 describes the typical planting typologies that will be employed on the Proposed Scheme. With regard to new street trees, in Section 4.6.13.5.1, it states that: “Typically, trees will be semi-mature and where appropriate, selected for having a clear stem height to facilitate visual permeability.”

With regard to new woodland/parkland areas and tree groups, Section 4.6.13.5.2 states: “.....Elsewhere along the Proposed Scheme, there are a range of existing and proposed woodlands and street trees. While it is proposed to retain and protect existing trees wherever possible, some will be impacted. The Proposed Scheme includes replacement and additional planting of semi-mature street trees to mitigate the loss of existing trees and to maintain the long-term tree-lined character of streets.

The Proposed Scheme incorporates additional landscaping arising from junction reconfiguration, reinforcement of existing vegetation areas, and the establishment of new urban realm and landscape opportunity areas. Tree species will be determined by location and will comprise of either native woodland / parkland trees as set out above. Landscaping proposals respond to the different localities and may include grass planting, hedgerows, trees, grasses, ornamental planting and swathes of bulbs.”

Section 17.5.1 (Construction Phase) of EIAR Chapter 17 Landscape and Visual describes mitigation and monitoring measures which are proposed to ameliorate, remediate or reduce significant landscape (townscape) and visual impacts from the Construction and Operational Phases wherever possible. It states:

“A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities. A summary of predicted Construction Phase effects following the implementation of mitigation and monitoring measures is listed in Table 17.9.

- *Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 ‘Trees in relation to design, demolition and construction-- Recommendations’ (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (Appendix A17.1 Arboricultural Impact Assessment in Volume 3 of this EIAR);*
- *Wherever practicable, trees and vegetation will be retained within the Proposed Scheme. Trees and vegetation identified for removal will be removed in accordance with ‘BS 3998:2010 Tree Work – Recommendations’ (BSI 2010) and best arboricultural practices as detailed and monitored by a professional qualified arborist. For details of trees and vegetation to be removed refer to Tree Protection Plans (Appendix A17.1 Arboricultural Impact Assessment in Volume 3 of this EIAR) and Landscape General Arrangements (BCIDA-ARP-ENV_LA-1012_XX_00-DR-LL-9001 in Volume 3 of this EIAR);*
- *The Arboricultural Assessment prepared for the Proposed Scheme will be fully updated by the appointed contractor at the end of the Construction Phase and made available, with any recommendations for on-going monitoring of retained trees during the Operational Phase;....” [list continues].*

In summary, the Planting Strategy for the Proposed Scheme has ensured that the green infrastructure within the Proposed Scheme has been examined, developed and enhanced within the development, in South Dublin and Dublin City areas.

a) Trees within Rathfarnham Castle Park

SDCC raise a number of concerns regarding the assessment of the impact on existing trees within Rathfarnham Castle Park. SDCC state that they are of the opinion that there is an under estimation of the number of trees that will be impacted by the Proposed Scheme within Rathfarnham Castle Park, and an over optimistic view of the proposals to protect schemes proposed for retention. SDCC make the following detailed comments.

- A) SDCC notes that with some exceptions, the survey has been primarily confined to the areas where land acquisition is proposed. SDCC notes that there are trees outside of this area, whose root zone may extend into the proposed works area, which may have not been assessed. The submission

includes two photographs referencing areas where SDCC state that trees have not been included within the tree survey.

- B) SDCC notes that the topographical survey does not seem to reflect the accurate position of existing trees. SDCC notes that there are some trees shown for removal which could in reality be retained, and some trees shown for retention which in reality will require removal. SDCC provide an example, tree number 1919 which is located within the permanent land take boundary but is shown on the drawings as being further back and to be retained.
- C) SDCC notes that the tree survey report notes that where proposed walls are in the vicinity of root zones of trees to be retained, that a pad/pile and raft foundation would be considered. SDCC notes that due to level differences between the carriageway side of the existing wall and the Rathfarnham Castle side of the wall that this may not be feasible, without lowering the existing ground level within Rathfarnham Castle Park and impacting on tree root zones.
- D) SDCC notes that a 'no-dig' type construction would be utilised to minimise impacts on trees shown for retention where surfaces will run through the root zone of these trees. SDCC notes that due to the undulating nature of the lands within the Rathfarnham Castle Park, that it will be necessary to excavate down in some locations to match the finished levels of the new path to the carriageway levels, with corresponding impact on tree root zones. Additionally, where it is necessary to build up levels, this could lead to excessive build up on top of tree roots.
- E) SDCC notes that services, including surface water drainage, are proposed within the new paths within Rathfarnham Castle Park, within the root zones of trees shown to be retained.

The submission notes that the impact assessment in the EIAR states that *"The magnitude of change in the baseline environment is very high"*.

SDCC goes on to state that the magnitude of the impact will be greater than that indicated within the submitted documentation. They state that more trees will likely require removal than what is shown in the submission and that the removal of woodland edge trees will have a knock-on effect due to previously sheltered trees being exposed to edge conditions.

SDCC recommends that further assessment is required with regard to the proposals along and within the boundary of Rathfarnham Castle Park. They state that the tree survey and report should be reviewed to include all trees impacted by the proposals, as well as the topographical survey reviewed to ensure that all trees are accurately positioned, and to ascertain the feasibility of the proposed no dig technique. If following this review, it is still proposed to proceed with the proposal, SDCC recommends that sufficient replacement woodland habitat be established as close as possible to Rathfarnham Castle Park.

Response

The NTA notes the concerns raised by SDCC in relation to the proposed tree removal within Rathfarnham Castle Park to facilitate the proposed improvements to bus priority and cycle infrastructure in this area. It is acknowledged within the EIAR that there is a significant impact on existing trees in this location. It is noted that considerable consultation has been undertaken on the proposals in this area with SDCC, the OPW, Dept. of Housing, Local Government and Heritage and is acknowledged within the SDCC submission.

Section 17.4.3.1.2 of Chapter 17 of the EIAR notes the following in relation to the Construction Stage impact of the Proposed Scheme in this location:

"The baseline townscape is of high sensitivity and the Proposed Scheme involves the reconstruction and resurfacing of the roads, footpaths, and cycle track pavements. New kerbs will also be provided following the realignment of the existing kerb lines. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new road lighting, new street furniture (rubbish bins, seats, lighting, benches, planters, bollards, cycle racks, bus stop (including shelters and information displays etc.)), landscape works and substantial removal of sections of trees and planting. Sections of the existing boundary walls along the eastern side of Grange Road and Rathfarnham Road, adjacent to Rathfarnham Castle Park, will be realigned and reconstructed due to the proposed widening of the carriageway. The low height wall at the junction with Rathfarnham Wood will also be realigned and reconstructed to accommodate the upgrade of the traffic signalised junction. The Construction Phase involves substantial acquisition from residential properties along Rathfarnham Road, and from Rathfarnham Castle grounds with associated removal of a substantial section of mature woodland edge as well as garden hedges and other plantings. This element of works will result in considerable changes along this section of the Proposed Scheme. Construction Compound TR3 will be located along Dodder View Road, across the road from Bushy Park, in the greenfield area between Dodder View Road, Woodview Cottages and Church

Lane, and will result in some short-term removal of grassland but no impact on the surrounding mature trees or woodland. The construction works will not alter the overall townscape character along this section of the Proposed Scheme, however, the works will detract from the streetscape character and amenity. The magnitude of change in the baseline environment is very high.

The townscape / streetscape impact of the Construction Phase is assessed to be Negative, Very Significant and Temporary / Short-Term.”

The following is noted in Section 17.4.4.1.2 in relation to the Operational Stage impacts of the Proposed Scheme:

“The sensitivity of this section is high. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme. Most notably there will be continuing negative effects from loss of trees removed during the Construction Phase at Rathfarnham Castle and along sections of residential properties along Rathfarnham Road. There will be the provision of a new boundary wall to the castle demesne in roughcast render which, while less aesthetically pleasing than the sections of existing stone boundary wall, will represent a neutral change when compared to the overall inharmonious boundary treatment which varies in quality and condition of materials used.

There will be provision of substantial new tree planting within the castle demesne to consolidate the new edge to the woodland group and ensure the amenity of the open space is restored. There will also be substantial replacement and additional street tree planting throughout this section, including medians, footpaths and roadside spaces. There will be an improvement to the setting of the Yellow House and the Church of the Annunciation in Willbrook with provision of stone paving to existing concrete footpaths. There will be a notable improvement to an existing grassland space within the River Dodder corridor with provision of new tree planting and species-rich grassland. An enhanced paving scheme will be provided at numerous locations throughout this section, most notably with the provision of stone paving to the frontages of the Church of the Annunciation and the Yellow House public house, as well as the provision concrete paving to footpaths at major junctions and sett paving to pedestrian crossing points at side roads. The Operational Phase will not alter the overall townscape character of this section but will result in substantial localised changes to the streetscape character of the section. The magnitude of change in the baseline environment is very high.

The townscape / streetscape impact of the Operational Phase is assessed to be Negative, Very Significant and Short-Term becoming Neutral, Moderate and Long-Term.”

A number of photomontages have been prepared in this location due to the significance of the impact and the sensitivity of the baseline environment. The before and after photomontages are reproduced in Figure 2.6.28, Figure 2.6.29, Figure 2.6.30 and Figure 2.6.31 below.



Figure 2.6.28 EIAR Figure 17.2.2.1 View from Grange Road at Willbrook Road - As Existing Photomontage



Figure 2.6.29 EIAR Figure 17.2.2.2 View from Grange Road at Willbrook Road - As Proposed Photomontage



Figure 2.6.30 EIAR Figure 17.2.3.2 View from Rathfarnham Road at Willbrook Road - As Existing Photomontage



Figure 2.6.31 EIAR Figure 17.2.3.2 View from Rathfarnham Road at Willbrook Road - As Proposed Photomontage

The EIAR has assessed the impact of the Proposed Scheme in relation to tree removal within Rathfarnham Castle Park, and this impact has been documented and considered within the EIAR.

Responses to specific points raised are included below:

- A) Rathfarnham Castle Park is a densely wooded area with hundreds of existing trees. It would not be practicable as part of the assessment of the Proposed Scheme to survey every tree within the Park. As such, the tree survey has only documented trees within the zone of influence of the Proposed Scheme. The methodology by which the Tree Survey was carried out is documented within Section 1.2 of the Arboricultural Impact Assessment Report, which is included as Appendix A17.1 in Volume 4 of the EIAR. The following is noted:

“An initial tree survey and visual condition assessment was undertaken on the 24th and 25th of August 2020. As part of this report and in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction - recommendations, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British standard document, where trees formed obvious groups, these were assessed and recorded as groups. The survey commenced at the junction of Grange Road and Nutgrove avenue, and at Junction 11 of the M50 and finished at Dame street, including the Terenure Road North / Harold’s Cross Road section and the Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road section of the Proposed Scheme.

Section 4.4.2.3 of BS 5837: 2012 states:

Trees growing as groups or woodland should be identified and assessed as such where the arboriculturist determines that this is appropriate. However, an assessment of individuals within any group should still be undertaken if there is a need to differentiate between them, e.g. in order to highlight significant variation in attributes (including physiological or structural condition).

NOTE: The term “group” is intended to identify trees that form cohesive arboricultural features either aerodynamically (e.g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally, including for biodiversity (e.g. parkland or wood pasture), in respect of each of the three subcategories.

The survey concentrated primarily on the significant trees/hedgerows and groups located within 20m of any development works which could impact on the tree (this could include excavation, resurfacing, utility installation, new signage/lighting etc) within and adjacent to the Proposed Scheme and has been based on the topographical survey plan provided. The objective of this survey was to gather information regarding the trees along the Proposed Scheme and to assess the impact the Proposed Scheme may have on the trees. Refer to Appendix A for the tree survey schedule.”

Figure 2.6.32 and Figure 2.6.33 below, are extracts from the Tree Protection Plans, included in Appendix C of the Arboricultural Impact Assessment Report (in Appendix A17.1 in Volume 4 of the EIAR). These figures demonstrate that the Tree Survey has considered trees beyond the boundary of the extent of permanent and temporary works of the Proposed Scheme. It is noted, as set out in Section 1.2 Methodology of the Arboricultural Impact Assessment Report, that trees with diameters of less than 75mm were not included in the survey. The NTA design team is satisfied that all trees, whose root zone may be impacted by the Proposed Scheme, have been assessed.



Figure 2.6.32 Extract from Tree Protection Plan in EIAR Appendix A17.1 (Sheet 01)



Figure 2.6.33 Extract from Tree Protection Plan in EIAR Appendix A17.1 (Sheet 02)

The NTA also note that two photographs are included under point A) which reference specific locations. These are discussed below.

Figure 4 Photograph No. 1 refers to a line of trees located along Rathfarnham Castle Park’s western boundary wall at the northern end which SDCC notes have not been included within the survey drawing.

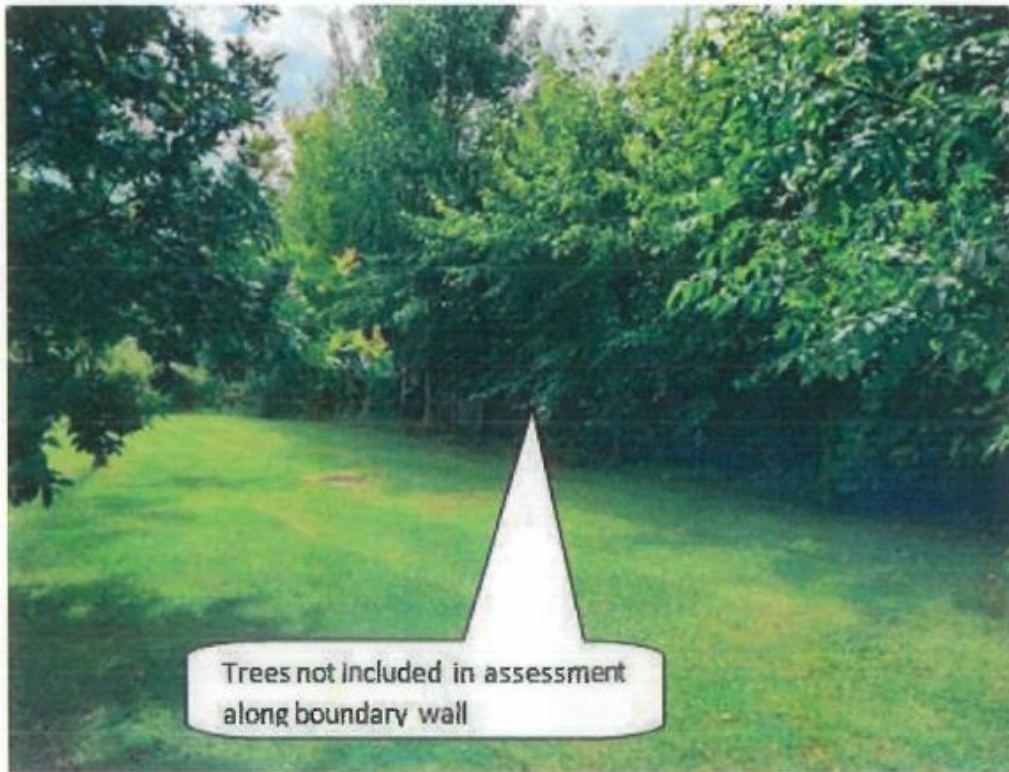


Figure 4 Photograph No. 1: shows a line of trees located along Rathfarnham Castle Park's western boundary wall at the northern end which have not been included within the survey drawing.

Figure 2.6.34 Photograph 1 from SDCCs submission

It is not clear from the submission the exact location which is referred to, however the NTA understands that it refers to an area behind the boundary wall, opposite the Butterfield Road junction, as highlighted in red in Figure 2.6.35.



Figure 2.6.35 Location believed to be referenced in Photograph 1 of SDCC submission

Figure 2.6.36 is a Google Streetview image from September 2022 highlighting the area referenced in Photograph 1 of the SDCC submission. Figure 2.6.37 is a Google Streetview image of the same location from May 2021. It is understood that from this figure that at the time of the survey (August 2020), these trees may not have been as mature and as such were not documented in the Tree survey, in line with the methodology outlined in section 1.2 of the Arboricultural Impact Assessment Report.

Notwithstanding this, and acknowledging that these trees have grown in the time since the survey was undertaken, it is considered that the impact rating documented in the assessment is conservative in nature and takes account of the impact of the removal of the trees identified and the impact of the Proposed Scheme on Rathfarnham Castle. Section 17.4.3.2.9 in Chapter 17 of Volume 2 of the EIAR sets out the construction phase impact due to the removal of existing trees:

“Construction of the Proposed Scheme will require removal of existing trees and other plantings at specific locations along the road corridor. These include trees and plantings around Rathfarnham Castle, some street trees and from many properties along the corridor of the Proposed Scheme, including loss of prominent mature specimens. The sensitivity is high, and the magnitude of change is high / very high. The townscape and visual impact of the Construction Phase on trees and plantings is assessed to be Negative, Significant / Very Significant and Temporary / Short-Term.”

Section 17.4.4.2.4 in Chapter 17 in Volume 2 of the EIAR addresses the potential operational phase impacts on protected structures and national monuments (which includes Rathfarnham Castle):

“There will be a change at Rathfarnham Castle, a National Monument and Protected Structure, most notably there will be continuing adverse effects from loss of land and from trees removed during the Construction Phase. However, there will be provision of substantial tree planting to consolidate the woodland edge to the demesne, which will reduce the negative effects over the long-term. The provision of a new cohesive boundary wall in a material sympathetic to the construction of the castle itself will be a positive impact. Overall the effect will be initially negative in the short-term becoming neutral over the long-term. The sensitivity is high and the magnitude of change is high. The potential townscape / streetscape and visual impact of the Operational Phase on Rathfarnham Castle is assessed to be Negative, Significant and Short-Term becoming Neutral, Moderate / Significant and Long-Term.”

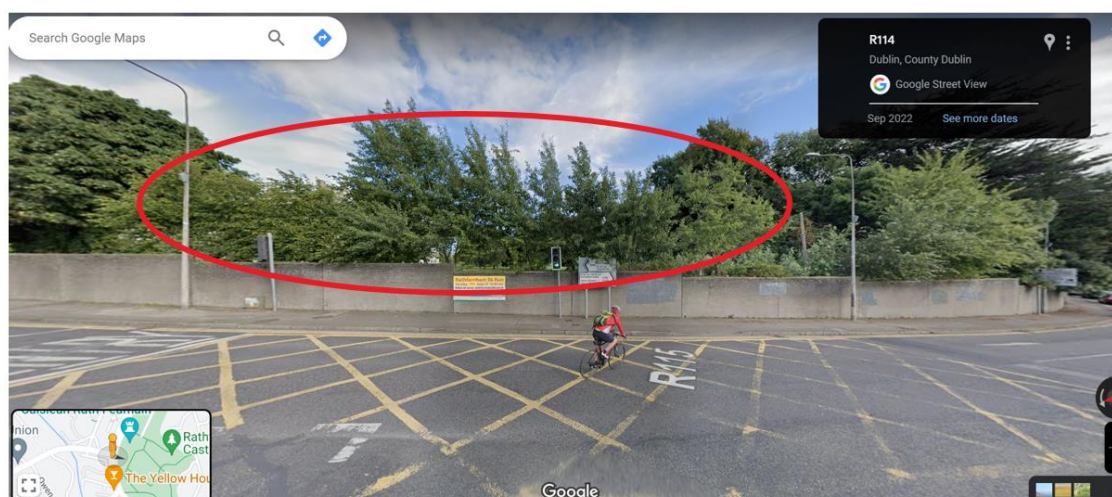


Figure 2.6.36 September 2022 Streetview image highlighting location of Photograph 1

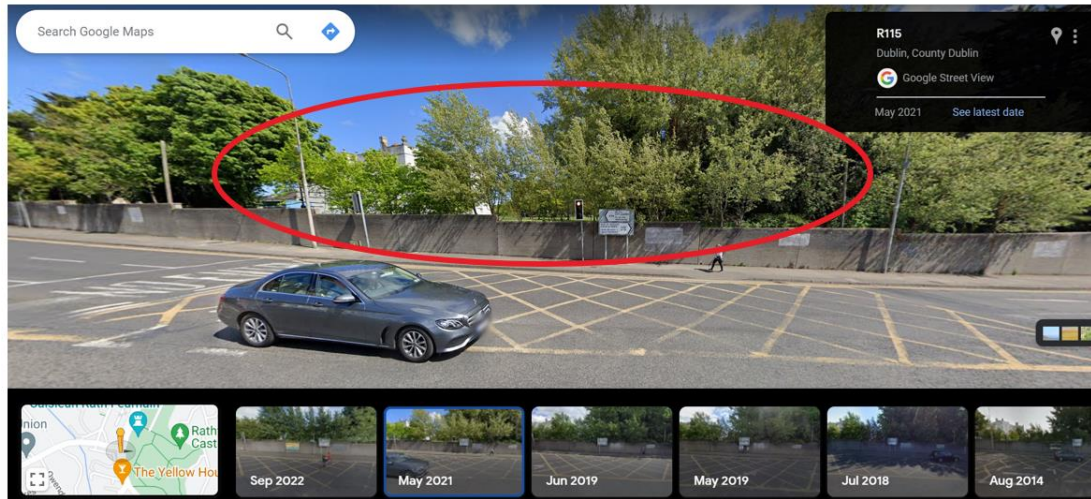


Figure 2.6.37 May 2021 Streetview image highlighting location of Photograph 1

Figure 5 Photograph No. 2 refers to large trees which are located outside of the land take but would have root zones which would extend into the land take area. SDCC notes that there may be implications on the health of these trees, and that some of these trees have not been picked up on the tree survey or plotted on the topographical survey.

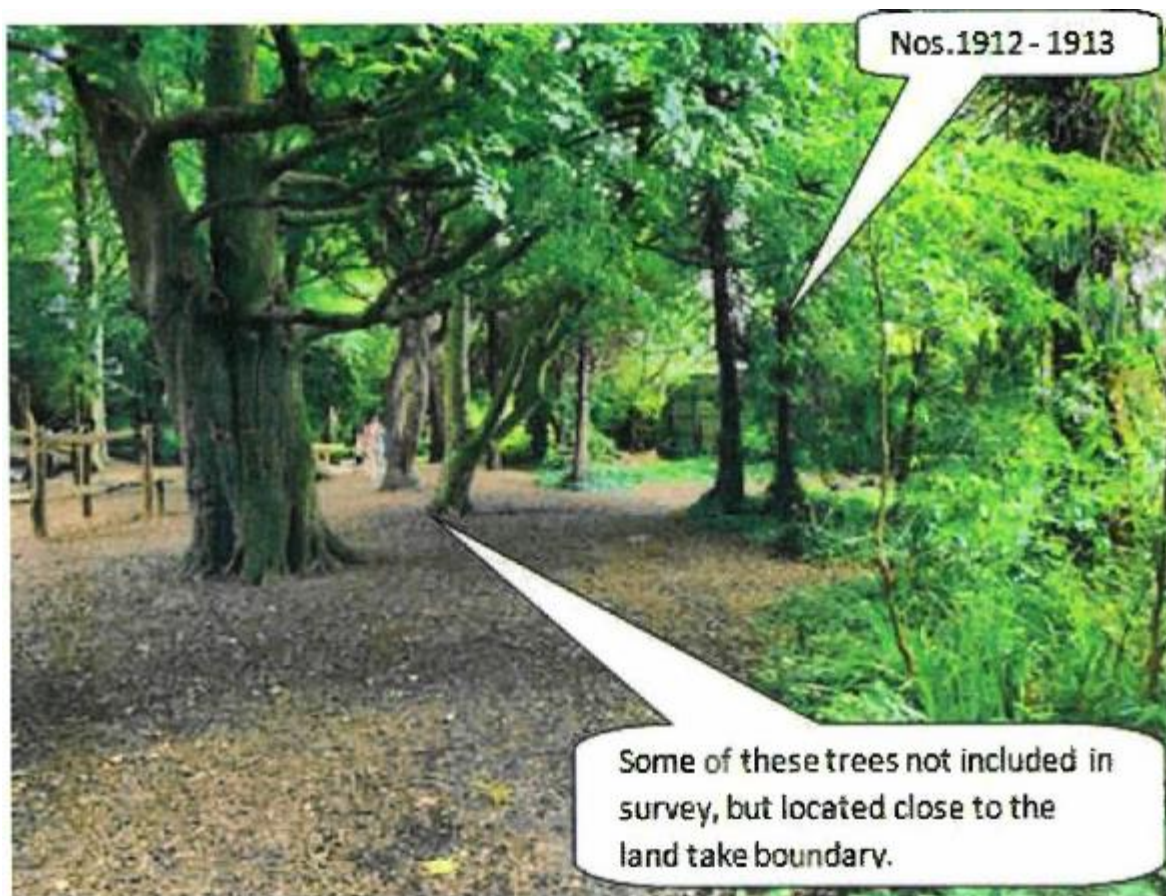


Figure 5 Photograph No. 2: some of these large size trees are located outside the land take, but would have root zone calculations which would extend into the land take area with possible implications on the health of these trees. Some of these trees have not been picked up on the tree survey or plotted on the topographical survey.

Figure 2.6.38 Photograph 2 from SDCCs Submission

It is noted that Photograph 2 indicates two trees labelled Nos. 1912 and 1913. An extract from the Tree Protection Plans highlighting these trees is included in Figure 2.6.39. Relative to the positions of Trees No. 1912 and 1913, the large trees referenced by SDCC appear to be significantly set back from the proposed works area and as such would not have been included in the tree survey.

The project arborist has considered the root protection zone of such trees outside of the boundary and considered that there is no impact predicted on these trees due to their separation from the works area.

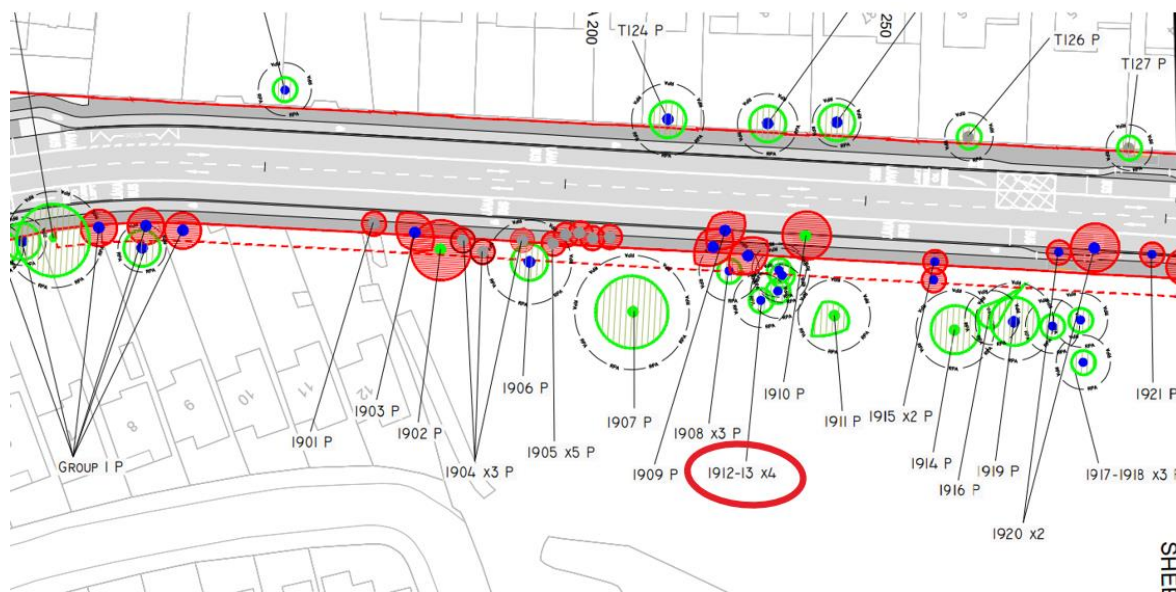


Figure 2.6.39 Extract from Tree Protection Plans highlighting location of trees reference 1912 and 1913

- B) The NTA notes this comment. While the Tree survey has been based on the topographical survey, the project arboriculturalist has also carried out a number of site visits to confirm the location of trees as surveyed. The NTA design team is confident that the trees shown in the Tree Protection Plans are reflective of the existing trees in this location.

The NTA also note that two photographs are included under point B) which reference specific locations. These are discussed below.

Figure 6 Photograph No. 3 shows an image of a tree growing close to the boundary wall and notes that this tree has mistakenly been shown in another location on the Tree Protection Plans as Tree No. 1919.

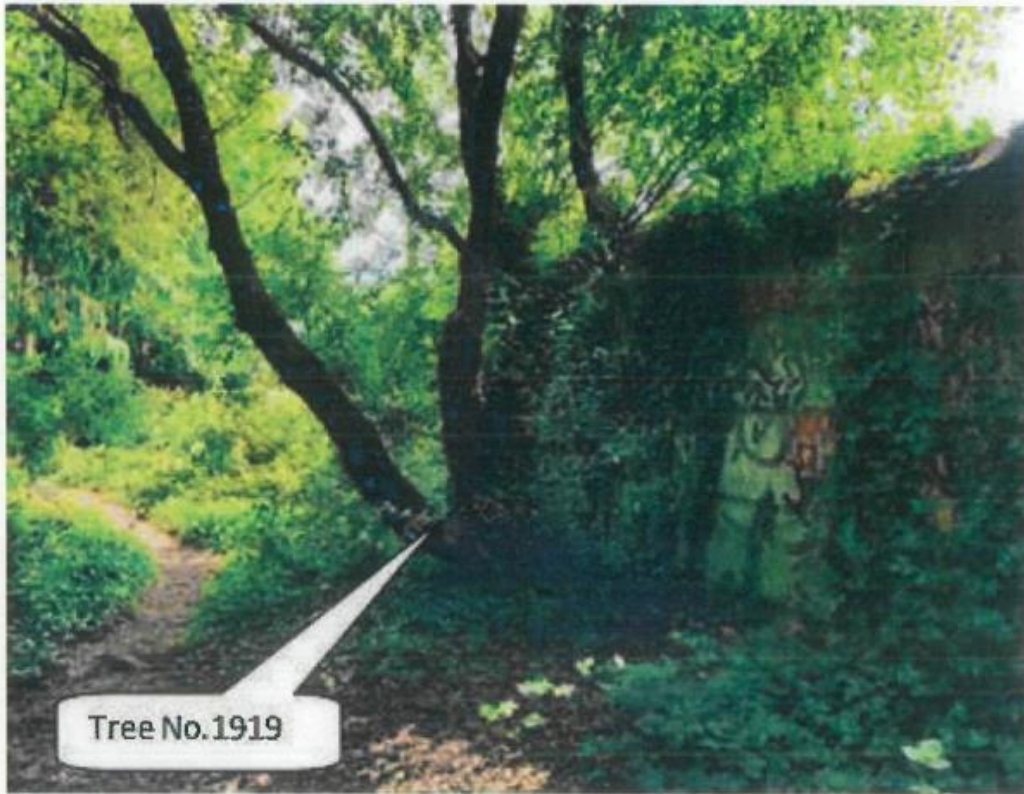


Figure 6 Photograph No. 3: shows Tree No. 1919 growing tight to the boundary wall, but shown on the tree survey drawing in a different location and marked for retention.

Figure 2.6.40 Photograph 3 from SDCCs Submission

Figure 2.6.41 shows the location of Tree No. 1919 which is set back from the existing boundary wall by approximately 10m. It is noted that another tree, tree 1920, is located in close proximity to this location and adjacent to the boundary wall, and that this may be the tree SDCC refers to in Photograph 3.

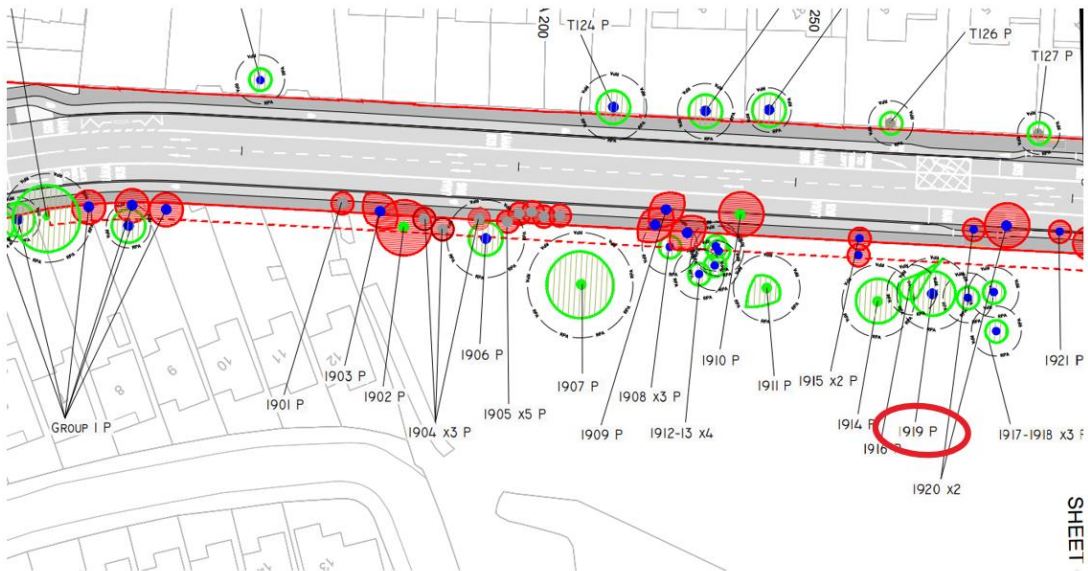


Figure 2.6.41 Extract from Tree Protection Plan showing location of Tree 1919

Figure 7 Photograph No. 4 shows an image of a number of trees within the Rathfarnham Castle grounds and notes that there are significantly more than the 16 trees referenced in the Tree Protection Plans in this location. SDCC do not provide the location for Photograph No. 4 and as such the NTA cannot ascertain exactly where this image is located.

The methodology outlined in Section 1.2 of the Arboricultural Impact Assessment Report (in Appendix A17.1 in Volume 4 of the EIAR), is again noted, and it is highlighted that not every tree

within Rathfarnham Castle Park has been surveyed. The NTA design team is confident that the survey has captured all relevant trees within Rathfarnham Castle Park.

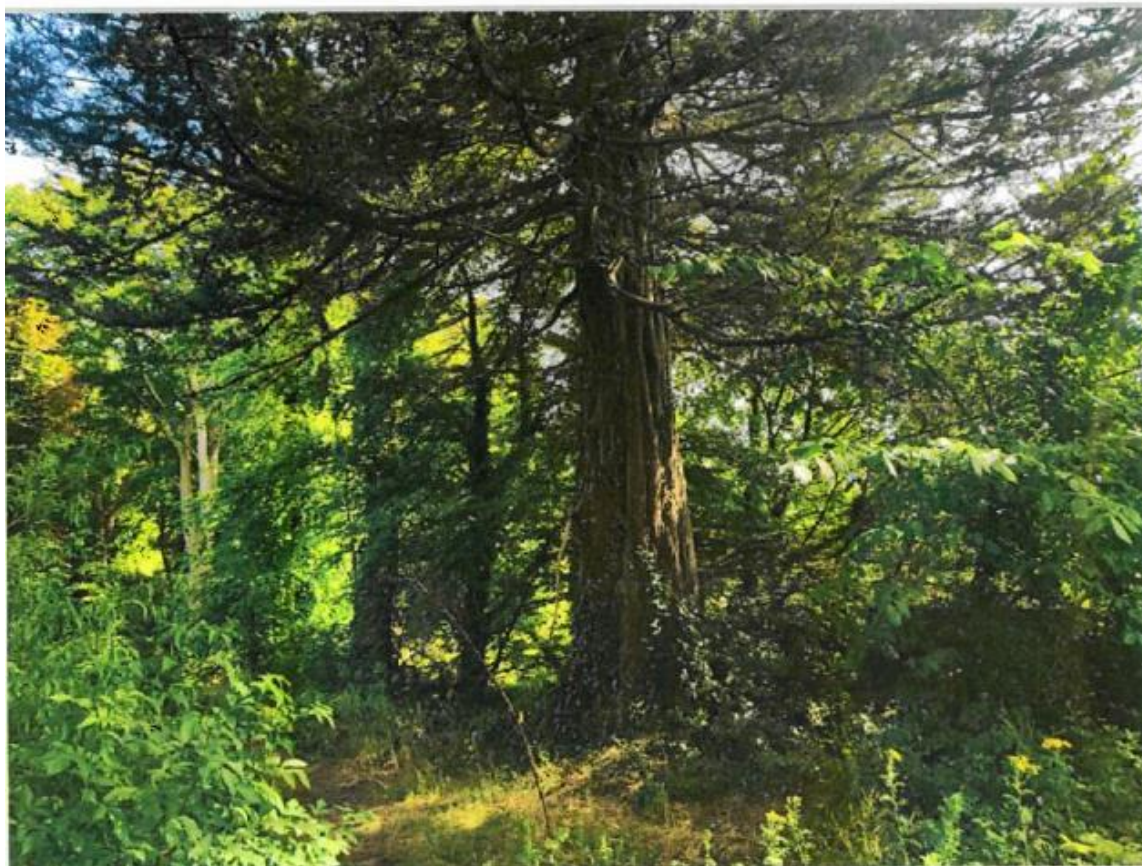


Figure 7 Photograph No. 4: One location within Rathfarnham woodland, which has a greater number of trees than the 16 No. trees marked on the tree survey drawing for this location.

Figure 2.6.42 Photograph No. 4 from SDCCs submission

- C) The NTA notes this comment. The existing levels within Rathfarnham Castle Park have informed the assessment contained within the Arboricultural Impact Assessment Report. The NTA design team is confident that the trees marked for retention can be retained.
- D) The NTA notes this comment. The existing levels within Rathfarnham Castle Park have informed the assessment contained within the Arboricultural Impact Assessment Report. The NTA design team is confident that the trees marked for retention can be retained.
- E) The NTA notes this comment. The positioning of new services in the vicinity of Rathfarnham Castle Park has taken due consideration of the existing tree root zones, and this has informed the assessment contained within the Arboricultural Impact Assessment Report (in Appendix A17.1 in Volume 4 of the EIAR). Section B22 of Appendix B contained within the Arboricultural Impact Assessment Report notes the following in relation to the diversion of existing or installation of new utilities:

“Utility diversion and new utilities have not been fully defined at this stage. The default position is that all services be located outside of the RPA of retained trees. In the context of this Site, it is not feasible to fully avoid the RPA of retained trees and therefore either trenchless installation below tree root systems or hand dug/compressed air excavation through RPAs where significant roots can be retained and worked around, will be required.

Use of trenchless techniques:

Where services can't avoid the RPA of retained trees, the primary consideration must be to install them using trenchless insertion techniques such as impact moiling, direct drilling or equivalent.

Insertion and retrieval pits must be located outside of the RPA of retained trees. The depth of the run must be at least 2m below ground level and should be located as far from the tree as practicable.

The mole must be lubricated with water only. Installation must follow the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2) and BS5837 Section 7.7 and Table 3.

Replacement pipes must be installed via pipe bursting, relining or equivalent trenchless techniques where they are located within the RPA of a retained tree. Pipe bursting or relining equipment must be positioned outside of the RPA at all times.

Hand digging:

Where trenchless installation isn't feasible, shallow utility runs can be installed via hand or compressed air/soil vacuum excavation. The excavation will be located as far from the stem of the tree as practicable and must be carried out by hand (ideally using compressed air such as an Air Spade and soil vacuum) under the supervision of the Project Arboriculturist.

Pedestrian only access will be permitted, and ground protection measures as set out in Section B10 will be employed where no hard surfacing is in place, with fencing positioned immediately adjacent to restrict any further access into RPAs.

Excavation will be supervised by the Project Arboriculturist who will be on hand to advise on the management of any roots encountered and to ensure the approved tree protection methodology is fully adhered to. Roots smaller than 25mm in diameter can be cut with a clean sharp tool where they pose an obstruction.

Should significant roots (larger than 25mm diameter or large clumps of smaller roots) be encountered, these will be retained and wrapped in dampened hessian to prevent drying out and pipes will be routed around them wherever practicable. If significant roots are encountered which cannot be feasibly worked around and retained, appropriate action will be agreed with the Project Arboriculturist.

Pipes must be constructed to resist future incursion by tree roots.

All spoil/ arisings from excavation will be placed onto ground protection boards to prevent compaction, ground level changes and to assist in removal or reinstatement. Backfill is to utilise the excavated parent material where feasible, applied to restore the soil profile to its original structure (i.e., topsoil will be installed last) and must be lightly hand tamped only.

Services shall be installed following the principles set out in the National Joint Utilities Group (NJUG) Vol 4: Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees (issue 2)."

The following is also noted in Section 5.5.2.4 of Chapter 5 of the EIAR:

"Trees to be retained within and adjoining the works areas will be suitably protected as necessary as per the British Standards Institution (BSI) British Standard (BS) 5837:2012 Trees in Relation to Design, Demolition and Construction (BSI 2012). Trees identified for removal will be removed in accordance with BS 3998:2010 Tree Work. Recommendations (BSI 2010). The location of trees to be retained, and trees to be removed is shown on the Landscaping General Arrangement drawings (BCIDA-ARP-ENV_LA-0809_XX_00-DR-LL-9001).

A suitably qualified arborist will be appointed by the contractor to monitor tree protection, and tree removal related activities. The design has been developed to ensure removal of trees has been minimised in so far as practicable. Where necessary, protective fencing will be erected, and mitigation measures will be put in place, prior to construction works commencing in the immediate vicinity.

Works required within the root protection area of trees to be retained will follow the arboricultural methodology included in Appendix A17.1 Arboricultural Impact Assessment in Volume 4 of this EIAR. Further information on mitigation measures with regards to the removal and protection of trees is provided in Chapter 12 (Biodiversity), and further information on the assessment of tree removal with regards to landscape and visual impact is provided in Chapter 17 (Landscape (Townscape) & Visual) of this EIAR."

The NTA design team is confident that the trees marked for retention can be retained.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC Public Realm Section comments as these matters were the subject of

extensive liaison with SDCC, the OPW, Dept. of Housing, Local Government and Heritage throughout the design development process.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the landscape strategy/ Green Infrastructure Strategy.

b) Natural SuDS

The submission raises concerns about the overall extent of natural SuDS across the scheme, requesting that this should be increased, and suggesting a planning condition requesting a detailed landscaping strategy. The submission also recommends that Natural Based Urban Drainage should be included particularly in areas where the road is being completely re-aligned, e.g. the entire Rathfarnham Road.

Response

Section 4.6.16.4 of EIAR Chapter 4 Proposed Scheme Description highlights that *“Whilst in some areas the Proposed Scheme will increase the impermeable areas, additional permeable areas are also provided by the softening of urban realm along the routes. The drainage design aims to sustain flow levels within the existing pipe network after a rainfall event by controlling the discharge rate within each catchment. Flows will be controlled by the implementation of SuDS techniques, where practicable. One of the principal objectives of the road drainage system is to minimise the impact of the runoff from the roadways on the surrounding environment via the position of: filter drains, swales, bio-retention areas, tree pits, oversized pipes, silt traps and attenuation features if necessary.”*

The drainage design is based on a number of best practice general principles, which are set out in the document ‘BusConnects Core Bus Corridor Drainage Design Basis’ which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality. Areas where SuDS measures are proposed are presented in the Surface Water Drainage Drawings provided in Volume 3 of the EIAR.

In summary, SuDS have been proposed across the scheme wherever practicable and sized appropriately.

The NTA will continue to liaise closely with South Dublin County Council Public Realm Section and this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme taking their requirements into consideration, where aligned with and consistent with the EIAR.

c) Construction Compounds

SDCC Public Realm section note that a number of construction compounds are proposed within public realm areas. SDCC question the need for CPO, either temporary or permanent, for proposed construction compounds. SDCC notes that in normal practice, contract managers liaise with the Council to agree suitable locations for construction compounds and agree mitigation and reinstatement measures directly with the council. SDCC Public Realm section note that they were not consulted in relation to the proposed CPO of these lands for the works and did not agree to them.

SDCC make comments in relation to specific compound locations, as outlined below.

Construction Compound TR1

SDCC strongly object to a permanent CPO at this location. SDCC notes that a permanent CPO is unnecessary and expect this land to be returned to SDCC in good condition at the completion of the construction stage. SDCC suggest that the location of the compound, mitigation and reinstatement measures should be agreed with SDCC public realm section by agreement rather than CPO.

Construction Compound TR3

SDCC notes that the proposed compound location is in the Dodder Valley and is close to the site of an existing term-limited, temporary construction compound where SDCC have agreements regarding full reinstatement of the compound area to planted, landscaped parkland. SDCC further states that the extent of the compound in this location is excessive and occupies most of the usable parkland in this location. SDCC states that it does not recommend ceding of this important location with a temporary CPO and recommends that the extent of the proposed compound should be limited to the existing compound location and that mitigation and reinstatement measures should be agreed with SDCC public realm section by agreement rather than CPO.

Construction Compound TR6

SDCC notes that the proposed compound location is in the Dodder Valley and is close to the site of an existing term-limited, temporary construction compound where SDCC have agreements regarding full reinstatement of the compound area to planted, landscaped parkland. SDCC states that it does not recommend ceding of this important location with a temporary CPO and recommends that the extent of the proposed compound should be limited to the existing compound location and that mitigation and reinstatement measures should be agreed with SDCC public realm section by agreement rather than CPO.

Response

Necessity

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of SDCC as the relevant road authority is automatically restored – it does not require the operation of the conventional “taking-in-charge” arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being South Dublin County Council. Consequently, all CPO lands acquired by NTA for purposes of the Proposed Scheme will be transferred to the relevant local authority.

NTA will however continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the CPO.

Construction Compound TR1

SDCC Urban Realm Section notes that a permanent CPO is proposed at the location of Construction Compound TR1. This is not the case, as the proposed Construction Compound is located within the existing roadbed, no CPO is proposed at this location.

Figure 2.6.43, is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.

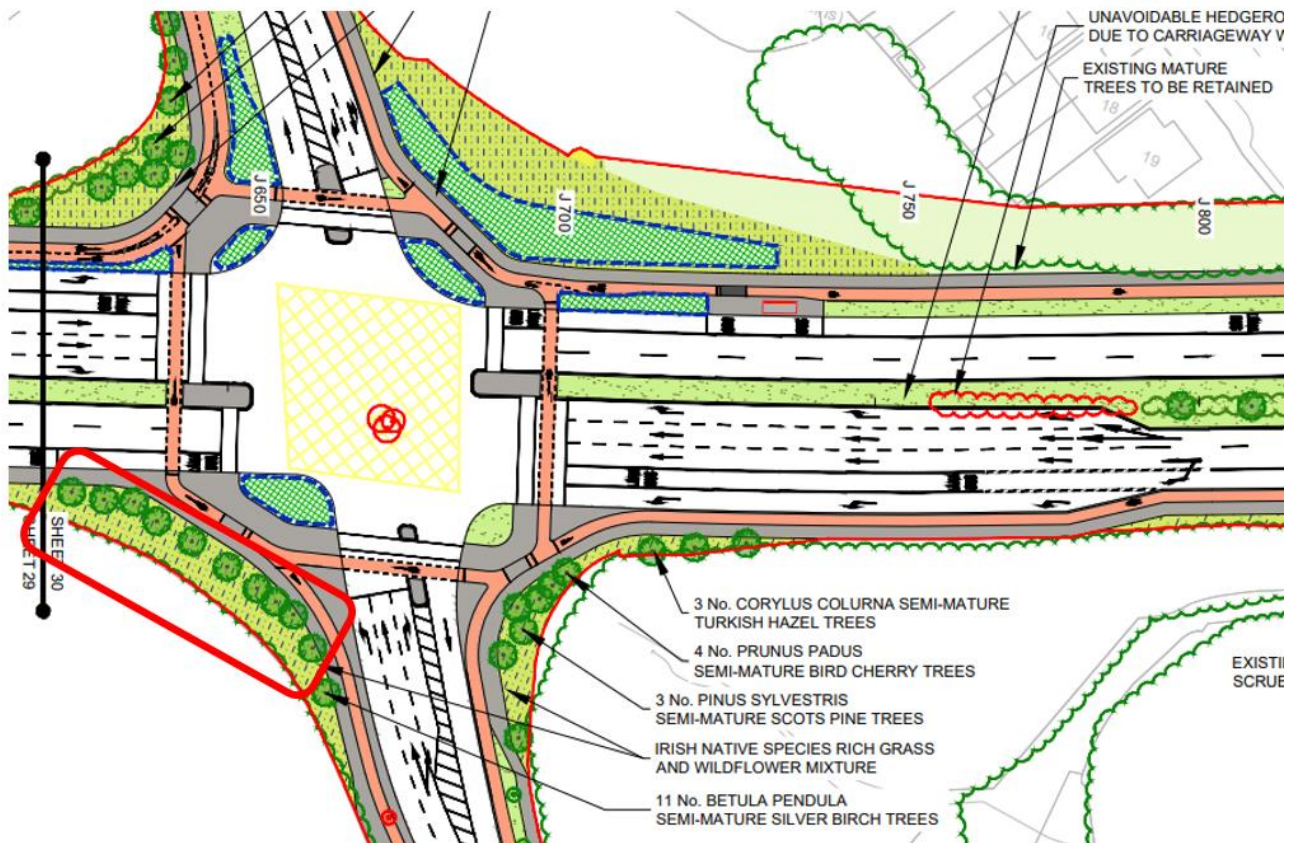


Figure 2.6.43 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR Compound TR1 location circled in red

As identified in Figure 2.6.43, no existing trees will need to be removed to allow the area to be used for Construction Compound TC1 during construction of the Proposed Scheme. In addition, a number of new trees are proposed to be planted here, within a new landscaped area.

Section 4.6.19.1 of EIAR Chapter 4 states that *“To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a ‘like for like’ basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area.”*

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Construction Compound TR3

The NTA has provided a detailed response in relation to the use of this location as a temporary construction compound in response to Section iii) d) above.

Construction Compound TR6

The NTA notes SDCCs comment in relation to the proposed Construction Compound in this location. Section 5.7.1 of Chapter 5 of the EIAR notes the following in relation to the proposed siting of Construction compounds:

“The location of the Construction Compounds in relation to the Proposed Scheme are shown in Figure 5.1 in Volume 3 of this EIAR. The Construction Compound locations have been selected due to the amount of available space, their relative locations near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. Refer to Chapter 6 (Traffic & Transport) of this EIAR for an assessment of the construction traffic.”

The construction compound referred to by SDCC is compound TR6, which is illustrated in Figure 2.6.44.

“Construction Compound TR6 will be located on Spawell Link Road, between Spawell Roundabout and Firhouse Road, as shown in Image 5.6. The area of Construction Compound TR6 is approximately 3,170m².”

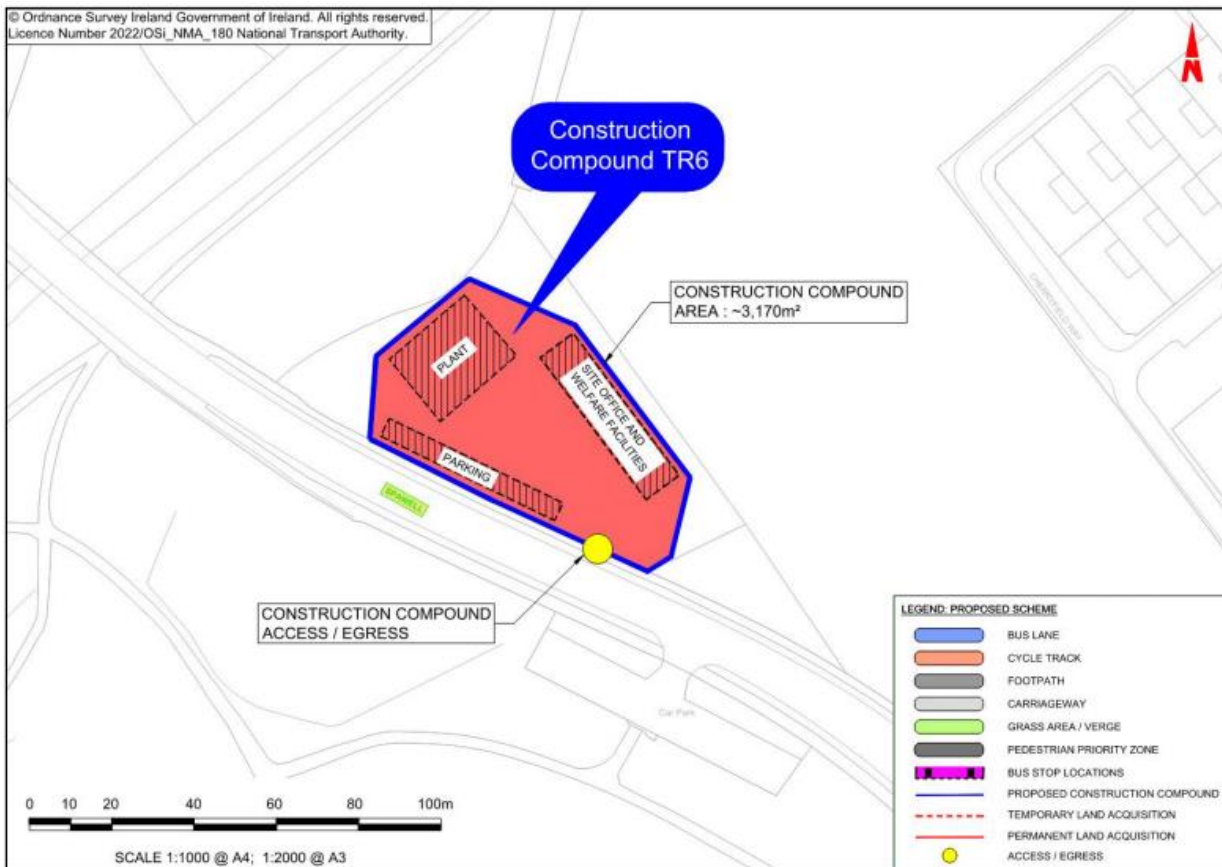


Image 5.6: Location and Extent of Construction Compound TR6

Figure 2.6.44 Construction Compound TR6 layout

Section 5.7.3 notes the following in relation the mitigation measures which will be implemented at Construction Compounds required to construct the Proposed Scheme:

“Appropriate environmental management measures will be implemented at the Construction Compounds, for example, to minimise the risk of fuel spillage, and to ensure that the Construction Compounds and the approaches to it are appropriately maintained. Further information on the air quality, noise and vibration and water related mitigation measures that will be implemented is included in Chapter 7 (Air Quality), Chapter 9 (Noise & Vibration) and Chapter 13 (Water) of this EIAR.

Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions.”

A Construction Environmental Management Plan (CEMP) has been prepared and submitted as part of the planning application, and is included as Appendix A5.1 in Volume 4 of the EIAR. A Construction Traffic Management Plan has been prepared to inform the CEMP, to demonstrate the manner in which the interface between the public and construction-related traffic will be managed and how vehicular movement will be controlled.

It is further noted that a construction compound has been located at this site, during recent construction works carried out for the Dodder Greenway Scheme.

d) Other CPO Locations

SDCC notes a number of locations where CPO is proposed of public lands to deliver the Proposed Scheme, and question the necessity and validity of CPO in these locations. The following locations are referenced in the submission:

- **Junction of Grange Road with Nutgrove Avenue** - SDCC notes that they have recently upgraded the car park at this location, and further notes that permanent CPO is proposed to lands either side of the south side of the junction. SDCC are not clear why CPO is required in these locations and recommend that CPO is not granted.
- **Rathfarnham Castle Park** – SDCC notes the loss of parkland and amenity within Rathfarnham Castle Park due to the proposed permanent and temporary CPO in this location. SDCC notes, that if granted, the NTA should be requested to agree with SDCC compensatory and mitigation measures within SDCC public open space for significant loss of landscape and amenity in SDCC lands. SDCC notes that it does not support the CPO proposed at the exit from the Rathfarnham Castle car park.
- **Junction of Rathfarnham Main Street and Rathfarnham Road** – SDCC notes that they are unsure why there is a permanent CPO proposed at the junction of Rathfarnham Main Street and Rathfarnham Road, as there does not seem to be any relevant proposal in the general arrangement drawings in this area. SDCC notes that this is the access route for maintenance to the historic graveyard and is used by local traders for on-street display. SDCC request that a permanent CPO is not granted in this location. SDCC further note that this plaza area was improved during recent public realm improvement scheme and note that the Proposed Scheme will impact on the works carried out, including recently planted trees. SDCC notes that the Proposed Scheme does not include a compensatory landscape layout for the area and SDCC request that ABP apply a condition for the NTA to agree a landscape proposal for this area including replacement trees, incorporation of natural SuDS and other landscape interventions.
- **Dodder Greenway tie-in at Pearse Bridge** – SDCC state that the extent of proposed permanent CPO at this location is excessive. They further note that there are no proposals that would require the NTA to be in control of this land and recommend that the CPO is not granted.

Response

The NTA notes these comments from SDCC. Acquisition of both private and public lands has been minimised during the development of the Proposed Scheme as far as practicable, however is required in some locations to deliver the Proposed Scheme. The NTA has consulted with SDCC in relation to the extent of public lands required to deliver the Proposed Scheme. Specific responses to the locations referenced by SDCC are included below.

Junction of Grange Road with Nutgrove Avenue

The proposed layout at this junction has been co-ordinated with the recently completed Grange Road Walking and Cycling Scheme to ensure that the schemes tie-in. This includes the recently upgraded car park layout, which will be modified slightly to facilitate the Proposed Scheme. Figure 2.6.45, which is an extract from the Landscape General Arrangement drawings, shows that it is proposed to install planted SuDS features within green spaces at this junction.

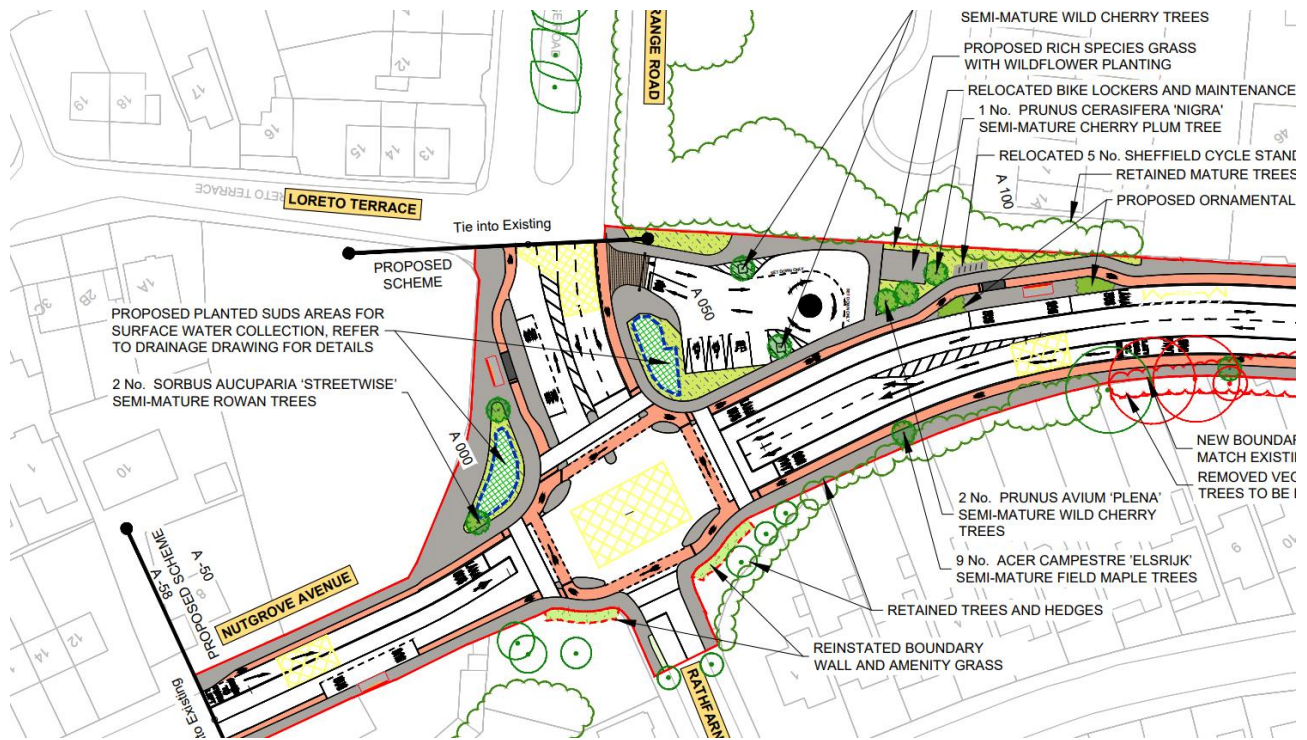


Figure 2.6.45 Extract from Landscape General Arrangement Drawings at Grange Road / Rathfarnham Road junction Rathfarnham Castle Park

The NTA notes the comments by SDCC regarding the loss of parkland and amenity space within Rathfarnham Castle Park. This impact has been documented and assessed in Chapter 17 of the EIAR. Section 17.4.3.2.5 notes the following in relation to the Construction Stage impacts of the Proposed Scheme in this location:

“A number of amenities are located along the Proposed Scheme. These include the Spawell golf grounds and outer sections of the River Dodder corridor, as well as major formal amenities of Bushy Park, Rathfarnham Castle, and the River Dodder corridor, the latter being an area of outstanding character and amenity.

The Construction Phase will result in changes to Rathfarnham Castle Demesne, as described in Section 17.4.3.2.4. Most notably the works will result in the removal of mature trees and the loss of a section of woodland amenity space to enable road widening. There will be temporary removal of the boundary walls separating the space from the adjacent roads and this will impact on the amenity of the open space through an increase in traffic noise and visibility, until the boundary is reinstated at a setback location. In addition, the presence of construction activity within the space will also be detrimental. The sensitivity is high, and the magnitude of change is high.

The potential townscape / streetscape and visual impact of the Construction Phase on open space at Rathfarnham Castle Demesne is assessed to be Negative, Significant and Temporary / Short-Term.”

Section 17.4.4.2.5 notes the following in relation to the Operational Stage impacts of the Proposed Scheme in this location:

“There will be a change at Rathfarnham Castle Demesne, most notably there will be continuing adverse effects from loss of land and from trees removed during the Construction Phase. However, there will be provision of substantial tree planting to consolidate the woodland edge to the demesne and restore the recreational amenity, which will reduce the negative effects over the long-term. Overall the effect will be initially negative in the short-term becoming neutral over the long-term. The sensitivity is high and the magnitude of change is high.

The potential townscape / streetscape and visual impact of the Operational Phase on open space at Rathfarnham Castle Demesne assessed to be Negative, Significant and Short-Term becoming Neutral, Moderate / Significant and Long-Term.”

In relation to the proposed CPO at the existing exit of Rathfarnham Castle Car Park, it is proposed to realign this access to provide a safer environment for pedestrians and cyclists. Currently, the exit joins Rathfarnham Road at an acute angle, making it difficult for drivers exiting the car park to see oncoming cyclists, and encouraging higher vehicle speeds. It is proposed to provide a raised crossing for cyclists and pedestrians at this location, as well as to increase the angle between the side road and Rathfarnham Road, to provide a lower speed exit for vehicles and improve vulnerable road user safety at this exit.

Junction of Rathfarnham Main Street and Rathfarnham Road

The NTA notes this comment by SDCC. In preparing the schedule to the CPO a comprehensive property referencing exercise has been undertaken by the NTA. At the time of making the CPO on 18 April 2023 South Dublin County Council have been identified as the owners of plot no. 1003(1).1e. Trevor Baker and MOTO4U were included in the occupiers column in relation to plot no. 1003(1).1e as they were utilising the area for the purposes of displaying stock for sale from unit 1A Rathfarnham Main St. They were not included in the owners/reputed owners column or the lessees/reputed lessees column.

Further, the purpose of including persons/entities in the CPO schedule is to ensure that all potentially relevant persons are notified. However, ultimately, in the event that the CPO is confirmed by the Board, and the NTA exercise its powers of acquisition pursuant to such a confirmed CPO, Notices to Treat will be served on all those included in the confirmed CPO and it will then be for persons to make a claim for compensation and establish that they have a compensable interest in the land in question.

As outlined on sheet 3 of 37 of EIAR Chapter 4 Landscaping General Arrangement in Figure 2.6.46 below it is proposed to *retain existing public plaza, including stone paving, planters, stainless steel bollards*. In addition, the existing dropped kerb arrangement will be reinstated in the same location, including the removable bollard. In summary, vehicular access arrangement into the plaza will be reinstated as per the existing condition as part of the Proposed Scheme

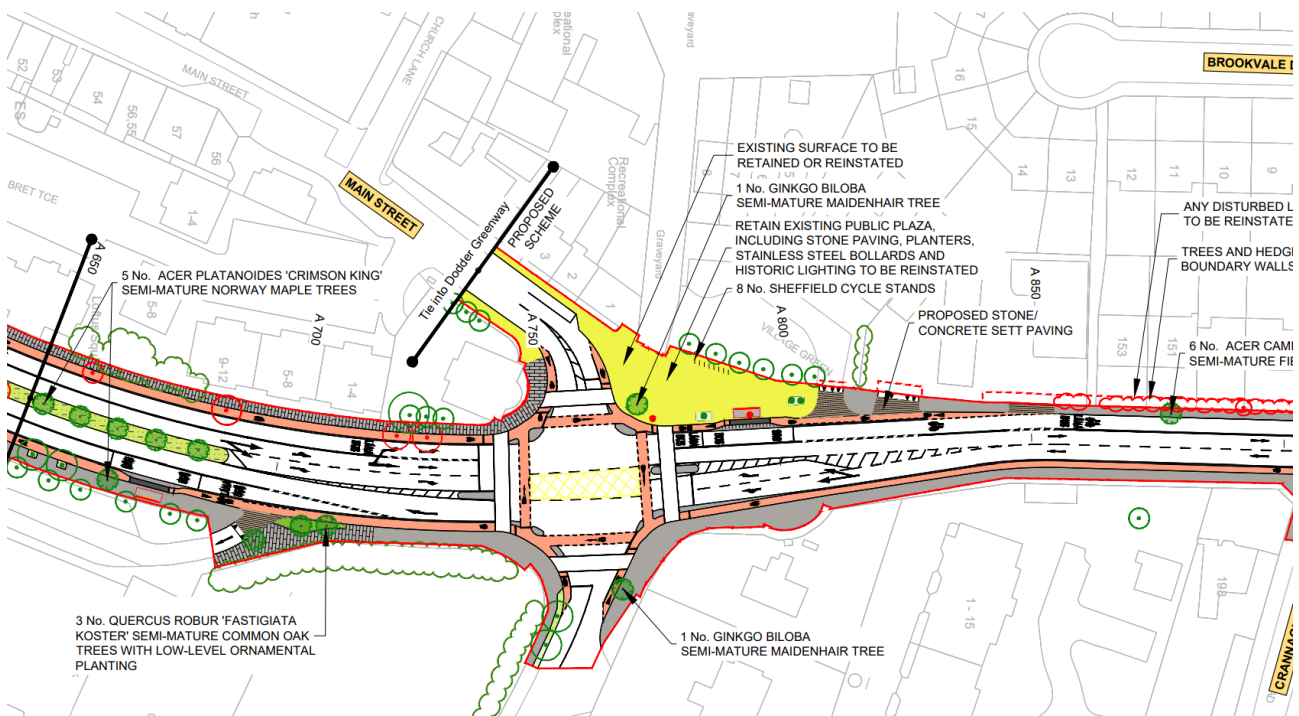


Figure 2.6.46 Extract from Landscape General Arrangement Drawings at Main Street Rathfarnham / Rathfarnham Road junction

Two existing semi trees are proposed to be removed in order to provide a protected junction for cyclists, and to relocate the existing bus stop to this location. The Arboricultural Impact Assessment notes the following in relation to these trees, which are referenced as Tag # 5925 x3:

“Represents 3 young Birch displaying over all fair condition. These trees are showing signs of decline. The middle tree is to be maintained.”

It is proposed to install a new Ginkgo Bilboa Semi-Mature Maidenhair tree in this location to mitigate the loss of the existing young trees.

Dodder Greenway tie-in at Pearse Bridge

The NTA notes SDCCs comments in relation to this location. It is proposed to slightly realign Dodder View Road in this location such that the proposed footpath would drain to a new filter drain within this open green space, which would eventually outfall to the existing drainage network within Dodder View Road, as indicated in Figure 2.6.47. It is further noted that 15 new trees are proposed in this location.

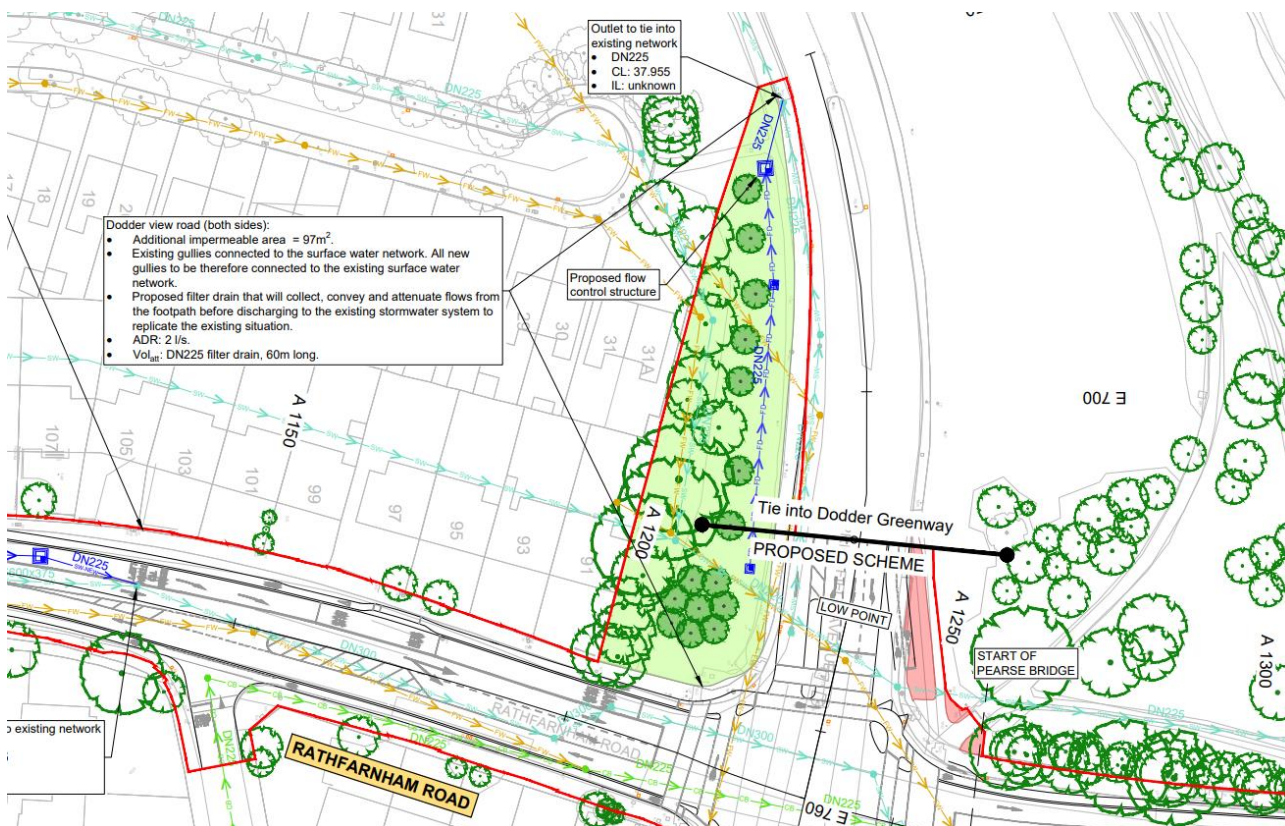


Figure 2.6.47 Extract from Surface Water Drainage Drawings at Dodder View Road / Rathfarnham Road junction

e) Proposed Boundary Treatment at Rathfarnham Castle Park

SDCC notes that the existing boundary along Rathfarnham Castle Park is not original. They further state that if a new boundary is approved it will not be constructed at the location of the original wall and as such the context is utterly changed. The Public Realm department notes that they are of the opinion that a stone wall, reflecting the type of stone used in the vicinity (e.g. within Rathfarnham Castle courtyard buildings) would better reflect the current context of the castle and the grounds, as well as help mitigate for loss of landscape an visual amenity at this location.

Response

The NTA notes this comment. As outlined from page 32 of SDCCs submission, extensive consultation has been carried out with SDCC in relation to the material of the replacement wall in this location. Following this extensive consultation, a roughcast render wall was considered the most appropriate solution, which was agreed with the SDCC Architects department. In addition, as stated in Section 16.5.1.5 in Chapter 16 in Volume 2 of the EIAR consultation has taken place with the OPW, Dept. of Housing, Local Government and Heritage regarding the encroachment into the Rathfarnham Castle Demense and the removal, set back and replacement of the existing boundary wall.

f) Biodiversity and Ecology

SDCC notes that given the concerns raised with regard to the assessment of impacts on existing trees within Rathfarnham Castle Park, that the impact on Ecology be reviewed for extent and accuracy. SDCC Public Realm department note that they believe that it is highly unlikely that only two potential bat roosts exist within Rathfarnham Castle Park. They also note that given the Proposed Scheme proposes to relocate the boundary wall, raises questions about the adequacy of a bat transect remaining outside of the park boundary. It is further noted that the removal of the woodland edge will allow light into the woodland proper and the impact on the species within should have been surveyed and considered in that context.

SDCC further note that Pearse Bridge is a suspected location of a bat roost, and that the NTA should re-assess this location.

Response

The NTA notes these comments. Section 12.2.3.6.1 of Chapter 12 in Volume 2 of the EIAR notes the transect surveys which have been carried out:

“Walked bat activity transect surveys were conducted along preselected transect routes at seven locations along the Proposed Scheme. Transect routes were located at La Touch Bridge, Portobello, referred to as CBC1012BT001, Pearse Bridge Rathfarnham referred to as CBC1012BT002, along the River Dodder within Bushy Park referred to as CBC1012BT003, adjacent to Rathfarnham Castle, referred to as CBC1012BT004, Owendore Crescent referred to as CBC1012BT005, adjacent to Terenure College, referred to as CBC1012BT006 and adjacent to Dodder Valley Park, referred to as CBC1012BT007. The walked transect routes are shown on Figure 12.1.1 in Volume 3 of this EIAR.

Walked transect surveys comprised of four visits to each transect route across the three seasons of autumn, spring and summer as guided by Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016) (see Table 12.2. for specific dates). Surveys were conducted in June to August 2018, September and October 2019, May 2020, and July 2020. Surveys commenced approximately 30 minutes after sunset to ensure that bats had emerged from their roosts. Surveys involved the surveyor walking each transect route at a slow pace using with a handheld ultrasound bat detector (Elekon Batlogger M) to record any bat species present.

Transect routes CBC1012BT001, CBC1012BT002 [Pearse Bridge Rathfarnham], CBC1012BT003, CBC1012BT004 [adjacent to Rathfarnham Castle] and CBC1012BT006 were surveyed across all seasons. Transect routes.....”

The surveys for bat activity focused on accessible areas where likely bat potential could occur. An activity transect was conducted along the Rathfarnham Road which captures the edge of Rathfarnham Castle Park. As is noted in Section 12.3.8.1 in Chapter 12 of the EIAR, no bat roosts were confirmed during surveys for the Proposed Scheme. Section 12.3.8.1.8 sets out the trees identified as having the potential to support roosting bats. Two number trees were identified (referenced as CBC1012PRF006/008 in Table 12.8 in Chapter 12, Volume 12 and Figure 12.7.2 in Volume 3 of the EIAR), based on standard guidance and typical features identified (Andrews 2018 – listed in Section 12.7 of Chapter 12)⁶ as having the potential to support roosts.

However, Chapter 12 (Section 12.5.1.4.1) sets out appropriate mitigation to address if:

- a) a roost is present and or used in advance of the construction phase;
- b) There is adjacent bat activity identified.

Section 12.2.3.6.2 describes the inspections undertaken at bridges to assess their potential to support roosting bats. In relation to Pearse Bridge the following is stated:

⁶ Andrews, H. (2018). Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-Care and Ecology Professionals. Bat Tree Habitat Key.

“One bridge with visible crevices was identified: namely Pearse Bridge Rathfarnham. The bridge was graded to inform the decision on whether or not follow up dusk / dawn surveys were required. The standard approach to bridge assessments uses four simple grades to describe the presence, or likely presence of bats. It follows Billington and Norman (1997) and involves a grading system where the bridges examined are categorized as follows:

- *Grade 0 = no potential for bats: These are bridges where there are no opportunities for bats to roost in crevices or under mats of dense ivy. Modern concrete bridges and masonry bridges which have been well-pointed often fall under this category.*
- *Grade 1 = crevices possibly of use to bats: These are bridges which have small and a limited number of crevices which may be sub-optimal, perhaps due to dampness or localised disturbance. The possibility that bats could use these crevices cannot be entirely ruled out but is regarded to be low.*
- *Grade 2 = ideal crevices but no bat present: These are generally more substantial crevices, often more than 150mm deep, dry and sheltered which offer good roosting opportunities. No evidence of bats is confirmed. The possibility that bats could use these crevices is regarded to be likely.*
- *Grade 3 = evidence of bats: Bats are seen in-situ or their droppings or other field signs are seen.*

Following on from the visual assessment, which identified a large deep suitable crevice under the barrel of the bridge which could not be examined fully due to height, it was deemed necessary to undertake follow up dawn surveys at Pearse Bridge to establish if the bridge is being used as a roost.

Bat re-entry surveys were conducted at Pearse Bridge Rathfarnham, referred to as CBC1012RI001 between 2018 and 2020. The dawn re-entry surveys were conducted on the 27th July 2018, 16th October 2019, 22nd May 2020 and 24th July 2020 and commenced approximately 1.5 to 2 hours before sunrise to approximately 15 minutes after sunrise (in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016).....”.

Section 12.4.3.4 acknowledges the evidence of bats at Pearse Bridge:

“ There is evidence of bats foraging and commuting within the study area of the Proposed Scheme, particularly along the River Dodder at Pearse Bridge in Rathfarnham (CBC1012BT002) and adjacent Bushy Park (CBC1012BT003). All parts of the Proposed Scheme which contain suitable habitat are likely to be within the CSZ of at least one bat roost. Considering the type of works proposed (e.g., upgrading of existing infrastructure for the most part), there is limited potential for the Proposed Scheme to act as a barrier to flight paths for bat species, as there will be no major changes to pre-existing habitats along most of the route.”

“The trees identified as having potential to support roosting bats, i.e., trees containing PRFs, are listed in Table 12.8 and shown on Figure 12.7.2 in Volume 3 of this EIAR. Each tree, or grouping of homogenous trees, was identified with regard to their potential to support roosting bats after Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016). Trees with negligible suitability for roosting bats are not described or mapped as they are assessed as not having potential to support roosting bats. Four of the trees containing PRFs will be removed as part of the Proposed Scheme, as indicated on the Landscaping General Arrangement (BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001 to 0037) for the Proposed Scheme.”

g) Feasibility of Proposed Street Tree Planting

SDCC notes that the Proposed Scheme includes the removal of a large number of trees within the SDCC area, and that this is not matched by proposed replacement trees within the SDCC area. The submission further queries the feasibility of the proposed street tree planting, and notes that where tree pits are proposed, that the NTA should demonstrate that the required CBR is achieved.

The submission refers to a number of specific locations as outlined below:

- **A850 – A1000:** The submission notes that trees proposed on the western side of the road seem to be proposed for the middle of the footpath, and request details of their feasibility.
- **Typical Section C-C:** The submission notes that this cross section illustrates the area referenced above but does not show trees.

- **The position of trees in conjunction with street lighting:** SDCC notes that existing street lights are retained along this section of the street, and it is unclear whether they are proposed to be replaced, SDCC notes that the position of the street lighting needs to be coordinated with the proposed tree planting. SDCC notes that this is applicable to the full scheme.

Response

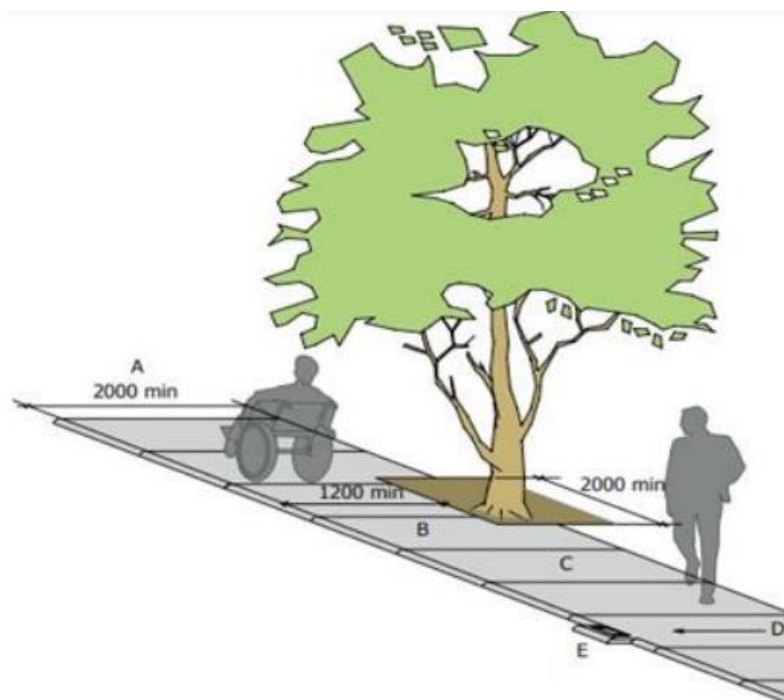
The NTA notes the comments. Table 14.1 in Section 14.7.5 notes that throughout the extent of the Proposed Scheme a total of 169 existing trees are proposed to be removed with a total of 400 new trees proposed to be planted. This equates to a net increase of 231 trees. Within the SDCC area a total of 114 trees are proposed to be removed with 326 new trees proposed to be planted. This equates to a net increase of 212 trees.

In relation to the feasibility of tree planting, new street trees have only been proposed where there is sufficient footpath width to accommodate them. A review of available existing underground utilities has also been undertaken to ensure sufficient space to accommodate the tree rootball. In relation to the CBR requirements, detailed ground investigations will be undertaken prior to construction.

Responses to specific queries are outlined below:

- **A850 – A1000:** It is not the design intent to position trees in the middle of proposed footpaths. As outlined in Section 4.3.1 of the Preliminary Design Report, a minimum clear width of 1.2m shall be maintained over short distances, such as at proposed trees. The following is noted:

“At specific pinch points, Building for Everyone: A Universal Design Approach, defines acceptable minimum footpath widths as being 1.2m wide over a 2m length of path (Figure 4.2). This minimum of 1.2m allows one wheelchair to pass. Refer to Table 4.2 for footpath widths recommended by DMURS.”



Key

- A. 2000mm minimum to allow two wheelchairs to pass each other
- B. Width reduced to 1200mm minimum for not more than 2m in length around existing obstructions
- C. Gradient should either be level along its length or should be gently sloping or incorporate ramp or ramps in accordance with building standards
- D. Crossfall gradient not more than 1:50
- E. Drainage gratings offset from access route where possible

Figure 4.2: Recommended absolute minimum footpath widths allowable over a short section

- **Typical Section C-C:** This cross-section is indicative and shows the proposed widths along this section of the road.
- **The position of trees in conjunction with street lighting:** The proposed positioning of new public lighting columns and new street trees has been coordinated. Existing and proposed lighting columns and existing and proposed tree locations are shown on the Street Lighting Drawings BCIDC-ARP-LHT_RL-1012_XX_00-DR-EO-0001 to BCIDC-ARP-LHT_RL-1012_XX_00-DR-EO-0037. Figure 2.6.48 is an extract from the Street Lighting drawings in the location referenced.

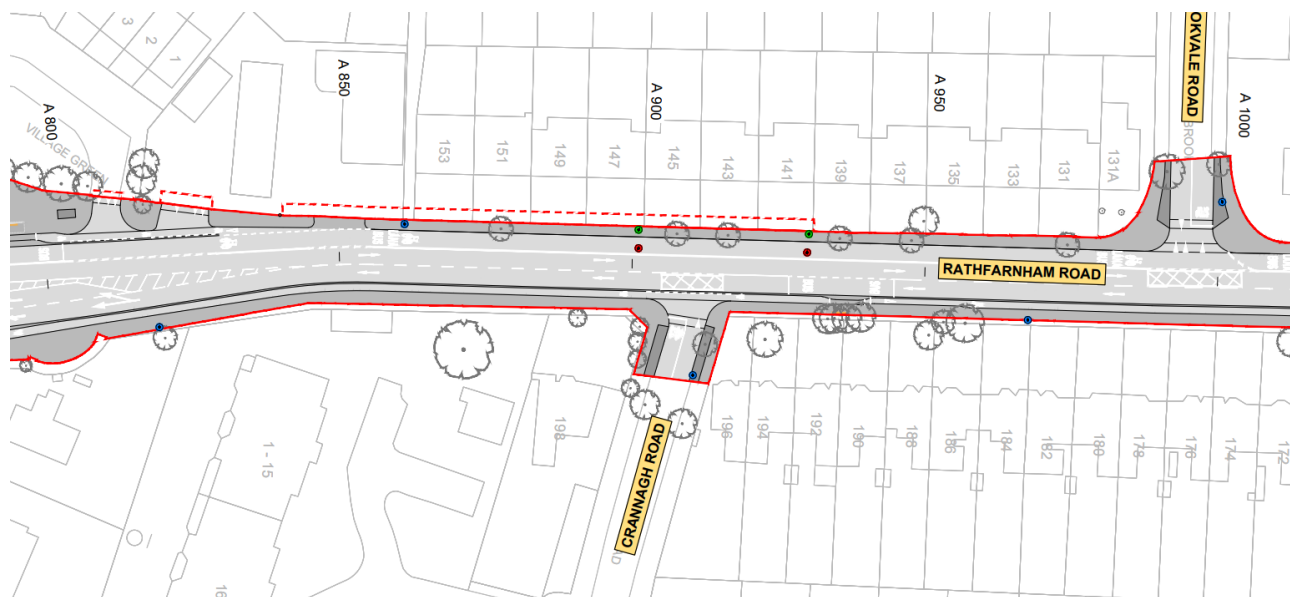


Figure 2.6.48 Extract from Street Lighting Drawings at Rathfarnham Road

h) Related Policies and Strategies

The submission notes a number of policies and strategies from the South Dublin County Development Plan 2022-2028 relating to public realm which is of relevance.

Response

The NTA notes the relevant policy referenced by SDCC. The South Dublin County Development Plan is a key policy document which has informed the development of the Proposed Scheme. Section 2.3.5.3 of Chapter 2 in Volume 2 of the EIAR outlines how the SDCC Development Plan is supportive of BusConnects. The SDCCDP 2022-2028 supports an integrated transport network that offers enhanced access and mobility throughout the county. The extensive number of policies and objectives relevant to the Proposed Scheme outlined within the SDCCDP 2022-2028 and the Proposed Schemes compliance against these policies and objectives have been set out in Table 1.3 in Appendix 1 Local Policy (which is contained in Appendix A2.1 in Volume 4 of the EIAR).

2.6.6.7 Water Services Section

Observations raised / clarifications sought

The Water Services Section have made the following comments on page 30-31 of the submission.

1. All structures should have setback distance to the outside diameter of surface water sewers as provided as per an attached table.
2. The setback distance for foul and watermain should be as per Irish Water Standards.
3. The Proposed Scheme is located in proximity to a riparian corridor near Cypress Grove Road and Templeogue Road. The submission notes that it is strongly recommended to review the relevant sections of the County Development Plan for relevant policy, objectives and criteria.

Response

The NTA notes the above comments.

As noted in Section 10.2 of the Preliminary Design Report provided as part of the Supplementary Information, preliminary consultations have been undertaken with utility asset owners, including Irish Water, so that conflict can be resolved by relocating or diverting services where necessary and protecting in-situ where appropriate. Section 10.2 notes that *“The services conflicts and the associated diversions will need to be considered in the design and construction of the Proposed Scheme. The design considerations have been taken into account as much as practicable at this stage, but it is likely that design modifications will be required at detailed design stage when further site investigations have taken place.”*

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works.

The riparian corridor referred to in the submission relates to the River Dodder. The NTA is satisfied that the relevant policies, objectives and criteria referenced in the SDCC Development Plan 2022 – 2028 have been considered in the development and assessment of the Proposed Scheme.

2.6.6.8 Architectural Conservation Section

Observations raised / clarifications sought

a) Support for the scheme

The submission states on page 38: *“The EIAR completed for the BusConnects Scheme Route (Templeogue/Rathfarnham to City Centre) includes a very detailed and comprehensive overview of Protected Structures and Architectural Conservation Areas and Architectural features/ items located within the vicinity of the proposed route. A methodology has been developed and is included in the Appendices of the EIAR.”*

Response

The NTA notes the view expressed by the submission.

b) Protection of architectural features

The submission notes that the Architectural Conservation department has been involved in lengthy conversations regarding two specific elements of the Proposed Scheme, namely:

- 1) The Gothic Arch on Templeogue Road (RPS Ref 244); and
- 2) Rathfarnham Castle (RPS Ref 221).

SDCC notes that the Gothic Arch will be opened up to the general public and will substantially contribute to the character of the area through the integration of this historic landmark into the urban realm. SDCC notes that the proposed paving is sympathetic to the aesthetic of the Arch, and that areas of seating and ornamental planting will be provided to enhance the sense of place and provide for passive recreation. On page 32 of their submission SDCC notes:

“The proposed works to include the conservation and repair of the Gothic Arch are welcomed along with the overall public realm design works ensuring the Arch is integrated into the design allowing it to be fully appreciated within the current landscape.”

The submission notes that a Schedule of Works and Method Statement for the proposed repair works to the Gothic Arch should be submitted for formal agreement and approval with SDCC Architectural Conservation Officer prior to the commencement of works. SDCC further note that works should be carried out by a suitably qualified conservation contractor with experience in the conservation and repair of historic structures.

The submission notes that the existing boundary wall of Rathfarnham Castle will be set back and reconstructed with a round capping roughcast render. The submission notes that the realigned boundary will facilitate planting street trees in the new footpath to soften and enhance the appearance of the existing

roadway and to provide a sense of separation between the pedestrian space and the roadway. SDCC notes that the roughcast render wall was presented as the preferred option as it was felt that it would be more in keeping with the construction of the castle. They further note that the impacted woodlands will be replanted with native species and that the existing playground will be integrated with the new planting and setback wall alignment. The submission notes that the affected boundary walls are replacement boundaries built as part of previous road schemes, and consist of concrete block walling. SDCC notes that the boundary treatment to Grange Road consists of coursed granite rubble, with railings and brick dressings near the pedestrian entrance to the park, which itself is of dressed stone blocks with a segmental arched lintel. It is noted that a number of trees will be removed and that there will be a negative visual impact during construction.

The submission notes that during 2022 SDCC Architectural Conservation Officer was presented with a number of options with regard to the proposed boundary treatment at Rathfarnham Castle. The submission highlights that a number of assessments and consultations were carried out at that time, and that the design of the Proposed Scheme in this location is based on these assessments and consultations, including with SDCC, the OPW, Dept. of Housing, Local Government and Heritage. The submission notes that SDCC Architectural Conservation department considers the proposal acceptable and that the new boundary wall will improve views from the Castle and allow the boundary of the Castle Demesne to be more consistent and improve the overall visual impact and architectural detail.

The submission further notes that indirect physical Construction Phase impacts are anticipated in a three locations where protected structures of National Importance and High Sensitivity share a boundary with the Proposed Scheme. SDCC states that a safety statement should be completed, detailing how shared boundary features which form part of a Protected Structure site will be safeguarded during construction. SDCC state that this safety statement should be submitted for the agreement and approval of the Council Architectural Conservation Officer.

The submission notes that a summary of Construction Phase impacts and associated mitigation measures are provided in the submission. It states that the details have been assessed and are considered appropriate in the overall approach, and that when works are due to commence, that the BusConnects project team should contact the Local Authority Conservation Officer to discuss specifications for works/repairs where required.

In conclusion the submission notes that the EIAR completed is very detailed and comprehensive in relation to Protected Structures and Architectural Conservation Areas and Architectural features/items located in the vicinity of the proposed route.

The submission notes a number of recommended conditions for An Bord Pleanála's consideration, which relate to the aforementioned points.

Response

The NTA acknowledges the significant level of consultation which SDCC Architectural Conservation department have facilitated in relation to the development of the Proposed Scheme.

In relation to the Gothic Arch in Templeogue, the NTA welcomes SDCC's support for this important element of the Proposed Scheme. In relation to Rathfarnham Castle, the NTA again welcomes SDCC's comments in this regard. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA notes the request that a Schedule of Works and Method Statement for the proposed repair works to the Gothic Arch should be submitted for formal agreement and approval with SDCC Architectural Conservation Officer prior to the commencement of works. Section 16.5.1.1. in Chapter 16 of Volume 2 of the EIAR sets out the mitigation which will be implemented:

"...Removal of vegetation, supervised by an accredited structural engineer specialising in historic structures has already taken place and a structural appraisal prepared by CORA engineers is appended in Volume 4 of this EIAR (Appendix A16.4). Their recommendations for consolidation and repair of the arch are contained in Section 3.1 of the CORA report and will be implemented by the appointed contractor. In addition, mitigation will include protection and monitoring prior to, and for the duration of the Construction Phase to prevent damage to the arch.

Protective measures and monitoring are to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR...."

With regard to protected structures, Section 16.5.1.1. in Chapter 16 of Volume 2 of the EIAR also sets out the mitigation which will be implemented:

“...The proposed mitigation is the recording, protection and monitoring of the Protected Structures prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR...”

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

2.6.6.9 Conclusion

General Issues

In conclusion, SDCC's submission reiterates support for the scheme and reiterates 5 general issues that have been raised by the various sections within SDCC:

- 1) Avoiding an over-engineered approach
- 2) Adequate provision for walking and cycling
- 3) Ensuring adequate greening
- 4) Tying in with other proposed infrastructure
- 5) Consideration of operation of construction compounds on SDCC lands by agreement rather than by temporary CPO

Response

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Specific Proposals

The submission repeats 12 specific concerns that have been raised by the various sections within SDCC:

1. Construction Compound TR3
2. Detailed Construction Management Plans
3. Public Land required to deliver the Proposed Scheme
4. Schedule of Works and Method Statement for proposed works to Gothic Arch on Templeogue Road
5. Liaison with SDCC Architectural Officer in advance of Construction Works
6. Safety & Method Statements in relation to RPS boundaries
7. Provision of additional green infrastructure
8. Tree loss at Rathfarnham Castle
9. More natural based SuDS along the full length of the route
10. Setback to outside diameter of surface water sewers, foul sewers and watermains
11. Review of relevant content within SDCC Development Plan relating to riparian corridors

12. Ensuring environmental and ecological surveys are completed

Response

Detailed responses to each of the above concerns have been provided in the relevant sections above.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

2.6.7 281 Transport Infrastructure Ireland

2.6.7.1 Overview of submission

This submission notes that Transport Infrastructure Ireland has no specific submissions to make in relation to the Proposed Scheme.

2.6.7.2 Response to submission

This submission is noted.

3 Responses to Individual Submissions on the Proposed Scheme

3.1 001 – Adrian Young and Nicole Byrne

3.1.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Location of construction compound TR3 along Dodder View Road
2. Construction hours
3. Hazardous materials on compound
4. Air, noise and light pollution
5. Construction traffic
 - a. Access/egress to site compound
6. Impacts to Dodder Greenway
7. Site designation as a recreational area
8. Drainage
9. Lack of flood risk assessment
10. Undefined end date to temporary CPO
11. Decreased parking availability
12. Unnecessary change providing no real gains to bus travel times.

3.1.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report.

3.2 002 – Aidan Brennan

3.2.1 Submission – Rathmines

The submission raised the following issues:

- Access to amenities

3.2.2 Response to submission

A detailed response to the issue raised by this submission has been provided in Section 2.5.3 of this report.

3.3 003 – Aislinn Collins

3.3.1 Submission – Rathfarnham Road

The submission raised the following issues:

- Compound site zoned as "OS" Open Space
- Potential increased flood risk
- Architectural and cultural heritage
- Air and noise pollution

3.3.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.4 004 – Alan Murphy

3.4.1 Submission – Rathfarnham Castle Park

The submission raised the following issues:

- Alternative options
 - Extents of project
- Road widening
- Land acquisition
- Loss of green space
 - Amenity
- Biodiversity
 - Flora and fauna.

- Destruction of trees

3.4.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.5 005 – Allison Dwyer

3.5.1 Submission – Whole scheme

The submission raised the following issues:

1. CPO Brought under Inappropriate Provisions
2. The Proposed Scheme and CPO cannot be considered/approved at the same time
3. Impact on character of the city
4. Cumulative Impacts of all BusConnects Schemes
5. Appropriate Assessment
6. Strategic basis for proposals
7. Request for Oral Hearing
8. Cost Benefit Required

3.5.2 Response to submission

A detailed response to this items 4, 7 and 8 are provided in Section 2.1.1. Responses to other items are provided below.

1. CPO Brought under Inappropriate Provisions

The submission/objection lodged by Reddy Charlton LLP Solicitors, on behalf of Allison Dwyer suggests that the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme should have been characterised as a “busway” and that accordingly the Scheme has been brought under the incorrect and inappropriate statutory provisions.

As the Board is aware, the NTA has applied under section 51(2) of the 1993 Act for approval in relation to a proposed road development consisting of the construction of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (the “Proposed Scheme”).

Section 1.5.4 of Chapter 1 of the EIAR for the Proposed Scheme clearly sets out the legislative basis for the application under section 51 of 1993 Act, as follows:

“Section 50 of the Roads Act 1993 is concerned with the requirement for EIA of road development. Section 50(1)(a) states that: ‘A road development that is proposed that comprises any of the following shall be subject to an environmental impact assessment:

(i) the construction of a motorway;

(ii) the construction of a busway;

(iii) the construction of a service area;

(iv) any prescribed type of road development consisting of the construction of a proposed public road or the improvement of an existing public road’.

Under Article 8 of S.I. No. 119/1994 - Road Regulations 1994 (as amended) the prescribed type of road development for the purposes of section 50(1)(a)(iv) of the Roads Act are:

'(a) The construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area'; and

'(b) The construction of a new bridge or tunnel which would be 100 metres or more in length.' The Proposed Scheme meets the threshold as set out in Article 8 of the Road Regulations 1994, as amended, in that it includes the realignment and / or widening of an existing road so as to provide four or more lanes, where such realigned and / or widened road is more than 500 metres in length and is in an urban area.

The Proposed Scheme meets the threshold as set out in Article 8 of the Road Regulations 1994, as amended, in that it includes the realignment and / or widening of an existing road so as to provide four or more lanes, where such realigned and / or widened road is more than 500 metres in length and is in an urban area."

Further, the associated application for confirmation of the compulsory purchase order has been correctly made under section 76 of, and the Third Schedule to, the Housing Act 1966 (as amended), and Part XIV of the Planning and Development Act 2000 (as amended) (the "**2000 Act**"). As set out in Section 1.4 of Chapter 1 of the EIAR for the Proposed Scheme, the NTA made a decision under section 44(2)(b) of the Dublin Transport Authority Act 2008 (as amended) (the "**2008 Act**") on 18 October 2019 that it considered it to be more convenient, more expeditious, more effective or more economical that the functions in relation to the provision of public transport infrastructure be performed by it in relation to this Proposed Scheme among others.

Section 44(6) of the 2008 Act provides: -

"(6) Where –

(a) a decision is made by the Authority under subsection (2)(b) or (5)(a) for the performance of a particular function otherwise than through a public transport authority or statutory body, or

(b) the Authority is performing its functions of securing the provision of public transport infrastructure in accordance with subsection (2)(e),

the following provisions have effect –

(i) the Authority shall be empowered (notwithstanding any other enactment) to perform the function, including the acquisition of land for that purpose, and to do any other thing which arises out of or is consequential on or is necessary for the purposes of or would facilitate the performance of the function,

(ii) for the purpose of paragraph (a) or (b), land may be acquired by agreement or by means of a compulsory purchase order made by the Authority in accordance with Part XIV of the Act of 2000,

(iii) the provisions of any enactment concerned (other than section 178 of the Act of 2000) apply in relation to the performance of the function subject to such modifications as may be necessary and as if the Authority was named in such enactment in each place where a public transport authority or other statutory body entitled to exercise the function is named, and..."

Therefore, the NTA has the power to acquire lands by means of a compulsory purchase order in accordance with Part XIV of the 2000 Act and the procedures by which the NTA is required to make an application for confirmation of such a compulsory purchase order are set out under section 76 of and the Third Schedule to the Housing Act 1966 (as amended) and the NTA has applied in accordance with the appropriate procedures. Any suggestion to the contrary in the submission/objection lodged by Reddy Charleton is entirely misplaced.

While section 49 of the 1993 Act is mentioned in the submission/objection lodged by Reddy Charleton, it is of no relevance to the Proposed Scheme given that the Proposed Scheme is not a "*motorway scheme*", a "*service area scheme*", a "*busway scheme*", or a "*protected road scheme*" as defined in the 1993 Act. In particular, the submission/objection suggests that the Proposed Scheme "*can only be characterised as a busway for the purposes of the Roads Act 1993*". This is simply not the case.

The Proposed Scheme is not a "*busway*" within the meaning of section 44 of the 1993 Act, which defines "*busway*" as meaning "*a public road or proposed public road specified to be a busway in a busway scheme approved by the Minister under section 49*". Section 44 of the 1993 Act goes on to provide that save in a limited circumstance, "*a person shall not have or be entitled to direct access from any land adjoining a*

busway to the busway, or from the busway to such land nor shall a right to such direct access be granted at any time". Subsection (3) of section 44 contemplates the making of regulations by the Minister to prescribe the classes of vehicles which shall be permitted to use a busway and conditions in relation to the use of busways generally. Further, save in limited circumstances, pedestrians and pedal cyclists are prohibited from using a busway.

The above is clearly not what is contemplated by the Proposed Scheme, which involves the provision of bus priority (through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements) as well as improved pedestrian and cycling infrastructure. Having regard to the nature of the development the subject matter of the NTA's applications (broadly described above), it is clear that in no way can the Proposed Scheme be construed as a "busway" within the meaning of section 44 of the 1993 Act (which means a public road or proposed public road rather than specific bus lanes for example), and that therefore the provisions of section 44 of the 1993 Act (and accordingly section 49 of the 1993 Act) are just not relevant to the development concerned.

Therefore, any suggestion by Reddy Charleton in its submission/objection that the Board must reject the proposed development or that it is ultra vires for the Board to further consider the NTA's applications with respect to the Proposed Scheme, are simply misplaced.

Further and in light of the above, there is simply no basis for a preliminary hearing into the statutory basis for the NTA's application for confirmation of the compulsory purchase order (as appears to be suggested in the submission/objection) given that the legislative basis for the application for confirmation of the compulsory purchase order under section 76 of and the Third Schedule to the Housing Act 1966 (as amended) and Part XIV of the 2000 Act, is clear.

2. The Proposed Scheme and CPO cannot be considered/approved at the same time.

The submission/objection made by Reddy Charlton on behalf of Mrs Allison Dwyer indicates that the "Board must address whether in fact to approve the scheme and that exercise must be undertaken first" and "[i]t is only following a consideration of the scheme as approved that the impact upon our client's property for the purpose of Section 76 of the Housing Act 1966 an then be determined".

As the Board will be aware, section 51(7)(b) of the Roads Act provides as follows:

"(7) (b) Where an application for approval under this section [being section 51 of the Roads Act 1993 (as amended) which is what has occurred here in relation to the Proposed Scheme] relates to a proposed road development, and

- i. *a scheme submitted to the Minister [now An Bord Pleanála] for approval under section 49, or*
- ii. *an application submitted to the Minister [now An Bord Pleanála] for a bridge order under the Act of 1946, or*
- iii. *a compulsory purchase order submitted to the Minister [now An Bord Pleanála] for confirmation [which is what has occurred here with this CPO],*

*relate wholly or partly to the same proposed road development, the Minister [now An Bord Pleanála] shall make a decision on such approval and on the approval of such scheme or the making of such bridge order or the confirmation of such compulsory purchase order **at the same time.**" (emphasis added)*

As the NTA's application for approval of the Proposed Scheme under section 51 of the Roads Act and the CPO submitted to the Board for confirmation "relate wholly or partly to the same proposed road development", the Board is therefore statutorily required to make its decisions at the same time. Therefore, it is not open to the Board to accede to the request made on behalf of the objector to first make a decision in relation to the application for approval of the Proposed Scheme under section 51.

Further, there are very many practical reasons including in relation to the efficient use of the decision maker's resources as to why it is entirely appropriate to deal with the section 51 application and the related application for confirmation of the CPO together. Indeed, this is also in ease of those who may wish to make an objection and/or submission both in writing and/or at any oral hearing that may be held in relation to the section 51 application and the application for confirmation of the CPO.

3. Impact on character of the city

Section 1.5.1 in Chapter 1 in Volume 2 of the EIAR sets out the statutory requirements for the preparation of an EIA, while Section 1.5.2 sets out the relevant legislation, policy and guidelines with which the EIA has been prepared in accordance with. It is pursuant to the provisions of the amended Roads Act and Roads Regulations 1994 that the EIAR for the Proposed Scheme has been prepared. Article 5 of and Annex IV to

the EIA Directive and Section 50(2) of the Roads Act specify the information to be contained in an EIAR in relation to this Proposed Scheme. Tables 1.1 and 1.2 in Section 1.5.6 provides the relevant sections of legislation. The NTA consider that the EIAR has been prepared in accordance with the appropriate guidance and legislation and has assessed the likely significant effects (including the direct, indirect and cumulative effects) as a result of the construction and operation of the Proposed Scheme.

With regard to the potential architectural heritage impacts which may arise as a result of the construction and operation of the Proposed Scheme specifically, this assessment is carried out in Chapter 16 in Volume 2 of the EIAR. A detailed methodology for the assessment is set out in Section 16.2.6.

The NTA consider that the EIAR has been prepared in accordance with the appropriate guidance and legislation and has assessed the likely significant effects (including the direct, indirect and cumulative effects) as a result of the construction and operation of the Proposed Scheme including the potential for architectural heritage impacts.

The NTA also note the submission from the Conservation Section of Dublin City Council (refer to 'General Response' in Section 2.4.9 of the DCC submission). The Conservation Section in their submission finds that "... a very thorough study of the receiving environment has been carried out. The comprehensive assessment on architectural heritage, streetscape and the urban environment submitted as part of the EIAR and the proposed mitigation measures across the scheme is generally welcomed...". The Conservation Section goes on to say "*Once the mitigation measures have been applied, there will be no significant adverse residual impacts on the architectural heritage resource as a result of the Construction and Operation of the Proposed Scheme*".

5. Appropriate Assessment

Section 9 of the NIS presents the assessment carried out to examine whether any other plans or projects have the potential to act in combination with the Proposed Scheme to have a significant effect on any of the European sites including those within its zone of influence (Zol).

The in-combination assessment involved first identifying those plans and projects which have the potential to impact on those European sites within the Zol of the Proposed Scheme. Those plans or projects with the potential to impact upon these European sites are any national, regional and local land use plans or any existing or proposed projects that could potentially affect the ecological environment within the Zol of the Proposed Scheme, are presented in Table 35 of the NIS (the 11 other BusConnects schemes are listed). The potential cumulative impacts on those European sites within the Zol of the Proposed Scheme from the Proposed Scheme in combination with other projects listed in Table 35 were identified and assessed and this is presented in Table 37 of the NIS (which includes the BusConnects schemes). Table 35: Land Use Plans and Projects Considered for the In-Combination Assessment.

Section 9.3 of the NIS sets out the conclusion of In Combination Assessment. It states that:

".....As the Proposed Scheme will not affect the integrity of European sites within the Zol of the Proposed Scheme, and given the protection afforded to European sites under the overarching land use plans, it has been concluded that there will be no adverse effects on the integrity of any European sites to arise as a consequence of the Proposed Scheme acting in combination with any other plans or projects. Table 36 and Table 37 present the results of a pairwise assessment of the Proposed Scheme in-combination with all of those projects and plans. This assessment found that there will be no adverse effects on the integrity of any European sites as a consequence of the Proposed Scheme acting in-combination with each of these plans and projects. Furthermore, for the same reasons, there will be no adverse effects on the integrity of any European sites as a consequence of the Proposed Scheme acting in combination with any, some or indeed all taken together, of these plans or projects. Therefore, the Proposed Scheme will not adversely affect the integrity of any European sites, either alone or in combination with any other plans or projects. No additional mitigation measures are necessary or required following this update assessment."

6. Strategic basis for proposals

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme sets out the strategic basis for the proposed scheme. In terms of an integrated approach to transport in the city, Section 2.3.4.4 states:

The GDA Transport Strategy is an essential component for the orderly development of the GDA over the next 20 years. The purpose and primary objective of the GDA Transport Strategy is 'to contribute to the economic, social and cultural progress of the Greater Dublin Area by providing for the efficient, effective and sustainable movement of people and goods'.

The GDA Transport Strategy sets out the necessary transport provision, for the period up to 2035, to achieve the above objective for the region.

As part of the GDA Transport Strategy, the Core Bus Network is to be developed to achieve a continuous priority for bus movement on sections of the Core Bus Network within the Metropolitan Area. This is to be achieved through enhanced bus lane provision, the removal of delays along the routes and to enable the bus to provide a faster mode of transport than the private car along these routes.

The GDA Transport Strategy highlights Core Radial Bus Networks and under the heading 'Bus Infrastructure' sets out that:

'In order to ensure an efficient, reliable, and effective bus system, it is intended, as part of the Strategy, to develop the Core Bus Network to achieve, as far as practicable, continuous priority for bus movement on the portions of the Core Bus Network within the Metropolitan Area. This will mean enhanced bus lane provision on these corridors, removing current delays on the bus network in the relevant locations and enabling the bus to provide a faster alternative to car traffic along these routes, making bus transport a more attractive alternative for road users. It will also make the overall bus system more efficient, as faster bus journeys means that more people can be moved with the same level of vehicle and driver resources.'

Section 5.6 of the GDA Transport Strategy sets out cycle policy in the Region. The routes identified in the Transport Strategy are those established in the Greater Dublin Area Cycle Network Plan 2013 (GDACNP) (NTA 2013). The provisions of the Transport Strategy (including bus-based transport modes), were evaluated for potential significant effects, and measures integrated into the Strategy on foot of SEA recommendations in order to ensure that potential adverse effects were mitigated.

The need for the Proposed Scheme is supported by the GDA Transport Strategy in so far as it will provide infrastructure required to facilitate 'a continuous priority for bus movement on sections of the Core Bus network within the Metropolitan area.' The Proposed Scheme will realise the objectives of the GDA Transport Strategy by providing the enhanced bus lanes, removing 'bottlenecks' and making the bus a faster option to commuters than car-based transport.

3.6 006 – Andrew Baird

3.6.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Alternative options
 - a. Rail
3. Inadequate bus service proposed.
4. Small bus journey time improvements
5. Character of the area
6. Bus gates
 - a. Limit hours of operation of proposed bus gates
7. Traffic
 - a. Increased traffic on Highfield Road
8. Biodiversity
 - a. Destruction of trees
9. Air and noise pollution

3.6.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3, 2.5.3 of this report.

3.7 007 – Ann and Bryan Strahan

3.7.1 Submission – Whole scheme

The submission raised the following issues:

1. Character of the area
2. Architectural and cultural heritage
 - a. Walls, railings and gates
3. Alternative options
 - a. Cashless fare payment
 - b. Alternating-direction bus priority lanes
 - c. Previous Clongriffin to Tallaght Bus Rapid Transit scheme
4. Access to amenities
5. Lack of consultation
6. Lack of park and ride facilities
7. Narrow proposed footpaths
8. Bus gates
 - a. Limit hours of operation of proposed bus gates

3.7.2 Response to submission

Detailed responses to the issues raised by this submission have been provided Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.8 008 – Ann Moore

3.8.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed Turn bans
 - a. Fortfield Road to Lavarna Grove right turn
 - b. Request exemption for residents
2. Access to amenities
3. Traffic

3.8.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.9 009 – Ann O'Donnell

3.9.1 Submission – Whole Scheme

The submission raised the following issues:

1. Air pollution

3.9.2 Response to submission

A detailed response to the issue raised by this submission has been provided in Section 2.1.1 of this report.

3.10010 – Anna Shanley and Ryan Stempniewicz

3.10.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Bus stops
 - a. Relocation
 - b. Spacing between stops
2. Lack of consultation
3. Traffic
4. Architectural and cultural heritage
 - a. Buildings, walls, railings and gates
5. Air and noise pollution
6. Property values

3.10.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1 and 2.4.3 of this report.

3.11011 – Anna, John & Sarah Meehan

3.11.1 Submission – Whole scheme

The submission raised the following issues:

1. Biodiversity on Rathfarnham Castle
 - a. Flora and fauna
 - b. Destruction of trees
2. Hydrology on Rathfarnham Castle
3. Traffic
4. Air pollution
5. No assessment of cumulative impact of 12 corridors

6. Safety pedestrians and cyclists
7. Lack of consultation
8. Bus stops
 - a. Relocation
9. Pre-COVID traffic volumes used in analysis.
10. Access to amenities
11. Architectural and cultural heritage
 - a. Buildings
12. Biodiversity
 - a. Destruction of trees
13. Alternative options
 - a. Rail
14. Unnecessary change providing no real gains to bus travel times.

3.11.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.12012 – Anne Marie James

3.12.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Bus stops
 - a. Relocation
2. Air pollution
3. Alternative options
 - a. Rail

3.12.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1 and 2.4.3 of this report.

3.13013 – Anne McMonagle

3.13.1 Submission – Whole scheme

The submission raised the following issues:

1. Biodiversity
 - a. Destruction of trees
2. Pre-COVID traffic volumes used in analysis.

3. Character of the area
4. Alternative options
 - a. Scheme on a trial basis

3.13.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.14014 – Anne Neary & Conor Farren

3.14.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of the area
2. Unnecessary change providing no real gains to bus travel times.
3. Biodiversity
 - a. Destruction of trees
4. Road widening
5. Traffic
6. Pre-COVID traffic volumes used in analysis.
7. Loss of on-street parking
8. Lack of park and ride facilities
9. Bus stops
 - a. Relocation
10. Alternative options
 - a. Cashless fare payment
 - b. Harolds Cross Road

3.14.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1, 2.4.3 and 2.5.3 of this report.

3.15015 – Anne Neville

3.15.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees
2. Loss of green space at compound

- a. Amenity
- 3. Air, noise and light pollution

3.15.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.16016 – Anthony Gorman

3.16.1 Submission – Rathmines

The submission raised the following issues:

- 1. Access to amenities
- 2. Delivery access
- 3. Negative effect on businesses
 - a. Passing trade
 - b. Additional travel distance and access issues

3.16.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.17017 – Antonio Autorita

3.17.1 Submission – Rathmines

The submission raised the following issues:

- 1. Access to Church of Mary Immaculate, Refuge of Sinners
- 2. Bus gate hours of operation

3.17.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.18018 – Aoidhbhen Ó Curraoin

3.18.1 Submission – Whole scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Inadequate bus service proposed.
3. Alternative options
 - a. Existing bus priority signals
4. No assessment of cumulative impact of 12 corridors
5. Traffic
6. Increased traffic congestion and additional traffic on surrounding roads
7. Access to Church of Mary Immaculate, Refuge of Sinners on Rathmines Road

3.18.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.19019 – Aoife & Patrick Ryan

3.19.1 Submission – Terenure and Rathgar

The submission raised the following issues:

Narrow proposed footpaths

1. Support the proposal scheme.
2. Unnecessary change providing no real gains to bus travel times.
3. Cost estimates
4. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
5. Architectural and cultural heritage
6. Noise and air pollution
7. CPO on Terenure Road East and Rathfarnham Road
8. Road widening
9. Bus gate
 - a. St Mary's college on Rathmines
10. One-way operation of Rathgar Road
11. Turn bans.
12. Negative effect on businesses
 - a. Loss of street parking/ Loading bays
13. Proposed Footpath
 - a. width of footpath
14. Safety of vulnerable pedestrians and cyclist
15. Traffic

- a. Increased volume
 - b. Increased congestion
16. Changes to work patterns due to the COVID-19 pandemic
 17. Character of area
 18. NTA refuse to trial the Proposed Scheme.
 19. Alternative options
 - a. Metro
 - b. School buses
 - c. Congestion charges
 - d. Park and ride facilities
 - e. Cashless fare payment
 - f. Trial the Proposed Scheme
 20. No assessment of cumulative impact of 12 corridors

3.19.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.20020 – Arran Timms & Others

3.20.1 Submission – Rathmines

The submission raised the following issues:

1. Access to amenities
2. Traffic
3. Bus gates
 - a. Relocate bus gate.
 - b. Exempt local residents from bus gate restrictions.
 - c. Operate bus gate in northbound direction only.

3.20.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.21021 – Ava Thornton

3.21.1 Submission – Whole scheme

The submission raised the following issues:

1. Loss of green space

- a. Amenity
- 2. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees

3.21.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 of this report.

3.22022 – Ballyboden Tidy Towns CLG

3.22.1 Submission – Rathfarnham Castle Park

The submission raised the following issues:

1. Loss of green space
 - a. Amenity
2. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees
3. Alternative options
 - a. Extents of project
 - b. Bus priority signals
4. Necessity of road widening
5. Trees not picked up on the Arboricultural Impact Assessment
6. No consideration of Glin River
7. Consideration of alternative options
 - a. Terminate Proposed Scheme at Butterfield Avenue – the submission suggests stopping the scheme at the Butterfield Avenue junction to avoid impacting the Rathfarnham Castle Park
 - b. Acquire land from the houses on the southern side of Grange Road
 - c. Cyclists share bus lanes as proposed elsewhere on the scheme
8. Climate Impact of Tree Removal
9. Biodiversity Impact
10. Landscape and Visual
11. Noise, Vibration and Air Quality
12. Replacement of the Castle Wall
13. Impact on woodland playground
14. Request to improve Nutgrove Avenue cycle facilities
15. Bus Stops
16. Courtyard/stables redevelopment
17. Nutgrove Avenue/Grange Road Junction Signals

3.22.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report. It also raises a number of concerns raised in submission 40 – see section 3.40.2 for more details.

3.23023 – Barbara Atkinson

3.23.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees
2. Character of the area
3. Inadequate bus service proposed.
4. Traffic impact in Terenure
5. Safety of vulnerable pedestrians

3.23.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.24024 – Barbara Molloy

3.24.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Highfield Road
3. Safety of vulnerable pedestrians

3.24.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.25025 – Barbara Smith

3.25.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of the area
2. Access to amenities
3. Loss of on-street parking
4. Turn bans.
 - a. Olney Crescent / Olney Grove
 - b. Fergus Road
5. Unnecessary change providing no real gains to bus travel times.
6. Road widening
7. Air and noise pollution
8. Traffic impact in Terenure
9. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees

3.25.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.26026 – Barry & Bairbre Redmond and Leo & Marina Casey

3.26.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Turn bans.
 - a. Templeogue Road to Rathdown Park
 - b. Limit hours of operation
2. Access to amenities
3. Traffic Impact

3.26.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 and 2.4.3 of this report.

3.27027 – Barry & Patricia Devaney

3.27.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Inadequate bus service proposed.
2. Small bus journey time improvements
3. Character of the area

4. Bus gates
 - a. Increased traffic on Highfield Road
5. Biodiversity
 - a. Destruction of trees
6. Air and noise pollution

3.27.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.28028 – Beaufort Downs Residents' Association

3.28.1 Submission – Rathfarnham Castle Park

The submission raised the following issues:

1. Impact on Rathfarnham Castle
 - a. Destruction of trees
 - b. Adequacy of Environmental Surveys
2. Consideration of the Whitechurch Stream
3. Traffic impact on local residents
4. Alternative options
 - a. Extents of project
 - b. Bus priority signals
5. Reconstruction of recently completed Grange Road car park.

3.28.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

In relation to Issue 2, Appendix A13.2 contains the Site-Specific Flood Risk Assessment carried out for the Proposed Scheme. Section 5.1.1 of this report refers to flood risk associated with the Whitechurch Stream:

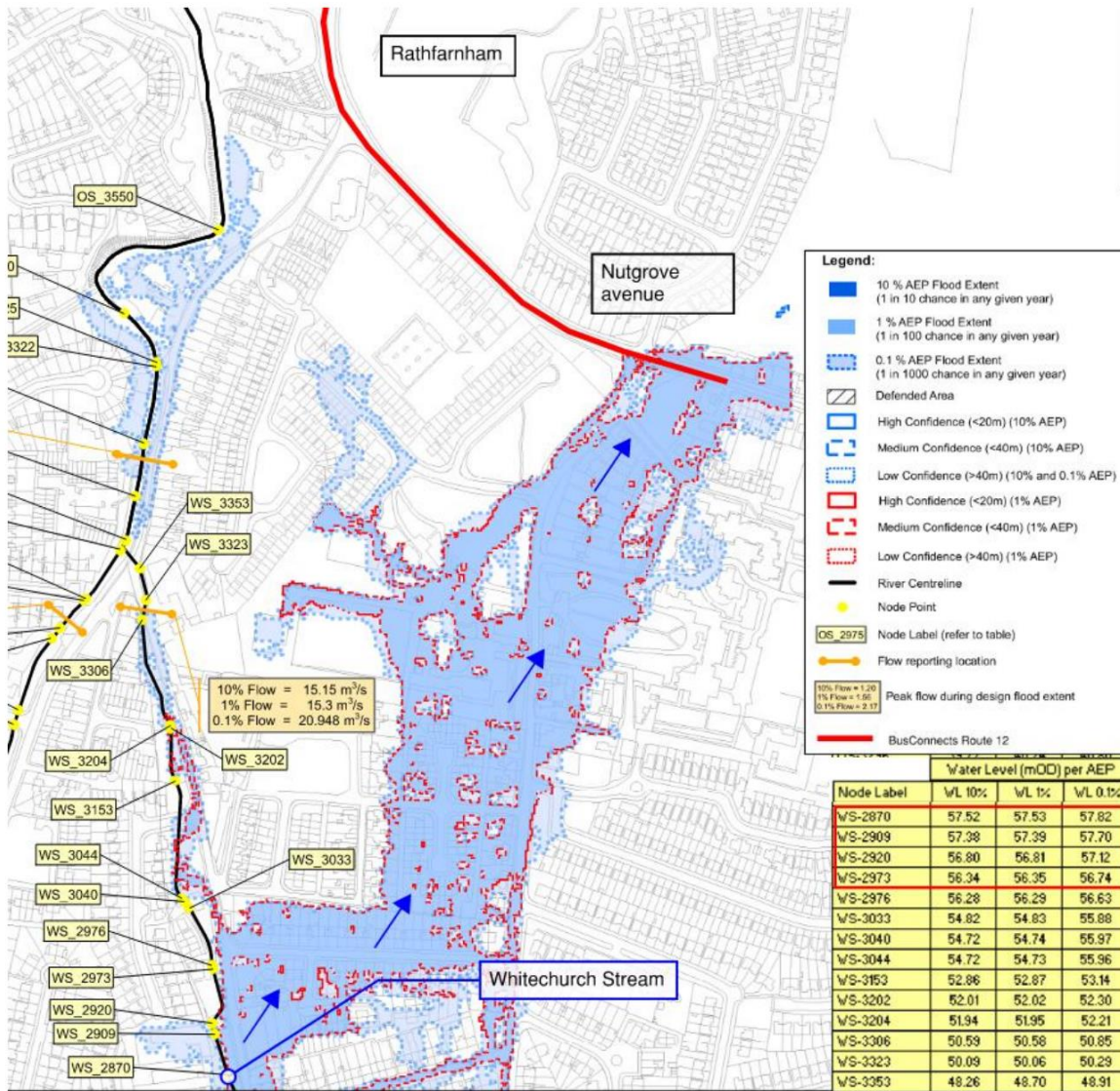


Figure 12: Flood extents at Nutgrove Avenue, Rathfarnham (Dodder CFRAM, 26/10/2010)

As shown in Figure 12, parts of Nutgrove Avenue are within the 1 in 100-year flood extents (Flood Zone A). Flooding of this area is a result of overtopping of the Whitechurch stream on Whitechurch road 750m southwest of the Avenue.

The flood water flows overland across the residential areas towards Nutgrove Avenue in a north-easterly direction, as shown by the blue arrows. A portion of the Proposed Scheme is shown in thick red line. Only a very small part of the works falls in an area at risk of flooding, where the project ties onto the existing levels.”

The Whitechurch Stream has been considered and assessed in the design and assessment of the Proposed Scheme.

In relation to Issue 5 the proposed layout at this junction has been co-ordinated with the recently completed Grange Road Walking and Cycling Scheme to ensure that the schemes tie-in. This includes the recently upgraded car park layout, which will be modified slightly to facilitate the Proposed Scheme. Figure 3.28.1, which is an extract from the Landscape General Arrangement drawings, shows that it is proposed to install planted SuDS features within green spaces at this junction.

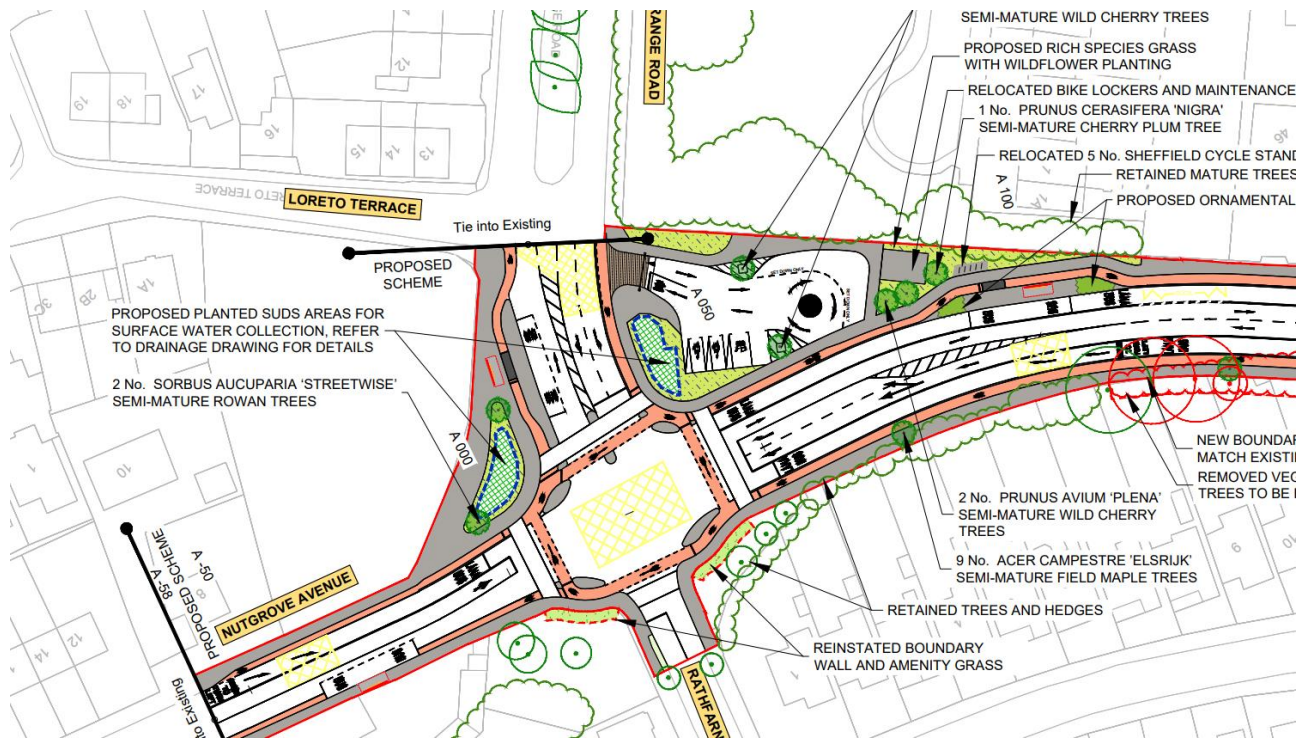


Figure 3.28.1 Extract from Landscape General Arrangement Drawings at Grange Road / Rathfarnham Road junction

3.29029 – Belgrave Residents Association

3.29.1 Submission – Rathmines

The submission raised the following issues:

1. Traffic
 - a. Diverted through Ranelagh
 - b. Diverted to Mountpleasant Avenue
2. Access to amenities
3. Access to Church of Mary Immaculate, Refuge of Sinners
4. Delivery access
5. Bus gates
 - a. Limit hours of operation of proposed bus gates
6. Alternative options
 - a. Bus priority signals
7. Narrow proposed footpaths
8. Additional pedestrian crossings
 - a. Castlewood Park / Avenue
9. Lack of park and ride facilities
10. Retain on-street parking.
11. Biodiversity
 - a. Destruction of trees

3.29.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and Section 2.5.3 of this report.

3.30030 – Ben Costello

3.30.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Turn bans.
 - a. Support proposed right turn from Templeogue Village to Springfield Avenue
 - b. Support right turn ban from Templeogue Road to Rathdown Avenue
 - c. Support right turn ban from Templeogue Road to Rathdown Park
2. Cycle tracks
 - a. Support proposed cycle way entrance at Rathdown Road
3. Bus stops
 - a. Support relocation
4. Traffic
 - a. Existing rat run traffic on Rathdown Dr. Quiet Street supported.
5. Parking
 - a. Inadequate supply at Bushy Park

3.30.2 Response to submission

The NTA welcomes the support for scheme elements noted in submission items 1-4.

Items 5 is an existing issue experienced in the area related to activity in the park and falls outside the remit of the Proposed Scheme.

3.31031 – Bernadette Behan

3.31.1 Submission – Rathmines

The submission raised the following issues:

1. Access to Church of Mary Immaculate, Refuge of Sinners
2. Bus gate
 - a. Limit hours of operation of proposed bus gates

3.31.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.32032 – Bernadette Quigley & Alessandro D'Erme

3.32.1 Submission – Whole scheme

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna.
 - b. Destruction of trees
2. Unnecessary change providing no real gains to bus travel times.
3. Traffic
 - a. Diverted to residential streets.
4. Air pollution
5. Safety of vulnerable cyclist due to gaps in segregated cycling infrastructure
6. Access to amenities
7. No assessment of cumulative impact of 12 corridors
8. Bus stop
 - a. Relocation
9. Pre-COVID traffic volumes used in analysis.
10. Bus gate
 - a. Limit hours of operation of proposed bus gates
11. Alternative options
 - a. Rail

3.32.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and Section 2.4.3 of this report.

3.33033 – Bernard Colman & Mary Muldoon

3.33.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Inadequate Cumulative Impact Assessment
2. Legal principles related to compulsory acquisition.
3. Benefits of proposals in this area do not justify the CPO.
4. Changes to work patterns due to the COVID-19 pandemic
5. Inability to turn a car within the driveway.
6. Proposed Scheme Out of Character for Urban Village

3.33.2 Response to submission

1. Inadequate Cumulative Impact Assessment

A detailed response to this item is presented in Section 2.1.1.

2. Legal principles related to compulsory acquisition.

The submission raises concerns regarding the NTA's compliance with the legal prerequisites for the compulsory acquisition of private property, as delineated by the Supreme Court in the case of *Rein v Industrial Development Agency* [2015]. It contends that the proposed road layout and the intended compulsory acquisition lack justification or necessity in light of the requirements for enhanced public transport infrastructure. In 2015, the Supreme Court articulated the following principles for the exercise of statutory powers related to land acquisition:

- a) That the authority by statute to acquire the land for the purpose for which it is sought to acquire it;
- b) That the acquisition of the land is legitimately being pursued for that purpose;
- c) That the acquisition of the land is necessary for that purpose; and
- d) That the land to be acquired is the minimum possible required to advance the statutory purpose.

Regarding principles a and b, the NTA is empowered by section 44 of the Dublin Transport Authority Act 2008 (as amended) to compulsorily acquire land for the purpose of establishing public transport infrastructure. Thus, the NTA possesses the requisite statutory authority to execute the Compulsory Purchase Order (CPO).

Regarding principal c, the NTA has delineated the necessity of the Proposed Scheme in EIAR Volume 2 Chapter 2 Need for the Proposed Scheme. This section elaborates on the transport requirements of the Proposed Scheme at both regional and local levels. Furthermore, in Section 2.3 of Chapter 2, the document expounds on how the Proposed Scheme aligns with various national and regional policies, including but not limited to the National Development Plan (2021-2030), the Transport Strategy for the Greater Dublin Area (2016-2035), the Climate Action Plan (2023), and the Climate Action and Low Carbon Development (Amendment) Act 2021, often referred to as the 2021 Climate Act.

Section 2.1 outlines the need for the Proposed Scheme stating that:

The key radial traffic routes into and out of Dublin City Centre are characterised by poor bus and cycle infrastructure in places. Effective and reliable bus priority depends on a combination of continuous bus lanes and signal control priority at pinch-points and junctions. Currently bus lanes are available for 30% of Templeogue / Rathfarnham to City Centre, with signal control priority for buses provided over 2% of the Proposed Scheme. Cyclists must typically share space on bus lanes or general traffic lanes with only 15% of the route providing segregated cycle tracks.

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million.

This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Section 2.2.1.4 of Chapter 2 states:

The GDA Cycle Network Plan 2013 (hereafter referred to as the GDACNP 2013) (NTA 2013), was adopted by the NTA in early 2014 following a period of consultation with the public and various stakeholders. This plan formed the strategy for the implementation of a high quality, integrated cycle network as set out in the GDA Transport Strategy 2016 - 2035. This is further discussed in Section 2.3.4.5.

Rathfarnham Road was identified as a primary cycle route (9A), in the GDA Cycle Network Plan 2013, this is further described in the extract below from section 2.2.1.4:

Extracts from the GDA Cycle Network Plan 2013 are shown in Image 2.1 and Image 2.2, which highlights the Proposed Scheme in the context of the planned cycle network. In the GDACNP 2013, there were two primary cycle routes (Cycle Route 9A and Cycle Route 10) and a number of secondary cycle routes (including Routes 9B, S04 and 10) identified along the Proposed Scheme

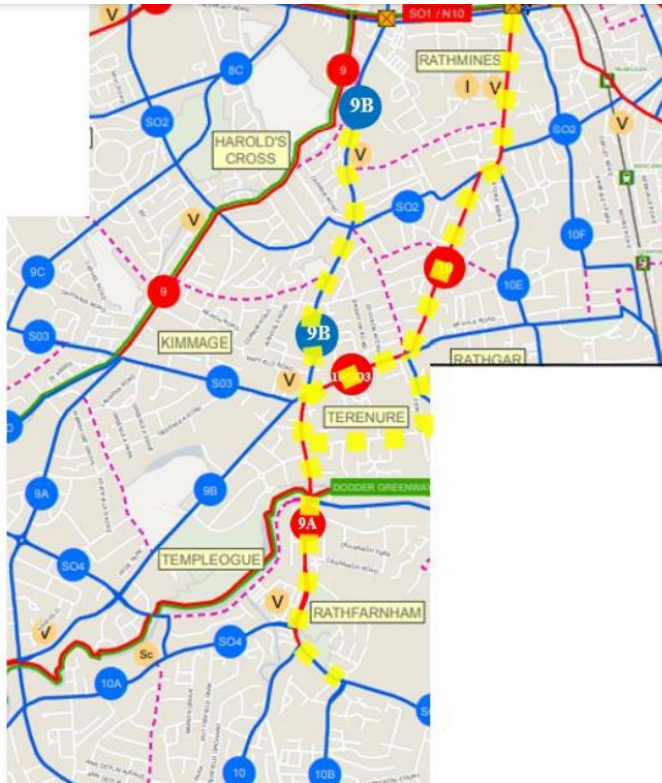


Figure 3.33.1 Extract from 2013 GDA Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

In preparing the GDA Transport Strategy (2022 – 2042) the NTA carried out a review of the GDA Cycle Network Plan. This review culminated in the preparation of the 2022 Greater Dublin Area Cycle Network which was published alongside the GDA Transport Strategy (2022 – 2042). The Proposed Scheme, including the section along Rathfarnham Road is supported by the GDACNP 2013 and the 2022 Greater Dublin Area Cycle Network is needed to address the deficiencies in the very limited segregated cycling infrastructure currently available on this corridor.



Figure 3.33.2 Extract from 2022 Greater Dublin Area Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme, Section 2.2.1.4 states:

To inform the preparation of the GDA Transport Strategy 2016 – 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to/from the Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the prior GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes.

The Core Bus Network study included a recommended route from Terenure/Rathfarnham to the City Centre on the basis of the need to serve significant demand along this entire corridor, and the need to address service deficiencies (lack of bus priority and associated journey time reliability) for a high level of scheduled bus services already operating along this corridor.

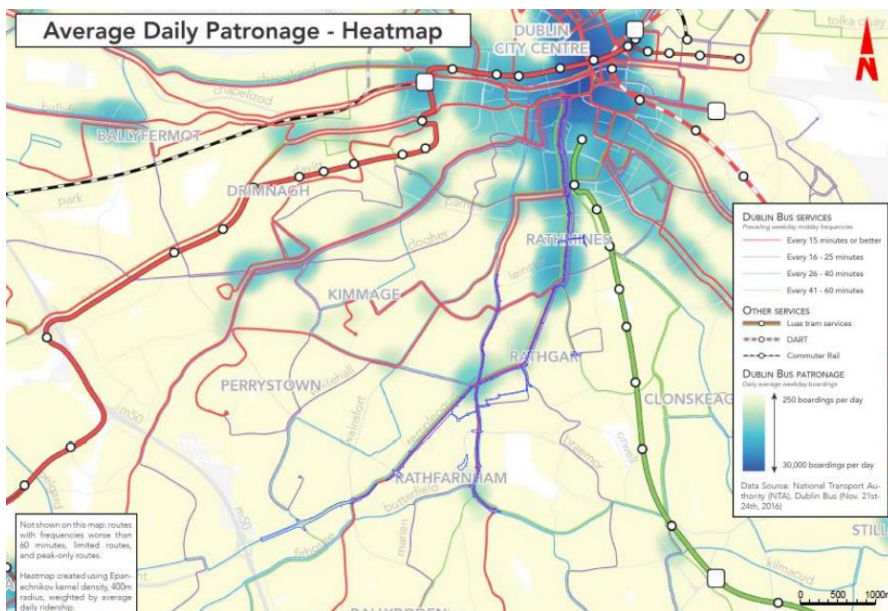


Figure 3.33.3 Average Daily Patronage Heatmap (Dublin Area Bus Network Redesign Revised Proposal ((NTA 2019)). Proposed Scheme Highlighted in Blue for Information

The need for the Proposed Scheme is supported by the objective of the GDA Transport Strategy to provide continuous bus priority, as far as is practicable, along the core bus route, that supports a more efficient and reliable bus service with lower journey times.

Article 5(1)(d) of Directive 2011/92/EU as amended by Directive 2014/52/EU (“the EIA Directive”) requires that an Environmental Impact Assessment Report (EIAR) contains ‘a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and the main reasons for the option chosen, taking into account the effects of the project on the environment’.

Chapter 3 of EIAR Volume 2 provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme.

1. **Feasibility and Options Reports**, which were associated with the Proposed Scheme (Rathfarnham to City Centre Core Bus Corridor (CBC) Feasibility Study and Options Assessment Report and Terenure to Tallaght CBC Feasibility Study and Options Assessment Report), were prepared in 2017 and set out the initial route options and concluded with the identification of the Emerging Preferred Route;

2. A first round of non-statutory **Public Consultation** was undertaken on the Emerging Preferred Route from 23 January 2019 to 30 April 2019;
3. Development of **Draft Preferred Route Option** (April 2019 to March 2020). Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered;
4. A second round of non-statutory **Public Consultation** was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year;
5. Further development of an updated **Draft Preferred Route Option** was undertaken subsequent to the second round of public consultation, which took account of submissions received, continuing stakeholder engagement and additional design information;
6. A third round of non-statutory **Public Consultation** was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020; and
7. Finalisation of the **Preferred Route Option**. Informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information, the Preferred Route Option, being the Proposed Scheme, was finalised.

Alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme, such as optimising the road layout in constrained locations including Rathfarnham Road, Rathgar Road, Rathmines Road Lower and Templeogue Road. The iterative development of the Proposed Scheme has also been informed by a review of feedback and new information received during each stage of public consultation and as data, such as topographical surveys, transport and environmental information was collected and assessed. In addition, the potential for climate impact was considered in all phases of the design process for the Proposed Scheme. As the design progressed climate was indirectly affected in a positive way by refining the design at each stage through reducing the physical footprint of the scheme coupled with the inclusion of technological bus priority measures.

Key environmental aspects have been considered during the examination of reasonable alternatives in the development of the Preferred Route Option for the Proposed Scheme. Environmental specialists have been involved in the iteration of key aspects of the Proposed Scheme with the engineering design team.

The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route.

- Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
- Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Following completion of Stage 1 initial appraisal, the remaining reasonable alternative options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

There were seven (CB1 to CB7) viable route options for Section 2 of the Rathfarnham to City Centre Corridor (Rathfarnham Road – Terenure Road East – Rathgar Road – Rathmines Road Lower) were taken forward for assessment and further refinement, these are detailed in section 3.3.2.2.2 of the Chapter 3 of the EIAR and illustrated in Image 3.13 (reproduced below).

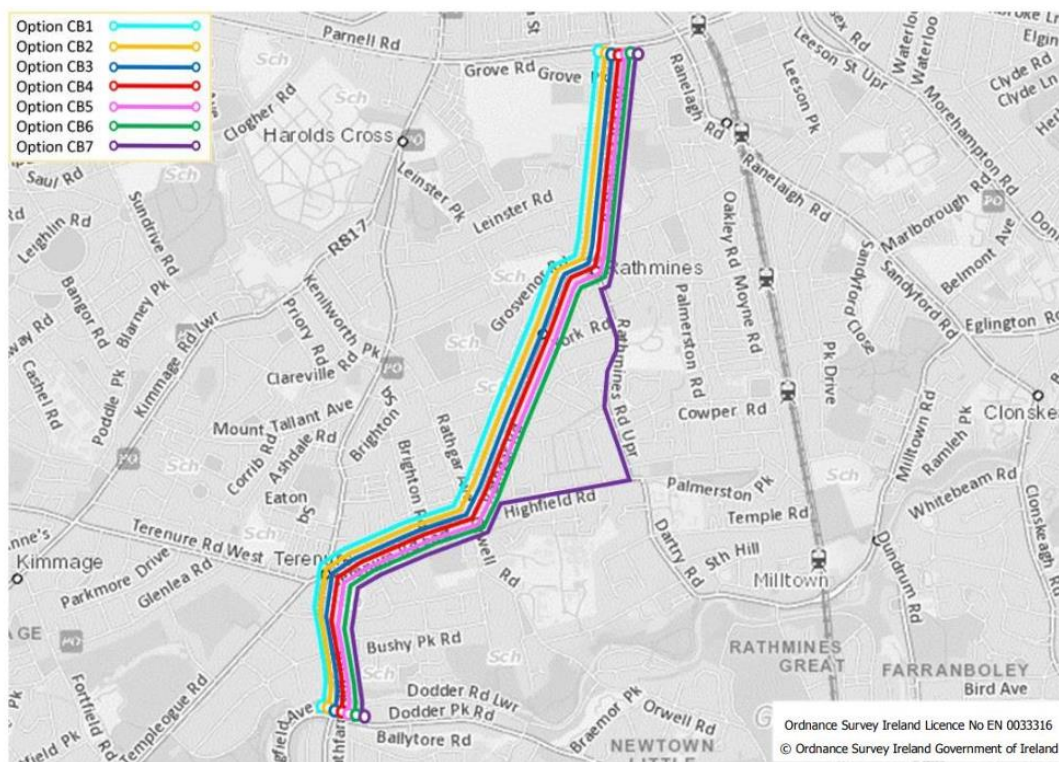


Image 3.13: Section 2 Route Options extracted from 'Rathfarnham to City Core Bus Corridor CBC Feasibility Study and Options Assessment Report'

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above.

A multi-criteria assessment (MCA) was carried out within each of these two sub-sections, as detailed in section 3.3.2.2.1 of Chapter 3.

Following the MCA, Stage 2- Route Options Assessment concluded that sub-option TVR3 was the preferred option for the sub-section along Rathfarnham Road and Terenure Road East to Rathgar Village, stating that:

Sub-option TVR3: *This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);*

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3 was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Following an MCA, sub-option TVR3 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

As described in the above paragraphs and in EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report, the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. Section 4.5.2.1 of the EIAR describes the general overview of the Proposed Scheme at Section 2: *Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road*. At the section adjacent to 48 Rathfarnham Road, between Bushy Park Road and Terenure Road North it is proposed to provide 1.5m wide cycle tracks, bus lanes and traffic lanes in both directions. To accommodate these new bus lanes on this section of

Rathfarnham Road, it is proposed to acquire land from adjacent properties on the eastern side of Rathfarnham Road.

Further details on the options assessment carried out in this area is presented in Section 2.3.3 this report.

The Proposed Scheme will address sustainable mode transport infrastructure deficits while contributing to an overall integrated sustainable transport system as proposed in the GDA Strategy. It will increase the effectiveness and attractiveness of bus services operating along the corridor and will result in more people availing of public transport due to the faster journey times and reliability improvements which the Proposed Scheme provides. This in turn will support the potential to increase the bus network capacity of services operating along the corridor and thereby further increasing the attractiveness of public transport. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth.

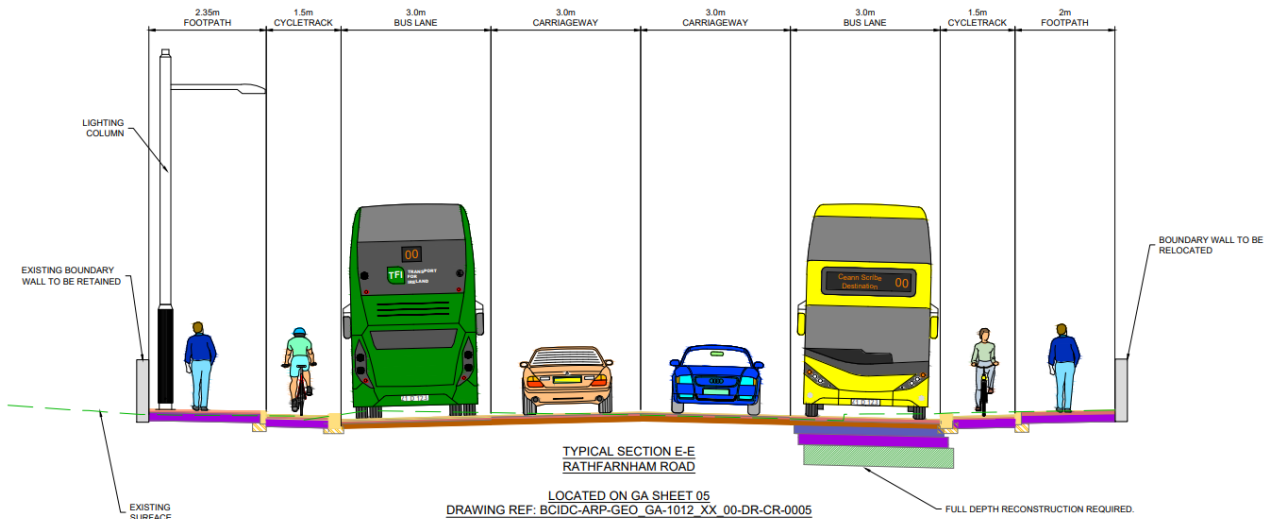


Figure 3.33.4 Typical Cross-section of Proposed Scheme between Bushy Park Road and Terenure Cross

Concerning principle d, at the specific area outside 48 Rathfarnham Road, the proposed cross-section and subsequent land acquisition have been considered and deemed necessary to facilitate the optimum scheme as presented in EIAR Volume 3 Chapter 4 Proposed Scheme Description and General Arrangement drawings. Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the absolute minimum width of 1.8m for footpaths and desirable width of 2m for cycle tracks. At this location a 2m footpath has been provided. However, as noted in table 4.3 of Chapter 4 of the EIAR, a reduced width cycle track of 1.5m is provided through this area in order to minimise impacts on adjacent properties while also meeting the scheme objectives. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

It should be noted that throughout the assessment process, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project's objectives. This approach was adopted to balance the necessity of the development with the preservation of the interests and rights of property owners in the area.

3. Benefits of proposals in this area do not justify the CPO.

The submission stated out that the proposed road layout and the compulsory acquisition lands appear disproportionate. The perceived imbalance lied in the fact that the anticipated benefits do not seem commensurate with the adverse implications of acquiring land.

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

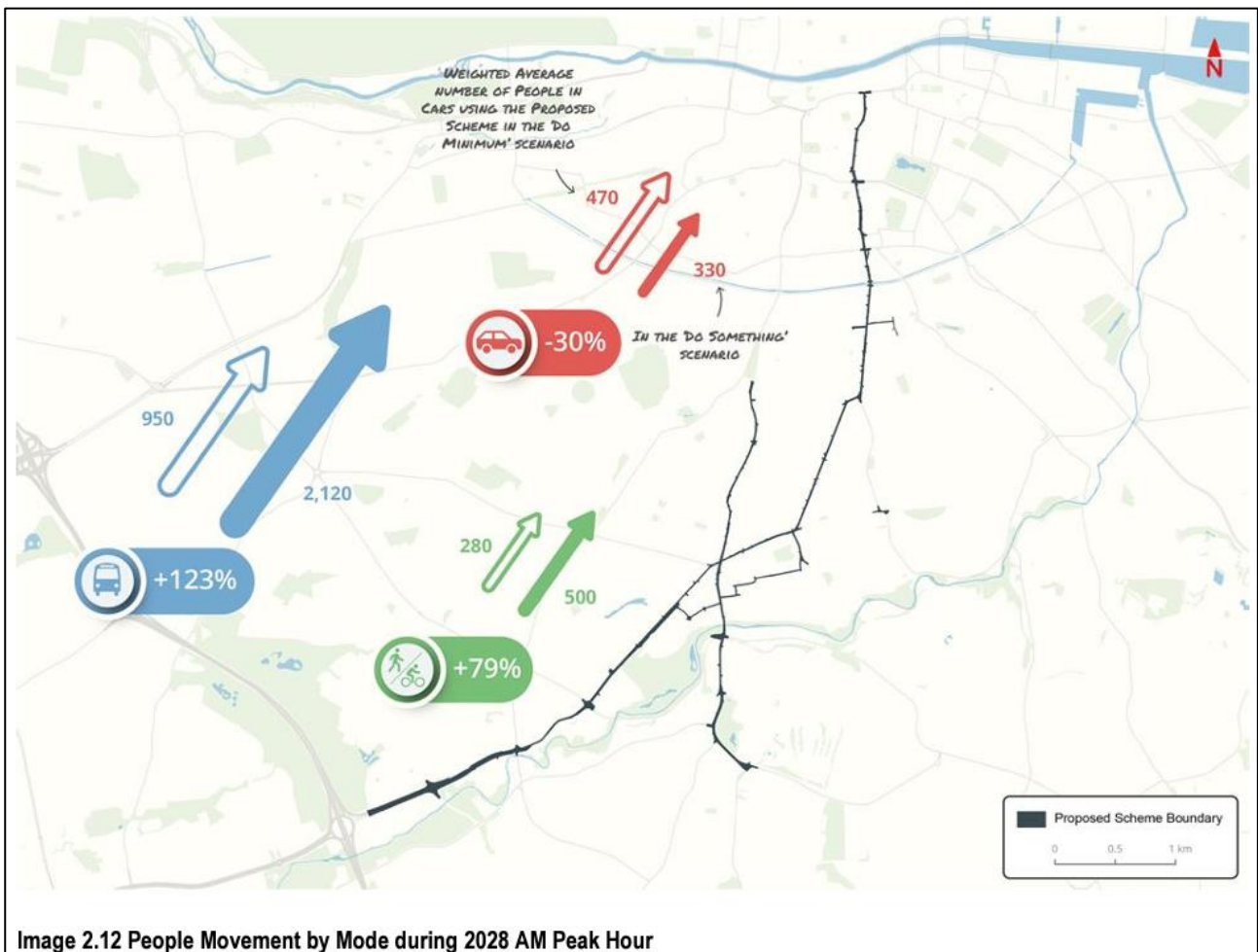
“enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of ‘People Movement’. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling),

which in turn provides significant efficiencies and benefits to users of the transport network and the environment.”

Section 2.4 notes the following:

The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical double-deck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e. walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is an increase of 123% in the number of people travelling by bus, an increase of 79% in people walking or cycling, and a reduction of 30% in the number of people travelling by car along the route of the Proposed Scheme. This is summarised in Image 2.12



In relation to the cumulative impacts on Traffic and Transport and car usage Appendix A6.1 (Transport Impact Assessment) notes the following for Cumulative Assessment:

In general, total trip demand (combining all transport modes) will increase into the future in line with population. In general, total trip demand (combining all transport modes) will increase into the future in line with population and employment growth. A greater share of the demand will be by sustainable modes (Public transport, Walking, Cycling) as facilitated by the GDA Strategy implementation.

The analysis indicates that with the 12 BusConnects Proposed Schemes in place, there will be a high positive impact on sustainable mode share. The Proposed Schemes, along with other GDA Strategy measures, will prevent any increase in private car traffic within the study area and will instead result in a reduction in car trips below 2020 levels.

In the 2028 Opening Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 12% increase in public transport trips, 2% decrease in general traffic trips (i.e. motorists) and a 14% increase in cycling trips in the AM Peak Hour and a 12% increase in public transport, 3% decrease in general traffic and a 12% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario. In the 2043 Design Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 6% increase in public transport trips, 6% decrease in general traffic trips (i.e. motorists) and a 10% increase in cycling trips in the morning peak hour and a 7% increase in public transport, 7% decrease in general traffic and a 11% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario.

General traffic levels reduce more in 2043 than when compared to 2028 due to the increased level of additional non-bus public transport infrastructure and services (MetroLink, Luas extensions and DART+ from the GDA Strategy) in tandem with the road capacity reduction measures as part of the Proposed Scheme leading to increased usage on all public transport modes.

The modelling outputs for the 2028 Cumulative Opening Year scenario demonstrate that there is a high growth in bus patronage along all the Proposed Schemes in the AM Peak Hour. The bigger increases occur in the inbound direction on the Blanchardstown to City Centre, the Proposed Scheme and the Bray to City Centre scheme where the loadings reach more than 2,000 additional passengers per Hour compared to the Do Minimum scenario.

In the 2028 Opening Year AM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 10% more passenger boardings across all public transport services and 17% more boardings on bus services. In the 2028 Opening Year PM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 11% increase in total passengers boarding Public transport services and 18% more passengers boarding buses services.

In the 2043 Design Year AM and PM Peak Hour scenarios, increase in total passengers boarding all public transport services will be 7% and 8% respectively, and the increase in passengers boarding bus services will increase by 11% and 14% respectively.

*Overall, the Proposed Schemes are expected to deliver a **High Positive** impact for People Movement by sustainable modes*

In terms of bus journey time savings, Section 6.4.6.3 of Chapter 6 of Volume 2 of the EIAR notes the following:

*A micro-simulation model assessment has been developed and network performance indicators established for bus operations along Proposed Scheme. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. Based on the AM and PM peak hours alone, 7.4 hours of savings in 2028 and 6.2 hours in 2043, when compared to the Do Minimum combined across all buses. Overall it is anticipated that the improvements to the network performance indicators for bus users along the Proposed Scheme will have a **Positive, Very-Significant and Long-term effect**.*

In relation to Air Quality, EIAR Volume 2 Chapter 7, section 7.5.3 states that the Proposed Scheme will have a generally neutral impact on air quality. Noting that vehicle emissions technology will improve, and the Irish vehicle fleet will continue to evolve to the extent that vehicle emissions impacts associated with the Proposed Scheme are anticipated to be short-term. City wide traffic management measures and proactive encouragement of low emissions vehicle uptake would accelerate these improvements.

Assessment Topic	Potential Impact (Pre-Mitigation and Monitoring)	Predicted Impact (Post Mitigation and Monitoring)
Road traffic impacts on local human receptors	Neutral, Long-term	Neutral, Long-term
Road traffic impacts on local ecological receptors	Positive, Slight, Long-term	Positive, Slight, Long-term
Regional air quality	Neutral, Long-term	Neutral, Long-term

Figure 3.33.5 Summary of Predicted Operational Phase Impacts Following the Implementation of Mitigation and Monitoring

In relation to Noise and Vibration, EIAR Volume 2 Chapter 9 Noise and Vibration, section 9.5.2.1 states that:

The impact assessment has determined that traffic noise impacts across the study area for the Proposed Scheme results in a positive to neutral imperceptible to slight short and long-term direct impacts along the Proposed Scheme and negative imperceptible to moderate short and long term indirect impacts along the surrounding road network. The range of noise level changes and overall noise levels calculated do not require any specific noise mitigation measures to be incorporated into the Proposed Scheme.

In relation to noise and vibration occurring from the construction phase, section 9.6.1 states that:

During evening periods, noise impacts associated with the Construction Phase will be Negative, Moderate to Significant and Temporary for the majority of scheduled works within 15m of the works and Negative, Not Significant beyond 15m. At distances between 15m to 20m from road widening / utility diversion works, there is the potential for Negative, Moderate to Significant and Temporary impacts. At distances within 10m of road widening / utility diversion works, the noise impact will be Negative, Significant to Very Significant and Temporary. As per DMRB Noise and Vibration (UKHA 2020), in cases of moderate to major magnitude of impacts, the duration of works determines the overall significance rating.

As part of the mitigation measures, the durations advised in the DMRB Noise and Vibration will be followed, where feasible, to reduce overall significance effects (i.e. scheduling works to occur for periods of less than 10 days / nights over 15 consecutive day / night periods and less than 40 days over six consecutive months where significant effects are identified). Once the CNL and duration of works is considered in line with the DMRB Noise and Vibration, all key Construction Phase residual noise levels will be Not Significant, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).

EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling, pedestrian, and bus infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Table 6.27: Section 2 – Significance of Effects for Pedestrian Impact during Operational Phase

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario. This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National

Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.

Cycling Infrastructure

Table 6.28, in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Table 6.28: Section 2 – Cycling Impact during Operational Phase

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant
R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Bus Infrastructure

Table 6.29, in section 6.4.6.1.3.3 of Chapter 6 outlines the changes to bus stop infrastructure along Section 2 of the Proposed Scheme, with reference to the number and percentage of bus stops that provide each facility in the Do Minimum and Do Something scenarios.

Table 6.29: Section 2 – Overview of Changes in Bus Stop Facilities

Bus Stop Facility	Do Minimum		Do Something		Comment
	No. of Stops	Percentage of Stops	No. of Stops	Percentage of Stops	
RTPI	2	11%	15	100%	RTPI added to all bus stops.
Timetable information	15	83%	15	100%	It is proposed that all bus stops provide real-time information.
Shelter	11	61%	12	80%	Shelter to be provided at all but three bus stops which are limited by spatial constraints.
Seating	10	55%	12	80%	Seating to be provided at all but three bus stops which are limited by spatial constraints.
Accessible Kerbs	16	89%	15	100%	Full provision.
Indented Drop Off Area	0	0%	0	0%	All proposed bus stops will be located inline within bus lanes.
Total Stops	18		15		Three fewer than the Do Minimum.

As set out in 6.4.6.1.3.2:

The contents of Table 6.29 indicate that there are significant improvements to the bus stop facilities along Section 1 of the Proposed Scheme. It is proposed that all bus stops will be provided inline within dedicated bus lanes along the entirety of the corridor, meaning that buses will not incur delay when setting off after picking up passengers. Improvements in the provision of real-time information, shelters, seating and accessible kerbs at the bus stops throughout Section 2 of the Proposed Scheme are assessed as providing an overall positive impact for bus passengers. All proposed facilities have been designed in accordance with BusConnects Preliminary Design Guidance which has been developed with cognisance to the relevant accessibility guidance. Taking into account the provision of bus lanes, pedestrian accessibility and bus stop facilities outlined within this section, Table 6.30 below outlines the bus qualitative assessment along Section 2 of the Proposed Scheme.

Table 6.30: Section 2 – Bus Qualitative Impact during Operational Phase

Section	Chainage	Description of Impact	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Avenue to R137 Terenure Road North	A000 - A1850	<ul style="list-style-type: none"> Three fewer stops than in the Do Minimum. Bus stops are located in more convenient locations for communities and access to signalised crossings. Slight improvements to bus stop facilities throughout. 	Medium	Medium	Positive Significant

*As indicated in Table 6.30, the Proposed Scheme improves the quality of existing bus infrastructure along Section 2 of the Proposed Scheme, which will provide long term benefits for bus users. The impact for this section of the Proposed Scheme is Medium Positive. The sensitivity of environment rating is predominately categorised as ‘medium.’ This results in a **Positive, Significant and Long-term** effect on this section.*

Further detail on the benefits of the Proposed Scheme are presented in Section 2.1.1.

4. Change to work patterns due to the COVID-19 Pandemic

A detailed response to this item is presented in Section 2.1.1.

5. Inability to turn a car within the driveway

The permanent acquisition will result in the loss of up to approximately 2.8m of lands with an additional 2m temporarily required to allow for the construction of boundary treatment works and tying into the existing garden/driveway. The edge of the nearest proposed traffic lane will be approximately 1.5m closer to the residence than the kerb of the existing general traffic lane. The front boundary wall, including pillars and entrance between the pillars will be at least 8.5m from the front of the house. This would not introduce any additional risk to the owners during the operation of the Proposed Scheme with access and egress to/from the property achieved similar to the current scenario and that this should not hinder the ability to park within the driveway.

The principle of how residents can access/egress their property is unchanged by the scheme proposals. The existing access/egress scenario is similar to the proposed with the requirement for a vehicle to be driven across a cycle lane/cycle track and footpath.

In addition, as noted in Appendix M2 Stage 1 Road Safety Audit of the Preliminary Design Report:

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. All recommended measures or alternative measures proposed by the Designer were accepted by the Road Safety Audit Team.

6. Proposed Scheme Out of Character for Urban Village

Chapter 17 of the EIAR has considered the potential landscape (townscape) and visual impacts associated with the Construction and Operational Phases of the Proposed Scheme.

17.4.4.1 presents an assessment of the Proposed Scheme in terms of Impact on Townscape and Streetscape Character. Section 17.4.4.1.2 presents the assessment for the Nutgrove to Terenure Road North Section:

*The sensitivity of this section is **high**. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme. Most notably there will be continuing negative effects from loss of trees removed during the Construction Phase at Rathfarnham Castle and along sections of residential properties along Rathfarnham Road. There will be the provision of a new boundary wall to the castle demesne in roughcast render which, while less aesthetically pleasing than the sections of existing stone boundary wall, will represent a neutral change when compared to the overall inharmonious boundary treatment which varies in quality and condition of materials used.*

*There will be provision of substantial new tree planting within the castle demesne to consolidate the new edge to the woodland group and ensure the amenity of the open space is restored. There will also be substantial replacement and additional street tree planting throughout this section, including medians, footpaths and roadside spaces. There will be an improvement to the setting of the Yellow House and the Church of the Annunciation in Willbrook with provision of stone paving to existing concrete footpaths. There will be a notable improvement to an existing grassland space within the River Dodder corridor with provision of new tree planting and species-rich grassland. An enhanced paving scheme will be provided at numerous locations throughout this section, most notably with the provision of stone paving to the frontages of the Church of the Annunciation and the Yellow House public house, as well as the provision concrete paving to footpaths at major junctions and sett paving to pedestrian crossing points at side roads. The Operational Phase will not alter the overall townscape character of this section but will result in substantial localised changes to the streetscape character of the section. The magnitude of change in the baseline environment is **very high**.*

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Very Significant and Short-Term** becoming Neutral, Moderate and Long-Term.*

Section 17.4.4.1.2 presents the assessment for the Terenure Road North to Charleville Road Section:

*The sensitivity of this section is **very high**. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme between Terenure and Rathgar. Although land take has been minimised through design iteration, Terenure Road East will be widened in parts which will require permanent land acquisition from sections of residential properties, some of which are protected structures, and others which have mature trees that are prominent features of the streetscape. There will be a change to the alignment of historic boundary features and loss of several prominent mature garden trees which are located on the edge of the street. There will be provision of several new street trees along Terenure Road which over time will neutralise the negative effects associated with loss of trees removed during the Construction Phase.*

There will be a substantial improvement of the junctions to each end of Terenure Road East; a new paving scheme will be provided to the junctions including high-quality concrete paving to active frontages, stone / concrete sett paving to pedestrian crossings, sett paving to formalised parking bays, as well as a narrowing of crossing distances to reduce crossing times and allow removal of detracting features such as pedestrian guardrails and traffic bollards. There will also be tree planting and some new ornamental planting areas provided.

The Operational Phase will not alter the overall townscape character of this section but will result in both substantial localised negative and positive changes to the streetscape character. Despite the adverse impacts on trees and properties there will be a substantial localised improvement in some areas of

streetscape and the effect across the overall section will become positive over the long-term as proposed planting matures. The magnitude of change in the baseline environment is **medium / high**.

The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Significant and Short-Term** becoming **Positive, Moderate and Long-Term**.

3.34034 – Bernardine Cantwell

3.34.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Compulsory purchase order
2. Impact on Character of Rathgar Road

3.34.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.35035 – Bertha Walsh

3.35.1 Submission – Templeogue Road

The submission raised the following issues:

1. Bus stop
 - a. Relocated Bus Stop outside 217 – 219 Templeogue Road

3.35.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.36036 – Betty Murphy

3.36.1 Submission – Templeogue Road

The submission raised the following issues:

1. Bus stop
 - a. Relocated Bus Stop outside 217 – 219 Templeogue Road

3.36.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.37037 – Brendan Heneghan

3.37.1 Submission – Whole Scheme

1. Procedural Issues
 - a. Aarhus Convention
 - b. Changes to Proposed Scheme
 - c. Impact on the Southwest City
 - d. Structure of EIAR
 - e. Site Notices
 - f. Length of Consultation Period
 - g. Submission Fee
 - h. Right of Reply to NTA Response
 - i. Errors and Omission in Plans
2. Substantive Issues
 - a. Spawell Roundabout
 - b. HGV Access on Templeogue Road
 - c. Templeogue Road Bus Gate
 - d. Terenure Road West / Templeogue Road Junction
 - e. Pearse Bridge
 - f. Terenure Cross
 - g. Terenure Road East
 - h. Traffic implications of proposed traffic management measures in Rathgar and Rathmines
3. Other Issues
 - a. Templeogue Road / Springfield Junction
 - b. Fortfield Road Turn Bans
 - c. Templeogue Road Bus Stops
 - d. CPO on Templeogue Road at Bushy Park and Rathdown Drive
 - e. The submission states that the compulsory purchase orders on the stretch
 - f. Rathdown Avenue Tun Ban
 - g. Construction Sequencing
 - h. Cumulative effect of traffic management proposals
 - i. Lack of additional buses in the south west city
 - j. Journey Time Savings
 - k. LUAS
 - l. Climate Change Impacts

3.37.2 Response to submission

The NTA welcomes the support for what the submission notes as ‘the central features of the plan’ and specifically the proposed one-way general traffic regime on Rathgar Road, the proposed bus gate on Rathmines Road Lowe and the proposed cycling infrastructure.

The NTA notes the comments raised in relation to procedural matters, bus journey time savings and the impact on general traffic due to proposed traffic management measures. Detailed responses to these matters are included in the responses to Items 1 – 28 below.

The NTA notes the request for an Oral Hearing. An Bord Pleanála has the discretion to decide whether an Oral Hearing will be held in respect of this application.

The submission totals over 200 pages, including 28 Appendices. The submission states that there is considerable merit to what the author considers are the central features of the plan, particularly the bus gate at Lower Rathmines Road, the one-way proposal on Rathgar Road and the cycling infrastructure.

Notwithstanding the above, the submission states that An Bórd Pleanála should reject the proposal on the basis of serious procedural issues. The submissions states that should the scheme be granted permission, that minor features of the scheme should be rejected as part of any permission granted, which are not core to the scheme achieving its aims.

The submission notes that bus journey time savings claimed are modest, there is little provision of extra buses, and in fact a decrease in bus numbers on the Templeogue Road and states that the proposals will contribute negatively to the environment and climate change.

The submission claims that schemes in the south west make excessive use of bus gates on main roads for excessive lengths of time, which the submission notes is not happening anywhere else in the city. The submission states that not enough information is provided in the documents to assess how diverted traffic will flow.

The submission requests an oral hearing for the Proposed Scheme.

1. Procedural Issues

a. Aarhus Convention

The submission states that the consultation carried out did not comply with the Aarhus Convention, excluding persons who are not computer literate, with the exception of the first round of consultation. The submission refers to Appendix 1 which provides additional detail in relation to the consultation carried out and the concerns raised in respect of same.

Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

The term “non-statutory” is used to describe the public consultation which occurred from [2018 to 2022] because this consultation process with the public and interested stakeholders was undertaken by the NTA on a voluntary basis and was not required by law. The purpose of this process was to inform the public and stakeholders of the evolution of the proposal from an early stage and to seek feedback on the design proposals.

This is in contrast with the statutory consultation period which ran from 9 May 2023 to 4 July 2023 during which an opportunity was provided to members of the public, including Mr Heneghan, (as well as certain prescribed bodies) to make submissions to An Bord Pleanála in accordance with section 51 of the Roads Act 1993 (as amended).

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

b. Changes to Proposed Scheme

The submission states that completely different plans have been presented on four separate occasions. It is noted that significant changes were made following each round of consultation and the submission notes that the NTA should have engaged in a further round of consultation. The submission notes that some changes were consulted on, and others were not, with submissions made earlier in the process being more likely to result in changes to the Proposed Scheme.

The response to Issue 1 above sets out the extensive consultation process which has been carried out to date in the development of the Proposed Scheme. The NTA notes that the three rounds of public consultation carried out to date have been non-statutory, while the present round of consultation being carried out on the Proposed Scheme is the statutory round of public consultation. The scheme as submitted to an Bord Pleanála has been developed taking due cognisance of the significant number of submissions made by residents, elected officials, representative bodies and members of the public. This consultation process is documented in the Templeogue/Rathfarnham Core Bus Corridor Scheme Public consultation Report 2018-2022, which included in the Supplementary Information of the application.

The NTA notes that the submission states that: “*There are very significant changes between each of the phases.*” The NTA recognises that changes have been made in response to public feedback and the NTA believes that these changes have improved the Proposed Scheme.

The submission states that more substantial changes were made during the earlier phases of consultation and asserts that this discriminates against those who did not make a submission until a later phase. The NTA notes this comment. The design of such a complex scheme involves an iterative design process, where

the proposals are refined over time, eventually culminating in a proposal which balances the objectives of the scheme with its impacts on the surrounding environment. At the earlier stages of consultation there was greater scope for changes to be made to the Proposed Scheme, as the design was still in the early stages of development. With the benefit of greater design information, and feedback from the public, this design was refined over time and as such less significant changes were made during the later consultation phases. It is noted that a significantly greater number of submissions were received in relation to the earlier rounds of consultation and the level of change reflects this consultation response.

c. Impact on the Southwest City

The submission states that three BusConnects CBC schemes in the southwest city seriously compromise the main arterial routes and divert traffic to side roads. The submission states that the data presented is not sufficient in this regard and requests that a third-party traffic expert is appointed to assess these issues properly. Furthermore, it is noted that traffic count data for the south side corridors is deficient when compared to northside corridors. The submission refers to Appendix 3 which provides additional detail in relation to the traffic modelling carried out.

The NTA notes the comments raised in relation to the traffic modelling and the presentation of the associated data.

The first point raised in Appendix 3 states that the NTA has not considered the construction of a bus corridor on the Lower Kimmage Road (the Kimmage to City Centre CBC Scheme) and on the Crumlin Road (the Tallaght/Clondalkin to City Centre CBC Scheme). It is noted that Chapter 21 of the EIAR assesses the cumulative Impact of the construction of all 12 Core Bus Corridor schemes, including the Templeogue/Rathfarnham CBC Scheme, the Kimmage to City Centre CBC Scheme and the Tallaght/Clondalkin to City Centre CBC Scheme. Cumulative traffic impacts are also set out in the Traffic Impact Assessment Report in Appendix A6.1 of Volume 4 of the EIAR.

The second point raised in Appendix 3 states that the traffic count surveys which are referred to in the planning application are very difficult to understand, in particular when compared to the traffic count surveys which were carried out for schemes on the northside. The NTA notes this comment. Due to the scale of the BusConnects Infrastructure programme, it was necessary to utilise two separate traffic count surveyors. Because of this, the presentation of data presented for schemes on the northside of the city, is not exactly the same as the presentation of data for schemes on the southside of the city. Notwithstanding this, the same data was collected and analysed in designing and assessing the Proposed Scheme as was for the other schemes. The raw traffic data has been shared with the public as background information to the Planning application.

Section 6.2.5.2.2 of Chapter 6 of the EIAR notes the following in relation to the traffic counts undertaken:

“Due to the scale of the CBC Infrastructure Works, the Proposed Scheme required a full set of consistent updated traffic counts for a neutral period e.g. November / February when schools, colleges were in session. Traffic surveys were undertaken in November 2019 and February 2020 (Pre-Covid) with the surveyed counts used as inputs to the model calibration and validation process of the strategic model and micro-simulation model. The two types of counts used in the study are Junction Turning Counts (JTCs) and Automatic Traffic Counts (ATCs).”

The submission states that the limited integrated modelling conducted is buried obscurely and lacks any figures. It is not entirely clear what is being referred to as ‘integrated modelling’ however Section 6.3.2 of Chapter 6 of the EIAR sets out the extensive modelling exercise carried out in developing and assessing the Proposed Scheme. The following is noted:

“In summary, there are four tiers of transport modelling which have been used to assess the impacts of the Proposed Scheme:

- **Tier 1 (Strategic Level):** *The NTA’s East Regional Model (ERM) is the primary tool which has been used to undertake the strategic modelling of the Proposed Scheme and has provided the strategic multi-modal demand outputs for the proposed forecast years;*
- **Tier 2 (Local Level):** *A Local Area Model (LAM) has been developed to provide a more detailed understanding of traffic movement at a local level. The LAM is a subset model created from the ERM and contains a more refined road network model used to provide consistent road-based outputs to inform the TIA, EIA and junction design models. This includes information such as road network speed data and traffic redistribution impacts for the Operational Phase. The LAM also provides traffic flow information for the micro-simulation model and junction design models and has been used to support junction design and traffic management plan testing;*

- **Tier 3 (Corridor Level):** *A micro-simulation model of the full ‘end to end’ corridor has been developed for the Proposed Scheme. The primary role of the micro-simulation model has been to support the ongoing development of junction designs and traffic signal control strategies and to provide bus journey time information for the determination of benefits of the Proposed Scheme; and*
- **Tier 4 (Junction Level):** *Local junction models have been developed, for each junction along the Proposed Scheme to support local junction design development. These models are informed by the outputs from the above modelling tiers, as well as the junction designs which are, as discussed above, based on people movement prioritisation.”*

A large number of figures are included in Chapter 6 of the EIAR to demonstrate the transport modelling carried out, and the NTA is satisfied that modelling and presentation of results is in line with best practice industry standards.

The submission notes that the NTA has consistently withheld information in relation to the hours of operation of the proposed bus gates. The submission notes that bus gates in other parts of the city, including St. Mobhi Road, St. James’ Hospital and Mount Brown are proposed to operate during the morning and evening peak only, while the Bus Gates proposed as part of the Proposed Scheme are to operate between 6am and 8pm, seven days a week.

The hours of operation of the bus gates proposed as part of the Proposed Scheme are set out in Section 4.3.11 of the Preliminary Design Report, included in the Supplementary Information to the application, as follows:

“A Bus Gate is a sign-posted short length of stand-alone bus lane. This short length of road is restricted exclusively to buses, taxis and cyclists plus emergency vehicles. It facilitates bus priority by removing general through traffic along the overall road where the bus gate is located. General traffic will be directed by signage to divert away to other roads before they arrive at the Bus Gate.

A bus gate is proposed on Templeogue Road between Olney Grove and Terenure Road West. This results in a shared inbound lane for buses and general traffic on Templeogue Road from Fortfield Avenue to Terenure Place - which is approximately 1.2km in length.

This bus gate is proposed to operate from 06:00 to 20:00 and, as such, signage is proposed to enable inbound general traffic on Templeogue Road to enter the bus lane and continue through the bus gate towards Terenure Cross outside of these hours.

A second bus gate is proposed on Rathmines Road Lower between Richmond Hill and Lissenfield. This results in a shared lane in each direction for buses and general traffic on Rathmines Road Lower from Castlewood Avenue to Grove Road - which is approximately 840m in length.

This bus gate is proposed to operate from 06:00 to 20:00 and, as such, signage is proposed to enable general traffic on Rathmines Road Lower to enter the bus lane and continue through the bus gate outside of these hours.”

In relation to the hours of operation, an analysis of existing traffic flow levels on the corridor do not show a significant reduction in traffic volumes through the day (relative to peak hours), and hence bus gate operation during the hours noted above is necessary to provide fast, reliable bus journey times for all services.

The submission makes a number of comments relating to the modelling work carried out to assess the Proposed Scheme. The points raised are summarised and responded to below.

The submission states that the approach used which presents only the AM and PM peak hour flows is insufficient and traffic flows for every hour of the day should be presented. The NTA notes that the approach adopted in assessing and presenting the information is in line with industry best practice, and considers the worst case scenario in terms of traffic impacts.

The submission states that the application assumes that traffic increases of less than 100 PCU’s per hour are not significant. The NTA notes that Section 6.4.6.1.15.2 of Chapter 6 of the EIAR states the following in relation to the significance of increases in general traffic volumes:

“Significance of an Increase in General Traffic: *To determine the impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to TII’s Traffic and Transport Assessment Guidelines (May 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

Diagram 6.39 is a snapshot from the guidance which outlines “Advisory Thresholds for Traffic and Transport Assessment Where National Roads are Affected”.

Where applications affect national roads a Transport Assessment should be requested if the thresholds in Table 2.2, below, are exceeded.

Table 2.2 Advisory Thresholds for Traffic and Transport Assessment Where National Roads are Affected

<i>Vehicle Movements</i>	<i>100 trips in / out combined in the peak hours for the proposed development</i>
	<i>Development traffic exceeds 10% of turning movements at junctions with and on National Roads.</i>
	<i>Development traffic exceeds 5% of turning movements at junctions with National Roads if location has potential to become congested or sensitive.</i>

Traffic and Transport Assessment Guidelines PE-PDV-02045 May 2014, TII Publications

Diagram 6.39: Extract from the Traffic and Transport Assessment Guidelines (PE-PDV-02045, May 2014)

The basis of the guidance is to assess the impacts of additional trips that have been generated as part of a new development (for example, a new housing estate etc.). Noting that the guidance relates to National Roads only, for the purpose of this assessment, the principles of the guidance have been adapted for the assessment of the Proposed Scheme. This has been achieved by extending the threshold from National Roads only to cover all road types in the vicinity of the Proposed Scheme. This ensures a robust and rigorous assessment has been undertaken and that potential impacts on more localised or residential streets have been captured as part of the assessment.

The impact assessment of increases to the general traffic flows has used the following thresholds based on the above guidelines:

- *Local / Regional Roads: Traffic redistribution results in an increase above 100 combined flows (i.e. in a two-way direction) along residential, local and regional roads in the vicinity of the Proposed Scheme in the AM and PM peak hours;*
 - *The threshold aligns with an approximate 1 vehicle per minute increase per direction on any given road. This is a very low level of traffic increase on any road type and ensures that a robust assessment of the impacts of redistributed traffic has been undertaken.*
- *National Roads: Traffic exceeds 5% of the combined turning flows at junctions with/ on/or with national roads in the AM and PM peak hours as a result of traffic redistribution comparing the ‘Do Minimum’ to the ‘Do Something’ scenario with the Proposed Scheme in place.*
 - *The guidelines indicate that a 10% threshold may be used, however, to ensure a rigorous assessment in this instance the lower 5% threshold for turning movements has been utilised. Where road links have been identified as experiencing additional general traffic flow increases which exceed the above thresholds, a further assessment has been undertaken by way of a traffic capacity analysis on the associated junctions along the affected links.”*

The submission raises concern regarding the accuracy of the traffic models. The NTA is confident that the traffic models developed are accurate and robust.

The submission notes that ‘integrated modelling’, which it is understood refers to traffic models incorporating all 12 CBC Schemes, has not been sufficiently presented. The potential of cumulative impacts arising from the construction and operation of the Proposed Scheme in-combination with other projects (including the other proposed BusConnects schemes) has been considered in Chapter 21 in Volume 2 of the EIAR. Section 21.1 in Chapter 21 states:

“This chapter reports the assessment of cumulative impacts of the Templeogue-Rathfarnham to City Centre Core Bus Corridor Scheme (hereafter referred to the Proposed Scheme) in combination with other existing and or approved projects and projects which, at the time of assessment, were yet to be approved, but for which a decision on such project is reasonably foreseeable over the likely consenting and construction period anticipated for the Proposed Scheme. In addition, the chapter addresses the potential for interactions

between impacts on different environmental factors of the Proposed Scheme itself on the receiving environment.”

Section 21.2.2.1 makes specific reference to the other BusConnects Core Bus Corridors:

“...As noted previously, the other 11 BusConnects Core Bus Corridor schemes were also included for assessment. While each of the other BusConnects Core Bus Corridor schemes will be subject to an application for approval, they have a similar likelihood of going ahead as this Proposed Scheme and therefore, the potential cumulative effects of the other BusConnects Core Bus Corridor schemes are of relevance to the potential cumulative effects of this Proposed Scheme so they were included on the preliminary long list.....”

A detailed response to this issue is presented in Section 2.1.1 of this response.

d. Structure of EIAR

The submission states that the EIAR does not set out the works in a way the public can understand. Further, the submission asserts that many of the features of the Proposed Scheme are not within the authority of An Bórd Pleanála to permit. The submission refers to Appendix 4.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

The NTA also notes that no Appendix 4 is included in the submission.

e. Site Notices

The submission states that the provision of site notices is insufficient, and states that further site notices should have been provided at additional locations where bus stops are being moved, or where turn bans are proposed. The submission states that no effort has been made to inform the public by way of circulars delivered to doors. The submission refers to Appendix 5.

The NTA complied with all statutory notice requirements in respect of the application for approval of the Proposed Scheme and the application for confirmation of the CPO. In addition, non-statutory site notices were erected in 39 locations along the route of the Proposed Scheme in certain locations where lands are proposed to be compulsorily acquired or where it is proposed to acquire, restrict or otherwise interfere with existing public and private rights of way thereby supplementing the statutory notices for the CPO which were (i) published in a national and a local newspaper and (ii) sent to owners, lessees and occupiers of the lands included in the CPO.

The NTA notes the reference in this submission to article 19 of the Planning and Development Regulations 2001 (as amended) which relates to site notices which are required to be erected before the making of a “*planning application*” under section 34 of the Planning and Development Act 2000 (as amended). The Proposed Scheme is an application for approval of a proposed road development under section 51 of the Roads Act 1993 (as amended) and not a “*planning application*” under section 34 of the Planning and Development Act 2000 (as amended) and so the requirements of article 19 do not apply to the Proposed Scheme.

The NTA notes the comment in relation to the incorrect date which was noted on the original site notices. Upon realising this error, the NTA liaised directly with An Bord Pleanála and the public consultation period was extended beyond the original deadline of 20 June 2023 to 15 August 2023 in order to ensure full and effective public participation as outlined in the further notice which was published in a national and a local newspaper on 8 June 2023. In addition to the newspaper notice, the owners, lessees and occupiers were notified of this extended deadline by letters dated 13 June 2023 and new site notices, referencing this

extended public consultation period, were erected in all 39 locations in place of the original site notices on 8 June 2023.

f. Length of Consultation Period

The submission states that eight weeks is not sufficient time to make observations due to the complexity of the plans. The submission refers to Appendix 6.

The application as submitted to An Bord Pleanála on 28 April 2023 was complete and fully in accordance with the requirements of section 51 of the Roads Act 1993 (as amended) and the Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014.

Section 51(3)(a)(iii) requires that a period of not less than 6 weeks be provided for public consultation in relation to a proposed road development such as this. For the Proposed Scheme a period of public consultation of 8 weeks was provided from 25th April 2023 to 20th June 2023.

It is noted that the consultation period was extended from 20th June to the 15th August due to a discrepancy on the Site Notices, so in total there was a period of 16 weeks of statutory public consultation for the Proposed Scheme, in addition to the extensive non-statutory public consultation carried out.

g. Submission Fee

The submission states that the requirement to pay a fee of €50 to make an observation is not appropriate. It is noted that a representative of the Minister for Transport stated there would be no fee and the NTA never mentioned a fee at public meetings. The submission refers to Appendix 7.

The requirement to pay a €50 fee is set by An Bord Pleanála. Further information relating to fees associated with making a submission on a planning application can be found at <https://www.pleanala.ie/en-ie/fees>.

h. Right of Reply to NTA Response

The submission states that is objectionable to the fact that the NTA will be given an opportunity to respond to submissions raised but the person who made the submission not being given a right of reply. The submission notes that for previous CBC Schemes the NTA has been selective in the issues they deal with. The submission refers to Appendix 8.

An Bord Pleanála, in issuing submissions to the NTA, requested that the NTA make any submissions or observations that they may have in relation to the submissions received. The NTA, in preparing this response document, is following the request of An Bord Pleanála. It will be a matter for An Bord Pleanála to decide whether any further response is appropriate. The NTA has endeavoured to respond to all submissions made, and will continue to do so.

i. Errors and Omission in Plans

The submission notes that there are errors and omission in the plans, most notable is the failure to include on the maps an existing bus gate arrangement at either side of Terenure Village. The submission refers to Appendix 9.

The NTA does not agree with the statement that there are 'many omissions and errors in the plans'. Appendix 9 notes three specific errors, which are summarised and responded to below:

- The submission notes that the General Arrangement plans do not show the existing bus gates on either side of Terenure Village, and notes that these are not discussed in the text. The NTA notes this comment. Firstly it is noted that the features which the submission refers to are not Bus Gates, but rather Bus Priority Signals. The General Arrangement plans show the Proposed Scheme, rather than any existing features. As these Bus Priority Signals are not proposed to be retained, they do not feature on the General Arrangement plans.
- The submission notes that the date shown on the Site Notices incorrectly references the 30th of June rather than the 20th of June as the final date for submissions on the Proposed Scheme. The NTA has acknowledged this error, and in consultation with An Bord Pleanála, the consultation period was extended until the 15th of August. All Site Notices were replaced and referenced this new final date for submissions.
- The submission states that the author believes that there are a number of errors in the correlation between directions in traffic counts. The submission refers to Terenure Cross, junction 12-2 and Old Bridge Road ATC survey 10-2. The NTA notes this comment, however in the absence of specific

comment on what the author believes to be the errors, the NTA cannot comment on the observation, and is unable to determine any error in regard to the correlation between directions in traffic counts in the data referring to Terenure Cross, junction 12-2 and Old Bridge Road ATC survey 10-2.

2. Substantive Issues

a. Spawell Roundabout

The submission states that An Bord Pleanála should refuse permission for the conversion of the Spawell Roundabout to a signalised junction. The submission refers to Appendix 10.

The conversion of Spawell Roundabout to a signalised junction is proposed to significantly improve facilities for pedestrians and cyclists at this large junction, as well as to facilitate bus priority through the junction. Section 6.4.6.1.2.1 discusses the assessment of the qualitative impacts on the pedestrian infrastructure for Section 1 of the Proposed Scheme. Figure 3.37.1 below is an extract from Table 6.23 which documents the significance of effects for pedestrian impact during the operational phase.

It is noted that in relation to pedestrian facilities at the Spawell Roundabout, the Proposed Scheme increases the Level of Service (LoS) for pedestrians from D to B which is categorised as a Positive Significant change.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
Spawell Roundabout (roundabout to signalised junction)	J700	D	B	Medium	Medium	Positive Significant

Figure 3.37.1 Extract from Table 6.23 from Chapter 6 of the EIAR

Similarly, in relation to the cycle facilities, the Proposed Scheme increases the LoS for cyclists through this area from C to A which is categorised as a Positive Significant change as presented in Table 6.24 of the EIAR.

Table 6.24: Section 1 – Cycling Impact during Operational Phase

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
Access junction for Cheeverstown House to R817 Cypress Grove Road	J1050 - J1500	C	A	Medium	Medium	Positive Significant

Figure 3.37.2 Extract from Table 6.24 from Chapter 6 of the EIAR

The Junction Design Report included in Appendix A.6.3 of the EIAR documents the junction modelling carried out to support the conversion of the existing roundabout to a signalised junction.

b. HGV Access on Templeogue Road

The submission states that HGVs should not be permitted to proceed into the Templeogue Road at Templeogue Bridge. The submission refers to Appendix 11.

A number of alternative routes for traffic will be available for use following the implementation of the Proposed Scheme, including routes suitable for HGVs. Additionally, HGVs may travel inbound on Templeogue Road to Terenure Cross outside of the hours of operation of the Bus Gate.

Further details on available access routes and signage strategy to divert through traffic is presented in Section 2.2.3 of this response document.

c. Templeogue Road Bus Gate

The submission states that the inbound bus gate at Templeogue Road/Fergus Road should be rejected and that the existing bus priority signal at Lakelands Park should be utilised. Alternatively the submission states that the hours of operation of the bus gate should be limited to peak times. The submission refers to Appendix 12.

At present, bus priority along Templeogue Road is intermittent as described in section 6.3.2.3.1 of Chapter 6 Traffic and Transport:

Bus lanes are intermittent along Section 1 of the Proposed Scheme, but are present at the following locations:

- *In both directions between Spawell Service Station and Spawell Roundabout, operating 24 hours;*
- *Northbound between Spawell Roundabout and 90m west of R817 Cypress Grove Road, operating 24 hours (no designated bus lane southbound, however, there are three traffic lanes);*
- *Northbound between the east of Templeogue Village (out the Hollingsworth Cycles shop) and Springfield Avenue/ Templeville Road.*
- *Between the majority of Springfield Road and Fortfield Road, operating 24 hours; and*
- *Northbound for approximately 420m from Rathdown Avenue, operating Monday to Saturday between 07:00 – 10:00 and 12:30 – 19:00.*

In addition to the above physical infrastructure provision, a bus priority signal operates from the termination of the inbound bus lane at Lakelands Drive as far as Terenure Cross.

Given the intermittent nature of the bus priority measures in each direction, as well as the absence of safe, segregated cycle facilities, it is considered that the existing situation will not deliver the aim and objectives to provide enhanced walking, cycling and bus infrastructure on this key corridor, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor.

As such, options were evaluated using a sifting process and multi-criteria assessment (MCA), with the route and scheme along Templeogue Road identified as the preferred option to deliver the aim and objectives of the scheme. Alternative options considered could not meet the objectives to enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through provision of bus lanes and other measures to provide priority to bus movements over general traffic movements, and to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

A comprehensive options assessment process was undertaken for the scheme and is summarised in Section 3.3.2.1.2 of Chapter 3 Consideration of Reasonable Alternatives in Volume 2 of the EIAR as presented below:

Due to a number of existing constraints, the section of Templeogue Road between the Fortfield Road/Templeogue Road junction and the Terenure Road East/Templeogue Road junction, required specific consideration which required the identification of alternative scheme options (12 no.) for this section. An MCA was undertaken on these alternative scheme options in order to determine the most appropriate scheme for this section of Templeogue Road. These options, which all follow the same route, are briefly summarised below.

- *Option S2-1 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction.*
- *Option S2-2 would consist of providing bus lanes in each direction from Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West with the exception of a 50m section of Templeogue Road approaching Rathdown Park. Segregated cycle facilities would be provided along each side of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road. A bus gate would be implemented on Templeogue Road at Rathdown Park/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic would share with buses in the proposed bus lanes.*
- *Option S2-3 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of the Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road at Rathdown Avenue/Templeogue Road junction and Terenure Road West/Templeogue Road junction to ensure only buses and cyclists are permitted, local access traffic would share with buses in the proposed bus lanes.*
- *Option S2-4 would consist of providing bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to the Rathdown Park/Templeogue junction. An inbound bus lane would be provided on Rathdown Park and then connecting with the Rathfarnham CBC on*

Rathfarnham Road. An outbound bus lane would be provided on Fergus Road connecting Rathfarnham Road to Templeogue Road. From the Fergus Road/Templeogue Road junction to Rathdown Park/Templeogue Road junction outbound buses will share with general traffic in the general traffic lane. Cycle lanes would be provided along each side of Templeogue Road between Fortfield Road/Templeogue Road junction and the Terenure Road West/Templeogue Road junction.

- *Option S2-5 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-6 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. The outbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-7 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. The inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-8 would consist of providing continuous bus lanes in each direction along Templeogue Road from the Fortfield Road/Templeogue Road junction to Templeogue Road/Terenure Road West junction. A bus gate would be implemented on Templeogue Road to ensure only buses and cyclists would be permitted entry from the Fortfield Road/Templeogue Road junction to Terenure Road West/Templeogue Road junction. Between the aforementioned bus gates, local access traffic would share with buses in the proposed bus lanes. Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park.*
- *Option S2-9 would consist of providing bus lanes in each direction for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where an outbound bus lane would not be provided. The inbound general traffic lane on Templeogue Road from Rathdown Park to Terenure Cross would be removed to reduce the required land acquisition on residential properties approaching Terenure Cross. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access would be permitted). Segregated cycle facilities would be provided along each side of Templeogue Road between Fortfield Road and Lakelands Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.*
- *Option S2-10 would consist of providing an outbound bus lane along Templeogue Road from Rathdown Park to Fortfield Road. An inbound bus lane would be provided along from Rathdown Park/Templeogue Road junction to Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from the Springfield Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access would be permitted). No inbound traffic lane would be provided between the Fortfield Road/Templeogue Road junction and the Rathdown Park/Templeogue junction (Local access would be permitted). Outbound cycle facilities would be provided along Templeogue Road from Terenure Cross to Rathdown Park. Between the Lakelands Park/Templeogue Road junction and the Terenure Road West/Templeogue Road junction cyclists*

would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West. The removal of the inbound general traffic lane is proposed on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross.

- Option S2-11 would consist of providing bus lanes in each direction for the majority of the route along Templeogue Road, with the exception of a 300m section of Templeogue Road from Rathdown Park to Terenure Cross where an outbound bus lane would not be provided. The removal of the inbound general traffic lane is proposed on Templeogue Road from Rathdown Park to Terenure Cross to reduce the required land acquisition on residential properties approaching Terenure Cross. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park (Local access would be permitted). Outbound cycle facilities provided along Templeogue Road from Terenure Cross to Rathdown Park. Between Lakelands Park/Templeogue Road junction and Terenure Road West/Templeogue Road cyclists would be able to divert onto an alternative route via Lakelands Park – Greenlea Grove – Greenlea Road – Terenure Road West.
- Option S2-12 would consist of providing an outbound bus lane along Templeogue Road from Rathdown Park to Springfield Avenue. An inbound bus lane would be provided between the Olney Grove/Templeogue Road junction and the Terenure Road West/Templeogue Road junction. A bus gate would be implemented on Templeogue Road to ensure only inbound (north-eastbound) buses and cyclists would be permitted entry from Springfield Avenue/Templeogue Road junction to Rathdown Park/Templeogue junction (Local access would be permitted). No inbound traffic lane would be provided between the Fortfield Road/Templeogue Road junction and Rathdown Park/Templeogue junction (Local access would be permitted). A two-way cycle route would be provided through Bushy Park adjacent to Templeogue Road. A shared/mixed street would be provided along Rathdown Drive. Segregated cycle facilities would be provided in the outbound direction from the Terenure Road West/Templeogue Road junction to Rathdown Drive pedestrian access/new proposed Toucan crossing. The inbound general traffic lane on Templeogue Road would be removed from Olney Grove to Terenure Cross, to reduce the required land acquisition on residential properties approaching Terenure Cross.

A multi-criteria assessment of all scheme options was undertaken. The assessment sub-criteria which were differentiators between scheme options included Capital Cost, Transport Reliability and Quality, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Pedestrian Safety, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character.

The assessment concluded that 'Option S2-12 was identified as having significant benefits over other options in relation to Capital Cost, Flora and Fauna, Landscape and Visual, Air Quality and Noise and Vibration. Option S2-12 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route'.

The Proposed Scheme along the Templeogue Road proposes an inbound bus gate which will be operational between 06:00 and 20:00 seven days a week. An analysis of existing traffic flow levels on the corridor do not show a significant reduction in traffic volumes through the day (relative to peak hours), and hence bus gate operation during the hours noted above is necessary to provide fast, reliable bus journey times for all services.

d. Terenure Road West / Templeogue Road Junction

The submission states that a separate pedestrian phase for lights at the junction of Terenure Road West and Templeogue Road should be omitted. The submission refers to Appendix 13.

The NTA notes this comment. The proposal for a single phase for pedestrians is proposed to improve facilities for pedestrians at this location. Figure 3.37.3 is an extract from Table 6.23 in Chapter 6 of the EIAR which indicates the significance of effects for pedestrian impact during operational phase. It is noted that the Level of Service LoS for pedestrians at this junction increases from D to B following the implementation of the Proposed Scheme, which represents a Positive, Very Significant effect.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R137 Templeogue Road / Springfield Road priority junction	J2250	D	B	Medium	High	Positive Very Significant
R137 Templeogue Road / Fortfield Road / Bushy Park House signalised junction	J2450	F	B	High	Medium	Positive Very Significant
R137 Templeogue Road / Rathdown Avenue priority junction	J2800	C	A	Medium	Medium	Positive Significant
R137 Templeogue Road / Lakelands Park priority junction	J3100	D	B	Medium	Low	Positive Moderate
R137 Templeogue Road / Rathdown Park priority junction	J3375	E	B	Medium	Low	Positive Moderate
R137 Templeogue Road / Olney Crescent priority junction	J3450	D	B	Medium	Low	Positive Moderate
R137 Templeogue Road / Fergus Road / priority junction	J3500	D	B	Medium	Medium	Positive Significant
R137 Templeogue Road / R818 Terenure Road West / R137 Terenure Place signalised junction	J3700	D	B	Medium	High	Positive Very Significant

Figure 3.37.3 Extract from Table 6.23 of Chapter 6 of the EIAR

Due to the proximity of this junction to Terenure Cross, both junctions have been modelled together. The results of this modelling are presented in the Junction Design Report (JDR) included in Appendix A6.3 of the EIAR. It is noted that the junctions as a whole operate slightly over capacity, however the Terenure Road West Arm operates within capacity during the AM and PM peaks, as indicated in Figure 3.37.4 below.

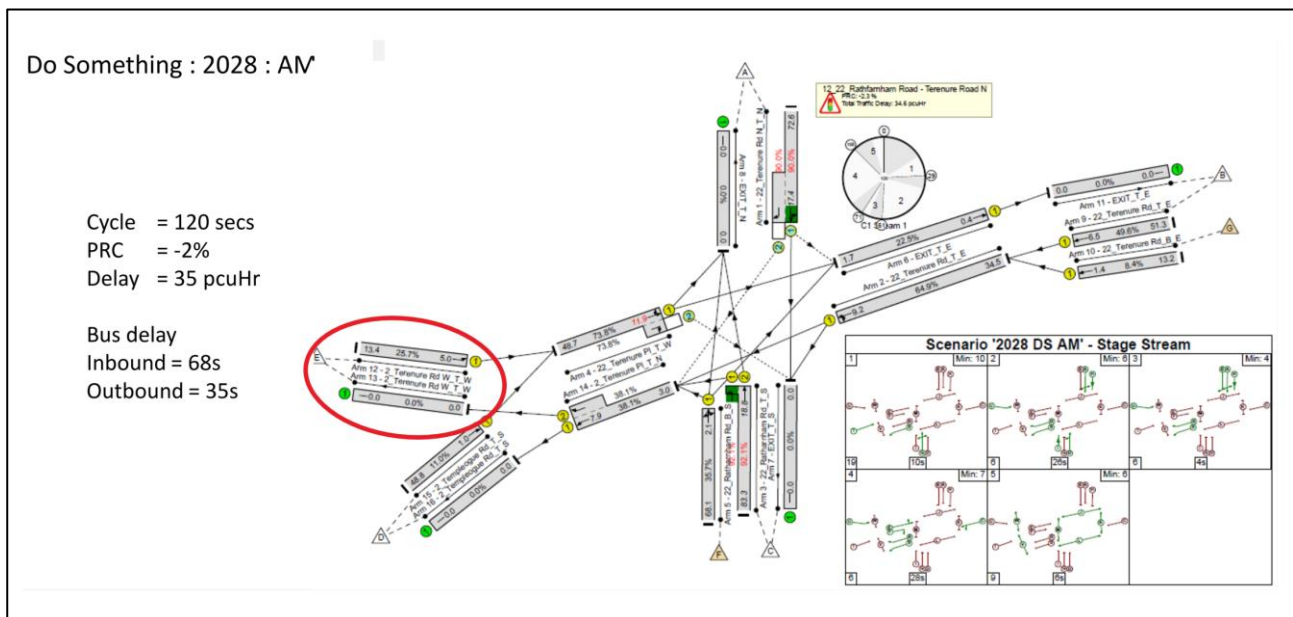


Figure 3.37.4 Extract from JDR showing AM Peak hour at the Terenure Road West / Templeogue Road Junction

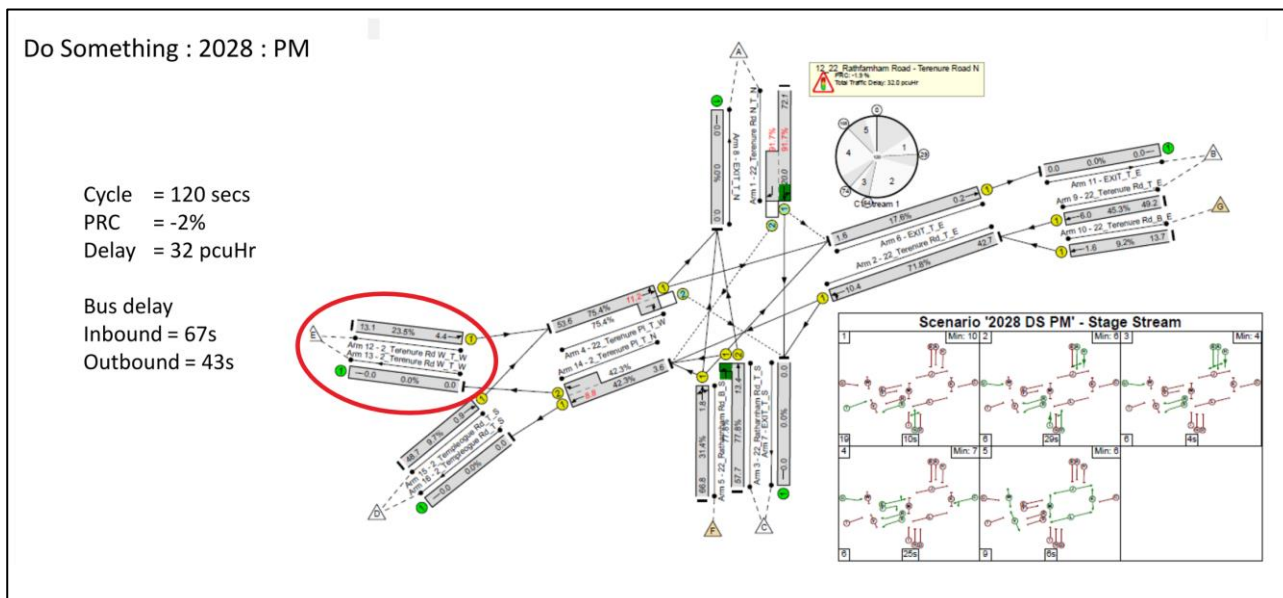


Figure 3.37.5 Extract from JDR showing PM Peak hour at the Terenure Road West / Templeogue Road Junction

e. Pearse Bridge

The submission states that road alterations proposed at Rathfarnham Road close to Pease Bridge should not be permitted, primarily due to the presence of bats at that site. The submission refers to Appendix 14.

The NTA notes these comments. Section 12.2.3.6.1 of Chapter 12 of the EIAR notes the transect surveys which have been carried out:

“Walked bat activity transect surveys were conducted along preselected transect routes at seven locations along the Proposed Scheme. Transect routes were located at La Touch Bridge, Portobello, referred to as CBC1012BT001, Pearse Bridge Rathfarnham referred to as CBC1012BT002, along the River Dodder within Bushy Park referred to as CBC1012BT003, adjacent to Rathfarnham Castle, referred to as CBC1012BT004, Owendore Crescent referred to as CBC1012BT005, adjacent to Terenure College, referred to as CBC1012BT006 and adjacent to Dodder Valley Park, referred to as CBC1012BT007. The walked transect routes are shown on Figure 12.1.1 in Volume 3 of this EIAR.

Walked transect surveys comprised of four visits to each transect route across the three seasons of autumn, spring and summer as guided by Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016) (see Table 12.2. for specific dates). Surveys were conducted in June to August 2018, September and October 2019, May 2020, and July 2020. Surveys commenced approximately 30 minutes after sunset to ensure that bats had emerged from their roosts. Surveys involved the surveyor walking each transect route at a slow pace using with a handheld ultrasound bat detector (Elekon Batlogger M) to record any bat species present.

Transect routes CBC1012BT001, CBC1012BT002, CBC1012BT003, CBC1012BT004 and CBC1012BT006 were surveyed across all seasons. Transect routes CBC1012BT005 and CBC1012BT007 were surveyed in spring and summer 2020 to capture changes to the Proposed Scheme.

All bat calls were analysed using Elekon BatExplorer software. Calls were manually identified against species descriptions provided within British Bat Calls - A Guide to Species Identification (Russ 2012).”

In relation to Pearse Bridge the following is noted in relation to the surveys carried out:

“Bridges in the footprint of the Proposed Scheme, were visually inspected to assess their potential to support roosting bats. One bridge with visible crevices was identified: namely Pearse Bridge Rathfarnham. The bridge was graded to inform the decision on whether or not follow up dusk / dawn surveys were required. The standard approach to bridge assessments uses four simple grades to describe the presence, or likely presence of bats. It follows Billington and Norman (1997) and involves a grading system where the bridges examined are categorized as follows:

- *Grade 0 = no potential for bats: These are bridges where there are no opportunities for bats to roost in crevices or under mats of dense ivy. Modern concrete bridges and masonry bridges which have been well-pointed often fall under this category.*

- *Grade 1 = crevices possibly of use to bats: These are bridges which have small and a limited number of crevices which may be sub-optimal, perhaps due to dampness or localised disturbance. The possibility that bats could use these crevices cannot be entirely ruled out but is regarded to be low.*
- *Grade 2 = ideal crevices but no bat present: These are generally more substantial crevices, often more than 150mm deep, dry and sheltered which offer good roosting opportunities. No evidence of bats is confirmed. The possibility that bats could use these crevices is regarded to be likely.*
- *Grade 3 = evidence of bats: Bats are seen in-situ or their droppings or other field signs are seen.*

Following on from the visual assessment, which identified a large deep suitable crevice under the barrel of the bridge which could not be examined fully due to height, it was deemed necessary to undertake follow up dawn surveys at Pearse Bridge to establish if the bridge is being used as a roost.

Bat re-entry surveys were conducted at Pearse Bridge Rathfarnham, referred to as CBC1012RI001 between 2018 and 2020. The dawn re-entry surveys were conducted on the 27th July 2018, 16th October 2019, 22nd May 2020 and 24th July 2020 and commenced approximately 1.5 to 2 hours before sunrise to approximately 15 minutes after sunrise (in accordance with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016). The surveys were carried out using handheld ultrasound bat detectors (Elekon Batlogger M) and direct observation.

All bat calls were analysed using Elekon BatExplorer software. Calls were manually identified against species descriptions provided within British Bat Calls - A Guide to Species Identification (Russ 2012)."

"The trees identified as having potential to support roosting bats, i.e., trees containing PRFs, are listed in Table 12.8 and shown on Figure 12.7.2 in Volume 3 of this EIAR. Each tree, or grouping of homogenous trees, was identified with regard to their potential to support roosting bats after Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2016). Trees with negligible suitability for roosting bats are not described or mapped as they are assessed as not having potential to support roosting bats. Four of the trees containing PRFs will be removed as part of the Proposed Scheme, as indicated on the Landscaping General Arrangement (BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001 to 0037) for the Proposed Scheme."

It is noted in Section 12.5.1.4.1.2 that pre-construction confirmation surveys will be undertaken in all locations identified as Potential Roof Features (PRFs)

"The NTA will ensure that a confirmatory pre-construction survey of all trees identified as containing PRFs or not to be removed within the boundary of the Proposed Scheme shall be rechecked for Potential Roost Features (PRFs) by an experienced bat specialist engaged by the NTA as part of the preconstruction surveys. The Appraisal will:

- 1. Confirm that previously identified PRF trees which are to be retained are still standing; and*
- 2. Identify whether new PRF features (if any) may have developed owing to damage or management change to a PRF tree in the intervening period between the original surveys and grant of planning."*

In addition to mitigation proposals that may arise as result of the pre-construction survey (e.g. emergence surveys and confirmation of roost) it is proposed to install generalist / self-cleaning bat boxes for each PRF tree that is confirmed to be removed.

The NTA is confident that the Proposed Scheme has been assessed in line with best practice approaches in this regard.

f. Terenure Cross

The submission states that the new right turn permitted at Terenure Cross should be permitted for buses only and not for taxis and cyclists. The submission further states that the left turn slip lane for general traffic should be maintained. The submission refers to Appendix 15.

The NTA notes these comments. Section 32 of S.I. No. 182/1997 - Road Traffic (Traffic and Parking) Regulations, 1997 states the following in relation to bus lanes.

"(1) A bus lane shall be indicated by means of traffic sign number RUS 028 or traffic sign number RUS 029 used in association with traffic sign number RRM 024, and a contra flow bus lane shall be indicated by means of traffic sign number RUS 030 used in association with traffic sign number RRM 024.

(2) A person shall not enter a bus lane with a vehicle other than an omnibus or a pedal cycle during the period of operation of the bus lane which shall be indicated on an information plate.

(3) A person shall not enter a contra flow bus lane with a vehicle other than an omnibus.

(4) A person shall not enter a bus only street with a vehicle other than an omnibus except for the purpose of access.

(5) (a) Sub-articles (1) and (2) shall not apply to a vehicle crossing a with flow bus lane or a contra flow bus lane solely for the purpose—

(i) of entering or leaving premises or property adjacent to such a bus lane, or

(ii) of entering or leaving a road inset adjacent to such a bus lane in order to load or unload goods.

(b) Sub-article (2) shall not apply to a taxi or a wheelchair accessible taxi which is being used in the course of business.”

As such, pedal cycles and taxis are permitted to use bus lanes.

The removal of slip lanes for general traffic is considered best practice. Section 4.4.3 of DMURS notes the following:

“[In general designers should] Omit left turn slips, which generally provide little extra effective vehicular capacity but are highly disruptive for pedestrians and cyclists. Where demand warrants, they may be replaced with left turning lanes with tighter corner radii.”

Slip lanes for general traffic have therefore been removed throughout the Proposed Scheme where practicable.

g. Terenure Road East

The submission states that proposed road widening at Terenure Road East should not be permitted, particularly on account of the removal of mature trees, which will destroy the village streetscape. The submission also notes that there is an existing bus priority light in this location. The submission refers to Appendix 16.

A detailed response to the issue raised by this submission has been provided in Section 2.4.3 of this report.

h. Traffic implications of proposed traffic management measures in Rathgar and Rathmines

The submission states that the applicant has not adequately assessed the knock on traffic implications of the one way proposal for Rathgar Road and the Lower Rathmines Road bus gate. The submission notes that there is no need for the bus gate to operate on Saturday and Sunday. The submission refers to Appendix 17.

A detailed response to the issue raised by this submission has been provided in Section 2.4.3 and 2.5.3 of this report.

3. Other Issues

a. Templeogue Road / Springfield Junction

The submission notes that if the intended diversion route for inbound traffic is to be along Dodder View Road, there should be a dedicated right turn lane at the Templeogue Road/Springfield Junction and that existing general traffic slip lanes should be retained. The submission refers to Appendix 18.

The Junction Design Report (JDR) included in Appendix A6.3 in the EIAR notes that this junction operates within capacity in the AM and PM peaks, as illustrated in Figure 3.37.6 below:

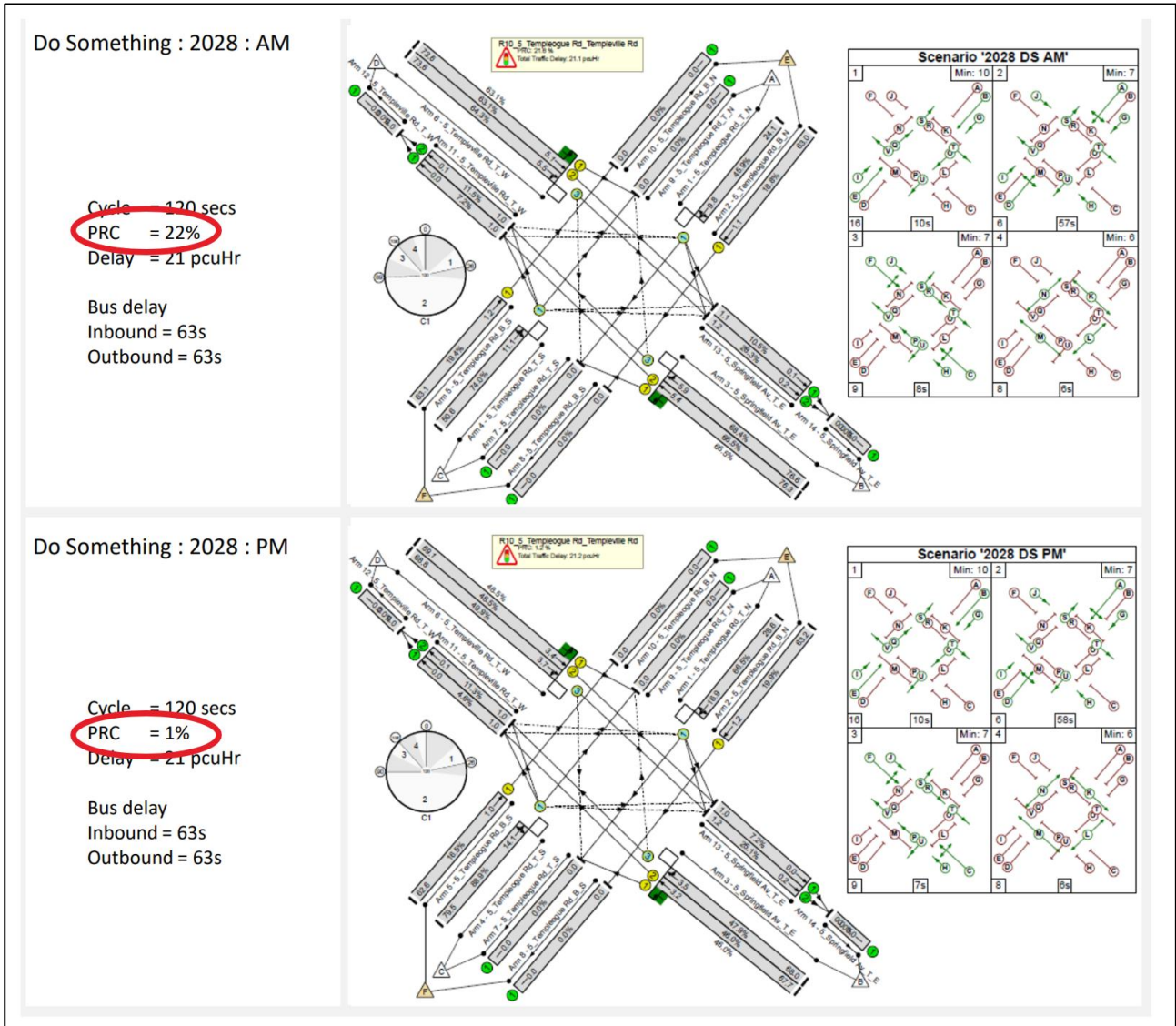


Figure 3.37.6 Extract from JDR showing junction performance at Templeogue Road / Springfield Road Junction

It is further noted that signal controlled priority is proposed either side of Templeogue Village to prevent general traffic from queuing through the village.

In relation to the suggestion that the existing left turn slip lanes be retained, as highlighted in response to item 15 above, the removal of slip lanes for general traffic is considered best practice. Section 4.4.3 of DMURS notes the following:

"[In general designers should] Omit left turn slips, which generally provide little extra effective vehicular capacity but are highly disruptive for pedestrians and cyclists. Where demand warrants, they may be replaced with left turning lanes with tighter corner radii."

Slip lanes for general traffic have therefore been removed throughout the Proposed Scheme where practicable.

b. Fortfield Road Turn Bans

The submission states that the bans on right turns from Fortfield Road should not proceed. The submission refers to Appendix 19.

The proposed turn bans from Fortfield Road onto Greenlea Road and Laverna Grove are proposed to prevent traffic from diverting onto residential streets which would not be suitable for such traffic. Alternative routes are available for residents to access their properties. A detailed response to this issue has been provided in Section 2.2.3 of this response.

c. Templeogue Road Bus Stops

The submission notes that the two busy bus stops adjacent to Fortfield Road on the Templeogue Road should be retained. The submission refers to Appendix 20.

As noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

- *The criteria that are considered when locating a bus stop are as follows;*
- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

The Bus Stop Review Report notes the following in relation to the existing bus stops on Templeogue Road at this section of the Proposed Scheme:

Bus Stop 1158

Stop to be amended? Removed

Reason for decision: This stop is being consolidated with 1159 at a location just south of Fortfield Road to improve accessibility to Fortfield Road while providing more consistent stop spacings.

Bus Stop 1159

Stop to be amended? Yes – stop to be moved 150m west

Reason for decision: This location serves to consolidate stops 1158 and 1159 into one stop, located adjacent to the Fortfield Road junction, which improves accessibility to Fortfield Road while providing more consistent stop spacings. The proposed location is also within a bus lane rather than a traffic lane which will minimise its impact.

The proposal to move consolidate bus stop 1158 and 1159 into a single stop aligns with the bus stop location principles namely:

- It is located close to the Fortfield Road junction increasing accessibility from the large residential catchment along, and accessed off, Fortfield Road. It is noted that while there is a preference for a bus stop to be located on the exit side of a junction, as there is no bus lane on the exit side in this instance it is preferable to locate the stop at its proposed location;

- It is located close to pedestrian crossings facilitating safe access to the eastern side of Templeogue Road, including Our Lady's School – existing stops are c. 120m from the nearest controlled crossing point;
- It facilitates better stop spacing with 400m between the prior and subsequent bus stops – existing distance between stops is 320m (between stop 1157 and 1158) and 260m (between stop 1158 and 1159);

The same footpath width is available at proposed location as the current location

d. CPO on Templeogue Road at Bushy Park and Rathdown Drive

The submission states that the compulsory purchase orders on the stretch of Templeogue Road adjacent to Bushy Park and Rathdown Drive should be refused. The submission refers to Appendix 21.

The submission references the potential for unassessed impact on existing trees in this location. The Arboricultural Impact Assessment Report (AIAR), included in Appendix D of the Preliminary Design Report (PDR) in the Supplementary Information, documents the trees to be retained and the trees to be removed to facilitate the delivery of the Proposed Scheme. Figure, Figure 3.37.8 and Figure 3.37.9 are extracts from the Tree Protection Plans, included in Appendix C of the AIAR, which indicate that the vast majority of the trees in the locations referenced by the submission, are to be retained.

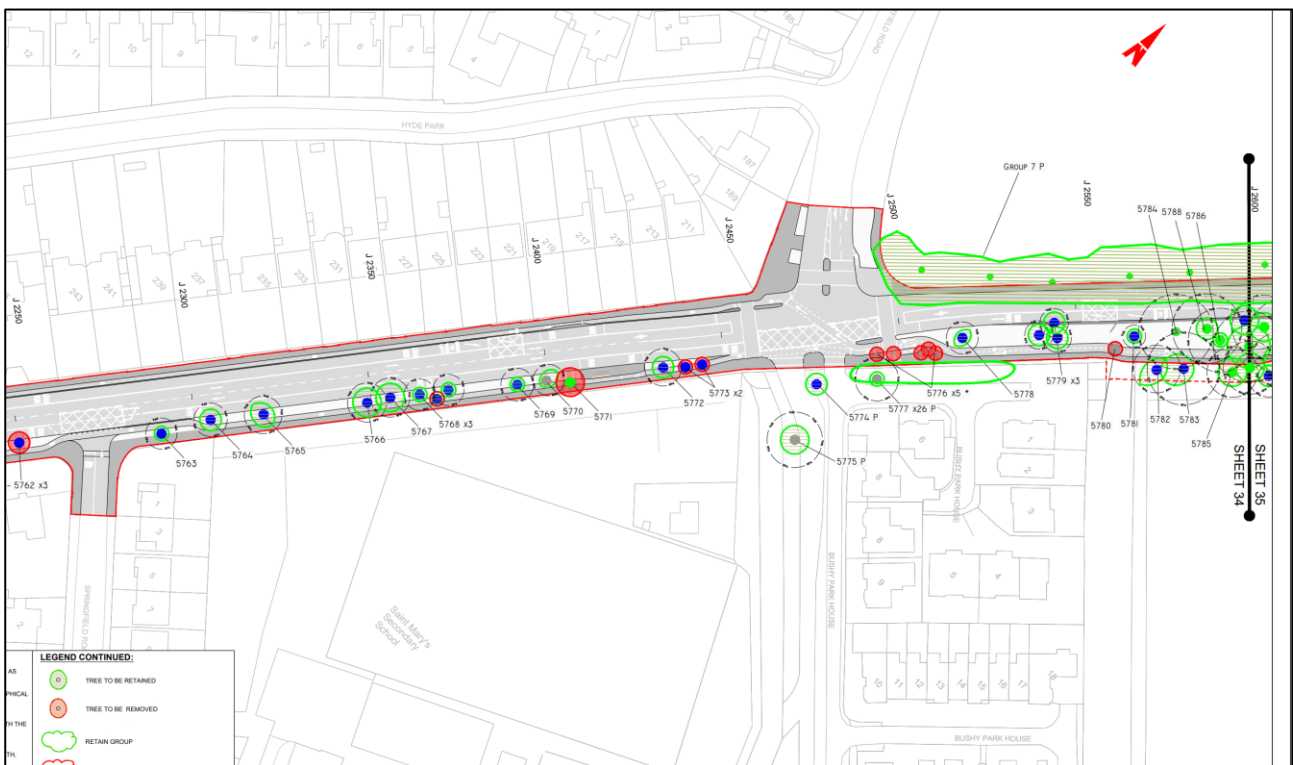


Figure 3.37.7 Extract from Tree Protection Plan Sheet 34 of 37

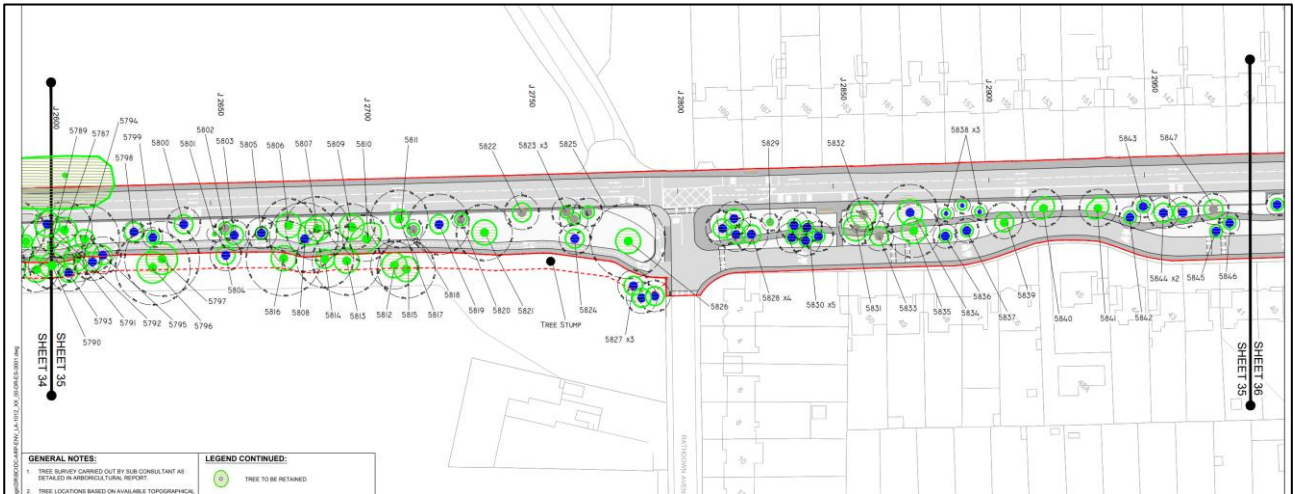


Figure 3.37.8 Extract from Tree Protection Plan Sheet 35 of 37

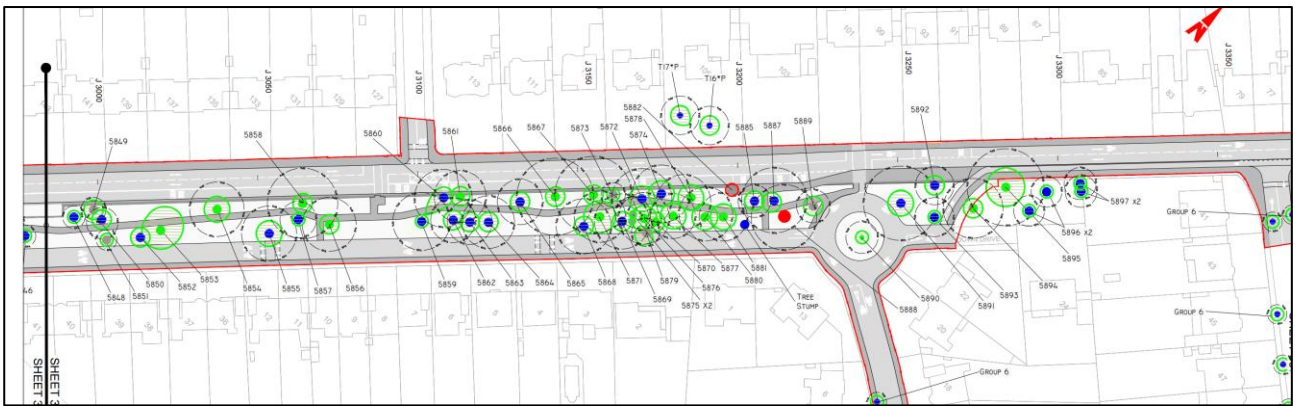


Figure 3.37.9 Extract from Tree Protection Plan Sheet 36 of 37

Furthermore, it is noted that new trees are proposed within these areas, to mitigate the proposed removal of trees. Figure 3.37.10, Figure 3.37.11 and Figure 3.37.12 are extracts from the Landscape General Arrangement Plans showing the proposals for these areas. Five new trees are proposed in this area in total, resulting in a net loss of two trees.

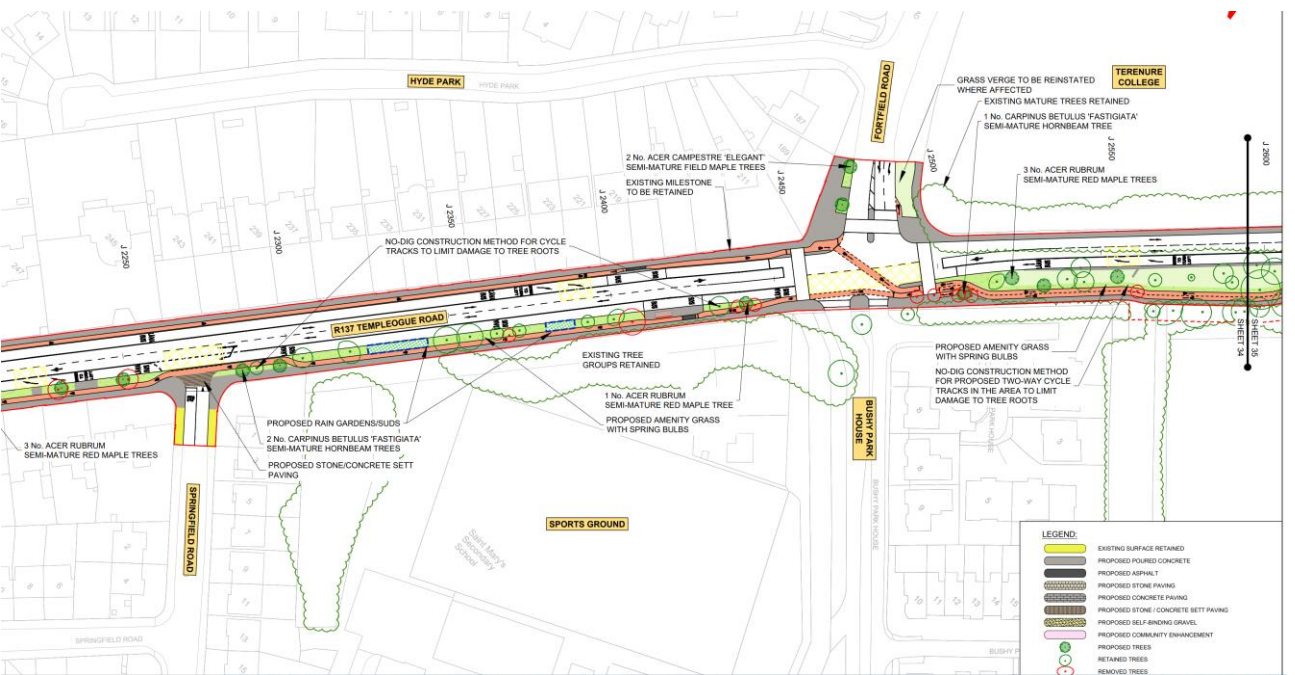


Figure 3.37.10 Extract from Landscape General Arrangement Plan Sheet 34 of 37

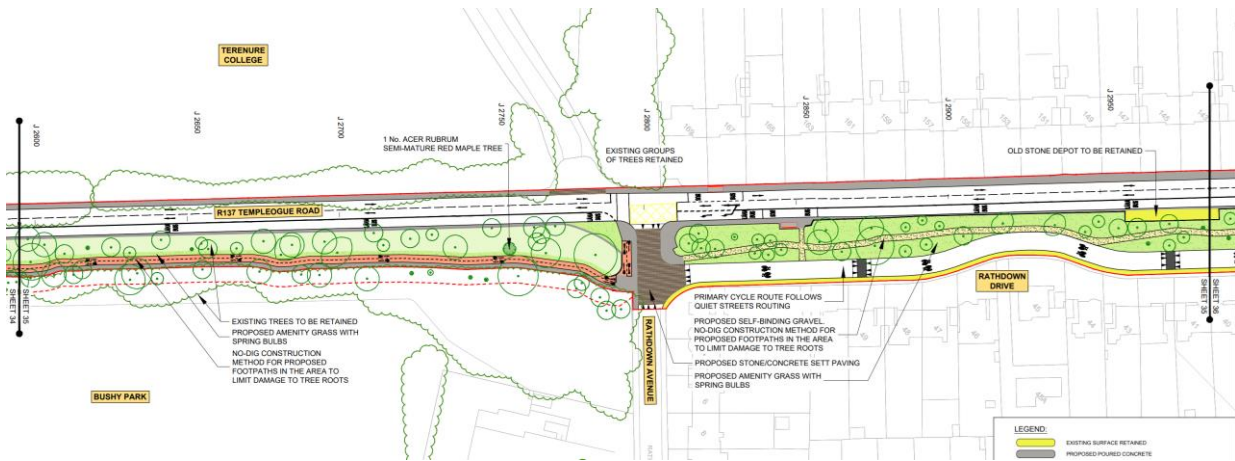


Figure 3.37.11 Extract from Landscape General Arrangement Plan Sheet 35 of 37

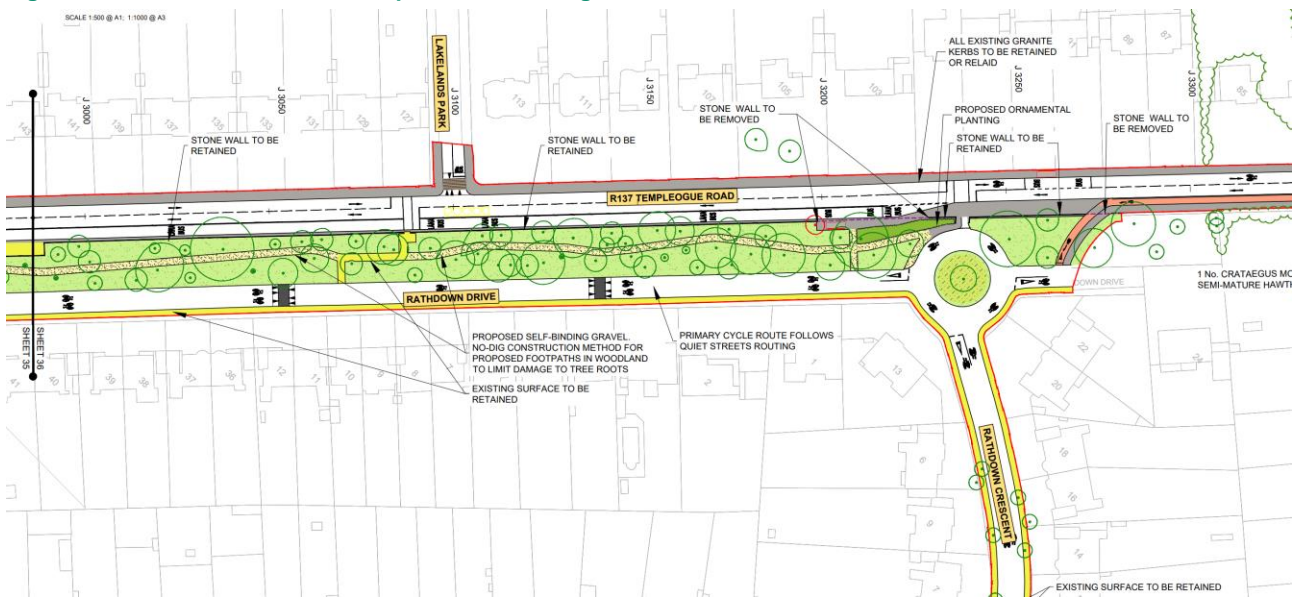


Figure 3.37.12 Extract from Landscape General Arrangement Plan Sheet 36 of 37

Section 17.4.4.1.1 of Chapter 17 of the EIAR notes the following in relation to the Impact on Townscape and Streetscape Character for this section of the Proposed Scheme.

The sensitivity of this section is low / high. The Operational Phase of the Proposed Scheme involves changes to the existing layout of roads and junctions. Section of the route will have experienced widening of the road corridor, and this will result in permanent land-take from a number of residential properties, including loss of private outdoor area, reinstatement of boundaries at a setback alignment and permanent loss of garden trees and other vegetation removed during the Construction Phase. However, there will be substantial tree planting throughout this section, to medians, roadside open spaces and streets which will more than compensate for the impact from removed trees. There will be a notable improvement at Templeogue Arch where the setting of this historic landmark public access will be provided, and an appropriate public realm scheme will be provided. There will be improvements to open space at Bushy Park and Rathdown Drive with provision of upgraded pedestrian and cycle access. The Operational Phase will not alter the overall townscape character along this section of the Proposed Scheme but there will be an overall improvement to streetscape amenity which will become more pronounced as proposed planting matures. The magnitude of change in the baseline environment is medium / high.

The townscape / streetscape impact of the Operational Phase is assessed to be Positive, Moderate / Significant and Short-Term becoming Positive, Significant and Long-Term.

e. Rathdown Avenue Turn Ban

The submission states that the ban on a right turn from Templeogue Road into Rathdown Avenue should be time limited to avoid cutting off vehicular access to Bushy Park. The submission refers to Appendix 22.

The NTA notes this comment. The proposed turn bans from Templeogue Road onto Rathdown Avenue and Rathdown Park is proposed to prevent through traffic from utilising this residential street. Alternative access routes are available for residents to access their properties as well as for patrons of Bushy Park to access on street parking. A detailed response to this issue has been provided in Section 2.2.3 of this response.

f. Construction Sequencing

The submission notes that the construction programme is not synchronised with other corridors. The submission refers to Appendix 23.

Section 5.4 of Chapter 5 of the EIAR sets out the Construction Programme for the Proposed Scheme. The following is noted:

“An indicative programme for the Proposed Scheme is provided in Table 5.2. The total Construction Phase duration for the overall Proposed Scheme is estimated at approximately 24 months. However, construction activities in individual sections will have shorter durations as outlined in Section 5.3. The programme identifies the estimated duration of works at each section. The location of each section / sub-section along the Proposed Scheme is shown in Figure 5.1 in Volume 3 of this EIAR.

Table 5.2: Proposed Scheme Construction Programme

Section No.	Estimated Construction Duration	Approximate Length (m)	Year 1				Year 2			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Section 1a	2 months	480								
Section 1b	6 months	Roundabout								
Section 1c	3 months	700								
Section 1d	7 months	735								
Section 1e	3 months	635								
Section 1f	6 months	915								
Section 1g	3 months	1490								
Section 2a	8 months	850								
Section 2b	9 months	460								
Section 2c	9 months	630								
Section 2d	6 months	710								
Section 2e	8 months	830								
Section 3a	6 months	630								
Section 3b	9 months	1275								
Section 4a	8 months	920								
Section 4b	8 months	880								
Section 4c	6 months	720								
Section 4d	3 months	400								

In order to achieve the overall programme duration, it will for the most part, be necessary to work on more than one section / sub-section at any one time. The programme has been prepared with a view to providing as much separation as practicable between sections under construction at any given time. This has been done in order to minimise traffic disruption and facilitate the ease of movement of sustainable modes, bus services and goods along the Proposed Scheme.”

Section 5.9 of Chapter 5 of the EIAR notes the following:

“The likely timelines of the Proposed Scheme construction works have considered the potential for simultaneous construction of, and cumulative impacts with other infrastructure projects and developments which are proposed along, or in the vicinity of the Proposed Scheme. The likely significant cumulative impacts caused by the Proposed Scheme in combination with other existing or planned projects were identified and assessed in Chapter 21 (Cumulative Impacts & Environmental Interactions) of this EIAR.

Interface liaison will take place on a case-by-case basis through the NTA, as will be set out in the Construction Contract, to ensure that there is coordination between projects, that construction access locations remain unobstructed by the Proposed Scheme works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately.”

g. Cumulative effect of traffic management proposals

The submission states that this scheme together with the Kimmage scheme proposes to block two of the three main arteries into the city from the south west. The submission states that no other part of the city is affected as severely, and that this impact is unfair and disproportionate. The submission refers to Appendix 24.

Section 21.2.7 of Chapter 21 of the EIAR outlines the cumulative traffic modelling which has been undertaken for the Operation Phase of the Proposed Scheme. The following is noted:

“For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational. This has been done for the following reasons:

- *It is the NTA’s intention that all Core Bus Corridor schemes would be completed by 2028, therefore the scenario is considered to be reasonable; and*
- *It is the largest scale option and therefore represents a reasonable worst case for operational effects in terms of redistribution of traffic and traffic related effects.*

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme (apart from the Core Bus Corridor Infrastructure Works elements) i.e. the new BusConnects routes and services (as part of the revised Dublin Area bus network), new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios.

In 2028, other notable Do Minimum transport schemes include; the roll out of the DART+ Coastal South project, LUAS Green Line capacity enhancement and the Greater Dublin Area Cycle Network Plan implementation (excluding BusConnects Core Bus Corridor elements). As outlined above, the 2043 Do Minimum scenario assumes the full implementation of the GDA Strategy schemes and so assumes that proposed major transport schemes such as MetroLink, LUAS line extensions to Lucan, Finglas, Poolbeg and Bray are all fully operational.

Appendix A6.2 (Transport Modelling Report) in Volume 4 of the EIAR, contains further information on the modelling assumptions contained within the Do Minimum scenario including the full list of transport schemes included.

For non-traffic modelling related CEA, the assessment is on the basis that the other shortlisted projects would all be in an operational state for the assessment. For traffic modelling related CEA, the Operational Phase scenario has been modelled including for background growth from reasonably foreseeable projects in line with regional growth projections and local development plans to capture the wider traffic effects expected from projected development in Dublin.”

A detailed response to this issue has been provided in Section 2.1.1 of this response.

h. Lack of additional buses in the south west city

The submission notes that despite a clear intent to shift people to buses, no material extra buses are being provided in the south west city. The submission notes that this is likely to result in people badly affected by the scheme, being unable to board buses. The submission notes that it is premature to approve the scheme before buses are put in place. The submission refers to Appendix 25.

The Proposed Scheme will facilitate opportunities to change bus network capacity operating along the corridor due to the extensive priority provided. This will allow increases in service provision as demand increases.

As noted in 6.4.6.1.14 Increased Bus Frequency – Resilience Sensitivity Analysis of Chapter 6 states the following:

For the purposes of this EIAR and the transport modelling undertaken in support of the EIAR, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios. This rollout is currently underway. The rationale for undertaking this approach was that the planning consent being sought and which this EIAR supports is solely for the infrastructural improvements associated with providing bus priority and other sustainable modes measures along the Proposed Scheme.

This analysis, however, is conservative as the bus priority infrastructure improvements and indeed the level of protection it will provide to bus journey time consistency and reliability will provide a significant level of resilience for bus services that will use the Proposed Scheme from implementation into the future. The resilience provided by the Proposed Scheme will allow the service pattern and frequency of bus services to be increased into the future to accommodate additional demand without having a significant negative impact on bus journey time reliability or the operation of cycle and pedestrian facilities. In order to assess this resilience and the potential impacts of this resilience on carbon emissions, an additional analysis has been undertaken.....

i. Journey Time Savings

The submission notes that there was an assertion that there would be significant time savings as a result of the Proposed Scheme, but that this has not been achieved, particularly in the Tallaght to Terenure section. The submission refers to Appendix 26.

The submission quotes the Information Brochures published in January 2019 outlining the Emerging Preferred Route (EPR) for the then Tallaght to Terenure CBC (Section 1 of the Proposed Scheme) and the Rathfarnham to City Centre CBC (Sections 2-4 of the Proposed Scheme). The submission misquotes these documents and asserts that these documents state that the current journey time is 32 minutes for the Tallaght to Terenure CBC and 75 minutes for the Rathfarnham to City Centre CBC. What these documents state is that the journey time is **up to** 32 minutes and **up to** 75 minutes respectively (see Figure 3.37.13 and Figure 3.37.14). This is intended to highlight the current worst case journey times along these corridors which currently experience poor bus journey time reliability.

2.3 Key Facts:

- Approximate number of properties that may be impacted: **40**
- Approximate number of on-street parking spaces that may be removed: **15**
- Approximate number of roadside trees that may be removed: **15**
- Approximate route length: **4kms**
- Approximate new cycle lane length: **1.2kms**
- Current bus journey time **up to 32 mins**
- BusConnects journey time: **10 - 12 mins**
- Future bus journey time without BusConnects: **45 mins +**

Figure 3.37.13 Extract from Tallaght to Terenure CBC EPR Information Brochure

2.3 Key Facts

- Approximate number of properties that may be impacted: **255**
- Approximate number of on-street parking spaces that may be removed: **50**
- Approximate number of roadside trees that may be removed: **45**
- Approximate route length: **6kms**
- Approximate new cycle lane length: **7kms**
- Current bus journey time: up to **up to 75 mins**
- BusConnects journey time: **25-30 mins**
- Future Bus journey time without BusConnects: **90 mins +**

Figure 3.37.14 Extract from Rathfarnham to City Centre CBC EPR Information Brochure

Section 6.4.6.1.11 of Chapter 6 of the EIAR documents the predicted journey time savings and journey time reliability benefits of the Proposed Scheme, which is summarised as follows:

“The change in total bus journey time for all buses travelling along both the Templeogue and Rathfarnham sections of the Proposed Scheme, is shown in Table 6.56.”

Table 6.56: Total Bus Journey Time

Peak Hour	Do Minimum (vehicle.minutes)	Do Something (vehicle.minutes)	Difference (vehicle.minutes)	%Difference
2028 AM	2240.5	2059.5	-181.0	-8%
2028 PM	2195.2	1930.4	-264.9	-12%
2043 AM	2142.7	1962.8	-179.9	-8%
2043 PM	2050.8	1860.0	-190.8	-9%

Based on the results presented in Table 6.72 modelling indicates that the Proposed Scheme will reduce total bus journey times along the Proposed Scheme by up to 12% in 2028 and 9% in 2043. Based on the AM and PM peak hours alone, this equates to 7.4 hours of savings in 2028 and 6.2 hours in 2043 combined across all buses when compared to the Do Minimum. On an annual basis this equates to approximately 5,600 hours of bus vehicle savings in 2028 and 7,700 hours in 2043, when considering weekday peak periods only.”

Further details on the scheme benefits are provided in Section 2.1.1 of this response.

j. LUAS

The submission notes that there is an intention to construct a LUAS on this corridor in future. It is noted that this would be unfair to residents to cause such disruption to construct the Proposed Scheme and then cause further disruption in future to construct a LUAS scheme. The submission refers to Appendix 27.

The NTA notes this comment. The Transport Strategy for the Greater Dublin Area 2022 – 2042 indicates a potential LUAS along this route to be delivered after 2042. Section 12.3.8 of the Transport Strategy for the GDA states the following in relation to these future LUAS routes:

“As referenced in sections 12.1.3 and 12.3.3, the analysis undertaken for the Transport Strategy indicates that a number of corridors in the GDA will, in the longer term, generate travel demand above that which can be catered for by higher capacity bus systems and are likely to require upgrading to light rail in the period after 2042.

The NTA is of the view that it is prudent to identify these corridors in this Transport Strategy in order to set out a longer term framework for transport investment in the GDA and to ensure that planning and design work can commence during the strategy period. The detailed alignments and locations to be served will be subject to these assessments.

It is likely, however, that due to capacity constraints on the existing Luas lines, a reconfiguration of both lines will be required to meet additional demand arising from development in locations such as the Naas Road, Cherrywood, and sites to the west of the N/M11.”

k. Climate Change Impacts

The submission notes that the Proposed Scheme will contribute to climate change, most notably by forcing drivers into long detours and by unnecessarily removing trees. The submission refers to Appendix 28.

Chapter 8 of the EIAR documents the assessment carried out in relation to the Proposed Scheme and its potential Climate impacts. Section 8.8.2 of the EIAR notes the following in relation to the residual impacts during the Operational Phase:

“The maintenance CO2e emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO2e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent.

The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCA 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland’s emission reduction targets.

It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions.”

3.38038 – Brendan Timbs

3.38.1 Submission – Whole scheme

1. Impact on Driveway Gradients
2. Clarification on Temporary Acquisition
3. Cumulative Traffic Assessment
4. Impact of traffic diversions on surrounding road network
5. Congestion from bus priority on Rathfarnham Road
6. Environmental Impact Assessment on Bushy Park and the Dodder River
7. Necessity of road widening
8. Footpath Width
9. Contravention of the development plan zoning objective
10. Removal and Replacement of trees
11. Air Quality Impacts as a Result of Increase in Traffic
12. Inadequate Consultation
13. Safety Concerns at the Terenure Cross Junction
14. Implementation of other less intrusive measures
15. Impact of Covid-19
16. Routing of orbital route services
17. Impact on heritage streetscape
18. Impact on Local Business
19. Park and Ride Facilities
20. Bus Service
21. The submission notes that the Proposed Scheme will result in a reduced bus service.
22. Cyclists Safety
23. Alternative Solution - Metro
24. Cost / Benefit Analysis

3.38.2 Response to submission

1. Driveway Gradients

As set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

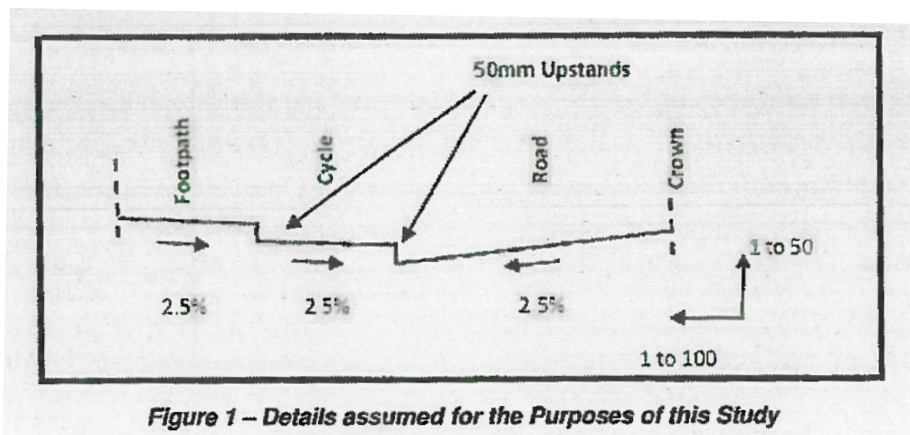
This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable. In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

Notwithstanding the above, it is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road by c. 0.14m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR);
- Reducing footpath gradient but retaining it above the gradient typically provided for new built schemes;

The submission refers to the NRB Consulting Engineers which was used to inform this response. In terms of the submission calculations prepared by NRB, it is important to note that these have been based on an assumed road cross-section as set out below in figure 1 of their submission - *Details assumed for the Purpose of this Study*.



As referenced earlier, in order to minimise impacts on adjacent properties the existing footpath gradient at No. 63 is being reduced (which is still significantly greater than the above in some cases), so the underlying assumption is incorrect.

It is further noted the NRB calculations also used the proposed centreline level of 42.582, taken at chainage A 1403 from the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR. Chainage A 1403 is adjacent to the centre of plot at No. 65, rather than at the driveway location at No. 63 which is of most relevance to the points being raised. The proposed centreline level at chainage A 1413 is 42.833 (Interpolated between chainage A 1410 and A 1420), some 0.250m higher than the value used by NRB in their assessment.

Furthermore, as part of the assessment, the calculation used the existing centreline level which was taken from outside No. 61. As can be seen in the extract from the NRB Assessment submitted to the NTA as part of the Emerging Preferred Route (EPR) consultation, the existing centreline level of 43.05 which was used in the assessment is some 16m away from the driveway which is of relevance to the points being raised.

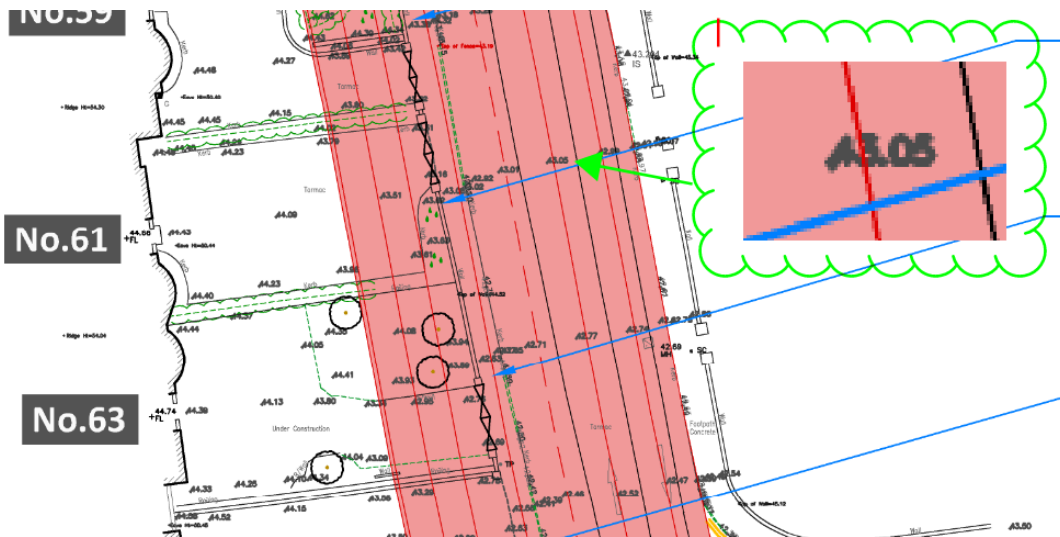


Figure 3.38.1 Extract from NRB Assessment submitted to the NTA during the EPR Consultation

So in summary, the assessment is based on an existing road level some 16m north of the driveway at No. 63 and a proposed level at chainage A 1403 which is 10m south from the driveway.

The factors outlined above contribute to an inaccurate estimate of the proposed level at the back of the new footpath and therefore misrepresents the effect of the Proposed Scheme on the driveway gradients.

In summary, the Proposed Scheme design has fully considered the engineering requirements along Rathfarnham Road to both minimise the impact of the Proposed Scheme on adjacent properties and facilitate no increase to the maximum gradients within these properties.

2. Clarification on temporary acquisition

Both permanent and temporary land acquisition is required at this property. In terms of the temporary acquisition, 4 meters from the proposed boundary wall will be required for the duration of the works. Any land temporarily acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question. If the CPO is confirmed by An Bord Pleanála, reinstatement of property frontage including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like for-like basis, as previously noted, and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

It is noted the entire area identified for temporary acquisition will not be required for the duration of the works. It is acknowledged that during the construction of the works there will be inconveniences for all users, but this will be managed to minimise impacts for all affects parties. The duration of the works will vary from property to property, but access and egress will be always maintained.

For clarity, the temporary acquisition at this location is required to facilitate boundary works and accommodation works including minor regrading of the driveway.

Mitigation and monitoring measures have been identified as environmental commitments and overarching requirements which shall avoid, reduce, or offset potential impacts which could arise throughout the Construction Phase of the Proposed Scheme. These mitigation and monitoring measures which are relevant to the Construction Phase of the Proposed Scheme are detailed in EIAR Volume 2 Chapter 6 to Chapter 21 and are summarised in Chapter 22 (Summary of Mitigation & Monitoring Measures) of this EIAR.

3. Cumulative Impact Assessment

A detailed response to the cumulative traffic assessment is presented in Section 2.1.1.

4. Impact on traffic diversion on surrounding road network

The submission states that the proposed traffic management in the area will cause rerouting of traffic through Rathfarnham Road causing additional flow of traffic. The submission notes the reintroduction of the right turn from Templeogue Road to Springfield Avenue as the main reason for this.

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network

According to Section 1.3 of the *Traffic and Transport Assessment Guidelines (TII 2014)*:

'a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences'.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

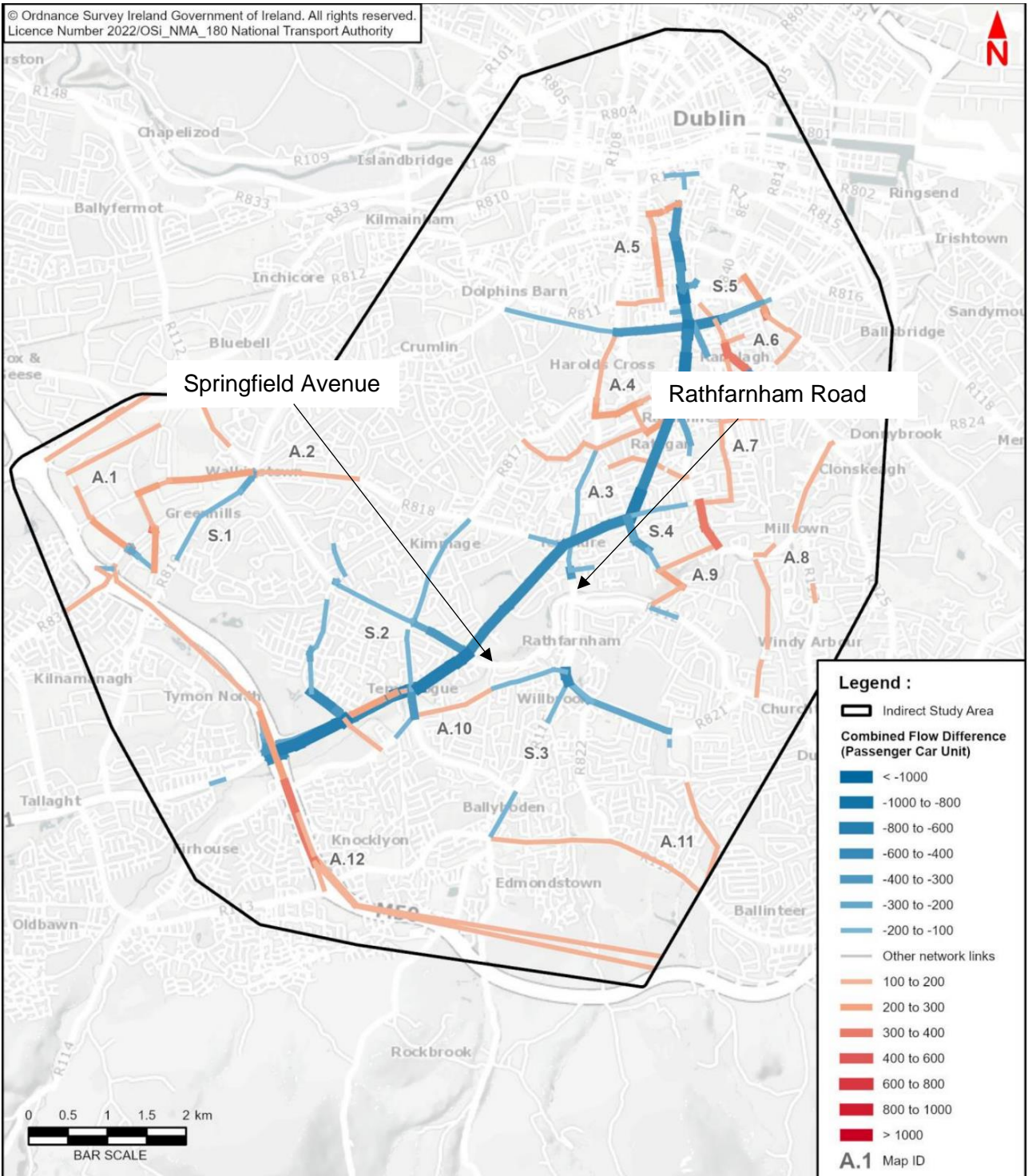


Figure 3.38.2 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

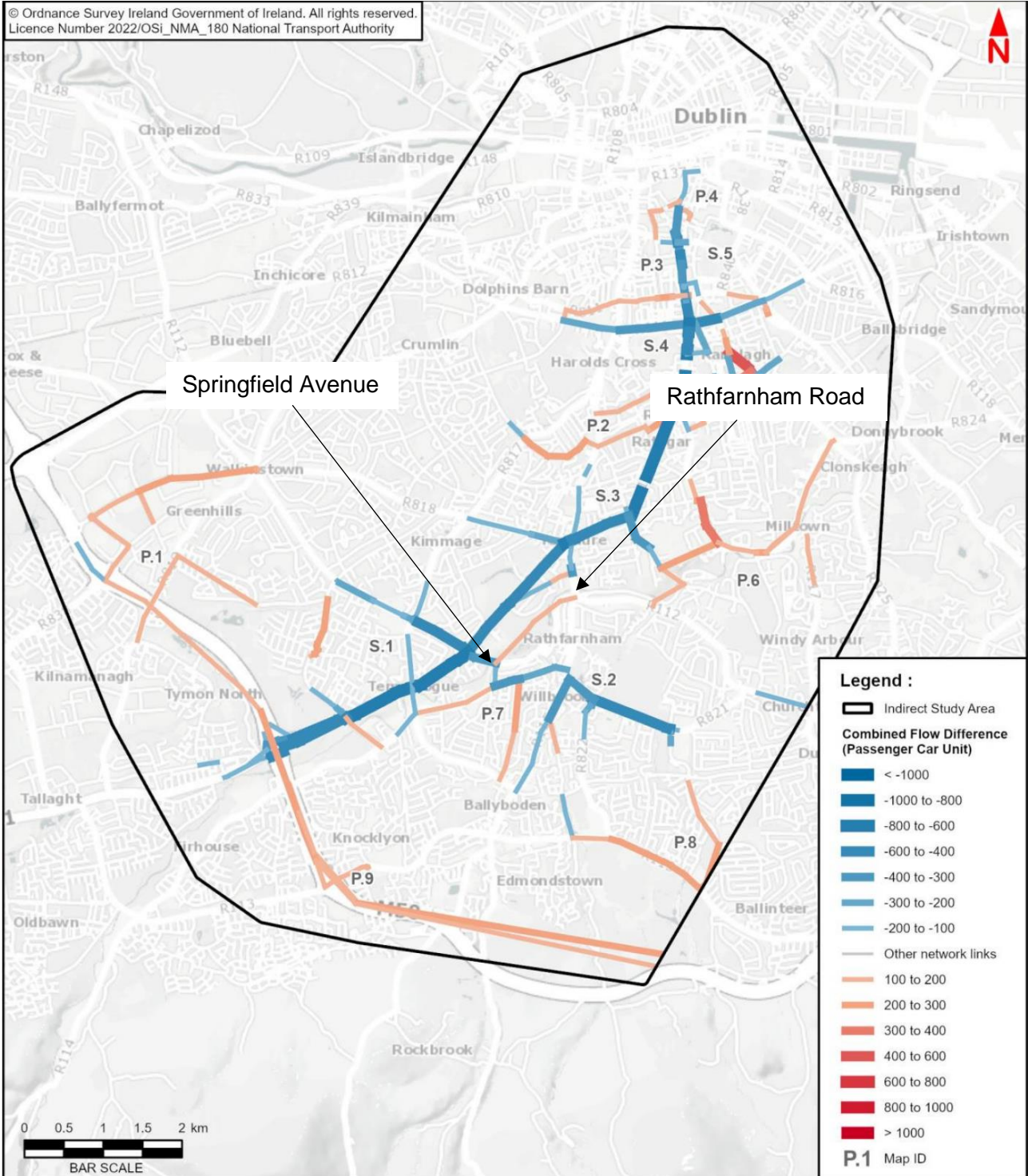


Figure 3.38.3 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

As can be seen in these figures, the traffic modelling undertaken does not identify any material change in traffic volumes along Springfield Avenue and on Rathfarnham Road during the AM peak as a result of the Proposed Scheme i.e. any changes in traffic volumes along Springfield Avenue and Dodder View Road are less than 100 passenger car units per hour. During the PM peak there is a reduction of traffic on Springfield Avenue and Rathfarnham Road and an increase of 119 PCU on Dodder View Road (as presented in Table 6.65).

Further details on the traffic impact in this area are presented in Section 2.3.3 of this report.

5. Congestion from bus priority on Rathfarnham Road

As set out in Section 4.1 of Appendix 4.1 of the EIAR:

Signal control bus priority uses traffic signals to enable buses to get priority ahead of other traffic on single lane road sections, but it is only effective for short distances. This typically arises where the bus lane cannot continue due to obstructions on the roadway. An example might be where a road has pinch-points where it narrows due to existing buildings or structures that cannot be demolished to widen the road to make space for a bus lane. It works through the use of traffic signal controls (typically at junctions) where the bus lane and general traffic lane must merge ahead and share the road space for a short distance until the bus lane recommences downstream. The general traffic will be stopped at the signal to allow the bus pass through the narrow section first and when the bus has passed the general traffic will then be allowed through the lights.

In terms of Rathfarnham Road, signal control bus priority is utilised to achieve the BusConnects objective of improving bus speeds, reliability, and punctuality.

Section 4.4.1.2.3 of the Preferred Route Option Report, which is part of the supplementary information, evaluated various choices for the BusConnects route between Grange Road and Terenure Cross. *Numerous submissions received as part of the public consultation raised concerns about the impact of land acquisition along this section of the route. In addition, upon review of the EPR Option proposals with the benefit of topographical survey, it was evident that portions of the EPR Option proposals, namely the Brookvale Downs parallel cycle route as well as the impact on steep driveways on Rathfarnham Road, required further consideration.' For these reasons, alternative options have been considered in this area.'* Consequently, alternative options were explored for this area. In this evaluation, 9 options (RF1-9) were considered.

Section 4.4.1.2.5 of the report summarises the assessment process and concludes that Option RF5 offers more advantages compared to the other options.

Option RF5: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross.

The submission also referred to sections 4.1 and 4.2 of the RW Nowlan & Associates Report, which was appended to the submission. Section 4.1 states that the proximity of the signal control bus priority at the Dodder View Road junction and Rathdown Park Junction may lead to congestion along Rathfarnham Road. While the issue of traffic congestion was already addressed earlier in this response, for additional context, Figure 3.38.2 and Figure 3.38.3 demonstrate an overall reduction in combined traffic flow on Rathfarnham Road in the 2028 Opening Year scenario of the Proposed Scheme

In reference to the recommendation presented in section 4.2 of the submission, which suggests that a more suitable alternative to the signal control bus priority for inbound buses at Rathdown Park is the implementation of longer green traffic light cycles, it is emphasised that this change could offer benefits for buses and effectively alleviate congestion.

The proposed road configuration for the section of Rathfarnham Road between Rathdown Park and Bushy Park Road maintains the northbound traffic lane and a right-turn filter lane into Bushy Park Road. Without the inclusion of bus priority at the entrance to Rathdown Park, a scenario could emerge in which buses and general traffic both converge in an uncontrolled manner into the straight-ahead traffic lane, exacerbating congestion and safety concerns. Therefore, a bus priority signal measure is essential at this location to effectively regulate the traffic flow into the straight-ahead lane, while also ensuring priority for buses is maintained.

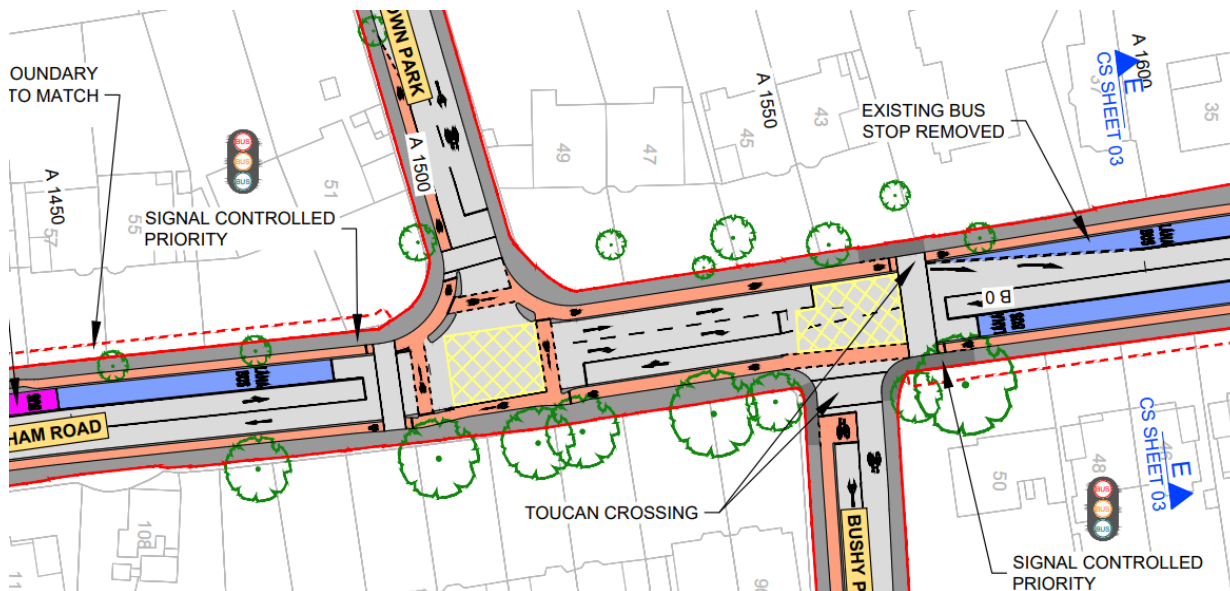


Figure 3.38.4 General Arrangement at Rathfarnham Road

6. Environmental Impact Assessment on Bushy Park and the Dodder River

The submission noted that the NTA has not considered environmental impacts on the Dodder River and Bushy Park arising from the redirected traffic on Springfield Avenue and Dodder View Road.

As described in response to issue raised iv. Traffic diversions there is no substantial changes to traffic volumes on Springfield Avenue and Dodder View Road. This is further detailed in Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken.

Notwithstanding the above, the EIAR has assessed the environmental impacts associated with altered traffic flows along the Proposed Scheme. Section 7.1 of EIAR Volume 2 Chapter 7 Air Quality states:

During the Construction Phase, the potential air quality impacts associated with the development of the Proposed Scheme have been assessed. This included construction activities such as utility diversions, road carriageway / cycleway / footway resurfacing, construction of minor structures and kerb road realignments. Construction traffic access routes are also assessed as part of the study area for this phase of the works. During the Operational Phase, the potential air quality impacts associated with altered traffic flows along the Proposed Scheme, realigned traffic lanes and displaced traffic flows have been assessed.

EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme's operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO2 limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO2 concentrations are predicted to exceed the limit value. However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.*

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road. In all cases, the significance of the modelled change in the annual mean NO₂, PM₁₀, PM_{2.5} during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

With respect to biodiversity, and in particular bats, Chapter 12 presents the output of the biodiversity assessment and contains information regarding, inter alia, the biodiversity baseline scenario, the potential impacts on biodiversity, the mitigation measures and the predicted residual effects of the Proposed Scheme.

In terms of bats, as set out in Section 12.2.3.6.1:

Walked bat activity transect surveys were conducted along preselected transect routes at seven locations along the Proposed Scheme. Transect routes were located at La Touch Bridge, Portobello, referred to as CBC1012BT001, Pearse Bridge Rathfarnham referred to as CBC1012BT002, along the River Dodder within Bushy Park referred to as CBC1012BT003, adjacent to Rathfarnham Castle, referred to as CBC1012BT004, Owendore Crescent referred to as CBC1012BT005, adjacent to Terenure College, referred to as CBC1012BT006 and adjacent to Dodder Valley Park, referred to as CBC1012BT007. The walked transect routes are shown on Figure 12.1.1 in Volume 3 of this EIAR.

As such, the impact of the scheme on bats throughout the scheme, including at Pearse Bridge were considered.

Section 12.4.3.4.1 sets out the impact of the Proposed Scheme on bats during the construction stage.

12.4.3.4.1 Bats

12.4.3.4.1.1 Roost Loss

There are no confirmed bat roosts located within the footprint of the Proposed Scheme. Twelve trees with Potential Roosting Features (PRFs) were identified within the footprint of the Proposed Scheme as detailed in Section 12.3.8.1.8. Four of these trees, two sycamores, one oak and one yew, will be removed to facilitate the construction of the Proposed Scheme. The Proposed Scheme will not result in the loss of any known breeding / resting sites for any bat species, however, it will result in the removal of potential roost sites in the form of the above mentioned four PRF trees. Therefore, in the absence of mitigation, there is potential for the felling of these trees to result in direct harm and pose a mortality risk to bats, should bats be present in the trees at the time of felling. This could result in a significant effect on the conservation status of bats at the local geographic level.

12.4.3.4.1.2 Habitat Loss as a result of Fragmentation of Foraging / Commuting Habitat and Commuting Routes

Bats rely on suitable semi-natural habitats which support the insect prey upon which they feed. The Proposed Scheme will result in the loss of such habitats used for feeding by all bat species recorded in the study area.

Suitable habitat for foraging and / or commuting bats within the footprint of the Proposed Scheme includes hedgerows and treelines, mixed broadleaved woodland, rivers, areas of parkland, and open grassland. The area of the habitats which will be lost as a result of the Proposed Scheme is provided in Table 12.14 and shown in the Landscape General Arrangement drawings (BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001 to 0037) in Volume 3 of the EIAR. This is not deemed significant, considering the extent of habitat loss, their location (adjacent to existing artificially lit roads in a generally highly disturbed urban environment) and the presence and relative abundance of other similar habitats in the wider locality, which will not be impacted by the Proposed Scheme. The Proposed Scheme will not result in any loss along the water courses. In assessing the impacts of habitat loss as a result of fragmentation of foraging / commuting habitat on bat populations, consideration was given to a species Core Sustainance Zone (CSZ). A CSZ refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the 'resilience and conservation status' of the colony using the roost. Bat Conservation Trust Guidance (Bat Conservation Trust 2016) states that:

"With reference to planning and development the core sustainance zone is: The area surrounding the roost within which development work can be assumed to impact the commuting and foraging habitat of bats using the roost, in the absence of information on local foraging behaviour. This will highlight the need for species-specific survey techniques where necessary; and; The area within which mitigation measures should ensure no net reduction in the quality and availability of foraging habitat for the colony, in addition to mitigation measures shown to be necessary following ecological survey work."

There is evidence of bats foraging and commuting within the study area of the Proposed Scheme, particularly along the River Dodder at Pearse Bridge in Rathfarnham (CBC1012BT002) and adjacent Bushy Park (CBC1012BT003). All parts of the Proposed Scheme which contain suitable habitat are likely to be within the CSZ of at least one bat roost. Considering the type of works proposed (e.g., upgrading of existing infrastructure for the most part), there is limited potential for the Proposed Scheme to act as a barrier to flight paths for bat species, as there will be no major changes to pre-existing habitats along most of the route.

The Proposed Scheme will result in loss and / or fragmentation of existing habitat used by local populations of commuting / foraging bats. Fragmentation of feeding habitat has the potential to disturb normal bat behavioural patterns, and thus adversely affect the ability of local bat populations to persist and reproduce, impacting on their local distribution and/or abundance. The barrier effect can manifest itself as soon as the site clearance phase commences and the barrier itself is in the form of the cleared lands. The Proposed Scheme will result in the removal/ fragmentation of small areas / strips of woodland, amenity grassland, scattered trees and parkland, treelines and hedgerows which could all be used by local bats. These habitats constitute a landscape feature which could be used by foraging / commuting bats and their loss, will result in a reduction of foraging / commuting habitat for local bats in this area.

Proposed works along the boundary of Rathfarnham Castle, comprising the relocation of the boundary wall, will result in the removal of the outermost section of mixed woodland (WD1) at this location. Habitats such as mixed woodland, may be used by foraging and commuting bats in the area. Given the peripheral nature of the section of woodland to be removed here and considering the extent of this habitat which will be retained, this will not result in any significant impact on local bat species.

Removal of suitable habitat for foraging and/commuting bats within the footprint of the Proposed Scheme is calculated as approximately 2.6ha. Habitat removal is within a highly disturbed urban environment with low numbers of species records, and, as such is not deemed to provide significant contributions to core sustenance zones of roosts outside of the footprint of the Proposed Scheme. The effect of habitat fragmentation and barrier effect associated with the construction of the Proposed Scheme is therefore considered to be significant at the local level only.

12.4.3.4.1.3 Installation of Temporary Working and Construction Compound Lighting which May Cause Direct / Indirect Disturbance of Flight Patterns

Construction Compounds are proposed in the following six locations:

- Construction Compound TR1 will be located south of the Spawell roundabout, at the Tallaght Road / Spawell Link Road junction;*
- Construction Compound TR2 will be located north-west of Terenure Road North, between Eaton Road and Eagle Hill Avenue;*
- Construction Compound TR3 will be located along Dodder View Road, across the road from Bushy Park, in the greenfield area between Dodder View Road, Woodview Cottages and Church Lane; • Construction Compound TR4 will be located on Military Road, perpendicular to Rathmines Road Lower, south of St Marys College;*
- Construction Compound TR5 will be located on Richmond Street South, on the slip road between Richmond Street South and Harcourt Road; and;*
- Construction Compound TR6 will be located on Spawell Link Road, between Spawell Roundabout and Firhouse Road.*

Security lighting will be installed in these compounds for the duration of construction (i.e., 24 months), thereby temporarily increasing the level of artificial lighting in this area. Artificial lighting within suitable habitat may result in avoidance behaviour by bats, and could prevent bats from accessing foraging areas or roosts and / or result in bats taking more circuitous routes to get to foraging areas and hence potentially depleting energy reserves and abandonment of nearby roosts. Given the urban - suburban setting of these proposed Construction Compounds, bats in the area would be habituated to some level of artificial lighting. Provided security lighting does not involve high intensity lighting (e.g., floodlighting) the impact of increased artificial lighting at Construction Compounds is considered to be significant at the local level only.

The bulk of the construction works along the Proposed Scheme will typically be undertaken during normal daylight working hours, although it is recognized that some elements of night-time work may be required. The bulk of the existing corridor is largely illuminated by regularly spaced lighting columns for much of its length and therefore the requirement for lighting to accommodate construction works during night-time will be limited, in areas where existing light levels are low and of short duration. The effect of the additional lighting is therefore considered to be significant at a local level only and temporary

The impact on bats during operation is Section 12.5.2.4.1:

The Operational Phase of the Proposed Scheme is not predicted to result in any significant effects to populations of bats in the vicinity of the Proposed Scheme. Therefore, no mitigation is proposed.

7. Necessity of road widening

A detailed response to the optioneering carried out in this area is presented in Section 2.3.3.

The Preferred Route Option Report also explains the rationale for the reconsideration of options on Rathfarnham Road south of the Dodder (where the EPR proposed a bus lane and traffic lane in each direction).

Between Brookvale Road and Dodder Park Road, the cross-section is particularly constraint. Widening into properties within this section of the scheme would require the road to be raised in order to maintain driveway gradients at existing grades, which is a requirement of Part M Building Regulations. The potential impacts of the construction works would include:

- *Potential temporary closure of vehicular access to some properties during construction works;*
- *Potential need to undertake significant utility works including raising of manhole covers / gullies, and potentially utility ducts;*
- *Potential temporary closure of Rathfarnham Road to traffic during construction to facilitate works;*
- *Extended construction period when compared to sections where works are less complex.*

Upon review, the collective and individual impact of the required construction works were not considered to be practicably feasible due to significant disruption caused by the unique construction works required to deliver this option.

While raising the road is required on the section north of the River Dodder, the extent to which it is required south of the Dodder is more significant due to the gradients within these adjacent properties and the length of these driveways which are considerably shorter than north of the River Dodder (thereby reducing the potential for regrading works within the limits of Part M).

8. Footpath Width

The submission states that the NTA are proposing larger than necessary footpath widths for the cross-section adjacent to 51-71 Rathfarnham Road. It notes that the NTA has proposed footpath widths between 2.35m and 2.9m.

As seen on the General Arrangement Drawings in Volume 1 Non-Technical Summary, sheet 04 and 05, there is only one cross-section displayed at the section of Rathfarnham Road adjacent to Nos 51-71. This cross-section (Typical Section D-D) is located in EIAR Volume 3 Chapter 4 Typical Cross-section (reproduced as Figure 3.38.4 above). This cross-section identifies a footpath width of 2m on the western side of Rathfarnham Road and of 2.9m on the eastern side. This cross-section identifies a footpath width of 2m on the western side of Rathfarnham Road and of 2.9m on the eastern side. The 2.9m footpath width on the eastern side of Rathfarnham Road represents an existing localised footpath widening outside 122 Rathfarnham Road where the boundary wall is set back slightly further over a short distance. Elsewhere along this section of the scheme, a footpath width of 2m is proposed.

9. Contravention of the development plan zoning objective

The submission noted that the houses and front gardens on Rathfarnham Road are designated as Z2 – Residential Neighbourhoods (Conservation Areas), and therefore the proposed road widening of the road space along the fronts of the houses is a material contravention of the Dublin City Development Plan.

Section 16.3.1.5 of EIAR Volume 2 Chapter 16 Architectural Heritage describes Conservation Areas in the context of the Dublin City Development Plan 2022-2028 (DCC (2022)).

Conservation Areas are areas which, while not to be confused with ACAs, do afford some protection to the architectural heritage under the Dublin City Development Plan 2022-2028 (DCC 2022), specifically under Policy BHA9:

'To protect the special interest and character of all Dublin's Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. Enhancement opportunities may include:

- 1. Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting.*
- 2. Re-instatement of missing architectural detail or important features.*
- 3. Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns.*
- 4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area.*
- 5. Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area.*
- 6. Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting. The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications, and will promote compatible uses which ensure future long-term viability'.*

Policy BHA10 states: 'There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit'.

A review of the Dublin City Development Plan 2016 to 2022 (DCC 2016a) indicates that the Proposed Scheme traverses through four CAs. These areas contain structures of Local to National importance and of Low to High Sensitivity. They are described briefly in Table: 16.8 and Section 16.3.1.5.1 to Section 16.3.1.5.4. Further information on each CA is provided in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. There are no equivalent Conservation Areas in the South Dublin or in Dún Laoghaire-Rathdown.

The status of the buildings in this area is acknowledged and assessed in the EIAR.

The proposed land take on the west side of the Rathfarnham Road will directly impact the boundary treatments to 51 to 71 Rathfarnham Road (CBC1012BTH039, CBC1012BTH040) which are of low sensitivity. These largely consist of cement rendered walls and piers with concrete cappings. Although some interventions have occurred in the past such as the widening of gateways, the boundary treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries would have a negative impact. The pre-mitigation Construction Phase impact will be Direct, Negative, Slight Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Not Significant, Temporary.

10. Removal and Replacement of trees

The impact of the Proposed Scheme on noise and vibration have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme.

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that “Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.” It goes on to state that “There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.”

Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR show the proposed landscaping along the Proposed Scheme. As can be seen in Figure 3.38.5, there are 7 No. Prunus Avium ‘PLENA’ Semi-Mature wild Cherry Trees proposed along the section of Rathfarnham Road between Nos 51-71.

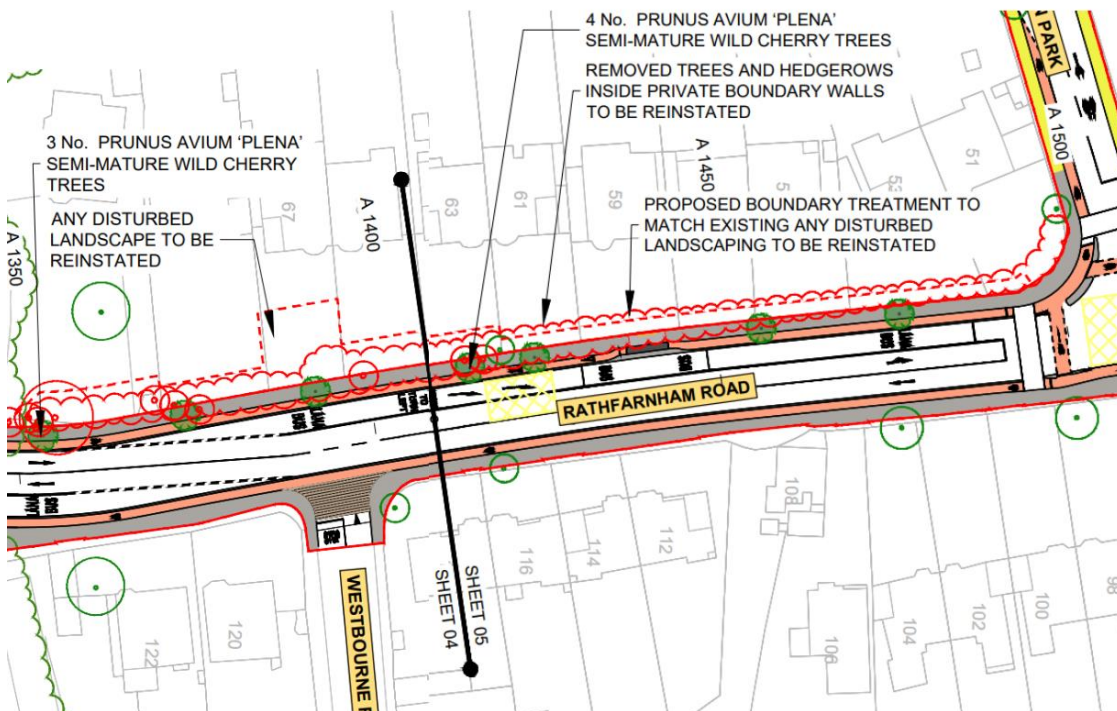


Figure 3.38.5 Extract from Landscaping General Arrangement Drawings (Combined Sheet 4 and 5)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

11. Air Quality Impacts as a Result of Increase in Traffic

The submission raised a concern regarding an increase in air pollutants, such as nitrogen oxides, particles, carbon monoxide and hydrocarbons associated with combustion engine vehicles. In addition, the submission notes concern regarding fine friction particles associated with tyre and brake wear and tear.

EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Emissions from brake and tyre wear in the form of particulate matter (as PM10 and PM2.5) have been included in the air dispersion modelling assessment through the use of the emissions factor toolkit (EFT,v10.1), which takes into account vehicle exhaust, brake wear, tyre wear and road abrasion for both PM10 and PM2.5. Details of the use of EFT and modelling methodology can be found in Section 7.2.4.1.2. The assessment of air quality impacts due to PM therefore includes both exhaust and non-exhaust emissions. Regarding quantification of emissions associated with electric vehicles, a proportion of electric vehicles in the fleet has been included in the assessment of both 2028 and 2043 emissions (see Table 7.5 in Chapter 7 Air Quality).

The subject of the submission, namely the residential property at 63 Rathfarnham Road, has been included in the air dispersion model as receptor AQ108. Modelled annual mean concentrations of NO₂, PM10, PM2.5 are all well below the relevant ambient air quality standards for all modelled scenarios (existing baseline, construction stage and operational phase). A reduction in concentrations of all modelled pollutants at receptor AQ108 due to the Proposed Scheme was observed in both the construction and operational phase scenarios; full modelling results can be found in Appendix A7.1 Air Quality. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme's operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value.*

However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road. In all cases, the significance of the modelled change in the annual mean NO₂, PM10, PM2.5 during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

12. Inadequate Consultation

A detailed response to this item is presented in Section 2.1.1.

In addition to the public consultation, as outlined in Section 1.6 of the EIAR, the BusConnects Infrastructure team undertook consultation on the EIAR with certain prescribed bodies and relevant non-statutory consultees including South Dublin County Council, Dublin City Council.

The submission notes that there is no access to preplanning meeting held between the NTA and ABP. However, it is noted that these are available on the ABP website at the following link <https://www.pleanala.ie/en-ie/case/309584>.

13. Safety Concerns at the Terenure Cross Junction

Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets traffic management measures which will be implemented on the route to facilitate the Proposed Scheme. An extract from this table is presented in Figure 3.38.6.

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathfarnham Road/Castleside Drive/Main Street Junction	Bus Priority Signals at Rathfarnham Road/Castleside Drive/Main Street Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Dodder Park Road Junction	Bus Priority Signals at Rathfarnham Road/Dodder Park Road Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Rathdown Park Junction	Inbound Bus Priority Signal at Rathfarnham Road/Rathdown Park	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Terenure Road East/Terenure Road West Junction	Right turn for buses from Rathfarnham Road to Terenure Road East introduced through bus priority signal	To allow for bus movements in this direction as per the A spine in the New Dublin Area Bus Network	Buses allowed to turn right from Rathfarnham Road onto Terenure Road East.
Terenure Road East/Greenmount Road Junction	No Right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
Rathgar Road/Highfield Road Junction	Inbound Bus Priority Signal	To allow for bus priority on Rathgar Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.

Figure 3.38.6 Extract from Table 4.25 of the Preliminary Design Report

The submission notes that the reintroduction of this right turn movement would introduce safety issues. However, as can be seen in the Junction System Design drawings included in Volume 3 of the EIAR, it is proposed that buses turning right from Rathfarnham Road would do so in its own stage therefore removing any potential safety issues. An extract from the staging diagrams is presented below with the relevant stage highlighted.

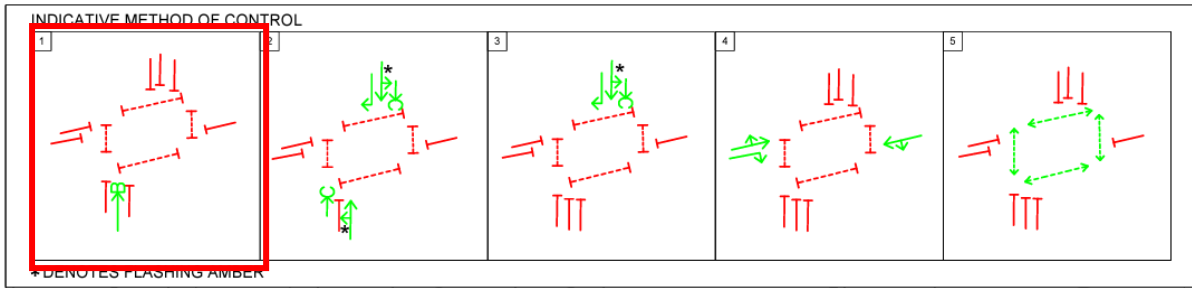


Figure 3.38.7 Extract from Junction Systems Design drawings included in EIAR Volume 3 (Sheet 8)

In relation to the statement made about insufficient space at Terenure Cross for large vehicles, such as buses, to take the right turn Section 4.9 of the Preliminary Design Report outlines the swept path analysis that was complete to inform junction design along the Proposed Scheme.

It is noted that an independent Stage 1 Road Safety Audit was complete by PMCE on the Proposed Scheme, the report is available in the Supplementary Information, Appendix M2 Stage 1 Road Safety Audit. The independent auditor did not identify a hazard associated with the right-turn on pedestrians and cyclists.

14. Implementation of other less intrusive measures

A detailed response to this item is presented in Section 2.1.1.

15. Changes to work/travel patterns due to the COVID-19 pandemic

A detailed response to this item is presented in Section 2.1.1.

16. Routing of orbital route services

The provision and improvement of the bus services in the GDA is constantly under review by the NTA. However, the provision, or removal, of bus services, as well as the routes of these services, is not part of the scope of the Proposed Scheme planning application.

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme outlines the policy context that underpins the Proposed Scheme as well as the regional and local transport need for the Proposed Scheme. Section 2.2.1.4 notes the following:

To inform the preparation of the GDA Transport Strategy, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

Section 2.2.2 of Chapter 2 notes that: *The Proposed Scheme will facilitate the ongoing Dublin Area Bus Network Redesign which will see continued investment in bus services into the future, which will improve journey-time reliability for all bus services, and therefore improve their attractiveness as an alternative to private car usage.*

Section 4.1 of the Preferred Route Option Report included as part of the Supplementary Information highlights that: *In 2017, the NTA began work on reviewing the Dublin Area Bus Network, in collaboration with Bus Operators and other stakeholders (including local authorities). It goes on to explain that “The “Dublin Area Bus Network Redesign” project was launched by the NTA in 2017 and looked at the existing bus network and the radial Core Bus Network identified in the GDA Transport Strategy. The output from the Bus Network Review was published and available for public comment in August 2018 and again in October 2019.*

The NTA published the final version of the Dublin Area bus network in 2020, resulting from previous redesign proposals and with consideration given to issues raised by over 72,000 submissions. Figure 3.38.8 and Figure 3.38.9 presents Image 2.9 and 2.10 of the EIAR Volume 2 Chapter 2 Need for the Proposed Scheme showing the routing of bus services along the Proposed Scheme.

The Proposed Scheme will serve the A Spine bus services. Figure 3.38.8 and Figure 3.38.9 show the A-Spine interface with the Proposed Scheme between Templeogue Road and Rathfarnham Road (A1, A3, A2 and A4), and from Terenure Road, the City Centre (A1, A3, A2 and A4). In addition to the Spine networks being proposed in the Dublin Area Bus Network, there are also several orbital routes proposed for the revised bus network that interact with the Proposed Scheme (S6, S4, S2). They serve the purpose of enabling commuters to travel between neighbourhoods, suburbs, and key destinations outside of the city centre.

17. Impact on heritage streetscape

In relation to the impact on heritage streetscape along the Proposed Scheme, EIAR Volume 2 Chapter 16 Architectural Heritage considers the potential architectural heritage impact associated with the construction and operational phases of the Proposed Scheme. Section 16.2.6 states:

This assessment methodology has regard to the EPA Guidelines assessment criteria (EPA 2022), the NRA Architectural Guidelines (NRA 2005a) and the NRA Archaeological Guidelines (NRA 2005b). In undertaking this assessment, regard was also had to other relevant assessments including archaeology and cultural heritage and landscape and visual, which are outlined in Chapter 15 (Archaeological & Cultural Heritage) and Chapter 17 (Landscape (Townscape) & Visual), respectively. The impact assessment was carried out by:

- *Determining and rating the sensitivity of baseline features within the baseline environment;*
- *A review of the Proposed Scheme drawings, in order to identify the locations of potential impacts both direct and indirect; and*
- *Determining the nature, magnitude, duration, and extent of these impacts*

Architectural heritage buildings, features and landscapes are a non-renewable resource, and such assets are generally considered to be location sensitive. In this context, any change to their environment either directly through construction activity or indirectly could adversely affect these sites, their settings or vistas of these sites.

Section 16.5.1.6 of Chapter 16 describes the architectural heritage impact to No 51 to 71 Rathfarnham Road:

The proposed land take on the west side of the Rathfarnham Road will directly impact the boundary treatments to 51 to 71 Rathfarnham Road (CBC1012BTH039, CBC1012BTH040) which are of low sensitivity. These largely consist of cement rendered walls and piers with concrete cappings. Although some interventions have occurred in the past such as the widening of gateways, the boundary treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries would have a negative impact. The pre-mitigation Construction Phase impact will be Direct, Negative, Slight Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Not Significant, Temporary

The submission noted that the Proposed Scheme will impact the Memorial Hall and Pearse Bridge in the context of heritage streetscape, noting that the project will reduce the frontage of the memorial hall. As can be seen in the EIAR Volume 1 General Arrangement Drawings and Deposit Maps submitted as part of the CPO documents, there is no land acquisition proposed at either of those locations.

See section 2.4.3 for response to queries on heritage impact on properties along Terenure Road East.

EIAR Volume 2 Chapter 17 Landscape (Townscape) & Visual, section 17.4.4.2.10 states:

Where the landscape measures incorporated in the design of the Proposed Scheme there is potential for a beneficial effect to the fabric and character of the receiving landscape / townscape. Measures include for improvements to the streetscape in several locations along the Proposed Scheme, including new or improved footpath and cycle routes, improved or more visually appealing hard surfacing, street furniture, improvement to the setting of heritage features, and new tree / ornamental planting. In some cases, this will create a short-term net benefit compared to the baseline landscape, such as along the Tallaght Road to Rathfarnham Road and Charleville Road to Dame Street sections of the scheme, as well as for open spaces and visual amenity of adjacent properties generally across the scheme. There will also be long-term benefits to the Terenure Road North to Charleville Road section. Over the long-term, the negative effects associated with the removal of mature trees along many sections of the scheme will be reduced with the growth of replacement planting, and there will be an overall positive effect for trees across the entire route of the Proposed Scheme.

Numerous enhancements are being undertaken across various destinations within the Proposed Scheme, including Rathfarnham, Terenure, and Rathgar. The primary objective of these improvements to the urban environment is to establish inviting and welcoming public spaces where individuals can convene and engage socially. These improvements involve the strategic reallocation of road space, wherever feasible, from vehicular use to pedestrian and cyclist-friendly areas. For a comprehensive overview of the streetscape design, refer to the EIAR Volume 3, Chapter 4 Landscaping General Arrangement.

Chapter 17 of EIAR has considered the potential landscape (townscape) and visual impacts associated with the construction and operational phases of the Proposed Scheme. Section 17.4.4.1 outlines the impacts of Townscape and streetscape Characters for sub-divided townscape / streetscape character areas. The assessment relevant to the areas of concern in this submission are summarised below.

Nutgrove Avenue to Terenure Road North

*The Operational Phase will not alter the overall townscape character of this section but will result in substantial localised changes to the streetscape character of the section. The magnitude of change in the baseline environment is **very high**.*

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Very Significant and Short-Term** becoming **Neutral, Moderate and Long-Term**.*

Terenure Road North to Charleville Road

The Operational Phase will not alter the overall townscape character of this section but will result in both substantial localised negative and positive changes to the streetscape character. Despite the adverse impacts on trees and properties there will be a substantial localised improvement in some areas of streetscape and the effect across the overall section will become positive over the long-term as proposed planting matures. The magnitude of change in the baseline environment is medium / high.

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Significant and Short-Term** becoming **Positive, Moderate and Long-Term**.*

18. Impact on Local Business

The Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on Templeogue Road and surrounding area, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Templeogue Road, by providing significantly improved sustainable transport options. It is therefore expected that the improvements to the sustainable transport options on Templeogue Road and surrounding areas will promote more frequent local trips to nearby amenities, such as Templeogue and Terenure Village.

EIAR Volume 4 Chapter 9 Appendix A10.2 The Economic Impact of the Core Bus Corridors, concludes that businesses along the corridors are not likely to see reduction in footfall, despite likely reductions in general traffic along the Proposed Scheme. Section 2 states that “*Evidence from studies in Ireland and internationally suggest that reductions in the numbers of car journeys to the shops should not lead to a reduction in footfall as traders typically overestimate the importance of cars. Many shoppers are already arriving using sustainable transport options and therefore should be quick to take advantage of new transport options. There may be some disruption to business during the construction phase, however once the new routes are open footfall should return to normal and may in fact rise*”.

Section 3 of the Economic Impact Report states that there is likely to be increased commercial opportunities and improved sales for the majority of impacted businesses. Section 3 states “*Evidence suggests that those travelling to shops via car spend on average more per trip, as can be seen in the graph to the left. However due to the frequency of visits by bus, bike or walking, the average total spend is much higher for this cohort. As such, local businesses could benefit financially from greater access to customers through these modes of transport.*”

With regard to the loss of parking and loading, Section 6.4.6.2 summarises the impact across the scheme as follows:

*A qualitative impact assessment has been undertaken of the Proposed Scheme impacts on the existing parking and loading. The results of the assessment demonstrate that the changes to the parking and loading provision will result in an overall loss of 54 parking spaces and five loading bay spaces within the redline boundary of the Proposed Scheme (-7 spaces in Section 2, -32 (including 5 loading bay spaces) in Section 3 and -20 spaces in Section 4). Given the nature of the loss in parking and the availability of alternative spaces in the indirect study area, the impact is expected to have a **Negligible and Long-term effect** in Section 2 and Section 3 and a **Negative, Slight and Long-term effect** in Section 4 of the Proposed Scheme.*

19. Park and ride facilities

A detailed response to this item is presented in Section 2.1.1.

20. Bus service

The Proposed Scheme will facilitate opportunities to change bus network capacity operating along the corridor due to the extensive priority provided. This will allow increases in service provision as demand increases.

As noted in 6.4.6.1.14 Increased Bus Frequency – Resilience Sensitivity Analysis of Chapter 6 states the following:

For the purposes of this EIA and the transport modelling undertaken in support of the EIA, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios. This rollout is currently underway. The rationale for undertaking this approach was that the planning consent being sought and which this EIA supports is solely for the infrastructural improvements associated with providing bus priority and other sustainable modes measures along the Proposed Scheme.

This analysis, however, is conservative as the bus priority infrastructure improvements and indeed the level of protection it will provide to bus journey time consistency and reliability will provide a significant level of resilience for bus services that will use the Proposed Scheme from implementation into the future. The resilience provided by the Proposed Scheme will allow the service pattern and frequency of bus services to be increased into the future to accommodate additional demand without having a significant negative impact on bus journey time reliability or the operation of cycle and pedestrian facilities. In order to assess this resilience and the potential impacts of this resilience on carbon emissions, an additional analysis has been undertaken.....

21. Cyclist safety

One of the objectives of the Proposed Scheme outlined in Chapter 1, Introduction of Volume 2 of the EIA is to *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.*

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIA outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. Following initial public consultation events, as well as a review of topographical information, a number of parallel cycle route options were considered off Rathfarnham Road in order to minimise the impact on adjacent properties. A total of 10 options were considered in this regard as set out in section 3.4.1.1.2.1

Following the identification of the preferred bridge option, as outlined above, 10 alternative parallel cycle route options were developed along this section of the Proposed Scheme. These options are briefly summarised below:

- *Option PC1 (EPR Option) – Parallel cycle route via Brookvale Downs using laneway north of Texaco Station and crossing River Dodder via a new boardwalk at Pearse Bridge;*
- *Option PC2 - Parallel cycle route via Brookvale Downs using laneway north of Texaco Station and crossing River Dodder via a new pedestrian/cycle bridge to Rathdown Park;*
- *Option PC3 - Parallel cycle route via Brookvale Downs using Brookvale Road and crossing the River Dodder via a new boardwalk at Pearse Bridge;*
- *Option PC4 - Parallel cycle route via Brookvale Downs using Brookvale Road and crossing River Dodder via a new pedestrian/cycle bridge to Rathdown Park;*
- *Option PC5 - Parallel cycle route along Butterfield Avenue and the Owendoher River connecting to the Dodder Greenway and crossing the River Dodder via a new boardwalk at Pearse Bridge;*

- Option PC6 - Parallel cycle route along Butterfield Avenue and Owendoher River connecting to the Dodder Greenway and a new bridge to Rathdown Park;
- Option PC7 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to the Dodder Greenway and a new boardwalk via a new boardwalk at Pearse Bridge;
- Option PC8 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to the Dodder Greenway and new bridge to Rathdown Park;
- Option PC9 - Parallel cycle route along Butterfield Avenue and the Owendoher River connecting to Bushy Park utilising the proposed Dodder Greenway bridge; and
- Option PC10 - Parallel cycle route along St Mary's Avenue and the Owendoher River connecting to Bushy Park utilising the proposed Dodder Greenway bridge.

These options were comparatively assessed in order to determine the draft preferred route option for a parallel cycle route in this section. This assessment was based on the same methodology presented in the 'Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report' for cycle route options considered in Rathgar/Rathmines. Further detail on the assessment methodology and criteria used in the assessment of these alternative cycle facilities is included in Section 3.3.3 and Table 3.1.

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Road Safety, Coherence, Directness, Attractiveness, Comfort, and Environmental. Sub-option PC8 was identified as having significant benefits over other sub-options in relation to Road Safety and Attractiveness. Following a detailed MCA, sub-option PC8 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

3.4.1.1.2.2 Grange Road to Rathdown Park - Principal Route Options

Following the initial assessment of Parallel Cycle Route options, a number of principal route options for the delivery of the CBC scheme from Grange Road to Rathdown Park were developed. These are briefly described below:

- Option RF1: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of the Dodder with cyclists diverted to Brookvale Downs. Two bus lanes, two general traffic lanes and two cycle tracks provided on Rathfarnham Road north of the Dodder. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey, namely the existing steep driveway gradients on Rathfarnham Road;
- Option RF2: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of the Dodder with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process;
- Option RF3: One-way inbound general traffic on Rathfarnham Road between Castleside Drive and Dodder Park Road with two bus lanes and online cycle tracks on the CBC. A combination of bus lanes and signal controlled priority two general traffic lanes and two cycle tracks provided north of the Dodder;
- Option RF4: One-way inbound general traffic on Rathfarnham Road between Castleside Drive and Dodder Park Road with two bus lanes on the CBC with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process;
- Option RF5: A combination of bus lanes and signal controlled priority provided on Rathfarnham Road south of the Dodder, with two-way general traffic and online cycle tracks on the CBC. A combination of bus lanes and signal controlled priority, two general traffic lanes and two cycle tracks provided north of the Dodder; and
- Option RF6: A combination of bus lanes and signal controlled priority provided on Rathfarnham Road south of the Dodder, with two-way general traffic and with cyclists diverted to the draft preferred parallel route as identified during the initial assessment of parallel cycle route options of the route selection process.

Option RF2 – the provision of two bus lanes and two general traffic lanes Rathfarnham Road south of the Dodder with cyclists diverted to the draft preferred parallel route - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the section and minimising the impact on residential properties with steep existing driveways on Rathfarnham Road through the provision of an alternative cycle route linking to Rathdown Park. This option would provide bus priority, and while cycle facilities would not be provided along a short section of the CBC, the proposal included an attractive and safe alternative.

In terms of the sub-criteria under the Environment criterion, the preferred option performed marginally better than other options in terms of Archaeology and Cultural Heritage as fewer recorded monuments were present in the study area. In terms of Architectural Heritage, the preferred option again performed better than other options fewer protected structures would be impacted. In terms of flora and fauna the preferred option performed significantly worse than other options due to the impacts on existing trees along the river Dodder. In terms of Landscape and Visual, the preferred option performed slightly worse than other options due to the impacts associated with the construction of a new bridge over the river Dodder. In terms of Air Quality and Noise and vibration the preferred option performed marginally worse than other options due to the fact that traffic would not be redirected from the CBC. In terms of land Use Character, the preferred option performed equally to other options.

Notwithstanding that the preferred option scored marginally lower under the environmental criteria compared to Option RF3 (and equal to the other options) it was taken forward as on balance, it best met the Proposed Scheme objectives when compared to the other options.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario along the Proposed Scheme, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

An independent Stage 1 Road Safety Audit was complete by PMCE on the Proposed Scheme, the report is available in the Supplementary Information, Appendix M2 Stage 1 Road Safety Audit. The independent auditor did not identify shared cycle and bus facilities as a potential safety concern. It should be noted that where cyclists and buses share space the speed limit is reduced to 30km/h.

22. Alternative solutions – Metro

A detailed response to this item is presented in Section 2.1.1.

23. Cost / benefit analysis

All major publicly funded infrastructure projects, such as the BusConnects Infrastructure Schemes are subject to the Public Spending Code (gov.ie - [The Public Spending Code \(www.gov.ie\)](http://www.gov.ie)) which requires the production of appropriate economic appraisals and business cases. The Preliminary Business Case for BusConnects schemes is set out at the following link. The document sets out the keys costs and benefits of the schemes.

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA's BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government."

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- *As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*

At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award

3.39039 – Brian & Audrey Mooney and John & Elisa Browne

3.39.1 Submission – Whole scheme

The submission raised the following issues:

1. Traffic
2. Negative effect on businesses

3.39.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.40040 – Brian & Ethna Healy

3.40.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Necessity of road widening
2. Trees not picked up on the Arboricultural Impact Assessment
3. No consideration of Glin River
4. Consideration of alternative options
 - a. Terminate Proposed Scheme at Butterfield Avenue – the submission suggests stopping the scheme at the Butterfield Avenue junction to avoid impacting the Rathfarnham Castle Park
 - b. Acquire land from the houses on the southern side of Grange Road
 - c. Cyclists share bus lanes as proposed elsewhere on the scheme
5. Climate Impact of Tree Removal
6. Biodiversity Impact
7. Landscape and Visual
8. Noise, Vibration and Air Quality
9. Replacement of the Castle Wall
10. Impact on woodland playground

11. Request to improve Nutgrove Avenue cycle facilities
12. Bus Stops
13. Courtyard/stables redevelopment
14. Nutgrove Avenue/Grange Road Junction Signals

3.40.2 Response to submission

1. Necessity of road widening

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

For the section between adjacent to 11 Rathfarnham Road, three options (SA1 to SA3) have been developed during the development of the Emerging Preferred Route (EPR). The assessment process of three options is described in section 5.4 of the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment (FSOA), included in appendix I2 of the supplementary documents submitted alongside the planning application.

Following the review of the EPR and submissions received as part of the public consultation within the section between Nutgrove Avenue to Willbrook Road, it was decided that alternative options could be feasible within this section of the Proposed Scheme. For this reason, two alternative options (RC1 and RC2) have been developed. The alternative options are described in detail in section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application.

A detailed response to the optioneering process complete for Grange Road and Rathfarnham Road is provided in response to item *iv. Consideration of Alternatives*.

Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the desirable width of 2.0m for footpaths and desirable width of 2m for cycle tracks. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

Providing the optimum cross-section described in the above paragraphs achieves the project objectives of enhancing the potential for cycling and walking by providing safe infrastructure. EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling and pedestrian infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

Figure 3.40.1 Section 2- Significance of Effects for Pedestrian Impact during Operational Phase (table 6.27 of EIAR Chapter 6)

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario.

This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.

Cycling Infrastructure

Table 6.28 (Figure below), in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant
R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

Figure 3.40.2 Section 2 - Cycling Impact during Operational Phase (Table 6.28 of EIAR Chapter 6)

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Further details on the significant benefits of the Proposed Scheme are presented in Section 2.1.1.

2. Trees not picked up on the Arboricultural Impact Assessment

In order to assess the impact of the Proposed Schemes on trees, a tree survey was undertaken in August 2020. The survey and resulting assessment of the impact of the scheme is presented in the Arboricultural Impact Assessment Report, which is included as Appendix A17.1 of EIAR. The methodology for the survey is set out in section 1.2 of Appendix A17.1

“An initial tree survey and visual condition assessment was undertaken on the 24th and 25th of August 2020. As part of this report and in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction - recommendations, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British standard document, where trees formed obvious groups, these were assessed and recorded as groups.

The survey commenced at the junction of Grange Road and Nutgrove avenue, and at Junction 11 of the M50 and finished at Dame Street, including the Terenure Road North / Harold's Cross Road section and the Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road section of the Proposed Scheme.

The survey concentrated primarily on the significant trees/hedgerows and groups located within 20m of any development works which could impact on the tree (this could include excavation, resurfacing, utility installation, new signage/lighting etc) within and adjacent to the Proposed Scheme and has been based on the topographical survey plan provided. The objective of this survey was to gather information regarding the trees along the Proposed Scheme and to assess the impact the Proposed Scheme may have on the trees. Refer to Appendix A for the tree survey schedule.”

While the submission does not identify trees that have been omitted from the assessment, it is understood that it is referring to a tree that is located close to the boundary wall on Grange Road at the eastern side of the property as indicated in the Streetview image below.



Figure 3.40.3 Streetview image of trees at boundary to 11 Rathfarnham Wood

While these trees have not been captured in the Arboricultural Impact Assessment Report or on the Landscape General Arrangement Drawings, they have been captured on the Proposed Surface Water Drainage drawings included in Volume 3 as presented below. As can be seen in the extract it is not intended to remove any trees from the back garden of 11 Rathfarnham Wood.

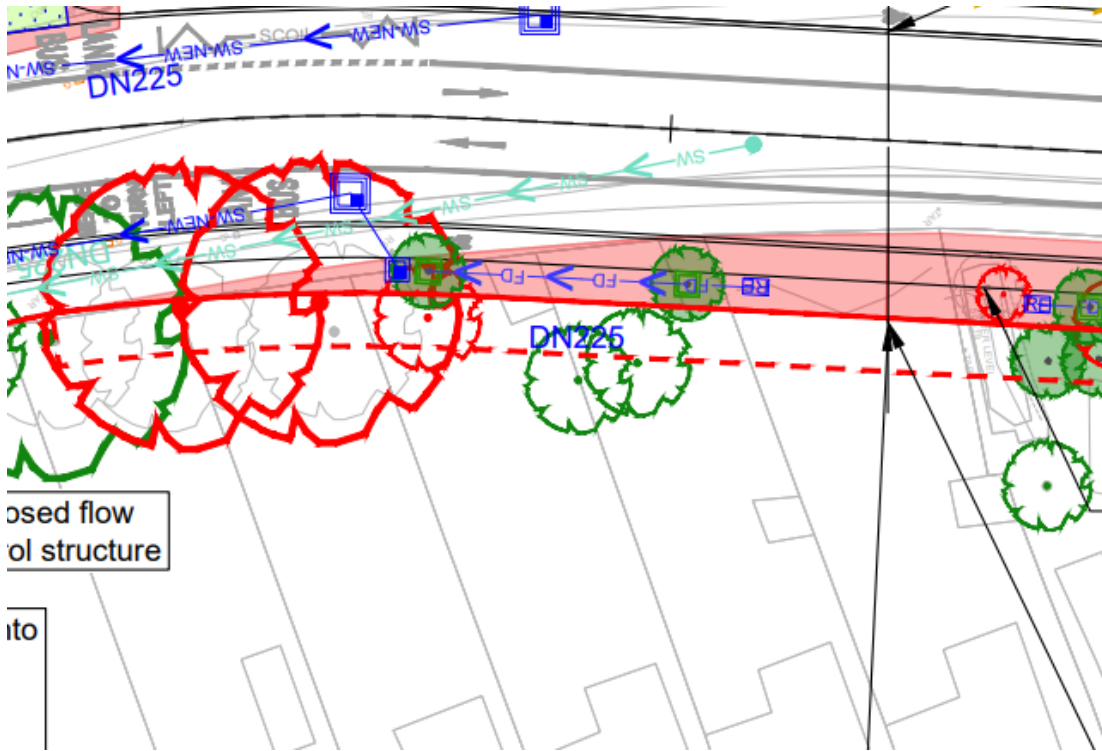


Figure 3.40.4: Extract from Proposed Surface Water Drainage Drawings (Sheet 1)

It is important to note that the impact assessment of the Proposed Scheme on trees has included the loss of the tree noted and that the number of trees to be removed across the scheme (169 trees) includes this particular tree. As such the assessment presented in the EIAR remains valid.

3. No consideration of Glin River

A detailed response to this item is presented in Section 2.3.3 of this report.

4. Consideration of alternative options

A detailed response to this item is presented in Section 2.3.3 of this report.

In relation to the additional alternatives put forward in the submission please note the following specific additional responses.

a. Terminate Proposed Scheme at Butterfield Avenue

As stated in Chapter 3 of the EIAR Consideration of Alternatives “*the Rathfarnham to City Centre Core Bus Corridor CBC Feasibility Study and Options Assessment Report, it was determined that the route should stop at the junction of Nutgrove Avenue and Grange Road, as south of this point generally there are three principal routes between Marley Park and the Dodder crossing namely via Stone Mason’s Way, Grange Road and Ballyboden Road which currently carry less frequent bus services and which converge at Nutgrove Avenue in the vicinity of the junction with Grange Road.*”

In addition the network redesign map below demonstrates how the A2, A4 and S6 services split at the Nutgrove junction which further supports the rationale to extend the scheme as far as Nutgrove junction.

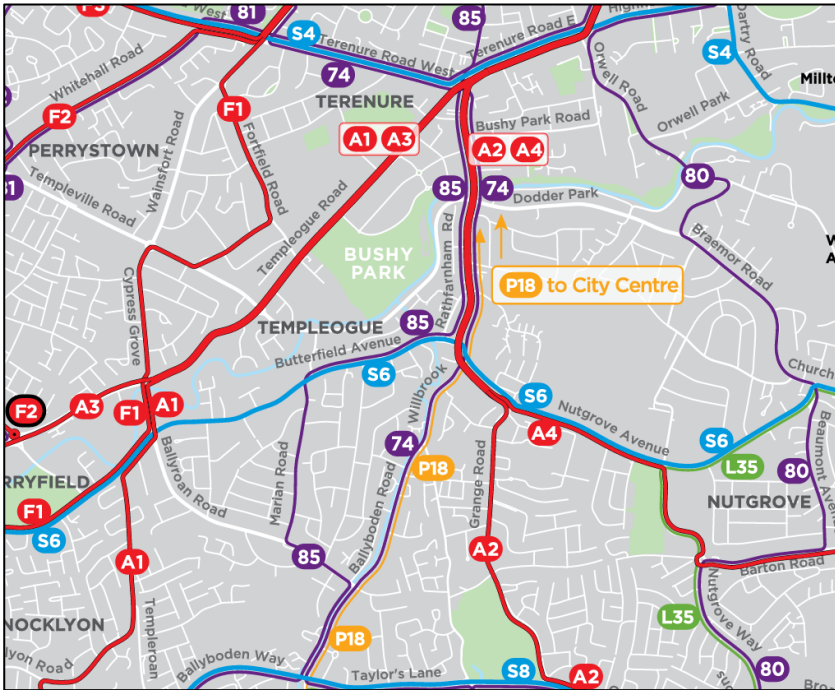


Figure 3.40.5 Extracts from the Dublin Area Bus Network Redesign Revised Proposal (2020)

- b. Acquire Land from the properties on the southern side of Grange Road

The consideration of options along Grange Road is described in Section 2.3.3 of this report. With regards to the option of acquiring land from properties on the southern side of Grange Road between Butterfield Avenue/Rathfarnham Road junction and Nutgrove/Grange Road junction the landtake would have impacted significantly more properties and as such was not considered.

- c. Cyclists to share bus lanes as proposed elsewhere

While it is proposed that cyclists share bus lanes at other locations on the scheme there are specific reasons for this. The 2 locations where cyclists share with bus lanes are along Terenure Road East and Rathfarnham Road.

In the case of Terenure Road East, additional alternative cycle facilities are proposed on Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road in lieu of facilities along Terenure Road East. Additionally, alternative cycle facilities are also proposed on Terenure Road North and Harold's Cross Road connecting to the Kimmage to City Centre CBC at Harold's Cross. This provides an alternative north-south route for cyclists who do not wish to stay on the CBC, in particular along Terenure Road East where it is not practically feasible to provide segregated cycle facilities. Given the presence of feasible alternative routes which have been incorporated into the scheme, no cycle facilities are proposed on Terenure Road East so as to minimise the impact on trees and properties on Terenure Road East whilst maintaining a high level of service for cyclists travelling to and from the city centre. The optioneering associated with this is presented in Chapter 3 of the EIAR and the Preferred Route Option Report presented in the Supplementary information.

In the case of Rathfarnham Road, an inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. The rationale for the shared cycle approach is set out in Section 4.3.3.1.3 of the Preferred Route Options Report:

Between Brookvale Road and Dodder Park Road, the cross-section is particularly constrained. Widening into properties within this section of the scheme would require the road to be raised in order to maintain driveway gradients at existing grades, which is a requirement of Part M Building Regulations. The potential impacts of the construction works would include:

- Potential temporary closure of vehicular access to some properties during construction works;

- *Potential need to undertake significant utility works including raising of manhole covers/gullies, and potentially utility ducts;*
- *Potential temporary closure of Rathfarnham Road to traffic during construction to facilitate works;*
- *Extended construction period when compared to sections where works are less complex.*

Upon review, the collective and individual impact of the required construction works were not considered to be practicably feasible due to significant disruption caused by the unique construction works required to deliver this option. Alternative design solutions have therefore been explored in this area in determining the PRO, as described in Section 4.4.1.2.3 of this report.

5. Climate impact of tree removal

A detailed response to this item is presented in section 2.3.3 of this report.

6. Biodiversity Impact

A detailed response to this item is presented in section 2.3.3 of this report.

7. Landscape and Visual

A detailed response to this item is presented in section 2.3.3 of this report.

8. Noise, Vibration and Air Quality

The impact of Construction on the woodland playground within in the park is described in the response to Item viii below. The impact of the construction of the Proposed Scheme on Noise, Vibration and Air Quality on the wildlife within the park is described below.

Noise and Vibration

In overall terms the impact of noise and vibration during construction is described in Chapter 9 Noise and Vibration. As per Table 9.1 of Chapter 9 the Noise Sensitive Locations (NSL) between Nutgrove Avenue to Terenure Road North are as follows : *“The key NSLs are predominately residential NSLs, which bound the east and west of the Proposed Scheme within 10m to 30m, of the Proposed Scheme including Rathfarnham Wood, Beaufort Downs, Brookvale and the residential receptors lining R821 Grange Road / R114 Rathfarnham Road. Education NSLs in the zone include St. Mary’s Boys National School Rathfarnham and Little Smarties Montessori and After School, within 15m to 100m of the Proposed Scheme. Rathfarnham Castle and Park, Rathfarnham Church of the Annunciation and Orthodox Synagogue are community NSLs within 5m to 35m of the road edge.”*

At the location of Rathfarnham Castle Park there will be road widening, road reconstruction, utility diversion works as well as boundary wall construction. The associated predicated construction phase impacts following the implementation of mitigation and monitoring is set out in Table 9.42 of Chapter 9 as set out below.

Assessment Topic	Period over which Criterion Applies	Potential Impacts (Pre-Mitigation and Monitoring)	Predicted Impact (Post Mitigation and Monitoring)
General Road Works, Quiet Street Treatment and Urban Realm Landscaping	Monday to Friday: Daytime (07:00hrs – 19:00hrs)	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary in the absence of noise mitigation at NSLs within 15m distance from the proposed works; Negative, Slight to Moderate and Temporary at NSLs at distances between 20m to 40m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 40m from the proposed works. 	<ul style="list-style-type: none"> Negative, Slight to Moderate and Temporary at NSLs within 15m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 15m from the proposed works.
	Monday to Friday: Evening: (19:00hrs – 23:00hrs) or Saturdays (08:00hrs – 16:30hrs)	<ul style="list-style-type: none"> Negative, Significant to Very Significant and Temporary at NSLs within 25m distance from the proposed works; Negative, Moderate to Significant and Temporary at NSLs at distances between 25m and 40m from the proposed works; Negative, Slight to Moderate and Temporary at NSLs at distances between 40m and 50m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 50m from the proposed works. 	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary at NSLs within 15m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 15m from the proposed works.
Road Widening, Road reconstruction, Utility Diversion Works, retaining walls	Monday to Friday: Daytime (07:00hrs – 19:00hrs)	<ul style="list-style-type: none"> Negative, Significant to Very Significant and Temporary at NSLs within 10m of the proposed works; Negative, Moderate to Significant and Temporary at NSLs between 15m to 25m from the proposed works; Negative, Slight to Moderate and Temporary at NSLs at distances between 25m to 60m from the proposed works; and Negative, Not Significant at NSLs at distances greater than 60m from the proposed works. 	<ul style="list-style-type: none"> Negative, Slight to Moderate and Temporary at NSLs within 20m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 20m from the proposed works.
	Monday to Friday: Evening: (19:00hrs – 23:00hrs) or	<ul style="list-style-type: none"> Negative, Significant to Very Significant and Temporary at 	<ul style="list-style-type: none"> Negative, Significant to Very Significant and Temporary at NSLs within 10m from the proposed works; and

Figure 3.40.6 Extract from Table 9.42 in Chapter 9 of the EIAR

Assessment Topic	Period over which Criterion Applies	Potential Impacts (Pre-Mitigation and Monitoring)	Predicted Impact (Post Mitigation and Monitoring)
	Saturdays (08:00hrs – 16:30hrs)	<ul style="list-style-type: none"> NSLs within 40m of the proposed works. Negative, Moderate to Significant and Temporary at NSLs within 40m to 75m from the proposed works; Negative, Slight to Moderate and Temporary at NSLs at distances within 75m and 80m from the proposed works; and Negative, Not Significant at NSLs at distances greater than 80m from the proposed works. 	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary at NSLs within 10m to 20m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 20m from the proposed works.
Boundary Wall, and structures	Monday to Friday: Daytime (07:00hrs – 19:00hrs)	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary at NSLs within 15m of the proposed works; Negative, Slight to Moderate and Temporary at NSLs 20m to 50m from the proposed works; and Negative, Not Significant at distances greater than 50m from the proposed works. 	<ul style="list-style-type: none"> Negative, Slight to Moderate and Temporary at NSLs within 15m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 15m from the proposed works.
	Monday to Friday: Evening: (19:00hrs – 23:00hrs) or Saturdays (08:00hrs – 16:30hrs)	<ul style="list-style-type: none"> Negative, Significant to Very Significant and Temporary to Short-Term at NSLs within 25m of the proposed works; Negative, Moderate to Significant and Temporary at NSLs 25m to 50m from the proposed works; Negative, Slight to Moderate and Temporary at NSLs 50m to 60m from the proposed works; and Negative, Not Significant at distances greater than 60m from the proposed works. 	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary at NSLs within 15m from the proposed works; Negative, Slight to Moderate and Temporary at NSLs within 15m to 20m from the proposed works; and Negative, Not Significant and Temporary at NSLs at distances greater than 20m from the proposed works.
Compounds	Monday to Friday: Daytime (07:00 – 19:00hrs)	<ul style="list-style-type: none"> Negative, Moderate to Significant and Temporary at NSLs within 10m of the Construction Compounds; Negative, Slight to Moderate and Temporary at NSLs between 15m and 40m from the 	<ul style="list-style-type: none"> Negative, Not Significant and Temporary at NSLs at distances within 10m of the Construction Compounds.

Figure 3.40.7 Extract from Table 9.42 in Chapter 9 of the EIAR

The impact of the construction noise and vibration on wildlife within the park is further described in Chapter 12 of the EIAR.

In relation to breeding birds, as per Section 12.4.3.5.1.3 “*The noise, vibration, increased human presence and the visual deterrent of construction traffic, associated with site clearance and construction will temporarily disturb breeding bird species and is likely to displace breeding birds from habitat areas adjacent to the footprint of the Proposed Scheme. Construction activities will largely involve carriageway and pavement resurfacing / reconstruction as required, readjustment of kerbs and new road. However, as an important transport corridor in a heavily urbanized landscape, there is an existing relatively high level of human disturbance within the immediate environment of the Proposed Scheme (e.g., Rathfarnham Road R114 and N81 / M50 Interchange) and as such it is likely that breeding species present are habituated to a certain degree of disturbance. The magnitude of the impact will be dependent on the type of construction works and their duration; general construction activities will have a less pronounced affect than blasting, in terms of its ZoI, but will be on-going from periods of up to 24 months and multiple breeding seasons across the entirety of the Construction Phase. However, phasing of the construction works in scheme section will reduce the temporary nature of this impact to approximately one to twelve month disturbances in each section of the Proposed Scheme.*

Table 12.15 provides a summary of the indicative construction noise calculations at varying distances, which have been modelled in the Chapter 9 Noise and Vibration in Volume 3 of this EIAR. All areas within 250m of the Proposed Scheme will be subject to construction activities which generate noise levels greater than 50dB (e.g., piling, rock-breaking, etc.). These activities will result in a greater magnitude of effect on the baseline environment. As a result, noise and vibration from these activities, will have the potential to result in the reduced breeding success of breeding bird species in the vicinity of the works. Breeding pairs will be temporarily displaced during the construction works.

The area over which disturbance / displacement effects will occur, forms a relatively small part of larger expanses of similar habitat types in the wider locality (e.g., mixed broadleaved woodland (WD1)). As such, given the availability of suitable habitat in the wider locality of the Proposed Scheme, the construction works are therefore not likely to affect the conservation status of breeding birds and will not result in a significant negative effect, above the local geographic scale. Although it is not possible to quantify the magnitude of this potential impact (or the potential effect zone) with precision, it could potentially extend for several hundred metres Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme Chapter 12 Page 87 from the Proposed Scheme. The results of noise modelling carried out for the Proposed Scheme confirmed that at 150m, noise levels for all construction activities will be below 60dB (See Chapter 9 (Noise & Vibration)). Given the temporary to short-term nature of the construction works, coupled with the existing levels of disturbance within these urban areas, disturbance or displacement effects associated with the Construction Phase of the Proposed Scheme will also be over the short-term. Therefore, these impacts will not affect the conservation status of breeding bird species and will not result in a negative effect, above the local geographic scale.”

In relation to Section 12.4.3.5.2 wintering birds, “None of the construction activities proposed would be expected to result in any more than a moderate level of disturbance effect on wintering birds at distances beyond 250m. At 100m, noise levels are below 60dB or, in most cases, are approaching the 50dB threshold. Low, or no, effects would be expected for those noise levels. Any landscape features, vegetation cover or buildings between the construction site and winter bird sites would contribute to further reducing the ambient noise at any given distance. Therefore, 300m is considered to be a precautionary buffer in defining the ZoI of disturbance effects. As the majority of works will be carried out during normal working daylight hours, the potential for construction to disturb wintering birds at night, will not arise. Impacts associated with increased levels of disturbance will likely result in the temporary displacement of these wintering bird species to other suitable available lands in the locality. These impacts will be associated with general construction activities (e.g. visual impact of construction workers and machinery and the associated vibration and more constant / continuous noise levels) and impulse noise disturbance from infrequent noise sources with a high noise level, such as blasting/ rock breaking. Following the completion of construction, disturbance levels will likely return to baseline conditions and as a result these lands will become available again as foraging and / or roosting habitat for these wintering bird species.”

To mitigate and monitor the impact of noise and vibration on wildlife within the park during construction the following measures as described in the EIAR will be implemented:

As per Section 12.5.1.2.4 “The appointed contractor will provide a site hoarding of 2.4m height along noise sensitive boundaries, at a minimum, at the Construction Compound, which will assist in minimising the potential for dust impacts off-site”

As per Section 12.5.1.5.1.3 “To mitigate disturbance and / or displacement to breeding birds from noise and vibration activities the relevant mitigation measures as described in Chapter 9 (Noise & Vibration) will be implemented by the appointed contractor. The use of noise generating equipment shall be tempered by the use of modern machinery that shall have appropriate noise restrictors for use in urban situations. Furthermore, the location of equipment that has the potential to cause long-term noise impacts, shall be sited in such a manner so that noise baffling screening reduces noise spill to adjacent areas of open ground.”

Air Quality

In relation to air quality during construction, EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme’s operation are neutral and long-term.

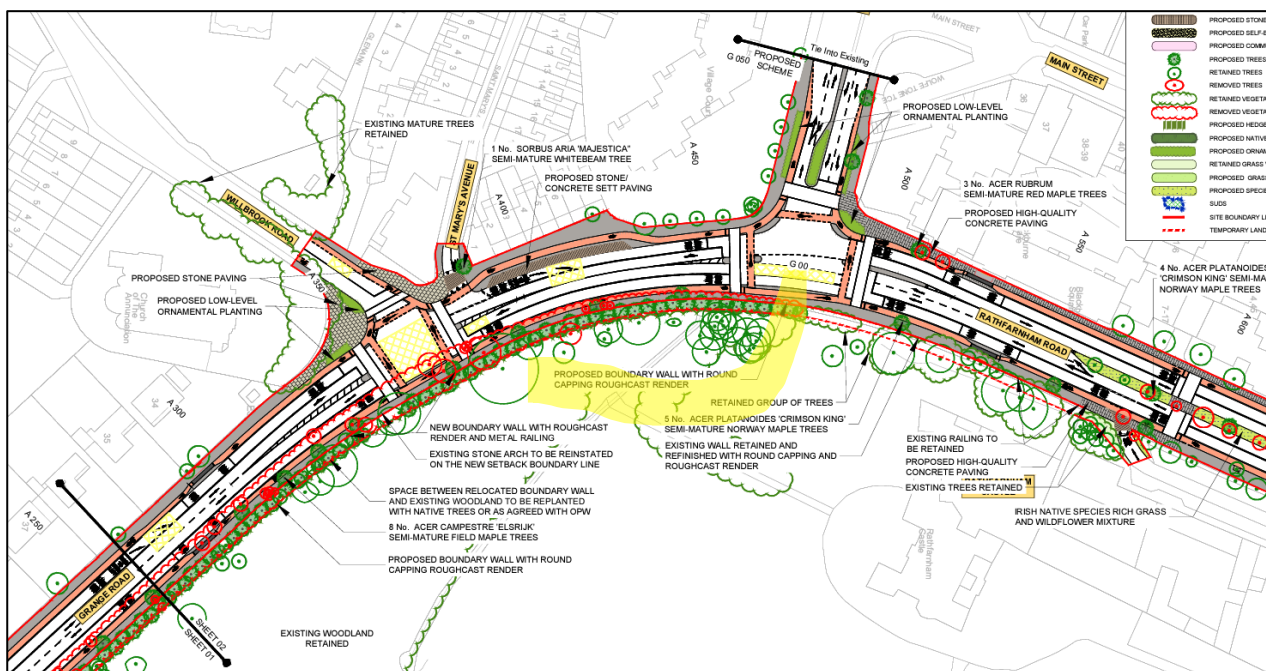
Section 7.6.1 describes the residual impact of the Construction Phase: “When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no significant residual Construction Phase dust impacts. The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme. Therefore, overall it is considered that the residual effects as a result of the Proposed Scheme’s construction are neutral and short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)”

In addition, the EIAR Volume 3 Figures: Part 3 of 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road.

In all cases, the significance of the modelled change in the annual mean NO₂, PM10, PM2.5 during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

9. Replacement of the Castle Wall

Section 4.5.2.1 in Chapter 4 in Volume 2 of the EIAR describes the Proposed Scheme along this section. *“The Proposed Scheme will commence at the junction of Grange Road and Nutgrove Avenue. Between this junction and the Castleside Drive junction it is proposed to provide a single bus lane alongside general traffic lanes and cycle tracks in both directions. To accommodate the road layout, it is proposed to utilise limited land-take from adjacent properties, including setting back the existing boundary wall to Rathfarnham Castle Park. The existing boundary wall of Rathfarnham castle will be set back and reconstructed with a round capping roughcast render”.* The extent of the proposed wall reinstatement is shown on Drawing Nos. BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001 and BCIDC-ARP-ENV_LA-1012_XX_00-DR-LL-0001, relevant extract from one of those drawings below with the detail highlighted.



As per Section 16.5.1.5 in Chapter 16 in Volume 2 of the EIAR *“the proposed land take to Grange Road directly impacts the boundary wall to the Rathfarnham Castle Demesne. Rathfarnham Castle is a 16th century Castle remodelled in the 18th century and is a National Monument (RMP DU022-014, Nat. Mon. No. 628, PO no. 2/1986, SDCC RPS 221) and therefore of High sensitivity. It is also located directly opposite the Rathfarnham Architectural Conservation Area. The Demesne (NIAH 2351) has been much reduced in size but is a public park around the Castle, preserving its setting. Some trees will be removed as a result of the land take and will be a temporary negative visual impact during construction. The pre-mitigation Construction Phase impact is Direct, Negative, Significant Temporary. The present boundary to Rathfarnham Castle on Grange Road and Rathfarnham Road are replacement boundaries built as part of the Rathfarnham Road bypass. The existing mix of boundary treatments on the Grange Road and Rathfarnham Road provides a poor and discordant street frontage and detracts from the streetscape, particularly in relation to the adjoining ACA and Protected Structures. The concrete block walling also detracts significantly from the Castle and its setting and is out of keeping with the Castle and its Demesne. The proposed land take presents an opportunity to reinstate a more consistent and sympathetic boundary treatment which is in keeping with the Castle, its Demesne landscape and the ACA. Consultations have been undertaken with SDCC, OPW, Dept. of Housing, Local Government and Heritage regarding the encroachment into the Rathfarnham Castle Demesne and the removal, set back and replacement of the existing boundary wall. The following boundary treatment is proposed as part of the Proposed Scheme.*

The proposed wall will be 2.8m in height with a rounded capping detail. This is consistent with the existing wall and together with the proposed landscape treatment will provide the necessary buffer between the proposed scheme and the Castle and it's Demesne and maintains and enhances the sense of enclosure.

It is noted that in their submission, South Dublin County Council indicate that proposed boundary wall details are acceptable stating *'the new boundary wall required at this location will provide a boundary treatment that improves views from the Castle and allows the boundary treatment of the Castle Demesne to be more consistent and improve the overall visual impact and architectural detail'*.

10. Impact on woodland playground

There is an existing woodland playground within Rathfarnham Castle. Section 4.5.2.8 in Chapter 4 of the EIAR provides a description of the landscape and urban design works and it acknowledges that *'...the impacted woodland will be replanted with native species and the existing playground will be integrated with the new planting and setback wall alignment (refer to Image 4.2)'*. An extract of Image 4.2 from Section 4.5.2.8 on Chapter 4 is provided below:



Figure 3.40.8 Rathfarnham Castle (extract from Image 4.2 from Section 4.5.2.8 of Chapter 4)

As a consequence of the Proposed Scheme the vehicular traffic lanes will be circa 4.5m closer to the playground than the existing road.

The submission contends that the Proposed Scheme will result in negative impacts on the playground, including increased noise.

The Proposed Scheme will require widening into the park boundary, the closest elements of the Proposed Scheme to the new park boundary are the proposed footpaths and cycle lanes. A bus lane will move approximately 4.5m closer to the natural playground as a result of the Proposed Scheme.

Chapter 9 of the EIAR has undertaken a detailed impact assessment relating to both construction and operational phase noise and vibration impacts associated with the Proposed Scheme taking account of the realignment of all vehicular and active travel lanes and the resultants forecasted traffic flows along the adjoining road network with and without the Proposed Scheme in place. The resultant noise impacts associated with the Proposed Scheme once operational are determined to be neutral to minor positive within the Park. This is due to the overall reduction in traffic flows (cars and HGVs) along the Proposed Scheme.

It is noted that the existing boundary wall will be replaced with a wall of the same height along the park boundary and hence no change in the effectiveness of noise screening from the boundary wall treatment will occur. Whilst there will be a portion of trees removed from the park boundary, these do not provide any notable noise screening for road traffic and hence are not relied upon for noise reduction.

Finally it is important to note that all traffic noise calculations are based on full fleet using combustion engines. As noted in Section 9.4.4.1.1.4 in Chapter 9 in Volume 2 of the EIAR, during the proposed year of opening, 2028, the percentage of vehicles with combustion engines will be reduced compared to the existing scenario. The NTA forecast for the year 2028 is for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the design year 2043, the city bus fleet is forecast to be 100% electric. This will in turn reduce the operational traffic noise levels from buses along the adjacent bus lane.

11. Request to improve Nutgrove Avenue cycle facilities

It is proposed to tie the scheme into the existing Nutgrove Avenue immediately after the Nutgrove Avenue/Grange Road junction as per the general arrangement drawing below.

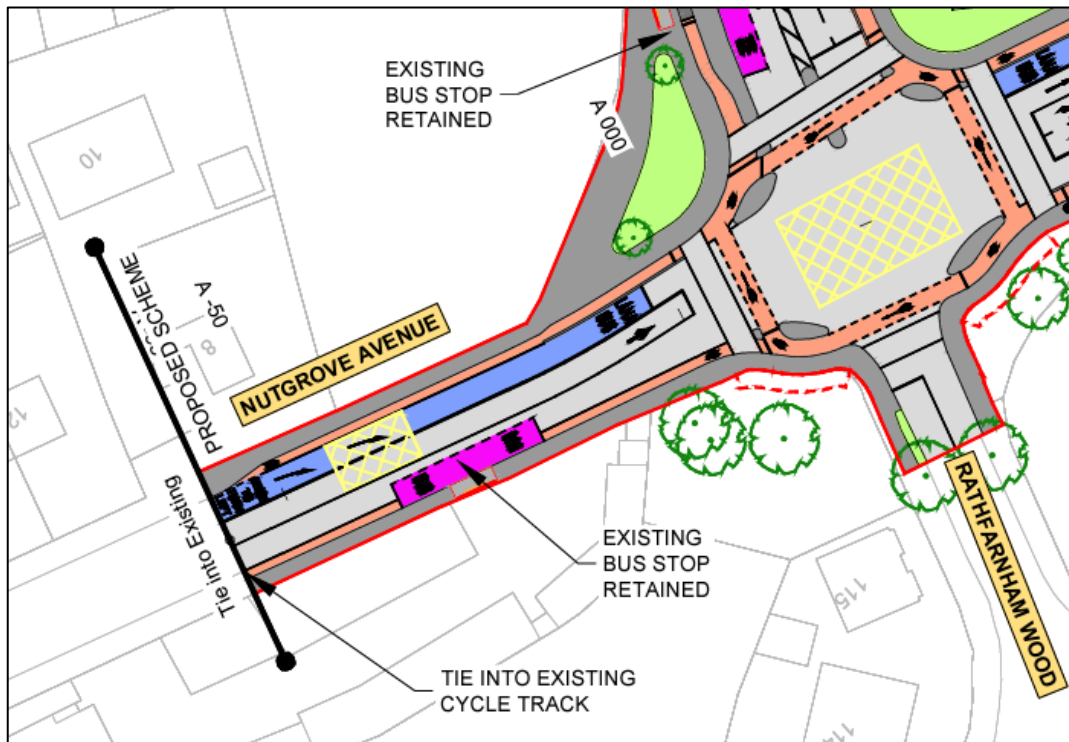


Figure 3.40.9 General Arrangement of Proposed Scheme (Sheet 01)

As per the 2022 Greater Dublin Cycle Network Plan published by the NTA identifies a Nutgrove for a secondary cycle link as indicated by the blue line below. The Proposed Scheme does not preclude any improvement to cycle facilities along Nutgrove Avenue in future.

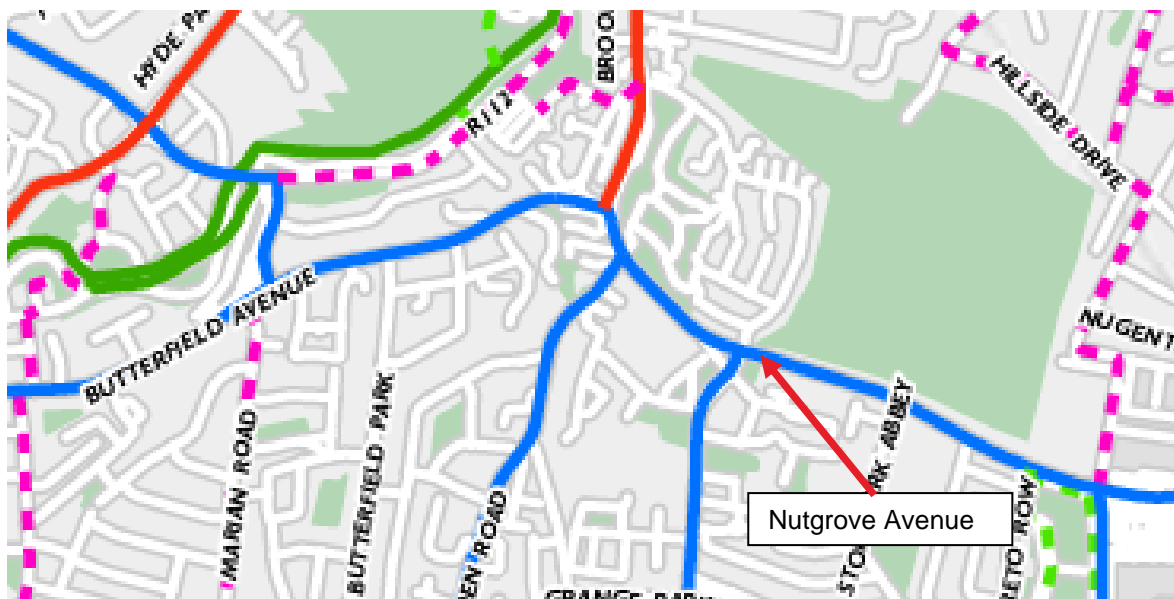


Figure 3.40.10 Extract from 2022 Greater Dublin Cycle Network Plan

12. Bus Stops

Table 6.29 relates to the change between R821 Nutgrove Avenue and R137 Terenure Road North.

Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR notes the following:

“To improve the efficiency of the bus service along the Proposed Scheme the positions and number of bus stops have been reviewed as part of a bus stop assessment. The criteria for consideration when locating a bus stop are as follows:

- *Driver and waiting passengers are clearly visible to each other;*
- *Location close to key facilities;*

- Location close to main junctions without affecting road safety or junction operation;
- Location to minimise walking distance between interchange stops;
- Where there is space for a bus shelter;
- Location in pairs, 'tail to tail' on opposite sides of the road;
- Close to (and on exit side of) pedestrian crossings;
- Away from sites likely to be obstructed; and
- Adequate footway width.

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections on route, reducing to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided." As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above." As a outcome of the bus stop assessment there is a proposed reduction in bus stops from 18 to 15 R821 Nutgrove Avenue and R137 Terenure Road North which results in a positive significant effect as set out in Table 6.30, extract below.

Section	Chainage	Description of Impact	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Avenue to R137 Terenure Road North	A000 - A1850	<ul style="list-style-type: none"> • Three fewer stops than in the Do Minimum. Bus stops are located in more convenient locations for communities and access to signalised crossings. • Slight improvements to bus stop facilities throughout. 	Medium	Medium	Positive Significant

13. Courtyard/Stables Redevelopment

In relation to the potential Courtyard/Stables redevelopment which does not yet have planning grant as of the day of writing this response report. Section 21.5.1 in Chapter 21 (Cumulative Impacts & Environmental Interactions), of Volume 2 of the EIAR acknowledges that other projects could directly interface with the Proposed Scheme and that appropriate liaison will take place:

"Other major infrastructure projects could directly interface with the construction of the Proposed Scheme. Interface liaison will take place on a case-by-case basis through the NTA, as will be set out in the Construction Contract, to ensure that there is coordination between projects, that construction access locations remain unobstructed by the Proposed Scheme works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately."

14. Nutgrove Avenue/Grange Road Junction Signals

At the time of preparing Chapter 6 of the EIAR there was not a signalised pedestrian crossing on the western arm of the R821 Nutgrove Avenue/R821 Grange Road/R822 Grange Road signalised junction. It is acknowledged that a separate project, the Grange Road project which was recently completed installed a signalised pedestrian crossing on the western arm. The assessment of the effects on pedestrian impact during operation is shown below.

As per Section 6.4.6.1.3.1 in addition to a pedestrian crossing on the western arm *"The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario. This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities."*

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
Park Road / R112 Dodder View Road signalised junction						Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

The contents of Table 6.27 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Figure 3.40.11 Extract from Table 6.27 Chapter 6 EIAR

3.41041 – Brian Walker, Carol Walker, Alison Walker

3.41.1 Submission – Whole Scheme

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna - bats
- b. Destruction of trees
2. Alternative solutions
 - a. Metro
 - b. Congestion Charges
 - c. Bus Priority Signals
 - d. Enforcement
3. Unnecessary change providing no real gains to bus travel times.
4. No assessment of cumulative impact of 12 corridors
5. Traffic
 - a. HGVs diverted to Fortfield Rd
 - b. Traffic redistribution onto residential streets

6. Bus stop
 - a. Relocated Bus Stop outside 217 – 219 Templeogue Road
7. Pre-COVID traffic volumes used in analysis.
8. Bus gate
 - a. Limit hours of operation of proposed bus gates
9. Inadequate bus service proposed
10. Air Quality
11. Road widening and CPO
12. Negative effect on businesses
13. Access to amenities
14. Loss of on-street parking
15. Property values
16. Cost / benefit
17. Inadequate public consultation
18. Access for elderly and disabled road users
19. Access to Church of Mary Immaculate, Refuge of Sinners
20. Architectural and cultural heritage
21. Provision of Cycle facilities
22. Bus gate
 - a. Rathmines Road bus gate
 - b. Terenure Road bus gate
23. Request Oral Hearing

3.41.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.42042 – Bridget O'Donoghue & Others

3.42.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Air and noise pollution
2. Loss of green space
 - a. Amenity
3. Biodiversity
 - a. Flora and fauna
4. Hydrology
5. Architectural and cultural heritage
6. Construction traffic
 - a. Risk of accidents

3.42.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.43043 – Butterfield District Residents' Association

3.43.1 Submission – Whole Scheme

1. Traffic impact at Terenure Cross
2. No consideration of what happens buses in the City Centre
3. Access to amenities
4. Traffic safety
 - a. Existing narrow lane widths
5. Alternative solutions
 - a. Metro
6. Biodiversity
 - a. Destruction of trees at Rathfarnham Castle
7. Loss of green space
 - a. Amenity at Rathfarnham Castle

3.43.2 Response to submission

Detailed responses to issues 1 – 3 and 5 – 7 raised by this submission have been provided in Section 2.1.1, 2.3.3 and 2.4.3 of this report.

In relation to Issue 4, the submission refers to road space reallocation which has recently been carried out on Dodder View Road as part of the Dodder Greenway Scheme. While the Proposed Scheme design has been coordinated with the design of the Dodder Greenway scheme at interface points, the schemes are subject to separate design processes.

Notwithstanding this, the NTA understands that the Dodder Greenway Scheme has been designed in accordance with DMURS and as such the traffic lane widths as constructed are appropriate.

3.44044 – Caitriona Holt & Ken Dolan

3.44.1 Submission – Whole Scheme

The submission raised the following issues:

1. Access to amenities
2. Inadequate bus service proposed on Rathmines Road

3.44.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.45045 – Catherine and Brendan Garvan

3.45.1 Submission – Rathmines

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Traffic impact
3. Air pollution
4. Access to amenities

3.45.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.46046 – Catherine Gaffney

3.46.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Loss of green space
 - a. Amenity
2. Biodiversity
 - a. Flora and fauna
3. Air and noise pollution, vibration
4. Flooding
5. Alternative options
 - a. Alternative location

3.46.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.47047 – Cedar Court Residents Association

3.47.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Inadequate bus service proposed.
2. Traffic
 - a. Traffic diverted to residential streets.

3.47.2 Response to submission

A detailed response to Item 2 raised by this submission have been provided in Section 2.4.3 of this report.

In terms of item 1, the submission notes the need for a bus service along Terenure Road North/Harold's Cross Road. While the Proposed Scheme runs along Terenure Road East/Rathgar Road, the BusConnects Network Redesign does not remove bus services from Terenure Road North/Harold's Cross Road. This show in the below extract from the network redesign map which shows route 85 operating at a frequency of up to six buses per hour along Harold's Cross Road from Terenure Cross before joining the F Spine at Harold's Cross Park. It is noted that the F Spine would run along the Kimmage to City Centre Core Bus Corridor Scheme.

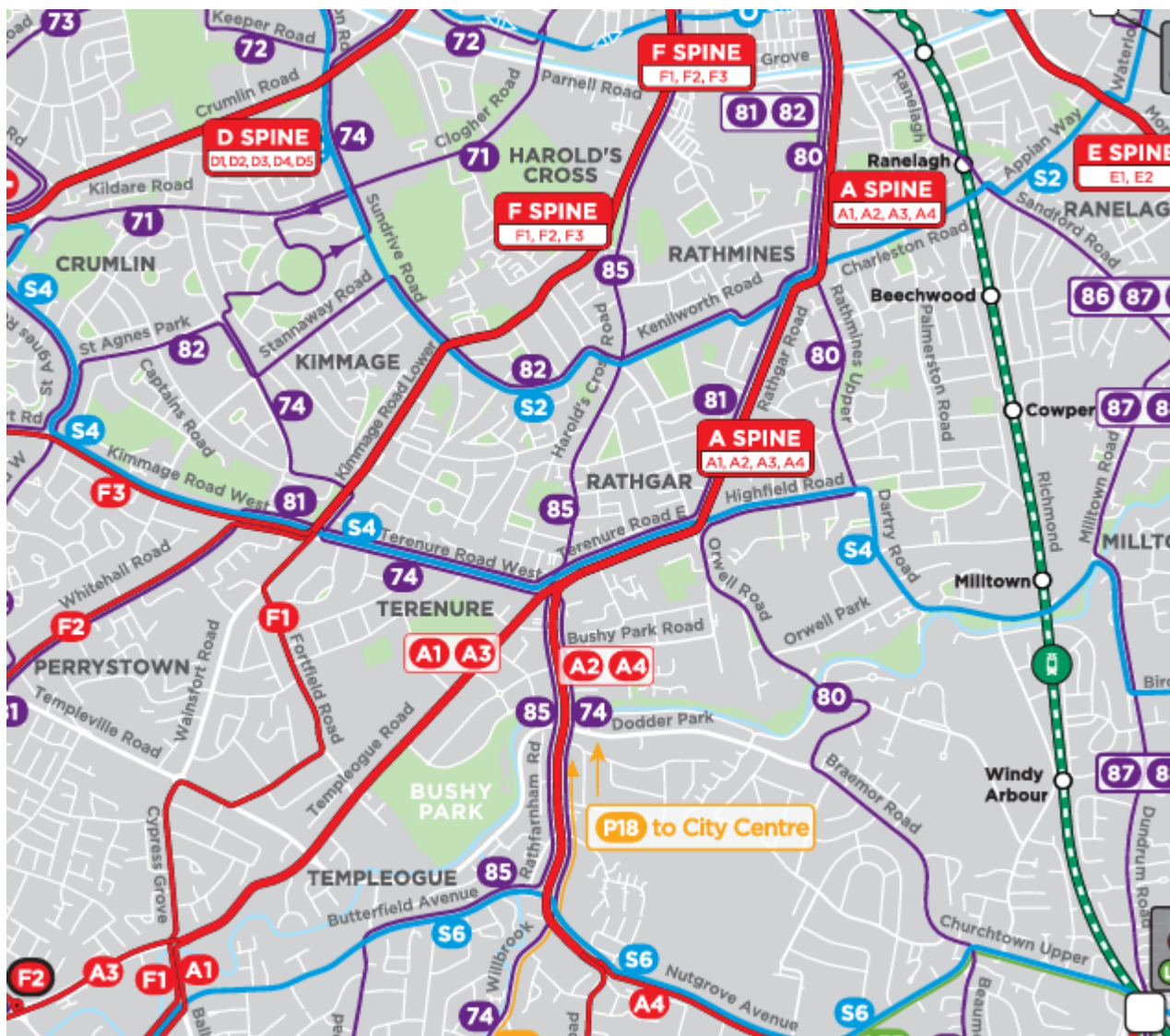


Figure 3.47.1 Extract from BusConnects Network Redesign Map

3.48048 – Celine & John Cullen

3.48.1 Submission – Templeogue Road

The submission raised the following issues:

1. Safety concerns associated with discontinuity of cycle tracks on Templeogue Road.
2. Loss of privacy and increased noise and air pollution
3. Lack of clarity around the temporary acquisition

3.48.2 Response to submission

- i. Safety concerns associated with discontinuity of cycle tracks on Templeogue Road.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. Section 3.3.2.1.1 assessed five scheme options (S1-1 to S1-5) for the section of Templeogue Road between Wellington Lane and Templeville Road. Following an MCA, sub-option S1-5 was identified as the preferred option for this section.

The MCA concluded that sub-option S1-5 *“was identified as having significant benefits over other options in relation to Transport Reliability and Quality, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character. Option S1-5 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route”*.

There is insufficient space to provide dedicated bus infrastructure and cycling facilities without extensive CPO of private lands or major disruptions to traffic in the area. The MCA has identified the preferred option (S1-5) as the most suitable in achieving the projects objectives.

The submission recommended that an option including a bus gate north of Cypress Grove Road is considered, this option was partially considered under options S1-1 to S1-4 in Chapter 3 Consideration of Reasonable Alternatives. These options were eliminated due to option S1-5 performing better in terms of Transport Reliability and Quality, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character.

The other alternative recommendation made in the submission recommended signal-controlled priority north of Templeogue Bridge (Bus stop 1158), for northbound buses and a signal-controlled priority south of the Templeville Road junction. This option was assessed in the Preferred Route Option Report, included in the Supplementary Information submitted to ABP as part of the planning application. The option was considered but was not carried forward for the reasons outlined in section 3.4.1.2.1 of the report:

“A sub option was also considered between Cypress Grove Road and Templeogue Village which sought to minimise the impact on properties this section. This option proposed curtailing the inbound bus lane at Cypress Grove Road, and re-commencing it at the north-eastern side of Templeogue Village. However, it was considered that in combination with vehicular activity in Templeogue Village, this distance (~500m) was too much to give guaranteed bus priority through use of signal-controlled priority. It was considered that this option would not be in line with the objectives of the scheme and, as such, this option was not considered any further.”

“An additional option considered curtailing the inbound bus lane at Cypress Grove Road, and re-commencing it at after Ashfield Place. However, under this option, no cycle facility would be provided between Cypress Grove Road and Ashfield Place meaning cyclists would have to share with general traffic. It was considered that this option would not be in line with the objectives of the scheme and, as such, this option was not considered any further.”

An independent Stage 1 Road Safety Audit was complete by PMCE on the Proposed Scheme, the report is available in the Supplementary Information, Appendix M2 Stage 1 Road Safety Audit. The independent auditor did not identify the section of Templeogue Road with shared cycle and traffic facilities as a potential safety concern. It should be noted that the section between Cypress Grove Road and north of Templeogue village will have the speed limit reduced to 30km/h.

- ii. Loss of privacy and increased noise and air pollution

The proposed permanent acquisition will result in the loss of between 2.2m to 1.2m at the roadside of the back garden, with an additional 3.0m temporarily required to allow for the construction of boundary treatment works and tying into the existing garden. Upon completion of the permanent works, the temporary land take area will be handed back to the property owner. The edge of the proposed carriageway (bus lane) will be 3.5m to 2.3m closer to the residence than the edge of the existing general traffic lane.

The proposed land acquisition at 14 Fortrose Park is necessary to facilitate the optimum cross-section in line with the scheme’s objectives outlined in EIAR Volume 2 Chapter 1 Introduction. Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. Section 3.3.2.1.1 assessed five scheme options (S1-1 to S1-5) for the section of Templeogue Road between Wellington Lane and Templeville Road.

A Multi-Criteria Analysis (MCA) which evaluated the route options under the assessment criteria of; Capital Cost, Transport Reliability and Quality, Cycle Network Integration, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character was undertaken for the five scheme options. Following an MCA, sub-option S1-5 was identified as the preferred option for this section. The MCA concluded that sub-option S1-5 *“was identified as having significant benefits over other options in relation to Transport Reliability and Quality, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character. Option S1-5 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route”*.

In relation to the impact of the Proposed Scheme on noise and vibration, these impacts have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme. Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that *“Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.”* It goes on to state that *“There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.”* Table 9.39 lists these roads and Templeogue is not included in Table 9.51.

In relation to air pollution, EIAR Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality as a result of the Proposed Scheme’s operation are neutral and long-term.

In respect of loss of privacy, reinstatement of property frontage including boundary walls, gates, railings and landscaping will be on a like-for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

iii. Lack of clarity around temporary acquisition

Both permanent and temporary land acquisition is required at this property. In terms of the temporary acquisition, 3 meters from the proposed boundary wall will be required for the duration of the works. Any land temporarily acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question. Any lands acquired temporarily to facilitate construction work will be returned to landowners on completion of the works. Existing boundary walls or fencing being relocated will be constructed to match the existing conditions, unless otherwise agreed. The removal of trees, vegetation, lawns, paving etc. will be minimised in so far as practicable. For clarity, it is not proposed to utilise the area identified for temporary or permanent acquisition as a site compound.

It is noted the entire area identified for temporary acquisition will not be required for the duration of the works. It is acknowledged that during the construction of the works there will be inconveniences for all users, but this will be managed to minimise impacts for all affected parties. The duration of the works will vary from property to property, but access and egress will be always maintained. Prior to undertaking any accommodation works within private property the appointed contractor will engage in consultation with landowners, during consultation the landowner will have an opportunity to raise any concerns and outline any requirements associated with the land in question.

For clarity, the proposed diversion, and increase, to temporary acquisition is to facilitate any potential work to the shed on the property that may arise due to the works associated with the Proposed Scheme at that location. With respect to the magnolia tree on the property, which is not identified for removal, as noted in 5.5.2.4 of the EIAR:

Trees to be retained within and adjoining the works areas will be suitably protected as necessary as per the British Standards Institution (BSI) British Standard (BS) 5837:2012 Trees in Relation to Design, Demolition and Construction (BSI 2012).

Trees identified for removal will be removed in accordance with BS 3998:2010 Tree Work. Recommendations (BSI 2010). The location of trees to be retained, and trees to be removed is shown on the Landscaping General Arrangement drawings (BCIDA-ARP-ENV_LA-0809_XX_00-DR-LL-9001).

A suitably qualified arborist will be appointed by the contractor to monitor tree protection, and tree removal related activities. The design has been developed to ensure removal of trees has been minimised in so far as practicable. Where necessary, protective fencing will be erected, and mitigation measures will be put in place, prior to construction works commencing in the immediate vicinity.

Works required within the root protection area of trees to be retained will follow the arboricultural methodology included in Appendix A17.1 Arboricultural Impact Assessment in Volume 4 of this EIAR. Further information on mitigation measures with regards to the removal and protection of trees is provided in Chapter 12 (Biodiversity), and further information on the assessment of tree removal with regards to landscape and visual impact is provided in Chapter 17 (Landscape (Townscape) & Visual) of this EIAR.

Mitigation and monitoring measures have been identified as environmental commitments and overarching requirements which shall avoid, reduce, or offset potential impacts which could arise throughout the Construction Phase of the Proposed Scheme. These mitigation and monitoring measures which are relevant to the Construction Phase of the Proposed Scheme are detailed in EIAR Volume 2 Chapter 6 to Chapter 21 and are summarised in Chapter 22 (Summary of Mitigation & Monitoring Measures) of this EIAR.

3.49049 – Christian Schaffalitzky

3.49.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Modelling baseline
2. Traffic on Rathmines Road
 - a. Volumes on Highfield Road
3. Lack of consultation

3.49.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.50050 – Christine Artcanuthurry & Lorean Burke

3.50.1 Submission – Whole Scheme

The submission raised the following issues:

1. Traffic
 - a. No off-peak modelling
 - b. Traffic diverted to residential streets.
2. Bus Stop
 - a. Relocation
3. Unnecessary change providing no real gains to bus travel times.
4. Access to amenities
5. Architectural and cultural heritage
6. Safety of vulnerable pedestrians
7. Destruction of trees

8. Property values

3.50.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.51 051 – Ciara McElinn

3.51.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact on Privacy
2. No consideration of Glin River
3. Consideration of alternative options
 - a. Terminate Proposed Scheme at Butterfield Avenue – the submission suggests stopping the scheme at the Butterfield Avenue junction to avoid impacting the Rathfarnham Castle Park
 - b. Acquire land from the houses on the southern side of Grange Road
 - c. Cyclists share bus lanes as proposed elsewhere on the scheme
4. Climate Impact of Tree Removal
5. Biodiversity Impact
6. Landscape and Visual
7. Noise, Vibration and Air Quality
8. Replacement of the Castle Wall
9. Impact on woodland playground
10. Request to improve Nutgrove Avenue cycle facilities
11. Bus Stops
12. Courtyard/stables redevelopment
13. Nutgrove Avenue/Grange Road Junction Signals

3.51.2 Response to submission

Items 2 - 13 raises the same concerns as Submission 40. Please refer to Section 3.40 for responses to these items. See below for response to item 1.

1. Impact on privacy

In respect of loss of privacy, if the CPO is confirmed by An Bord Pleanála, reinstatement of property boundaries including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

3.52052 – Ciarán Ahern

3.52.1 Submission – Whole Scheme

The submission raised the following issues:

1. Support the Proposed Scheme.
2. Compulsory purchase order
3. Cycle track
 - a. Prefer fully segregated facilities throughout
 - b. Narrow proposed widths
4. Impact on Rathfarnham Castle
 - a. Loss of Amenity
 - b. Impact on flora and fauna
 - c. Destruction of trees

3.52.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report.

3.53053 – Ciaran Mulligan & Bryan Mc Cormack

3.53.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic Impact as a result of Rathgar Road 1-way
2. Impact of additional Traffic on Highfield Road

3.53.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.54054 – Clare Fitzpatrick and Will Czerniak & Others

3.54.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options
 - a. Tram/ Luas
 - b. Metro
2. No assessment of cumulative impact of 12 corridors
3. Lack of consultation

3.54.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 of this report.

3.55055 – Clare Sexton

3.55.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Loss of on-street parking
2. Delivery access
3. Impact on Character of the area
4. Biodiversity
 - a. Destruction of trees
5. Alternative options
 - a. Congestion charges
 - b. Park and ride facilities

3.55.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.56056 – Claudia Gentile

3.56.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Architectural and cultural heritage
2. Impacts/costs of the Proposed Scheme outweigh the benefits.
3. Minimal bus journey time improvement
4. Inadequacies in the Consultation Process
5. Biodiversity
 - a. Flora and fauna
 - b. Destruction of trees
6. Noise and Air pollution
7. Compulsory Purchase Order due to proposed traffic management measures
8. Traffic
 - a. Traffic redistribution due to proposed traffic management measures
 - b. Proposed one-way on Rathgar Road.
 - c. Impact of Turn bans.
9. Bus Gate

- a. St Mary's college in Rathmines
- 10. Negative effect on businesses
 - a. Loss of street parking / loading bays
- 11. Narrow proposed footpaths
- 12. Safety of proposed cycle tracks
- 13. Road widening
- 14. Justification for corridor routing along Rathgar Road
- 15. Pre-COVID traffic volumes used in analysis.
- 16. Changes to work/commuting patterns
- 17. Trialling of the Proposed Scheme
- 18. Alternative options
 - a. Metro
 - b. School buses
 - c. Congestion charges
 - d. Park and ride facilities
 - e. Cashless fare payment
 - f. Bus priority traffic lights
- 19. No assessment of cumulative impact of 12 corridors
- 20. Routing of buses via Terenure Road North and Harold's Cross Road
- 21. Separate consultation on CBC10 and CBC12

3.56.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.57057 – Cliona Hickey

3.57.1 Submission – Rathmines

The submission raised the following issues:

- 1. Traffic
 - a. Increased traffic volumes on Richmond Hill
- 2. Access to amenities
- 3. Access to Church of Mary Immaculate, Refuge of Sinners

3.57.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.58058 – Cliona Maughan

3.58.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Lack of consultation
2. Traffic
 - a. Increased traffic on Highfield Road, Villiers Road, Neville Road and Templemore Avenue
 - b. Traffic diverted to residential streets.
3. Pre-COVID traffic volumes used in analysis.

3.58.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

In terms of traffic increases on Villiers Road, Neville Road and Templemore Avenue, it is noted that Diagram 6.40 and 6.41 do not identify any increases in traffic along these roads as a result of the Proposed Scheme.

3.59059 – Cliona Mullen

3.59.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Architectural and cultural heritage
3. Bus stop
 - a. Relocation
4. Alternative options
 - a. Park and ride facilities
 - b. Bus priority signals
 - c. Cashless fare payment
5. Traffic impact as a result of bus gate in Rathmines and one-way on Rathgar Road
6. Justification for corridor routing along Rathgar Road
7. Air pollution
8. No assessment of cumulative impact of 12 corridors
9. Metro is more appropriate for this corridor.
10. Inadequate bus service on Harold's Cross Road

3.59.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

In terms of item 10, the submission notes the need for a bus service along Terenure Road North/Harold's Cross Road. While the Proposed Scheme runs along Terenure Road East/Rathgar Road, the BusConnects Network Redesign does not remove bus services from Terenure Road North/Harold's Cross Road. This is shown in the below extract from the network redesign map which shows route 85 operating at a frequency of up to six buses per hour along Harold's Cross Road from Terenure Cross before joining the F Spine at Harold's Cross Park. It is noted that the F Spine would run along the Kimmage to City Centre Core Bus Corridor Scheme.

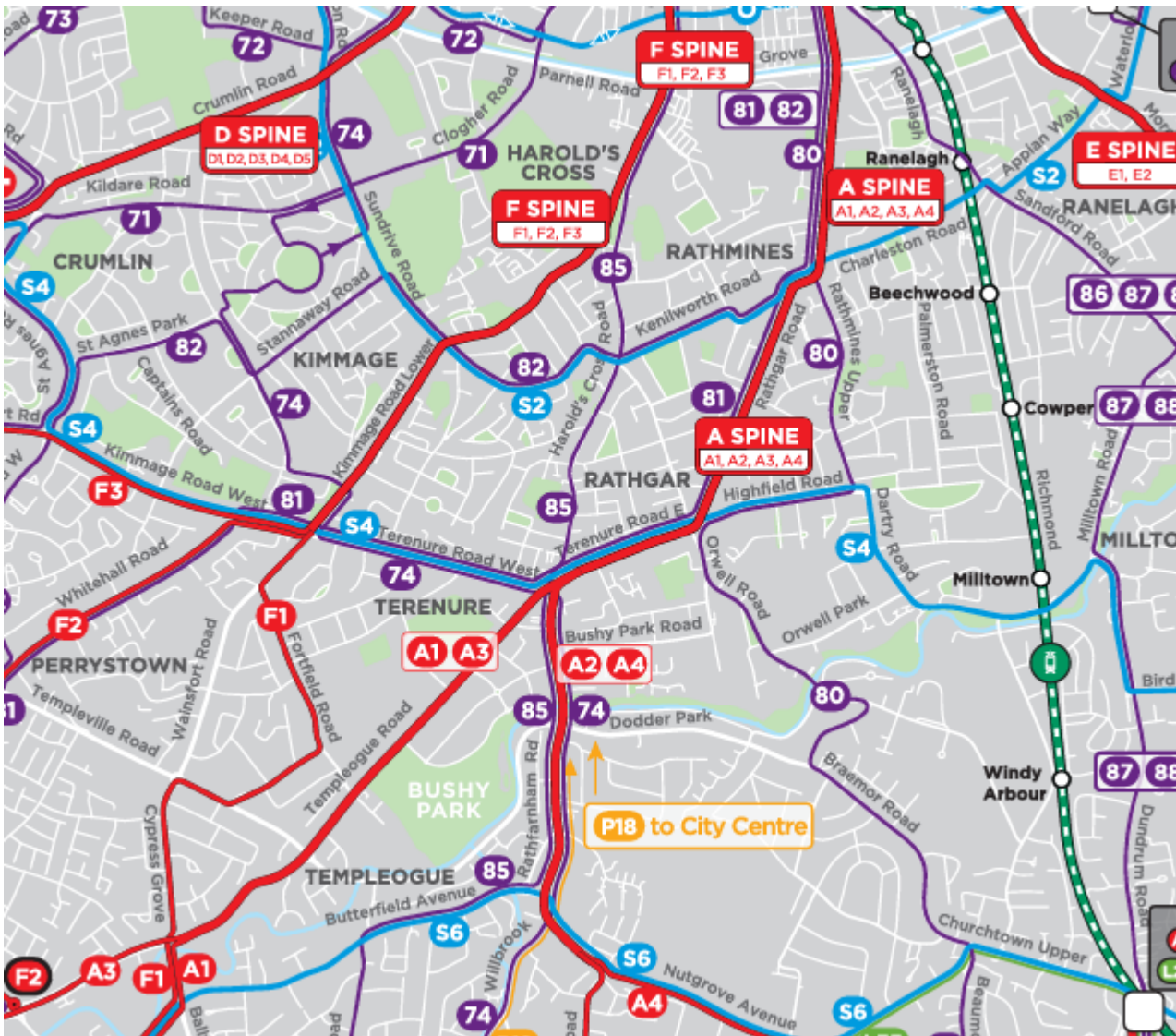


Figure 3.59.1 Extract from BusConnects Network Redesign Map

3.60060 – Cllr. Pamela Kearns

3.60.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Destruction of trees including at Rathfarnham Castle
2. Architectural and cultural heritage
 - a. Wall at Rathfarnham Castle including visual impact.
3. Compulsory purchase order

4. Bus stop
 - a. Relocation
5. Traffic
 - a. Increased volumes on Wellington Land, Cypress Grove Road and Templeville Road
6. Negative effect on businesses

3.60.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.61 061 – Cllr. Lynn McCrave

3.61.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna
 - b. Destruction of trees
2. Architectural and cultural heritage
 - a. Walls
3. Alternative options
 - a. Alternative locations
4. Air pollution
5. Support the Proposed Scheme.

3.61.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.62 062 – Cllr. Yvonne Collins

3.62.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Flora and fauna
 - b. Destruction of trees
2. Hydrology
3. Loss of green space
 - a. Amenity
4. Alternative options

- a. Extents of project
 - b. Bus priority signals
 - c. Increased bus service
 - d. Light rail
 - e. Metro
 - f. Alternative location
 - g. School buses
5. Bus stop
 - a. Relocation
 6. Hazardous materials on compound
 7. Air and noise pollution

3.62.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.63063 – Colin McKeeman

3.63.1 Submission – Templeogue Road

The submission raised the following issues:

1. Turn bans.
 - a. Proposed Greenlea road to Fortfield right-turn ban
2. Proposed bus gates
 - a. Limit hours of operation
3. Access to amenities
 - a. Bushy Park
 - b. Templeogue village post office
4. Traffic
 - a. Increased volumes on Fortfield Road
 - b. Increased volumes on Terenure Road
5. Bus stop
 - a. Consolidation of Bushy Park and Terenure College stops
6. Proposed bus gates
 - a. Proposed Templeogue Road bus gate
 - b. Limit hours of operation
7. Alternative options
 - a. Existing Templeogue Road bus priority signals
8. Architectural and cultural heritage
9. Negative effect on businesses

- a. Passing trade
 - b. Additional travel distance and access issues
10. Safety of vulnerable pedestrians
11. Unnecessary change providing no real gains to bus travel times.

3.63.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.64064 – Colleen Feeley

3.64.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Compulsory purchase order
 - a. No details with CPO reference
3. Traffic
 - a. Increased traffic on Highfield Road
4. Architectural and cultural heritage
5. Biodiversity
 - a. Flora and fauna
6. Air and noise pollution
7. Alternative options
 - a. Tram/ Luas
 - b. Metro
8. Negative effect on businesses
 - a. Additional travel distance and access issues
9. Access to amenities

3.64.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.65065 – Colm Brophy TD

3.65.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options

- a. Metro
2. Turn bans.
3. Traffic
4. Unnecessary change providing no real gains to bus travel times.
5. Concern with construction compound TR3 on Dodder View Road
6. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna

3.65.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.3.3, 2.4.3, and 2.5.3 of this report.

3.66 066 – Conor and Anna O'Kelly and others

3.66.1 Submission – Templeogue Road

The submission raised the following issues:

1. Turn bans.
 - a. Support right-turn ban from Fortfield to Greenlea Road

3.66.2 Response to submission

The support for the right turn ban from Fortfield to Greenlea Road is noted.

3.67 067 – Conor O'Meara

3.67.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed bus gates
2. Turn bans to Lavarna Grove
 - a. Compliance and enforcement
3. Traffic
 - a. Increased traffic on Lavarna Grove
4. Air and noise pollution

3.67.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.68068 – Conor Ryan and Siobhan Ryan

3.68.1 Submission – Whole Scheme

The submission raised the following issues:

1. Bus stop
 - a. Support reduction in stops
 - b. Bus stops shelters & real-time passenger information.
2. Inadequate bus service proposed
3. Biodiversity
 - a. Destruction of trees in Bushy Park
4. Loss of green space
 - a. Amenity
5. CPO on Terenure Road East and Rathfarnham Road
6. Commuting patterns post COVID-19
7. Limit hours of operation of proposed bus gates
8. Traffic Impact due to proposed traffic management measures
9. Access for emergency services
10. One-way operation of Rathgar Road

3.68.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

The support for the reduction in the number of stops is noted and welcomed by the NTA. In relation to the provision of new bus shelters, it is noted that the Proposed Scheme will result in the provision of bus shelters at eight additional locations, as well as the provision of RTP1 facilities at 44 additional locations.

In relation to the removal of trees in Bushy Park, Figure 3.68.1 to Figure 3.68.2 are extracts from the Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR. These drawing show the proposed landscaping along Templeogue Road in the area referenced in the submission and identify trees to be removed (trees with red outlines).

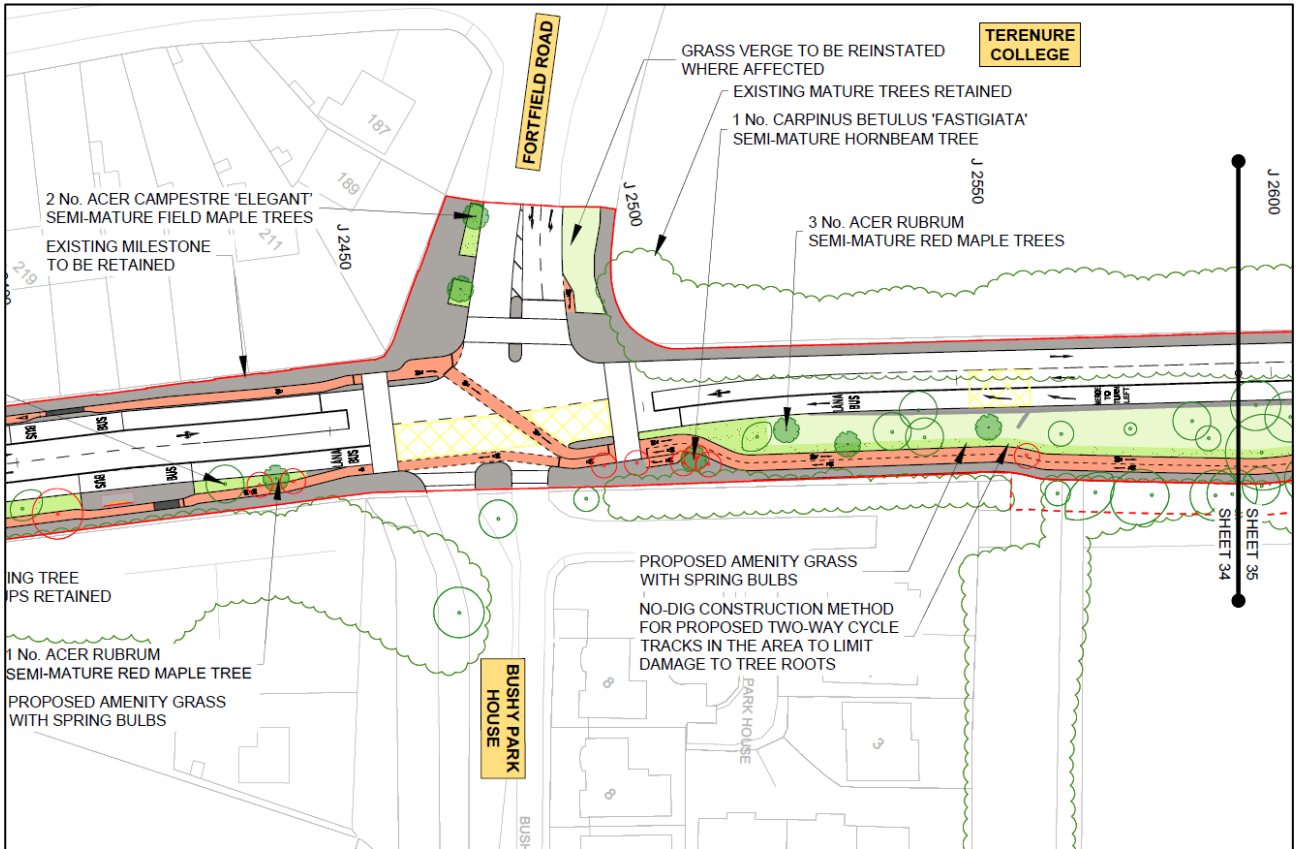


Figure 3.68.1 Extract from Landscaping General Arrangement Drawings (Sheet 34)

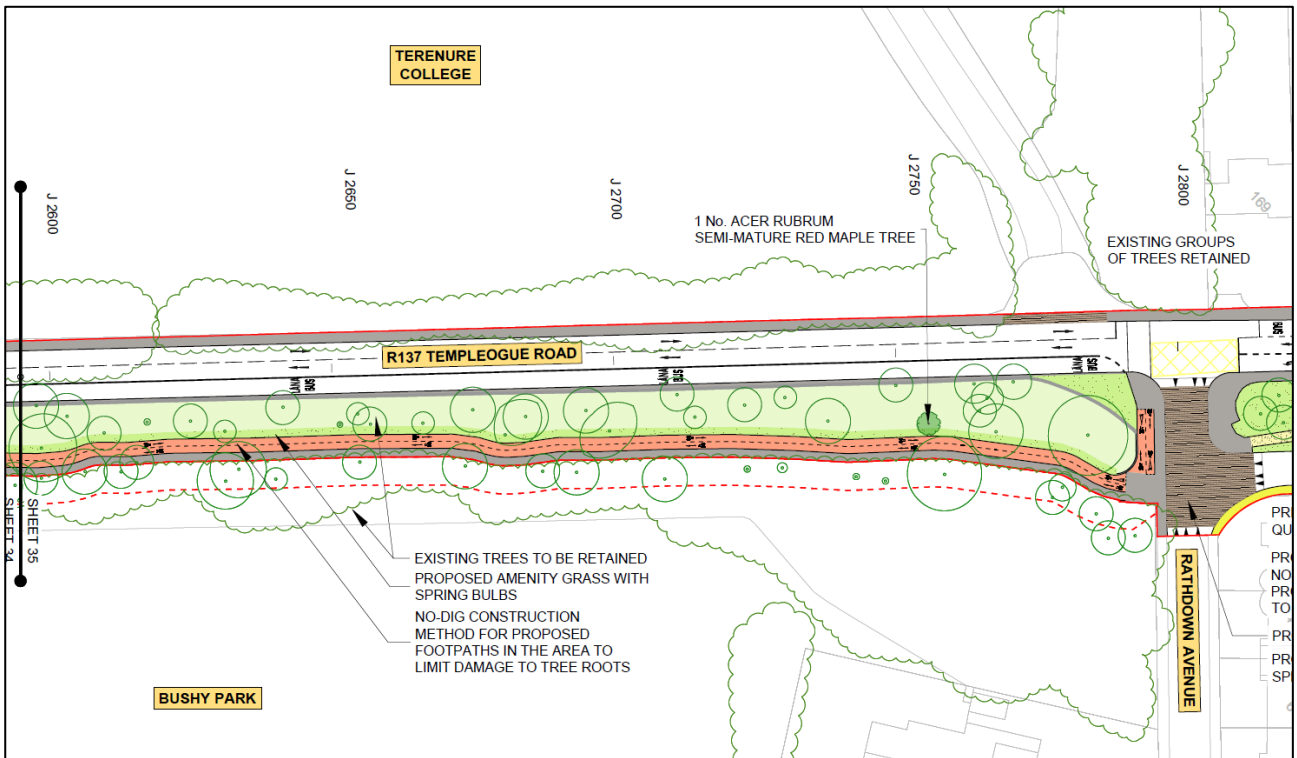


Figure 3.68.2 Extract from Landscaping General Arrangement Drawings (Sheet 35)

It is noted that only 1 tree is identified for removal within Bushy Park.

Within Bushy Park, it is noted that the design has considered the impact on trees and in this area it is proposed to deviate slightly from the required minimums in order to retain trees while still achieving the scheme objectives. This is explained in Table 4.3 of Chapter 4 for of the EIAR, and extract of which is presented below.

Ch. J2500-J2790	Two-Way Cycle Track	3.25	Departure	2.5m	Cycle track width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.
Ch. J2500-J2790	Footpath (within Bushy Bark)	2.0m	Departure	1.5m	Footpath width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.

Figure 3.68.3 Extract from Chapter 4 of the EIAR (Table 4.3)

3.69069 – Councillor Anne Feeney

3.69.1 Submission – Whole scheme

The submission raised the following issues:

1. Alternative options
 - a. Metro
 - b. Luas
2. Existing bus priority signal on Templeogue Road is adequate.
3. Inadequate bus service proposed.
4. Traffic
 - a. Diverted to residential streets.
 - b. Increased volumes on Fortfield Road, Terenure Road East, Greenlea Road, Lavarna Grove, Highfield Road
 - c. Increased volumes on Castlewood Ave, Castlewood Park, Church Ave, Grosvenor Road and Place, Leinster Rd, Belgrave Sq, Rathmines Road Upper, Terenure Road North
5. Safety of vulnerable cyclist due to gaps in segregated cycling infrastructure
6. Compulsory purchase order
 - a. Cost
7. Biodiversity
 - a. Destruction of trees
8. Unnecessary change providing no real gains to bus travel times.
9. Proposed bus gates
 - a. Templeogue Road
10. Access to amenities
11. Road widening

3.69.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.70070 – Councillor Carolyn Moore

3.70.1 Submission – Whole Scheme

The submission raised the following issues:

1. Lack of consultation
2. Cumulative Traffic Impact
3. Bus stop
 - a. Shelter design
4. Biodiversity
 - a. Destruction of trees and impact of Rathfarnham Castle
5. Existing junction designs
6. Narrow footpath widths
7. Cycle tracks
 - a. Narrow proposed widths
 - b. Provide bicycle priority signals.
 - c. Discontinuity at Terenure Place
8. Speed limits
 - a. Limit to 30 km/hr near cycle tracks
9. Inadequate bus service proposed.
10. Enforcement
11. Traffic
 - a. Diverted to residential streets.
12. Monitoring and mitigation
13. Compulsory purchase order

3.70.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3 and 2.4.3 of this report.

3.71071 – Danny & Margaret McLaughlin

3.71.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Character of the area
3. Biodiversity
 - a. Destruction of trees
4. Traffic
 - a. Increased volumes

- b. Diverted to residential streets.
- 5. Safety of vulnerable pedestrians
- 6. Air pollution
- 7. Safety of vulnerable cyclist due to gaps in segregated cycling infrastructure
- 8. Cycle track
 - a. Narrow proposed widths
- 9. Lack of consultation

3.71.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.3.3, and 2.4.3 of this report.

3.72072 – Daria Sochacka and William Mc Elinn

3.72.1 Submission – Rathfarnham Road

The submission raised the following issues:

- 1. Loss of green space
 - a. Amenity
- 2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
- 3. Alternative option
 - a. Bus priority signals
 - b. Project extents
- 4. Hydrology
- 5. Architectural and cultural heritage
 - a. Walls, railings and gates
- 6. Air and noise pollution, vibration

3.72.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.73073 – Darren Twyford

3.73.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Road widening
3. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
4. Loss of green space
 - a. Amenity
5. Architectural and cultural heritage
 - a. Walls, railings and gates
6. Lack of consultation
7. Traffic

3.73.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.74074 – David Byrne

3.74.1 Submission – Templeogue Road

The submission raised the following issues:

1. Cumulative Impact of all CBC Schemes
2. Minimal Journey Time Savings
3. Metro/Light Rail Alternative
4. Lack of consultation
5. Traffic
 - a. Diverted to residential streets.
 - b. Increased congestion
 - c. Operation of Terenure Cross
 - d. Lack of dedicated right turn lane from Templeogue Road to Springfield Avenue
6. Proposed bus gate on Templeogue Road
7. Relocation of bus stop 1159
8. Proposed turn bans
 - a. Support for proposed turn bans
 - b. Enforcement
9. Access to amenities
 - a. Bushy Park
10. Air pollution
11. Biodiversity

- a. Destruction of trees at Rathfarnham Castle
 - b. Flora and fauna
- 12. Loss of green space
 - a. Amenity
- 13. Junction design to accommodate for larger delivery vehicles.

3.74.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3 2.4.3 and 2.5.3 of this report.

The NTA notes the support for the proposed turn bans in the vicinity of Templeogue Road.

In relation to Issue 13, vehicle tracking has been carried out at all junctions to ensure that larger vehicles, including delivery vehicles where appropriate, can make all required movements.

3.75075 – David O'Doherty and Niamh Tierney

3.75.1 Submission – Whole scheme

The submission raised the following issues:

1. Benefits of the proposed Scheme do not justify the cost and environmental impacts
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Whitechurch Stream not considered
4. Traffic
 - a. Traffic displaced to residential streets
 - b. Insufficient traffic modelling
5. Air pollution
6. Access to amenities including Bushy Park
7. No assessment of cumulative impact of 12 corridor
8. Impact on visibility/perceived safety from proposed LED lighting
9. Lack of enhanced pedestrian facilities
10. Cycle facilities
 - a. Lack of continuity
 - b. Insufficient width
11. Alternative options
 - a. Metro
 - b. Congestion Charges
12. Turn bans
13. Proposed bus gate
 - a. Limit hours of operation
14. Lack of consultation

15. Request Oral Hearing
16. Bus stop
 - a. Removal of multiple bus stops
 - b. Relocation of bus stop 1159
17. Elderly and Disability Access
18. Access to St Luke's Hospital
19. Pre-COVID traffic volumes used in analysis.
20. Changes to work patterns due to the COVID-19 pandemic
21. Architectural and cultural heritage
 - a. Impact on heritage properties due to CPO
22. Negative impact on businesses

3.75.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 8, Section 12.4 of the Preliminary Design Report contained in the Supplementary Information outlines the design approach to Public Lighting. The following is noted:

“All new public lighting will be designed and installed in accordance with the specific lighting and electrical items set out the following National Standards and guides, including but not limited to:

- *Local Authority Guidance Specifications;*
- *EN 13201: 2014 Road Lighting (all sections);*
- *ET211:2003 ‘Code of Practice for Public Lighting Installations in Residential Areas’;*
- *BS 5489-1 ‘Code of practice for the design of road lighting’;*
- *TII Publications: Specification for Road Works, Series 1300 & 1400;*
- *TII Publications Standard Construction Details, Series 1300 & 1400;*
- *IS EN 40 – Lighting Columns;*
- *Institution of Lighting Professionals “GN01 Guidance Notes for Reduction of Obtrusive Light”.*

All new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the ‘Guidance notes for the Reduction of Light Pollution’ issued by the Institution of Lighting Professionals (ILP).”

In line with these guidance documents, and industry best practice, LED lighting will be provided. The Proposed Scheme will provide sufficient lighting in all areas. The following is noted in Section 12.4.1 of the Preliminary Design Report:

“Where significant alterations are proposed to the existing carriageways, the preliminary street lighting design ensures that the current standard of public lighting is maintained or improved.”

In relation to Issue 9, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do

Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

“Pedestrian Infrastructure: The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C/ D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a Positive, Significant and Long-term effect in all four sections of the Proposed Scheme.”

In relation to Issue 10, the GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.75.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4% following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

3.76076 – David Phelan

3.76.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Highfield Road

2. One-way operation of Rathgar Road
3. Proposed turn bans
 - a. Highfield Road to Rathgar Road
4. Safety of vulnerable pedestrians
5. Unnecessary change providing no real gains to bus travel times.

3.76.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.77077 – Dearbhail Shannon

3.77.1 Submission – Whole scheme

The submission raised the following issues:

1. Lack of clarity around land acquisition
2. Consultation Process
3. Impact on Heritage Properties
4. Existing bus priority signal on Terenure Road East is adequate
5. Removal of trees on Terenure Road East
6. Changes to work patterns due to the COVID-19 pandemic
7. Cost Benefit Analysis
8. Alternative, less intrusive measures
9. Metro and light rail is more appropriate
10. Right turn from Rathfarnham Road onto Terenure Road East
11. Traffic disruption due to traffic management proposals

3.77.2 Response to submission

15. Lack of clarity around land acquisition

Both permanent and temporary land acquisition is required at this property, the extents of which are outlined in the Deposit Maps part of the EIAR. In terms land permanent acquisition, 3.1 meters from the proposed boundary wall will be required to achieve the optimum road cross-section, as described in Section 4.5.3.1 of EIAR Volume 2 Chapter 4 Proposed Scheme Description and General Arrangement Drawings. An additional 2.0m temporary acquisition is required for the duration of the works to facilitate reconstruction of the boundary treatment.

Any land temporary acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question. Any lands acquired temporarily to facilitate construction work will be returned to landowners on completion of the works. Existing boundary walls or fencing being relocated will be constructed to match the existing conditions, unless otherwise agreed. The removal of trees, vegetation, lawns, paving etc. will be minimised in so far as practicable.

It is noted the entire area identified for temporary acquisition will not be required for the duration of the works. It is acknowledged that during the construction of the works there will be inconveniences for all users, but this will be managed to minimise impacts for all affected parties. The duration of the works will vary from property to property, but access and egress will be always maintained.

Prior to undertaking any accommodation works within private property the appointed contractor will engage in consultation with landowners, during consultation the landowner will have an opportunity to raise any concerns and outline any requirements associated with the land in question.

If the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent/valuer in preparing, negotiating, and advising on compensation.

16. Consultation process

A detailed response to this item is presented in Section 2.1.1.

17. Impact on Heritage properties on Terenure Road East

A detailed response to this item is presented in Section 2.4.3.

18. Existing bus priority signal on Terenure Road East is adequate

A detailed response to this item is presented in Section 2.4.3.

19. Removal of Trees on Terenure Road East

A detailed response to this item is presented in Section 2.4.3.

20. Changes to working patterns as a result of the Covid-19 pandemic

A detailed response to this item is presented in Section 2.1.1.

21. Cost / Benefit Analysis

All major publicly funded infrastructure projects, such as the BusConnects Infrastructure Schemes are subject to the Public Spending Code (gov.ie - [The Public Spending Code \(www.gov.ie\)](http://www.gov.ie)) which requires the production of appropriate economic appraisals and business cases. The Preliminary Business Case for BusConnects schemes is set out at the following link. The document sets out the key's costs and benefits of the schemes.

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA's BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government."

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)
- At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award

22. Implementation of other less intrusive measures

A detailed response to this item is presented in Section 2.1.1.

23. Metro / Light rail is more appropriate

A detailed response to this item is presented in Section 2.1.1.

24. Right turn from Rathfarnham Road onto Terenure Road East

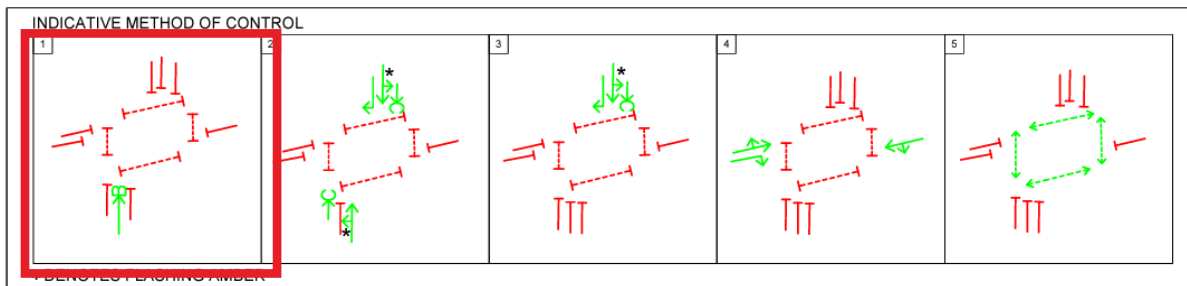
Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic. An extract from this table is presented in Figure 3.77.1.

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathfarnham Road/Castleside Drive/Main Street Junction	Bus Priority Signals at Rathfarnham Road/Castleside Drive/Main Street Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Dodder Park Road Junction	Bus Priority Signals at Rathfarnham Road/Dodder Park Road Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Rathdown Park Junction	Inbound Bus Priority Signal at Rathfarnham Road/Rathdown Park	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Terenure Road East/Terenure Road West Junction	Right turn for buses from Rathfarnham Road to Terenure Road East introduced through bus priority signal	To allow for bus movements in this direction as per the A spine in the New Dublin Area Bus Network	Buses allowed to turn right from Rathfarnham Road onto Terenure Road East.
Terenure Road East/Greenmount Road Junction	No right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
Rathgar Road/Highfield Road Junction	Inbound Bus Priority Signal	To allow for bus priority on Rathgar Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.

Figure 3.77.1 Extract from Table 4.25 of the Preliminary Design Report

The submission notes that the reintroduction of this right turn movement would introduce safety issues. However, as can be seen in the Junction System Design drawings included in Volume 3 of the EIAR, it is proposed that buses turning right from Rathfarnham Road would do so in its own stage therefore removing any potential safety issues. An extract from the staging diagrams is presented below with the relevant stage highlighted.

Table 3.77.1 Extract from Junction System Design Drawings (Sheet 8)



It is noted that an independent Stage 1 Road Safety Audit was complete by PMCE on the Proposed Scheme, the report is available in the Supplementary Information, Appendix M2 Stage 1 Road Safety Audit. The independent auditor did not identify a hazard associated with the right-turn on pedestrians and cyclists.

25. Traffic disruption due to traffic management proposals

A detailed response to the one-way on Rathgar Road is presented in Section 2.4.3.

A detailed response to bus gates on Templeogue Road and Rathmines are presented in Section 2.2.3 and 2.5.3 respectively.

A detailed response to noise pollution is presented in Section 2.1.1.

3.78078 – Denis O'Connell

3.78.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
2. Loss of green space
 - a. Amenity
3. Alternative options
 - a. Bus priority signals
 - b. Project extents
4. Hydrology
5. Architectural and cultural heritage
 - a. Walls, railings and gates
6. Air and noise pollution, vibration

3.78.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.79079 – Denise Russell

3.79.1 Submission – Templeogue Road

The submission raised the following issues:

2. Deterioration of visual appeal of front garden
3. Driveway Access and Parking
4. Loss of Privacy
5. Impact on property value
6. Traffic volumes on Templeogue Road
7. Impact on local businesses
8. Removal of Trees
9. Continuous cycle lanes
10. Impact of Covid-19
11. Implementation of other less intrusive measures

3.79.2 Response to submission

1. Deterioration of visual appeal of front garden

The proposed permanent acquisition will result in the loss up to 3.0m at the roadside of the front garden, with an additional 3.0m temporarily required to allow for the construction of boundary treatment works and tying into the existing garden. Upon completion of the permanent works, the temporary land take area will be handed back to the property owner.

Section 17.4.4.2.8 in Chapter 17 of the EIAR sets out the impact on streetscape elements and visual impacts during operation.

Operation of the Proposed Scheme will require the permanent acquisition from 72no. residential properties:

- *Nos. 317, 319, 321, 323, 325 and 327 Templeogue Road (6no.);*
- *Nos. 311, 313 and 315 Templeogue Road (3no.);*
- *Nos. 44 and 45 Templeogue Road (2no.);*
- *11, 14 and 15 Fortrose Park (3no.);*
- *Nos. 8, 9, 10, 11 and 12 Rathfarnham Wood (5no.);*
- *Nos. 141, 143, 145, 147, 149, 151 and 153 Rathfarnham Road (7no.);*
- *Nos. 51, 53, 55, 57, 59, 61, 63, 65, 67, 69 and 71 Rathfarnham Road (11no.);*
- *Nos. 34, 36, 38, 40, 42, 44, 46, 48, 50 Rathfarnham Road (9no.);*
- *No. 80 Earls Court, Terenure Road (1no.); • Nos. 74, 74A, 76, 76A and 78 Terenure Road East (5no.);*
- *Nos. 1, 2, 3, 4, 5, 6, 7, 8 and 9 Town Houses, Terenure Road East (9no.);*
- *Nos. 59, 61, 65, 67 and 69 Terenure Road East (5no.); and*
- *Nos. 52, 54, 56, 58, 60 and 62 Terenure Road East (6no.).*

*The houses have matured established gardens with boundary railings / walls, entrances / gates and associated lawns and plantings. There will be continuing effects from permanent loss of land area and trees which were removed during the Construction Phase. However, there will be like-for-like reinstatement of boundaries, planting and, in most cases, the planting of new street trees in similar locations to those removed, which will reduce negative effects over the long-term. The sensitivity is **high**, and the magnitude of change is **very high**.*

*The potential townscape / streetscape and visual impact of the Operational Phase on these residential properties is assessed to be **Negative, Very Significant and Short-Term** becoming **Negative, Moderate / Significant and Long-Term**.*

Reinstatement of property frontage including boundary walls, gates, railings, and landscaping will be on a like-for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

In addition to reinstating the property frontage on a like-for-like basis, it is also proposed to provide Four new street trees on the footpath, on the section of Templeogue Road between No. 315 and 44. The proposed landscape design can be found in EIAR Volume 3 Chapter 4 Landscape General Arrangement.

2. Driveway access and parking

The permanent acquisition will result in the loss of 3.0m of lands with an additional 3.0m temporarily required to allow for the construction of boundary treatment works and tying into the existing garden/driveway. The edge of the nearest proposed traffic lane will be 4.0m closer to the residence than the kerb of the existing general traffic lane. The front boundary wall, including gate and entrance pillars will be at least 16m from the front of the house. This would not introduce any additional risk to the owners during the operation of the Proposed Scheme and that this should not hinder the availability of parking in the driveway.

The principle of how residents can access/egress their property is unchanged by the scheme proposals. The existing access/egress scenario is similar to the proposed with the requirement for a vehicle to be driven across a cycle lane/cycle track and footpath.

In addition, as noted in Appendix M2 Stage 1 Road Safety Audit of the Preliminary Design Report:

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. All recommended measures or alternative measures proposed by the Designer were accepted by the Road Safety Audit Team.



Figure 3.79.1 Land acquisition at 44 Templeogue Road

3. Loss of Privacy

In respect of loss of privacy, if the CPO is confirmed by An Bord Pleanála, reinstatement of property frontage including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like-for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

In addition to reinstating the property frontage on a like-for-like basis, it is also proposed to provide Four new street trees on the footpath, on the section of Templeogue Road between No. 315 and 44. The proposed landscape design can be found in EIAR Volume 3 Chapter 4 Landscape General Arrangement.

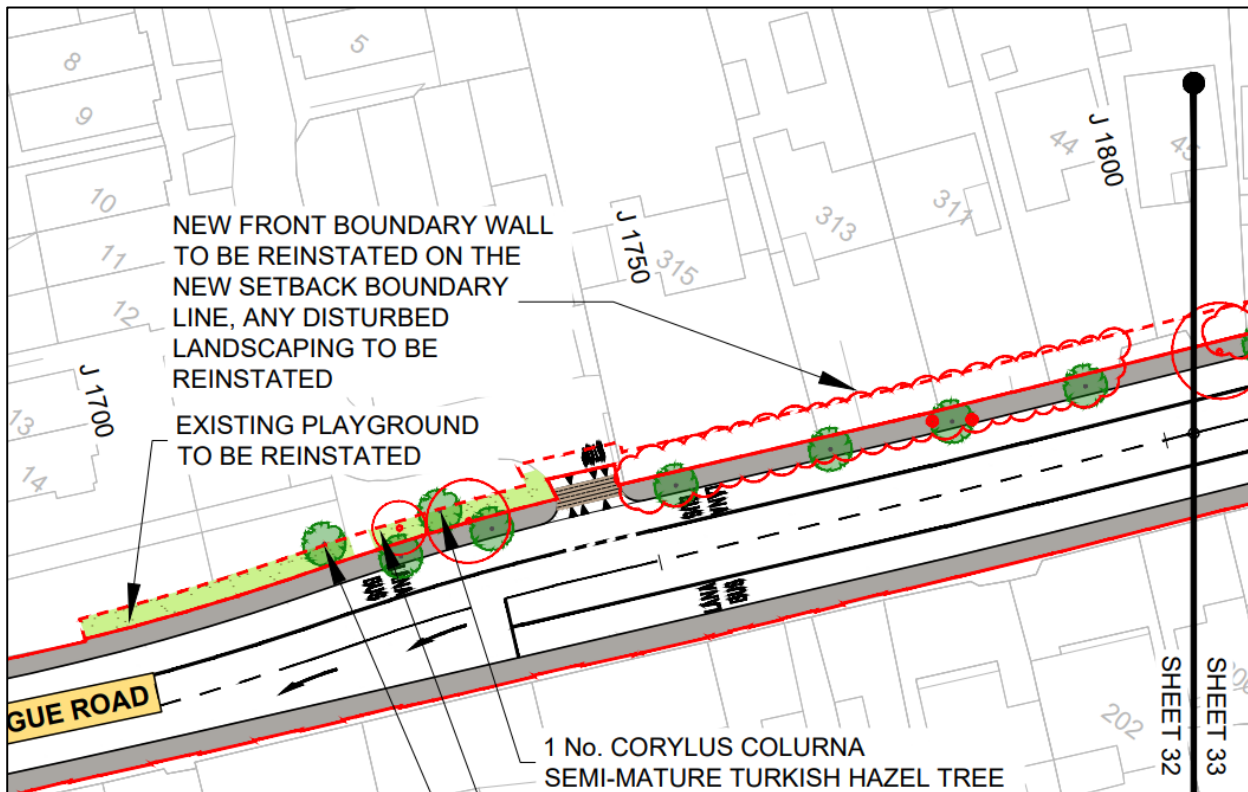


Figure 3.79.2 Landscape General Arrangement at Templeogue Road

4. Impact on Property Value

The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Templeogue Road, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix assesses what the economic impact of the provision of bus corridor infrastructure on the communities along the route using evidence from international Case Studies for similar schemes. This economic impact includes effects on property values. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes:

Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area. and

Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm.

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties on Templeogue Road.

If the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent/valuer in preparing, negotiating, and advising on compensation.

5. Traffic volumes on Templeogue Road

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences'.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively with more detail presented in Table 6.60 and 6.64. These diagrams and tables are reproduced below.

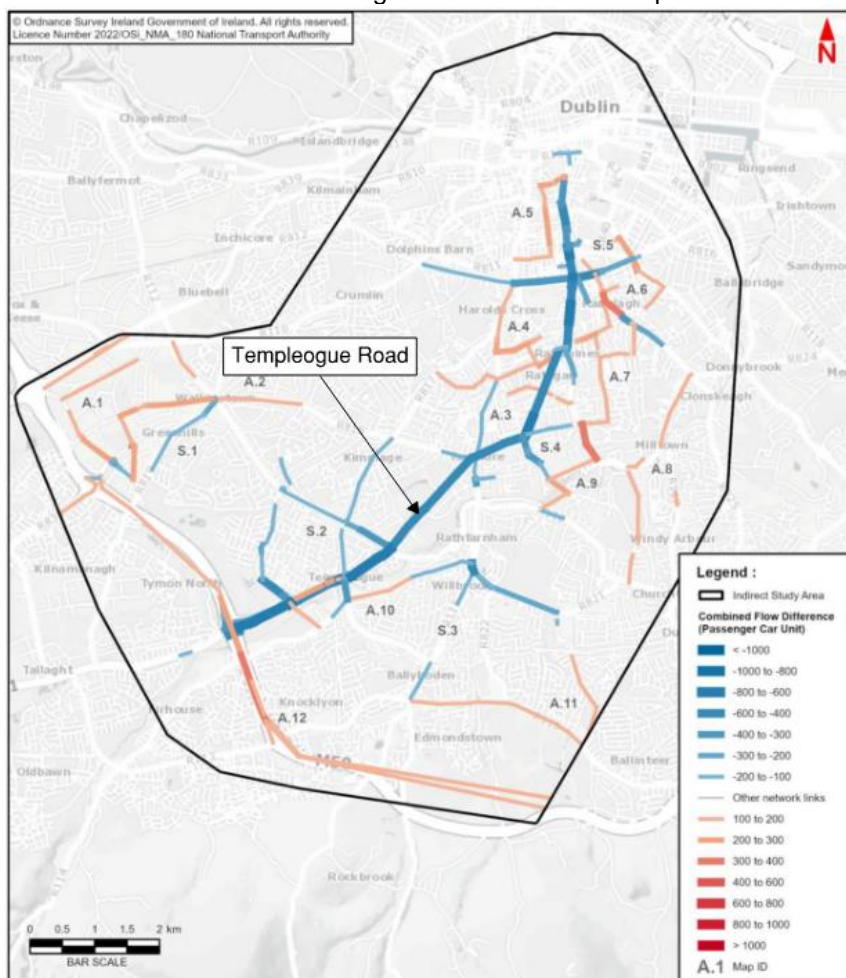


Figure 3.79.3 Fig: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

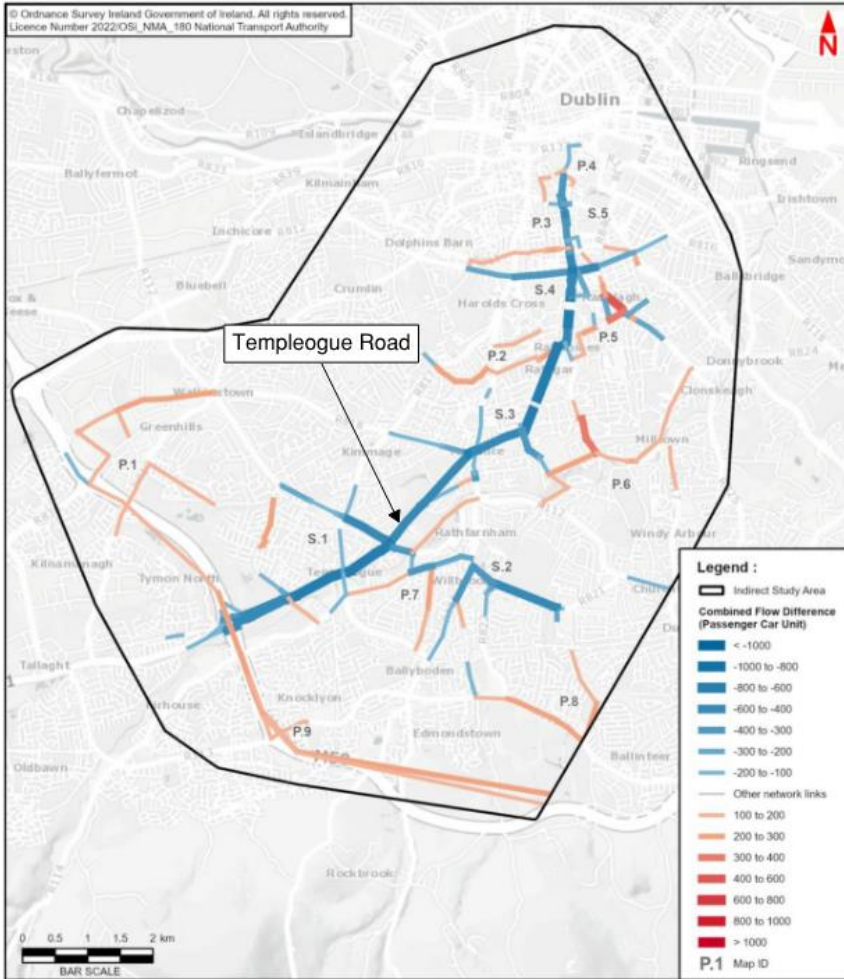


Figure 3.79.4 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	S.1	Cypress Grove Road	1,080	900	-180
		Old Bridge Road	1,242	1,087	-155
		Springfield Avenue	1,265	926	-339
		Tallaght Road	1,471	1,044	-427
		Templeogue Road	1,303	852	-451
		Templeville Road	972	558	-414
		Wellington Lane	2,241	1,960	-280
	S.2	Templeogue Road	864	462	-402
	S.3	Rathdown Park	171	30	-140
		Templeogue Road	864	462	-402
Terenure Place		1,535	795	-740	
		Terenure Road West	802	584	-218

Figure 3.79.5 Road Links that Experience a Reduction of ≥ 100 Combined Flows during AM Peak Hour (Direct Study Area) (Table 6.60 from Chapter 6 of the EIAR)

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
Section 1 - R137 Templeogue Road to R114 Rathfarnham Road	S.2	Cypress Grove Road	1,108	926	-182
		Old Bridge Road	1,333	983	-350
		Tallaght Road	1,675	1,400	-275
		Templeville Road	1,036	689	-348
		Wellington Lane	2,141	1,851	-291
	S.4	Templeogue Road	665	212	-453
		Terenure Place	1,345	759	-586
		Terenure Road West	704	597	-107

Figure 3.79.6 Road Links that Experience a Reduction of ≥ 100 Combined Flows during PM Peak Hour (Direct Study Area) (Table 6.64 from Chapter 6 of the EIAR)

As shown in the above tables, Templeogue Road will result in a reduced combined flow during both the AM Peak Hour (-402 PCUs) and PM Peak Hour (-453 PCUs).

6. Impact on Local Business

As described in response *v. Traffic volumes on Templeogue Road*, the assessment on traffic volumes completes for the Proposed Scheme and detailed in Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR concluded that there will be overall reduction to combined traffic flows on Templeogue Road.

Furthermore, the aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on Templeogue Road and surrounding area, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Templeogue Road, by providing significantly improved sustainable transport options. It is therefore expected that the improvements to the sustainable transport options on Templeogue Road and surrounding areas will promote more frequent local trips to nearby amenities, such as Templeogue and Terenure Village.

EIAR Volume 4 Chapter 9 Appendix A10.2 The Economic Impact of the Core Bus Corridors, concludes that businesses along the corridors are not likely to see reduction in footfall, desire likely reductions in general traffic along the Proposed Scheme. Section 2 states that “*Evidence from studies in Ireland and internationally suggest that reductions in the numbers of car journeys to the shops should not lead to a reduction in footfall as traders typically overestimate the importance of cars. Many shoppers are already arriving using sustainable transport options and therefore should be quick to take advantage of new transport options. There may be some disruption to business during the construction phase, however once the new routes are open footfall should return to normal and may in fact rise*”.

Section 3 of the Economic Impact Report states that there is likely to be increased commercial opportunities and improved sales for the majority of impacted businesses. Section 3 states “*Evidence suggests that those travelling to shops via car spend on average more per trip, as can be seen in the graph to the left. However due to the frequency of visits by bus, bike or walking, the average total spend is much higher for this cohort. As such, local businesses could benefit financially from greater access to customers through these modes of transport.*”

7. Removal of Trees

Section 1.1 of Appendix A17.1 Arboricultural Impact Assessment of Volume 4 of the EIAR states:

The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained and to identify the trees that are to be removed to facilitate the Proposed Scheme.

The survey was undertaken between the 10th and 13th August 2020. The survey commenced at the junction of Grange Road and Nutgrove avenue, and at Junction 11 of the M50 and finished at Dame street, including the Terenure Road North / Harold's Cross Road section and the of the Proposed Scheme. The below impact assessment report is based on the British standard BS 5837:2012 Trees in relation to design, demolition and construction recommendations. This standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan.

The Arboricultural Impact Assessment and a tree protection plan was prepared for the Proposed Scheme to identify trees that may be impacted on by the proposed development based on the proposed design.

Section 6 of Appendix A17.1 states: *This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.*

In EIAR Chapter 17 Landscape (Townscape) and Visual, Section 17.1 confirms that the assessment has been carried out according to best practice and guidelines relating to landscape (townscape) and visual assessment, and in the context of similar large-scale infrastructural projects. In relation to the Templeogue Road, the following sections of Chapter 17 are relevant and demonstrate that a detailed and comprehensive assessment has been undertaken of the impacts associated with the Proposed Scheme.

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal.

Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 231 individual trees as a result of the Proposed Scheme. As shown on the Landscape General Arrangement drawings in Volume 3 of the EIAR, it is noted that approximately 170 street trees are proposed along Templeogue Road between M50 Junction 11 and Terenure Road / Rathfarnham Road Junction, with the proposed removal of approximately 58 trees, resulting in a net gain of approximately 112 trees along this section of the Proposed Scheme.

Section 17.4.3.1 of the EIAR sets out the assessment of the impact on Townscape and Streetscape Character, with section 17.4.3.1.1 setting out the impact on Templeogue Road.

*The baseline townscape is of **low sensitivity** west of Templeogue Village to **high** sensitivity through Templeogue Village to Terenure. The Proposed Scheme involves the reconstruction and resurfacing of the roads, footpaths, and cycle track pavements. New kerbs will also be provided following the realignment of the existing kerb lines. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new road lighting, new street furniture (rubbish bins, seats, lighting, benches, planters, bollards, cycle racks, bus stop (including shelters and information displays etc.)), landscape works and localised removal of trees and planting. There will be land take from 15 residential properties on Templeogue Road involving permanent loss of garden area, setting back of boundaries, construction of retaining wall, and removal of trees hedges and other garden planting. There will be substantial works to Spawell roundabout where the existing roundabout junction will be upgraded to a four-arm signalised junction. The central island and splitter islands and associated vegetation of the roundabout will be removed and there will be a rearrangement and general expansion of the outer landscape areas. There will be more minor works to verges and other roadside landscape areas throughout this section with some limited loss of trees to accommodate new or realigned cycle tracks. There will be works to the surrounds of the historic folly of Templeogue Arch for the purposes of permanently enhancing the setting of the structure and providing public access. The construction works will not alter the overall townscape character along this section of the Proposed Scheme but there will be temporary disturbance to the landscape and visual amenity of the streetscape. The magnitude of change in the baseline environment is **high**.*

*The townscape / streetscape impact of the Construction Phase is assessed to be **Negative, Moderate Temporary / Short-Term**, west of Templeogue and **Negative, Significant / Very Significant and Temporary / Short-Term** through Templeogue to Rathfarnham Road.*

Section 17.4.4.2 of the EIAR presents an assessment of the impact on Streetscape Elements and Visual Impacts, with 17.4.4.2.9 presenting the impact on trees.

*The design of the Proposed Scheme has sought to avoid impacts on trees as far as practicable, however, some trees will have been removed during the Construction Phase. The most significant loss occurs from sections of streets and gardens of residential properties. In some locations the loss will be particularly evident such as on Terenure Road East, where trees are mature and visually prominent in the streetscape. The Operational Phase of the Proposed Scheme will not impact directly on additional trees but there will be continuing effects resulting from the loss of trees lost during construction. The effect will become positive over the long-term as proposed tree planting matures resulting in a net gain in tree canopy coverage. The sensitivity **high** and the magnitude of change is **medium**.*

*The townscape and visual impact of the Operational Phase on trees and plantings is assessed to be **Negative, Moderate and Short-Term** becoming **Positive, Moderate and Long-Term**.*

The impact of the Proposed Scheme on habitat loss and loss of breeding / resting site has been assessed and are reported in Chapter 12 Biodiversity of Volume 2 of EIAR. Section 12.4.3.5.1.1 states that *“The habitat areas that will be lost as a result of the Proposed Scheme form a relatively small part of larger expanses of similar habitat types and mosaics in the wider locality. Parks and greenspaces form a vital resource for breeding birds within an urban setting. These areas of suitable breeding bird nesting and / or foraging habitat available in the wider locality of the Proposed Scheme (i.e., from approximately 0.3 to 2km from these existing sites located within the footprint of the Proposed Scheme”*.

In relation to noise pollution, the impact of the Proposed Scheme on noise and vibration have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme. Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that *“Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.”* It goes on to state that *“There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.”* Table 9.39 lists these roads and Templeogue Road is not identified, indicating that there are no potential significant noise impacts envisaged along Templeogue Road.

In relation to air pollution, EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme’s operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO2 limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO2 concentrations are predicted to exceed the limit value. However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.*

8. Continuous cycle lanes

One of the objectives of the Proposed Scheme outlined in Chapter 1, Introduction of Volume 2 of the EIAR is to *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.*

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In the vicinity of the property to which this submission relates, the alternatives considered are detailed in section 3.3.2.1. A number of options were considered in this area which included dedicated online cycle facilities (Option S1-2) as well as alternative routes for cyclists (Option S1-3 and S1-4). On balance the Proposed Scheme was selected as the preferred option. It is noted that in this area, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

It should be noted that the assessment of routes and options was an iterative process and, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project's objectives.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated.

However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Figure 3.79.7 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

9. Impact of Covid-19

A detailed response to this item is presented in Section 2.1.1.

10. Implementation of other less intrusive measures

A detailed response to this item is presented in Section 2.1.1.

3.80080 – Deputy Francis Noel Duffy TD and Cllr. Mark Lynch

3.80.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Road widening
2. Alternative options
 - a. Narrow road
 - b. Metro
3. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
4. Compulsory purchase order

5. Noise pollution on Rathfarnham Castle
6. Hazardous materials on compound on Rathfarnham Castle

3.80.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.81 081 – Derek Bradley, Mrs. Wallace & Mr. & Mrs. Paul Jones

3.81.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact of proposed site compound
 - a. Noise and air pollution
 - b. Loss of green space

3.81.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.82082 – Derval O'Brien

3.82.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Lack of consultation
2. Traffic
 - a. Increased congestion
 - b. Increased congestion on Highfield Road, Villiers Road, Neville Road and Templemore Ave
3. Pre-COVID traffic volumes used in analysis.

3.82.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

In terms of traffic increases on Villiers Road, Neville Road and Templemore Avenue, it is noted that Diagram 6.40 and 6.41 do not identify any increases in traffic along these roads as a result of the Proposed Scheme.

3.83083 – Desmond Ryan

3.83.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Traffic
 - a. Highfield Road and Villiers Road

3.83.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 and 2.5.3 of this report.

In terms of traffic increases on Villiers Road, it is noted that Diagram 6.40 and 6.41 does not identify any increases in traffic along this roads as a result of the Proposed Scheme.

3.84084 – Development Applications Unit

3.84.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Archaeological impacts and mitigation measures shall be documented.
2. A project archaeologist shall be appointed.
3. A final archaeological report shall be furnished.

3.84.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.2 of this report.

3.85085 – Diarmaid McGuinness

3.85.1 Submission – Whole Scheme

The submission raised the following issues:

1. Consideration of a route via Harold's Cross Road
2. Errors in the description of the Proposed Scheme on Rathgar Road
3. Journey Time Savings
4. Errors in presentation of traffic count data
5. No assessment of cumulative impact of 12 corridors
6. Property access
7. Multicriteria assessment of Rathgar Road
8. Proposed bus gates
 - a. Request exemption for residents

9. Request oral hearing.

3.85.2 Response to submission

Detailed responses to Issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In relation to Issue 2, the NTA acknowledges that a minor error was included in Section 3.4.1.1.3 of the EIAR where the following was stated:

*“Option RG2 – the provision of bus lanes and general traffic lanes on Terenure Road East, a one-way **outbound*** regime on Rathgar Road and alternative cycle facilities on Terenure Road North/Harold’s Cross Road and Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the majority of this section and would minimise the impact the curtilage of protected structures and private gardens and trees on Terenure Road East and Rathgar Road through the provision of alternative cycle routes.”*

*emphasis added

The description of Option RG2 should have stated that a one-way inbound regime on Rathgar Road would be provided. Notwithstanding this minor typographical error the NTA is confident that the Proposed Scheme has been appropriately assessed on the basis of the one-way inbound regime presented in the General Arrangement Drawings presented in Volume 3 of the EIAR.

In relation to Issue 4, the NTA acknowledges that a minor error in the presentation of traffic count data is included in Table 5.3 in Appendix A6.2, refer to Figure 3.85.1. As highlighted by the submission, traffic counts for inbound general traffic and outbound general traffic at ATC location 12.5 have been incorrectly labelled. The movements labelled as 12-5A in fact correspond to ATC location 12-5B and vice versa. Notwithstanding the above, the correct traffic volumes have been used to carry out the traffic modelling and assessment of the Proposed Scheme. Table 3.2 is simply a summary table and the NTA is confident that this minor presentation error has had no influence on the design or assessment of the Proposed Scheme.

Table 5.3 ATC Locations

ATC IDENTIFIER	ATC LOCATION	DIRECTION	DAILY MOVEMENTS	AM MOVEMENTS	PM MOVEMENTS
12-4A	Rathfarnham Road south of Brighton Road	Northbound	8549	685	438
12-4B	Rathfarnham Road south of Brighton Road	Southbound	7755	332	634
12-5A	Rathgar Road south of Auburn Villas	Northbound	8128	358	750
12-5B	Rathgar Road south of Auburn Villas	Southbound	8719	710	393
12-7A	Rathmines Road north of Leinster Road	Northbound	excluded	excluded	excluded
12-7B	Rathmines Road north of Leinster Road	Southbound	excluded	excluded	excluded
12-8A	Rathmines Road south of Grove Park Road	Northbound	excluded	excluded	excluded
12-8B	Rathmines Road south of Grove Park Road	Southbound	excluded	excluded	excluded
12-9A	Richmond Street south of Lennox Street	Northbound	excluded	excluded	excluded
12-9B	Richmond Street south of Lennox Street	Southbound	excluded	excluded	excluded
12-11A	Aungier Street north of York Street	Northbound	7660	329	306
12-11B	Aungier Street north of York Street	Southbound	7603	392	434
12-12A	Georges Street south of Dame Street	Northbound	excluded	excluded	excluded
12-12B	Georges Street south of Dame Street	Southbound	excluded	excluded	excluded

Figure 3.85.1 Extract from Table 5.3 of Appendix 6.2 of the EIAR

In relation to Issue 6, Mr. McGuinness in his submission refers to Article 32(5)(a) of the Road Traffic (Traffic and Parking) Regulations 1997 (SI 182/1997) and suggests, in relation to the proposed bus lanes on Rathgar Road, that post scheme he will be “*entitled to enter the bus lane and/or cross the bus lane for the purposes of entering or leaving premises or property, including my house and laneway, adjacent to the bus lane*”.

In accordance with Article 32(5)(a) of the Road Traffic (Traffic and Parking) Regulations 1997 (SI 182/1997) (as amended), when travelling northbound in the main traffic lane on the Rathgar Road, Mr McGuinness will be permitted to turn right and cross the proposed bus lane for the purposes of entering his property in Auburn Villas from Rathgar Road, and indeed when leaving his property in Auburn Villas by car will be permitted to cross the bus lane and turn right to join the main northbound traffic lane. As indicated on Sheet 08 of 42 of the General Arrangement Drawings, a broken white line is provided along the boundary of the bus lane at the entrance of Auburn Villas to provide for these turning movements.

However, Mr McGuinness will not be permitted to drive southbound in the proposed bus lane along Rathgar Road to reach the entrance to Auburn Villas. Article 32(5)(a) of the Road Traffic (Traffic and Parking) Regulations 1997 (SI 182/1997) (as amended), which Mr McGuinness cites in his submission, only permits a vehicle to “cross” a bus lane for the purposes of access, and not to drive in the bus lane as such.

In relation to Issue 7, the submission claims that Options RG2 and RG3 should receive a different ranking within the Multi Criteria Assessment (MCA) under the headings of ‘Road Safety and Pedestrian Safety’ and ‘Transport Quality and Reliability’ due to the proposal to redirect outbound general traffic under these options.

Section 4.4 of the Tallaght to Terenure Core Bus Corridor Feasibility Study and Options Assessment Report, included as Appendix I1 to the Preferred Route Options Report in the Supplementary Information, outlines the methodology for assessing Proposed Scheme options under the headings referenced in the submission.

Road Safety

“Generally, the introduction of CBC will result in a reduction in road incidents due to people switching from private car to public transport. However, the reduction in incidents is unlikely to differ between various route options, particularly over the short sections being investigated as part of this assessment.

Therefore, for the purposes of comparing route options, the number of junctions along the route has been used as a proxy for road safety. The number of junctions is effectively a measure of the number of potential conflicts on the route and therefore a measure of the potential for a collision. The type of movement required by the bus at junctions on the route is also considered with routes where turning movements (either left or right) are required being assigned a lower ranking in terms of safety.”

Pedestrian Safety

“This criterion assesses the safety of passengers accessing the stops along the route. This is predominantly concerned with the proximity of bus stops to crossing facilities and the presence of footpaths along desire lines to bus stops.”

Transport Quality and Reliability

“This criterion assesses route options in terms of the degree to which transport reliability and quality of service is likely to be achieved, with associated economic benefits. The assessment considers the following attributes:

i. Journey Time

The extent to which journey time savings, and associated economic benefits, for public transport services, including the CBC, can be achieved on a route. This would be practically achieved through the extent to which any or all of the following measures can be implemented:

- *Enhancement of existing bus and / or provision of new bus priority along road links;*
- *Provision of bus priority through junctions (preferably through signal controlled junctions);*
- *Local upgrading of road sections to provide more carriageway space and therefore, additional capacity;*
- *Removal of ‘pinch points’ for bus services and traffic along the route; and*
- *Rationalisation of existing bus stops in terms of location, indentation (i.e. ability to provide laybys to avoid blockage of bus lanes) and spacing.*

Journey times for each route option have been calculated by comparing the time required by a bus to travel between common start and end points on each route. Where both the start and end points are not the same for each route option (e.g. at the start/end of the route/the scheme terminus), the journey time is calculated between one common point and the end of the route. The following assumptions have been made in calculating the comparative journey times along route options: -

- *Operational speed (free-flow) of 50 kph in suburban areas and 30 kph in City Centre areas;*
- *Dwell time of 20 seconds per stop on average (assumes introduction of cashless fares as part of the CBC/Bus Service upgrade programme in the Greater Dublin Area); and*

- Delay of 15 seconds per junction on average (assumes buses stop at every second junction i.e. 30 second delay at every second junction).

These assumptions assume dedicated bus priority infrastructure or free-flowing traffic conditions along a route section by direction of travel. Where the indicative scheme determined for a route suggests that this is not practically achievable, modified speeds and delay assumption are applied as appropriate. These additional delays are estimated based on available queue length information, automatic vehicle location information from Dublin Bus and estimates of the impact of traffic management measures (such as queue relocation). Delays at junctions and stops include delays associated with deceleration /acceleration to/from a stationary position.

ii. Number of Signalised Junctions

The number of signalised junctions along each route have been compared. Regardless of the level of practical or feasible bus priority provided at signalised junctions, there will always be an element of delay to buses associated with signalised junctions, even with the most efficient signalling system being provided.

While it is impossible to completely avoid signalised junctions on any route option, this risk of potential delay has been considered when comparing route options. This feeds into the overall journey time calculations as indicated above.

iii. Level of Bus Priority Provision

The level of bus priority achievable along route options has been considered and compared. The level of priority is predominantly concerned with the degree to which road space can practically be allocated to buses, the amount of protection afforded to this priority (i.e. segregation) and the provision at junctions such as bus lanes at the stop line. This feeds into the overall journey time calculations as indicated above.”

In relation to Option RG2, Figure 3.85.2 and Figure 3.85.3 are extracts taken from Appendix G of the Preferred Rute Option Report, included in the Supplementary Information, which detail the assessment carried out for Rathgar Road under the headings referenced in the submission.

Appraisal Criteria	Sub-Criteria	Option RG1 Full Cross Section (EPR Option Proposal)	Option RG2 One-way inbound, 1.5m cycle track on Rathgar Road, Parallel Cycle in Harold's Cross & Orwell	Option RG3 One-way inbound, 2m cycle track	Option RG4 Combination of bus lanes and signal- controlled priority, 1.5m cycle track, Parallel Cycle in Harold's Cross & Orwell	Option RG5 Combination of bus lanes and signal- controlled priority, 2m cycle track
	IB Transport Quality & Reliability	Journey Time Inbound: 4.6 mins Journey Time Outbound: 4.6 mins Length: 1.79 km No. of Junctions: 2 No. of Pedestrian Crossings: 1 Full Physical Bus Priority provided throughout.	Journey Time Inbound: 4.6 mins Journey Time Outbound: 4.6 mins Length: 1.79 km No. of Junctions: 2 No. of Pedestrian Crossings: 1 Full Physical Bus Priority provided throughout.	Journey Time Inbound: 4.6 mins Journey Time Outbound: 4.6 mins Length: 1.79 km No. of Junctions: 2 No. of Pedestrian Crossings: 1 Full Physical Bus Priority provided throughout.	Journey Time Inbound: 5.6 mins Journey Time Outbound: 5.6 mins Length: 1.79 km No. of Junctions: 2 No. of Pedestrian Crossings: 1 Bus priority provided through signalling with buses sharing the lane with traffic for large portions of Rathgar Road.	Journey Time Inbound: 5.6 mins Journey Time Outbound: 5.6 mins Length: 1.79 km No. of Junctions: 2 No. of Pedestrian Crossings: 1 Bus priority provided through signalling with buses sharing the lane with traffic for large portions of Rathgar Road.
	Rank					

Figure 3.85.2 Extract from Table 5.3 of Appendix 6.2 of the EIAR

Appraisal Criteria	Sub-Criteria	Option RG1 Full Cross Section (EPR Option Proposal)	Option RG2 One-way inbound, 1.5m cycle track on Rathgar Road, Parallel Cycle in Harold's Cross & Orwell	Option RG3 One-way inbound, 2m cycle track	Option RG4 Combination of bus lanes and signal- controlled priority, 1.5m cycle track, Parallel Cycle in Harold's Cross & Orwell	Option RG5 Combination of bus lanes and signal- controlled priority, 2m cycle track
4 Safety	4A Road Safety	No. of junctions: 1 No turn movements required.	No. of junctions: 1 No turn movements required.	No. of junctions: 1 No turn movements required.	No. of junctions: 1 No turn movements required.	No. of junctions: 1 No turn movements required.
	Rank					
	4B Pedestrian Safety	Footpaths provided throughout. Signalised crossings at all major junctions.	Footpaths provided throughout. Signalised crossings at all major junctions.	Footpaths provided throughout. Signalised crossings at all major junctions.	Footpaths provided throughout. Signalised crossings at all major junctions.	Footpaths provided throughout. Signalised crossings at all major junctions.
	Rank					

Figure 3.85.3 Extract from Table 5.3 of Appendix 6.2 of the EIAR

3.86086 – Diarmuid O'Brien & Deirdre Healy

3.86.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Noise and air pollution
3. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
4. Road widening
5. Architectural and cultural heritage
6. Character of area

3.86.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.87087 – Dolores (Dee) Gaffney

3.87.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Bus Stop
 - a. Relocation
2. Traffic
 - a. Cars blocked behind stopped buses.
3. Narrow proposed footpaths
4. Lack of consultation
5. Property access

6. Architectural and cultural heritage
 - a. Walls, railings and gates

3.87.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.88088 – Dr. Roderick Maguire and Dr. M.E. Maguire

3.88.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Proposed bus gates
 - a. St. Mary's College
3. Traffic
 - a. Increased volumes
 - b. Diverted to residential streets.
4. Air pollution
5. Access to amenities
 - a. St. Luke's Hospital
6. Architectural and cultural heritage
7. Biodiversity
 - a. Destruction of trees
8. Unnecessary change providing no real gains to bus travel times.
9. Negative effect on businesses
10. Alternative options
 - a. Tram/ Luas

3.88.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.89089 – Dublin City Council

3.89.1 Submission – Whole Scheme

Description of issues raised in this submission is included in Section 2.6.3 of this report.

3.89.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.3 of this report.

3.90090 – Dublin Commuter Coalition

3.90.1 Submission – Whole Scheme

Description of issues raised in this submission is included in Section 2.6.4 of this report.

3.90.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.4 of this report.

3.91091 – Dublin Cycling Campaign

3.91.1 Submission

Description of issues raised in this submission is included in Section 2.6.5 of this report.

3.91.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.5 of this report.

3.92092 – Dylan Timbs

This submission contains the same content as submission 038. A Description of issues raised in this submission is included in Section 3.37.2 of this report.

3.92.1 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 3.37.2 of this report.

3.93093 – Eamon Kelly

3.93.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Compulsory purchase order
 - a. CPO before planning permission granted.

2. Road widening
3. No account of changes to travel patterns as a result of Covid.
4. Implementation of other less intrusive BusConnects measures first.
5. Unnecessary change providing no real gains to bus travel times.
6. Traffic
 - a. Increased volumes and congestion in vicinity of Terenure
7. Safety of vulnerable pedestrians
8. Lack of consultation

3.93.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.94094 – Eileen Dolan

3.94.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Lack of consultation
3. Alternative options
 - a. Park and ride facilities
 - b. Reversible bus lanes
 - c. Harolds Cross Road
4. Negative effect on businesses
5. Access to amenities
6. Road widening
7. Proposed footpaths
 - a. Narrow widths

3.94.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.95095 – Eimear O'Broin

3.95.1 Submission – Templeogue Road

The submission raised the following issues:

1. Bus travel times
2. Traffic
 - a. Increased congestion at Fortfield Road and Templeogue Road junction
3. Proposed bus service
4. Bus stops
 - a. Relocation

3.95.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.96 096 – Elaine J. Wright

3.96.1 Submission – Templeogue Road

The submission raised the following issues:

1. Architectural and cultural heritage
 - a. Walls, railings and gates
2. Unnecessary change providing no real gains to bus travel times.
3. Bus stops
 - a. Relocation
4. Cyclist segregation
5. Enforcement
6. Biodiversity
 - a. Destruction of trees

3.96.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to the stone wall and plaque identifying the Dublin City Council Stone Depot in the green space adjacent to Rathdown Drive, Section 15.3.2.6 in Chapter 15 (Archaeology & Cultural Heritage) of Volume 2 of the EIAR notes the feature referenced in the submission:

“...A stone depot related to the construction and maintenance of the then New Road from Terenure to Templeogue is within the Proposed Scheme on the R137 Templeogue Road (CBC1012CH002; Sheet 17 of 19, Figure 15.1 in Volume 3 of this EIAR).”

Section 15.4.3.1.2 in Chapter 15 notes that:

“There are three cultural heritage sites within this section of the Proposed Scheme. They comprise of a memorial to the Virgin Mary (CBC1012CH001), a stone depot (CBC1012CH002) and the former street pattern of Terenure or ‘Round Town’ (CBC1012CH003). The memorial (CBC1012CH001) at the Templeogue Crossroads is to be maintained in situ and no impact is anticipated. The stone depot (CBC1012CH002) at Templeogue Road, is an upstanding stone structure that acts as a bay to the low stone wall along the road. There are no anticipated works to the structure. The closest works will take place to the south of the structure where a grassed path will be formalised as part of the landscape and urban realm works and landscaping works will take place around the structure. The stone depot site has a low sensitivity value and the magnitude of impact is none, therefore there is no potential impact.”

Section 16.4.3.7.3 in Chapter 16 (Architectural Heritage) in Volume 2 of the EIAR records statutory and miscellaneous street furniture which states:

“...Four items of statutory or miscellaneous street furniture of Local Importance and Low Sensitivity were identified in the study area, as outlined in Section 16.3.1.10 and described in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. These include:

- *Electrical cabinet Camden Street (CBC1012BTH392);*
- *Car Shaped Bicycle racks Dame Lane (CBC1012BTH487);*
- *Marian Statue of Virgin Mary Templeogue Road (CBC1012BTH390); and*
- *Plaque inscribed ‘Dublin City Council, Stone Depot’ (CBC1012BTH007).*

In all four locations, the Proposed Scheme will include changes in the vicinity of the street furniture, which will carry a potential risk of damage during the Construction Phase. The magnitude of impact is Medium. The potential Construction Phase impact is Indirect, Negative, Slight and Temporary.

Section 16.5.1.7.3 addresses the mitigation which will be implemented to protect statutory and street furniture and states:

“...Four items (CBC1012BTH392, CBC1012BTH487, CBC1012BTH390, CBC1012BTH007 [the Plaque referenced in the submission]) of statutory or miscellaneous street furniture of Low sensitivity will directly adjoin the Proposed Scheme. The proximity of the construction works, including the replacement of the ground surfaces on which the street furniture sits, means Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Templeogue / Rathfarnham to City Centre Core Bus Corridor Chapter 16 Page 61 that there is a potential for damage to the street furniture during construction. The pre-mitigation Construction Phase impact is Indirect, Negative, slight and Temporary. The proposed mitigation is the recording, protection and monitoring statutory or miscellaneous street furniture prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR, reducing the magnitude of the risk from Medium to Low. The predicted residual Construction Phase impact is Indirect, Negative, Not significant and Temporary.”

3.97097 – Elaine Timbs

3.97.1 Submission – Whole Scheme

This submission contains the same content as submission 038. A Description of issues raised in this submission is included in Section 3.38.1 of this report.

3.97.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 3.38.2 of this report.

3.98098 – Emmanuel Kehoe and Dr Attracta Halpin

3.98.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed bus service
 - a. Transfers

2. Character of area
3. Traffic
 - a. Increased congestion
4. Proposed turn bans
5. Access to amenities
 - a. Bushy Park
6. Bus stops
 - a. Relocation
7. Biodiversity
 - a. Destruction of trees
8. Air pollution
9. Alternative options
 - a. Metro

3.98.2 Response to submission

Detailed responses to items 2 to 9 have been provided in Section 2.1.1 and 2.2.3 of this report.

In terms of item 1, the submission states that passengers travelling by bus from Templeogue to travel to the city centre would be required to interchange in Terenure. While the bus network does not form part of this application, it is noted that interchange is not required on this route with services A1 and A3 providing a direct connection between Templeogue and the city centre.

3.99099 – Eoin & Liadh Ui Chinneide and Neil & Amy Adams

3.99.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact of proposed compound
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
 - c. Loss of green space
3. Lack of consultation

3.99.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report.

3.100100 – Eve McMorrow

3.100.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Loss of public green space
2. Biodiversity
 - a. Flora and Fauna
3. Excessive land take of Woodland area on Grange Road

3.100.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.101101 – Feidhlimidh Wrafter

3.101.1 Submission – Terenure and Rathgar

This submission references support for the Rathgar Residents Association submission. This issues raised in this submission are summarised in Section 3.219 of this report.

3.101.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 3.219 of this report.

3.102102 – Fergus Bolster & others

3.102.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Inadequate Cumulative Impact Assessment
2. Legal principles related to compulsory acquisition.
3. Benefits of proposals in this area do not justify the CPO.
4. Changes to work patterns due to the COVID-19 pandemic
5. Inability to turn a car within the driveway.
6. Proposed Scheme Out of Character for Urban Village

3.102.2 Response to submission

1. Inadequate Cumulative Impact Assessment

A detailed response to this item is presented in Section 2.1.1.

2. Legal principles related to compulsory acquisition

The submission raises concerns regarding the NTA's compliance with the legal prerequisites for the compulsory acquisition of private property, as delineated by the Supreme Court in the case of *Reid v Industrial Development Agency* [2015]. It contends that the proposed road layout and the intended compulsory acquisition lack justification or necessity in light of the requirements for enhanced public transport infrastructure. In 2015, the Supreme Court articulated the following principles for the exercise of statutory powers related to land acquisition:

- a) That the authority by statute to acquire the land for the purpose for which it is sought to acquire it;
- b) That the acquisition of the land is legitimately being pursued for that purpose;
- c) That the acquisition of the land is necessary for that purpose; and
- d) That the land to be acquired is the minimum possible required to advance the statutory purpose.

Regarding principles a and b, the NTA is empowered by section 44 of the Dublin Transport Authority Act 2008 (as amended) to compulsorily acquire land for the purpose of establishing public transport infrastructure. Thus, the NTA possesses the requisite statutory authority to execute the Compulsory Purchase Order (CPO).

Regarding principal c, the NTA has delineated the necessity of the Proposed Scheme in EIAR Volume 2 Chapter 2 Need for the Proposed Scheme. This section elaborates on the transport requirements of the Proposed Scheme at both regional and local levels. Furthermore, in Section 2.3 of Chapter 2, the document expounds on how the Proposed Scheme aligns with various national and regional policies, including but not limited to the National Development Plan (2021-2030), the Transport Strategy for the Greater Dublin Area (2016-2035), the Climate Action Plan (2023), and the Climate Action and Low Carbon Development (Amendment) Act 2021, often referred to as the 2021 Climate Act.

Section 2.1 outlines the need for the Proposed Scheme stating that:

The key radial traffic routes into and out of Dublin City Centre are characterised by poor bus and cycle infrastructure in places. Effective and reliable bus priority depends on a combination of continuous bus lanes and signal control priority at pinch-points and junctions. Currently bus lanes are available for 30% of Templeogue / Rathfarnham to City Centre, with signal control priority for buses provided over 2% of the Proposed Scheme. Cyclists must typically share space on bus lanes or general traffic lanes with only 15% of the route providing segregated cycle tracks.

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million. This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Section 2.2.1.4 of Chapter 2 states:

The GDA Cycle Network Plan 2013 (hereafter referred to as the GDACNP 2013) (NTA 2013), was adopted by the NTA in early 2014 following a period of consultation with the public and various stakeholders. This plan formed the strategy for the implementation of a high quality, integrated cycle network as set out in the GDA Transport Strategy 2016 - 2035. This is further discussed in Section 2.3.4.5.

Rathfarnham Road was identified as a primary cycle route (9A), in the GDA Cycle Network Plan 2013, this is further described in the extract below from section 2.2.1.4:

Extracts from the GDA Cycle Network Plan 2013 are shown in Image 2.1 and Image 2.2, which highlights the Proposed Scheme in the context of the planned cycle network. In the GDACNP 2013, there were two primary cycle routes (Cycle Route 9A and Cycle Route 10) and a number of secondary cycle routes (including Routes 9B, S04 and 10) identified along the Proposed Scheme

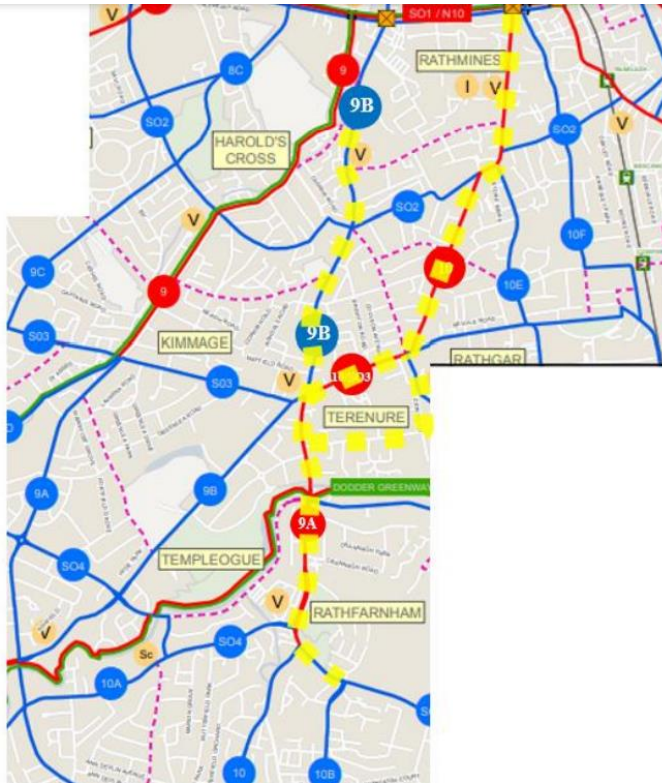


Figure 3.102.1 Extract from 2013 GDA Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

In preparing the GDA Transport Strategy (2022 – 2042) the NTA carried out a review of the GDA Cycle Network Plan. This review culminated in the preparation of the 2022 Greater Dublin Area Cycle Network which was published alongside the GDA Transport Strategy (2022 – 2042). The Proposed Scheme, including the section along Rathfarnham Road is supported by the GDACNP 2013 and the 2022 Greater Dublin Area Cycle Network is needed to address the deficiencies in the very limited segregated cycling infrastructure currently available on this corridor.



Figure 3.102.2 Extract from 2022 Greater Dublin Area Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme, Section 2.2.1.4 states:

To inform the preparation of the GDA Transport Strategy 2016 – 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to/from the Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the prior GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes.

The Core Bus Network study included a recommended route from Terenure/Rathfarnham to the City Centre on the basis of the need to serve significant demand along this entire corridor, and the need to address service deficiencies (lack of bus priority and associated journey time reliability) for a high level of scheduled bus services already operating along this corridor.

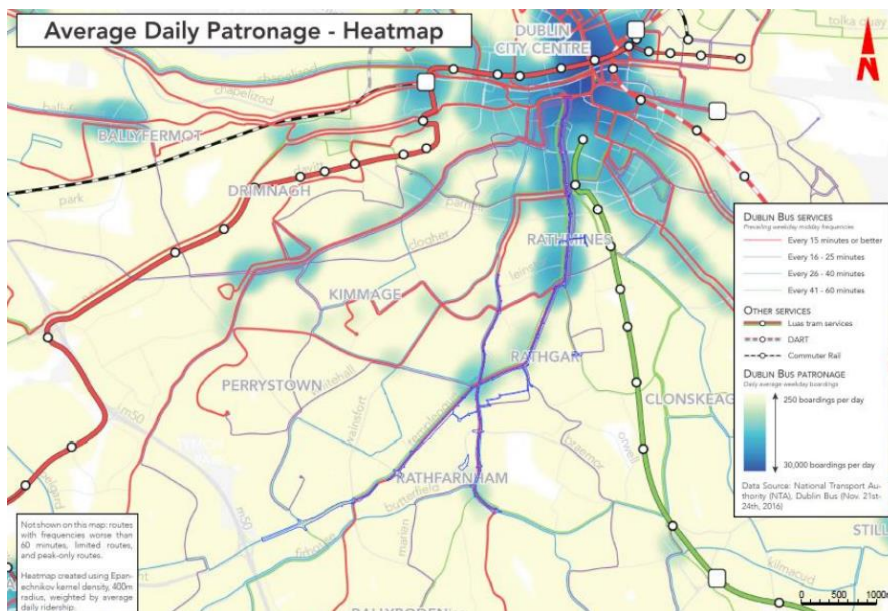


Figure 3.102.3 Average Daily Patronage Heatmap (Dublin Area Bus Network Redesign Revised Proposal ((NTA 2019)). Proposed Scheme Highlighted in Blue for Information

The need for the Proposed Scheme is supported by the objective of the GDA Transport Strategy to provide continuous bus priority, as far as is practicable, along the core bus route, that supports a more efficient and reliable bus service with lower journey times.

Article 5(1)(d) of Directive 2011/92/EU as amended by Directive 2014/52/EU (“the EIA Directive”) requires that an Environmental Impact Assessment Report (EIAR) contains ‘a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and the main reasons for the option chosen, taking into account the effects of the project on the environment’.

Chapter 3 of EIAR Volume 2 provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme.

1. **Feasibility and Options Reports**, which were associated with the Proposed Scheme (Rathfarnham to City Centre Core Bus Corridor (CBC) Feasibility Study and Options Assessment Report and Terenure to Tallaght CBC Feasibility Study and Options Assessment Report), were prepared in 2017 and set out the initial route options and concluded with the identification of the Emerging Preferred Route;

2. A first round of non-statutory **Public Consultation** was undertaken on the Emerging Preferred Route from 23 January 2019 to 30 April 2019;
3. Development of **Draft Preferred Route Option** (April 2019 to March 2020). Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered;
4. A second round of non-statutory **Public Consultation** was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year;
5. Further development of an updated **Draft Preferred Route Option** was undertaken subsequent to the second round of public consultation, which took account of submissions received, continuing stakeholder engagement and additional design information;
6. A third round of non-statutory **Public Consultation** was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020; and
7. Finalisation of the **Preferred Route Option**. Informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information, the Preferred Route Option, being the Proposed Scheme, was finalised.

Alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme, such as optimising the road layout in constrained locations including Rathfarnham Road, Rathgar Road, Rathmines Road Lower and Templeogue Road. The iterative development of the Proposed Scheme has also been informed by a review of feedback and new information received during each stage of public consultation and as data, such as topographical surveys, transport and environmental information was collected and assessed. In addition, the potential for climate impact was considered in all phases of the design process for the Proposed Scheme. As the design progressed climate was indirectly affected in a positive way by refining the design at each stage through reducing the physical footprint of the scheme coupled with the inclusion of technological bus priority measures.

Key environmental aspects have been considered during the examination of reasonable alternatives in the development of the Preferred Route Option for the Proposed Scheme. Environmental specialists have been involved in the iteration of key aspects of the Proposed Scheme with the engineering design team.

The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route.

- Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
- Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Following completion of Stage 1 initial appraisal, the remaining reasonable alternative options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

There were seven (CB1 to CB7) viable route options for Section 2 (Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road) were taken forward for assessment and further refinement, these are detailed in section 3.3.2.2.2 of the Chapter 3 of the EIAR.

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above.

A multi-criteria assessment (MCA) was carried out within each of these two sub-sections, as detailed in section 3.3.2.2.1 of Chapter 3.

Following the MCA, Stage 2- Route Options Assessment concluded that sub-option TVR3 was the preferred option for the sub-section along Rathfarnham Road and Terenure Road East to Rathgar Village, stating that:

Sub-option TVR3: *This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);*

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3 was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Following an MCA, sub-option TVR3 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

As described in the above paragraphs and in EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report, the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. Section 4.5.2.1 of the EIAR describes the general overview of the Proposed Scheme at Section 2: *Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road*. At the section adjacent to 42 - 50 Rathfarnham Road, between Bushy Park Road and Terenure Road North it is proposed to provide 1.5m wide cycle tracks, bus lanes and traffic lanes in both directions. To accommodate these new bus lanes on this section of Rathfarnham Road, it is proposed to acquire land from adjacent properties on the eastern side of Rathfarnham Road.

Further details on the options assessment carried out in this area is presented in Section 2.3.3 this report.

The Proposed Scheme will address sustainable mode transport infrastructure deficits while contributing to an overall integrated sustainable transport system as proposed in the GDA Strategy. It will increase the effectiveness and attractiveness of bus services operating along the corridor and will result in more people availing of public transport due to the faster journey times and reliability improvements which the Proposed Scheme provides. This in turn will support the potential to increase the bus network capacity of services operating along the corridor and thereby further increasing the attractiveness of public transport. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth.

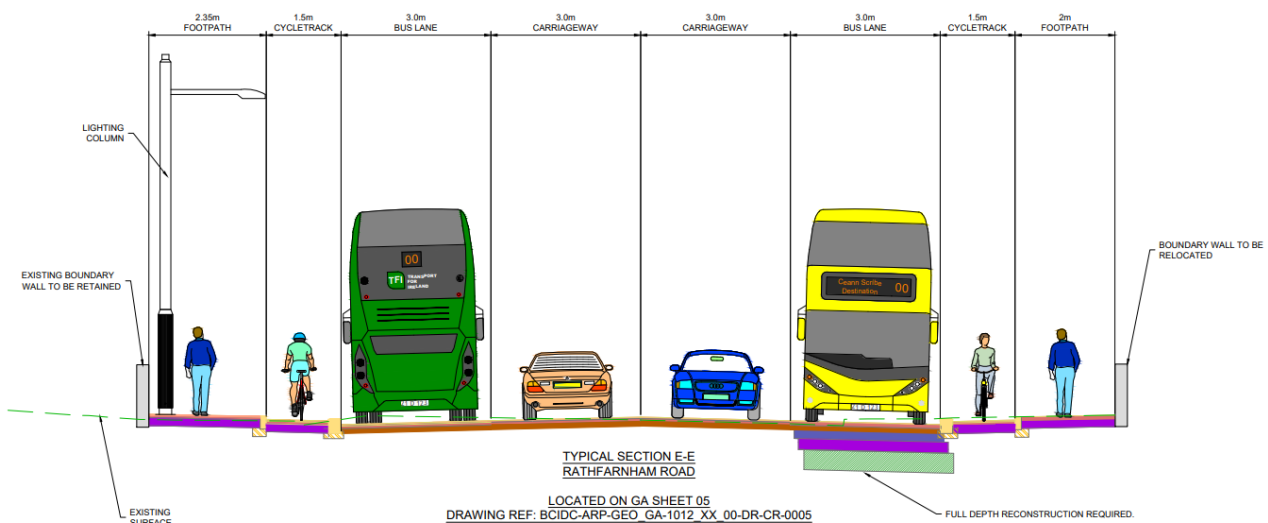


Figure 3.102.4 Typical Cross-section of Proposed Scheme between Bushy Park Road and Terenure Cross

Concerning principle d, at the specific area outside 42 - 50 Rathfarnham Road, the proposed cross-section and subsequent land acquisition have been considered and deemed necessary to facilitate the optimum scheme as presented in EIAR Volume 3 Chapter 4 Proposed Scheme Description and General Arrangement drawings. Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the absolute minimum width of 1.8m for footpaths and desirable width of 2m for cycle tracks. At this location a 2m footpath has been provided. However, as noted in table 4.3 of Chapter 4 of the EIAR, a reduced width cycle track of 1.5m is provided through this area in order to minimise impacts on adjacent properties while also meeting the scheme objectives. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

It should be noted that throughout the assessment process, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project's objectives. This approach was adopted to balance the necessity of the development with the preservation of the interests and rights of property owners in the area.

3. Benefits of proposals in this area do not justify the CPO

The submission stated out that the proposed road layout and the compulsory acquisition lands appear disproportionate. The perceived imbalance lied in the fact that the anticipated benefits do not seem commensurate with the adverse implications of acquiring land.

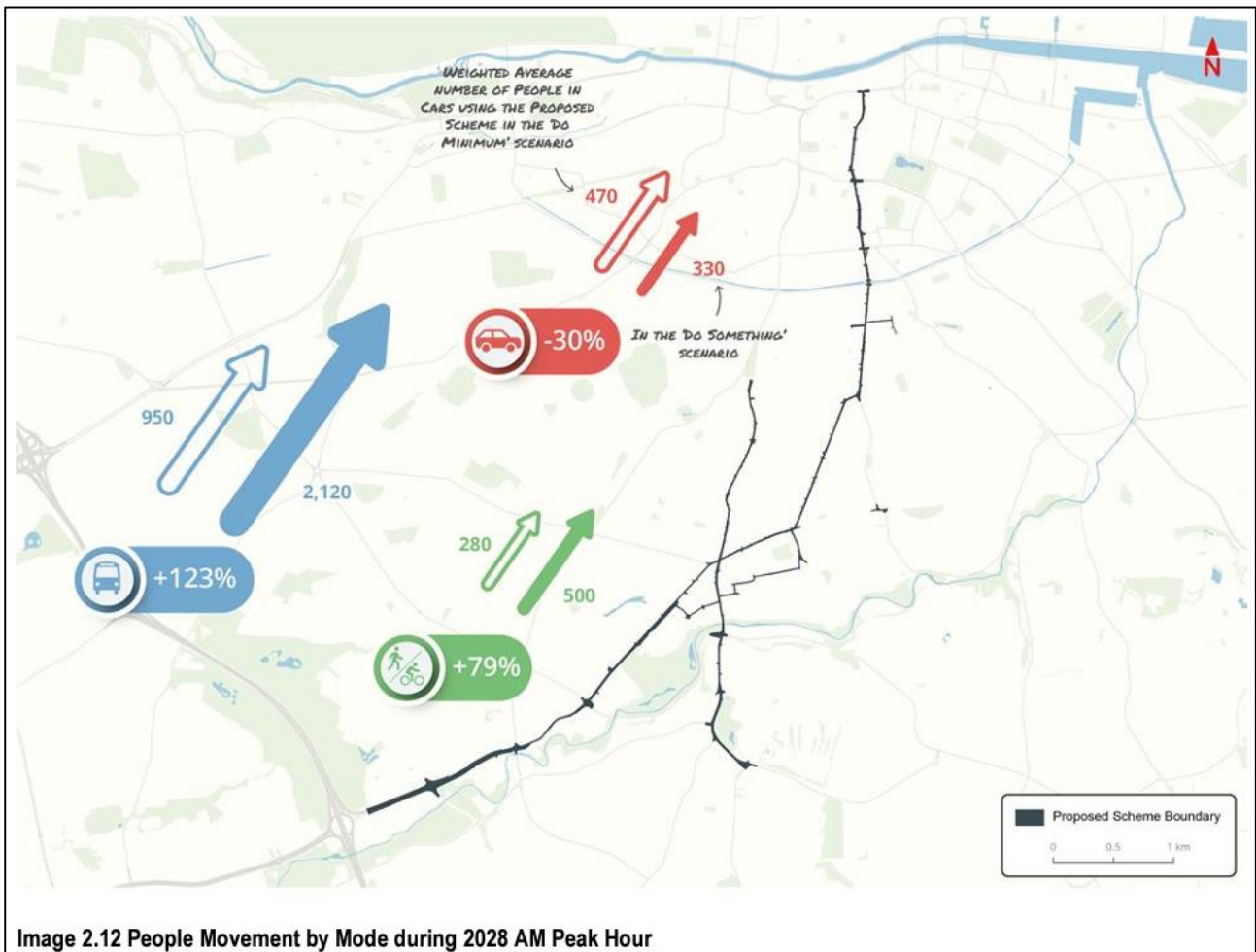
As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

“enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of ‘People Movement’. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.”

Section 2.4 notes the following:

The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical double-deck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e. walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is an increase of 123% in the number of people travelling by bus, an increase of 79% in people walking or cycling, and a reduction of 30% in the number of people travelling by car along the route of the Proposed Scheme. This is summarised in Image 2.12



In relation to the cumulative impacts on Traffic and Transport and car usage Appendix A6.1 (Transport Impact Assessment) notes the following for Cumulative Assessment:

In general, total trip demand (combining all transport modes) will increase into the future in line with population. In general, total trip demand (combining all transport modes) will increase into the future in line with population and employment growth. A greater share of the demand will be by sustainable modes (Public transport, Walking, Cycling) as facilitated by the GDA Strategy implementation.

The analysis indicates that with the 12 BusConnects Proposed Schemes in place, there will be a high positive impact on sustainable mode share. The Proposed Schemes, along with other GDA Strategy measures, will prevent any increase in private car traffic within the study area and will instead result in a reduction in car trips below 2020 levels.

In the 2028 Opening Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 12% increase in public transport trips, 2% decrease in general traffic trips (i.e. motorists) and a 14% increase in cycling trips in the AM Peak Hour and a 12% increase in public transport, 3% decrease in general traffic and a 12% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario. In the 2043 Design Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 6% increase in public transport trips, 6% decrease in general traffic trips (i.e. motorists) and a 10% increase in cycling trips in the morning peak hour and a 7% increase in public transport, 7% decrease in general traffic and a 11% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario.

General traffic levels reduce more in 2043 than when compared to 2028 due to the increased level of additional non-bus public transport infrastructure and services (MetroLink, Luas extensions and DART+ from the GDA Strategy) in tandem with the road capacity reduction measures as part of the Proposed Scheme leading to increased usage on all public transport modes.

The modelling outputs for the 2028 Cumulative Opening Year scenario demonstrate that there is a high growth in bus patronage along all the Proposed Schemes in the AM Peak Hour.

The bigger increases occur in the inbound direction on the Blanchardstown to City Centre, the Proposed Scheme and the Bray to City Centre scheme where the loadings reach more than 2,000 additional passengers per Hour compared to the Do Minimum scenario.

In the 2028 Opening Year AM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 10% more passenger boardings across all public transport services and 17% more boardings on bus services. In the 2028 Opening Year PM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 11% increase in total passengers boarding Public transport services and 18% more passengers boarding buses services.

In the 2043 Design Year AM and PM Peak Hour scenarios, increase in total passengers boarding all public transport services will be 7% and 8% respectively, and the increase in passengers boarding bus services will increase by 11% and 14% respectively.

Overall, the Proposed Schemes are expected to deliver a **High Positive** impact for People Movement by sustainable modes

In terms of bus journey time savings, Section 6.4.6.3 of Chapter 6 of Volume 2 of the EIAR notes the following:

A micro-simulation model assessment has been developed and network performance indicators established for bus operations along Proposed Scheme. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. Based on the AM and PM peak hours alone, 7.4 hours of savings in 2028 and 6.2 hours in 2043, when compared to the Do Minimum combined across all buses. Overall it is anticipated that the improvements to the network performance indicators for bus users along the Proposed Scheme will have a **Positive, Very-Significant and Long-term effect**.

In relation to Air Quality, EIAR Volume 2 Chapter 7, section 7.5.3 states that the Proposed Scheme will have a generally neutral impact on air quality. Noting that vehicle emissions technology will improve, and the Irish vehicle fleet will continue to evolve to the extent that vehicle emissions impacts associated with the Proposed Scheme are anticipated to be short-term. City wide traffic management measures and proactive encouragement of low emissions vehicle uptake would accelerate these improvements.

Assessment Topic	Potential Impact (Pre-Mitigation and Monitoring)	Predicted Impact (Post Mitigation and Monitoring)
Road traffic impacts on local human receptors	Neutral, Long-term	Neutral, Long-term
Road traffic impacts on local ecological receptors	Positive, Slight, Long-term	Positive, Slight, Long-term
Regional air quality	Neutral, Long-term	Neutral, Long-term

Figure 3.102.5 Summary of Predicted Operational Phase Impacts Following the Implementation of Mitigation and Monitoring

In relation to Noise and Vibration, EIAR Volume 2 Chapter 9 Noise and Vibration, section 9.5.2.1 states that: *The impact assessment has determined that traffic noise impacts across the study area for the Proposed Scheme results in a positive to neutral imperceptible to slight short and long-term direct impacts along the Proposed Scheme and negative imperceptible to moderate short and long term indirect impacts along the surrounding road network. The range of noise level changes and overall noise levels calculated do not require any specific noise mitigation measures to be incorporated into the Proposed Scheme.*

In relation to noise and vibration occurring from the construction phase, section 9.6.1 states that:

During evening periods, noise impacts associated with the Construction Phase will be Negative, Moderate to Significant and Temporary for the majority of scheduled works within 15m of the works and Negative, Not Significant beyond 15m. At distances between 15m to 20m from road widening / utility diversion works, there is the potential for Negative, Moderate to Significant and Temporary impacts. At distances within 10m of road widening / utility diversion works, the noise impact will be Negative, Significant to Very Significant and Temporary. As per DMRB Noise and Vibration (UKHA 2020), in cases of moderate to major magnitude of impacts, the duration of works determines the overall significance rating.

As part of the mitigation measures, the durations advised in the DMRB Noise and Vibration will be followed, where feasible, to reduce overall significance effects (i.e. scheduling works to occur for periods of less than 10 days / nights over 15 consecutive day / night periods and less than 40 days over six consecutive months where significant effects are identified).

Once the CNL and duration of works is considered in line with the DMRB Noise and Vibration, all key Construction Phase residual noise levels will be Not Significant, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).

EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling, pedestrian, and bus infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Table 6.27: Section 2 – Significance of Effects for Pedestrian Impact during Operational Phase

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate

R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario. This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.

Cycling Infrastructure

Table 6.28, in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Table 6.28: Section 2 – Cycling Impact during Operational Phase

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant

R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Bus Infrastructure

Table 6.29, in section 6.4.6.1.3.3 of Chapter 6 outlines the changes to bus stop infrastructure along Section 2 of the Proposed Scheme, with reference to the number and percentage of bus stops that provide each facility in the Do Minimum and Do Something scenarios.

Table 6.29: Section 2 – Overview of Changes in Bus Stop Facilities

Bus Stop Facility	Do Minimum		Do Something		Comment
	No. of Stops	Percentage of Stops	No. of Stops	Percentage of Stops	
RTPi	2	11%	15	100%	RTPi added to all bus stops.
Timetable information	15	83%	15	100%	It is proposed that all bus stops provide real-time information.
Shelter	11	61%	12	80%	Shelter to be provided at all but three bus stops which are limited by spatial constraints.
Seating	10	55%	12	80%	Seating to be provided at all but three bus stops which are limited by spatial constraints.
Accessible Kerbs	16	89%	15	100%	Full provision.
Indented Drop Off Area	0	0%	0	0%	All proposed bus stops will be located inline within bus lanes.
Total Stops	18		15		Three fewer than the Do Minimum.

As set out in 6.4.6.1.3.2:

The contents of Table 6.29 indicate that there are significant improvements to the bus stop facilities along Section 1 of the Proposed Scheme. It is proposed that all bus stops will be provided inline within dedicated bus lanes along the entirety of the corridor, meaning that buses will not incur delay when setting off after picking up passengers. Improvements in the provision of real-time information, shelters, seating and accessible kerbs at the bus stops throughout Section 2 of the Proposed Scheme are assessed as providing an overall positive impact for bus passengers.

All proposed facilities have been designed in accordance with BusConnects Preliminary Design Guidance which has been developed with cognisance to the relevant accessibility guidance. Taking into account the provision of bus lanes, pedestrian accessibility and bus stop facilities outlined within this section, Table 6.30 below outlines the bus qualitative assessment along Section 2 of the Proposed Scheme.

Table 6.30: Section 2 – Bus Qualitative Impact during Operational Phase

Section	Chainage	Description of Impact	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Avenue to R137 Terenure Road North	A000 - A1850	<ul style="list-style-type: none"> Three fewer stops than in the Do Minimum. Bus stops are located in more convenient locations for communities and access to signalised crossings. Slight improvements to bus stop facilities throughout. 	Medium	Medium	Positive Significant

As indicated in Table 6.30, the Proposed Scheme improves the quality of existing bus infrastructure along Section 2 of the Proposed Scheme, which will provide long term benefits for bus users. The impact for this section of the Proposed Scheme is Medium Positive. The sensitivity of environment rating is predominately categorised as 'medium.' This results in a **Positive, Significant and Long-term** effect on this section.

Further detail on the benefits of the Proposed Scheme are presented in Section 2.1.1.

4. Change to work patterns due to the COVID-19 Pandemic

A detailed response to this item is presented in Section 2.1.1.

5. Inability to turn a car within the driveway.

The permanent acquisition will result in the loss of up to 3.5m of lands with an additional 2m temporarily required to allow for the construction of boundary treatment works and tying into the existing garden/driveway. The edge of the nearest proposed traffic lane will be 2.5m closer to the residence than the kerb of the existing general traffic lane. The front boundary wall, including pillars and entrance between the pillars will be at least 8.5m from the front of the house. This would not introduce any additional risk to the owners during the operation of the Proposed Scheme with access and egress to/from the property achieved similar to the current scenario and that this should not hinder the ability to park within the driveway.

The principle of how residents can access/egress their property is unchanged by the scheme proposals. The existing access/egress scenario is similar to the proposed with the requirement for a vehicle to be driven across a cycle lane/cycle track and footpath.

In addition, as noted in Appendix M2 Stage 1 Road Safety Audit of the Preliminary Design Report:

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. All recommended measures or alternative measures proposed by the Designer were accepted by the Road Safety Audit Team.

6. Proposed Scheme Out of Character for Urban Village

Chapter 17 of the EIAR has considered the potential landscape (townscape) and visual impacts associated with the Construction and Operational Phases of the Proposed Scheme.

17.4.4.1 presents an assessment of the Proposed Scheme in terms of Impact on Townscape and Streetscape Character. Section 17.4.4.1.2 presents the assessment for the Nutgrove to Terenure Road North Section:

*The sensitivity of this section is **high**. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme. Most notably there will be continuing negative effects from loss of trees removed during the Construction Phase at Rathfarnham Castle and along sections of residential properties along Rathfarnham Road. There will be the provision of a new boundary wall to the castle demesne in roughcast render which, while less aesthetically pleasing than the sections of existing stone boundary wall, will represent a neutral change when compared to the overall inharmonious boundary treatment which varies in quality and condition of materials used.*

There will be provision of substantial new tree planting within the castle demesne to consolidate the new edge to the woodland group and ensure the amenity of the open space is restored.

There will also be substantial replacement and additional street tree planting throughout this section, including medians, footpaths and roadside spaces. There will be an improvement to the setting of the Yellow House and the Church of the Annunciation in Willbrook with provision of stone paving to existing concrete footpaths.

*There will be a notable improvement to an existing grassland space within the River Dodder corridor with provision of new tree planting and species-rich grassland. An enhanced paving scheme will be provided at numerous locations throughout this section, most notably with the provision of stone paving to the frontages of the Church of the Annunciation and the Yellow House public house, as well as the provision concrete paving to footpaths at major junctions and sett paving to pedestrian crossing points at side roads. The Operational Phase will not alter the overall townscape character of this section but will result in substantial localised changes to the streetscape character of the section. The magnitude of change in the baseline environment is **very high**.*

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Very Significant and Short-Term** becoming Neutral, Moderate and Long-Term.*

Section 17.4.4.1.2 presents the assessment for the Terenure Road North to Charleville Road Section:

*The sensitivity of this section is **very high**. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme between Terenure and Rathgar. Although land take has been minimised through design iteration, Terenure Road East will be widened in parts which will require permanent land acquisition from sections of residential properties, some of which are protected structures, and others which have mature trees that are prominent features of the streetscape. There will be a change to the alignment of historic boundary features and loss of several prominent mature garden trees which are located on the edge of the street. There will be provision of several new street trees along Terenure Road which over time will neutralise the negative effects associated with loss of trees removed during the Construction Phase.*

There will be a substantial improvement of the junctions to each end of Terenure Road East; a new paving scheme will be provided to the junctions including high-quality concrete paving to active frontages, stone / concrete sett paving to pedestrian crossings, sett paving to formalised parking bays, as well as a narrowing of crossing distances to reduce crossing times and allow removal of detracting features such as pedestrian guardrails and traffic bollards. There will also be tree planting and some new ornamental planting areas provided.

*The Operational Phase will not alter the overall townscape character of this section but will result in both substantial localised negative and positive changes to the streetscape character. Despite the adverse impacts on trees and properties there will be a substantial localised improvement in some areas of streetscape and the effect across the overall section will become positive over the long-term as proposed planting matures. The magnitude of change in the baseline environment is **medium / high**.*

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Significant and Short-Term** becoming **Positive, Moderate and Long-Term***

3.103103 – Filipa Allen Egan

3.103.1 Submission – Rathmines

The submission raised the following issues:

1. Support for modal filter on Mount Pleasant Avenue Lower

3.103.2 Response to submission

The NTA welcomes the support for the proposed modal filter on Mount Pleasant Avenue Lower.

3.104104 – Finola Connolly

3.104.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. the right turn on to Highfield Road will increase traffic
 - b. Traffic impact on Highfield incorrectly assessed
 - c. The closure of Rathgar road to outbound non-public transport will impact several roads like Highfield Road, Villiers Road, Neville Road and Templemore Avenue
2. Safety concerns of the Right turn from Upper Rathmines Rd to Highfield Rd
3. Lack of consultation

3.104.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

In terms of traffic increases on Villiers Road, Neville Road and Templemore Avenue, it is noted that Diagrams 6.40 and 6.41 do not identify any increases in traffic along these roads as a result of the Proposed Scheme.

3.105105 – Fiona Burns

3.105.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Relocation of Bus Stop on Rathfarnham Road (Bus Stop 1334)

3.105.2 Response to submission

As noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

- *The criteria that are considered when locating a bus stop are as follows;*
- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

The Bus Stop Review Report notes the following in relation to the existing bus stops on Rathfarnham Road at this section of the Proposed Scheme:

Bus Stop 1333

Stop to be amended? Yes - stop to be moved 80m north of existing.

Reason for decision: This location is closer to the Junction with Dodder Park Rd and allows for this stop to be combined with existing stop 1334 thus improving bus stop spacing.

Bus Stop 1334

Stop to be amended? Removed

Reason for decision: Although located on the correct side of the junction, this stop would be located in a shared bus/traffic lane and as such has been removed to optimise the movement of traffic/buses through this section.

The proposal to relocate bus stop 1133 and remove bus stop 1334 aligns with the bus stop location principles namely:

- It is located a similar distance to the Dodder View Road / Dodder Park Road junction as the current situation providing good accessibility from the large residential catchment along, and accessed off, these roads. It is noted that while there is a preference for a bus stop to be located on the exit side of a junction, as there is no bus lane on the exit side in this instance it is preferable to locate the stop at its proposed location;
- It facilitates better stop spacing with 360m between it and the prior stop, 260m between it and the subsequent bus stop – existing distance between stops is 250m (between stop 1332 and 1333) and 180m (between stop 1333 and 1334);

3.106106 – Fiona Daly

3.106.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. No need for this scheme on Rathgar Road
 - b. Traffic will have nowhere to go once it reaches Rathmines except small roads.
2. Lack of Consultation.
3. Unnecessary change providing no real gains to bus travel times.
4. Alternative measures such as congestion charges should be considered

3.106.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.107107 – Fiona Eogan

3.107.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Impact on the character of area
2. Impact on protected structures
3. Biodiversity
 - a. Destruction of trees
4. One-way operation of Rathgar Road
5. Traffic
 - a. Increased congestion on Highfield Road
6. Proposed bus gates
 - a. Rathmines Road
7. Access to Church of Mary Immaculate, Refuge of Sinners
8. Unnecessary change providing no real gains to bus travel times.

3.107.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.108108 – Fiona Reilly

3.108.1 Submission – Templeogue Road

The submission raised the following issues:

1. Clarity on deriving transport modal shift
2. Reduced bus service in Templeogue Road
3. Operation of proposed S4 orbital route
4. Impact on access to local amenities
5. Impact on businesses
6. Accessibility
7. Lack of Cost/Benefit analysis
8. Air Quality
9. Traffic
 - a. Congestion on Templeogue Road
 - b. Terenure Cross
 - c. Redistribution of traffic onto residential streets
 - d. Signalisation of Spawell roundabout
10. Biodiversity on Terenure Road East and Dodder River
 - a. Destruction of trees
 - b. Flora and Fauna

3.108.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to Issue 1, Section 6.4.6.1.8 of Chapter 6 of the EIAR notes the following:

“To determine the impact that the Proposed Scheme has on modal share in the direct study area as a result of its implementation, the weighted average number of people moved by each mode (Car, Bus, Active Modes) has been extracted from the ERM / LAM.

The analysis compares the Do Minimum and Do Something scenarios both in the inbound and outbound direction in the AM and PM peak hours (8-9am, 5-6pm) for each forecast year (2028, 2043).

As outlined previously, the same demographic assumptions (population, employment levels) are included in both the Do Minimum and Do Something scenarios. The bus network and frequency assumptions are also the same in both scenarios and are in line with the BusConnects bus network proposals. It is acknowledged, therefore, that the assessment is conservative in terms of the level of people movement that is predicted in the Do Something scenario. The Do Something scenario will facilitate opportunities to increase bus network capacity operating along the corridor due to the extensive priority provided. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth. In the absence of the delivery of the Proposed Scheme, growth along this key corridor would continue to contribute to increased congestion and operational issues on the road network. The Proposed scheme delivers a reliable alternative to car-based travel that can support future sustainable growth and provide a positive contribution towards reducing carbon emissions.”

Section 6.4.3 of Chapter 6 of the EIAR describes the transport modelling methodology that has been used to assess the Proposed Scheme:

“This section summarises the various transport modelling tools that have been developed and used to inform the preparation of the TIA and this chapter of the EIAR. The purpose of each tool has been detailed and its use for each element of the Proposed Scheme assessment has been defined.

The modelling tools that have been developed as part of the assessment, do not work in isolation, but instead work as a combined modelling system driven by the NTA’s East Regional Model (ERM) as the primary source for multi-model demand and trip growth. Demand information is passed from the ERM to the cordoned Local Area Model (LAM), corridor micro-simulation models and junction models which have been refined and calibrated to represent local conditions to a greater level of detail than that contained in the ERM.

In summary, there are four tiers of transport modelling which have been used to assess the impacts of the Proposed Scheme:

- **Tier 1 (Strategic Level):** *The NTA’s East Regional Model (ERM) is the primary tool which has been used to undertake the strategic modelling of the Proposed Scheme and has provided the strategic multi-modal demand outputs for the proposed forecast years;*
- **Tier 2 (Local Level):** *A Local Area Model (LAM) has been developed to provide a more detailed understanding of traffic movement at a local level. The LAM is a subset model created from the ERM and contains a more refined road network model used to provide consistent road-based outputs to inform the TIA, EIA and junction design models. This includes information such as road network speed data and traffic redistribution impacts for the Operational Phase. The LAM also provides traffic flow information for the micro-simulation model and junction design models and has been used to support junction design and traffic management plan testing;*
- **Tier 3 (Corridor Level):** *A micro-simulation model of the full ‘end to end’ corridor has been developed for the Proposed Scheme. The primary role of the micro-simulation model has been to support the ongoing development of junction designs and traffic signal control strategies and to provide bus journey time information for the determination of benefits of the Proposed Scheme; and*
- **Tier 4 (Junction Level):** *Local junction models have been developed, for each junction along the Proposed Scheme to support local junction design development. These models are informed by the outputs from the above modelling tiers, as well as the junction designs which are, as discussed above, based on people movement prioritisation.*

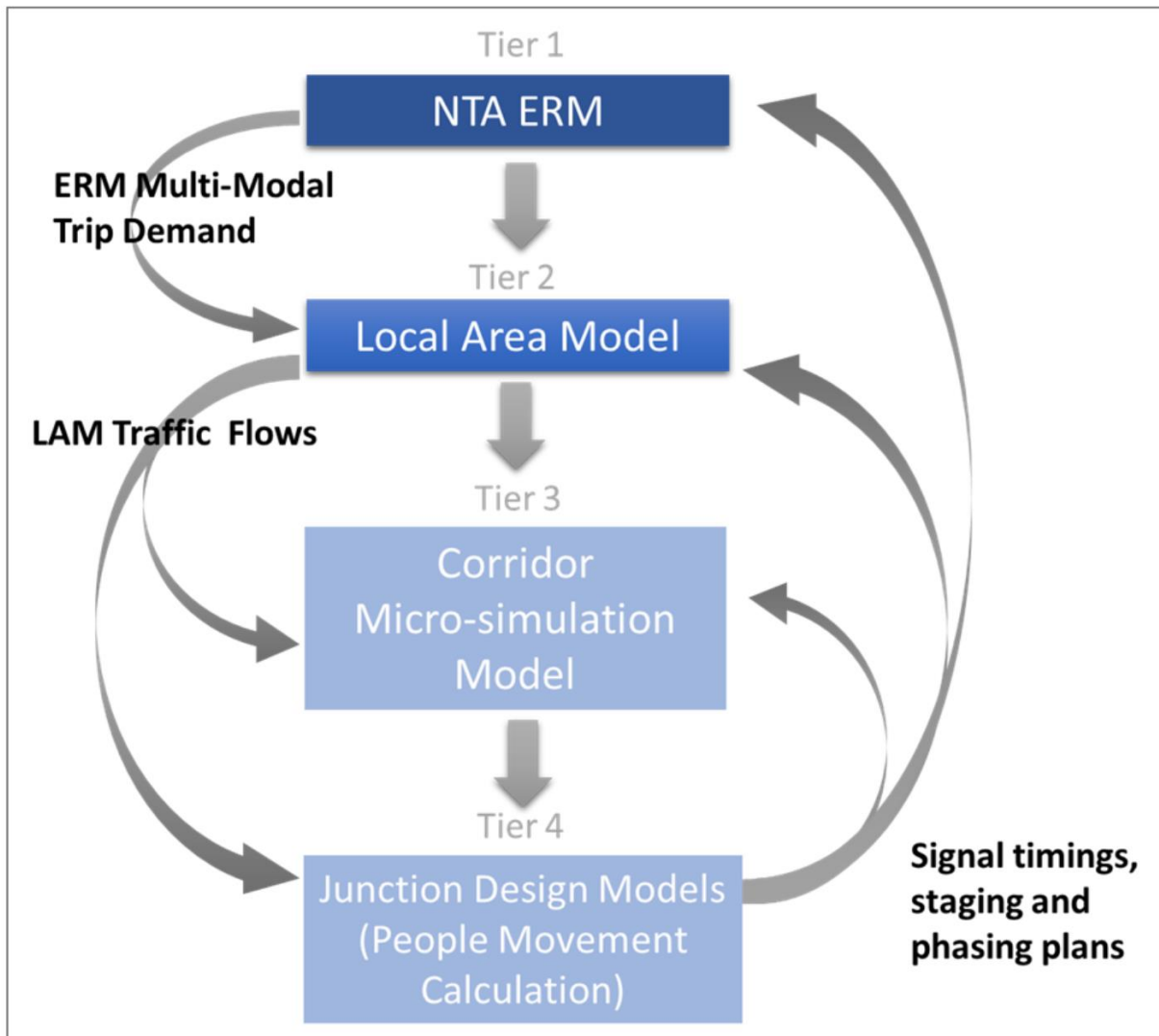


Diagram 6.3: Proposed Scheme Modelling Hierarchy

Further detail on the transport model development process, the traffic data inputs used, the calibration, validation and forecast model development for the suite of transport models can be found in the Transport Modelling Report, in Appendix A6.2 (Transport Modelling Report) and Appendix A6.3 (Junction Design Report) in Volume 4 of this EIA.

In relation to Issue 3, it is noted that an increase in general traffic is not predicted on Terenure Road West, as indicated in Figure 3.108.1 and Figure 3.108.2 below:

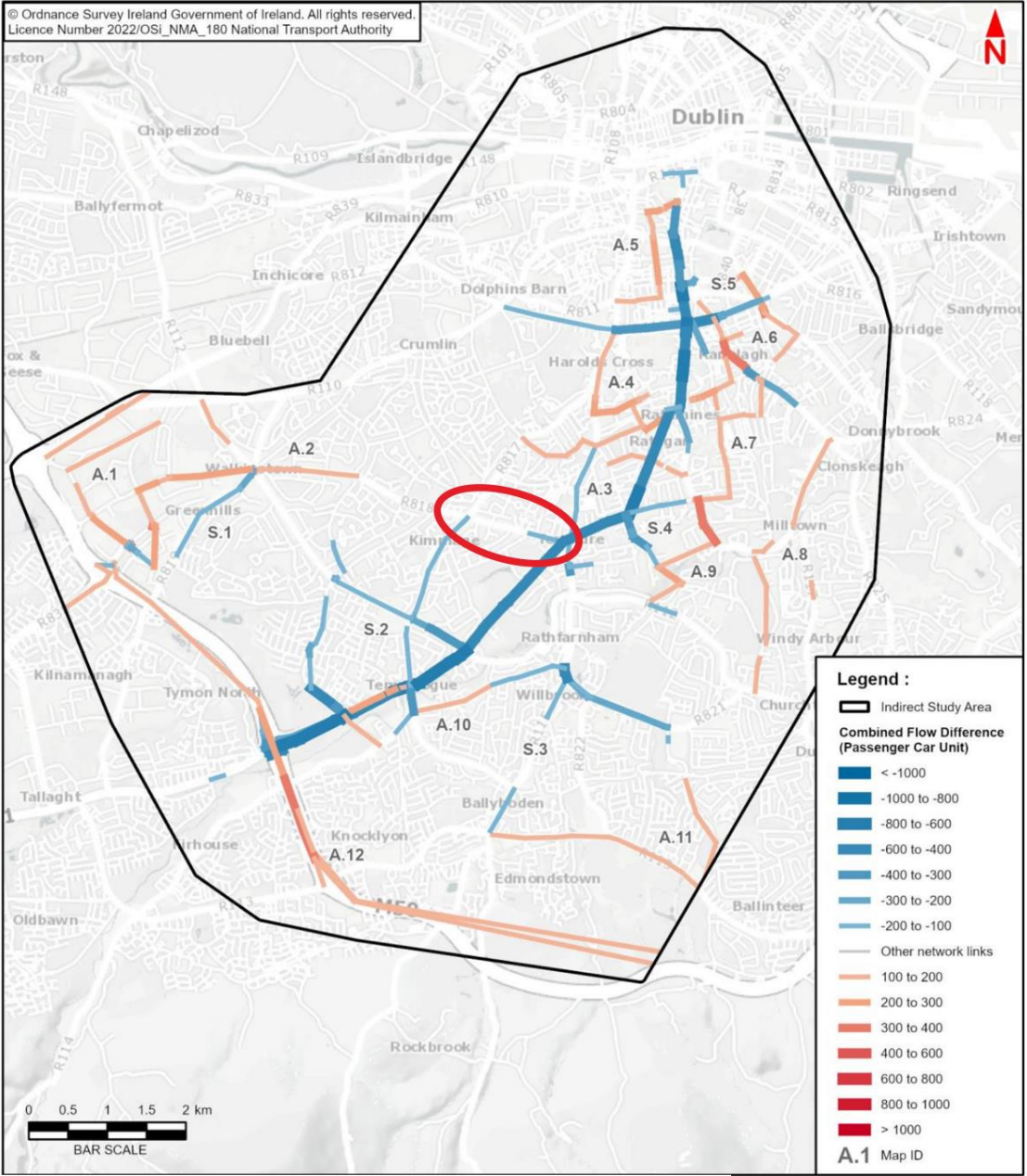


Diagram 6.40: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year

Figure 3.108.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year

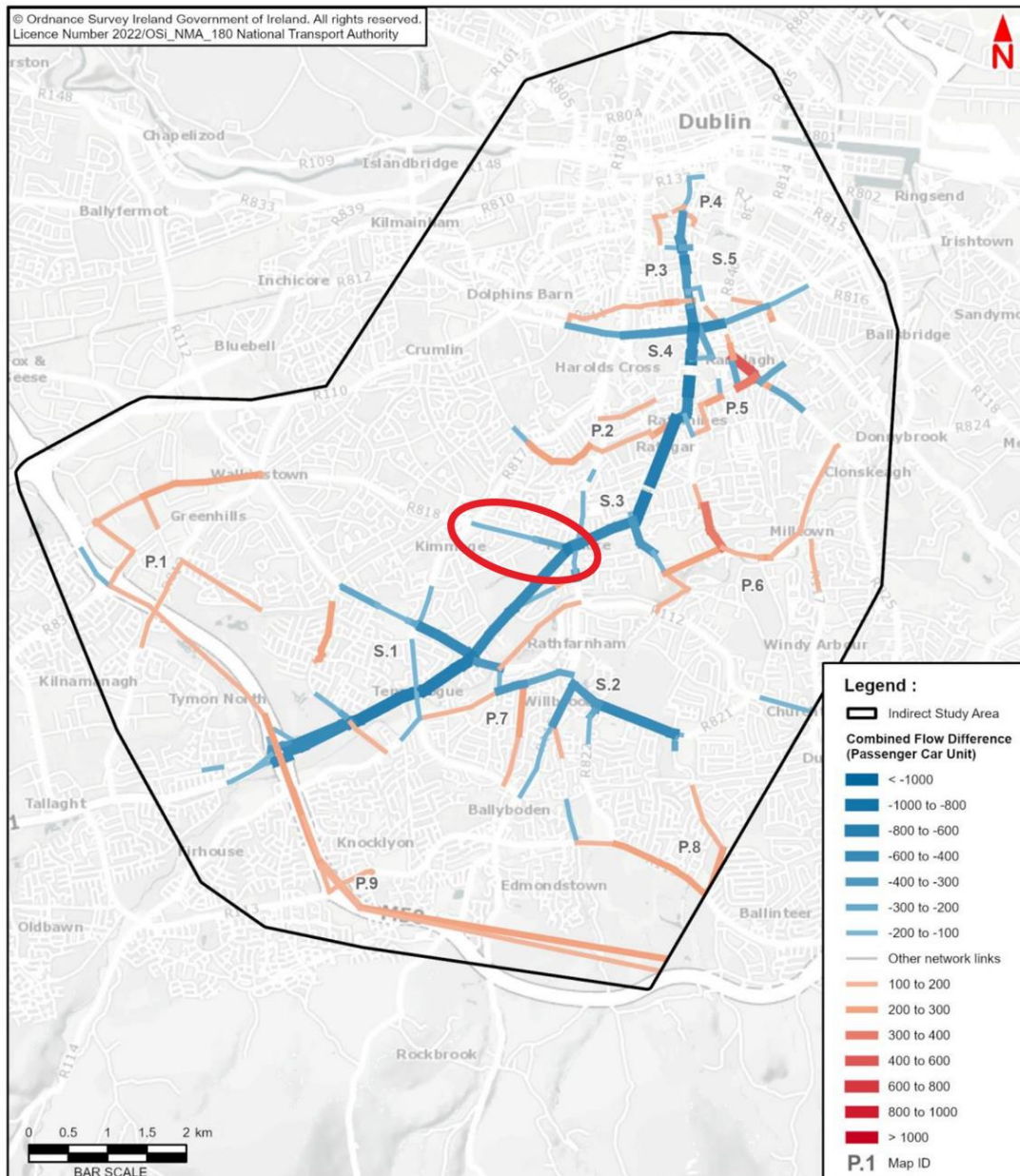


Diagram 6.41: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak, 2028 Opening Year

Figure 3.108.2 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year

In relation to Issue 7, pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA’s BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government.”

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- *As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*
- *At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award*

Refer to the BusConnects Business case website for further detail and links:

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

3.109109 – Fionnuala and Dick Blake

3.109.1 Submission – Whole Scheme

The submission raised the following issues:

1. Support BusConnects objectives
2. Inadequate planning processes/ evaluation
3. Pre-COVID traffic volumes used in analysis.
4. Changes to work patterns due to the COVID-19 pandemic
5. Environmental impacts on the areas and quality of residents
6. No detailed analysis of impacts on roads, residents and commercial interests
7. Cost-Benefit analysis
8. Architectural and cultural heritage
9. Biodiversity
 - a. Destruction of trees
10. Breach of Part M
11. Bus gates time plating on Templeogue Road
12. Unnecessary change providing no real gains to bus travel times.
13. Traffic
 - a. Turn bans from Templeogue Road to Rathdown
 - b. Proposed bus gate on Templeogue Road
 - c. Proposed bus gate in Rathmines
 - d. Cumulative impact of adjacent schemes

3.109.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

In relation to compliance with part M at properties along Rathfarnham Road (51-71), as set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable. In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

Notwithstanding the above, it is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR); and
- Retaining existing footpath gradients.

The works may require minor regrading works within some properties but will not result in an increase to the maximum gradient experienced in these properties.

3.110110 – Frank O'Callaghan

3.110.1 Submission – Whole Scheme

The submission raised the following issues:

1. Benefits of the proposed Scheme do not justify the cost and environmental impacts
2. Biodiversity
3. Destruction of trees
4. Flora and fauna
5. Whitechurch Stream not considered
6. Traffic
7. Traffic displaced to residential streets

8. Insufficient traffic modelling
9. Air pollution
10. Access to amenities including Bushy Park
11. No assessment of cumulative impact of 12 corridor
12. Impact on visibility/perceived safety from proposed LED lighting
13. Lack of enhanced pedestrian facilities
14. Cycle facilities
15. Lack of continuity
16. Insufficient width
17. Alternative options
18. Metro
19. Congestion Charges
20. Turn bans
21. Proposed bus gate
22. Limit hours of operation
23. Lack of consultation
24. Request Oral Hearing
25. Bus stop
26. Removal of multiple bus stops
27. Relocation of bus stop 1159
28. Elderly and Disability Access
29. Access to St Luke's Hospital
30. Pre-COVID traffic volumes used in analysis.
31. Changes to work patterns due to the COVID-19 pandemic
32. Architectural and cultural heritage
33. Impact on heritage properties due to CPO
34. Negative impact on businesses

3.110.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 8, Section 12.4 of the Preliminary Design Report contained in the Supplementary Information outlines the design approach to Public Lighting. The following is noted:

“All new public lighting will be designed and installed in accordance with the specific lighting and electrical items set out the following National Standards and guides, including but not limited to:

- *Local Authority Guidance Specifications;*
- *EN 13201: 2014 Road Lighting (all sections);*
- *ET211:2003 ‘Code of Practice for Public Lighting Installations in Residential Areas’;*
- *BS 5489-1 ‘Code of practice for the design of road lighting’;*
- *TII Publications: Specification for Road Works, Series 1300 & 1400;*
- *TII Publications Standard Construction Details, Series 1300 & 1400;*

- *IS EN 40 – Lighting Columns;*
- *Institution of Lighting Professionals “GN01 Guidance Notes for Reduction of Obtrusive Light”.*

All new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the ‘Guidance notes for the Reduction of Light Pollution’ issued by the Institution of Lighting Professionals (ILP).”

In line with these guidance documents, and industry best practice, LED lighting will be provided. The Proposed Scheme will provide sufficient lighting in all areas. The following is noted in Section 12.4.1 of the Preliminary Design Report:

“Where significant alterations are proposed to the existing carriageways, the preliminary street lighting design ensures that the current standard of public lighting is maintained or improved.”

In relation to Issue 9, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

“Pedestrian Infrastructure: The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C / D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a Positive, Significant and Long-term effect in all four sections of the Proposed Scheme.”

In relation to Issue 10, the GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.110.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4% following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

3.111111 – Gavin Maguire

3.111.1 Submission – Templeogue Road

The submission raised the following issues:

1. Support BusConnects objectives
2. Additional traffic due to bus gate
3. Request that turns ban is enforced with physical measures.

3.111.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.112112 – Graham Brooks and Jennifer Porter

3.112.1 Submission – Whole Scheme

The submission raised the following issues:

1. Traffic
 - a. Additional traffic on Victoria Road
 - b. Traffic issue as no modelling has been carried out.
 - c. Traffic issues at Rathgar Crossroads
2. Drivers will ignore turn bans.
3. Air quality
4. Impact on community and businesses
5. Biodiversity on Terenure Road East
 - a. Destruction of trees

3.112.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3, 2.4.3 and 2.5.3 of this report.

In terms of item 1.a., Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

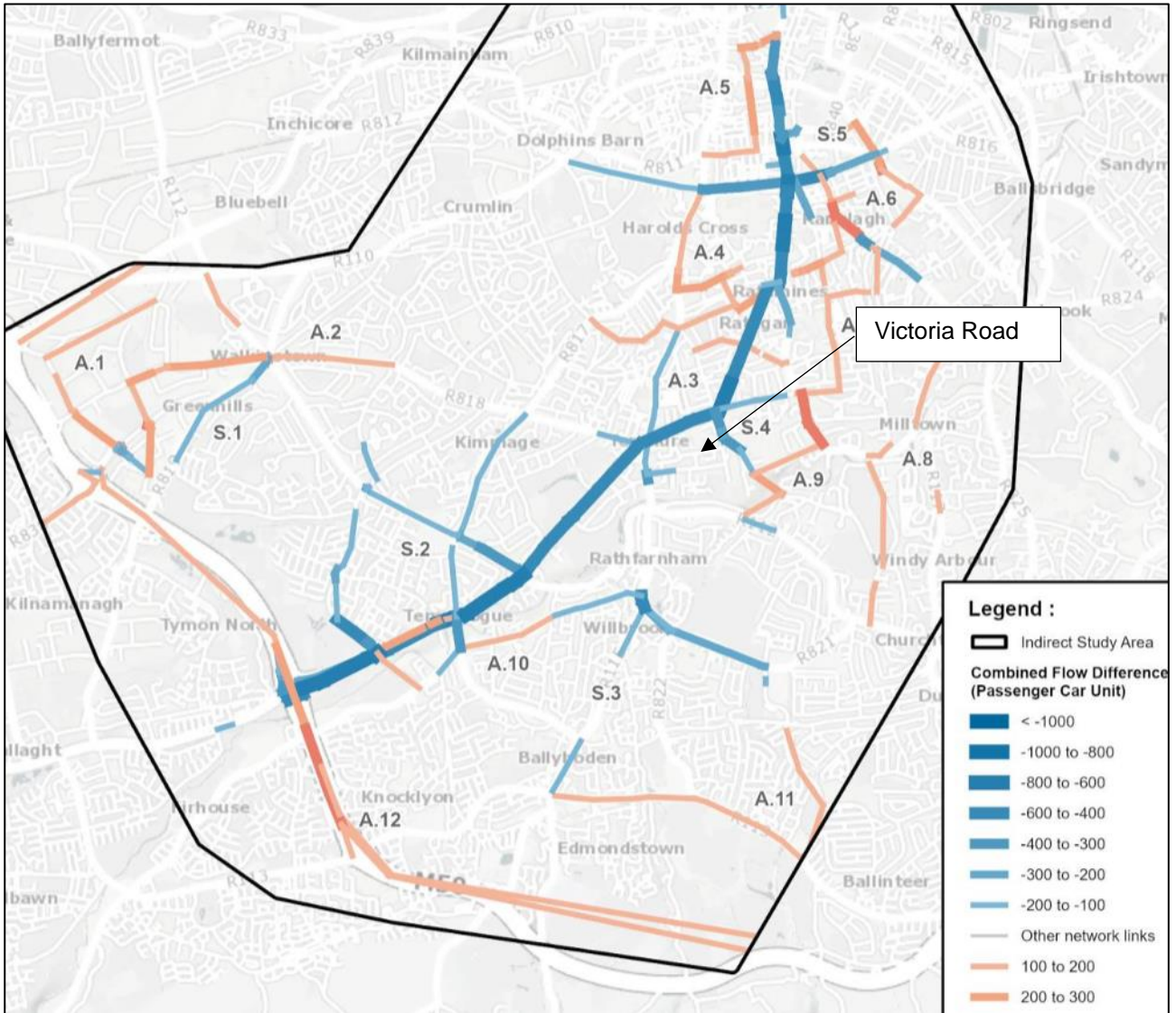


Figure 3.112.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

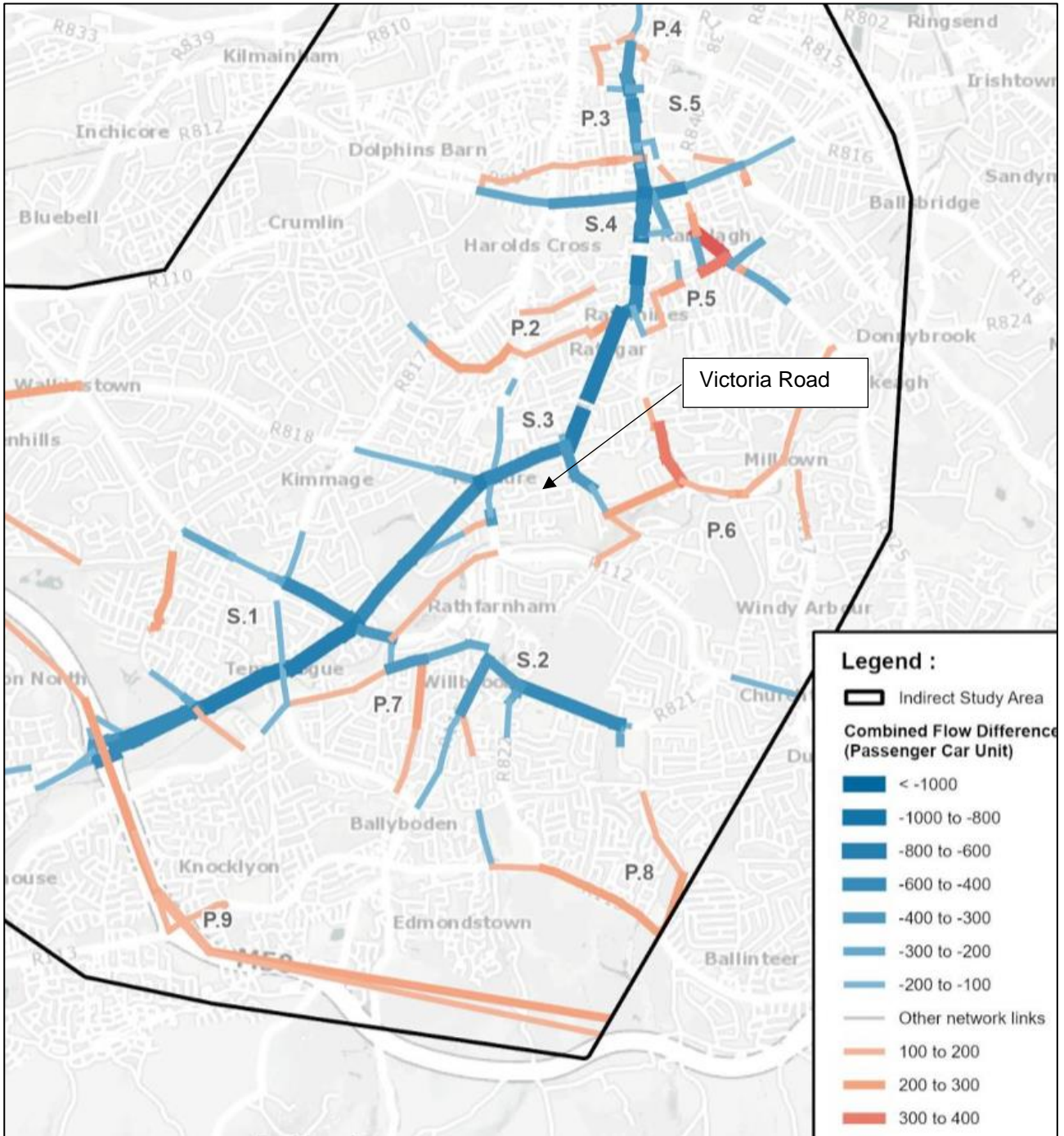


Figure 3.112.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken does not identify any material change in traffic volumes along Fortfield Road as a result of the Proposed Scheme i.e. any changes in traffic volumes along Fortfield Road are less than 100 passenger car units per hour.

3.113 113 – Grainne O'Neill & Others

3.113.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Environmental impact
 - a. Air and noise pollution
2. Compulsory purchase order on Terenure Road East & Rathfarnham Road
3. Impact on businesses
4. Proposed footpaths
 - a. Narrow widths on Rathgar Road
5. Traffic
 - a. Increased volumes
 - b. Diverted to residential streets.
 - c. Additional traffic on Highfield Road
 - d. Cumulative impact of all BusConnects Schemes
6. Architectural and cultural heritage on Terenure Road East
 - a. Walls, railings and gates
7. Alternative options
 - a. Metro
 - b. School buses
 - c. Congestion Charges
 - d. Park and Ride facilities
 - e. Introducing bus priority lights
 - f. Cashless fare payment
 - g. Bus routing along Harold's Cross Road
8. Unnecessary change providing no real gains to bus travel times.
9. Lack of improvements to walking provision
10. Cycle infrastructure
 - a. Support for improved segregated facilities
 - b. Lack of Continuity
 - c. Insufficient width
11. Lack of consultation
12. Removal of bus stops
13. Access to local amenities
14. Elderly and Disability Access
15. Removal of Trees
16. Biodiversity on Rathfarnham Castle Park
 - a. Destruction of trees
 - b. Flora and Fauna
 - c. No mention of the Whitechurch stream in the hydrological assessment
17. Contravention of DCC Development Plan

3.113.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 17, Section 3.7.4 of the Planning Report included in Appendix A2.1 of the EIAR extensively outlines how the Proposed Scheme is in alignment with the Dublin City Development Plan 2022-2028. The following is noted in Section 3.7.4.1 of this report:

“It is clear that BusConnects and the delivery of same is an important objective of the DCDP. The DCDP fully supports the BusConnects Programme of works and its policy/objectives are aligned with the Proposed Scheme. The Proposed Scheme will deliver the infrastructure necessary to provide a sustainable transport system, to support the enhancement and growth of the cycle and pedestrian network and achieve a modal shift.”

3.114 114 – Greg and Audrey Turley

3.114.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Removal of trees at property underestimated.
2. Traffic data out of date due to Covid
3. Section 51 and CPO Application should not be made concurrently.
4. NTA has not demonstrated need for the scheme and the CPO.
5. Existing signal-controlled priority sufficient
6. Inadequate Consultation
7. Cost Benefit Analysis is Required
8. Implementation of other BusConnects measures first.
9. Metro is more suitable for this corridor.
10. Impact on Heritage Properties on Terenure Road East
11. Congestion at Terenure Cross due to proposed changes
12. Impact on Businesses due to loss of parking/loading
13. Bus Gate Hours of Operation
14. Proposed Cycle Facilities are Insufficient.
15. Traffic Impact as a result of Traffic Management Measures
16. Cumulative Impact of Scheme with Adjacent BusConnects Schemes

3.114.2 Response to submission

1. Removal of trees at property underestimated

In order to assess the impact of the Proposed Schemes on trees, a tree survey was undertaken in August 2020. The survey and resulting assessment of the impact of the scheme is presented in the Arboricultural Impact Assessment Report, which is included as Appendix A17.1 of EIAR. The methodology for the survey is set out in section 1.2 of Appendix A17.1

“An initial tree survey and visual condition assessment was undertaken on the 24th and 25th of August 2020. As part of this report and in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction - recommendations, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British standard document, where trees formed obvious groups, these were assessed and recorded as groups.

The survey commenced at the junction of Grange Road and Nutgrove avenue, and at Junction 11 of the M50 and finished at Dame street, including the Terenure Road North / Harold's Cross Road section and the Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road section of the Proposed Scheme.

The survey concentrated primarily on the significant trees/hedgerows and groups located within 20m of any development works which could impact on the tree (this could include excavation, resurfacing, utility installation, new signage/lighting etc) within and adjacent to the Proposed Scheme and has been based on the topographical survey plan provided. The objective of this survey was to gather information regarding the trees along the Proposed Scheme and to assess the impact the Proposed Scheme may have on the trees. Refer to Appendix A for the tree survey schedule.”

While the submission does not identify particular trees that have been omitted from the assessment, it is understood that it is referring to a tree that is located close to the boundary wall on Terenure Road East at the easter side of the property as indicated in the streetview image below.



Figure 3.114.1 Streetview image of trees at boundary to 59 Terenure Road East

It is noted, as set out in Section 1.2 Methodology of the Arboricultural Impact Assessment Report, that trees with diameters of less than 75mm were not included in the survey. This tree had been captured in the topographical survey but was omitted in error from the survey.

While this was not captured in the Arboricultural Impact Assessment Report or on the Landscape General Arrangement Drawings, the planned removal of this tree was identified in the Proposed Surface Water Drainage Works drawings included in Volume 3 of the EIAR as presented below.

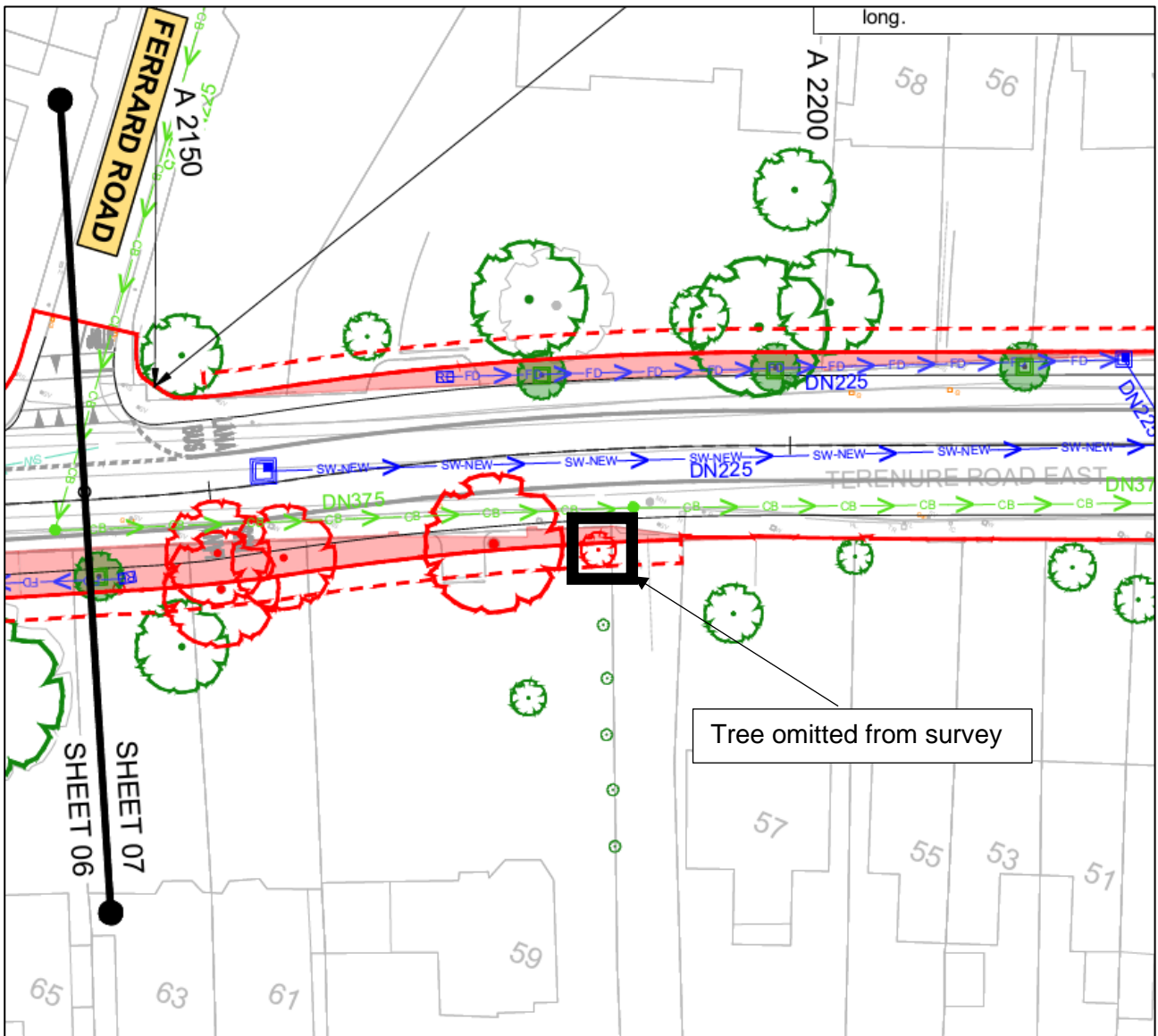


Figure 3.114.2 Extract from Proposed Surface Water Drainage Works drawings (Sheet 7)

It is important to note that the impact assessment of the Proposed Scheme on trees has included the loss of the tree noted and that the number of trees to be removed across the scheme (169 trees) includes this particular tree. As such the assessment presented in the EIAR remains valid.

17.4.3.1.3 of Chapter 17 Landscape and Visual of Volume 2 of the EIAR sets out the assessment of the impact on townscape/streetscape during the construction stage.

*The baseline townscape is of **very high sensitivity** and the Proposed Scheme involves the reconstruction and resurfacing of the roads, footpaths, and cycle track pavements. New kerbs will also be provided following the realignment of the existing kerb lines. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new road lighting, new street furniture (rubbish bins, seats, lighting, benches, planters, bollards, cycle racks, bus stop (including shelters and information displays etc.)) and landscape works. Although the design of the schemes has sought as far as practicable to limit impacts on private properties and trees, the works will involve acquisition from several residential properties with associated removal of boundaries, trees and other plantings. There will be a substantial impact on the streetscape of Terenure Road East from the loss of several prominent specimen trees. These element of works will result in considerable changes along the Terenure to Rathgar section of the Proposed Scheme, but other sections of the scheme will involve relatively modest changes. The construction works will not alter the overall townscape character along this section of the Proposed Scheme, however, the works will detract from the streetscape character and amenity, particularly between Terenure and Rathgar. The magnitude of change in the baseline environment is **high**.*

*The potential townscape / streetscape impact of the Construction Phase is assessed to be **Negative, Very Significant and Temporary / Short-Term.***

Section 17.4.4.1.3 of Chapter 17 sets out the assessment of the impact on townscape/streetscape during the operational stage.

The sensitivity of this section is very high. The Operational Phase of the Proposed Scheme involves substantial changes along the corridor of the Proposed Scheme between Terenure and Rathgar. Although land take has been minimised through design iteration, Terenure Road East will be widened in parts which will require permanent land acquisition from sections of residential properties, some of which are protected structures, and others which have mature trees that are prominent features of the streetscape. There will be a change to the alignment of historic boundary features and loss of several prominent mature garden trees which are located on the edge of the street. There will be provision of several new street trees along Terenure Road which over time will neutralise the negative effects associated with loss of trees removed during the Construction Phase.

There will be a substantial improvement of the junctions to each end of Terenure Road East; a new paving scheme will be provided to the junctions including high-quality concrete paving to active frontages, stone / concrete sett paving to pedestrian crossings, sett paving to formalised parking bays, as well as a narrowing of crossing distances to reduce crossing times and allow removal of detracting features such as pedestrian guardrails and traffic bollards. There will also be tree planting and some new ornamental planting areas provided.

*The Operational Phase will not alter the overall townscape character of this section but will result in both substantial localised negative and positive changes to the streetscape character. Despite the adverse impacts on trees and properties there will be a substantial localised improvement in some areas of streetscape and the effect across the overall section will become positive over the long-term as proposed planting matures. The magnitude of change in the baseline environment is **medium / high.***

*The townscape / streetscape impact of the Operational Phase is assessed to be **Negative, Significant and Short-Term** becoming **Positive, Moderate and Long-Term.***

As noted in section 17.5.2.1 Review of Photomontages of Chapter 17, photomontages have been prepared from key or illustrative viewpoints to give an indication of changes and potential effects resulting from the Proposed Scheme during the Operational Phase after the implementation of the scheme. The proposed views are shown with proposed planting at approximately 10 – 15 years post completion of the Construction Phase. This below text describes the Proposed Scheme changes as illustrated in the photomontage. The Photomontages are as included in Figure 17.2 in Volume 3 of the EIAR. Figure 3.114.4 shows the proposed view from Terenure Road East at Ferrard Road. Section 17.5.2.1.10 states:

The primary change is the widening of the road corridor, land take from residential properties on the far (south) side of the road, with setting back and reinstatement of boundaries and removal of the large mature beech tree and other trees in the adjacent garden. There is a notable reduction in visual amenity of the view.



Figure 3.114.3 View 10 Existing: Road East at Ferrard Road looking east



Figure 3.114.4 View 10 Photomontage as Proposed: Terenure Road East at Ferrard Road looking east

The submission refers to an evergreen oak tree and 4 semi mature hornbeam trees which would be affected by the Proposed Scheme. However, only two trees are identified for removal within this property. With respect to further trees could be impacted as a result of construction works, Section 17.5.1 of the EIAR states:

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*
- New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.*
- Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*
- Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted.

Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

A detailed response to concerns around the removal of trees generally on Terenure Road East is presented in Section 2.4.3.

2. Traffic data out of date due to Covid

A detailed response to this item is presented in Section 2.1.1.

3. Section 51 and CPO Application should not be made concurrently

It was entirely appropriate and proper for the NTA to make (i) an application to the Board for confirmation of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme Compulsory Purchase Order 2023 (the "CPO") and (ii) an application to the Board for approval of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (the "Proposed Scheme") under section 51 of the Roads Act 1993 (as amended) (the "Roads Act").

As the Board will be aware, section 51(7)(b) of the Roads Act provides as follows:

"(7) (b) Where an application for approval under this section [being section 51 of the Roads Act 1993 (as amended) which is what has occurred here in relation to the Proposed Scheme] relates to a proposed road development, and

- i. a scheme submitted to the Minister [now An Bord Pleanála] for approval under section 49, or*
- ii. an application submitted to the Minister [now An Bord Pleanála] for a bridge order under the Act of 1946, or*
- iii. a compulsory purchase order submitted to the Minister [now An Bord Pleanála] for confirmation [which is what has occurred here with this CPO],*

*relate wholly or partly to the same proposed road development, the Minister [now An Bord Pleanála] **shall** make a decision on such approval and on the approval of such scheme or the making of such bridge order or the confirmation of such compulsory purchase order **at the same time.**" (emphasis added)*

As the NTA's application for approval of the Proposed Scheme under section 51 of the Roads Act and the CPO submitted to the Board for confirmation "*relate wholly or partly to the same proposed road development*", the Board is therefore statutorily required to make its decisions at the same time. Therefore, it is not open to the Board to accede to the request made on behalf of the objector to first make a decision in relation to the application for approval of the Proposed Scheme under section 51.

Further, there are very many practical reasons including in relation to the efficient use of the decision maker's resources as to why it is entirely appropriate to deal with the section 51 application and the related application for confirmation of the CPO together. Indeed, this is also in ease of those who may wish to make an objection and/or submission both in writing and/or at any oral hearing that may be held in relation to the section 51 application and the application for confirmation of the CPO.

4. NTA has not demonstrated need for the scheme and the CPO

Need for the Scheme

Chapter 2 on Volume 3 of the EIAR presents in detail the need for the Proposed Scheme. Section 2.1 summarise this.

Sustainable transport infrastructure assists in creating more sustainable communities and healthier places while also stimulating our economic development. It contributes to enhanced health and well-being when delivered effectively.

The key radial traffic routes into and out of Dublin City Centre are characterised by poor bus and cycle infrastructure in places. Effective and reliable bus priority depends on a combination of continuous bus lanes and signal control priority at pinch-points and junctions. Currently bus lanes are available for 30% of Templeogue / Rathfarnham to City Centre, with signal control priority for buses provided over 2% of the Proposed Scheme. Cyclists must typically share space on bus lanes or general traffic lanes with only 15% of the route providing segregated cycle tracks.

Furthermore, there are key sections of the current bus lanes that are not operational on a 24-hour basis in addition to being shared with both formal and informal parking facilities and cyclists which compromises the reliability and effectiveness of the bus services in these areas.

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million. This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Without intervention, traffic congestion will lead to longer and less reliable bus journeys throughout the region and will affect the quality of people's lives. The Proposed Scheme is needed in order to enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region. The objectives of the Proposed Scheme are to:

- Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movements over general traffic movements;
- Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;
- Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;
- Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;
- Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and
- Ensure that the public realm is carefully considered in the design and development of transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

The objectives outlined above relating to enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimisation of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.

The delivery of the Proposed Scheme is supported by International, European Union, National, Regional and Local strategies, policies and plans. The key policy and planning documents are described in Section 2.3, including the manner in which the need for the Proposed Scheme is supported by the relevant policies and objectives.

Finally, Section 2.4 describes the benefits that will accrue from the provision of the Proposed Scheme.

Investments in high quality public transport infrastructure and systems have been proven to result in significant modal shift. Indeed, in Dublin, the Canal Cordon Report (NTA 2019a) outlined that in 2019 (prior to COVID-19 restrictions) travel by sustainable modes accounted for 72% of all trips into Dublin City, compared to 59% in 2010. This positive improvement in sustainable mode uptake was facilitated by investment in walking, cycling and bus infrastructure, Luas Cross City and the re-opening of the Phoenix Park Tunnel in addition to investments in systems such as Leap Card and Real Time Passenger Information.

The COVID-19 pandemic brought about a short-term change in travel patterns in the Greater Dublin Area (which led, for example, to fewer people using public transport and more people working from home). Travel demand and patterns of travel have now started to return to pre-pandemic levels and are anticipated to grow in line with population growth. The impacts on travel demand and patterns of travel are still dependent on the quality of the transport system, in particular the reliability of a bus service that is not constrained by general traffic congestion.

Further detail on the need for the Proposed Scheme is presented in Chapter 2.

Need for the CPO and Consideration of Alternatives

Chapter 3 of EIAR Volume 2 provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme.

1. **Feasibility and Options Reports**, which were associated with the Proposed Scheme (Rathfarnham to City Centre Core Bus Corridor (CBC) Feasibility Study and Options Assessment Report and Terenure to Tallaght CBC Feasibility Study and Options Assessment Report), were prepared in 2017 and set out the initial route options and concluded with the identification of the Emerging Preferred Route;
2. A first round of non-statutory **Public Consultation** was undertaken on the Emerging Preferred Route from 23 January 2019 to 30 April 2019;
3. Development of **Draft Preferred Route Option** (April 2019 to March 2020). Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered;
4. A second round of non-statutory **Public Consultation** was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year;
5. Further development of an updated **Draft Preferred Route Option** was undertaken subsequent to the second round of public consultation, which took account of submissions received, continuing stakeholder engagement and additional design information;
6. A third round of non-statutory **Public Consultation** was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020; and
7. Finalisation of the **Preferred Route Option**. Informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information, the Preferred Route Option, being the Proposed Scheme, was finalised.

Alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme, such as optimising the road layout in constrained locations including Rathfarnham Road, Rathgar Road, Rathmines Road Lower and Templeogue Road. The iterative development of the Proposed Scheme has also been informed by a review of feedback and new information received during each stage of public consultation and as data, such as topographical surveys, transport and environmental information was collected and assessed. In addition, the potential for climate impact was considered in all phases of the design process for the Proposed Scheme. As the design progressed climate was indirectly affected in a positive way by refining the design at each stage through reducing the physical footprint of the scheme coupled with the inclusion of technological bus priority measures.

Key environmental aspects have been considered during the examination of reasonable alternatives in the development of the Preferred Route Option for the Proposed Scheme. Environmental specialists have been involved in the iteration of key aspects of the Proposed Scheme with the engineering design team.

The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route.

- Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
- Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Following completion of Stage 1 initial appraisal, the remaining reasonable alternative options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

There were seven (CB1 to CB7) viable route options for Section 2 of the Rathfarnham to City Centre Corridor (Rathfarnham Road – Terenure Road East – Rathgar Road – Rathmines Road Lower) were taken forward for assessment and further refinement, these are detailed in section 3.3.2.2.2 of the Chapter 3 of the EIAR and illustrated in Image 3.13 (reproduced below).

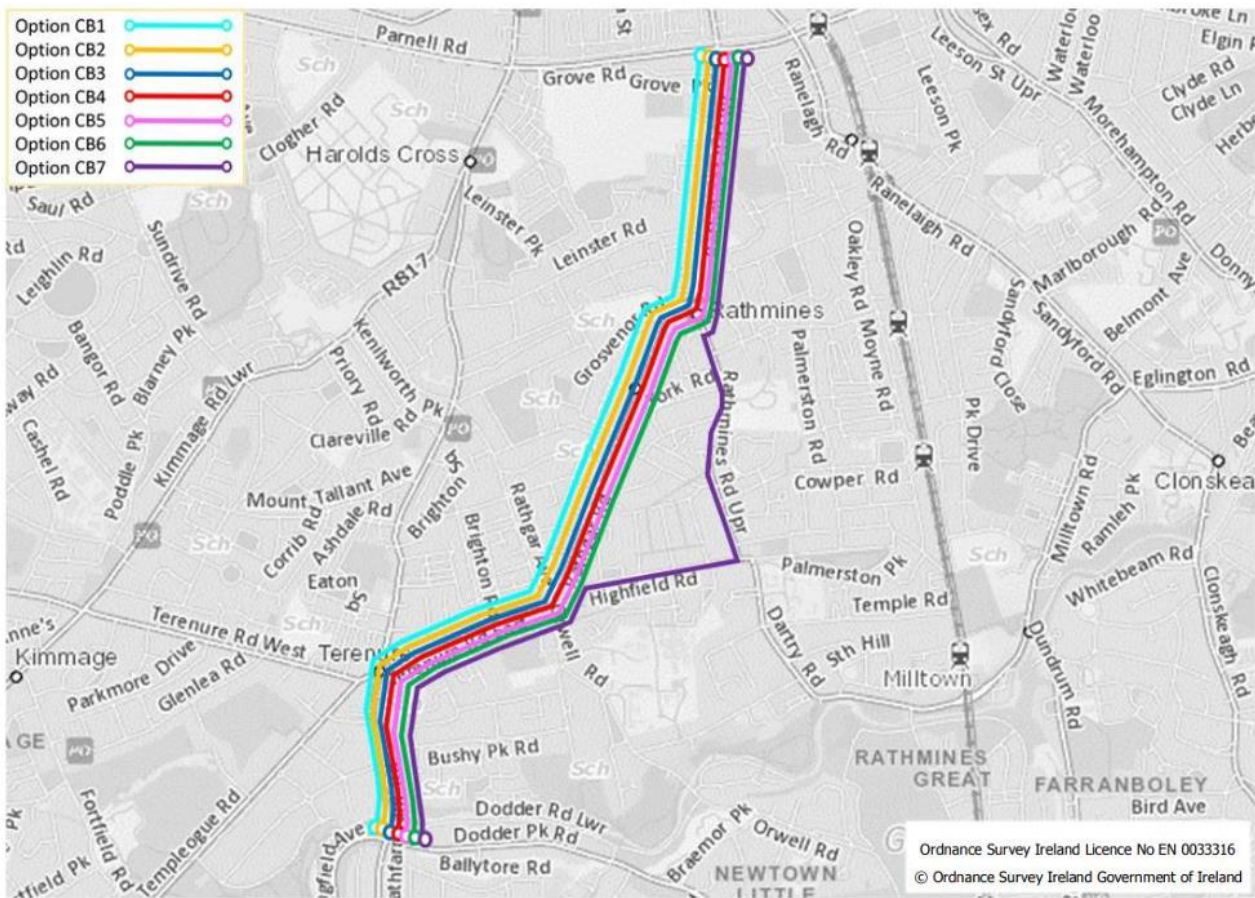


Image 3.13: Section 2 Route Options extracted from 'Rathfarnham to City Core Bus Corridor CBC Feasibility Study and Options Assessment Report'

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above.

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above. One of these areas was the section between Terenure Village and Rathgar (TVR).

As set out in Section 3.3.2.2.1, there were eight scheme sub-options (TVR1 to TVR8) considered for the section along Rathfarnham Road and Terenure Road East to Rathgar Village which are discussed below.

- *Sub-option TVR1: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided and a short section on Rathfarnham Road between Pearse Bridge and Bushy Park Road junction, where an outbound bus lane would not be provided. Segregated cycle facilities would be provided on Bushy Park Road and Orwell Road;*
- *Sub-option TVR2: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East. This would require the removal of one of the general traffic lanes in the outbound direction. A 3m wide two-way cycle bridge would be provided on the western side of Pearse bridge. Segregated cycle facilities would be provided on Bushy Park Road and Orwell Road;*

- *Sub-option TVR3: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);*
- *Sub-option TVR4: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the west of Pearse Bridge) is proposed, to provide a parallel cycle route from Brookvale Downs to Rathdown Park. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;*
- *Sub-option TVR5: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the east of Pearse Bridge) is proposed to provide a parallel cycle route from the Dodder Greenway to Riversdale Avenue. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;*
- *Sub-option TVR6: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. A cycle bridge across the River Dodder (to the east of Pearse Bridge) is proposed to provide a parallel cycle route from the Dodder Greenway to Laurelton. Segregated cycle facilities would also be provided in both directions on Bushy Park Road, Zion Road and Orwell Road;*
- *Sub-option TVR7: This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East, with the exception of a 100m section at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided on a route via the Dodder Greenway, through Orwell Park and along Orwell Road to Rathgar Village; and*
- *Sub-option TVR8: This route sub-option would include the provision of continuous bus priority in both directions but with different routes for the northbound (Bushy Park Road/Orwell Road) and southbound (Terenure Road/Rathfarnham Road), with the exception of the section on Rathfarnham Road from Westbourne Road junction to Bushy Park Road junction where bus priority signalling is proposed in the outbound direction at this pinch point. Segregated cycle facilities would also be split in terms of direction. These facilities would be provided in the opposite direction to the bus facilities on Bushy Park Road/Terenure Road East. There is also a 100m section of Terenure Road East at Terenure Cross where the inbound cycle lane would not be provided*

A multi-criteria assessment (MCA) was carried out within each of these two sub-sections, as detailed in section 3.3.2.2.2.1 of Chapter 3.

Following the MCA, Stage 2- Route Options Assessment concluded that sub-option TVR3 was the preferred option for the sub-section along Rathfarnham Road and Terenure Road East to Rathgar Village, stating that:

Sub-option TVR3: *This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);*

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3 was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Following an MCA, sub-option TVR3 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

Following the completion of the public consultation process in relation to the Emerging Preferred Route, various amendments were made to the scheme proposals to address a number of the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, and/or arising from the availability of additional information. These amendments were incorporated into the designs and informed a draft Preferred Route Option. Where substantial revisions had been made to the design since the publication of the Emerging Preferred Route, options were assessed using MCA to determine the Preferred Route Option. The MCA assessed any newly developed options against the previously identified Emerging Preferred Route. The methodology and MCA used were consistent with that carried out during the initial route optioneering work (including consideration of the relevant environmental aspects), which informed the identification of the Emerging Preferred Route.

Section 3.4.1.1.3 sets out the alternative options considered in the Terenure to Grosvenor Road section

Option RG1: Option RG1 would provide a general traffic lane in each direction along the entirety of this route section, as well as dedicated bus lanes and cycle tracks along the CBC for the majority of the route section. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey;

Option RG2: Option RG2 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes in each direction. Under this option, bus lanes would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signal controlled priority. No cycle facilities would be provided on Terenure Road East under this option. Additional cycle facilities would be provided on Terenure Road North and Harold's Cross Road, linking to the Kimmage to City Centre CBC, and providing an alternative route for cyclists travelling towards the city which would otherwise use Terenure Road East. Additional secondary cycle facilities would also be provided on Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road, linking back to the CBC at Rathgar Village to provide some level of service for east-west cyclists. A one-way inbound traffic arrangement would be provided on Rathgar Road, with outbound traffic diverted to alternative routes. 1.5m wide cycle tracks would be provided along Rathgar Road;

Option RG3: Option RG3 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes and cycle tracks in each direction. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. A one-way inbound traffic arrangement would be provided on Rathgar Road, with outbound traffic diverted to alternative routes. 2.0m wide cycle tracks would be provided along Rathgar Road;

Option RG4: Option RG4 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes in each direction. Under this option, bus lanes would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signal controlled priority. No cycle facilities would be provided on Terenure Road East under this option. Additional cycle facilities would be provided on Terenure Road North and Harold's Cross Road, linking to the Kimmage to City Centre CBC, and providing an alternative route for cyclists travelling towards the city which would otherwise use Terenure Road East. Additional cycle facilities would also be provided on Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road, linking back to the CBC at Rathgar Village to provide some level of service for east-west cyclists. A two-way general traffic arrangement would be provided on Rathgar Road. An inbound bus lane would be provided between Highfield Road and Frankfort Avenue, while north of this point inbound bus priority would be managed through signal controlled bus priority. An outbound bus lane would be provided between Grosvenor Road and Frankfort Avenue, while south of this point outbound bus priority would be managed through signal controlled bus priority. 1.5m wide cycle tracks would be provided along Rathgar Road; and

Option RG5: Option RG5 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes and cycle tracks in each direction. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. A two-way general traffic arrangement would be provided on Rathgar Road. An inbound bus lane would be provided between Highfield Road and Frankfort Avenue, while north of this point inbound bus priority would be managed through signal controlled bus priority. An outbound bus lane would be provided between Grosvenor Road and Frankfort Avenue, while south of this point outbound bus priority would be managed through signal controlled bus priority. 2.0m wide cycle tracks would be provided along Rathgar Road.

Option RG2 – the provision of bus lanes and general traffic lanes on Terenure Road East, a one-way outbound regime on Rathgar Road and alternative cycle facilities on Terenure Road North/Harold’s Cross Road and Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the majority of this section and would minimise the impact the curtilage of protected structures and private gardens and trees on Terenure Road East and Rathgar Road through the provision of alternative cycle routes. This option would provide bus priority, and while cycle facilities would not be provided along a section of the CBC, the proposal included an attractive and safe alternative.

An option of a bus gate along Terenure Road East between Rathfarnham Road and Rathgar Road was also considered. However as stated in section 3.4.1.1.3:

This option was not considered feasible due to the orbital traffic movement function of Terenure Road East and the lack of an alternative route for east-west traffic movements. In addition, a bus gate at this location was not considered feasible in combination with scheme proposals for a bus gate within Rathmines Village, which is considered a more appropriate location given the inability to introduce other bus priority measures on this road section.

Chapter 3 demonstrates that significant alternative options were considered along Terenure Road East over the course of the design process.

In terms of the need for the CPO, at the specific area outside 59 Terenure Road East, the proposed cross-section and subsequent land acquisition have been considered and deemed necessary to facilitate the optimum scheme as presented in EIAR Volume 3 Chapter 4 Proposed Scheme Description and as derived from the comprehensive optioneering undertaken as part of the scheme development.

5. Existing signal-controlled priority sufficient

A detailed response to this item is presented in Section 2.4.3.

6. Inadequate Consultation

A detailed response to this item is presented in Section 2.1.1.

7. Cost Benefit Analysis is Required

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA’s BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government.”

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- *As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*
- *At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award*

Refer to the BusConnects Business case website for further detail and links:

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

8. Implementation of other BusConnects measures first.

A detailed response to this item is presented in Section 2.1.1.

9. Metro is more suitable for this corridor.

A detailed response to this item is presented in Section 2.1.1.

10. Impact on Heritage Properties on Terenure Road East

A detailed response to this item is presented in Section 2.4.3

11. Congestion at Terenure Cross due to proposed changes

The submission raised a concern with the proposed layout at the Terenure Cross junction, in particular the introduction of a right turn for buses from Rathfarnham Road to Terenure Road East noting that this would create congestion at the junction.

Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets traffic management measures which will be implemented on the route to facilitate the Proposed Scheme. An extract from this table is presented below.

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathfarnham Road/Castleside Drive/Main Street Junction	Bus Priority Signals at Rathfarnham Road/Castleside Drive/Main Street Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Dodder Park Road Junction	Bus Priority Signals at Rathfarnham Road/Dodder Park Road Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Rathdown Park Junction	Inbound Bus Priority Signal at Rathfarnham Road/Rathdown Park	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Terenure Road East/Terenure Road West Junction	Right turn for buses from Rathfarnham Road to Terenure Road East introduced through bus priority signal	To allow for bus movements in this direction as per the A spine in the New Dublin Area Bus Network	Buses allowed to turn right from Rathfarnham Road onto Terenure Road East.
Terenure Road East/Greenmount Road Junction	No Right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
Rathgar Road/Highfield Road Junction	Inbound Bus Priority Signal	To allow for bus priority on Rathgar Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.

Figure 3.114.5 Extract from Table 4.25 of the Preliminary Design Report

As can be seen in the Junction System Design drawings included in Volume 3 of the EIAR, it is proposed that buses turning right from Rathfarnham Road would do so in its own stage to remove any potential safety issues. An extract from the staging diagrams is presented below with the relevant stage highlighted.

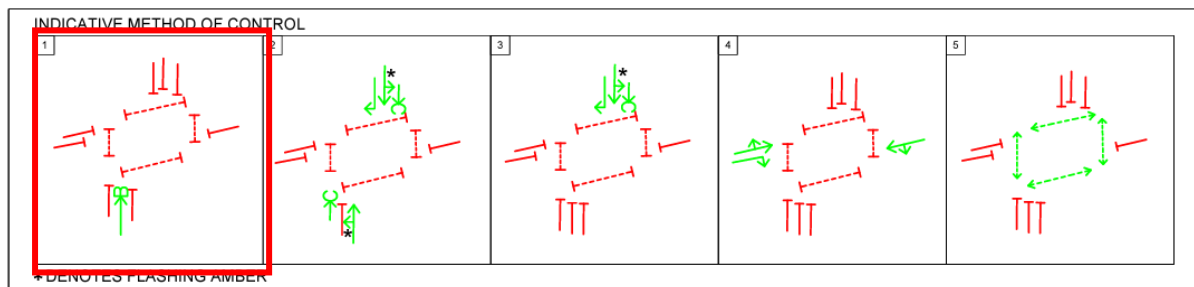


Figure 3.114.6 Extract from Junction Systems Design drawings included in EIAR Volume 3 (Sheet 8)

The Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 presents a LinSig analysis for all major junctions along the Proposed Scheme with the assessment for Terenure Cross presented on page 34. This illustrates that the junction would be operating at capacity in both the morning and evening peaks. While the junction may be congested during the peak periods, it will be safer for pedestrians and cyclists through the introduction of shorter, more direct pedestrian crossings as well as upgrading crossings to toucan crossings. The proposed arrangement will also ensure that buses have priority through the junction.

12. Impact on Businesses in Terenure and Rathgar due to Loss of Parking/Loading

A detailed response to this item is presented in Section 2.4.3

13. Bus Gate Hours of Operation

A detailed response to this item is presented in Section 2.1.1

14. Proposed Cycle Facilities are Insufficient

One of the objectives of the Proposed Scheme outlined in Chapter 1, Introduction of Volume 2 of the EIAR is to *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.*

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In the vicinity of the property to which this submission relates, the alternatives considered are detailed in section 3.3.2.1. A number of options were considered in this area as outlined in response to Item (iii). On balance the Proposed Scheme was selected as the preferred option which provided some degree of cycle facility through the extension of bus lanes along Terenure Road East while reducing the amount of land take envisaged as part of the Emerging Preferred Route. It is noted that in this area the speed limit has been reduced to 30km/h.

It should be noted that the assessment of routes and options was an iterative process and, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project's objectives. This approach was adopted to balance the necessity of the development with the preservation of the interests and rights of property owners in the area.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.114.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

The NTA acknowledges the comments raised in relation to enforcement of cycle tracks. Enforcement of road traffic laws is a matter for An Garda Síochána.

15. Traffic Impact as a result of Traffic Management Measures

A detailed response in relation to specific traffic impacts in the Terenure and Rathgar area is presented in Section 2.4.3.

A detailed response in relation to specific traffic impacts in the Rathmines area is presented in Section 2.5.3.

16. Cumulative Impact of Scheme with Adjacent BusConnects Schemes

A detailed response to this item is presented in Section 2.1.1

3.115115 – Grove Park Residents Group

3.115.1 Submission – Rathmines

The submission raised the following issues:

1. Access to amenities
2. Negative impact on businesses
3. Negative impact on residents
4. Lack of consultation

3.115.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.116116 – Helena McLaughlin

3.116.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increase congestion on Highfield Road
 - b. Traffic diverted to Rathmines Road Upper and Highfield Road
2. Noise and air pollution
3. Architectural and cultural heritage
 - a. Walls, railings and gates on Terenure Road East
4. Biodiversity
 - a. Destruction of trees
5. Character of area
6. Insufficient cost-benefit analysis

3.116.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.117117 – I Love Terenure 2030

3.117.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Impacts outweigh the benefits of the Proposed Scheme
2. Minimal Journey Time improvements
3. Negative effect on Character of villages
4. Negative effect on businesses
 - a. loss of parking/loading
5. Lack of Demand Analysis
6. Clarity on the number of buses proposed
7. Gap in the City Centre
8. No assessment of cumulative impact of 12 corridors
9. Templeogue Bus Gate hours of operation
10. Alternative options
 - a. Metro
11. Traffic
 - a. Traffic Management Measures

- b. Insufficient traffic modelling
 - c. Increased congestion
 - d. Increased volumes
 - e. Increased traffic on residential roads
12. Pre-COVID traffic volumes used in analysis
 13. Changes in working patterns
 14. Turn bans
 15. Air pollution
 16. Bus Stops
 - a. Removal of bus stops
 - b. Relocation
 17. Access to local amenities
 18. Elderly and Disability Access
 19. Vulnerable Road User Safety
 20. Main Car Park in Terenure to be used as a construction compound
 21. Request to prepare:
 - a. Transport Modelling Report
 - b. Cost Estimate
 - c. Economic Appraisal
 - d. Multi Criteria Analysis
 - e. Study of Technical Feasibility
 22. Inadequate Public Consultation
 23. CPO on Terenure Road East
 24. Biodiversity
 - a. Destruction of trees
 25. Architectural and cultural heritage
 26. Request Oral hearing

3.117.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In relation to Issue 20, the submission states that the main car park in the village is to be used as a Construction Compound, therefore reducing the capacity for trade function and not allowing access to the HSC Medical Centre and Evergreen Community Centre.

Section 5.7.1 of Chapter 5 of the EIAR outlines the location of proposed Construction Compound TR2. The following is noted:

“Construction Compound TR2 will be located north-west of Terenure Road North, between Eaton Road and Eagle Hill Avenue, as shown in Image 5.2. The area of Construction Compound TR2 is approximately 110m².

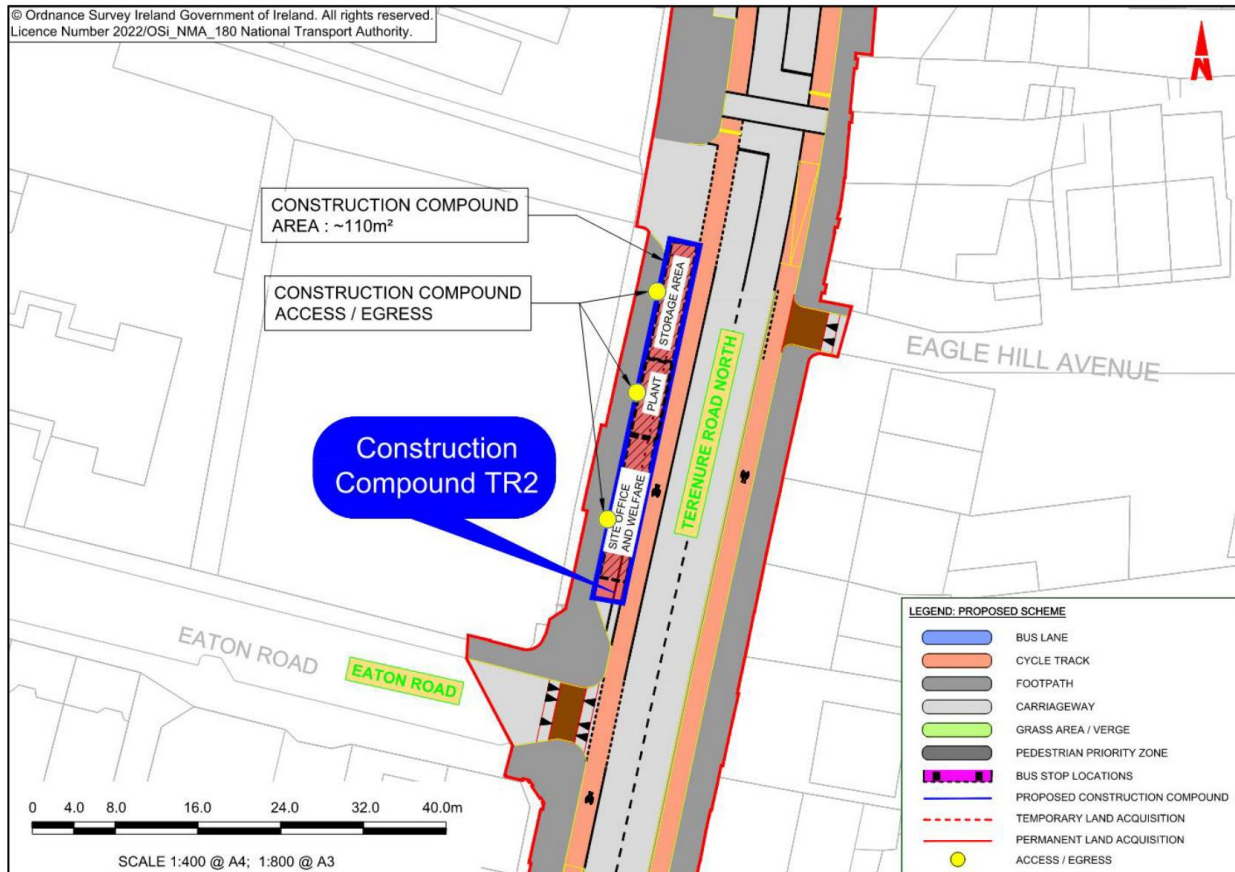


Image 5.2: Location and Extent of Construction Compound TR2

Figure 3.117.1 Extract from EIAR Chapter 5 showing location of Construction Compound TR2

The compound is proposed within existing car parking spaces and taxi rank spaces. It is not proposed to alter the existing car park to the west of the proposed compound location, nor the access to it.

In relation to Issue 20, the following is noted

- A Transport Modelling Report has been prepared for the Proposed Scheme and is included in Appendix A6.2 of the EIAR
- All major publicly funded infrastructure projects, such as the BusConnects Infrastructure Schemes are subject to the Public Spending Code (gov.ie - [The Public Spending Code \(www.gov.ie\)](http://www.gov.ie)) which requires the production of appropriate economic appraisals and business cases. The Preliminary Business Case for BusConnects schemes is set out at the following link. The document sets out the keys costs and benefits of the schemes.

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA's BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2).

This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government.”

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- *As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*

At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award

- c) Refer to response to b) above.
- d) Detailed Multi Criteria Analysis has been carried out to inform the Preferred Route Option and is documented in the Preferred Route Option Report contained in the Supplementary Information of the application.
- e) Detailed studies of the technical feasibility of the Proposed Scheme have been carried out and are presented in the Tallaght to Terenure Core Bus Corridor Feasibility Study and Options Assessment Report and the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment Report contained in Appendix I1 and I2 of the Preferred Route Option Report contained in the Supplementary Information of the application.

3.118118 – Involve Autism D6/D6W and Surrounds

3.118.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Compulsory purchase order
 - a. negative impact on children with autism
2. Impact to ecology
3. Road widening of Grange Road
4. insufficient hydrology and hydrogeology assessments
5. Impact on Glin River
6. No mention of the Whitechurch stream in the hydrological assessment
7. Loss of public green space
 - a. Amenity Value
 - b. Social Impact
8. Biodiversity
 - a. Destruction of trees
 - b. Flora and Fauna
9. Noise and air pollution

10. Alternative options

- a. Bus Corridor should terminate at the end of the Rathfarnham Village bypass (by the Butterfield Avenue junction)
- b. Priority bus signals

3.118.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.119119 – (AsIAm) Ireland’s National Autism Charity

3.119.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Compulsory purchase order
 - a. Negative impact on children with autism at Rathfarnham Castle woodland playground
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and Fauna
3. Noise and air pollution

3.119.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.120120 – Ivana Bacik TD

3.120.1 Submission – Rathfarnham

The submission raised the following issues:

1. Support the proposal scheme.
2. Alternative option
 - a. Metro
 - b. Light Rail
3. Proposed turn bans on Fortfield Road
4. Access to amenities
5. Construction stage impacts
 - a. Working hours
 - b. Noise pollution

6. Biodiversity in Rathfarnham Castle Park

- a. Destruction of trees
- b. Flora and Fauna

3.120.2 Response to submission

Detailed responses to the issue 1-4 and 6 have been provided in Section 2.1.1, 2.2.3, 2.3.3 and 2.4.3 of this report.

In terms of Item 5, as part of the EIAR, a CEMP (Construction Environmental Management Plan) has been prepared for the Proposed Scheme and is included as Appendix A5.1 in Volume 4 of the EIAR. The purpose of the CEMP is to set out the management framework for the delivery of the proposed construction works and to illustrate how the Proposed Scheme could be delivered in a logical, sensible, and safe sequence with the incorporation of specific Environmental Commitments. The CEMP will be used by the appointed contractor, and the appointed contractor personnel, as a guidance document for the Construction Phase of the Proposed Scheme, outlining procedures for the delivery of environmental mitigation measures and for addressing general day-to-day environmental issues that could arise during the Construction Phase of the Proposed Scheme.

The CEMP will be updated by the NTA prior to finalising the Construction Contract documents for tender, so as to include any additional measures required pursuant to conditions attached to An Bord Pleanála's decision. The CEMP comprises the construction mitigation measures, which are set out in the EIAR and NIS. All of the measures set out in this CEMP will be implemented in full by the appointed contractor and its finalisation will not affect the robustness and adequacy of the information presented and relied upon in the EIAR and NIS.

A CTMP (Construction Traffic Management Plan) has been prepared to demonstrate the manner in which the interface between the public and construction-related traffic will be managed and how vehicular movement will be controlled. It will be a condition of the Employer's Requirements that the successful appointed contractor, immediately following appointment, must detail in the CTMP the manner in which it is intended to effectively implement all the applicable mitigation measures identified in this EIAR and any additional measures required pursuant to conditions imposed by An Bord Pleanála, should they grant approval. Further details on the assessment of construction traffic, and traffic related mitigation measures are provided in Chapter 6 (Traffic & Transport) of this EIAR.

In terms of working hours, section 5.10.3 of Chapter 5 Construction of Volume 2 of the EIAR sets out that general construction working hours on weekdays are between 07:00 and 23:00, the planning and management of activities will take due consideration of sensitive receptors, in particular nearby residential areas.

Section 5.10.3 'Working Hours' states: *"It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16:30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under day-time / evening-time conditions. The planning of such works will take due consideration of sensitive receptors, in particular any nearby residential areas."*

3.121121 – Jack Thornton

3.121.1 Submission – Terenure and Rathgar

The submission consists of a report prepared by Kieran O'Malley Ltd. In 2019 and raised the following issues:

1. Compulsory purchase order
2. Road widening
3. Biodiversity
 - a. Destruction of trees

- b. Flora and Fauna
- 4. Architectural and cultural heritage
- 5. Consideration of alternative Route via Terenure Road North and Harold's Cross Road
- 6. Character of area
- 7. No assessment of cumulative impact of 12 corridors
- 8. Proposed bus network
 - a. Discontinuity of bus network and bus priority provided along certain sections
- 9. Proposed cycle network
 - a. Safety of vulnerable cyclist due to gaps in segregated cycling infrastructure
- 10. Proposed footpaths
 - a. Narrow widths, uneven surface and many obstructions
 - b. safety concerns for those with mobility impairments
- 11. Traffic
 - a. Congestion
- 12. Cost estimates
- 13. Air quality, noise and vibration
- 14. Protected Structures
- 15. Safety of vulnerable pedestrians
- 16. Removal of street parking
- 17. Negative effect on businesses
 - a. loss of parking/loading
- 18. Alternative options
 - a. Primary cycle route from Rathfarnham to Terenure passing through Rathgar Village
 - b. Secondary cycle route at Terenure via Terenure Road North at Rathgar via Highfield Road and Rathmines Road Upper

3.121.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

It is noted that the report prepared by Kiaran O'Malley Ltd. Refers to a prior iteration of the Proposed Scheme, and therefore a number of specific elements referred to, e.g. proposed land acquisition from properties on Rathgar Road, no longer feature as part of the Proposed Scheme as submitted.

3.122122 – Jacqueline Murphy

3.122.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed Bus gate
 - a. Access to Church of Mary Immaculate, Refuge of Sinners

3.122.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.123123 – James & Cora McEntee

3.123.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic Impact

3.123.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.124124 – James Dwan

3.124.1 Submission – Whole Scheme

The submission raised the following issues:

1. Benefits of the proposed Scheme do not justify the cost and environmental impacts
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Whitechurch Stream not considered
4. Traffic
 - a. Traffic displaced to residential streets
 - b. Insufficient traffic modelling
5. Air pollution
6. Access to amenities including Bushy Park
7. No assessment of cumulative impact of 12 corridor
8. Impact on visibility/perceived safety from proposed LED lighting
9. Lack of enhanced pedestrian facilities
10. Cycle facilities
 - a. Lack of continuity
 - b. Insufficient width
11. Alternative options
 - a. Metro

- b. Congestion Charges
- 12. Turn bans
- 13. Proposed bus gate
 - a. Limit hours of operation
- 14. Lack of consultation
- 15. Request Oral Hearing
- 16. Bus stop
 - a. Removal of multiple bus stops
 - b. Relocation of bus stop 1159
- 17. Elderly and Disability Access
- 18. Access to St Luke's Hospital
- 19. Pre-COVID traffic volumes used in analysis.
- 20. Changes to work patterns due to the COVID-19 pandemic
- 21. Architectural and cultural heritage
 - a. Impact on heritage properties due to CPO
- 22. Negative impact on businesses

3.124.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 8, Section 12.4 of the Preliminary Design Report contained in the Supplementary Information outlines the design approach to Public Lighting. The following is noted:

"All new public lighting will be designed and installed in accordance with the specific lighting and electrical items set out the following National Standards and guides, including but not limited to:

- *Local Authority Guidance Specifications;*
- *EN 13201: 2014 Road Lighting (all sections);*
- *ET211:2003 'Code of Practice for Public Lighting Installations in Residential Areas';*
- *BS 5489-1 'Code of practice for the design of road lighting';*
- *TII Publications: Specification for Road Works, Series 1300 & 1400;*
- *TII Publications Standard Construction Details, Series 1300 & 1400;*
- *IS EN 40 – Lighting Columns;*
- *Institution of Lighting Professionals "GN01 Guidance Notes for Reduction of Obtrusive Light".*

All new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the 'Guidance notes for the Reduction of Light Pollution' issued by the Institution of Lighting Professionals (ILP)."

In line with these guidance documents, and industry best practice, LED lighting will be provided. The Proposed Scheme will provide sufficient lighting in all areas. The following is noted in Section 12.4.1 of the Preliminary Design Report:

"Where significant alterations are proposed to the existing carriageways, the preliminary street lighting design ensures that the current standard of public lighting is maintained or improved."

In relation to Issue 9, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

“Pedestrian Infrastructure: The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C / D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a Positive, Significant and Long-term effect in all four sections of the Proposed Scheme.”

In relation to Issue 10, the GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.124.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4% following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

3.125125 – James M. Bourke & Ilona de Burgh

3.125.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Existing bus priority signal on Terenure Road East is adequate
2. Impact to Heritage and Natural Environment on Terenure Road East

3. Pollution
4. Impact on structures

3.125.2 Response to submission

1. Existing bus priority signal on Terenure Road East is adequate

A detailed response to this item is presented in Section 2.4.3.

2. Impact on Heritage and Natural Environment on Terenure Road East

A detailed response to this item is presented in Section 2.4.3.

3. Pollution

EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality as a result of the Proposed Scheme are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme. In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios.*

There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value. However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Terenure Road East. In all cases, the significance of the modelled change in the annual mean NO₂, PM₁₀, PM_{2.5} during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

4. Impact on structures

Section 9.4.4.2 of EIAR Chapter 9 Noise and Vibration considers the operational vibration impact of the Proposed Scheme. *Analysis of traffic data for the Proposed Scheme indicates a reduction in overall AADT traffic flows along the core bus corridor. Reference to the monitoring results in Table 9.24 and Table 9.25 of Chapter 9 of the EIAR confirms that vibration levels associated with passing buses and other vehicular traffic at distances of 2.5 to 10m from the road edge are negligible in terms of human perception and building response. Vibration levels associated with a passing bus were recorded at 0.1mm/s PPV or less under the monitored scenarios. These values are below the normal range of perceptible human response to vibration and would not pose any significant impact.*

A review of the traffic data for the Proposed Scheme indicates that the maximum number of buses travelling inbound or outbound is 650 over the 16hr daytime period along the Proposed Scheme are along Camden Street. This value is slightly lower than bus numbers along this road during the Do Minimum scenario. Using this number and the highest VDV event measured during a bus pass at a reference distance of 5m from the road edge (0.0033 m/s^{1.75}), the daytime VDV_{b,day} value is calculated as 0.016 m/s^{1.75}. Reference to Table 9.18 confirms this value is orders of magnitude below those associated with a low probability of adverse comment. The overall impact is Neutral, Negligible and Long Term.

3.126126 – Jason Devine and others

3.126.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Object the proposed construction compound TR3
2. Noise and air pollution
3. enjoyment of home

3.126.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.127127 – Jean Murray

3.127.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Noise and air pollution at construction compound TR3
2. Loss of green space
3. Impact the quality of resident's life.

3.127.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.128128 – Jim Byrne

3.128.1 Submission – Whole Scheme

The submission raised the following issues:

1. Bus gates
 - a. Impact on access around Templeogue
 - b. Impact on access around Rathmines
 - c. Reduced hours of operation
2. Proposed turn bans
 - a. Turn ban from Cullenswood Road
3. Elderly and Disability Access
4. Traffic
 - a. Impact on Rathmines Road Upper

- b. Impact on Highfield Road
 - c. Impact on Villiers Road, Neville Road and Templemore Road
5. Negative impact on businesses

3.128.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3, 2.4.3 and 2.5.3 of this report.

In terms of traffic increases on Villiers Road, Neville Road and Templemore Avenue, it is noted that Diagrams 6.40 and 6.41 do not identify any increases in traffic along these roads as a result of the Proposed Scheme.

3.129129 – Jim O'Callaghan TD

3.129.1 Submission – Whole Scheme

The submission raised the following issues:

1. Cost-benefit assessment
2. Biodiversity
 - a. Destruction of trees
3. Additional traffic and emissions
4. Bus gates
 - a. Impact on access
5. Elderly and Disability Access
6. Compulsory purchase order
 - a. On Rathfarnham Road and Terenure Road East
7. Impact on character of Terenure, Rathgar and Rathmines.
8. Traffic
 - a. Increased traffic on Highfield Road
9. Request for oral hearing.
10. Unnecessary change providing no real gains to bus travel times.

3.129.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.130130 – Joan Kelly

3.130.1 Submission – Rathmines

The submission raised the following issues:

1. Support the Proposed Scheme

2. Bus gates
 - a. Access to Church of Mary Immaculate, Refuge of Sinners
3. Traffic management

3.130.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.131131 – Joe Davitt

3.131.1 Submission – Rathmines

The submission raised the following issues:

1. Removal of Parking
2. Loading bay
 - a. Additional bays required.
3. Traffic
 - a. Impact of Rathmines bus gate
 - b. Traffic Management Measures
 - c. Traffic for rat runs such as Richmond Hill and Leinster Road
4. Negative impact on businesses
5. Pre-COVID traffic volumes used in analysis.

3.131.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.132132 – John Gleeson and Christine Blessing

3.132.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Traffic impact on Victoria Road
 - b. Access to/from Rathgar
2. Biodiversity
 - a. Destruction of trees
3. Negative impact on businesses in Rathgar

3.132.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3, 2.4.3 and 2.5.3 of this report.

3.133133 – John Grant

3.133.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Reduced speed limit from Rathfarnham Road to City Centre
2. Wasdale Grove/Park and Victoria Road not suitable for cyclists

3.133.2 Response to submission

1. Reduced speed limit from Rathfarnham Road to City Centre

Section 4.5.2.1 of Chapter 4 the EIAR states:

It is proposed to introduce a 30 kph speed limit on Rathfarnham Road at this point due to the fact that inbound cyclists will be sharing the bus lane through this section. This 30 kph speed limit will continue from here to the City Centre, due to the presence of multiple urban villages along the route, as well as other sections where cyclists share the bus lane. This consistent speed limit is proposed to ensure legibility for road users along the route and to avoid frequent increases and decreases in speed limits.

While road safety is important to all road users, cyclists and pedestrians are amongst those who are the most at risk of sustaining injuries in accidents with the extent and severity of injuries directly linked to vehicle speed. Therefore, traffic speed reduction for all vehicles plays a crucial role in improving road safety on the city streets. Given the areas through which the scheme passes, in addition to some of the scheme proposals which require speed limit reductions (e.g. where cyclists share with vehicles on the road), it is appropriate to introduce speed limit reductions along this section of the scheme.

2. Wasdale Grove/Park and Victoria Road not suitable for cyclists

As set out in Chapter 4 of the EIAR:

It is also proposed to provide an alternative cycle facility consisting of cycle tracks in each direction along Terenure Road North and Harold's Cross Road, connecting to the Kimmage to City Centre Core Bus Corridor Scheme at Harold's Cross. An additional alternative cycle facility is proposed along Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road to provide a secondary east-west route for cyclists travelling between Rathfarnham Road and Rathgar Road.

Chapter 3 of the EIAR sets out the various options considered in the Rathfarnham, Terenure and Rathgar areas, with a particular focus on cycle options. Through this process, it was determined that on balance, it was not considered appropriate to further widen Terenure Road East to accommodate segregated cycle tracks. The options assessment identified that an option which provided a direct north-south facility along Harolds Cross Road/Terenure Road North, in combination with an offline quiet street through Wasdale Grove, Wasdale Park and Victoria Road accommodating east-west cyclists would best meet the objectives of the scheme. This cycle facility is proposed to provide an alternative for those who wish to travel east-west (or vice versa). Given the low volumes of traffic on these roads, in combination with low speeds enforced by the presence of existing traffic calming measures, a quiet street facility is considered an appropriate solution in this area.

3.134134 – John Lahart TD

3.134.1 Submission – Whole Scheme

The submission raised the following issues:

1. Compulsory purchase order on Rathfarnham Castle Park
2. Cost-benefit assessment
3. Traffic
 - a. Increased Congestion in Templeogue and environs
4. Air quality
5. Negative impact on businesses
6. No consideration of what happens buses in city centre.
7. Signalisation of Spawell junction
8. No assessment of cumulative impact of 12 corridors
9. Impact of bus gates and hours of operation
10. Access to amenities
11. Alternative options
 - a. Metro
 - b. Cashless fare payment
 - c. Replace bus gate to bus priority.
 - d. School buses

3.134.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.135135 – John Perham and Valerie Henderson

3.135.1 Submission – Templeogue Road

The submission raised the following issues:

1. Reduced quality of public transport
2. Biodiversity
 - a. Destruction of trees
3. Unnecessary change providing no real gains to bus travel times
4. Bus gates
 - a. Limit hours of operation
5. Elderly and Disability Access
6. Access to amenities

7. Alternative
 - a. Rail
8. Negative impact for ambulance to pass due to the narrow-proposed lane for car on Templeogue Village

3.135.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to Issue 5, as noted in section 4.6.5 Accessibility for Mobility Users of Chapter 4 of Volume 2 of the EIAR:

“The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure. In achieving this aim, the Proposed Scheme has been developed using the PDGB and in accordance with the principles of DMURS and Building for Everyone: A Universal Design Approach (NDA 2020).

The following non exhaustive list of relevant standards and guidelines have informed the approach to Universal Design in developing the Proposed Scheme:

- *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors (NTA 2020);*
- *Building for Everyone: A Universal Design Approach (NDA 2020);*
- *How Walkable is Your Town? (NDA 2015);*
- *Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland (NDA 2012);*
- *Best Practice Guidelines, Designing Accessible Environments. Irish Wheelchair Association (IWA) (IWA 2020).;*
- *UK DfT Inclusive Mobility (UK DfT 2005);*
- *UK DfT Guidance on the use of tactile paving surfaces (UK DfT 2007); and*
- *BS8300:2018 Volume 1 Design of an accessible and inclusive built environment. External Environment- code of practice (BSI 2012).*

The Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. An Accessibility Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken.

The Accessibility Audit provided a description of the key accessibility features and potential barriers to mobility impaired people based on the Universal Design standards of good practice. The Accessibility Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Accessibility Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has implemented the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes.”

As noted in section 4.2 Accessibility for Mobility Impaired Users of the Preliminary Design Report:

“The assessment of the existing street infrastructure and its ability to support access for disabled users have been based mainly on the Irish Wheelchair Association [IWA] ‘Best Practice Guidelines, Designing Accessible Environments’ and The National Disability Authority’s [NDA] ‘Building for Everyone: A Universal Design Approach’”.

3.136136 – John Shanahan

3.136.1 Submission – Whole Scheme

The submission raised the following issues:

1. Consideration of adapted cycles
2. Consistency with DMURS
3. Excessive traffic lane width and pedestrian crossing width
4. Lack of traffic calming provided.
5. Bus Stop review methodology
6. Road Safety Audit
7. Parking Report
8. Pedestrian and cycling facilities at junctions.
 - a. Crossings should be provided on all arms of junctions.
 - b. Excessive junction cycle times
 - c. pedestrian crossings speeds
 - d. inadequate stacking space provided for cyclists.
9. EIAR Chapter 6
 - a. Baseline cycling description.
 - b. The cycling assessment is not presented for some of Section 1 of the Proposed Scheme
 - c. Cycling assessment does not consider junctions.
10. Terenure Village Drainage Catchment not included.
11. Footpath & cycle track should be included on southern side of R137.
12. Spawell Junction
 - a. High entry speeds
 - b. Long crossings
 - c. Two-way cycle crossings should be included.
 - d. Active Travel overbridge option
13. Existing two-way cycle track on Templeogue Road should be retained.
14. Footpath should remain on the roadside of Templeogue Arch
15. Cypress Grove Road Junction
 - a. Pedestrian crossing not included on western arm of the junction.
 - b. Cycle facilities at the junction
 - c. Relocation of bus stop
16. Consideration of Alternatives

- a. Two-way cycle track cypress grove road to Springfield Ave
 - b. Bus priority signals at Cypress Grove Road junctions
17. Templeogue Village Scheme – Project Splitting
18. Cycle infrastructure in Terenure

3.136.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

1. Consideration of adapted cycles

As noted in section 4.6.5 Accessibility for Mobility Users of Chapter 4 of Volume 2 of the EIAR:

“The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure. In achieving this aim, the Proposed Scheme has been developed using the PDGB and in accordance with the principles of DMURS and Building for Everyone: A Universal Design Approach (NDA 2020).

The following non exhaustive list of relevant standards and guidelines have informed the approach to Universal Design in developing the Proposed Scheme:

- *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors (NTA 2020);*
- *Building for Everyone: A Universal Design Approach (NDA 2020);*
- *How Walkable is Your Town? (NDA 2015);*
- *Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland (NDA 2012);*
- *Best Practice Guidelines, Designing Accessible Environments. Irish Wheelchair Association (IWA) (IWA 2020).;*
- *UK DfT Inclusive Mobility (UK DfT 2005);*
- *UK DfT Guidance on the use of tactile paving surfaces (UK DfT 2007); and*
- *BS8300:2018 Volume 1 Design of an accessible and inclusive built environment. External Environment- code of practice (BSI 2012).*

The Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. An Accessibility Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken.

The Accessibility Audit provided a description of the key accessibility features and potential barriers to mobility impaired people based on the Universal Design standards of good practice. The Accessibility Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Accessibility Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has implemented the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes.”

As noted in section 4.2 Accessibility for Mobility Impaired Users of the Preliminary Design Report:

“The assessment of the existing street infrastructure and its ability to support access for disabled users have been based mainly on the Irish Wheelchair Association [IWA] ‘Best Practice Guidelines, Designing Accessible Environments’ and The National Disability Authority’s [NDA] ‘Building for Everyone: A Universal Design Approach’”.

In terms of adapted cycles, whilst these can come in a range of shapes and sizes (for example standard, tandem, recumbent, cargo, handcycle, wheelchair user tricycle, articulated bikes with additional child trailer or trailer bikes), these cycles are typically less than 1m in width and will be accommodated by the Proposed Scheme.

2. Consistency with DMURS

The approach to design standards is set out in Section 2.2 of the Preliminary Design Report contained in the Supplementary Information as follows:

“Design standards applied on the Proposed Scheme are stated within the applicable chapters of this report. In addition to national design standards, the CBC Infrastructure Works has developed the BusConnects Preliminary Design Guidance Booklet (BCPDGB) – included in Appendix O; its purpose is to provide guidance for the various design teams involved in CBC Infrastructure Works, to ensure a consistent design approach across the twelve Proposed Schemes.

The BCPDGB complements existing guidance documents relating to the design of urban streets, bus facilities, cycle facilities and urban realm. A non-exhaustive list of these guidelines is as follows:

- *The Design Manual for Urban Roads and Streets (DMURS);*
- *The National Cycle Manual (NCM);*
- *TII Publications;*
- *The Traffic Signs Manual (TSM);*
- *Guidance on the use of Tactile Paving;*
- *Building for Everyone: A Universal Design Approach, and*
- *Greater Dublin Strategic Drainage Study (GSDSDS).*

The BCPDGB focuses on the engineering geometry and Proposed Scheme operation. It is recognised that the Proposed Scheme has been planned and designed within the context of an existing city, with known constraints.

The BCPDGB provides guidance; however, a more flexible approach to the design of the Proposed Scheme, utilising engineering judgement, may be necessary in some locations due to these constraints.

Where it has been necessary to deviate from the parameters set out in the relevant national design standards or design guidance, these deviations have been noted within Section 4.17.”

The NTA is confident that the Proposed Scheme has been designed in accordance with DMURS and all other relevant design standards, and where departures or deviations from DMURS have been applied, these have been recorded appropriately.

3. Excessive traffic lane width and pedestrian crossing width

Section 5.1 of the BusConnects Preliminary Design Guidance Booklet (BCPDGB) – included in Appendix O, outlines the proposed traffic lane widths. Generally traffic lanes have been designed to be 3.0m wide as part of the Proposed Scheme. Traffic lanes of approximately 3.6m wide have been retained on the R137 Tallaght Road and Templeogue Road dual carriageway. There is sufficient space within this section of the Proposed Scheme to provide segregated bus, cycle and pedestrian infrastructure without narrowing of general traffic lanes. Given the extensive road re-engineering that would be required to narrow these lanes, the existing cross-section has been retained in this location.

4. Lack of traffic calming provided

There are a number of traffic calming measures that have been implemented in the Proposed Scheme that will reduce speeds including improved junction layouts with reduced corner radii, narrow carriageway lane widths, raised table crossings on side roads.

The additional landscaping and enhanced pedestrian/ cyclist priority measures along the Proposed Scheme will also lend themselves to the principles of self-regulating streets as set out in DMURS to encourage lower driving speeds.

5. Bus Stop review methodology

The submission states that the Tables included in Appendix B of the Bus Stop Review Report should document the proposed distance to the previous stop, in addition to the current distance to the previous stop which is documented. The NTA notes this comment. The current distance to the previous stop is included within the table to document the rationale to relocate the bus stop, where the current distance between bus stops is too long or too short. Where the bus stop location has been amended, the approximate distance it has been relocated is noted in the column titled 'Stop to be Amended'. Furthermore, the proposed bus stop locations are shown on the scaled General Arrangement drawings, from which the proposed distance between bus stops can be ascertained.

6. Road Safety Audit

The submission notes that in some locations, the Road Safety Audit has not been carried out on the latest junction designs, e.g. Spawell junction. The Junction Design Report, provided as Appendix A6.3 of EIAR Volume 4 Part 2 of 4, sets out the evolution of the junction design at this location. As can be seen on page 87 of this document, in the final stages of the design, this junction layout was amended to a junction type 4 (as defined in section 7.4.4 of the BusConnects Preliminary Design Guidance Booklet included as appendix A4.1 of the EIAR). The reason for this change is stated as:

To better tie in with proposals under the approved Dodder Greenway Phase 6 scheme to the south of the junction.

In addition to this, the proposed amendment overall provides a safer environment for both pedestrians and cyclists at the junction.

Due to the late stage at which this change occurred, it was not incorporated into the Stage 1 Road Safety Audit included as Appendix M2 of the Preliminary Design Report included in the Supplementary Information. However, a Stage 2 Road Safety Audit will be carried out at the next design stage. Any safety issues identified at this junction, or anywhere else along the Proposed Scheme will be addressed at this stage.

7. Parking Report

The submission notes that the parking report does not consider Section 1 of the Proposed Scheme, even though there is existing parking within this section. The NTA notes this comment. The existing parking referred to in the submission is within Templeogue Village, which does not form part of Section 1 of the Proposed Scheme. The following is noted in Section 1.1 of the Parking Survey Report

"It is noted that the section of the Templeogue/Rathfarnham to City Centre scheme that runs along Templeogue Road (between Spawell and Terenure Road West) was also considered but no parking is present on this section within the scheme extents. Parking is present within Templeogue Village but this section of the route is not included in the Proposed Scheme and has therefore not been included in this report."

8. Pedestrian and cycling facilities at junctions

a. Crossings should be provided on all arms of junctions

With regard to ensuring Pedestrian Priority, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

b. Excessive junction cycle times

Each junction has been modelled and the results of this modelling are presented in the Junction Design Report, included as Appendix L of the Preliminary Design Report in the Supplementary Information. Where practicable, junction cycle times have been kept to 90s or 120s maximum, to minimise waiting times for pedestrians. One junction, the Spawell junctions, has been modelled with a 150s cycle time, in order to maintain operational efficiency of this strategic junction. Given the proximity of this junction to the M50, its strategic traffic function and its suburban location this is considered appropriate.

c. Pedestrian crossing speeds

Pedestrian crossing speeds have been modelled in accordance with Chapter 9 of the Traffic Signs Manual which notes:

“The pedestrian signal sequence is red figure, green figure, amber figure, red figure. The amber figure signal indicates that pedestrians should not start to cross. The duration of the green figure signal, which indicates that pedestrians may start to cross the road, shall be based on the time to cross the full road width at a walking speed of 1.2m/s, and shall be a minimum of 6 seconds. An all-red period before and after the pedestrian crossing phase shall be a minimum of 1 second but may be increased depending on traffic speed and crossing width.”

d. Inadequate stacking space provided for cyclists

Stacking space has been provided at junctions for turning cyclists through the provision of protected corners, which allow right turning cyclists to wait safely. The available space at each junction is often limited and additional stacking space has been provided where practicable.

9. EIAR Chapter 6

The submission notes that a number of elements are omitted from the Baseline Description in Section 6.3.2.2 of Chapter 6 of the EIAR. The following elements are referenced:

- Toucan crossings at each arm of Spawell Roundabout

NTA Response: Section 6.3.2.1 of the EIAR notes:

*“Controlled pedestrian crossing facilities (i.e. signalised and/or zebra crossings) can be found at the following locations and benefit from dropped kerbs and tactile paving: • On each arm of Spawell Roundabout, a four-arm roundabout between the R137 Tallaght Road, L4019 Wellington Lane, R137 Templeogue Road and L4023 Spawell Road (staggered **toucan crossing*** with guard rails on the southern, eastern and western arms and a direct crossing on the northern arm);”*

***emphasis added**

- The two-way cycle track on the north side of the R137, which according to the submission provides a key link into the greenway path into Rossmore Estate.

NTA Response: Section 6.3.2.2 of the EIAR notes:

“Segregated two-way cycle track approximately 2.0m wide on the northern side of the R137 Tallaght Road and Templeogue Road between the M50 Interchange and the access to Templeogue House. The path links to the overbridge crossing of the M50 Motorway which provides pedestrian and cycle access to Tallaght to the west. The two-way cycle track is off-road, offering an increased level of service to users”

The NTA is confident that what is documented in the EIAR is an accurate representation of the existing infrastructure along the route of the Proposed Scheme, notwithstanding that there is an existing path connecting to the R137 at this location.

- Toucan crossings at two arms of the Templeogue Bridge junction, including associated shared space.

NTA Response: Section 6.3.2.1 of the EIAR notes:

*“On two arms of the four arm signalised crossroads junction between the R137 Templeogue Road, R187 Cypress Grove Road and R817 Old Bridge Road, on all but the R137 Templeogue Road eastern and southern arms (**staggered toucan crossing*** with guard rails)”*

***emphasis added**

- Shared space along both footpaths between Templeogue Bridge and Templeogue Village.

NTA Response: It is noted that this existing shared space is not described in the baseline cycling description. Notwithstanding this, it is not considered that this existing shared space provides a high level of service for cyclists or pedestrians.

- The description in Templeogue Village is inaccurate, the northernmost cycle lane is on road with no kerb protection and adjacent to general lanes while also being in the reverse zone of parked vehicles. The southern cycle track is also driven along and reversed over to access/exit parking.

NTA Response: There is a kerb segregating the northernmost cycle lane from general traffic through Templeogue Village, and as such it is off road. The southern cycle lane is separated from general traffic by parking bays. Refer to the figure below.



Figure 3.136.1 Existing cycle facilities within Templeogue Village

The submission further notes that there are inconsistencies between the drawings in Figure 6.4a and the written description. The submission references the road between Templeogue Bridge and Springfield Avenue and Rathdown Drive.

It is noted that Figure 6.4a shows the existing cycle tracks within Templeogue Village extending further towards the Templeogue Bridge junction than they in fact do. The written description is correct in this case.

Figure 6.4a does not show any existing cycle infrastructure on Rathdown Drive, which is correct.

The submission further states that the baseline description for cycling should have provided commentary on the existing facilities for cyclists at junctions and that the impact assessment is incomplete in that it does not consider facilities for cyclists at junctions.

It is noted that one of the elements of the impact assessment for cycling is the treatment at junctions, as highlighted in the Figure below. As such, the baseline facilities for cyclists at junctions have been considered allowing a full comparison of existing and proposed facilities.

1.5 Section 1 – R137 Tallaght Road, R137 Templeogue Road to R114 Rathfarnham Road;

Table 10: Section 1 – Cycling Infrastructure Assessment

Location	Chainage	Criteria	Do Minimum	Do Something	Impact
Access junction for Cheeverstown House to R137 Cypress Grove Road	J1050 - J1500	Segregation	On-road cycle lanes for 230m followed by 150m of cyclists sharing the bus / traffic lanes.	C Well separated cycle lane at mid-link with some conflict at intersections	A Medium Positive
		Number of Adjacent Cyclists / Width	Each one-way cycle lane has capacity for cycling one cyclist only (1.25 - 1.75m, 1.0m). Where cyclists share bus / traffic lanes, the capacity for cycling two abreast and / or overtaking (>= 2.5m, 2+1)	C Each cycle lane has capacity for cycling two abreast and / or overtaking (2.0 - 2.5m, 1+1)	A
		Junction Treatment	No specific bicycle facilities at junctions.	D Cycle lanes traverse priority junctions and continue through signalised junctions with protected treatment in the form of kerb segregation.	A
		Overall		C	A

Figure 3.136.2 Extract from Table 10 of Appendix A6.4 Impact Assessment

10. Terenure Village Drainage Catchment not included

The drainage design of the Proposed Scheme ties into the now constructed Templeogue Village Initiative Scheme. However, it is noted that the Templeogue Village Scheme was still in the planning phase during design development of the Proposed Scheme. At the time of the PDR production, the catchments to the West and East of Springfield Avenue on Templeogue Road were indeed one catchment (catchment 17). Liaison was undertaken with SDCC during the design development of the Templeogue Village Scheme, providing SDCC with the catchment and additional impermeable areas. The now existing attenuation tanks installed as part of the Templeogue Village Scheme were designed to include the additional impermeable areas as part of the so called TV catchment. These additional impermeable areas were included in Catchment 17. Notwithstanding the perceived difference in catchment numbers, the Proposed Scheme design ties into the planned (now constructed) Templeogue Village Scheme. However, the catchment drawing intentionally did not reflect this but reflected the existing situation at the time. So, the consequence is with the now constructed scheme the catchments change with Catchment 17 being split into two that is the Templeogue Village Scheme (TV) Catchment which discharges to the Dodder River & the remaining Catchment 17 discharging to the London bridge Pumphouse which discharges to Ringsend Treatment Works with overflows to the River Dodder. But this change improves matters from what was considered in the PDR and EIAR, so the EIAR is conservative.

Table 1 of Mr. Shanahan’s submission notes the following in respect of the Biodiversity Assessments. The individual points have been extracted in full, from the Table on Page 10 & 11 of the submission and the response provided beneath each item.

Appropriate Assessment Report – Screening Report

1) Section 3.1.1 Surface Water Drainage - “The surface water drainage system for the Proposed Scheme will discharge to 18 catchment areas”. There are 19 catchment areas when the Templeogue Catchment is considered. The submission notes that “Templeogue Village Catchment has been incorrectly called catchment 17 which discharges to a water treatment plant) and it will discharge to the Dodder River”.

Response: It is noted that the Templeogue Village Scheme was still in the planning phase during design development of the Proposed Scheme. At the time of the PDR production, the catchments to the West and East of Springfield Avenue on Templeogue Road were indeed one catchment (catchment 17). Liaison was undertaken with SDCC during the design development of the Templeogue Village Scheme, providing SDCC with the catchment and additional impermeable areas. The now existing attenuation tanks installed as part of the Templeogue Village Scheme were designed to include the additional impermeable areas as part of the so called TV catchment. These additional impermeable areas were included in Catchment 17. Notwithstanding the perceived difference in catchment numbers, the Proposed Scheme design ties into the planned (now constructed) Templeogue Scheme. However, the catchment drawing intentionally did not reflect this but reflected the existing situation at the time. So, the consequence is with the now constructed scheme the catchments change with Catchment 17 being split into two that is the Templeogue Village Scheme (TV) Catchment which discharges to the Dodder River & the remaining Catchment 17 discharging to the London bridge Pumphouse which discharges to Ringsend Treatment Works with overflows to the River Dodder. But this change improves matters from what was considered in the EIAR, so the EIAR is conservative. Hence there is no material change to the finding presented in the AA reports.

2) Table 9: Projects Considered for the In Combination Assessment. The Templeogue Village works are not included Templeogue village is an integral part of the Scheme.

Response: The Templeogue Village Scheme was still in still planning phase during the Proposed Scheme design development. At the time of the PDR production, the catchments to the West and East of Springfield Avenue on Templeogue Road were indeed one catchment (catchment 17). The drawings and PDR correctly reflected the existing situation at the time of writing and preparation of the AA Screening report. The AA Screening report represents a stage in the assessment at a point in time and following guidance, represents information in support of the Competent Authority undertaking the AA and making a determination.

Natura Impact Statement (NIS)

3) Introduction - "It considers the implications of the Proposed Scheme on its own and in combination with other plans or projects". The NIS assesses the final Proposed Scheme design" – Submission contends that the Templeogue village drainage catchment and mitigation measures are not correctly referenced throughout, refer point below. With reference to 9.1, the Templeogue Village project has not been included as an in combination project.

Response: Unlike the AA Screening, the NIS is required to assess all likely planning projects (consented or planned (within the public arena) against the Proposed Scheme. However, as noted previously, the Templeogue Village Scheme was still in still planning phase the Proposed scheme design development. At the time of the PDR production, the catchments to the West and East of Springfield Avenue on Templeogue Road were indeed one catchment (catchment 17). The drawings and PDR reflected the existing situation at the time of writing and preparation of the NIS. However, the Design team liaised with SDCC during the design development of the Templeogue Village Scheme, providing SDCC with the catchment and additional impermeable areas. The now existing attenuation tanks installed as part of the Templeogue Village Scheme was designed to include the additional impermeable areas as part of the so called TV catchment. These additional impermeable areas were included in Catchment 17. Thus, there is no material change to the finding presented in the NIS, which has prescribed and are aligned with those presented in the Water Chapter and the Surface Water Management Plan.

4) 3.3 Surface Water Drainage Infrastructure - 18 catchment areas are referred to but her are 19 catchment areas when Templeogue Village Catchment is considered. The submission contends that The attenuation tanks are not referenced in the project description.

Response: The NIS assessed the Proposed Scheme. Liaison was undertaken with SDCC during the design development of the Templeogue Village Scheme, providing SDCC with the catchment & additional impermeable areas. The now existing attenuation tanks installed as part of the Templeogue Village Scheme was designed to include the additional impermeable areas as part of the so called TV catchment. These additional impermeable areas were included in Catchment 17. Thus, the assessment was cognisant of the attenuation tanks, and they had been included in the overall hydrological assessment.

5) Appendix II – Proposed Surace Water Drainage Works - The Templeogue Village attenuation tanks are indicated as planned infrastructure, but they have already been built. The submission contends that the attenuation tanks have already been constructed, in advance of any environmental screening or assessment.

Response: The catchment drawings intentionally did not reflect the now constructed TV attenuation tanks, as they reflected the existing situation at the time of original design. So the consequence is with the now constructed scheme the catchments change with Catchment 17 being split into two that is the Templeogue Village Scheme (TV) Catchment which discharges to the Dodder River and the remaining Catchment 17 discharging to the London bridge Pumphouse which discharges to Ringsend Treatment Works with overflows to the River Dodder. As a separate development, the TV village attenuation tanks would have been subject to their own environmental assessment, and as noted previously, liaison was undertaken with SDCC in respect of design and inclusion of the impermeable areas calculations, and these formed part of the overall BusConnects design calculations.

The Proposed Scheme design assessed in the NIS was as provided, and based on above, it is noted that although not explicitly identified, that it is in fact captured by the design team.

6) 7.1.4 Mitigation Measures- Measure to Protect Surface water Quality during Operation. The submission notes that the Templeogue Village attenuation tanks are not referenced.

Response:

The environmental compliance of the Templeogue Village Scheme falls within said scheme designers scope and outside of the Proposed scheme. Section 13.5.3 in Chapter 13 (Water) in Volume 2 of the EIAR addresses the mitigation to address operational phase water quality:

“Mitigation for the Operational Phase has been built into the design of the Proposed Scheme. No additional mitigation is required. In the Operational Phase the infrastructure (including the maintenance regime for SuDS) will be carried out by the local authority and will be subject to their management procedures. “

7) 9.1 Analysis of Potential In Combination Effects - The Templeogue Village works are not included. The submission contends that the Templeogue Village is an integral part of the scheme.

Response: The Templeogue Village works are a separate project, undertaken under the auspices of SDCC. They were not identified as a standalone project, as they were constructed at the time of assessment for the NIS. However, the hydraulic capacity of the Templeogue Village works is an integral part of the BusConnects solution and as noted previously, liaison was undertaken with SDCC and the constructed attenuation tank is sized to take account of the Proposed Scheme.

11. Footpath & cycle track should be included on southern side of R137

The existing arrangement in this location has been retained. The Proposed Scheme does not preclude the provision of a footpath and cycle track in this location, however the scheme objectives are achieved through the provision of pedestrian and cycle facilities on the northern side of the carriageway within this section.

12. Spawell Junction

a. High entry speeds

The replacement of the existing roundabout at Spawell with a signalised junction will improve facilities for vulnerable road users at this important junction, through the provision of segregated crossing facilities for pedestrians and cyclists. It is also envisaged that the provision of a signalised junction will slow vehicle approach speeds, as vehicles are more likely to be required to stop than at the existing roundabout junction. As indicated in Figure 3.136.3, cantilever signal poles will be provided on the eastern and western arms of the junctions to ensure sufficient visibility of approaching vehicles to the traffic signals. It is further noted that the conversion of the roundabout to a signalised junction with tighter corner radii by introduction of hard islands will reduce vehicle speeds.

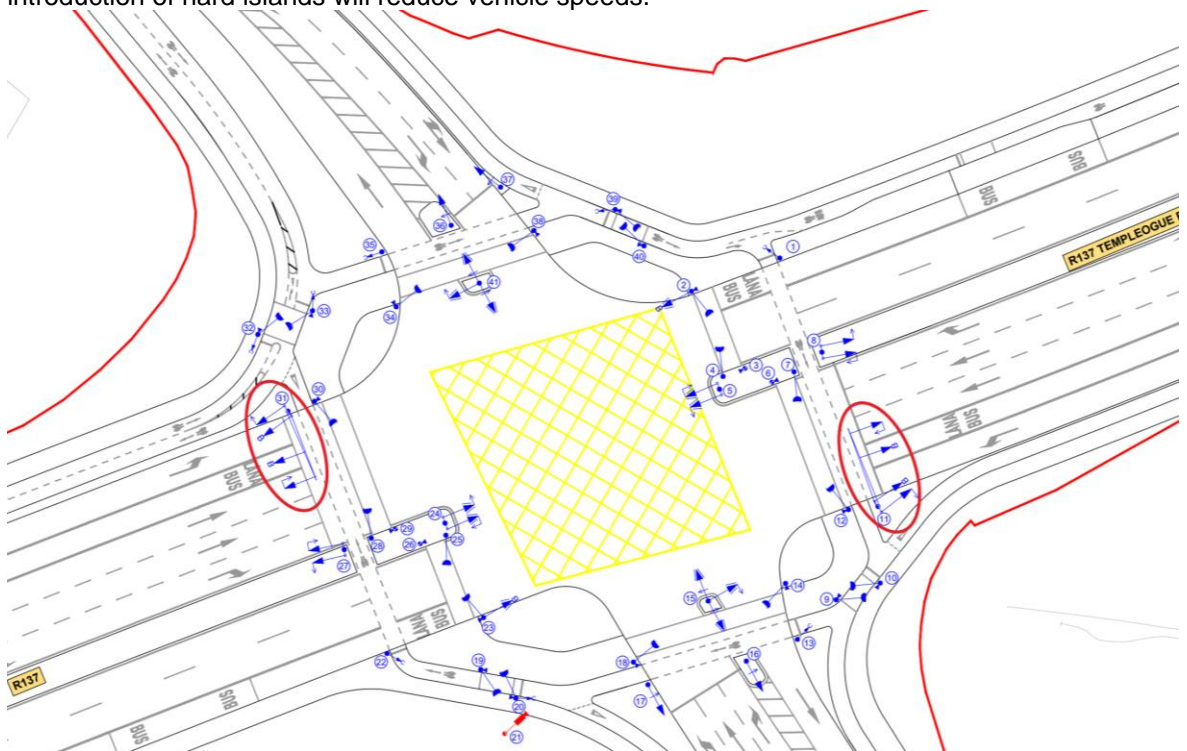


Figure 3.136.3 Extract from Junction Systems Design Drawings at Spawell junction

b. Long crossings

The NTA notes this comment. The below is an extract from Table 4 of Appendix A6.4 which documents the pedestrian impact assessment at this junction.

Junctions	Change	Criteria	Do Minimum		Do Something		Impact
			Comment	Criteria Met	Comment	Criteria Met	
Spawell Roundabout (roundabout to signalised junction)	J700	Pedestrian Routing	Signalised crossings available on all arms.	✓	Signalised crossings available on all arms.	✓	Medium Positive
		Pedestrian Directives	Signalised crossings on the R137 Templeogue arms and the Spawell Road arm are in two stages. Signalised crossing on the Wellington Lane is direct. All crossings are one-way, set back approximately 50m from the junction.	✗	Signalised crossings on the Wellington Lane and Spawell Road arms are direct. Signalised crossings on the R137 Templeogue arms remain two stage.	✗	
		Vehicular Speeds	No particular constraints on vehicle speeds. Roundabout junctions typically maintain the flow of traffic and higher vehicle speeds.	✗	Conversion from roundabout to signalised crossroads junction with tighter corner radii by introduction of hard islands will reduce vehicle speeds.	✓	
		Accessibility	Adequate tactile paving, dropped kerbs and road markings at existing crossing points.	✗	Fully compliant tactile paving, dropped kerbs, road markings at all crossing points at the junction.	✓	
		Footpath and Crossing Widths	Existing footpaths are in excess of 1.8m wide. Crossings are 4m wide.	✓	Similar geometry to Do Minimum. Footpaths are a minimum of 2.5m wide and crossings are 3.0m wide.	✓	
		Overall LoS	2 indicators met	D	4 indicators met	B	

Figure 3.136.4 Extract from Appendix A6.4 relating to Spawell Junction

c. Two-way cycle crossings should be included

The provision of two-way cycling facilities at this junction would greatly increase the complexity of this junction in terms of signal phasing. The submission notes that the current crossing facilities allow for two-way cycle movements, however it does not acknowledge that these are toucan crossings, whereby pedestrians and cyclists share space, which provides a lower level of service for both pedestrians and cyclists.

It is also noted that a two-way crossing is to be provided on Wellington Lane just north of the Spawell junction facilitating a two-way connection across Wellington Lane and onwards to the two-way cycle facility west of Spawell.

d. Active Travel overbridge option

The provision of a grade separated solution for active travel at this location is not considered suitable.

13. Existing two-way cycle track on Templeogue Road should be retained

The submission notes that the Proposed Scheme removes a section of two-way cycle track between Spawell and Rossmore Greenway (which connects Rossmore Lawns to Templeogue Road). It is noted that the existing two way facility along this section is substandard with a width of c. 2.4m and terminates in advance of the archway, meaning that pedestrians and cyclists are funnelled into a narrow shared space. While it would be possible to widen the cycle track, it was considered that an isolated section of 2-way cycle track introduced potential issues with legibility and may encourage cycling the wrong way on the one-way cycle track further east to which this section connects. Similarly the provision of a two-way cycle track on each side of the road would require additional land acquisition to facilitate. As a result, it was considered that the most appropriate solution that minimised impacts, improved legibility and maximised the provision of high quality segregated cycle facilities, was the provision of a one-way cycle track on each side of the road. It is noted that a widened toucan crossing is proposed across the Templeogue Road at this location to facilitate movements to and from the Rossmore Greenway and surrounding areas. It is further noted that no change is proposed to the pedestrian/cyclist entrance to Templeogue Wood.

14. Footpath should remain on the roadside of Templeogue Arch

It is proposed to improve the public realm around the Templeogue Arch, to include planting, new high quality paving and public lighting. The alignment of the proposed footpath has been carefully designed to ensure visibility to the section behind the archway from both approaches.

15. Cypress Grove Road Junction

a. Pedestrian crossing not included on western arm of the junction

The provision of a pedestrian crossing on the western arm of the junction would require the vehicular stop line to be set back significantly, which would impact on the operational performance of the junction, which already operates above capacity. Furthermore, there is a level difference between the northern and southern carriageways which would require significant re-engineering to provide a pedestrian crossing across.

b. Cycle facilities at the junction

The submission states that the Proposed Scheme will downgrade cycle facilities at this junction. The NTA does not accept that this is the case, and in fact believes that the Proposed Scheme will significantly improve cycle facilities at this important junction through the provision of segregated cycle facilities at the junction, corner protection for cyclists and cycle signals, to provide priority for cyclists through the junction. In relation to cycle facilities on Old Bridge Road, the Proposed Scheme ties into the existing facilities in this location.

c. Relocation of bus stop

In relation to the proposal to relocate bus stop 1130 west of the Cypress Grove Road junction, the following is noted in the Bus Stop Review Report contained in Appendix H of the Preliminary Design Report in the Supplementary Information:

“Stop to be moved 160m West.. This location places the stop after the junction, which aligns with the principle of locating stops after junctions.”

16. Consideration of Alternatives

a. Continuous cycle tracks from Cypress Grove Road to Springfield Ave

The submission states that an option should have been considered which provided segregated cycle facilities over the full length of this section of the Proposed Scheme, either a two-way cycle track or one-way cycle tracks on either side of the road. It is noted that Option S1-2 consisted of providing 2.0m wide cycle tracks on either side of the road for the full extent of this section. The following is noted in Section 3.3.2.1.1 of Chapter 3 of the EIAR:

“Option S1-2 would consist of providing an inbound bus gate on Templeogue Road at the Cypress Grove Road / Old Bridge Road junction. From the bus gate, an inbound general traffic lane would be provided along Templeogue Road where buses would share with local access traffic. From the Templeogue Road/Riverside Cottages junction an inbound bus lane would be provided. An outbound bus lane would be provided from the Springfield Avenue/Templeville Road junction. This bus lane would terminate after a distance of approximately 140m at new bus priority signals on Templeogue Road, after which buses would be required to merge into the adjacent general vehicle traffic lane. An outbound bus lane would be provided approximately 120m in advance of the Cypress Grove Road/Old Bridge Road junction. Cycle lanes would be provided along each side of the carriageway throughout this section.”

A multi-criteria assessment was carried out to identify the Emerging Preferred Route, which is documented as follows:

“A multi-criteria assessment of all scheme options was undertaken. The assessment sub-criteria which were differentiators between scheme options included Capital Cost, Transport Reliability and Quality, Cycle Network Integration, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character.

Under the Economy criteria, options S1-3 and S1-4 performed marginally better than other options in terms of Capital Cost, due to the lower land acquisition costs associated with these options. Option S1-5 performed significantly better than other options in terms of Transport Quality and Reliability due to the fact that full bus priority would be provided in both the inbound and outbound directions under this option, whereas other options relied on shared access with general traffic or bus priority signalling to provide bus priority.

Under the Integration criteria, Options S1-1 and S1-2 performed significantly better than other options as online cycle facilities were provided throughout the extent of these options, while other options would provide offline facilities. Option S1-5 performed significantly better than other options in relation to Traffic Network Integration due to the fact that two-way general traffic would be permitted along the route, while all other options proposed to restrict traffic along the route.

In terms of Road Safety, Option S1-5 was found to have significant benefits over other options as it was proposed to segregate buses from general traffic throughout this section, thereby reducing the likelihood for bus/general traffic and cyclist/general traffic incidents.

As mentioned previously each route option was evaluated using a multi-criteria assessment with one of the primary criteria being 'Environment', under which there was a number of sub-criteria which each route option was considered against comparatively.

In terms of potential Archaeological, Cultural Heritage and Architectural Heritage impacts, options S1-1, S1-2 and S1-5 were considered to have significant advantages over the other options as they would avoid any interaction with Riverside Cottages which is an architectural conservation area.

With regard to Flora and Fauna, options S1-1, S1-2 and S1-5 were considered to have significant advantages over the other options as they would impact on fewer trees due to the fact that these routes did not include the alternative cycle route along the River Dodder.

All five route options were considered neutral when compared against one another under the Soils and Geology sub-criterion, given none presented any appreciable impacts.

All five route options were considered neutral when compared against one another under the Hydrology sub-criterion, given none presented any appreciable impacts.

With regard to Landscape and Visual, it was considered that all five route options were considered neutral when compared against one another as while options S1-1, S1-2 and S1-5 would require more road widening and impact on tree lines on Templeogue Road, Options S1-3 and S1-4 would have additional impacts due to the provision of a cycle route through Riverside Cottages and along the route of the Dodder Greenway.

With regard to Air Quality, it was considered that all five route options were considered neutral when compared against one another given that in each option there is already existing vehicular and bus traffic, and each would have an equivalent level of road widening.

With regard to Noise and Vibration, it was considered that all five route options were considered neutral when compared against one another given that in each option there is already existing vehicular and bus traffic, and each would have an equivalent level of road widening.

With regard to Land Use Character, it was considered that all five route options were considered neutral when compared against one another given that in each option there would be no impact on the viability of the intended land use of the land proposed to be acquired.

Option S1-5 was identified as having significant benefits over other options in relation to Transport Reliability and Quality, Traffic Network Integration, Road Safety, Archaeology and Cultural Heritage and Land Use Character.

Option S1-5 was therefore identified as the preferred option for this section and was brought forward into the Emerging Preferred Route."

b. Bus priority signals at Cypress Grove Road junctions

The submission notes that consideration should have been given to moving the inbound bus priority signal to the Cypress Grove Road junction. The following is noted in Section 3.4.1.2.1 of the Preferred Route Options Report contained in the Supplementary Information:

"A sub option was also considered between Cypress Grove Road and Templeogue Village which sought to minimise the impact on properties on this section. This option proposed curtailing the inbound bus lane at Cypress Grove Road, and re-commencing it at the north-eastern side of Templeogue Village. However, it was considered that in combination with vehicular activity in Templeogue Village, this distance (~500m) was too much to give guaranteed bus priority through use of signal-controlled priority. It was considered that this option would not be in line with the objectives of the scheme and, as such, this option was not considered any further."

17. Templeogue Village Scheme – Project Splitting

The Proposed Scheme does not propose any physical infrastructure within Templeogue Village. As outlined in Section 4.5.1.1 of Chapter 4 of the EIAR:

“Within Templeogue Village, between Templeogue Tennis Club and the Templeville Road junction, it is proposed to manage bus priority through the use of signal-controlled priority and tie into South Dublin County Council’s Templeogue Village Initiative Scheme.”

The submission asserts that Templeogue Village is essential to the movement of people along the route of the Proposed Scheme, however the subject of the application to An Bord Pleanála is the Core Bus Corridor Infrastructure. In relation to drainage, a detailed response to this matter is provided under item 10 above.

On page 18 under the heading “Boundary Lines”, Mr Shanahan sets out that Article 22(2)(b)(i) of the Planning and Development Regulations 2001 (as amended) (the “Planning Regulations”) require boundary lines to be depicted in a certain way in the drawings. Article 22 of the Planning Regulations applies to planning applications under section 34 of the Planning and Development Act 2000 (as amended). The Templeogue/Rathfarnham Scheme is not a planning application under section 34 and therefore, the requirements of Article 22 do not apply to the Templeogue/Rathfarnham Scheme.

Similarly, under the heading “NTA Drawing Presentation”, Mr Shanahan indicates that Articles 23 and 24 of the Planning Regulations require the NTA to show adjacent infrastructure to the same level of detail as the proposed infrastructure in the NTA’s drawings. Articles 23 and 24 apply to planning applications under section 34 and as the Templeogue/Rathfarnham Scheme is not such a planning application, Articles 23 and 24 do not apply.

18. Cycle infrastructure in Terenure

The submission makes a number of comments which relate to provision for cyclists in the vicinity of Terenure. The submission notes that a priority crossing should be provided for pedestrians and cyclists across Rathdown Avenue. It is noted that a raised table treatment is provided at this junction to provide priority for pedestrians and cyclists. It is noted that the cycle facility transitions from a segregated two-way cycle track to a quiet street treatment at this location, as such, the provision of shared space at this junction facilitates this transition.

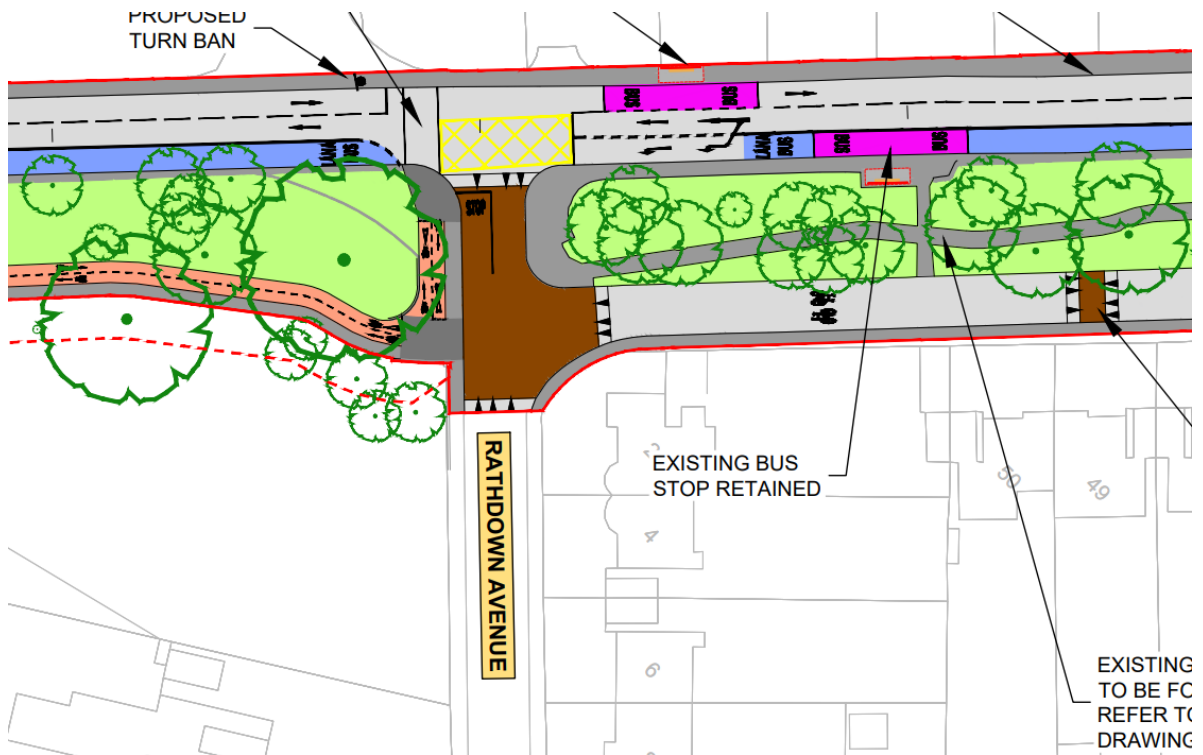


Figure 3.136.5 Extract from General Arrangement drawings showing layout at Rathdown Avenue

The submission also notes that cycle tracks should be provided on Terenure Place through the removal of one of the outbound general traffic lanes. This junction is a strategic junction for traffic and the provision of cycle tracks on Terenure Place would require the removal of right turning lanes for vehicles turning from Terenure Place onto Rathfarnham Road, as well as from Terenure place onto Terenure Road West. Alternative cycle facilities have been proposed on Rathdown Drive, Rathdown Crescent and Rathdown Park, to allow cyclists travelling along Templeogue Road to connect to Rathfarnham Road and Terenure Village.

The submission notes that provision should be made to ensure that inbound cyclists can travel from Rathdown Park and Rathfarnham Road onto Bushy Park Road. It is noted that a Toucan crossing is provided to provide for this movement from Rathfarnham Road to Bushy Park Road.

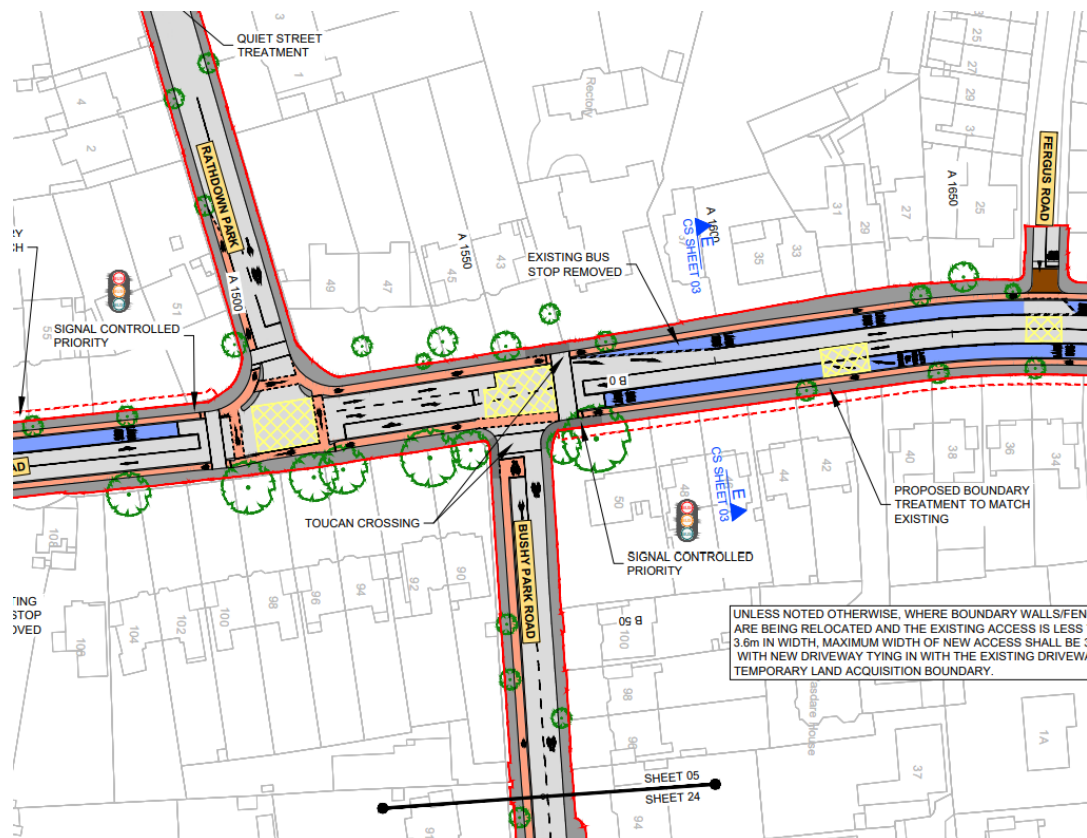


Figure 3.136.6 Extract from General Arrangement drawings showing layout at Bushy Park Road

3.137137 – John Walsh

3.137.1 Submission – Rathmines

The submission raised the following issues:

1. Footpath geometry
2. Bus gate
 - a. Limit hours of operation
3. Impact of Bus Gate on access to amenities
4. Integration of secondary cycle routes
5. Shuttle system on Mount Pleasant Avenue Upper

3.137.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.138138 – Judith Lunny

3.138.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Architectural and cultural heritage
3. Biodiversity
 - a. Destruction of trees
4. Traffic
 - a. Increased volume on Highfield Road
 - b. Diversions to residential streets
5. Unnecessary change providing no real gains to bus travel times.
6. Negative impact on businesses

3.138.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.139139 – Karen Lynch

3.139.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Necessity of road widening
2. Removal of tree
3. No consideration of Glin River
4. Consideration of alternative options
5. Climate Impact of Tree Removal
6. Biodiversity Impact
7. Landscape and Visual
8. Noise, Vibration and Air Quality

3.139.2 Response to submission

Items 3 – 8 raises the same concerns as Submission 40. Please refer to Section 3.40 for responses to these items. See below for response to items 1 and 2.

1. Necessity of road widening

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

For the section between adjacent to 8 Rathfarnham Road, three options (SA1 to SA3) have been developed during the development of the Emerging Preferred Route (EPR). The assessment process of three options is described in section 5.4 of the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment (FSOA), included in appendix I2 of the supplementary documents submitted alongside the planning application.

Following the review of the EPR and submissions received as part of the public consultation within the section between Nutgrove Avenue to Willbrook Road, it was decided that alternative options could be feasible within this section of the Proposed Scheme. For this reason, two alternative options (RC1 and RC2) have been developed. The alternative options are described in detail in section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application.

A detailed response to the optioneering process complete for Grange Road and Rathfarnham Road is provided in Section 2.3.3.

Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the desirable width of 2.0m for footpaths and desirable width of 2m for cycle tracks. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

Providing the optimum cross-section described in the above paragraphs achieves the project objectives of enhancing the potential for cycling and walking by providing safe infrastructure. EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling and pedestrian infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

Figure 3.139.1 Section 2- Significance of Effects for Pedestrian Impact during Operational Phase (table 6.27 of EIAR Chapter 6)

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario.

This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.

Cycling Infrastructure

Table 6.28 (Figure below), in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant
R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

Figure 3.139.2 Section 2 - Cycling Impact during Operational Phase (Table 6.28 of EIAR Chapter 6)

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Further details on the significant benefits of the Proposed Scheme are presented in Section 2.1.1.

2. Removal of Tree

EIAR Volume 4 Part 2 Chapter 17 Appendix A17 provides the Arboricultural Impact Assessment Report (AIAR), which includes detailed drawings showing all trees that are to be removed. It can be seen from these drawings that there is one tree proposed to be removed at No. 8 Rathfarnham Wood. This tree has been surveyed and assessed as part of the AIAR, and has been categorised as follows:

- An 16m tall mature Beech displaying overall good condition, of Category B2 and with 20+ estimated remaining years;

Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the Landscape General Arrangement drawings included in EIAR Volume 3 Chapter 4. Along the eastern section of Rathfarnham Road between entrance to Rathfarnham Wood residential estate and Willbrook Road it is proposed to plant 13 No. Acer Campestre 'Elsrijk' Semi-Mature Field Maple Trees. Along the Proposed Scheme there will be substantial replanting of trees as detailed in section 17.4.4.2.9 of Chapter 17. As states in section 12.5.1.2.1 of Chapter 12, 400 trees will be planted throughout the scheme resulting in a net increase of 231 trees along the Proposed Scheme.

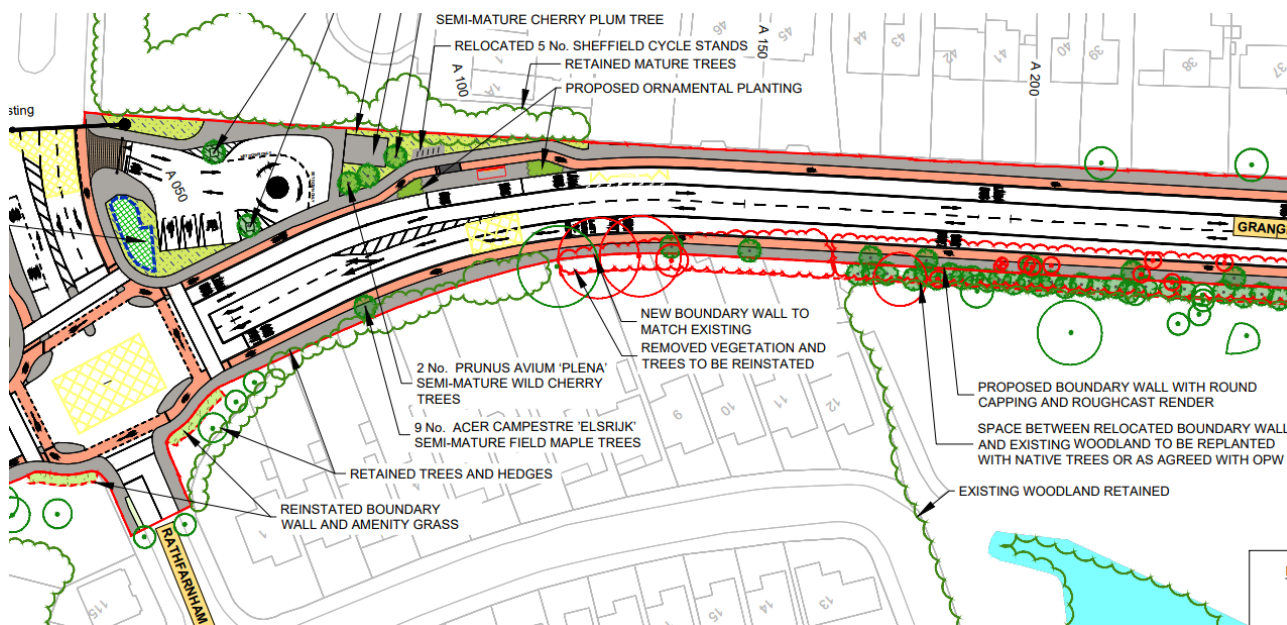


Figure 3.139.3 Extract from Landscaping General Arrangement Drawings (Sheet 1)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

In relation to the concern raised relating to impact on trees within proximity of the tree proposed for removal. A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- *The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*

- *New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.*
- *Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*
- *Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- *Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- *The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- *All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

Further details on the removal of trees along the Proposed Scheme are presented in Section 2.1.1.

3.140140 – Karen Quirk

3.140.1 Submission – Rathmines

The submission raised the following issues:

1. Lack of consultation
2. Changes to commute patterns due to Covid
3. Traffic
 - a. Increased congestion
 - b. Impact of bus gate on access routes

4. Air pollution
5. Character of area
6. Cost estimates
7. Alternative option
 - a. Metro
 - b. Luas/tram
8. Request oral hearing.

3.140.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.141141 – Kathryn & Eoin McVey

3.141.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased congestion on Highfield Road
2. Impact on the quality of resident's life
3. Alternative options
 - a. Metro
 - b. Tram/ Luas
4. Lack of consultation
5. Pre-COVID traffic volumes used in analysis.

3.141.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.142142 – Kathy Jacobs

3.142.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Support the proposal scheme.
2. Alternative option
 - a. Metro
3. Lack of consultation
4. Impact on the quality of resident's life
5. Access to amenities

6. Negative impact on businesses
7. Pre-COVID traffic volumes used in analysis.
8. Changes to work patterns due to the COVID-19 pandemic
9. Biodiversity
 - a. Destruction of trees
10. compulsory purchase order
11. Road widening
12. Turn bans.
13. Closure of Templeogue Road
14. Traffic
 - a. Disruption as a result of traffic management proposals
 - b. Ambulance unable to access due to congestion.
 - c. Increased volumes
 - d. Increased emissions
15. Character of area
16. Cost-Benefit analysis
17. Bus Stops
 - a. Removal of various bus stop
18. Cycle track
 - a. Lack of provision of cycle lane along the route

3.142.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.143143 – Keith Walsh, Camden Inns Limited

3.143.1 Submission – Camden Street

The submission raised the following issues:

1. Construction of new loading bay outside The Camden will detract from historical façade
2. Reduced footpath width
3. Traffic impact on roads surrounding Camden Street
4. Removal of Loading Bays
5. Alternative solution such as rail more appropriate

3.143.2 Response to submission

A detailed responses to Item 5 of this submission is provided in Section 2.1.1 of this report.

1. Construction of new loading bay outside The Camden will detract from historical façade

The proposed loading bay does not require any physical works that would detract from the historical façade of The Camden. While there will be vehicles parked in this location intermittently to facilitate loading/unloading activity, this is not considered to be any different to the existing situation which would see intermittent buses stopping at the bus stop outside this property.

Section 17.4.4.1.4 in Chapter 17 in Volume 2 of the EIAR sets out the townscape/streetscape impact in Charleville to Dame Street (which includes Camden Street) during the operational phase:

“The sensitivity of this section is very high. The Operational Phase of the Proposed Scheme involves very minimal negative changes and substantial positive changes throughout this section. There will be the provision of a new paving scheme, including high-quality concrete paving to active frontages, stone / concrete sett paving to pedestrian crossings, sett paving to formalised parking bays, as well as provision of numerous new street trees throughout this section. The proposals will improve the streetscape character along the full length of this section of the Proposed Scheme. The magnitude of change in the baseline environment is medium / high. The impact of the Operational Phase is assessed to be Positive, Moderate / Significant and Short-Term becoming Positive, Significant and Long-Term.”

2. Reduced footpath width

As set out in section 4.6.2.1 of Chapter 4 of Volume 2 of the EIAR:

The desirable minimum width for a footpath is 2.0m. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footpath width for road sections as 1.8m based on the width required for two wheelchairs to pass each other. Building for Everyone: A Universal Design Approach (NDA 2020), defines acceptable minimum footpath widths at specific pinch points as being 1.2m wide over a two-metre length of path.

In line with the Road User Hierarchy designated within DMURS, at pinch points the width of the general traffic lane should be reduced first, then the width of the cycle track should be reduced before the width of the footpath is reduced, where practicable.

Throughout the Proposed Scheme, footpath widths of two metres or wider have been proposed, however where this has not been achieved, deviations from standard have been required as outlined in Section 4.5.

In the Camden Street/Wexford Street area, the busy nature of the footpaths has been acknowledged in the design by reducing cycletrack widths through this area. This is identified in table 4.21 of Chapter 4 as reproduced below.

Location	Design Element	DMURS/ NCM	Type	Design	Justification
Ch. A3800	Footway (Inbound)	2m	Relaxation	1.5m	Localised pinch point (Less than 2.0m) due to the constraint nature of Wynnefield Road Junction. A minimum width of 1.5m is achieved at this location.
Ch. A4720-4880	Cycle Track (Both directions)	2m	Relaxation	1.5m	Approximately 160m of narrowed cycle track on both sides at this section of Richmond Street South due to the constraint nature of this section. It should be noted that the narrowed width enables the retention of existing kerb line along much of this section.
Ch. A4780-4960	Footway (Inbound)	2m	Departure/ Relaxation	1.2-1.95m	It is proposed to reduce approximately 180m of reduced footpath width at this section to provide a bus lane in both directions along most of the section.
Ch. A5100-5650	Cycle Track (Both directions)	2m	Relaxation	1.5-1.9m	It is proposed to provide approximately 550m of narrowed cycle track at this section to provide a bus lane in both directions. Providing a standard width would require reducing the width of the footpath at this section. This location is in a busy town centre environment, reducing the footpath width at this location would have significant impact on pedestrian comfort.
Ch. A6130-6220	Cycle Track (Outbound)	2m	Relaxation	1.5m	It is proposed to provide 90m of narrowed cycle track due to the constraint nature of this section. It should be noted that the narrowing enables the retention of existing kerb line along majority of this section and existing footpath width.

Figure 3.143.1 Extract from Chapter 4 of the EIAR (Table 4.21)

Generally along Camden Street/Wexford Street, existing footpath widths will be retained or increased. However, there are a number of areas where localised pinch points will create reducing footpath widths from the existing width but still providing a minimum of 2m.

This is the case outside The Camden where it is proposed to provide a loading bay. This proposal would reduce the footpath width to 2.1m over a distance of 30m. Either side of this pinch point the footpath width increases to c.3.5m.

3. Traffic impact on roads surrounding Camden Street

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

‘a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences’.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. Tables 6.63 and Table 6.67 present road links in the indirect study area where link threshold of 100 combined flows is exceeded (in the AM and PM peak hour period respectively). These diagrams and tables are reproduced below with streets relevant to this submission highlighted.

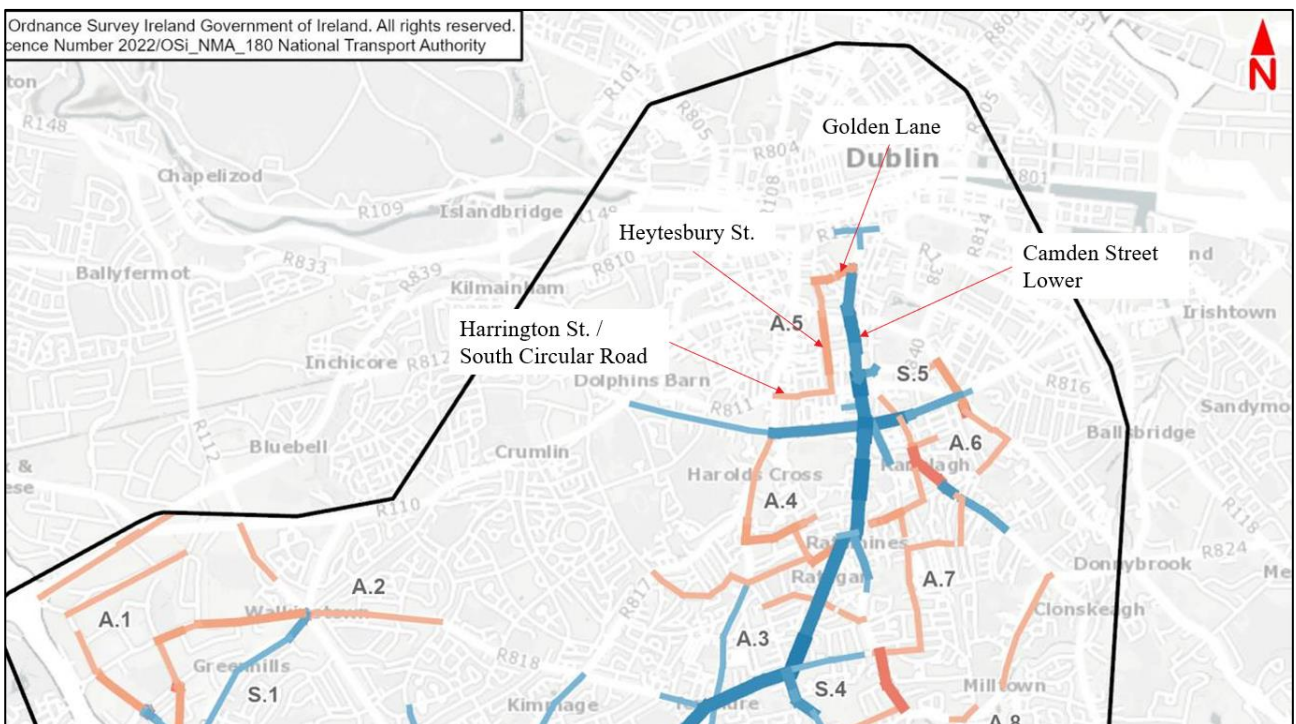


Figure 3.143.2 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

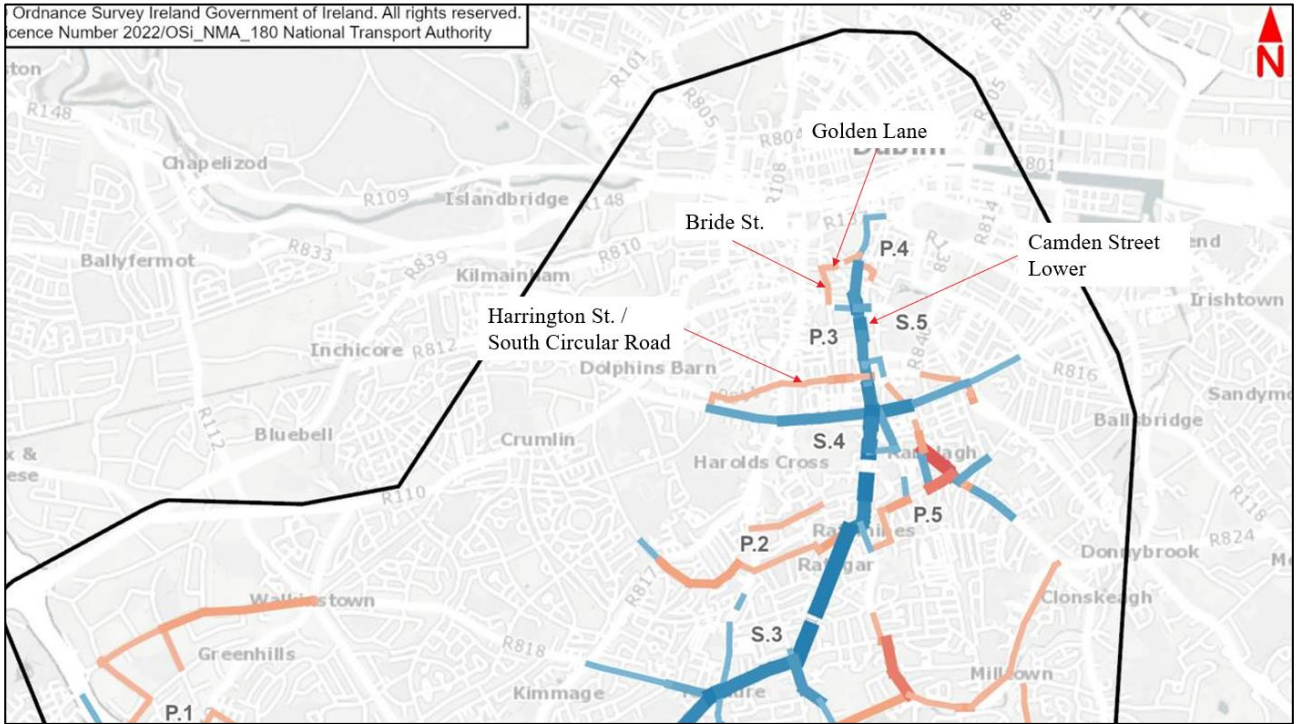


Figure 3.143.3 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above diagrams show that along Camden Street Lower, traffic volumes are projected to reduce significantly in the AM (-300 PCUs) and PM (-287 PCUs) peak hours. The surrounding streets, including Heytesbury Street, Bride Street, South Circular Road/Harrington Street would see increases of 100-200 PCUs in each peak period,

Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the AM and PM Peak periods, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 16 and Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 3.143.5.

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC		
A.7	Northbrook Road	11197	Northbrook Road / Dartmouth Terrace	221	332	8	13	<85%	<85%	Negligible	
	Orwell Road	11315	Lower Dodder Road / Orwell Road	1340	1492	51	86	<85%	85%-100%	Low	
	Leeson Street Lower	6266	Adelaide Road / Leeson Street Lower / Fitzwilliam Place	1672	1845	73	74	<85%	<85%	Negligible	
		6265	Adelaide Road / Leeson Street Lower / Wilton Terrace	1775	2005	36	43	<85%	<85%	Negligible	
		6268	Hatch Street Lower / Leeson Street Lower	1405	1600	37	37	<85%	<85%	Negligible	
		11124	Leeson Street Upper / The Applian Way	1800	1864	95	84	85%-100%	<85%	Low Positive	
	Lower Dodder Road	11246	Dodder Road Lower / Dodder Road Lower	444	556	15	21	<85%	<85%	Negligible	
	Palmerston Park	11311	Palmerston Park / Rathmines Road Upper	1084	1176	51	76	<85%	<85%	Negligible	
		11329	Palmerston Park / Sunbury Gardens	952	1308	52	76	<85%	<85%	Negligible	
	Palmerston Road	11290	Cowper Road / Palmerston Road	162	348	9	21	<85%	<85%	Negligible	
	Ranelagh	11184	Mountpleasant Place / Ranelagh / Ranelagh Road	935	1392	59	91	<85%	85%-100%	Low	
	Rathmines Road Upper	11295	Rathmines Road Upper / Frankfort Avenue	773	781	26	53	<85%	<85%	Negligible	
Taylor's Lane	21148	Palmer Park / Taylor's Lane	827	977	27	31	<85%	<85%	Negligible		
A.8	M50	21149	Pearse Brothers Park / Taylor's Lane	904	1041	25	29	<85%	<85%	Negligible	
		21225	M50 Jct 12	3941	4023	93	93	85%-100%	85%-100%	Negligible	
	Ranelagh	11233	Ashfield Road / Ranelagh	1222	1244	78	79	<85%	<85%	Negligible	
		11250	Cullenswood Road / Ranelagh	1324	1360	54	64	<85%	<85%	Negligible	
	Ranelagh Road	11185	Northbrook Road / Ranelagh Road	910	1192	51	75	<85%	<85%	Negligible	
		11261	Ranelagh Road / Beechwood Avenue Lower	1142	1258	79	92	<85%	85%-100%	Low	
	Leeson Street Upper	6300	Leeson Street Upper / Sussex Road (North)	1314	1597	45	60	<85%	<85%	Negligible	
		11138	Leeson Street Upper / Sussex Road (South)	716	904	36	47	<85%	<85%	Negligible	
		11201	Ranelagh Road / Mountpleasant Place	948	1314	58	79	<85%	<85%	Negligible	
		11338	Ranelagh Road / Mountpleasant Square / Orchard Lane	965	1338	54	77	<85%	<85%	Negligible	
	Ranelagh Road	11186	Ranelagh Road / Mountpleasant Terrace / Dartmouth Road	788	917	42	55	<85%	<85%	Negligible	
		21153	Taylor's Lane / Whitechurch Road	1256	1384	54	66	<85%	<85%	Negligible	
A.1	Ballymount Avenue	16138	Ballymount Av / Calmount Rd Rbt	492	663	70	65	<85%	<85%	Negligible	
	Ballymount Road Lower	16143	Ballymount Road Lower / Robinhood Road	1274	1431	46	45	<85%	<85%	Negligible	
	Bride Street	6171	Bride Street / Bishop Street	694	827	36	43	<85%	<85%	Negligible	
		6362	Bride Street / Golden Lane	1042	1237	36	39	<85%	<85%	Negligible	
	Grosvenor Place	6183	Bride Street / New Bride Street	1623	1813	62	66	<85%	<85%	Negligible	
		11242	Grosvenor Place / Effra Road	85	228	3	7	<85%	<85%	Negligible	
	Grove Road	11238	Grosvenor Place / Grosvenor Road	438	646	27	33	<85%	<85%	Negligible	
		6306	Grove Road / Harold's Cross Road / Parnell Road	2274	2109	72	61	<85%	<85%	Negligible	
	Harold's Cross Road	8267	Harold's Cross Road / Mount Drummond Avenue	1333	1445	79	85	<85%	<85%	Negligible	
	A.10	Harrington Street	6130	Harrington Street / Heytesbury Street / South Circular Road	1335	1486	47	49	<85%	<85%	Negligible
		South Circular Road	6484	Emorville Avenue / South Circular Road	988	1185	30	38	<85%	<85%	Negligible
			6134	South Circular Road / Bloomfield Avenue	983	1141	27	32	<85%	<85%	Negligible
6132		South Circular Road / Curzon Street	919	1043	26	30	<85%	<85%	Negligible		
Stephen Street Upper		6331	Stephen Street Upper / Longford Street Great	153	274	12	33	<85%	<85%	Negligible	
Harold's Cross Road		8265	Harold's Cross Road / Harold's Cross Road	1508	1631	55	63	<85%	<85%	Negligible	
	6332	Stephen Street Upper / Great Ship Street	353	563	28	44	<85%	<85%	Negligible		
A.12	M50	16177	M50 Jct 10	3232	3294	99	97	85%-100%	85%-100%	Negligible	
A.2											
A.3	Calmount Road	16118	Calmount Rd Rbt	1538	1594	72	78	<85%	<85%	Negligible	
	Golden Lane	6438	Chancery Lane / Golden Lane	501	729	15	24	<85%	<85%	Negligible	
		6105	Golden Lane / Stephen Street Upper	255	454	5	13	<85%	<85%	Negligible	
		6196	Golden Lane / Whitefriar Street	530	748	23	34	<85%	<85%	Negligible	

Figure 3.143.4 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 16

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flow		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact	
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC		
P.6	Butterfield Park	21146	Butterfield Park / Ballyroan Road	557	632	30	32	<85%	<85%	Negligible	
		21139	Butterfield Park / Butterfield Orchard	124	353	7	16	<85%	<85%	Negligible	
	Canal Road	6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1828	1532	82	76	<85%	<85%	Negligible	
	Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	602	824	18	25	<85%	<85%	Negligible	
	Dodderview Road	9144	Dodderview Road / Fairways / Springfield Avenue	1599	1362	89	91	85%-100%	85%-100%	Negligible	
	Dundrum Road	19385	Bird Avenue / Dundrum Road	594	697	32	39	<85%	<85%	Negligible	
		11327	Dundrum Road / Milltown Bridge Road	997	1086	86	92	85%-100%	85%-100%	Negligible	
	Firhouse Road	21204	Firhouse Road / Spawell Link Road	1542	1556	92	85	85%-100%	85%-100%	Negligible	
	Grand Parade	6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespill Road	2480	2395	67	58	<85%	<85%	Negligible	
	Grange Road	19436	Grange Road / Stonemason's Way	1338	1587	56	96	<85%	85%-100%	Low	
		21175	Grange Road / Taylor's Lane	866	1059	50	60	<85%	<85%	Negligible	
	P.7	Ballyboden Road	21144	Ballyboden Road / Whitechurch Road / Willbrook Road	951	791	47	31	<85%	<85%	Negligible
		Belgrave Square North	11357	Belgrave Square East / Belgrave Square North / Charlestown Road / Mount Pleasant Avenue Upper	945	1036	68	47	<85%	<85%	Negligible
			61000	Belgrave Square North / Castlewood Avenue	0	810	0	23	<85%	<85%	Negligible
		Braemor Road	11297	Braemor Road / Lower Dodder Road	1099	1129	59	68	<85%	<85%	Negligible
		Castlewood Avenue	40073	Castlewood Avenue / Castlewood Park	516	678	15	28	<85%	<85%	Negligible
Leeson Street Upper	11136	Leeson Street Upper / Leeson Street Upper	640	869	35	47	<85%	<85%	Negligible		
P.8	Charlemont Street	6100	Charlemont Street / Charlemont Mall	836	945	51	55	<85%	<85%	Negligible	
	Charleston Road	11312	Charleston Road / Cullenswood Road	691	1057	17	32	<85%	<85%	Negligible	
	Leeson Street Upper	11131	Leeson Street Upper / Dartmouth Road	1060	1228	60	64	<85%	<85%	Negligible	
P.1	Leinster Road	11287	Charleville Road / Leinster Road	378	450	18	18	<85%	<85%	Negligible	
		11160	Leinster Road / Leinster Road West	240	391	10	13	<85%	<85%	Negligible	
	Limekiln Road	9186	Limekiln Avenue / Limekiln Road	360	436	24	40	<85%	<85%	Negligible	
	South Circular Road	7258	Dufferin Avenue / South Circular Road	1098	1248	46	58	<85%	<85%	Negligible	
	Wellington Road	9195	Limekiln Road / Wellington Road	1422	1560	69	85	<85%	<85%	Negligible	
P.2	Parnell Road	7211	Donore Avenue / Parnell Road	1583	1484	98	96	85%-100%	85%-100%	Negligible	
P.3	South Circular Road	6484	Emorville Avenue / South Circular Road	865	1079	32	46	<85%	<85%	Negligible	
		6134	South Circular Road / Bloomfield Avenue	846	1040	28	36	<85%	<85%	Negligible	
	6132	South Circular Road / Curzon Street	790	979	34	42	<85%	<85%	Negligible		
	6131	South Circular Road / Kingsland Park Avenue	946	1162	41	51	<85%	<85%	Negligible		
	7209	South Circular Road / Raymond Street	952	1109	35	40	<85%	<85%	Negligible		
	7208	South Circular Road / St Albans Road	1117	1267	32	37	<85%	<85%	Negligible		
	7213	Washington Street / South Circular Road	1000	1141	40	46	<85%	<85%	Negligible		
	Stephen Street Upper	6332	Stephen Street Upper / Great Ship Street	216	326	17	27	<85%	<85%	Negligible	
	P.4	Clareville Road	8133	Clareville Road / Larkfield Park	547	893	18	26	<85%	<85%	Negligible
		Golden Lane	6438	Chancery Lane / Golden Lane	504	648	20	21	<85%	<85%	Negligible
P.5	M50	16177	M50 Jct 10	3055	3111	89	91	85%-100%	85%-100%	Negligible	
	Wellington Lane	9163	Wellington Lane / Orwell Road Rbt	589	722	31	38	<85%	<85%	Negligible	
	Ballymount Avenue	16138	Ballymount Av / Calmount Rd Rbt	554	609	37	41	<85%	<85%	Negligible	
	Ballymount Road Lower	16145	Ballymount Avenue / Ballymount Road Lower	1135	1343	95	96	85%-100%	85%-100%	Negligible	
	Cianbrassil Street Lower	6220	Cianbrassil Street Lower / South Circular Road	2340	2591	100	101	>100%	>100%	Negligible	
	Clareville Road	8413	Clareville Road / Kenilworth Park	744	935	51	73	<85%	<85%	Negligible	
	Donore Avenue	7210	Donore Avenue / South Circular Road	1348	1506	85	95	<85%	85%-100%	Low	
	Greenhills Road	24220	Greenhills Road / Castletymon Road	1763	1804	119	124	>100%	>100%	Negligible	
	9157	Greenhills Road / Limekiln Road	1606	1710	94	99	85%-100%	85%-100%	Negligible		
	Grosvenor Place	11238	Grosvenor Place / Grosvenor Road	393	571	20	27	<85%	<85%	Negligible	

Figure 3.143.5 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 17

The assessment presented in Table 16 and 17 of Appendix A6.4.4 in Volume 4 of the EIAR, shows that the Proposed Scheme would result in negligible traffic impact on the operation of junctions in the vicinity of Camden Street as a result of the Proposed Scheme.

4. Removal of Loading Bays

As noted in section 6.4.6.1.1.4 of Chapter 6 of Volume 2 of the EIAR, the potential impacts of the Proposed Scheme on parking and loading provision have been assessed through a comparison of the availability of spaces or lengths of bay in the Do Minimum and Do Something scenarios. The assessment considers the impact of any changes on the general availability of parking and loading in the vicinity of the Proposed Scheme. This qualitative assessment has also taken into account nearby parking, which is defined as alternative parking locations along side roads within 200 – 250m of the Proposed Scheme.

The contents of Table 6.36 present a summary of the proposed changes to parking and loading along Section 4 of the Proposed Scheme.

Table 6.41: Section 4 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Number of Parking Spaces		
		Do Minimum	Do Something	Change
Rathmines Road Lower, between Rathmines Road Upper and Grove Road.	Loading Bay	4 loading bays (14 spaces)	6 loading bays (20 spaces)	+ 2 loading bays (+6 spaces)
Military Road	Loading Bay	1	1	0
	Informal Parking: pay and display residential	21	17	-4
Richmond Street South (between Lennox Street and Harcourt Road and Richmond Street)	Pay & display: commercial	8	8	0
	Loading Bays	3 loading bays (6 spaces)	3 loading bays (6 spaces)	0
Camden Street Lower (between Harcourt Road and Montague Street)	Pay & display: commercial	20	13	-7
	Disabled Bay	0	1	+1
	Loading Bay	4 loading bays (8 spaces)	5 loading bays (11 spaces)	+1 loading bay (+3 spaces)
Wexford Street	Loading Bay	2 loading bays (5 spaces)	1 loading bays (2 spaces)	-1 loading bays (-3 spaces)
	Pay & display: commercial	9	0	-9
	Disabled Bay	1	0	-1
Redmond's Hill	Loading Bay	1 loading bay (5 spaces)	1 loading bay (5 spaces)	0
Aungier Street	Loading Bay	3 loading bays (8 spaces)	2 loading bays (5 spaces)	-1 loading bays (-3 spaces)
South Great George's Street	Loading Bay	4 loading bays (11 spaces)	3 loading bays (8 spaces)	-1 loading bay (-3 spaces)
	Taxi Rank	5	5	0
Total		122	102	-20

Table 6.41 shows that in Camden Street Lower, there would be an increase of 1 loading bay as a result of the Proposed Scheme. Further along on Wexford St, there would be a loss of 1 loading bay. In total, there would be no net loss in dedicated loading bays along Camden Street Lower / Wexford Street.

In addition to these dedicated loading bays, it is noted that parking bays proposed along Camden Street Lower will operate as loading bays between the hours of 07:00 – 10:00 as illustrated on the Traffic Sign and Road Marking drawing provided in Volume 3 of the EIA with relevant extract presented below. This will provide further kerb space for loading activity in this area during peak periods.

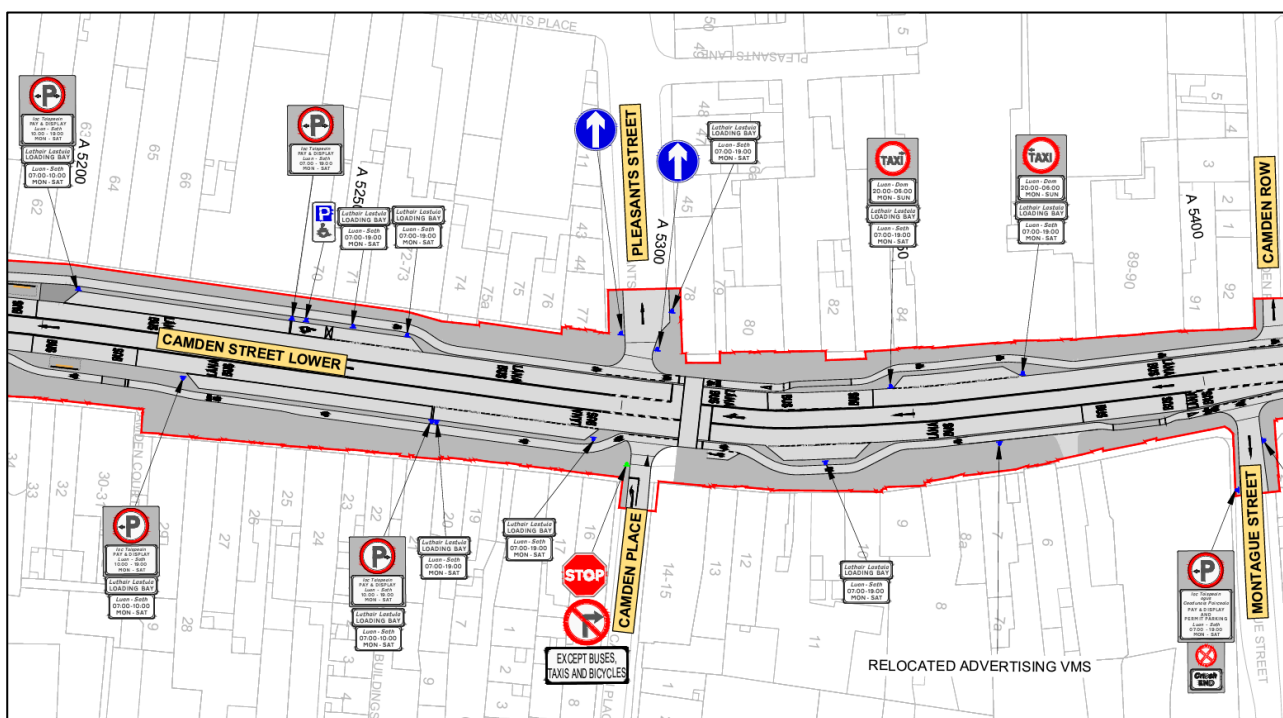


Figure 3.143.6 Extract from Traffic Signs and Road Markings Drawings (Sheet 16)

As noted in Section 6.4.6.1.5.4 of Chapter 6 Traffic and Transport of Volume 2 of the EIA:

As shown in Table 6.41, there are currently approximately 122 parking spaces affected along Section 4 of the Proposed Scheme and it is proposed that 20 of these spaces are removed. The Proposed Scheme will formalise the parking arrangements at these locations to improve the environment, particularly for pedestrians and cyclists. Given the local number of parking spaces being removed and availability of equivalent types of parking along adjacent streets within 200m of these locations (and typically within under 100m), the overall impact of this loss of parking is considered to have a **Negative, Slight and Long-term** effect. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.

3.144144 – Kerrie Glynn

3.144.1 Submission – Camden Street

1. Inadequacy of streets to accommodate additional traffic due to closure of Lennox Street

3.144.2 Response to submission

This submission is concerned that the closure of Lennox Street to traffic will redirect traffic along other roads in the immediate vicinity that are unsuitable for traffic.

As set out in Section 4.5.4 of the Chapter 4 EIA:

It is proposed to restrict movements into and out of Lennox Street to pedestrians and cyclists only through the introduction of planted buildouts. It is also proposed to upgrade the junction of Richmond Street South and Harrington Street through the provision of kerb protection for cyclists.

Figure 3.144.1 presents an extract of the General Arrangement Drawings at the Richmond Street/Lennox Street junction.

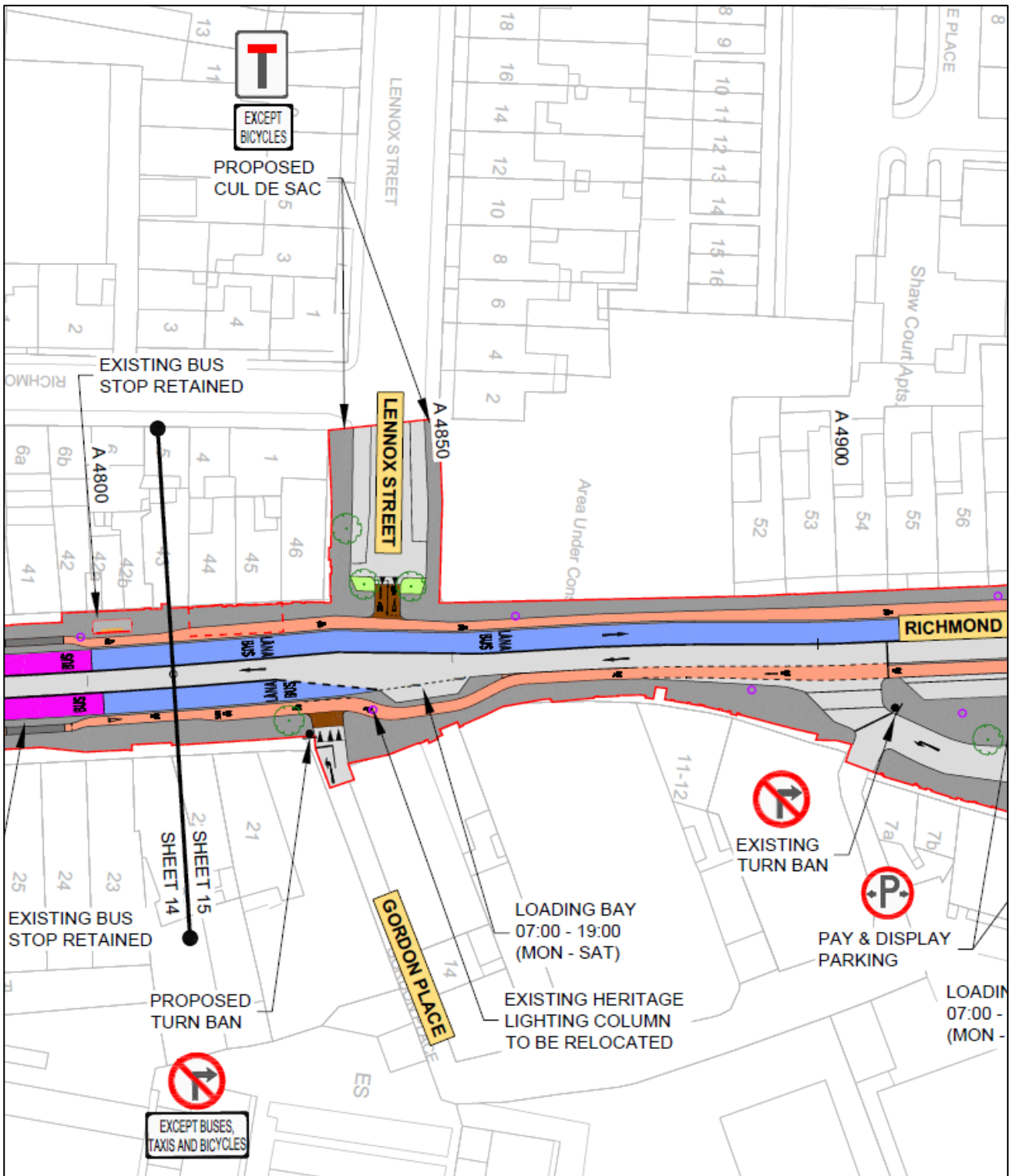


Figure 3.144.1 Extract from General Arrangement Drawings (Sheet 15)

This proposal has been incorporated to supplement the Proposed Scheme in this area by providing a better facility for cyclists and buses.

It is noted that the draft Preferred Route Option (PRO), was published for consultation in November 2020. As part of this proposal, it was proposed to introduce a one-way outbound general traffic regime on Richmond Street South to facilitate bus and cyclist priority through this section of the scheme. An extract from the draft PRO drawings, highlighting the section in question, is included in Figure 3.144.2.

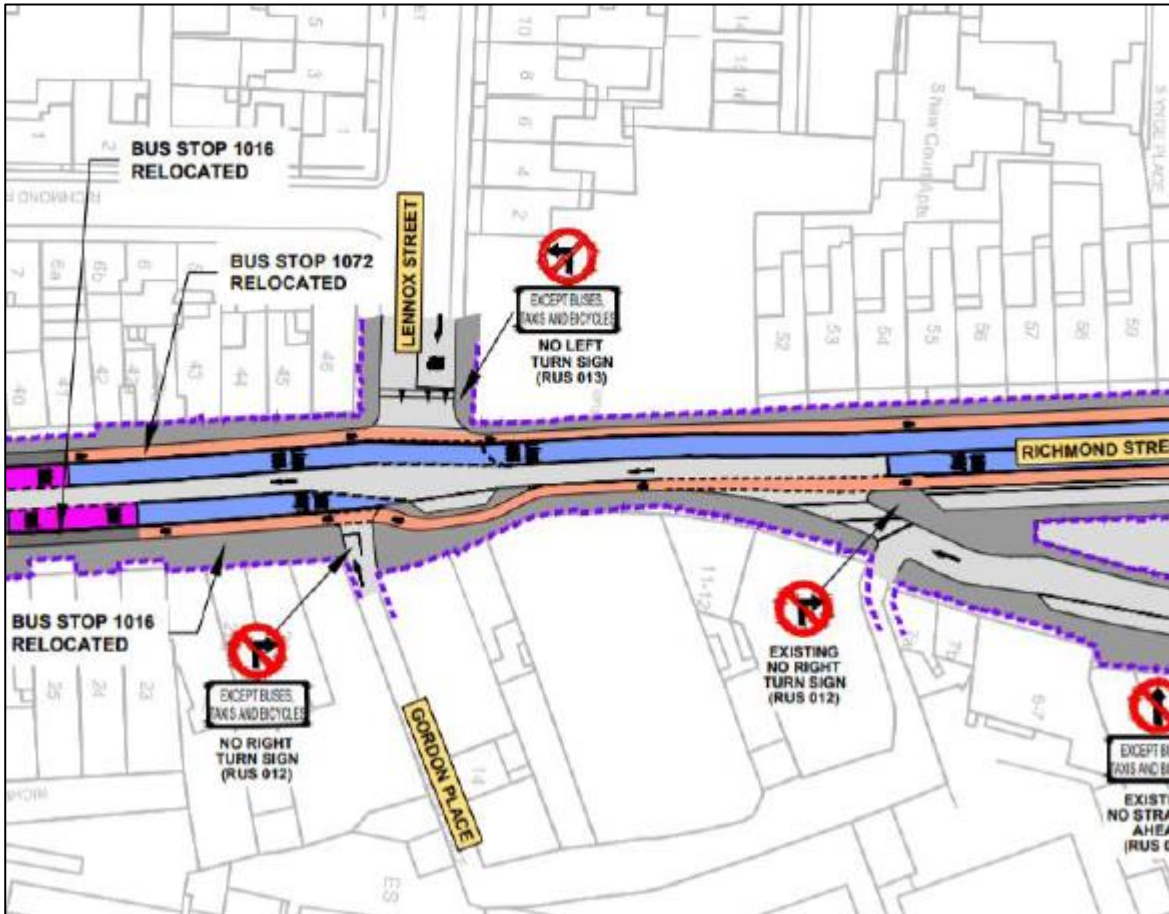


Figure 3.144.2 Extract from Draft PRO Drawings

As part of this proposal, it was proposed to introduce a ban on left-turning movements for general traffic exiting Lennox Street onto Richmond Street South. Vehicles would no longer be able to turn left into Lennox Street due to the removal of the northbound traffic lane at this location. However, following a more detailed review of this proposal it was identified that this would result in an increase in traffic on Lennox Street and other streets within the area and as such it was decided to close Lennox Street to general traffic.

As noted in the submission there are currently 10 vehicular access points to the area bounded by Richmond Street to the east, Harrington Street/South Circular Road to the north, Clanbrassil Street to the west and the Grand Canal to the south. This is considered to be an extremely permeable network of roads. The effect of this permeability is that traffic volumes in the area are well spread among the various access/egress points ensuring that no one road is overloaded.

With the closure of the Lennox Street/Richmond Street junction to traffic, a further 9 access points will remain to the area thereby retaining excellent vehicular permeability through this area. While it is noted that some of the roads are narrow, the permeability of the road network ensures that volumes on these roads are low and manageable within the constraints. It is noted that the traffic assessment presented in Chapter 6 of the EIAR does not identify any material changes to traffic flows on roads within the area currently served by Lennox Street (see Diagram 6.40 and 6.41 of Chapter 6 for further details).

3.145145 – Kieran Comerford

3.145.1 Submission – Rathmines

The submission raised the following issues:

1. Traffic
 - a. Impact on Access

2. Unnecessary change providing no real gains to bus travel times

3.145.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.146146 – Leah Donnelly and Others

3.146.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Location of site compound TR3
 - a. Loss of green area
 - b. Flooding
 - c. Impact the quality of resident's life.
 - d. Construction stage
 - i. Air pollution
 - ii. Dust
 - iii. Impact elderly residents
 - e. Alternation option
 - i. Alternative site should be considered.
 - f. Noise and air pollution

3.146.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report.

3.147147 – Leila Anglade

3.147.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic on Highfield Road
 - a. Increased volumes and congestion
2. Air pollution
3. Safety of vulnerable pedestrian, children and cyclist
4. Access to amenities
5. Proposed Footpath
 - a. Narrow footpath

6. Changes to work patterns due to the COVID-19 pandemic
7. Character of area
8. Architectural and cultural heritage
9. Alternative option
 - a. Metro
 - b. School buses

3.147.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.148148 – Liam Bell

3.148.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Removal of trees
2. Traffic data out of date due to Covid
3. Section 51 and CPO Application should not be made concurrently
4. NTA has not demonstrated need for the scheme and the CPO
5. Existing signal-controlled priority sufficient
6. Inadequate Consultation
7. Cost Benefit Analysis is Required
8. Implementation of other BusConnects measures first
9. Metro is more suitable for this corridor
10. Impact on Heritage Properties on Terenure Road East
11. Congestion at Terenure Cross due to proposed changes
12. Impact on Businesses due to loss of parking/loading
13. Bus Gate Hours of Operation
14. Proposed Cycle Facilities are Insufficient
15. Traffic Impact as a result of Traffic Management Measures
16. Traffic rerouting from current corridor to residential streets and impact on these streets
17. Traffic rerouting to other routes and resulting congestion (e.g. through Harold's Cross and Ranelagh)
18. New access routes to/from the city following implementation of traffic management measures
19. Cumulative Impact of Scheme with Adjacent BusConnects Schemes

3.148.2 Response to submission

This Objection raises the same concerns as submission 114. Please refer to Section 3.114 for responses to these items.

Further elaboration to item 1 is provided below.

1. Removal of trees

The submission notes that the proposals do not indicate the removal of trees within 63 Terenure Road East, 61 Terenure Road East, 60 Terenure Road East (Beaumont House), and a tree in 59 Terenure Road East (Argos House).

The Landscape General Arrangement drawings in Volume 3 of the EIAR identify trees required to be removed to facilitate the Proposed Scheme. An extract of the area of interest is presented below:

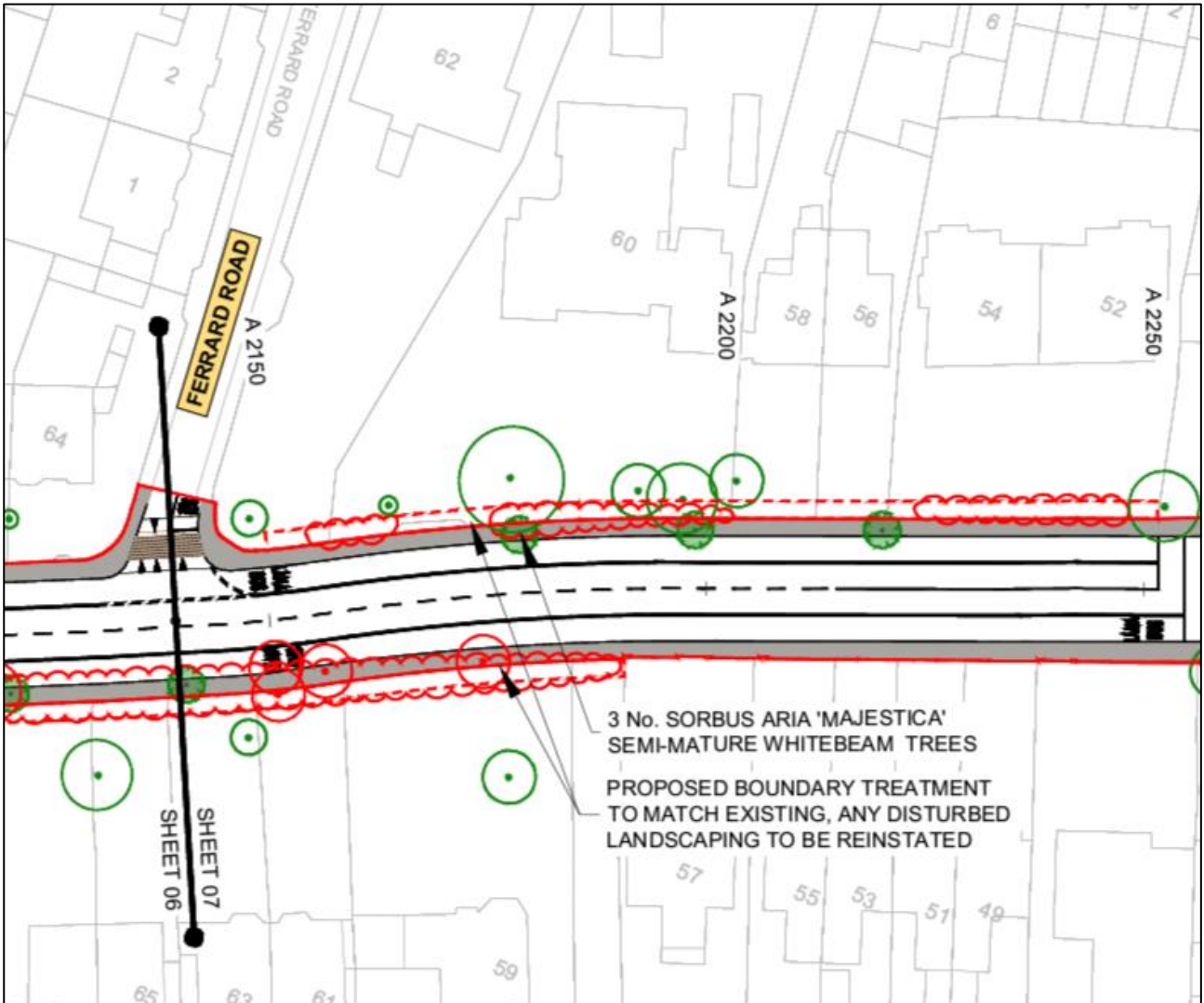


Figure 3.148.1 Landscape General Arrangement Drawings at Terenure Road East

In order to assess the impact of the Proposed Schemes on trees, a tree survey was undertaken in August 2020. The survey and resulting assessment of the impact of the scheme is presented in the Arboricultural Impact Assessment Report, which is included as Appendix A17.1 of EIAR. The methodology for the survey is set out in section 1.2 of Appendix A17.1

“An initial tree survey and visual condition assessment was undertaken on the 24th and 25th of August 2020. As part of this report and in accordance with BS 5837: 2012 Trees in relation to design, demolition and construction - recommendations, only trees with diameters of 75mm or greater were surveyed. Also, in accordance with section 4.4.2.3 of the British standard document, where trees formed obvious groups, these were assessed and recorded as groups. The survey commenced at the junction of Grange Road and Nutgrove avenue, and at Junction 11 of the M50 and finished at Dame Street, including the Terenure Road North / Harold’s Cross Road section and the Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road section of the Proposed Scheme.”

In relation to 63 Terenure Road East, no trees are identified for removal. While there are a number of small trees to west of the vehicular entrance close to the boundary wall, the diameters of these were less than 75mm and as such were not surveyed.

In terms of 61 Terenure Road East, 3 no. trees are identified for removal.

In terms of 60 Terenure Road East (Beaumont House) no trees are identified for removal.

A response to trees in Argos House is provided in Section 3.114.

3.149149 – Liam Fitzgerald

3.149.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Highfield Road
2. Biodiversity
 - a. Destruction of trees
3. Noise and air pollution
4. Unnecessary change providing no real gains.

3.149.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.150150 – Linda Hackett

3.150.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased traffic on Highfield Road
2. Cycle tracks
 - a. None proposed for Highfield Road
3. Proposed turn bans
 - a. Turn ban from Upper Rathmines to Highfield Road to be removed.
4. Access to amenities

3.150.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.151151 – Linda Patton

3.151.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Negative effect on businesses
3. Proposed bus gates
 - a. Limit hours of operation
 - b. Impact on local vehicular access
4. Traffic
 - a. Increased volumes and congestion on roads around Terenure
5. Pre-COVID traffic volumes used in analysis.
6. Lack of consultation
7. No assessment of cumulative impact of 12 corridors
8. Alternative options
 - a. Metro
 - b. Park and Ride
9. Access to amenities
10. Delivery access
11. Cycle tracks
 - a. Poor routing
12. Biodiversity
 - a. Flora and fauna

3.151.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.152152 – Lissonfield Management Company CLG

3.152.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Rathmines Road
2. Proposed turn bans
 - a. Right turn from Lissenfield to Rathmines Road Lower
3. Access to amenities
4. Alternative options
 - a. Eliminate proposed Rathmines Road bus gate.
 - b. Relocate proposed bus gate north of Church of Mary Immaculate, Refuge of Sinners

- c. Eliminate proposed Lissenfield to Rathmines Road Lower right turn bans.
5. Access to Church of Mary Immaculate, Refuge of Sinners

3.152.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.153153 – Lorna Callanan

3.153.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Driveway gradients
2. Road widening and Consideration of alternatives
 - a. Shared outbound cycle and bus lane
 - b. Off-line cycle alternative, including a new cycle bridge of the Dodder adjacent to Rathdown Park
 - c. One-way systems and bus gates
 - d. “Dovetailing bus lanes’ North of Bushy Park
3. Existing Signal Controlled Priority on Terenure Road East is Adequate
4. Impact on Heritage Properties on Terenure Road East
5. Benefits of Scheme do not justify the impacts
6. Consideration of alternative transport solutions (Luas or Metro)
7. Park and Ride Facilities
8. Cumulative traffic impact
9. Commercial traffic
10. Templeogue Road Bus Gate
11. Turning Bans
12. Contravention of Dublin City Development Plan
13. Terenure Village – Public Realm

3.153.2 Response to submission

1. Driveway Gradients

As set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has

been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

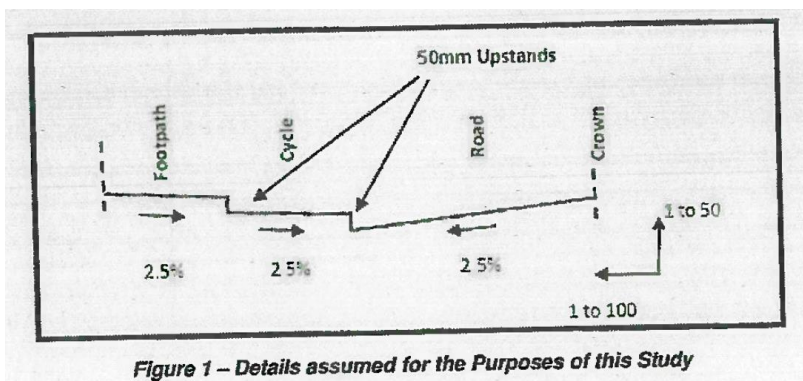
This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable. In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

Notwithstanding the above, it is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road by c. 0.15m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR);
- Providing footpath cross-fall gradient above that which is typically provided for new built schemes, however not exceeding the existing gradient.

In terms of the submission calculations prepared by NRB; it is important to note that these have been based on an assumed road cross-section as set out below in figure 1 of their submission - *Details assumed for the Purpose of this Study*.



As noted earlier, in order to minimise impacts on adjacent properties, existing footpath gradients are being retained (which are significantly greater than the above in some cases) so the underlying assumption above is incorrect.

It is further noted the NRB calculations also used the proposed centreline level of 43.961, taken at chainage A 1460 from the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR. While the chainage A 1460 is adjacent to 55 Rathfarnham Road it is located to the south of the property plot, rather than at the driveway location which is to the north which is of most relevance to the points being raised. The proposed centreline level at chainage A 1464 is 44.03, some 0.069m higher than the value used by NRB in their assessment.

So, in summary, the assessment is based on a proposed level at chainage A 1460 which is 4m away from the driveway.

The factors outlined above contribute to an inaccurate estimate of the proposed level at the back of the new footpath and therefore misrepresents the effect of the Proposed Scheme on the driveway gradients. It is

noted that the NRB assessment indicated that the gradients in the driveway to 55 Rathfarnham Road would be improved as a result of the Proposed Scheme, but this is not the case – existing gradients within the property will be retained as per the existing situation.

In relation to table 1 – *Summary of Design Review of Access Gradients*, included in the appended report by NRB Consulting Engineer which includes a summary of increased driveway gradients between Nos 55-71 Rathfarnham Road. A detailed response to each CPO submission received in relation to driveway gradients, where the NRB assessment concluded that the driveway gradient is either *steeper or significantly steeper*, has been prepared. The response to this submission can be found in the response to points of objection of CPO-01, CPO-19, CPO-25, CPO-30 and CPO-36.

In summary, the Proposed Scheme design has fully considered the engineering requirements along Rathfarnham Road to both minimise the impact of the Proposed Scheme on adjacent properties and facilitate no increase to the maximum gradients within these properties.

2. Road widening and Consideration of alternatives.

A detailed response to the optioneering process completed for Rathfarnham Road is presented in Section 2.3.2.

Alternative recommendation a - Shared outbound cycle and bus lane

In relation to the alternative proposal mentioned in the submission, which would include an inbound segregated cycle track and shared outbound lane between buses and cyclists. To accommodate the shared bus and cycle facility in the outbound direction, a southbound bus lane would be required between Rathdown Park and Dodder View Road. However, this adjustment would require the removal of the inbound bus lane.

The bus priority setup proposed for outbound buses between Rathdown Park and Dodder View Road as part of the Proposed Scheme relies on signal-controlled bus priority at the Bushy Park Road junction. Outbound buses subsequently transition into a dedicated bus lane starting south of Westbourne Road, approximately 200m from the bus priority. Inbound buses, on the other hand, receive priority at the Dodder View Road junction through signal-controlled bus priority and then merge into a dedicated bus lane 130m north of the Dodder View Road.

It's important to note that for this signal-controlled priority to function optimally, a bus lane is required at the approach to each junction. If the proposed outbound bus lane is implemented, leading to the removal of the inbound bus lane, this would result in the loss of signal-controlled priority. It is important to recognise that signal-controlled priority is effective only over a short distance and where there is limited access to the route from side roads. Given this alternative would require bus priority to be controlled over 380m with a complex junction in the middle at Rathfarnham Road/Rathdown Drive/Bushy Park Road. For these reasons, this alternative proposal was not considered to be a feasible option.

It is an objective of the Proposed Scheme to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable, and it is proposed on Rathfarnham Road to widen the existing carriageway to accommodate enhanced bus, cycle and pedestrian facilities along the corridor to achieve this objective.

For these reasons, this alternative proposal was not considered to be a feasible option.

Alternative recommendation b - Off-line cycle alternative, including a new cycle bridge of the Dodder adjacent to Rathdown Park.

In response to the recommendation made in the submission including an offline cycle facility including a new cycle bridge over the Dodder into Rathdown Park. Section 3.4.1.1.2.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives describes the assessment of parallel cycle route options following the completion of the Public Consultation in relation to the Emerging Preferred Route. 10 Parallel Cycle Route Options were assessed (PC1 to PC10) between Grange Road and Rathdown Park. Following a detailed Multi-Criteria Analysis (MCA), sub-option PC8 was identified as the preferred option. As detailed in section 3.4.3.2 of Chapter 3, following the second round of Public Consultation additional 9 options (RF1 to RF9) between Grange Road and Rathdown Park were developed and assessed. The parallel cycle route sub-option PC2 was further incorporated into sub-option RF2:

Option RF2: Two bus lanes and two general traffic lanes provided on Rathfarnham Road south of Brookvale Road with cyclists diverted to the preferred parallel route as identified during the initial assessment of parallel

cycle route options of the route selection process. Between Brookvale Road and the River Dodder, two general traffic lanes and an inbound bus lane would be provided with outbound bus priority being maintained through use of signal-controlled priority. Two bus lanes, two general traffic lanes on Rathfarnham Road north of the River Dodder as far as Terenure Cross with two 1.5m wide cycle tracks provided north of Rathdown Park where the parallel cycle route re-joins the CBC;

Following a detailed MCA, option RF5 was identified as the preferred option as it best aligned with the objectives of the Proposed Scheme by balancing the provision of physical bus priority and segregated cycle with engineering and construction constraints.

In terms of the sub-criteria under the Environment criterion, Option RF5 performed marginally better than other options in terms of Archaeology and Cultural Heritage due to fact that this option would not impact on Pearse Bridge. In terms of Architectural Heritage, RF5 performed marginally better than other options as it would not impact on Pearse Bridge or Rathfarnham War Memorial Hall. Option RF5 performed significantly better than other options under the Flora and Fauna criterion due to the significantly fewer number of trees impacted. In terms of Landscape and Visual, Option RF5 performed significantly better than other options due to the impacts associated with the construction of a new bridge crossing the River Dodder. In terms of Air Quality and Noise and Vibration, Option RF5 performed marginally worse than other options due to the fact that traffic is not diverted from the main CBC. Under all other criteria, Option RF5 performed equally to the other options.

Further assessment of the sub-options is included in section 4.4.1.2.4 of the Preferred Route Option Report included in the supplementary documents:

In terms of Capital Cost, Options RF2 would be the most expensive option due to the significant infrastructure costs associated with delivering the alternative cycle facilities coupled with land acquisition costs. Option RF9 would have a higher cost than other options, but slightly lower than RF2 due to lower levels of land acquisition.

Options RF1, RF2 and RF9 perform worse than other options under flora and fauna due to the significantly higher number of trees that would be impacted. These trees would be impacted due to road widening that would be required to deliver these options, as well as the construction of the boardwalk at the Pearse bridge and the parallel cycle route, respectively.

In addition to the impact on trees, Option RF2 and RF9 would have the potential to impact on the habitats of bats, badgers, otters and kingfishers which are present in the vicinity of the proposed bridge locations.

Options RF2 and RF9 perform the worst under the landscape and visual criterion due to the likely impacts that would be associated with the construction of new bridge structures as well as the land acquisition impacts. All remaining options perform the best under this criterion as they would not require the construction of new bridge structures.

Further details on the large number of options considered in this area is presented in 2.3.3.

Alternative recommendation c - One-way systems and bus gates

In response to the recommendation made in the submission relating an alternative option consisting of one-way systems or bus gates. Section 4.4.1.2.3.2.1 of the Preferred Route Option Report, included in the supplementary documents alongside the planning application describes options considered in between Grange Road and Terenure Cross but were not carried forward. Both options consisted of bus gates along Rathfarnham Road.

Option of a bus gate along Rathfarnham Road between Castleside Drive and Dodder Park Road. This option was not considered practicable as through traffic would be required to undertake a diversion of up to 2km to continue beyond the bus gate, resulting in a route almost four times as long when compared to the most direct route. Similarly, local access for residents along Rathfarnham Road could be increased by up to 2.5km resulting in a route almost 10 times as long for some residents compared to the most direct route. This diversion length is considered to be too disruptive in this area and as such a bus gate at this location was not considered further.

Option of a bus gate along Rathfarnham Road between Dodder Park Road and Rathdown Park.

A variety of bus gate options were considered in this area. A two-way bus gate was not considered practicable as through traffic in each direction would be required to undertake a diversion of up to 3km to

continue beyond the bus gate, resulting in a route almost six times as long when compared to the most direct route.

Similarly, local access for residents along Rathfarnham Road could be increased by up to 2.5km resulting in a route over 10 times as long for some residents compared to the most direct route.

Given the constraints in this area, the provision of a one-way bus gate in this location was given further consideration. In light of the proposal to provide an inbound bus gate along Templeogue Road (where physical space is not available for other options) as part of the Templeogue to Terenure section, an outbound bus gate was considered to be the most appropriate option, and this option was brought through to the MCA.

As noted above, a bus gate option was progressed to the MCA as detailed below.

Option RF7: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Main Street Rathfarnham and Terenure Cross. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. An outbound bus gate provided on Rathfarnham Road, north of Dodder Park Road.

The submission suggests that the Proposed Scheme has been designed to facilitate increased traffic associated with traffic rerouting from bus gates on Templeogue Road and the Kimmage to City Centre Scheme. However, the traffic assessment shows that in both the standalone scheme assessment, and the cumulative assessment, traffic volumes along Rathfarnham Road will either reduce compared the do-minimum scenarios or result in no material change. Further details on the traffic volumes along Rathfarnham Road for the standalone scheme assessment and the cumulative assessment are presented in Section 2.3.3 and 2.1.1 respectively.

Alternative recommendation d - "Dovetailing bus lanes' north of Bushy Park

The submission suggests that between Bushy Park Road and Beechlawn Way the provision of dovetailing bus lanes (partially inbound and partially outbound) would eliminate the need for land acquisition and provide effective bus priority.

As outlined in the submission, this option would provide 125m of inbound bus lane on approach to Terenure Road East and 125m of outbound bus lane on approach to Bushy Park Road. This option is not considered appropriate for the following reasons:

- Inbound bus lane would be reduced from c.250m to 125m. Reduction in physical inbound priority, in combination with bus priority signals at both Rathdown Drive and Dodder Park Road introduces a risk to bus journey times and journey time reliability;
- Outbound bus lane would be reduced from c. 160m to 125m. Maximum amount of physical outbound priority required in this area in order to manage priority signal from Terenure Road East and through Terenure Cross. Any extension of the distance between the bus priority signal at St. Joseph's and the bus lane on Rathfarnham Road would significantly compromise bus journey times and journey time reliability through this section.

It is noted that this option would not remove the need for land take through this section.

3. Existing Signal Controlled Priority on Terenure Road East is Adequate

A detailed response to this item is included in Section 2.4.3.

4. Impact on Heritage Properties on Terenure Road East

A detailed response to this item is included in Section 2.4.3.

5. Benefits of Scheme do not justify the impacts

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

"Enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme.

The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.”

Section 2.4 notes the following:

The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical double-deck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e., walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is an increase of 123% in the number of people travelling by bus, an increase of 79% in people walking or cycling, and a reduction of 30% in the number of people travelling by car along the route of the Proposed Scheme. This is summarised in Image 2.12.

6. Consideration of alternative transport solutions (Luas or Metro)

A detailed response to this item is provided in section 2.1.1.

7. Park and Ride Facilities

A detailed response to this item is provided in section 2.1.1.

8. Cumulative traffic impact

A detailed response to this item is provided in section 2.1.1.

9. Commercial traffic

In relation the claim made in the submission stating that commercial traffic behaviour, and therefore traffic impacts, have not been considered in the EIAR.

EIAR Volume 2 Chapter 6 Traffic & Transport *considered the potential traffic & transport impacts associated with the Construction and Operational Phases of the Templeogue / Rathfarnham to City Centre Core Bus Corridor Scheme (hereafter referred to as the Proposed Scheme).*

The traffic and transport assessment developed for the Proposed Scheme has taken into account a growth in economic activity along the route and subsequently the increase in good vehicles (HGVs and LGVs). Section 6.4.6.1.15.1 of EIAR Chapter:

The assessment also assumes that goods vehicles (HGVs and LGVs) continue to grow in line with forecasted economic activity with patterns of travel remaining the same. For example, the assessment assumes a 45% and 77% increase in goods traffic versus the base year in 2028 and 2043 respectively. This is considered a very conservative assumption.

It is not expected that the Proposed Scheme will not have any adverse effects on the accessibility of commercial vehicles to local villages and businesses with access by vehicle retained to all destinations but by alternative routes compared to the current situation. These routes are explained in section 2.2.3, 2.4.3 and 2.5.3.

In relation to the concern raised regarding rerouting of Heavy Good Vehicles through suitable road.

The Traffic Signs and Road Markings Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR present the signage to be included as part of the proposed scheme. The signage strategy, in combination with the supplementary traffic management measures ensure that traffic, including commercial vehicles, are limited to roads suitable for dealing with the traffic.

10. Impact of Templeogue Road Bus Gate

A detailed response to this item is provided in Section 2.2.3.

11. Turning Bans from Templeogue Road to Rathdown Avenue and Rathdown Park.

A detailed response to this item is provided in Section 2.2.3.

12. Contravention of Dublin City Development Plan

The submission noted that the houses and front gardens on Rathfarnham Road are designated as Z2 – Residential Neighbourhoods (Conservation Areas), and therefore the proposed road widening of the road space along the fronts of the houses is a material contravention of the Dublin City Development Plan.

Section 16.3.1.5 of EIAR Volume 2 Chapter 16 Architectural Heritage describes Conservation Areas in the context of the Dublin City Development Plan 2022-2028 (DCC (2022)).

Conservation Areas are areas which, while not to be confused with ACAs, do afford some protection to the architectural heritage under the Dublin City Development Plan 2022-2028 (DCC 2022), specifically under PolicyBHA9:

'To protect the special interest and character of all Dublin's Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. Enhancement opportunities may include:

- 1. Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting.*
- 2. Re-instatement of missing architectural detail or important features.*
- 3. Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns.*
- 4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area.*
- 5. Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area.*
- 6. Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting. The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications, and will promote compatible uses which ensure future long-term viability'.*

Policy BHA10 states: 'There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit'.

A review of the Dublin City Development Plan 2016 to 2022 (DCC 2016a) indicates that the Proposed Scheme traverses through four CAs. These areas contain structures of Local to National importance and of Low to High Sensitivity. They are described briefly in Table: 16.8 and Section 16.3.1.5.1 to Section 16.3.1.5.4. Further information on each CA is provided in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. There are no equivalent Conservation Areas in the South Dublin or in Dún Laoghaire-Rathdown.

The status of the buildings in this area is acknowledged and assessed in the EIAR.

The proposed land take on the west side of the Rathfarnham Road will directly impact the boundary treatments to 51 to 71 Rathfarnham Road (CBC1012BTH039, CBC1012BTH040) which are of low sensitivity. These largely consist of cement rendered walls and piers with concrete cappings. Although some interventions have occurred in the past such as the widening of gateways, the boundary treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries would have a negative impact. The pre-mitigation Construction Phase impact will be Direct, Negative, Slight Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking-down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Not Significant, Temporary

13. Terenure Village – Public Realm

Urban realm refers to the everyday street spaces that are used by people to shop, socialise, play, and use for activities such as walking, exercise, or commute to/from work. The urban realm encompasses all streets, squares, junctions, and other rights-of-way, whether in residential, commercial, or civic use. When well designed and laid out with care in a community setting, it enhances the everyday lives of residents and those passing through. It typically relates to all open-air parts of the built environment where the public has free access. It would include seating, trees, planting, and other aspects to enhance the experience for all.

The landscape design for the Proposed Scheme is depicted on the Landscaping General Arrangement Drawings, in EIAR Volume 3. The specific design for Terenure Village is outlined in the extract below. The design intent at Terenure Village aims to improve the streetscape by replacing concrete footpaths with high quality paving, reinstating granite kerbs, planting of semi-mature street trees (9 No.), and incorporating stone/concrete sett paving at pedestrian crossing, loading bays and access roads. Terenure Road East will incorporate wider footpaths within the village core and reduced carriageways so as to enhance pedestrian facilities. Widened footpaths will be built using quality material commensurate with that of the built context of the village so as to enhance the character of the village locality.

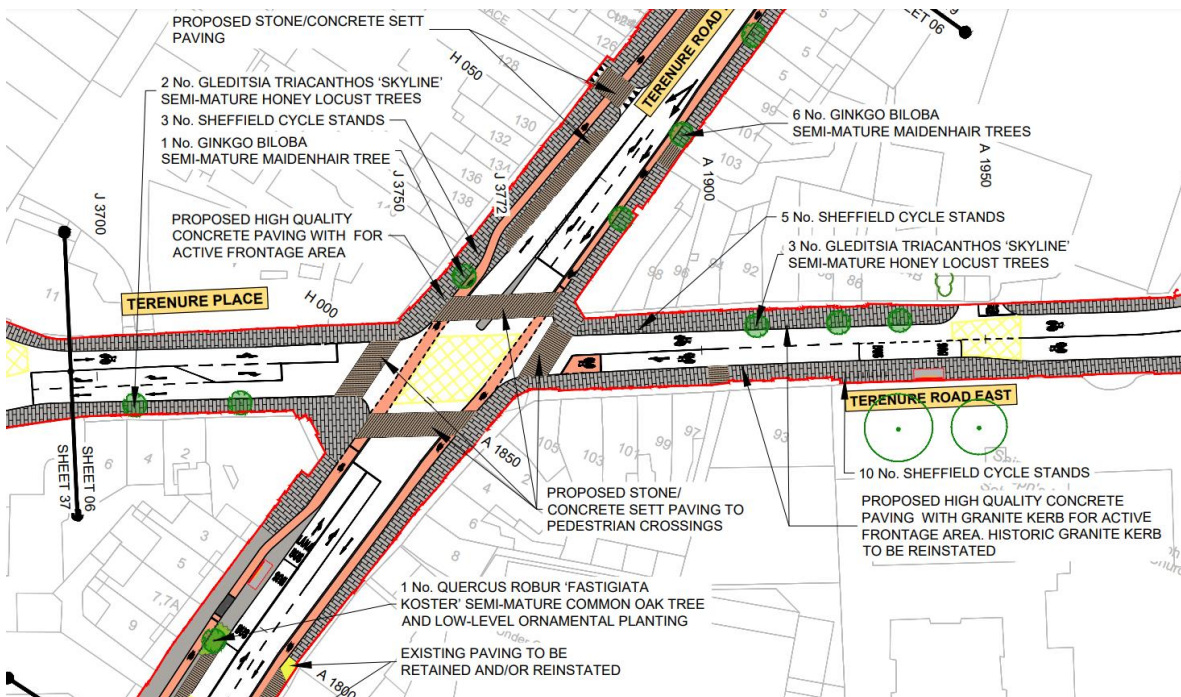


Figure 3.153.1 Landscaping General Arrangement Drawings (Sheet 06 of 37)

The proposed footpath width directly outside nos. 128 to 138 Terenure Road North, next to the reconfigured loading bay and on-street parking, is between 2.2 and 3.0m which is above the Design Manual for Urban Roads and Streets (DMRUS) recommended desirable footpath width of 2.0m and only marginally narrower than the existing width of 2.3 to 3.2m. However this proposal provides significantly enhanced cycle facilities through this area.

3.154154 – Macdara O Morain

3.154.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Minimal improvements to bus journey times
2. Impact on Architectural and Cultural Heritage
3. Biodiversity
 - a. Removal of trees
 - b. Flora and fauna
4. Increased Emissions and Noise
5. Compulsory purchase of property
6. Traffic diverted to residential streets.
7. Loss of on-street parking and impact on businesses
8. Width of proposed footpaths
9. Pre-COVID traffic volumes used in analysis.
10. Relocation of inbound bus stop to 77 - 80 Rathgar Road
11. Consideration of Alternatives
 - a. Metro
 - b. School buses
 - c. Cashless fare payment
 - d. Park and ride facilities
 - e. Bus priority signals
12. Routing of buses via Harold's Cross Road
13. Assessment of cumulative impact of 12 corridors
14. Separate consultation for CBC10 and CBC12
15. Proposed bus gate at Rathmines Road

3.154.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.155155 – Maire O'Kelly

3.155.1 Submission – Rathmines

The submission raised the following issues:

1. Access to Church of Mary Immaculate, Refuge of Sinners

3.155.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.156156 – Malachy & Jackie Farrell

3.156.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gate on Rathmines Road
 - a. Allow access for bin trucks.
 - b. Limit hours of operation
2. Suggested solutions
 - a. Add yellow box at Grove Road and Grove Park
 - b. Add mini roundabout at Mount Pleasant Road Lower and Canal Road
 - c. Add roundabout at Lissenfield and Rathmines Road Lower
 - d. Reduce speed limit on Rathmines Road Lower to 30 km/hr
3. Vibration and noise pollution
 - a. Study inadequate as based on Covid traffic volumes.
4. Construction hours

3.156.2 Response to submission

Detailed responses to most of the issues raised by this submission have been provided in Section 2.5.3 of this report.

In relation for the various alternative solutions suggested:

- It is not considered that the Proposed Scheme will result in the need for a yellow box at this location. However, should an issue with access be identified in future, a yellow box may be considered appropriate and could be installed by the local authority. It is noted that the Proposed Scheme would not preclude this being introduced.
- A mini-roundabout is not required at the junction of Mount Pleasant Road Lower and Canal Road or the junction of Lissenfield and Rathmines Road Lower, to facilitate the Proposed Scheme.
- The speed limit along Rathmines Road Lower will be reduced to 30km/hr as a result of the Proposed Scheme.
- Access to properties for refuse collection and deliveries will be retained during the hours of operation of the bus gate, but will be via different routes to the current situation.

3.157157 – Marcus Purcell & Family

3.157.1 Submission – Whole Scheme

The submission raised the following issues:

1. Driveway Gradients
2. Necessity of Road Widening
3. Congestion from bus priority on Rathfarnham Road
4. Clarification on Temporary Acquisition

5. Removal and replacement of Trees
6. Traffic data out of date due to Covid
7. Section 51 and CPO Application should not be made concurrently
8. NTA has not demonstrated need for the scheme and the CPO
9. Existing signal-controlled priority sufficient
10. Inadequate Consultation
11. Cost Benefit Analysis is Required
12. Implementation of other BusConnects measures first
13. Metro is more suitable for this corridor
14. Impact on Heritage Properties on Terenure Road East
15. Congestion at Terenure Cross due to proposed changes
16. Impact on Businesses due to loss of parking/loading
17. Bus Gate Hours of Operation
18. Proposed Cycle Facilities are Insufficient
19. Traffic Impact as a result of Traffic Management Measures
20. Cumulative Impact of Scheme with Adjacent BusConnects Schemes

3.157.2 Response to submission

This Objection raises the same concerns as Submission 38 and Submission 114. Please refer to Submission 38 in Section 3.38 above for responses to items 2, 3 and 5 and to CPO-20 in Section 3.114 for responses to items 6 to 20. Items 1 and 4 are responded to below.

1. Driveway Gradients

As set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable. In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban

areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

It is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road by c. 0.06m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR);
- Retaining existing footpath gradient at this location;
- Regrading within the property over a distance of 9.6m which would result in a gradient no greater than the maximum existing gradient within the property. It is noted that this is incorporated into the temporary land acquisition presented in the Deposit Maps.

In terms of the submission calculations prepared by NRB, it is important to note that these have been based on an assumed road cross-section as set out below in figure 1 of their submission - *Details assumed for the Purpose of this Study*.

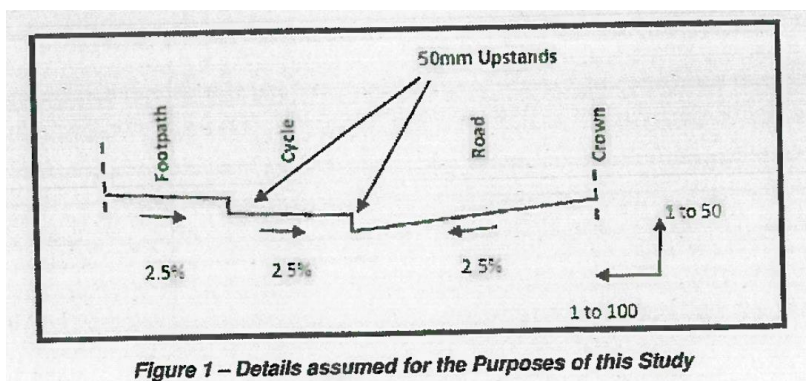


Figure 1 – Details assumed for the Purposes of this Study

As noted earlier, in order to minimise impacts on adjacent properties, existing footpath gradients are being retained (which are significantly greater than the above in some cases) so the underlying assumption above is incorrect.

It is further noted the NRB calculations also used the proposed centreline level of 42.491, taken at chainage A 1400 from the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR. Chainage A 1400 is located adjacent to Rathfarnham Road No. 57, rather than at the driveway location which is to the south which is of most relevance to the points being raised. The assessment is based on a proposed road level which is 12m away from the driveway.

Furthermore, as part of the assessment, it is assumed that the calculation used the existing centreline level which was taken between the boundary of No. 65 and 67, since the existing centreline level used in the NRB assessment (42.32) is 0.01m or 10mm above the value shown in the extract below. As can be seen in the extract from the NRB Assessment submitted to the NTA as part of the Emerging Preferred Route (EPR) consultation, the existing centreline level of 43.32 which was used in the assessment is some 8m away from the driveway which is of relevance to the points being raised.

2. Character of area
3. Access to amenities
4. Biodiversity
 - a. Destruction of trees
5. Architectural and cultural heritage
 - a. Walls, railings and gates
6. Pre-COVID traffic volumes used in analysis.
7. Alternative options
 - a. Congestion charges
 - b. Increased parking fees
 - c. Reduced public transport fares.
8. Access to amenities on Rathmines Road
 - a. Access around Charleville Road
9. Turn bans.
 - a. Allow left turn from Rathmines Road to Castlewood Avenue
10. Proposed bus gates
 - a. Rathmines Road
 - b. Limit hours of operation
11. Access to Church of Mary Immaculate, Refuge of Sinners
12. Traffic
 - a. Traffic diverted to Richmond Hill and Mountpleasant Avenue
 - b. Traffic diverted to Ranelagh Road

3.158.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.159159 – Margaret Silke

3.159.1 Submission – Whole Scheme

The submission raised the following issues:

1. Traffic data out of date due to Covid
2. Section 51 and CPO Application should not be made concurrently
3. NTA has not demonstrated need for the scheme and the CPO
4. Existing signal-controlled priority sufficient
5. Inadequate Consultation
6. Cost Benefit Analysis is Required
7. Implementation of other BusConnects measures first
8. Metro is more suitable for this corridor

9. Impact on Heritage Properties on Terenure Road East
10. Congestion at Terenure Cross due to proposed changes
11. Impact on Businesses due to loss of parking/loading
12. Bus Gate Hours of Operation
13. Proposed Cycle Facilities are Insufficient
14. Traffic Impact as a result of Traffic Management Measures
 - a. Traffic rerouting from current corridor to residential streets and impact on these streets
 - b. Traffic rerouting to other routes and resulting congestion (e.g. through Harold's Cross and Ranelagh)
 - c. New access routes to/from the city following implementation of traffic management measures
15. Cumulative Impact of Scheme with Adjacent BusConnects Schemes

3.159.2 Response to submission

This Objection raises the same concerns as Submission 114. Please refer to refer to Section 3.114 for responses to these items.

3.160160 – Mari O'Leary

3.160.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Pre-COVID traffic volumes used in analysis.
3. Alternative options
 - a. Harolds Cross Road
 - b. Priority bus signals
 - c. Cashless fare payment
 - d. Park and ride facilities
 - e. Congestion charges
4. Biodiversity
 - a. Destruction of trees
5. Architectural and cultural heritage
6. Access to amenities
7. One-way operation of Rathgar Road
8. Traffic
 - a. Increased volumes on local streets
9. Proposed footpaths
 - a. Narrow widths
10. Bus stops
 - a. Relocations

11. Access to Church of Mary Immaculate, Refuge of Sinners

3.160.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.161161 – Maria Blair

3.161.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Necessity of road widening
2. Removal of tree
3. No consideration of Glin River
4. Consideration of alternative options
 - a. Terminate Proposed Scheme at Butterfield Avenue – the submission suggests stopping the scheme at the Butterfield Avenue junction to avoid impacting the Rathfarnham Castle Park
 - b. Acquire land from the houses on the southern side of Grange Road
 - c. Cyclists share bus lanes as proposed elsewhere on the scheme
5. Climate Impact of Tree Removal
6. Biodiversity Impact
7. Landscape and Visual
8. Noise, Vibration and Air Quality
9. Replacement of the Castle Wall
10. Impact on woodland playground
11. Request to improve Nutgrove Avenue cycle facilities
12. Bus Stops
13. Courtyard/stables redevelopment
14. Nutgrove Avenue/Grange Road Junction Signals

3.161.2 Response to submission

Items 3 – 15 raises the same concerns as Submission 40. Please refer to Section 3.40 for responses to these items. See below for response to item 1 and 2.

1. Necessity of road widening and Optioneering

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

For the section between adjacent to 11 Rathfarnham Road, three options (SA1 to SA3) have been developed during the development of the Emerging Preferred Route (EPR). The assessment process of three options is described in section 5.4 of the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment (FSOA), included in appendix I2 of the supplementary documents submitted alongside the planning application.

Following the review of the EPR and submissions received as part of the public consultation within the section between Nutgrove Avenue to Willbrook Road, it was decided that alternative options could be feasible within this section of the Proposed Scheme. For this reason, two alternative options (RC1 and RC2) have been developed. The alternative options are described in detail in section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application.

A detailed response to the optioneering process complete for Grange Road and Rathfarnham Road is provided in Section 2.3.3.

Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the desirable width of 2.0m for footpaths and desirable width of 2m for cycle tracks. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

Providing the optimum cross-section described in the above paragraphs achieves the project objectives of enhancing the potential for cycling and walking by providing safe infrastructure. EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling and pedestrian infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate

R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawm Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

Figure 3.161.1 Section 2 – Significance of Effects for Pedestrian Impact during Operational Phase (Table 6.27 of EIAR Chapter 6)

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario. This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

*Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.*

Cycling Infrastructure

Table 6.28, in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant

R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

Figure 3.161.2 Section 2 – Cycling Impact during Operational Phase (Table 6.28 of EIAR Chapter 6)

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Further details on the significant benefits of the Proposed Scheme are presented in Section 2.1.1

2. Removal of Tree

EIAR Volume 4 Part 2 Chapter 17 Appendix A17 provides the Arboricultural Impact Assessment Report (AIAR), which includes detailed drawings showing all trees that are to be removed. It can be seen from these drawings that there is one tree proposed to be removed at No. 10 Rathfarnham Wood. This tree has been surveyed and assessed as part of the AIAR, and has been categorised as follows:

- Whitebeam tree displaying overall good condition, of Category B2 and with 20+ estimated remaining years;

Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the Landscape General Arrangement drawings included in EIAR Volume 3 Chapter 4. Along the eastern section of Rathfarnham Road between entrance to Rathfarnham Wood residential estate and Willbrook Road it is proposed to plant 13 No. Acer Campestre ‘Elsrijk’ Semi-Mature Field Maple Trees. Along the Proposed Scheme there will be substantial replanting of trees as detailed in section 17.4.4.2.9 of Chapter 17. As states in section 12.5.1.2.1 of Chapter 12, 400 trees will be planted throughout the scheme resulting in a net increase of 231 trees along the Proposed Scheme.

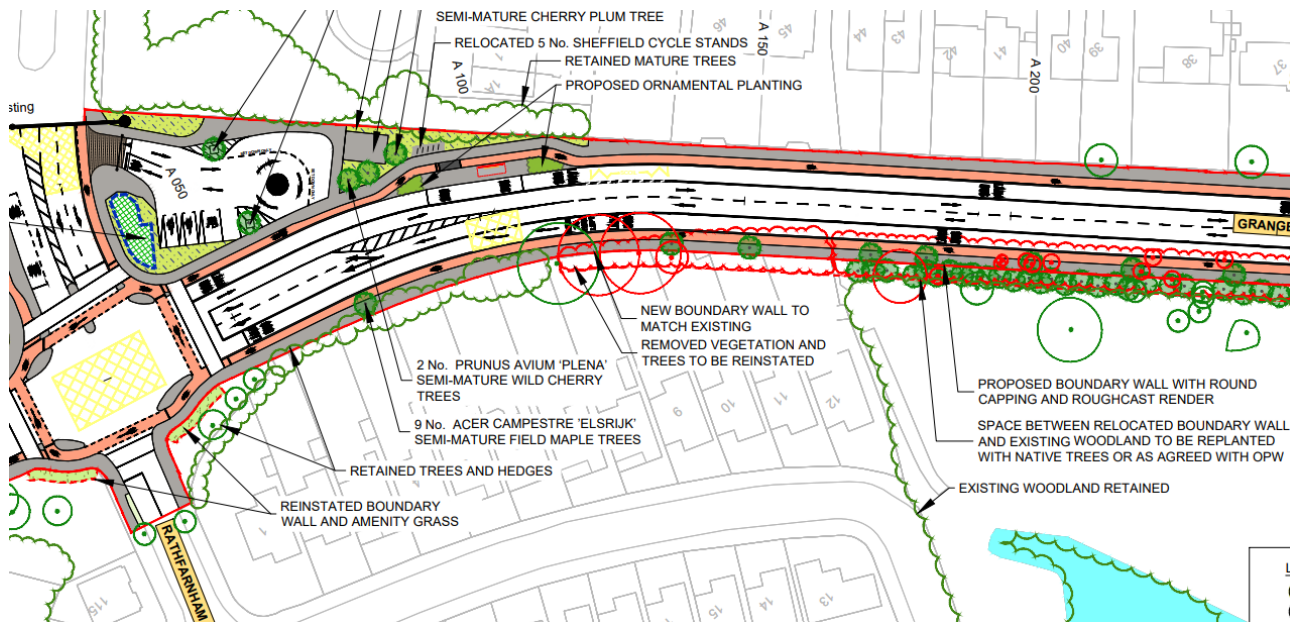


Figure 3.161.3 Extract from Landscaping General Arrangement Drawings (Sheet 1)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

Further details on the removal of trees along the Proposed Scheme are presented in Section 2.1.1.

3.162162 – Marina Lynch & Kingston Mills

3.162.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Bus stops
 - a. Relocation
3. Concerns about gaps in segregated cycle infrastructure
4. Road widening on Terenure Road East
5. Biodiversity
 - a. Destruction of trees
6. Alternative options.
 - a. Bus priority signals
 - b. Tram / Luas
 - c. Congestion charges

3.162.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.163163 – Mark and Linda Smith – Bijou Deli and Bistro

3.163.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Architectural and cultural heritage
3. Alternative options
 - a. Congestion charges
 - b. Park and ride facilities
 - c. Bus priority signals
 - d. Cashless fare payment
4. Delivery access
5. Loss of on-street parking
6. Lack of Public Realm improvements in Rathgar
7. Biodiversity
 - a. Destruction of trees

3.163.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In terms of Item 4, it is noted that it is proposed to retain, in a slightly different form, the loading bay referred to in the submission outside SuperValu. An extract from General Arrangement Drawings in Appendix B of the EIAR is presented below which identifies the loading bay.

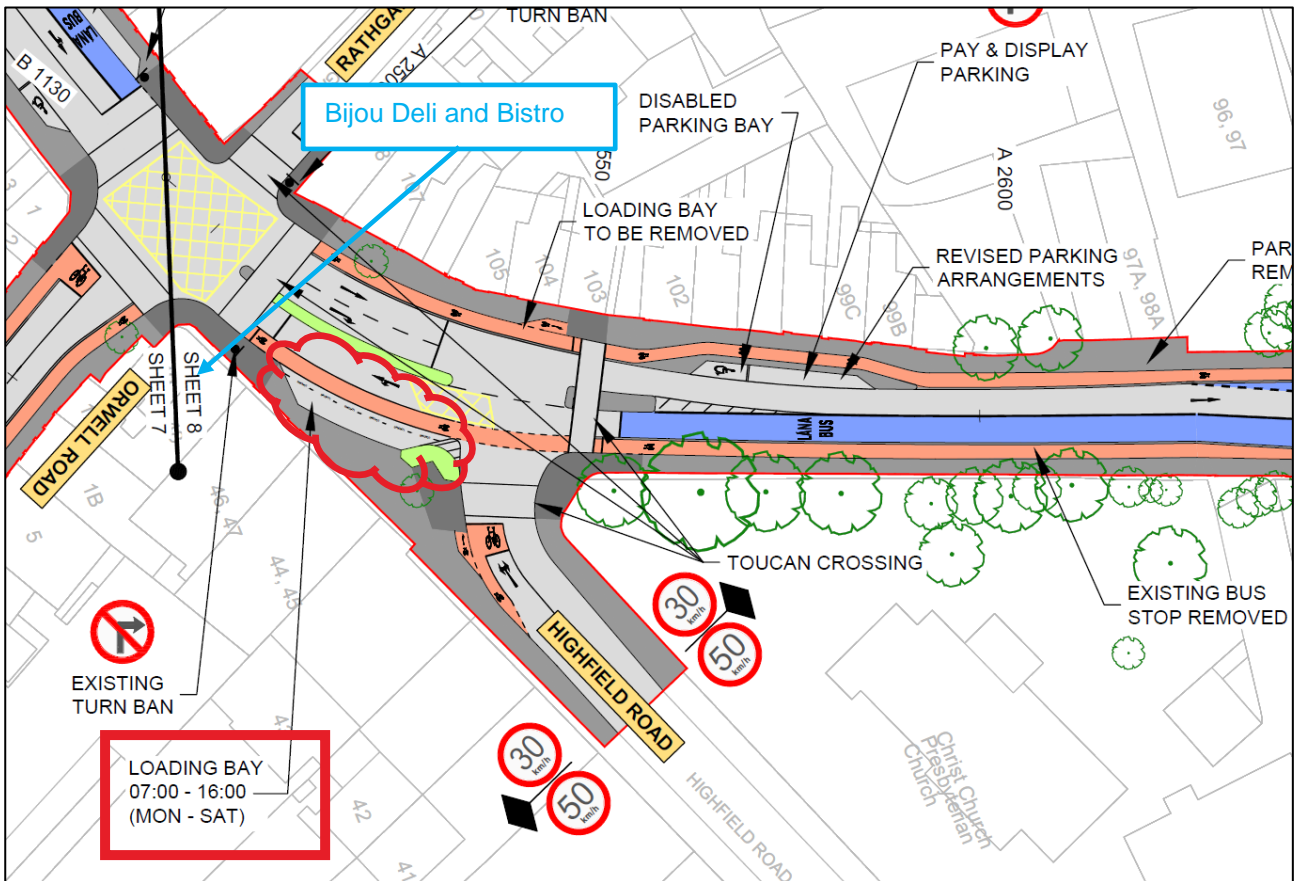


Figure 3.163.1 Extract from General Arrangement Drawings (Sheet 8)

In terms of Item 6, Section 4.5.3.8 of the EIAR summarises the public realm improvements in Rathgar Village.

At Rathgar Village, the carriageway at the adjoining junction is to be rationalised to reduced vehicular space and to provide additional pedestrian and public realm space. The slip lane from Highfield Road will be removed and this will facilitate the provision of a greatly increased public realm amenity space, with hard and soft landscaping along the shop frontages, that will incorporate seating, tree planting and low-level planting to encourage passive amenity. Medians will be introduced and will incorporate low level planting to further reduce the apparent width of the carriageways. Pavement and kerbs will be re-built using high quality materials sympathetic to the form of the surrounding traditional buildings and the character of the village setting. Importantly, the emerging design avoids impacting the boundary of Christ Church and the mature trees within the grounds and the distinctive focal point of the village will be retained as existing (refer to Image 4.3).



Image 4.3: Rathgar Village

These proposals are elaborated upon in the Landscape General Arrangement Drawings in Appendix B of the EIAR. The proposals include:

- Areas of widening footpaths, particularly outside SuperValu;
- Additional street trees and ornamental planting;
- High quality concrete paving and retention of historic granite kerbing;
- A bench at the corner of Highfield and Rathgar Road;
- Additional cycle parking.

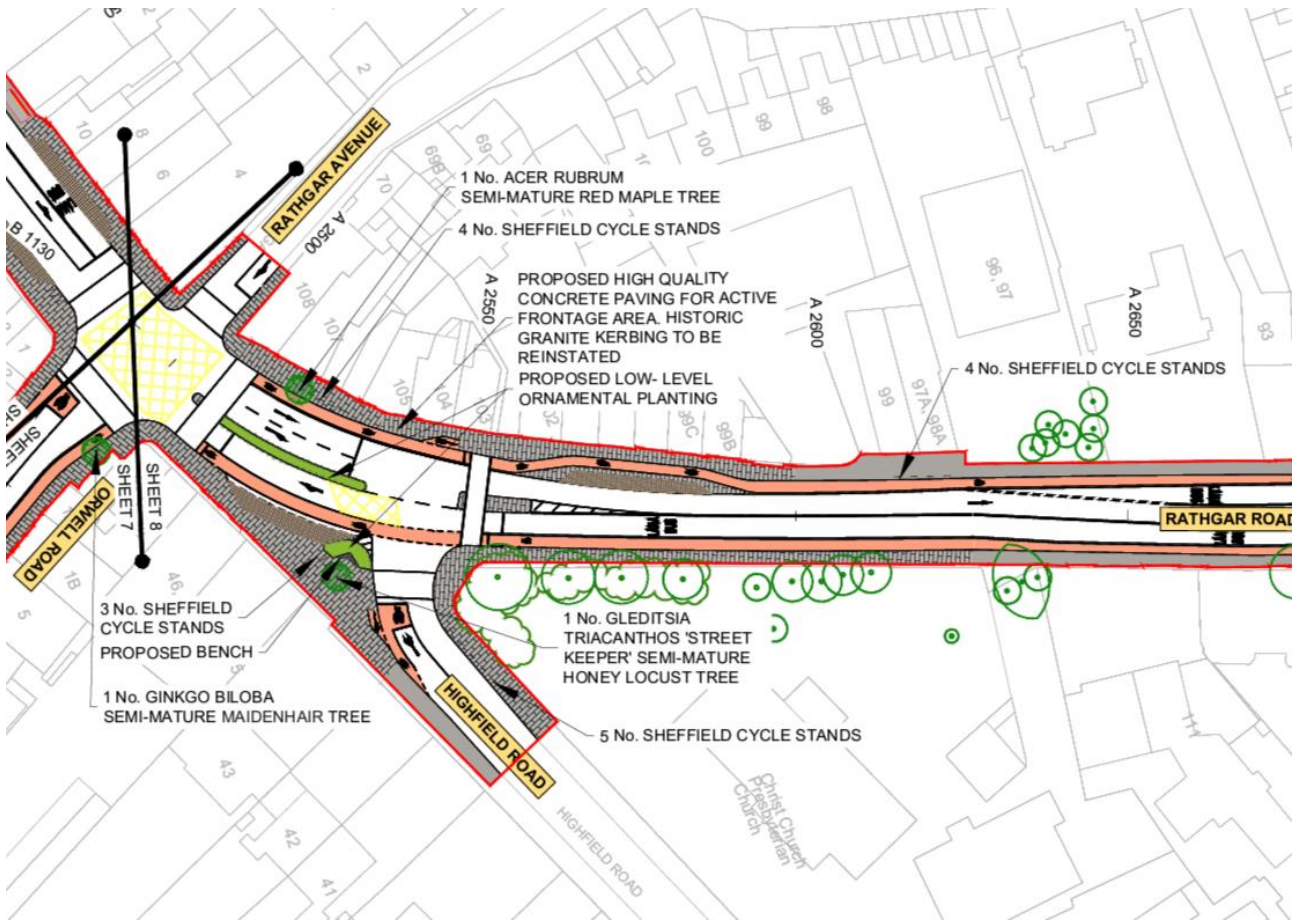


Figure 3.163.2 Extract from Landscaping General Arrangement Drawings (Sheet 8)

3.164164 – Mark Duggan and Maria and Brian Bilings

3.164.1 Submission – Whole Scheme

The submission raised the following issues:

1. No consideration of what happens buses in the City Centre
2. Traffic
 - a. Increased volume of buses on the Quays as a result of network changes
 - b. Increased congestion at proposed signalised Spawell junction
 - c. Impact on access routes around Templeogue
3. Alternative options
 - a. Tram / Luas
 - b. Metro
 - c. Park and ride facilities
 - d. Cycle parking

3.164.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.165165 – Mark Fitzgerald

3.165.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Increase in air and noise pollution
2. Safety concerns associated with Increased Traffic
3. Devaluation of property
4. Changes to work patterns due to the COVID-19 pandemic

3.165.2 Response to submission

1. Increase in Air and Noise Pollution

In relation to air quality, EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme's operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme.*

In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value. However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road. In all cases, the significance of the modelled change in the annual mean NO₂, PM₁₀, PM_{2.5} during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

In relation to noise levels, the impact of the Proposed Scheme on noise and vibration have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme.

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that *“Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.”*

It goes on to state that *“There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq, 16hr an increase in noise level greater than 3 dB.”*

Section 9.6.2 states that: *Once operational, there will be a direct, positive, imperceptible to slight impact along the Proposed Scheme due to a reduction in traffic volumes during both the year of Opening Year (2028) and the Design Year (2043).*

It is noted that at this property the nearest traffic lane (bus lane) will move approximately 700mm closer to the house.

2. Safety Concerns Associated with Increased Traffic

The submission states that the Proposed Scheme will result in an increase in traffic and therefore negatively impact on safety in the community.

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

'a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences'.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

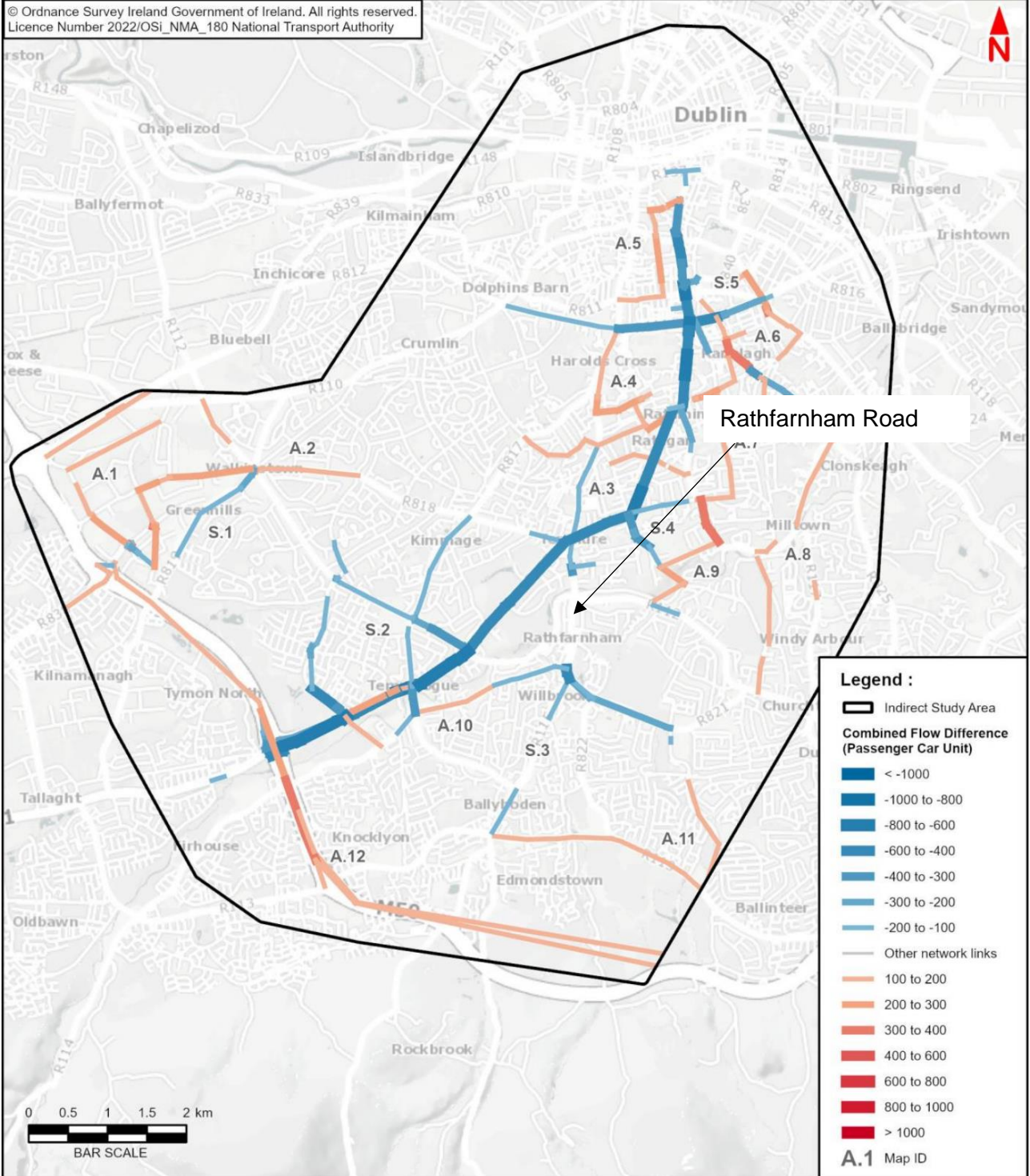


Figure 3.165.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

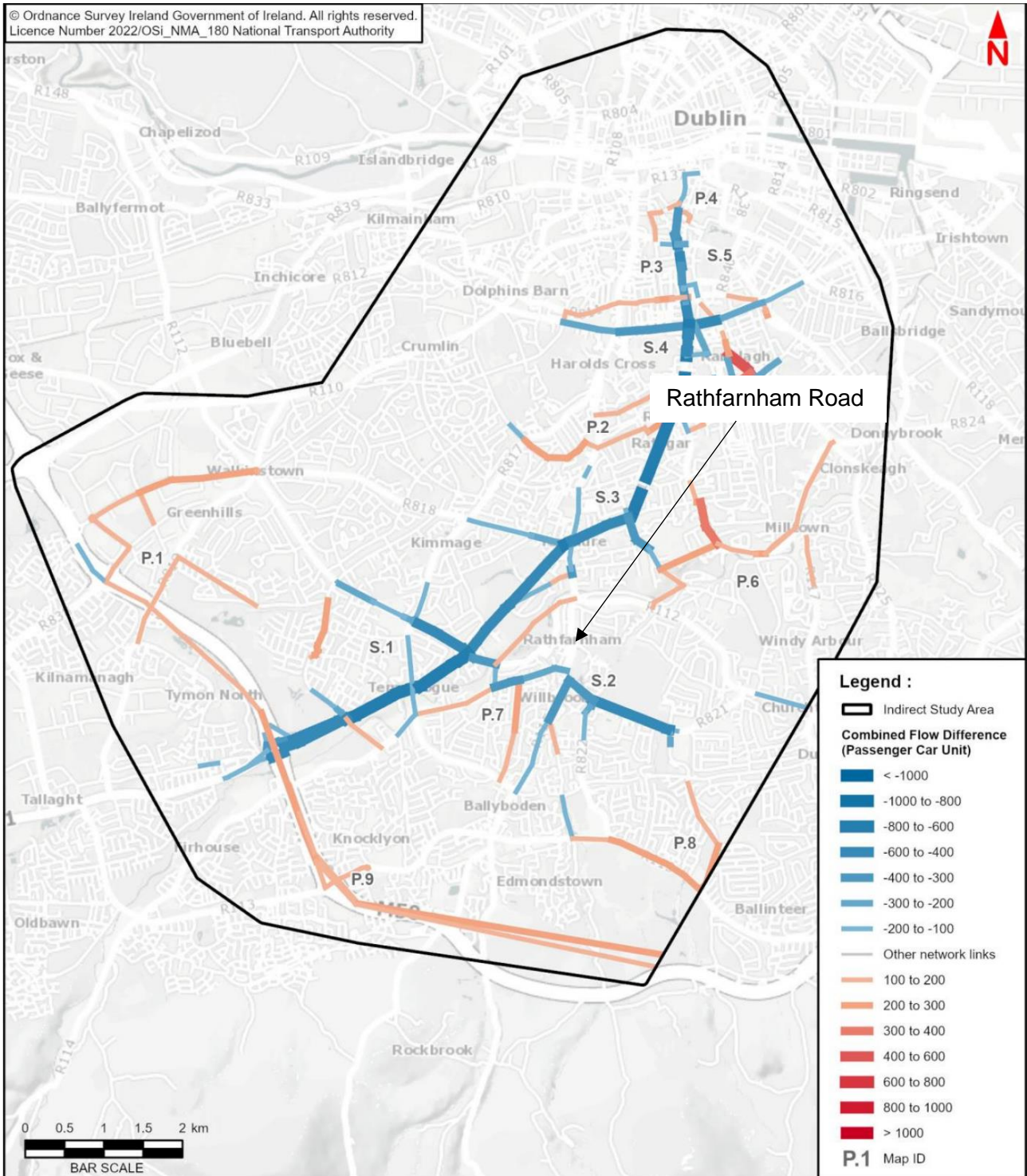


Figure 3.165.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

As can be seen in these figures, the traffic modelling undertaken does not identify any significant material change in traffic volumes along Rathfarnham Road during the AM and PM peak as a result of the Proposed Scheme i.e. any changes in traffic volumes along Rathfarnham Road than 100 passenger car units per hour.

Further details on the traffic impact in this area are presented in Section 2.3.3.

As seen in the General Arrangement Drawings provided in Volume 1 of the Environmental Impact Assessment Report (EIAR), there is a proposed reduction in the speed limit to 30km/h for Rathfarnham Road north of Main Street. Furthermore, the Proposed Scheme aims to decrease the width of traffic lanes on Rathfarnham Road to 3.0 meters concurrently also increasing the presence of street trees. These combined measures collectively create a perception of a slower-paced environment, thereby contributing to reduced driving speeds and improved safety.

3. Devaluation of Property

As described in response to point of objection *i. Increase in air and noise pollution* and *ii. Safety concerns associated with increased traffic*, the EIAR assessment concluded that there will be a neutral and long-term residual effect on air pollution and *direct, positive, imperceptible to slight impact* noise pollution along the Proposed Scheme. Similarly, the assessment complete in the EIAR Chapter 6 determined that there will not be a significant material change in traffic volumes along Rathfarnham Road.

In addition to the above, the aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Rathfarnham Road, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix assesses what the economic impact of the provision of bus corridor infrastructure on the communities along the route using evidence from international Case Studies for similar schemes. This economic impact includes effects on property values. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes: *"Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area."* and *"Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."*

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties on Rathfarnham Road.

4. Changes to work patterns due to the COVID-19 pandemic

A detailed response to this issue is presented in Section 2.1.1.

3.166166 – Martin & Bernie Gibbons

3.166.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed turn bans
 - a. Right turn from Templeogue Road to Rathdown estate
2. Proposed cycle tracks
 - a. Remove proposed cycle track into Rathdown Drive

3.166.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

In relation to Item 2, a quiet street treatment is proposed Rathdown Crescent and Rathdown Park to provide for inbound on the Templeogue to Terenure section to join the Rathfarnham to City Centre section providing interconnectivity between each scheme. It also provides a safe route from the proposed route through Bushy Park and an alternative to cycling on road along Templeogue Road where space does not exist to provide dedicated facilities along this section.

In terms of the interaction of the outbound cycle track with the roundabout at Rathdown Crescent, this is considered to be the most appropriate solution for cyclists and removes the need to mix cyclists and pedestrians at the crossing point where pedestrians may be congregating. An extract from General Arrangement Drawings in Appendix B of the EIAR showing this area is presented in Figure 3.166.1.

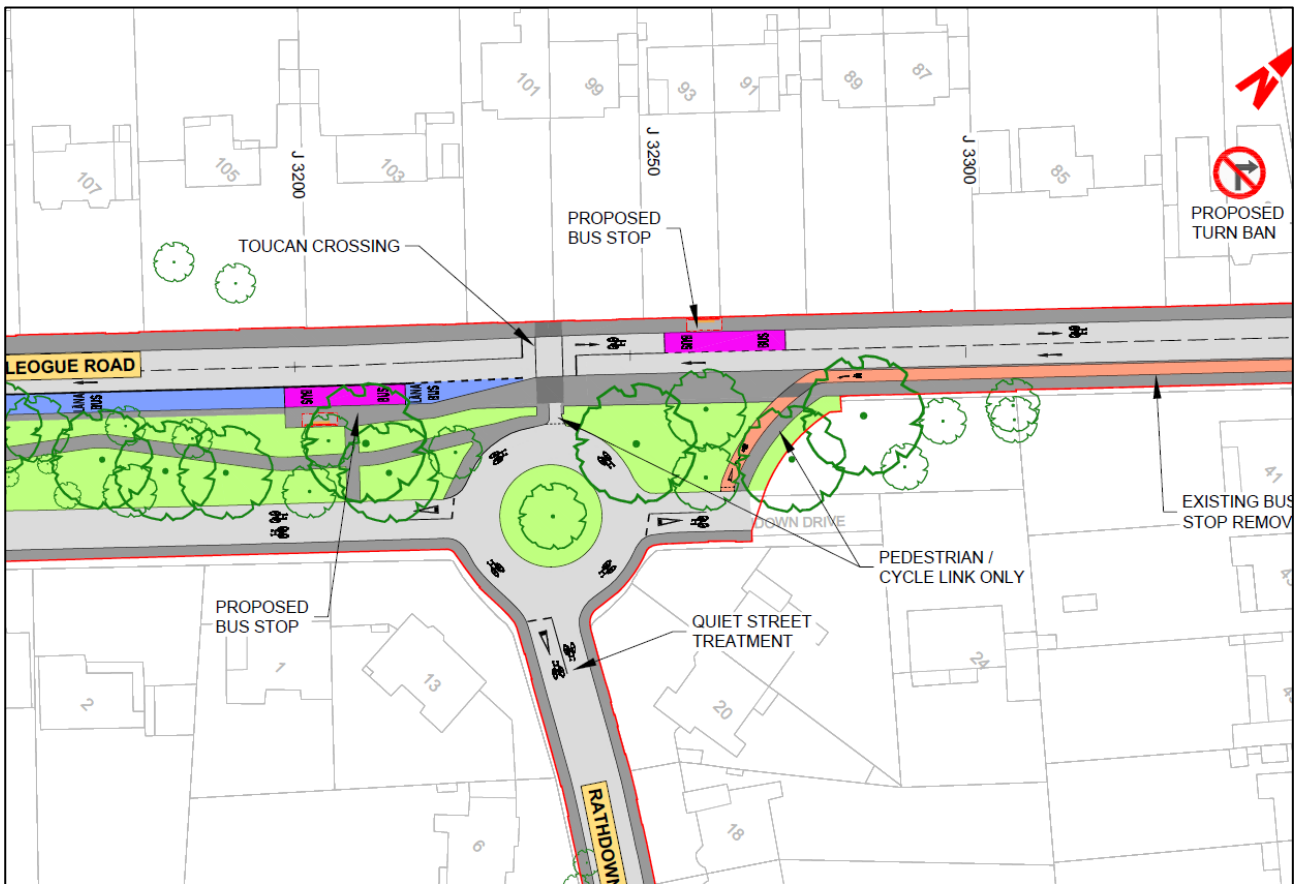


Figure 3.166.1 Extract from General Arrangement Drawings (Sheet 36)

3.167167 – Mary Dunning

3.167.1 Submission – Whole scheme

The submission raised the following issues:

1. Traffic
 - a. Impact of proposed bus gate in Rathmines
 - b. Impact of proposed bus gate on Templeogue Road
 - c. Increased volumes on Castlewood Avenue
 - d. Impact of proposed one-way on Rathgar Road
 - e. Impact of proposed turn bans
2. Cumulative impact of adjacent BusConnects schemes
3. Air pollution
4. Unnecessary change providing no real gains to bus travel times.
5. Pre-COVID traffic volumes used in analysis.
6. Alternative options
 - a. Metro
 - b. Congestion charges

- c. Close car parks
- 7. Access to amenities
- 8. Proposed bus gates
 - a. Limit hours of operation

3.167.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.168168 – Mary O'Farrell

3.168.1 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.168.2 Submission – Rathmines

The submission raised the following issues:

- 1. Access to Church of Mary Immaculate, Refuge of Sinners
- 2. Proposed bus gates
 - a. Rathmines Road

3.169169 –Mary O'Mahony

3.169.1 Submission – Rathfarnham Road

The submission raised the following issues:

- 1. Necessity of road widening
- 2. Removal of tree
- 3. No consideration of Glin River
- 4. Consideration of alternative options
- 5. Climate Impact of Tree Removal
- 6. Biodiversity Impact
- 7. Landscape and Visual
- 8. Noise, Vibration and Air Quality

3.169.2 Response to submission

Items 3– 8 raises the same concerns as submission 40. Please refer to Section 3.40 for responses to these items. See below for response to item 1 and 2.

- 1. Necessity of road widening

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the proposed scheme. It also outlines the different stages that were undertaken during the development of the proposed scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

For the section between adjacent to 9 Rathfarnham Road, three options (SA1 to SA3) have been developed during the development of the Emerging Preferred Route (EPR). The assessment process of three options is described in section 5.4 of the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment (FSOA), included in appendix I2 of the supplementary documents submitted alongside the planning application.

Following the review of the EPR and submissions received as part of the public consultation within the section between Nutgrove Avenue to Willbrook Road, it was decided that alternative options could be feasible within this section of the Proposed Scheme. For this reason, two alternative options (RC1 and RC2) have been developed. The alternative options are described in detail in section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application.

A detailed response to the optioneering process complete for Grange Road and Rathfarnham Road is provided in Section 2.3.3.

Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the desirable width of 2.0m for footpaths and desirable width of 2m for cycle tracks. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

Providing the optimum cross-section described in the above paragraphs achieves the project objectives of enhancing the potential for cycling and walking by providing safe infrastructure. EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling and pedestrian infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate

R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

Figure 3.169.1 Section 2 – Summary of Effects for Pedestrian Impact during Operational Phase (Table 6.27 of EIAR Chapter 6)

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario. This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

*Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.*

Cycling Infrastructure

Table 6.28, in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant

R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

Figure 3.169.2 Section 2 – Cycling Impact during Operational Phase (Table 6.28 of EIAR Chapter 6)

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Further details on the significant benefits of the Proposed Scheme are presented in Section 2.1.1.

2. Removal of Tree

EIAR Volume 4 Part 2 Chapter 17 Appendix A17 provides the Arboricultural Impact Assessment Report (AIAR), which includes detailed drawings showing all trees that are to be removed. It can be seen from these drawings that there is one tree proposed to be removed at No. 9 Rathfarnham Wood. This tree has been surveyed and assessed as part of the AIAR, and has been categorised as follows:

- An 16m tall mature Beech displaying overall good condition, of Category B2 and with 20+ estimated remaining years;

Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the Landscape General Arrangement drawings included in EIAR Volume 3 Chapter 4. Along the eastern section of Rathfarnham Road between entrance to Rathfarnham Wood residential estate and Willbrook Road it is proposed to plant 13 No. Acer Campestre 'Elsrijk' Semi-Mature Field Maple Trees. Along the Proposed Scheme there will be substantial replanting of trees as detailed in section 17.4.4.2.9 of Chapter 17. As states in section 12.5.1.2.1 of Chapter 12, 400 trees will be planted throughout the scheme resulting in a net increase of 231 trees along the Proposed Scheme.

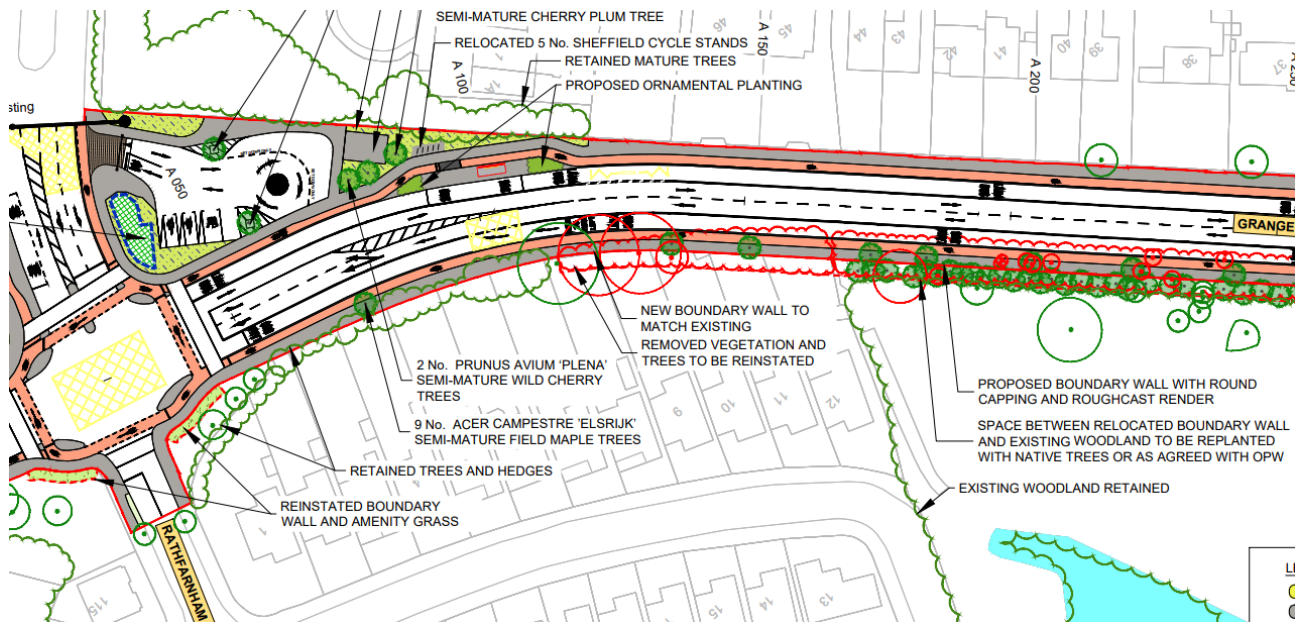


Figure 3.169.3 Extract from Landscaping General Arrangement Drawings (Sheet 1)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

In relation to the concern raised relating to impact on trees within proximity of the tree proposed for removal. A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- *The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*
- *New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.*
- *Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*

- *Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- *Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- *The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- *All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

3.170170 – Maura Byrne

3.170.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Bus stops
 - a. Relocation of bus stop to 80 - 81 Rathgar Road
2. Impacts/costs of the Proposed Scheme outweigh the benefits.
3. Minimal bus journey time improvement
4. Inadequacies in the Consultation Process
5. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
6. Architectural and cultural heritage

7. Noise and air pollution
8. Compulsory Purchase Order on Terenure Road East and Rathfarnham Road
9. Traffic redistribution due to proposed traffic management measures
10. Bus gate
 - a. St Mary's college in Rathmines
11. One-way operation of Rathgar Road
12. Proposed turn bans
13. Negative effect on businesses
 - a. Loss of street parking/ Loading bays
14. Width of Footpaths on Rathgar Road
15. Safety of proposed cycle tracks
16. Outdated Traffic Count Information
17. Changes to work/commuting patterns due to the COVID-19 pandemic
18. Trialling of the Proposed Scheme
19. Alternative options
 - a. Metro
 - b. School buses
 - c. Congestion charges
 - d. Park and ride facilities
 - e. Cashless fare payment
 - f. Bus priority traffic lights
20. No assessment of cumulative impact of 12 corridors
21. Routing of buses via Terenure Road North and Harold's Cross Road
22. Separate consultation on CBC10 and CBC12

3.170.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.171171 – Maureen O'Halloran

3.171.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased traffic on Highfield Road
2. One-way operation of Rathgar Road
3. Compulsory purchase order on Terenure Road East
4. Biodiversity

- a. Destruction of trees

3.171.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.172172 – Maurice Dorney & Dympna Dorney

3.172.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Changes to work/travel patterns due to the COVID-19 pandemic
2. Traffic
 - a. Increased traffic on Highfield Road
3. Alternative options
 - a. Congestion charges
 - b. Park and ride facilities
4. One-way operation of Rathgar Road

3.172.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.173173 – Meals on Wheels Rathmines Melisa Kearney

3.173.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Limit hours of operation
 - b. Impact on access routes

3.173.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.174174 – Melisa Kearney

3.174.1 Submission – Whole Scheme

The submission raised the following issues:

1. Benefits of the proposed Scheme do not justify the cost and environmental impacts
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Whitechurch Stream not considered
4. Traffic
 - a. Traffic displaced to residential streets
 - b. Insufficient traffic modelling
5. Air pollution
6. Access to amenities including Bushy Park
7. No assessment of cumulative impact of 12 corridor
8. Impact on visibility/perceived safety from proposed LED lighting
9. Lack of enhanced pedestrian facilities
10. Cycle facilities
 - a. Lack of continuity
 - b. Insufficient width
11. Alternative options
 - a. Metro
 - b. Congestion Charges
12. Turn bans
13. Proposed bus gate
 - a. Limit hours of operation
14. Lack of consultation
15. Request Oral Hearing
16. Bus stop
 - a. Removal of multiple bus stops
 - b. Relocation of bus stop 1159
17. Elderly and Disability Access
18. Access to St Luke's Hospital
19. Pre-COVID traffic volumes used in analysis.
20. Changes to work patterns due to the COVID-19 pandemic
21. Architectural and cultural heritage
 - a. Impact on heritage properties due to CPO
22. Negative impact on businesses

3.174.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1, 2.2.3, 2.3.3, and 2.4.3 of this report.

In relation to Issue 8, Section 12.4 of the Preliminary Design Report contained in the Supplementary Information outlines the design approach to Public Lighting. The following is noted:

“All new public lighting will be designed and installed in accordance with the specific lighting and electrical items set out the following National Standards and guides, including but not limited to:

- *Local Authority Guidance Specifications;*
- *EN 13201: 2014 Road Lighting (all sections);*
- *ET211:2003 ‘Code of Practice for Public Lighting Installations in Residential Areas’;*
- *BS 5489-1 ‘Code of practice for the design of road lighting’;*
- *TII Publications: Specification for Road Works, Series 1300 & 1400;*
- *TII Publications Standard Construction Details, Series 1300 & 1400;*
- *IS EN 40 – Lighting Columns;*
- *Institution of Lighting Professionals “GN01 Guidance Notes for Reduction of Obtrusive Light”.*

All new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the ‘Guidance notes for the Reduction of Light Pollution’ issued by the Institution of Lighting Professionals (ILP).”

In line with these guidance documents, and industry best practice, LED lighting will be provided. The Proposed Scheme will provide sufficient lighting in all areas. The following is noted in Section 12.4.1 of the Preliminary Design Report:

“Where significant alterations are proposed to the existing carriageways, the preliminary street lighting design ensures that the current standard of public lighting is maintained or improved.”

In relation to Issue 9, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

“Pedestrian Infrastructure: *The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C / D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a Positive, Significant and Long-term effect in all four sections of the Proposed Scheme.”*

In relation to Issue 10, the GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.174.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4% following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

3.175175 – Mery Fenton, Olwyn Callaghan & Mary Rose Callaghan

3.175.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Relocated Rathmines Road bus gate to north of Lissenfield.
 - b. Impact of proposals on access

3.175.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.176176 – Michael & Ann Maire Morris

3.176.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Highfield Road
3. Access to amenities
 - a. St. Luke's Hospital
4. Architectural and cultural heritage
5. Biodiversity
 - a. Destruction of trees
6. Air pollution
7. Alternative options
 - a. Metro
 - b. Tram / Luas

3.176.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.177177 – Michael and Colette Clarke and Others

3.177.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Impact on access routes as a result of changes to traffic management
 - a. One-way operation of Rathgar Road
 - b. Templeogue Bus Gate
 - c. Rathmines Bus Gate
3. Lack of consultation
4. Bus Stop
 - a. Relocation
5. Alternative options
 - a. Metro
 - b. Tram / Luas

3.177.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

3.178178 – Michael Bermingham

3.178.1 Submission – Whole Scheme

1. Lack of clarity around land acquisition
2. Consultation Process
3. Impact on Heritage Properties
4. Existing bus priority signal on Terenure Road East is adequate
5. Removal of trees on Terenure Road East
6. Changes to work patterns due to the COVID-19 pandemic
7. Cost Benefit Analysis
8. Alternative, less intrusive measures
9. Metro and light rail is more appropriate.
10. Right turn from Rathfarnham Road onto Terenure Road East
11. Traffic disruption due to traffic management proposals

3.178.2 Response to submission

This Objection raises the same concerns as submission 77. Please refer to Section 3.77.2 for responses to these items.

3.179179 – Michael McAuley

3.179.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Increase in air and noise pollution
2. Safety concerns
3. Devaluation of property
4. Changes to work patterns due to the COVID-19 pandemic

3.179.2 Response to submission

1. Increase in Air and Noise Pollution

In relation to air quality, EIAR Volume 2 Chapter 7 Air Quality provides details of the air quality assessment undertaken for the Proposed Scheme. Overall, the assessment concluded that the residual effects on air quality because of the Proposed Scheme's operation are neutral and long-term.

Section 7.6.2 describes the residual impacts for the Operational Phase: *The air dispersion modelling assessment has found that the majority of all modelled receptors are predicted to experience negligible impacts due to the Proposed Scheme, and beneficial impacts are also estimated along the length of the Proposed Scheme. The number of receptors where an exceedance of the NO₂ limit value is predicted decreases as a result of the Proposed Scheme.*

In 2043 all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the DM and DS scenarios. There are localised residual moderate adverse effects expected on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road as a result of the 2028 Operational Phase of the Proposed Scheme which are considered significant as NO₂ concentrations are predicted to exceed the limit value. However, these are expected to reduce to negligible by 2043, due to a significant reduction in emissions between 2028 and 2043 from advancements in engine technology and the addition of a higher percentage of electric vehicles to the fleet. The localised impacts at human receptors on the R137 Clanbrassil Street Lower junction with the R811 South Circular Road due to the 2028 Operational Phase of the Proposed Scheme are therefore considered negative, significant and short-term.

Overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are neutral and long-term.

In addition, the EIAR Volume 3 Figure 7.1 – 7.8 indicates all the receptors located adjacent to Rathfarnham Road. In all cases, the significance of the modelled change in the annual mean NO₂, PM₁₀, PM_{2.5} during the operation phase (2028) and construction stage (2024) of the Proposed Scheme were negligible.

In relation to noise levels, the impact of the Proposed Scheme on noise and vibration have been assessed and are reported in Chapter 9 Noise and Vibration of Volume 2 of the EIAR. The traffic noise impacts associated with the Proposed Scheme have fully considered any physical changes along the Proposed Scheme.

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that “Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.” It goes on to state that “There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.”

Section 9.6.2 states that: *Once operational, there will be a direct, positive, imperceptible to slight impact along the Proposed Scheme due to a reduction in traffic volumes during both the year of Opening Year (2028) and the Design Year (2043).*

It is noted that at this property the nearest traffic lane (bus lane) will move approximately 300mm closer to the house.

2. Safety Concerns Associated with Increased Traffic

The submission states that the Proposed Scheme will result in an increase in traffic and therefore negatively impact on safety in the community.

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland’s (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network.

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

‘a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences’.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.

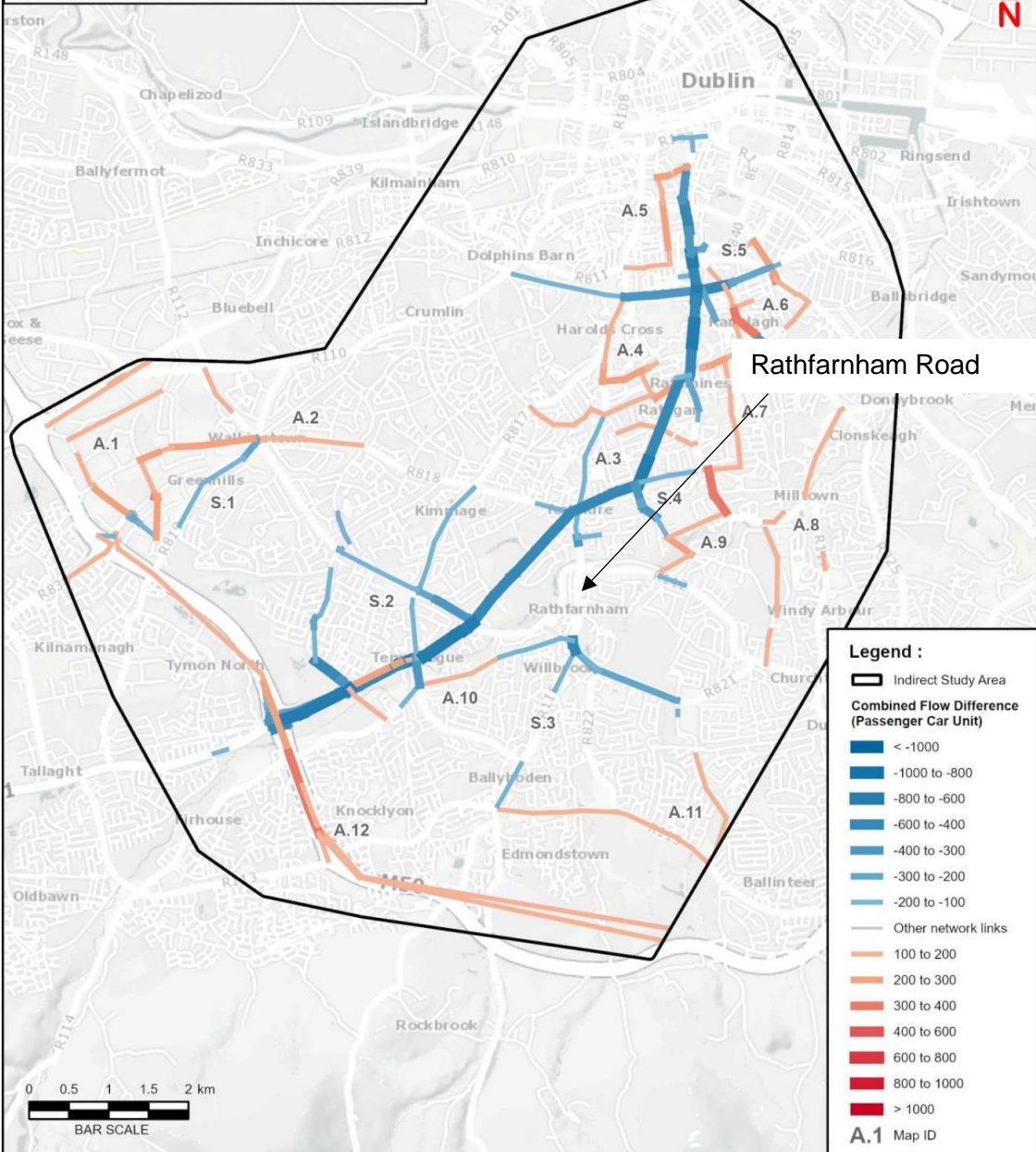


Figure 3.179.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

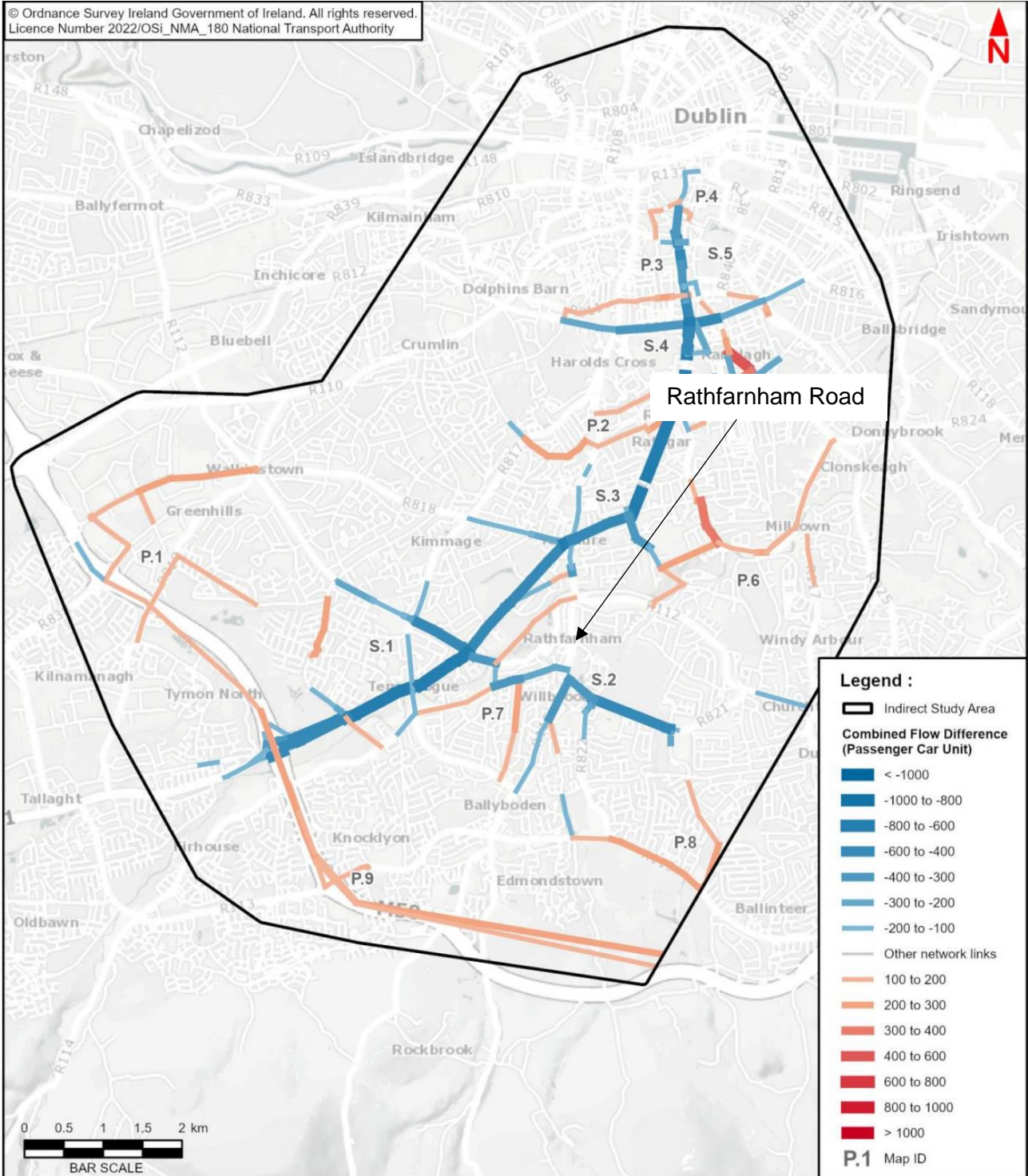


Figure 3.179.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

As can be seen in these figures, the traffic modelling undertaken does not identify any significant material change in traffic volumes along Rathfarnham Road during the AM and PM peak as a result of the Proposed Scheme i.e. any changes in traffic volumes along Rathfarnham Road than 100 passenger car units per hour.

Further details on the traffic impact in this area are presented in Section 2.3.3.

As seen in the General Arrangement Drawings provided in Volume 1 of the Environmental Impact Assessment Report (EIAR), there is a proposed reduction in the speed limit to 30km/h for Rathfarnham Road north of Main Street. Furthermore, the Proposed Scheme aims to decrease the width of traffic lanes on Rathfarnham Road to 3.0 meters concurrently also increasing the presence of street trees. These combined measures collectively create a perception of a slower-paced environment, thereby contributing to reduced driving speeds and improved safety.

3. Devaluation of Property

As described in response to point of objection *i. Increase in air and noise pollution* and *ii. Safety concerns associated with increased traffic*, the EIAR assessment concluded that there will be a neutral and long-term residual effect on air pollution and *direct, positive, imperceptible to slight impact* noise pollution along the Proposed Scheme. Similarly, the assessment complete in the EIAR Chapter 6 determined that there will not be a significant material change in traffic volumes along Rathfarnham Road.

In addition to the above, the aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Rathfarnham Road, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix assesses what the economic impact of the provision of bus corridor infrastructure on the communities along the route using evidence from international Case Studies for similar schemes. This economic impact includes effects on property values. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes: "*Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area.*" and "*Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm.*"

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties on Rathfarnham Road.

4. Changes to work patterns due to the COVID-19 pandemic

A detailed response to this issue is presented in Section 2.1.1.

3.180180 – Michele Van Valey and Derek Hennessy

3.180.1 Submission – Templeogue Road

The submission raised the following issues:

1. Negative effect on businesses
2. Proposed turn bans
 - a. Right turn ban to Greenlea Road from Fortfield Road
3. Access to amenities
4. Alternative options
 - b. Metro
5. No assessment of cumulative impact of 12 corridors
6. Changes to travel patterns as a result of Covid 19

3.180.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.181181 – Mick and Miriam Dunne

3.181.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Lack of consultation
2. Traffic Impact
 - a. Increased congestion on Highfield Road, Villiers Road, Neville Road n Templemore Avenue
 - b. Diverted to residential streets.
3. Pre-COVID traffic volumes used in analysis.

3.181.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In terms of traffic increases on Villiers Road, Neville Road and Templemore Avenue, it is noted that Diagrams 6.40 and 6.41 do not identify any increases in traffic along these roads as a result of the Proposed Scheme.

3.182182 – Mona Stafford

3.182.1 Submission – Templeogue Road

The submission raised the following issues:

1. Relocated bus stop outside 217-219 Templeogue Road

3.182.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.183183 – Monica Tansey

3.183.1 Submission – Templeogue Road

The submission raised the following issues:

1. Biodiversity
 - a. Destruction of trees in Bushy Park and adjacent Rathdown Drive/Crescent

3.183.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

This submission is primarily concerned with the loss of trees in Bushy Park and in the green area between Templeogue Road and Rathdown Drive/Crescent and suggests there will be a loss of 34 and 94 mature trees in each of these areas respectively.

It appears that this submission has misinterpreted the impact on trees in this area which is clarified below.

Figure 3.183.1 to Figure 3.183.4 are extracts from the Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR. These drawing show the proposed landscaping along Templeogue Road in the area referenced in the submission and identify trees to be removed (trees with red outlines).

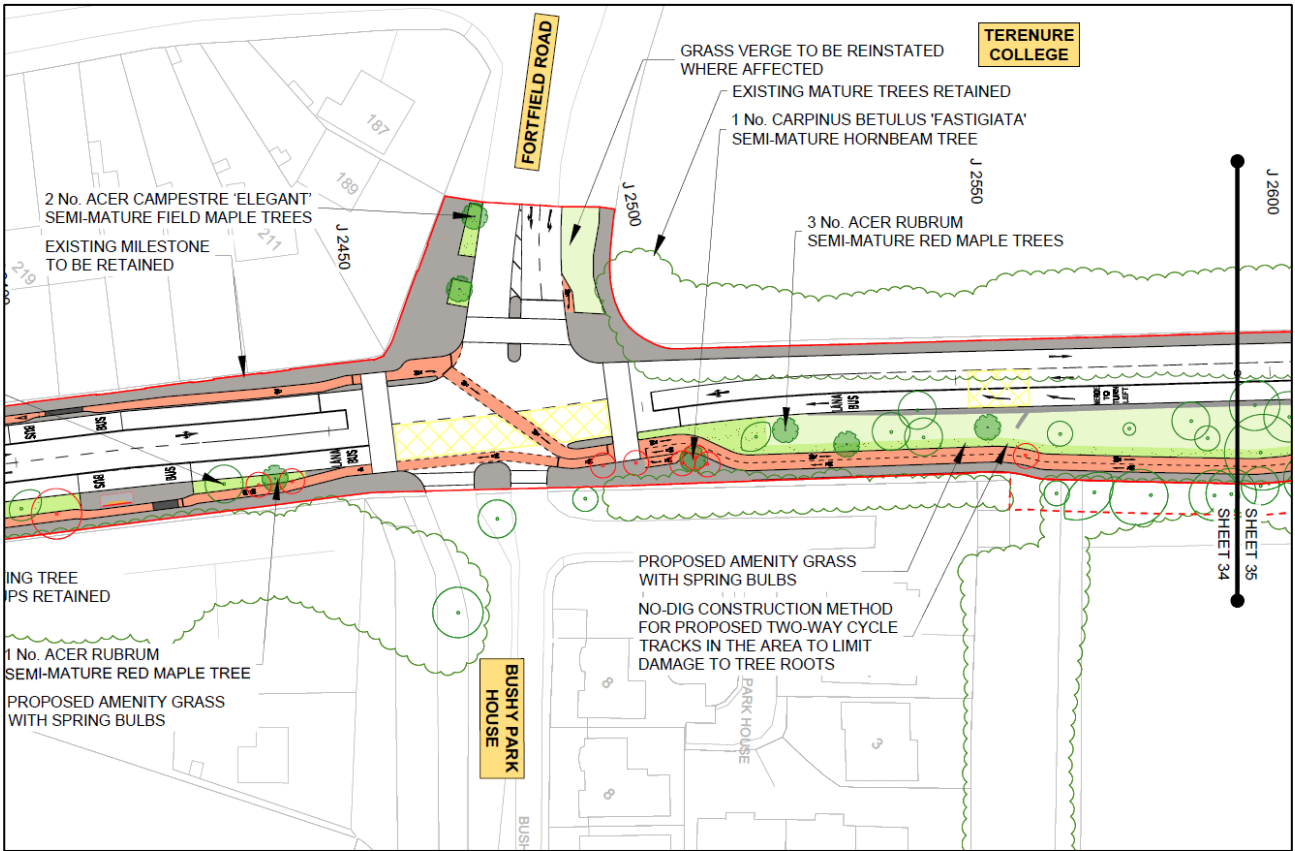


Figure 3.183.1 Extract from Landscaping General Arrangement Drawings (Sheet 34)

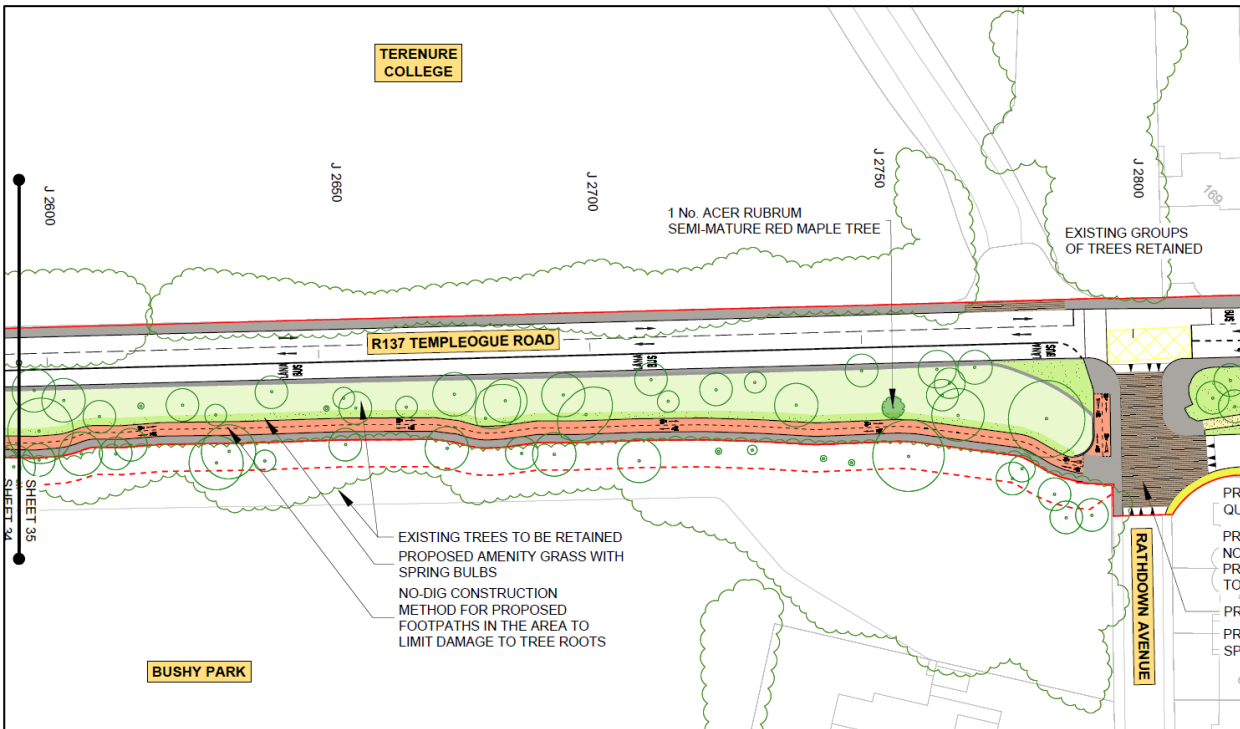


Figure 3.183.2 Extract from Landscaping General Arrangement Drawings (Sheet 35)

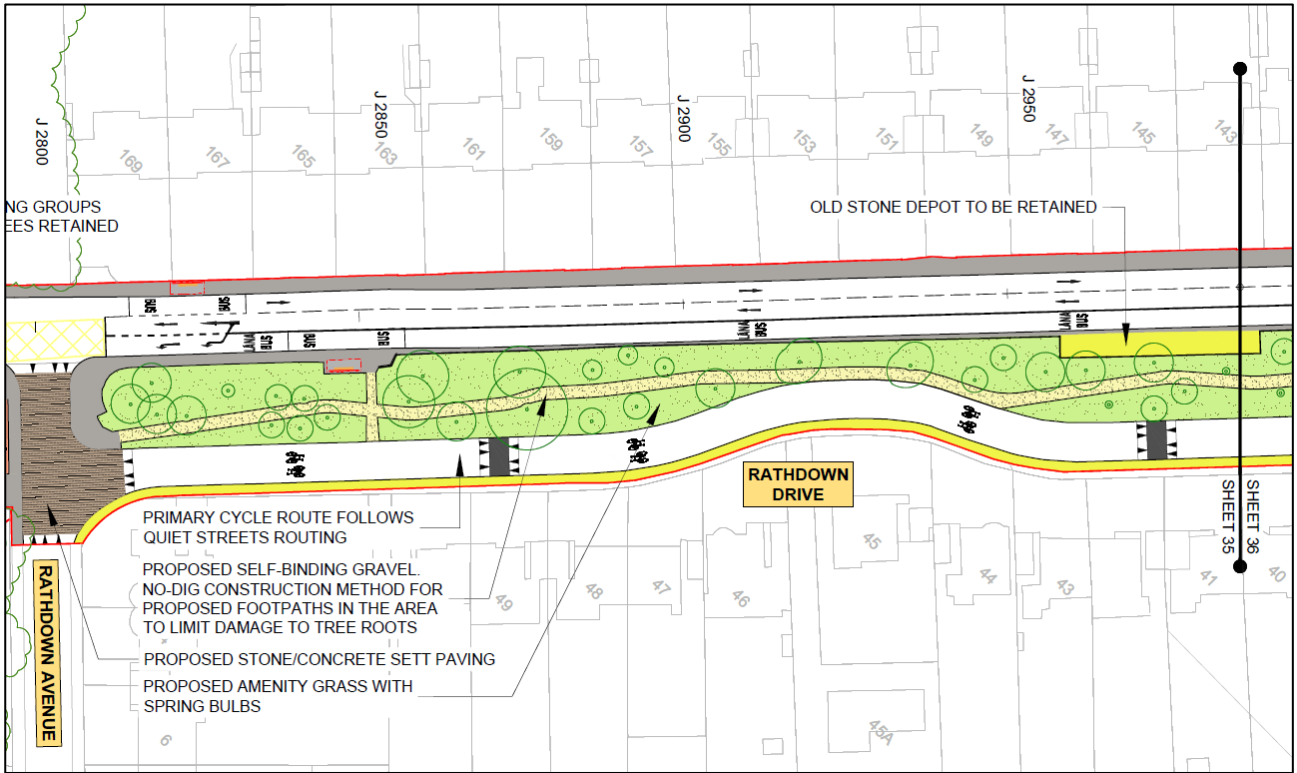


Figure 3.183.3 Extract from Landscaping General Arrangement Drawings (Sheet 35)

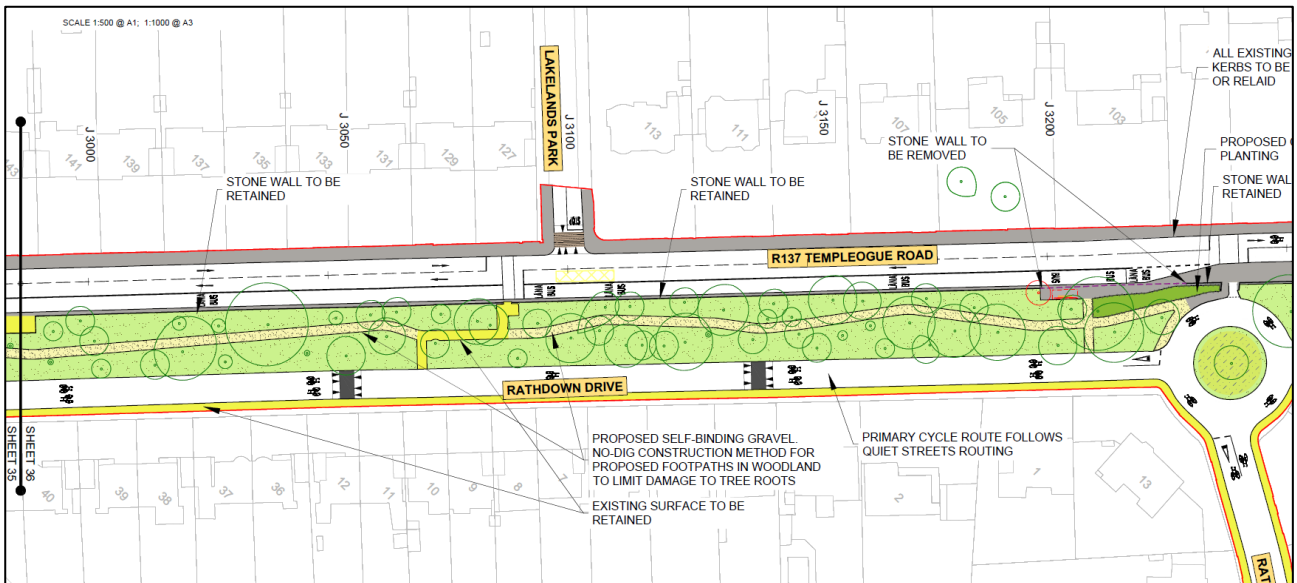


Figure 3.183.4 Extract from Landscaping General Arrangement Drawings (Sheet 36)

It is noted that in the area of concern to this submission:

- 5 trees are identified for removal just north of the Fortfield Road/Bushy Park House junction;
- 1 tree is identified for removal within Bushy Park; and
- 1 tree is identified for removal in the area between Templeogue Road and Rathdown Drive.

In summary 7 trees are to be removed in this area, not 128 as suggested by this submission.

Within Bushy Park, it is noted that the design has considered the impact on trees and in this area it is proposed to deviate slightly from the required minimums in order to retain trees. This is explained in Table 4.3 of Chapter 4 for of the EIAR, and extract of which is presented below.

Ch. J2500-J2790	Two-Way Cycle Track	3.25	Departure	2.5m	Cycle track width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.
Ch. J2500-J2790	Footpath (within Bushy Bark)	2.0m	Departure	1.5m	Footpath width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.

Figure 3.183.5 Extract from Chapter 4 of the EIAR (Table 4.3)

As noted in Section 4.6.13.2.1:

In some locations, existing street trees have disturbed or broken footpath surfaces. The footpath around such trees will be replaced where appropriate with self-binding gravel to improve the vitality of the trees and ensure accessible pedestrian facilities.

This approach has been taken in the area between Templeogue Road and Rathdown Drive to ensure trees are retained.

3.184184 – Mrs. Marian Pau

3.184.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact of Construction Compound adjacent Woodview Cottages
2. Noise and air pollution
3. Biodiversity
4. Loss of green space
5. Flooding
6. Traffic

3.184.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.185185 – Muireann O'Dea, Frank Cronin & Oran Doyle

3.185.1 Submission – Whole Scheme

The submission raised the following issues:

1. Support for scheme
2. Proposed cycle tracks
 - a. Reduced widths
3. Concerns about gaps in segregated cycle infrastructure
4. Proposed quiet streets.

- a. Large existing traffic volumes
 - b. Require traffic calming measures.
5. Enforcement
- c. Require speed camera enforcement.

3.185.2 Response to submission

Detailed responses to the Items 3 and 5 raised by this submission have been provided in Section 2.1.1 of this report.

In terms of Item 2, one of the main outcomes of the Proposed Scheme is safe, segregated cycling facilities which are accessible to all along the corridor. As set out in the PDGB and in accordance with the NCM width calculator, the desirable minimum width for a single-direction, with-flow, raised adjacent cycle track is 2.0m, to provide a high Quality of Service and allow for overtaking within the cycle track, as well as to cater for larger cycles. Notwithstanding this aspiration, it is acknowledged that the Proposed Scheme is to be delivered in constrained urban environments, and the delivery of a 2.0m+ wide cycle track may not always be practicable. As such, the cycle track widths have been reduced to typically 1.8m or 1.5m wide where the provision of 2.0m wide cycle tracks is not practicable.

In terms of Item 4 in relation to quiet street treatments, all streets on which these interventions are proposed are low speed environments supported by traffic calming measures, typically by means of speed ramps or raised table junctions (either existing or proposed). It is considered that these measures are sufficient to ensure a safe environment for cyclists. Traffic volumes on these roads are considered to be sufficiently low to support the quiet street proposal and, in some cases, will see reduced traffic volumes as a result of the Proposed Scheme e.g. Rathdown Crescent / Drive as a result of the proposed turn bans.

3.186186 – Naomi Murphy

3.186.1 Submission – Whole Scheme

The submission raised the following issues:

1. Access to amenities
 - a. Effect of turn bans to Greenlea Road
2. Changes to work/travel patterns due to the COVID-19 pandemic
3. Biodiversity
 - a. Destruction of trees
4. Alternative options
 - a. Tram / Luas
 - b. Metro

3.186.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.187187 – Neasa McGarrigle & Oisin Tobin

3.187.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Negative effect on businesses
3. Access to amenities
4. No assessment of cumulative impact of 12 corridors
5. Traffic
 - a. Diverted to residential streets as a result of bus gates
6. Pre-COVID traffic volumes used in analysis.
7. Inadequate bus service proposed.
8. Alternative options
 - a. Congestion charges
 - b. Increased bus service
 - c. Park and ride facilities
9. Noise and air pollution
10. One-way operation of Rathgar Road
11. Bus stops
 - a. Relocation
12. Biodiversity
 - a. Destruction of trees
13. Architectural and cultural heritage
14. Character of area
15. Access to amenities
16. Proposed turn bans
17. Right turn from Greenmount Road to Terenure Road East

3.187.2 Response to submission

Detailed responses to Items 1-15 in this submission have been provided in Section 2.1.1, 2.2.3, 2.4.3 and 2.5.3 of this report.

In terms of Item 16, as presented in table 4.24 of the Preliminary Design Report presented in the Supplementary Information, this turn ban is proposed to mitigate against inbound traffic bypassing right turn ban at Terenure Cross. An extract from table 4.24 is presented below.

Terenure Road East/Greenmount Road Junction	No Right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
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Figure 3.187.1 Extract from Preliminary Design Report included in Supplementary Information (Table 4.24)

3.188188 – Niall & Yvonne Gunne

3.188.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
3. Increased volumes on Highfield Road
4. Biodiversity
5. Destruction of trees
6. Road widening on Terenure Road East
7. Changes to travel patterns as a result of Covid-19

3.188.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.189189 – Niall Turley

3.189.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Highfield Road and the vicinity
3. Proposed road sign outside house
4. Alternative options
 - a. Tram / Luas
 - b. Bus priority signals

3.189.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

In relation to sign proposed outside the Ashgrove House, the exact form and positioning will be determined during the next design stages but it may be a low-level sign that will not be visible from this house.

3.190190 – Niamh Wilson & David O'Doherty

3.190.1 Submission – Rathfarnham Road

1. Impact of Construction Compound adjacent Woodview Cottages
 - a. Noise and air pollution
 - b. Biodiversity
 - c. Loss of green space
 - d. Property Value
 - e. Traffic

3.190.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.191191 – Nigel Clerkin

3.191.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options
 - a. Peak period bus gates
 - b. Cashless fare payment
 - c. Congestion charges
2. One-way operation of Rathgar Road
3. Bus stops
 - a. Relocation
4. Proposed removal of on-street parking
5. Traffic
 - a. Increased volumes on Frankfort Avenue
 - b. Increased congestion on Rathmines Road Upper
6. Proposed bus gates
 - a. Rathmines Road

3.191.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report..

In relation to the Item 3 related to removal of bus stops, as noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

- *The criteria that are considered when locating a bus stop are as follows;*
- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

In relation to Item 5a, Section 6.4.6.1.15.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 and the road links listed in Table 6.63 where there is an increase in combined flow of >100. These are shown below.

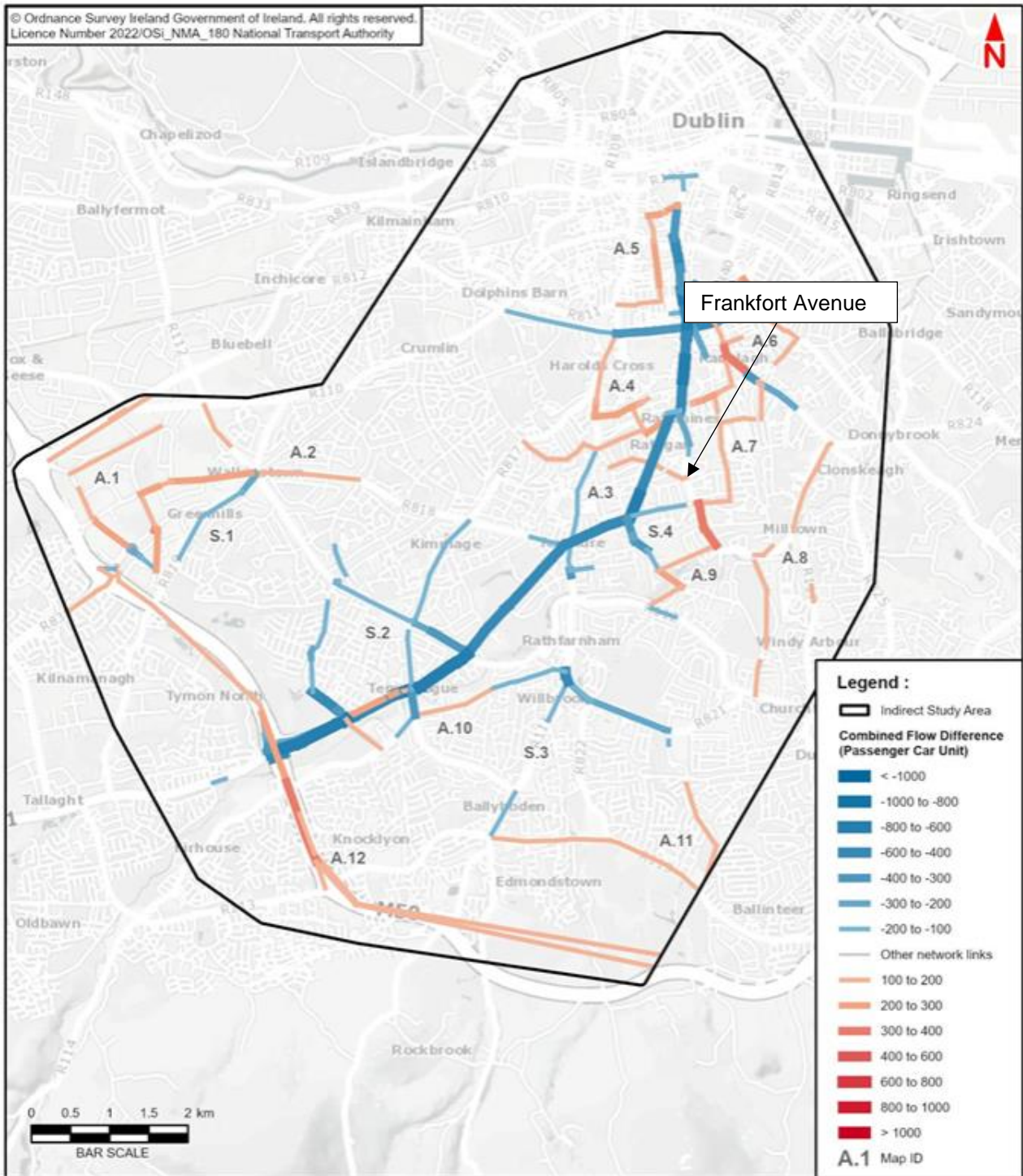


Figure 3.191.1 Extracts from EIAR Chapter 6: Diagram 6.40

Location	Map ID	Road Name	Do Minimum Flow (pcu)	Do Something Flow (pcu)	Flow Difference (pcu)
		Belgrave Square East	122	228	+105
		Belgrave Square North	640	873	+232
		Castlewood Avenue	619	824	+206
		Dunville Avenue	357	510	+153
		Frankfort Avenue	120	311	+191
		Milltown Road	1,049	1,185	+136
		Palmerston Park	853	1,028	+175
		Palmerston Road	108	304	+196

Figure 3.191.2 Extracts from EIAR Chapter 6: Table 6.63

The table shows that traffic volumes along Frankfort Avenue are estimated to increase by 191 PCUs during the morning peak period although it is noted that the overall traffic volume on Frankfort Avenue would remain low. Further junction capacity assessment was undertaken to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the AM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 16 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in below.

Four Junction Analysis

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
				Do Minimum Flow	Do Something Flow	Do Minimum V/C	Do Something V/C	Do Minimum	Do Something	
A.1	Belgrave Square North	11357	Belgrave Square East / Belgrave Square North / Charleston Road / Mount Pleasant Avenue Upper	817	1025	56	37	≤85%	≤85%	Negligible
	Butterfield Avenue	21132	Butterfield Avenue / Marian Road	834	942	58	66	≤85%	≤85%	Negligible
	Churchtown Road Lower	19384	Churchtown Road Lower / Woodlawn Park	930	1016	71	74	≤85%	≤85%	Negligible
	Dartry Road	11355	Dartry Road / Sunbury Gardens	993	1378	42	56	≤85%	≤85%	Negligible
	Grange Road	21175	Grange Road / Taylors Lane	1105	1306	52	64	≤85%	≤85%	Negligible
A.10	Milltown Road	11316	Milltown Road / Dundrum Road	1574	1751	60	68	≤85%	≤85%	Negligible
	Palmerston Park	11276	Palmerston Park / Palmerston Road	129	327	5	13	≤85%	≤85%	Negligible
A.11	Northbrook Road	11205	Northbrook Road / Cambridge Terrace	282	382	8	12	≤85%	≤85%	Negligible
	Orwell Park	11228	Orwell Park / Orwell Road	1468	1611	72	92	≤85%	85%-100%	Low
	Taylors Lane	21162	Taylors Ln / Ballyboden Way Rbt	887	890	55	47	≤85%	≤85%	Negligible
A.12	M50	9226	M50 Jct 11	3400	3337	100	88	>100%	85%-100%	Low
	Ashfield Road	11260	Ashfield Road / Beechwood Road	373	489	20	30	≤85%	≤85%	Negligible
A.2	Butterfield Avenue	21121	Butterfield Avenue / Firhouse Road / Old Bridge Road	1982	1728	51	58	≤85%	≤85%	Negligible
	Dunville Avenue	11259	Dunville Avenue / Oakley Road	293	443	13	22	≤85%	≤85%	Negligible
	Dunville Avenue	11254	Dunville Avenue / Palmerston Road	353	512	24	53	≤85%	≤85%	Negligible
	Firhouse Road	21204	Firhouse Road / Spawell Link Road	1557	1616	54	53	≤85%	≤85%	Negligible
	Frankfort Avenue	11269	Garville Road / Frankfort Avenue	96	270	4	18	≤85%	≤85%	Negligible
A.3	Braemor Road	11297	Braemor Road / Lower Dodder Road	1238	1215	75	96	≤85%	85%-100%	Low
	Broadford Road	19305	Broadford Road / Stonemason'S Way	934	1054	65	75	≤85%	≤85%	Negligible
	Canal Road	6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1676	1400	95	87	85%-100%	85%-100%	Negligible
	Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	626	825	21	26	≤85%	≤85%	Negligible
	Castlewood Avenue	40073	Castlewood Avenue / Castlewood Park	549	764	20	25	≤85%	≤85%	Negligible
	Charlemont Street	6100	Charlemont Street / Charlemont Mall	783	876	75	82	≤85%	≤85%	Negligible
	Charleston Road	11257	Charleston Road / Oxford Road	729	926	27	60	≤85%	≤85%	Negligible
A.4	Frankfort Avenue	11270	Frankfort Avenue / Vernon Grove	168	304	6	15	≤85%	≤85%	Negligible
	Broadford Road	19215	Broadford Road / Stonemason'S Way	934	1054	65	75	≤85%	≤85%	Negligible
A.4	Butterfield Avenue	21129	Anne Devlin Road / Butterfield Avenue	991	1095	67	76	≤85%	≤85%	Negligible
	Butterfield Avenue	21185	Butterfield Avenue / Fairways	1209	1185	70	98	≤85%	85%-100%	Low
	Chelmsford Road	11305	Chelmsford Road / Sallymount Avenue / The Applan Way	791	876	39	44	≤85%	≤85%	Negligible
	Beechwood Road	11399	Beechwood Road / Dunville Avenue	335	449	11	17	≤85%	≤85%	Negligible
	Churchtown Road Lower	11339	Churchtown Road Lower / Patrick Doyle Road	834	912	25	32	≤85%	≤85%	Negligible
A.5	Churchtown Road Upper	19396	Churchtown Road Lower / Churchtown Road Upper	1495	1483	48	56	≤85%	≤85%	Negligible
	Dartry Road	11359	Dartry Road / Orwell Park	1393	1657	61	74	≤85%	≤85%	Negligible
	Dundrum Road	19385	Bird Avenue / Dundrum Road	665	782	40	44	≤85%	≤85%	Negligible
	Dundrum Road	19386	Dundrum Road / Farrenbole Park	596	698	36	38	≤85%	≤85%	Negligible
	Grand Parade	6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2368	2400	60	46	≤85%	≤85%	Negligible
	Grange Road	19436	Grange Road / Stonemason'S Way	1595	1744	90	99	85%-100%	85%-100%	Negligible
	Leeson Street Upper	11125	Leeson Street Upper / Burlington Road	1376	1510	51	55	≤85%	≤85%	Negligible
A.6	Leeson Street Upper	11131	Leeson Street Upper / Dartmouth Road	996	1265	66	85	≤85%	≤85%	Negligible
	Leeson Street Upper	11136	Leeson Street Upper / Leeson Street Upper	877	1177	47	64	≤85%	≤85%	Negligible

Figure 3.191.3 Extracts from EIAR Appendix A6.4.4: Table 16

The above shows that the Proposed Scheme would result in negligible impact affected junctions on Frankfort Avenue as a result of the Proposed Scheme.

3.192192 – Nora McCaul

3.192.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Bus stops
2. Relocation of bus stop from near Bushy Park Road

3.192.2 Response to submission

The Proposed Scheme does not run along Bushy Park Road and as such it is not proposed to make any changes to bus stops along this road.

3.193193 – Orla Kelly and Paul Farrell

3.193.1 Submission – Whole Scheme

The submission raised the following issues:

1. Need for the Proposed Scheme
2. Every issue raised during public consultation has not been resolved
3. Transport modelling is based on outdated data
4. Changes to working patterns
5. Lack of peer review of the NTA ERM
6. Inadequate Public Consultation
7. Presentation of information
8. Access to religious institutions as a result of traffic management
9. Impact on businesses

3.193.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 2, the Proposed Scheme has been developed in an iterative manner, taking into account thousands of submissions, over multiple rounds of Public Consultation. While all submissions have been logged, considered and responded to, it is not possible with a scheme of such complexity to ensure that all issues are fully resolved. Notwithstanding this, the NTA believes that the Proposed Scheme balances achieving its objectives with minimising impacts on the surrounding environment. The feedback from the multiple rounds of Public Consultation has been essential in achieving this.

In relation to Issue 5, Section 3.2.2 of the Transport Modelling Report contained in Appendix A6.2 of the EIAR describes the use of the East Regional Model (ERM) in assessing the Proposed Scheme:

“The East Regional Model (ERM) is part of the National Transport Authority’s (NTA) Regional Modelling System (RMS) for Ireland that allows for the appraisal of a wide range of potential future transport and land use alternatives. The RMS comprises the National Demand Forecasting Model (NDFM); five large-scale, detailed, multi-modal regional transport models; and, a suite of Appraisal Modules. The five regional models comprising the RMS are focussed on the travel to-work areas for Dublin (represented by the aforementioned East Regional Model (ERM)), for Cork (represented by the South West Regional Model (SWRM)), for

Limerick (represented by the Mid-West Regional Model (MWRM)), for Galway (represented by the West Regional Model (WRM)) and for Waterford (represented by the South East Regional Model (SERM)).

The key attributes of the five regional models include; full geographic coverage of each region, detailed representations of all major surface transport modes including active modes, road and public transport networks and services, and of travel demand for five time periods (AM, 2 Inter-Peaks, PM and Off-Peak).

The RMS encompasses behavioural models calibrated to 2017 National Household Travel Survey 2 data that predict changes in trip destination and mode choice in response to changing traffic conditions, transport provision and/or policies which influence the cost of travel.

3.2.2.1 Purpose of the RMS

The NTA uses the RMS to help inform decisions required during strategy development and to assess schemes and policy interventions that are undertaken as part of its remit. The RMS has been developed to provide the NTA with the means to undertake comparative appraisals of a wide range of potential future transport and land use options, and to provide evidence to assist in the decision-making process. Examples of how the RMS can assist the NTA include testing new public transport schemes by representing the scheme in the assignment networks, testing demand management measures by, for example, changing the cost of parking or number of parking spaces within the regional model or testing the impacts of new land use by changing the planning data assumptions within the NDFM.

The RMS includes the 2016 Census/POWSCAR and 2017 National Household Travel Survey (NHTS) data sets and the NTA has included a range of improvements to the main model components where identified and implemented. These improvements include improving and making changes to such elements as the NDFM, development of the Long-Distance Model, updated zoning, networks, and parking modules; best-practice discrete choice modelling using the NHTS and POWSCAR datasets to estimate the parameters of the behavioural models, improved model runtimes, and general model functionality improvements.

3.2.2.2 RMS Components

The NTA RMS comprises of the following three main components, namely:

- The National Demand Forecasting Model (NDFM);
- Regional Models (including the ERM); and
- A suite of Appraisal Modules.

The NDFM takes input attributes such as land-use data, population etc., and estimates the total quantity of daily travel demand produced by, and attracted to, each of the 18,641 Census Small Areas in Ireland.

The ERM is a strategic multi-modal transport model representing travel by all the primary surface modes – including, walking and cycling (active modes), and travel by car, bus, rail, tram, light goods and heavy goods vehicles, and broadly covers the Leinster province of Ireland including the counties of Dublin, Wicklow, Kildare, Meath, Louth, Wexford, Carlow, Laois, Offaly, Westmeath, and Longford, plus Cavan and Monaghan.

The ERM is comprised of the following key elements:

- **Trip End Integration:** The Trip End Integration module converts the 24-hour trip ends output by the NDFM into the appropriate zone system and time period disaggregation for use in the Full Demand Model (FDM);
- **The Full Demand Model (FDM):** The FDM processes travel demand, carries out mode and destination choice, and outputs origin-destination travel matrices to the assignment models. The FDM and assignment models run iteratively until an equilibrium between travel demand and the cost of travel is achieved; and
- **Assignment Models:** The Road, Public Transport, and Active Modes assignment models receive the trip matrices produced by the FDM and assign them in their respective transport networks to determine route choice and the generalised cost for each origin and destination pair.”

The East Regional Model (ERM) provides a comprehensive representation of travel patterns across the Greater Dublin Area and is a suitable tool for the testing and appraisal of the Proposed Scheme. The limitations of strategic transport models are recognised and fully understood. The ERM is considered the appropriate tool for fulfilling the NTA’s requirements in terms of the planning and appraisal of the Proposed Scheme.

3.194194 – Orla Murphy

3.194.1 Submission – Templeogue Road

The submission raised the following issues:

1. Inadequate bus service proposed.
2. Enforcement
3. Biodiversity
 - a. Destruction of trees
4. Alternative options
 - a. Remove roundabout at Rathdown Park / Rathdown Crescent
 - b. Make Rathdown Park one-way.
 - c. Metro
 - d. Tram / Luas
5. Traffic
 - a. Increased congestion
 - b. Increased congestion on Fortfield Road
6. Bus stops
 - a. Relocation of Terenure College bus stop
7. Access to amenities
 - a. Bushy Park

3.194.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.195195 – Orwell Park (Templeogue) Residents Association

3.195.1 Submission –

The submission raised the following issues:

1. Underestimation of transport demand along the Rathmines corridor within the Greater Dublin Area Transport Strategy 2022 – 2042
2. Inability to provide for the number of buses required to meet the demand on the corridor.
3. Gap in the scheme in the city centre
4. Interaction with College Green Scheme
5. Lack of consideration of Metro alternative
6. Impact on general traffic due to traffic management proposals
7. Increased emissions due to longer car journeys
8. Cashless fare system
9. Templeogue Road Bus Gate

10. Construction impacts and land acquisition.
11. Retain existing cycle lanes on Terenure Road East
12. Remove some of the proposed turn bans.

3.195.2 Response to submission

Detailed responses to issues 1 and 3 - 12 have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

In relation to issue 2, Section 6.4.6.1.14 outlines the resilience testing which has been carried out for the Proposed Scheme in relation to the provision of buses along the route, whereby the Proposed Scheme was tested based on 56 buses per direction per hour. The following is noted:

“For the purposes of this EIAR and the transport modelling undertaken in support of the EIAR, no increase in bus service frequency beyond that planned under the current Bus Connects Network redesign proposals was assessed. The bus frequencies used in the modelling are based on the proposed service rollout as part of the BusConnects Network Redesign and are the same in both the Do Minimum and Do Something scenarios. This rollout is currently underway. The rationale for undertaking this approach was that the planning consent being sought and which this EIAR supports is solely for the infrastructural improvements associated with providing bus priority and other sustainable modes measures along the Proposed Scheme.

This analysis, however, is conservative as the bus priority infrastructure improvements and indeed the level of protection it will provide to bus journey time consistency and reliability will provide a significant level of resilience for bus services that will use the Proposed Scheme from implementation into the future. The resilience provided by the Proposed Scheme will allow the service pattern and frequency of bus services to be increased into the future to accommodate additional demand without having a significant negative impact on bus journey time reliability or the operation of cycle and pedestrian facilities. In order to assess this resilience and the potential impacts of this resilience on carbon emissions, an additional analysis has been undertaken, which is detailed below.

A key benefit of the provision of a resilient BusConnects Service network, one which can provide reliable and consistent journey times, is that it has potential to cater for further significant transfer from private car travel to more sustainable and environmentally friendly travel via public transport.

To assess the resilience of the Proposed Scheme to cater for additional bus service frequency provision whilst maintaining a high level of bus journey time reliability, a separate analysis was undertaken in the Proposed Scheme micro-simulation model. In this analysis, the service frequency, in both directions of travel, was increased to achieve a 10 buses per hour increase, at the busiest section, to assess whether the Proposed Scheme could cater for this increased service frequency whilst maintaining a high level of journey time reliability. The analysis was undertaken in the 2028 Minimum and Do Something models to assess whether the bus priority infrastructure was having the desired impact of protecting bus journey time reliability.

The bus service frequency, along the busiest section along Aungier Street, in the 2028 Do Minimum model and in the 2028 Do Something Resilience testing model is outlined in Table 6.57.

Table 6.57: Resilience Testing Bus Service Frequency Scenario Testing

Scenario	Inbound (Buses per Hour)	Outbound (Buses per Hour)
Do Minimum	46	46
Do Something	46	46
Do Minimum - Additional Services Resilience Test	56	56
Do Something - Additional Services Resilience Test	56	56

Table 6.58 outlines the average journey times for the inbound and outbound A2 service in the 2028 Opening Year scenarios. The A2 service has been chosen for the resilience testing as it represents the bus service which travels the longest distance along the Proposed Scheme.

Table 6.58: A2 Service – Average Bus Journey Times

Direction	Do Minimum (minutes)	Do Minimum (Additional Services) (minutes)	% Difference	Do Something (minutes)	Do Something - Additional Services (minutes)	% Difference
2028 Inbound AM	35.2	37.7	7.0%	29.4	30.4	3.6%
2028 Outbound PM	35.2	36.9	4.9%	27.0	28.4	5.3%

The results of the scenario testing with an additional 10 buses per direction per hour operating along the Proposed Scheme in the 2028 Opening Year are presented graphically in Diagram 6.38. The diagram displays the maximum, minimum and average journey times for each of the A2 bus services modelled.

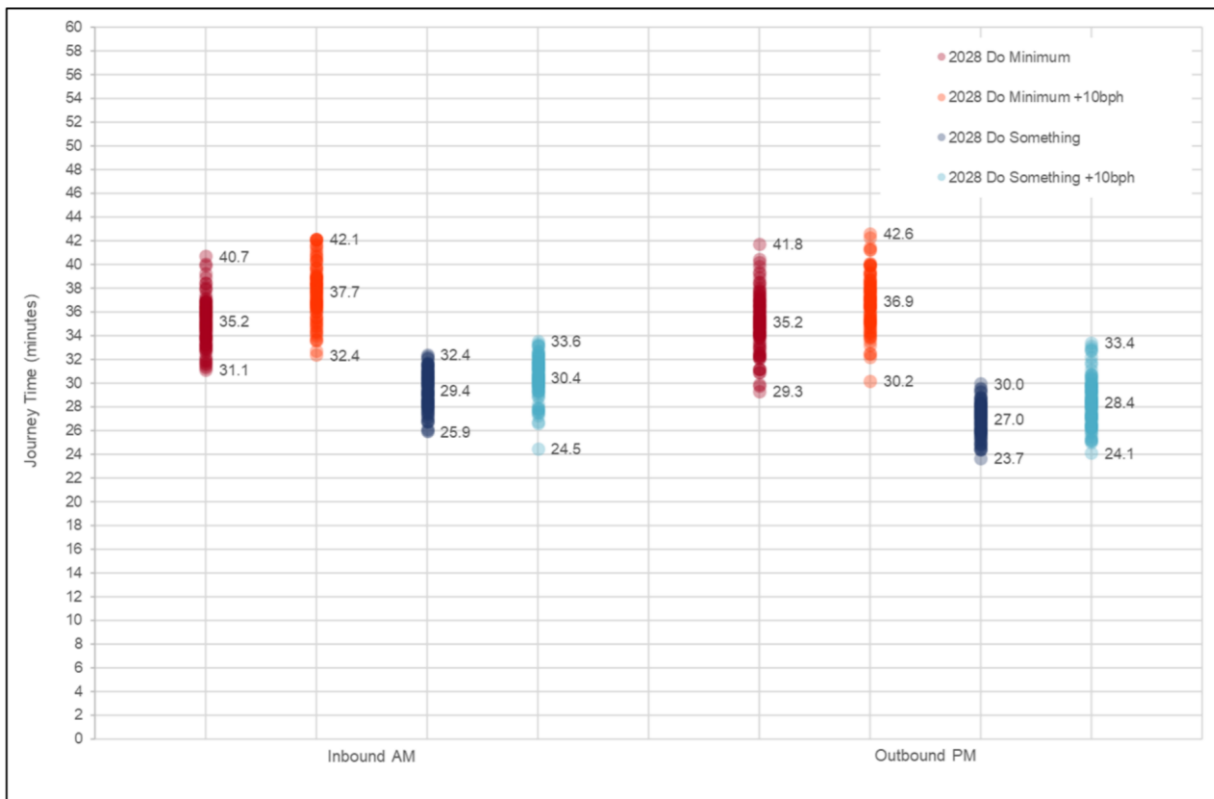


Diagram 6.38: Resilience Testing Bus Journey Time Reliability Indicators - Scenario Testing– Opening Year (2028)

As can be seen from Diagram 6.38 the modelling indicates that even with an additional 10 services operating per direction per hour along the Proposed Scheme, a high level of journey time reliability is maintained in the Do Something scenario, comparable with the 46 buses per direction per hour results. The results indicate limited change in average journey times in the Do Something Resilience sensitivity tests per bus. In the Do Minimum Resilience sensitivity test, journey times are more severely impacted, particularly in the AM peak inbound. In the Do Something Resilience sensitivity test bus journey time reliability is maintained with the additional services in place as indicated by the reduced range of journey times compared to the Do Minimum Resilience Test scenario.

This highlights the benefit that the Proposed Scheme infrastructure improvements can provide in protecting bus journey time reliability and consistency, as passenger demand continues to grow into the future.

It should be noted that it was assumed the general traffic levels included in each scenario would remain static. If traffic levels were to increase (typical daily variations are in the order of +/- 15%) then the bus priority infrastructure would further protect journey time reliability and resilience in comparison with the Do Minimum scenario.

Further details on the potential additional greenhouse gas (GHG) emissions savings that could occur from this resilience is outlined in Chapter 8 (Climate).”

3.196196 – Pat & Eileen McMorow

3.196.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact on Rathfarnham Castle Park

- a. Road widening
- b. Biodiversity
 - i. Flora and fauna
- c. Loss of green space
 - i. Amenity

3.196.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.197197 – Pat and Maire Coman

3.197.1 Submission – Templeogue Road

The submission raised the following issues:

- 1. Biodiversity
 - a. Destruction of trees in Bushy Park
- 2. Air pollution
- 3. Traffic
 - a. Increased bus volumes
- 4. Alternative options
 - a. Tram / Luas

3.197.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to the removal of trees in Bushy Park, Figure 3.68.1 to Figure 3.68.2 are extracts from the Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR. These drawing show the proposed landscaping along Templeogue Road in the area referenced in the submission and identify trees to be removed (trees with red outlines).

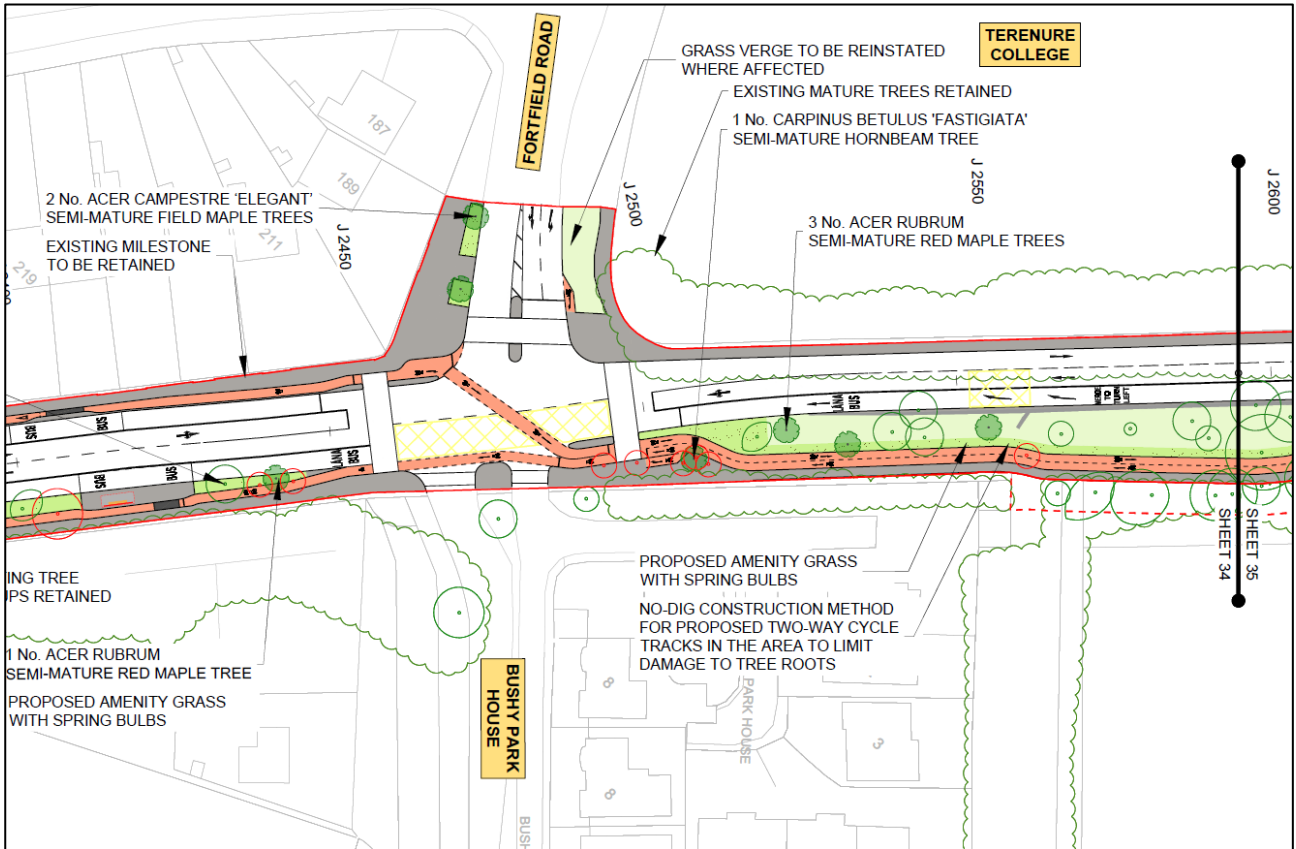


Figure 3.197.1 Extract from Landscaping General Arrangement Drawings (Sheet 34)

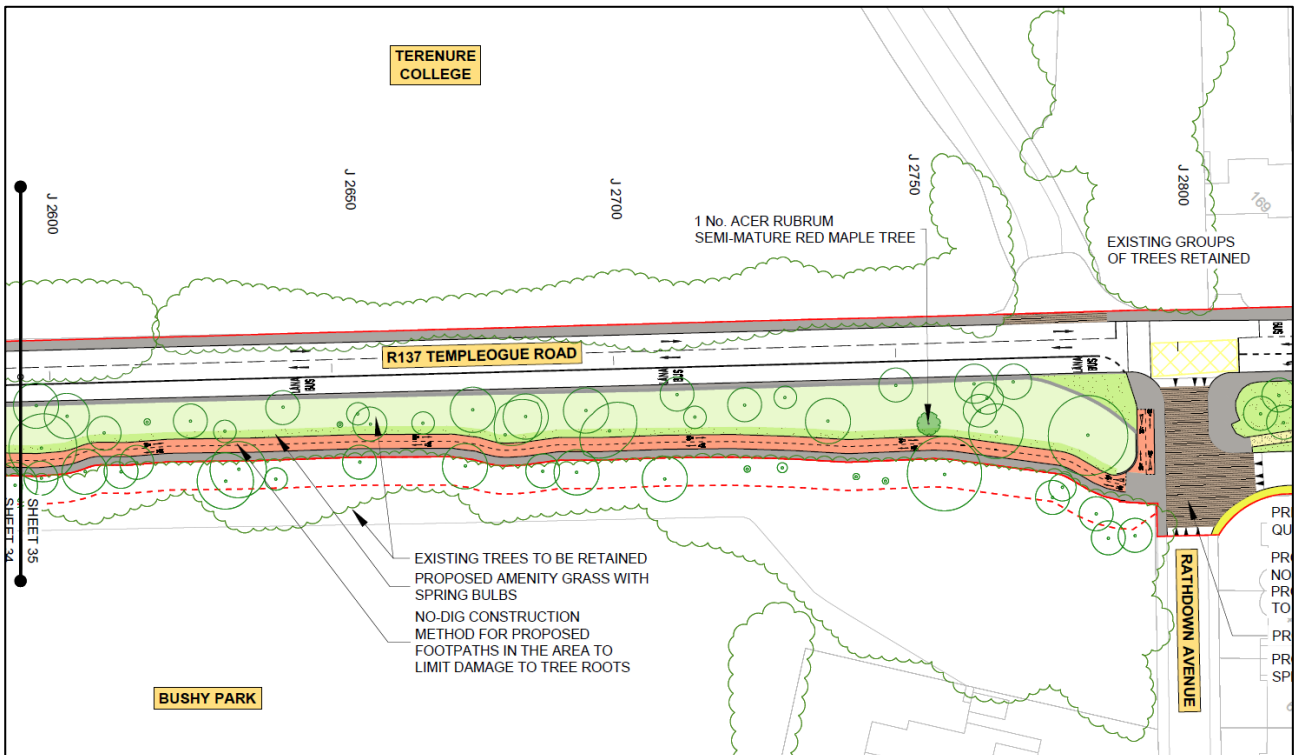


Figure 3.197.2 Extract from Landscaping General Arrangement Drawings (Sheet 35)

It is noted that only 1 tree is identified for removal within Bushy Park.

Within Bushy Park, it is noted that the design has considered the impact on trees and in this area it is proposed to deviate slightly from the required minimums in order to retain trees while still achieving the scheme objectives. This is explained in Table 4.3 of Chapter 4 for of the EIAR, and extract of which is presented below.

Ch. J2500-J2790	Two-Way Cycle Track	3.25	Departure	2.5m	Cycle track width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.
Ch. J2500-J2790	Footpath (within Bushy Bark)	2.0m	Departure	1.5m	Footpath width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.

Figure 3.197.3 Extract from Chapter 4 of the EIAR (Table 4.3)

3.198198 – Pat and Theresa McCaffrey

3.198.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. One-way operation of Rathgar Road
3. Unnecessary change providing no real gains to bus travel times.
4. Traffic
 - a. Diverted to residential streets.
5. Access to amenities
6. Biodiversity
 - a. Destruction of trees

3.198.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.199199 – Patrick & Anne Fletcher

3.199.1 Submission – Templeogue Road

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Cycle routes
3. Victoria Road unsuitable for a cycle route
4. Turn bans.
5. Left turn from Zion Road to Orwell Road
6. From Victoria Road
7. Compulsory purchase of property
8. Fortfield Road and Templeogue Road junction
9. No assessment of cumulative impact of 12 corridors
10. Negative effect on businesses

11. Alternative options
12. Tram / Luas
13. Metro
14. Loss of on-street parking
15. Rathmines Road Upper
16. Traffic
17. Increased volumes on Highfield Road

3.199.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

In relation to Item 2, as set out in Chapter 4 of the EIAR:

It is also proposed to provide an alternative cycle facility consisting of cycle tracks in each direction along Terenure Road North and Harold's Cross Road, connecting to the Kimmage to City Centre Core Bus Corridor Scheme at Harold's Cross. An additional alternative cycle facility is proposed along Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road to provide a secondary east-west route for cyclists travelling between Rathfarnham Road and Rathgar Road.

Chapter 3 of the EIAR sets out the various options considered in the Rathfarnham, Terenure and Rathgar areas, with a particular focus on cycle options. Through this process, it was determined that on balance, it was not considered appropriate to further widen Terenure Road East to accommodate segregated cycle tracks. The options assessment identified that an option which provided a direct north-south facility along Harolds Cross Road/Terenure Road North, in combination with an offline quiet street through Wasdale Grove, Wasdale Park and Victoria Road accommodating east-west cyclists would best meet the objectives of the scheme. This cycle facility is proposed to provide an alternative for those who wish to travel east-west (or vice versa). Given the low volumes of traffic on these roads, in combination with low speeds enforced by the presence of existing traffic calming measures, a quiet street facility is considered an appropriate solution in this area.

3.200200 – Patrick O'Hagan

3.200.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of area
2. Unnecessary change providing no real gains to bus travel times.
3. Alternative options
 - a. Tram / Luas
 - b. Metro
4. Biodiversity
 - a. Destruction of trees
5. Air pollution
6. Access to amenities

3.200.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In relation to Item 4 Figure 3.200.1 to Figure 3.200.4 are extracts from the Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR. These drawing show the proposed landscaping along Templeogue Road in the vicinity of Rathdown Drive and Bushy Park and identify trees to be removed (trees with red outlines).

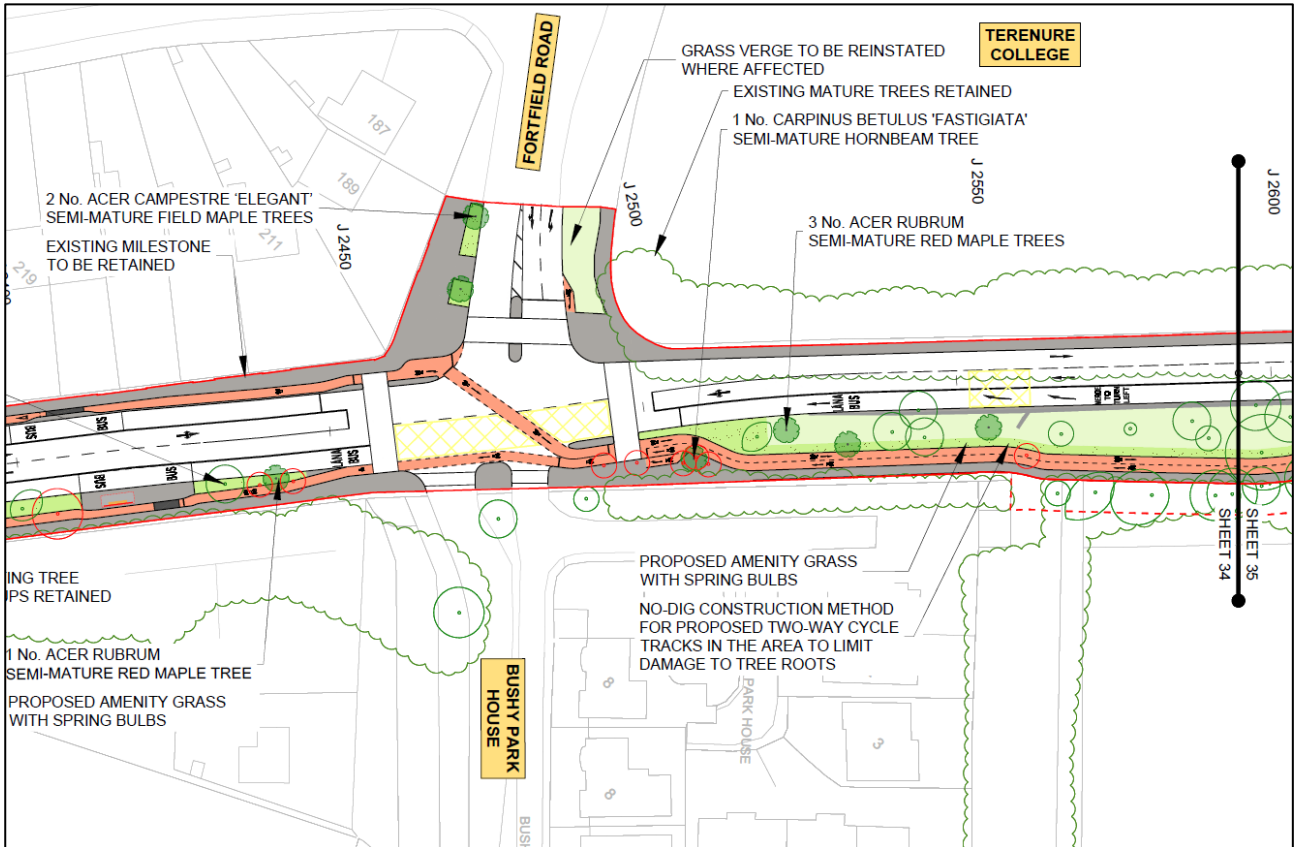


Figure 3.200.1 Extract from Landscaping General Arrangement Drawings (Sheet 34)

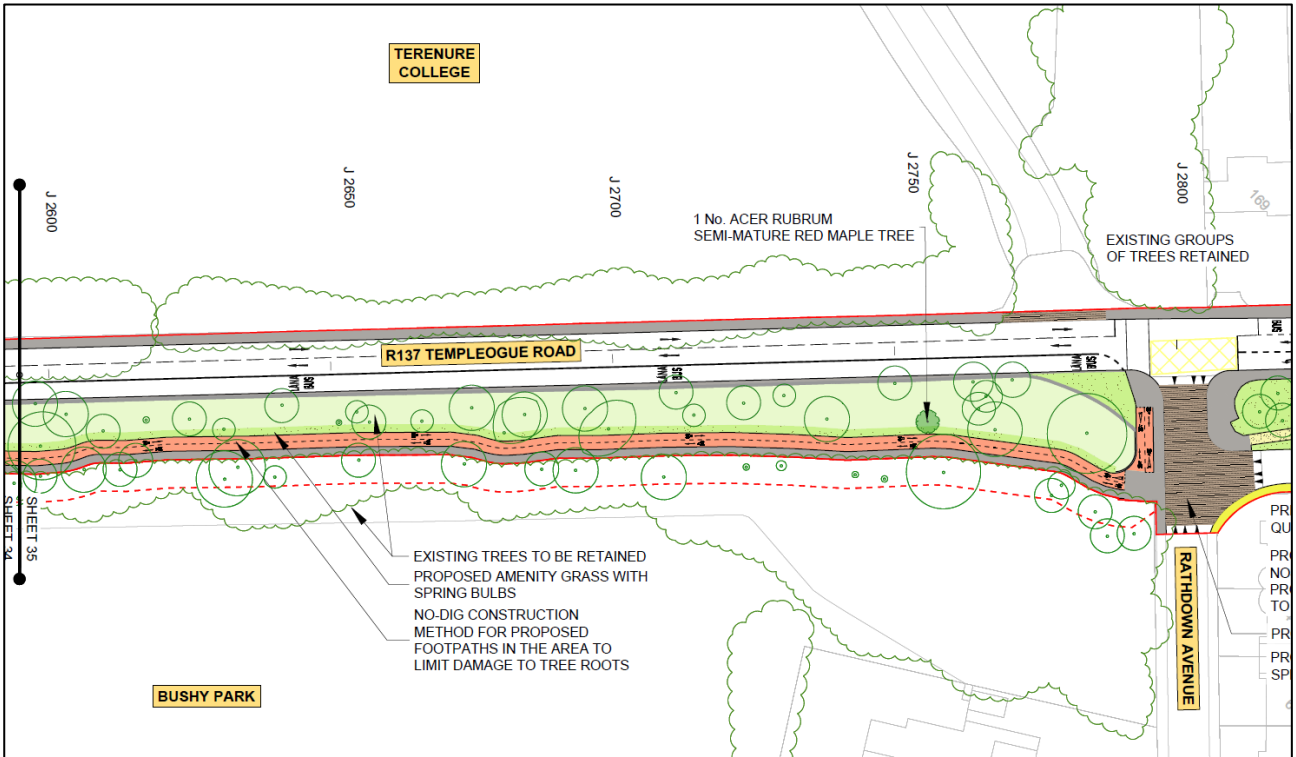


Figure 3.200.2 Extract from Landscaping General Arrangement Drawings (Sheet 35)

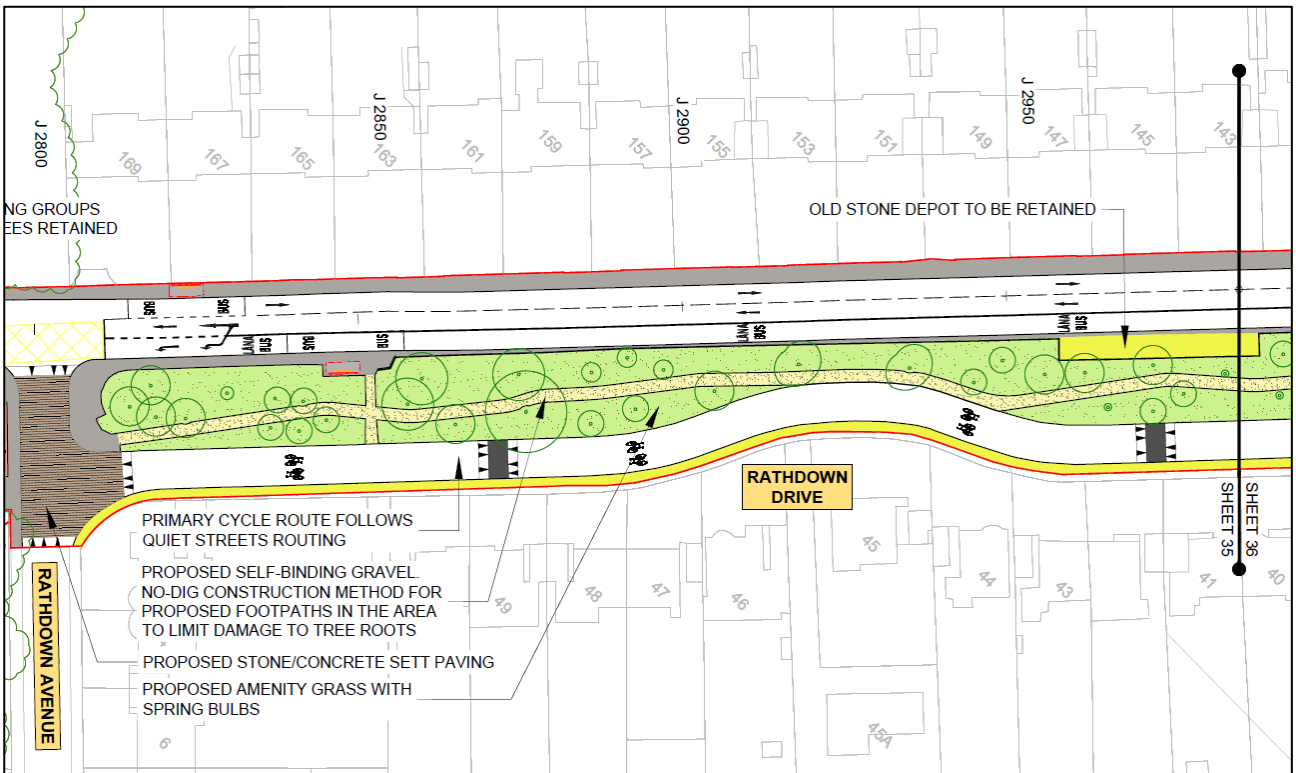


Figure 3.200.3 Extract from Landscaping General Arrangement Drawings (Sheet 35)

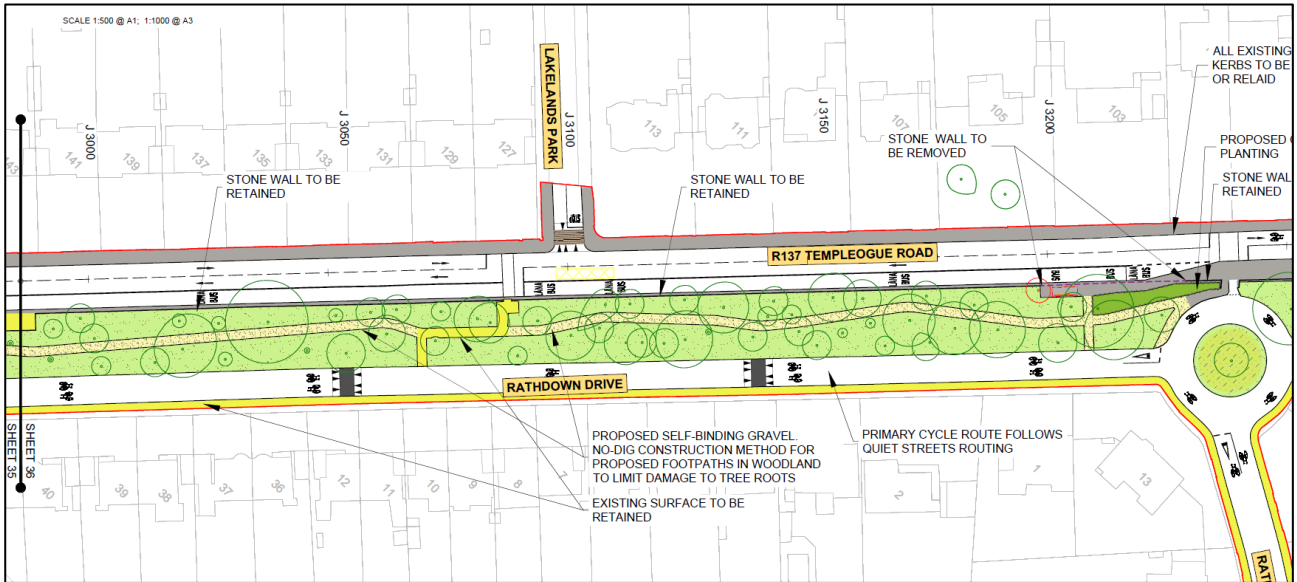


Figure 3.200.4 Extract from Landscaping General Arrangement Drawings (Sheet 36)

It is noted that in the area of concern to this submission:

- 5 trees are identified for removal just north of the Fortfield Road/Bushy Park House junction;
- 1 tree is identified for removal within Bushy Park; and
- 1 tree is identified for removal in the area between Templeogue Road and Rathdown Drive.

Within Bushy Park, it is noted that the design has considered the impact on trees and in this area it is proposed to deviate slightly from the required minimums in order to retain trees. This is explained in Table 4.3 of Chapter 4 for of the EIAR, and extract of which is presented below.

Ch. J2500-J2790	Two-Way Cycle Track	3.25	Departure	2.5m	Cycle track width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.
Ch. J2500-J2790	Footpath (within Bushy Bark)	2.0m	Departure	1.5m	Footpath width reduced over a distance of approximately 290m to mitigate any impact on existing mature trees. Existing width of shared pedestrian and cycle facility maintained.

Figure 3.200.5 Extract from Chapter 4 of the EIAR (Table 4.3)

As noted in Section 4.6.13.2.1:

In some locations, existing street trees have disturbed or broken footpath surfaces. The footpath around such trees will be replaced where appropriate with self-binding gravel to improve the vitality of the trees and ensure accessible pedestrian facilities.

This approach has been taken in the area between Templeogue Road and Rathdown Drive to ensure trees are retained.

3.201201 – Paul and Maria Baird

3.201.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
2. Increased volumes on Fortfield Road

3. Unnecessary change providing no real gains to bus travel times.

4. No consideration of what happens buses in the City Centre

3.201.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.202202 – Paul Jacobs

3.202.1 Submission – Whole Scheme

The submission raised the following issues:

1. Inadequate bus service proposed.
2. Unnecessary change providing no real gains to bus travel times.
3. Pre-COVID traffic volumes used in analysis.
4. Biodiversity
 - f. Destruction of trees
5. Compulsory purchase Order
6. Lack of consultation
7. Proposed bus gates
 - a. Templeogue Road
8. Access to amenities
 - a. Bushy Park
9. Traffic
 - a. Increased traffic on Rathdown Park
10. Proposed turn bans
 - a. Right turn from Templeogue Road to Rathdown Park
11. One-way operation of Rathgar Road

3.202.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.203203 – Paul Kavanagh

3.203.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.

2. Biodiversity
 - a. Destruction of trees
3. Architectural and cultural heritage
4. Traffic
 - a. Increased congestion
5. Bus stops
 - a. Relocation
6. Character of area
7. One-way operation of Rathgar Road

3.203.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report

3.204204 – Paula & Ray Moore

3.204.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Minimal improvements to bus journey times
2. Impact on Architectural and Cultural Heritage
3. Biodiversity
 - a. Removal of trees
 - b. Flora and fauna
4. Increased Emissions and Noise
5. Compulsory purchase of property
6. Traffic diverted to residential streets.
7. Loss of on-street parking and impact on businesses
8. Width of proposed footpaths
9. Pre-COVID traffic volumes used in analysis.
10. Relocation of inbound bus stop to 77 - 80 Rathgar Road
11. Consideration of Alternatives
 - a. Metro
 - b. School buses
 - c. Cashless fare payment
 - d. Park and ride facilities
 - e. Bus priority signals
12. Routing of buses via Harold's Cross Road
13. Assessment of cumulative impact of 12 corridors
14. Separate consultation for CBC10 and CBC12
15. Proposed bus gate at Rathmines Road

3.204.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.205205 – Pauline Wheatley

3.205.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Impact on access to amenities
 - a. Bushy Park
2. Bus stops
 - a. Relocation
3. Traffic
 - a. Increased volumes on Fortfield Road

3.205.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

In relation to the Item 2 related to removal of bus stops, as noted in Section 4.6.5.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

- *The criteria that are considered when locating a bus stop are as follows;*
- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, 'Tail to Tail' opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

3.206206 – Pete & Emma Smyth

3.206.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Alternative options
 - a. Tram / Luas
 - b. Metro
3. Inadequate bus service proposed.
4. Unnecessary change providing no real gains to bus travel times.
5. Character of area
6. One-way operation of Rathgar Road
7. Traffic
 - a. Increased volumes on Highfield Road
8. Proposed bus gates
 - a. Limit hours of operation
9. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
10. Noise and air pollution

3.206.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.207207 – Peter Lynch

3.207.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Necessity of land acquisition and consideration of alternatives
2. Clarity around land acquisition
3. Combined impact of BusConnects Schemes
4. Removal of Trees
5. Driveway Gradients
6. Congestion from bus priority on Rathfarnham Road
7. Contravention of the development plan zoning objective

3.207.2 Response to submission

1. Necessity of Land Acquisition and Consideration of Alternatives

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route.

- Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
- Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Following completion of Stage 1 initial appraisal, the remaining reasonable alternative options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

There were seven (CB1 to CB7) viable route options for Section 2 (Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road) were taken forward for assessment and further refinement, these are detailed in section 3.3.2.2.2 of the Chapter 3 of the EIAR.

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above.

A multi-criteria assessment (MCA) was carried out within each of these two sub-sections, as detailed in section 3.3.2.2.1 of Chapter 3.

Following the MCA, Stage 2- Route Options Assessment concluded that sub-option TVR3 was the preferred option for the sub-section along Rathfarnham Road and Terenure Road East to Rathgar Village, stating that:

Sub-option TVR3: *This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village);*

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3 was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Following an MCA, sub-option TVR3 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

As described in the above paragraphs and in EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report, the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

Section 4.5.2.1 of the EIAR describes the general overview of the Proposed Scheme at Section 2: *Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road*. At the section adjacent to 55 Rathfarnham Road, between Dodder Park Road and Rathdown Park, it is proposed to provide bus priority through a combination of signal-controlled priority and partial bus lanes, with 1.5m wide cycle tracks provided. To accommodate the new configuration within this section it is proposed to utilise land-take from adjacent properties on the western side of the road.

Further detail on the optioneering carried out in this area is presented in Section 2.3.3.

The Proposed Scheme will address sustainable mode transport infrastructure deficits while contributing to an overall integrated sustainable transport system as proposed in the GDA Strategy. It will increase the effectiveness and attractiveness of bus services operating along the corridor and will result in more people availing of public transport due to the faster journey times and reliability improvements which the Proposed Scheme provides. This in turn will support the potential to increase the bus network capacity of services operating along the corridor and thereby further increasing the attractiveness of public transport. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth.

At the specific area outside 55 Rathfarnham Road, the proposed cross-section and subsequent land acquisition have been considered and deemed necessary to facilitate the optimum scheme as presented in EIAR Volume 3 Chapter 4 Proposed Scheme Description and General Arrangement drawings. Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the absolute minimum width of 1.8m for footpaths and desirable width of 2m for cycle tracks. At this location a 1.8m footpath has been provided. However, as noted in table 4.3 of Chapter 4 of the EIAR, a reduced width cycle track of 1.5m is provided through this area in order to minimise impacts on adjacent properties while also meeting the scheme objectives. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

It should be noted that throughout the assessment process, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project's objectives.

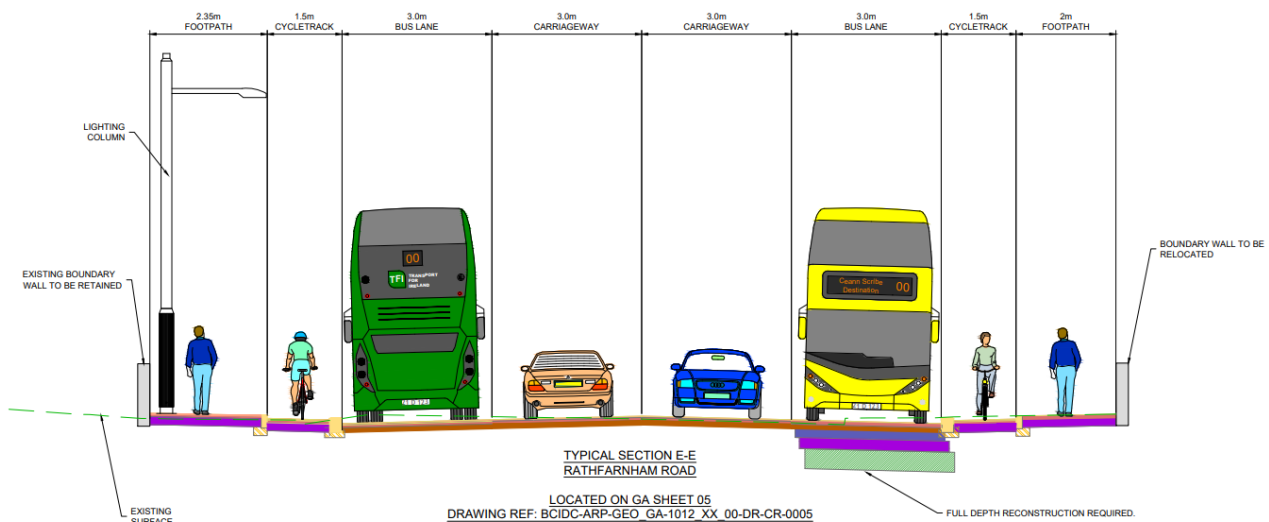


Figure 3.207.1 Typical Cross-section of Proposed Scheme between Bushy Park Road and Terenure Cross

2. Clarity around land acquisition

Both permanent and temporary land acquisition is required at this property. In terms of permanent acquisition, up to 1.2m will be required to achieve the optimum road cross-section, as described in Section 4.5.1.1 of EIAR Volume 2 Chapter 3 Proposed Scheme Description and General Arrangement Drawings.

An additional 2.0m temporary acquisition is required for the duration of the works to facilitate reconstruction of the boundary treatment.

Any land temporary acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question. Any lands acquired temporarily to facilitate construction work will be returned to landowners on completion of the works.

It is noted the entire area identified for temporary acquisition will not be required for the duration of the works. It is acknowledged that during the construction of the works there will be inconveniences for all users, but this will be managed to minimise impacts for all affected parties. The duration of the works will vary from property to property, but access and egress will be always maintained. Prior to undertaking any accommodation works within private property the appointed contractor will engage in consultation with landowners, during consultation the landowner will have an opportunity to raise any concerns and outline any requirements associated with the land in question.

In relation to boundary treatments and planting, section 4.6.13.5.2 Chapter 4 states:

Impacted property boundaries will be reinstated following construction. In some instances, boundaries will be rebuilt along their original alignments. In other cases, boundaries will be re-built on a new setback alignment. In general, property boundaries will be reinstated on a 'like for like' basis, including any walls, piers, fences, railings, gates, driveway finishes and private landscaping. Private grounds that are utilised in part for construction access will be reinstated following completion of the works to match the existing landscaping of the property. Where private grounds are reduced by permanent land take required for the scheme, the remaining grounds will be reinstated to match the landscape and character of the existing grounds in consultation with the property owner.

3. Combined impact of BusConnects Schemes

A detailed response to this item is presented in Section 2.1.1.

4. Removal of Trees

Section 1.1 of Appendix A17.1 Arboricultural Impact Assessment of Volume 4 of the EIAR states:

The objective of the impact assessment was to identify the areas that contained trees, groups of trees or hedgerows, and to ensure where practicable that these areas would be retained and to identify the trees that are to be removed to facilitate the Proposed Scheme. The survey was undertaken between the 10th and 13th August 2020. The survey commenced at the junction of Grange Road and Nutgrove Avenue, and at Junction 11 of the M50 and finished at Dame Street, including the Terenure Road North / Harold's Cross Road section and the of the Proposed Scheme. The below impact assessment report is based on the British standard BS 5837:2012 Trees in relation to design, demolition and construction recommendations. This standard gives recommendations and guidance on the principles to be applied to achieve a satisfactory juxtaposition of trees, including shrubs, hedges and hedgerows, with structures. It sets out to assist those concerned with trees in relation to construction to form balanced judgements. This impact assessment report is accompanied by an inventory of trees and hedgerows on site and a tree protection plan. The Arboricultural Impact Assessment and a tree protection plan was prepared for the Proposed Scheme to identify trees that may be impacted on by the proposed development based on the proposed design.

Section 6 of Appendix A17.1 states: *This impact assessment sets out the likely principal direct and indirect impacts of the Proposed Scheme on the trees on or immediately adjacent to the site and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.*

Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR show the proposed landscaping along the Proposed Scheme. As can be seen in Figure 3.207.2, there are 7 No. Prunus Avium 'PLENA' Semi-Mature wild Cherry Trees proposed along the section of Rathfarnham Road between Nos 51-71.

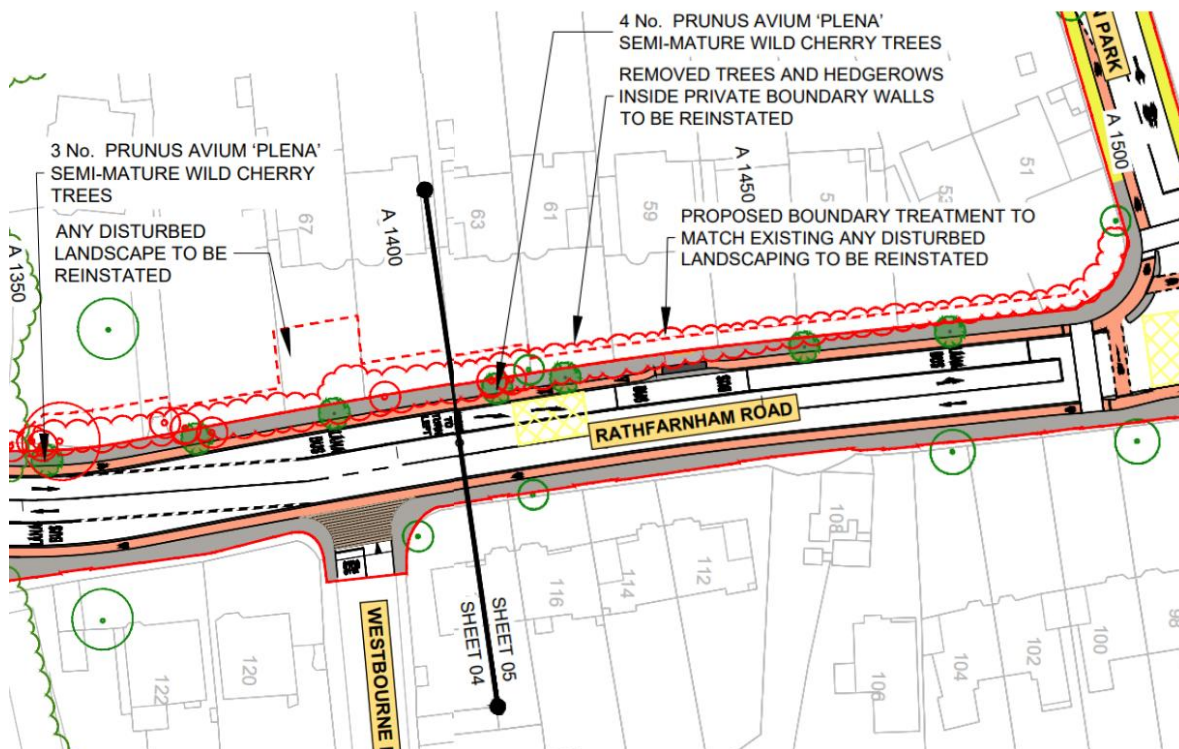


Figure 3.207.2 Extract from Landscaping General Arrangement Drawings (Combined Sheet 4 and 5)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

A detailed response to the removal of trees generally is presented in Section 2.1.1.

5. Driveway Gradients

As set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable.

In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

Notwithstanding the above, it is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road by c. 0.15m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR);
- Providing footpath cross-fall gradient above that which is typically provided for new built schemes, however not exceeding the existing gradient.

In relation to table 1 – *Summary of Design Review of Access Gradients*, included in the appended report by NRB Consulting Engineer which includes a summary of increased driveway gradients between Nos 55-71 Rathfarnham Road. A detailed response to each CPO submission received in relation to driveway gradients, where the NRB assessment concluded that the driveway gradient is either *steeper or significantly steeper*, has been prepared. The response to this submission can be found in the response to points of objection of CPO-01, CPO-19, CPO-25, CPO-30 and CPO-36 in the NTA Observations on the Proposed Scheme CPO Objections.

It is noted that the NRB assessment indicated that the gradients in the driveway to 55 Rathfarnham Road would be improved as a result of the Proposed Scheme, but this is not the case – existing gradients within the property will be retained as per the existing situation.

In summary, the Proposed Scheme design has fully considered the engineering requirements along Rathfarnham Road to both minimise the impact of the Proposed Scheme on adjacent properties and facilitate the no increase to the gradients within these properties.

6. Congestion from bus priority on Rathfarnham Road

As set out in Section 4.1 of Appendix 4.1 of the EIAR:

Signal control bus priority uses traffic signals to enable buses to get priority ahead of other traffic on single lane road sections, but it is only effective for short distances. This typically arises where the bus lane cannot continue due to obstructions on the roadway. An example might be where a road has pinch-points where it narrows due to existing buildings or structures that cannot be demolished to widen the road to make space for a bus lane. It works through the use of traffic signal controls (typically at junctions) where the bus lane and general traffic lane must merge ahead and share the road space for a short distance until the bus lane recommences downstream. The general traffic will be stopped at the signal to allow the bus pass through the narrow section first and when the bus has passed the general traffic will then be allowed through the lights.

In terms of Rathfarnham Road, signal control bus priority is utilised to achieve the BusConnects objective of improving bus speeds, reliability, and punctuality.

Section 4.4.1.2.3 of the Preferred Route Option Report, which is part of the supplementary information, evaluated various choices for the BusConnects route between Grange Road and Terenure Cross. *Numerous submissions received as part of the public consultation raised concerns about the impact of land acquisition along this section of the route. In addition, upon review of the EPR Option proposals with the benefit of topographical survey, it was evident that portions of the EPR Option proposals, namely the Brookvale Downs parallel cycle route as well as the impact on steep driveways on Rathfarnham Road, required further consideration.* For these reasons, alternative options have been considered in this area. Consequently, alternative options were explored for this area. In this evaluation, 9 options (RF1-9) were considered.

Section 4.4.1.2.5 of the report summarises the assessment process and concludes that Option RF5 offers more advantages compared to the other options.

Option RF5: An inbound bus lane, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road south of the River Dodder. A combination of bus lanes and signal-controlled priority, with two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between the River Dodder and Bushy Park Road. The inbound cycle track would be curtailed for a short section (c.270m) from the Texaco station to c. 100m in advance of the junction with Dodder Park Road. For this short section, cyclists would use the bus lane. Two bus lanes, two general traffic lanes and two 1.5m wide cycle tracks provided on Rathfarnham Road between Bushy Park Road and Terenure Cross.

RW Nowlan & Associates Report, which was appended to the submission states in Section 4.1 states that the proximity of the signal control bus priority at the Dodder View Road junction and Rathdown Park Junction may lead to congestion along Rathfarnham Road. While the issue of traffic congestion was already addressed earlier in this response, for additional context, Section 2.3.3 demonstrates an overall reduction in combined traffic flow on Rathfarnham Road in the 2028 Opening Year scenario of the Proposed Scheme

In reference to the recommendation presented in section 4.2 of the submission, which suggests that a more suitable alternative to the signal control bus priority for inbound buses at Rathdown Park is the implementation of longer green traffic light cycles, it is emphasised that this change could offer benefits for buses and effectively alleviate congestion.

The proposed road configuration for the section of Rathfarnham Road between Rathdown Park and Bushy Park Road maintains the northbound traffic lane and a right-turn filter lane into Bushy Park Road. Without the inclusion of bus priority at the entrance to Rathdown Park, a scenario could emerge in which buses and general traffic both converge in an uncontrolled manner into the straight-ahead traffic lane, exacerbating congestion and safety concerns. Therefore, a bus priority signal measures is essential at this location to effectively regulate the traffic flow into the straight-ahead lane, while also ensuring priority for buses is maintained.

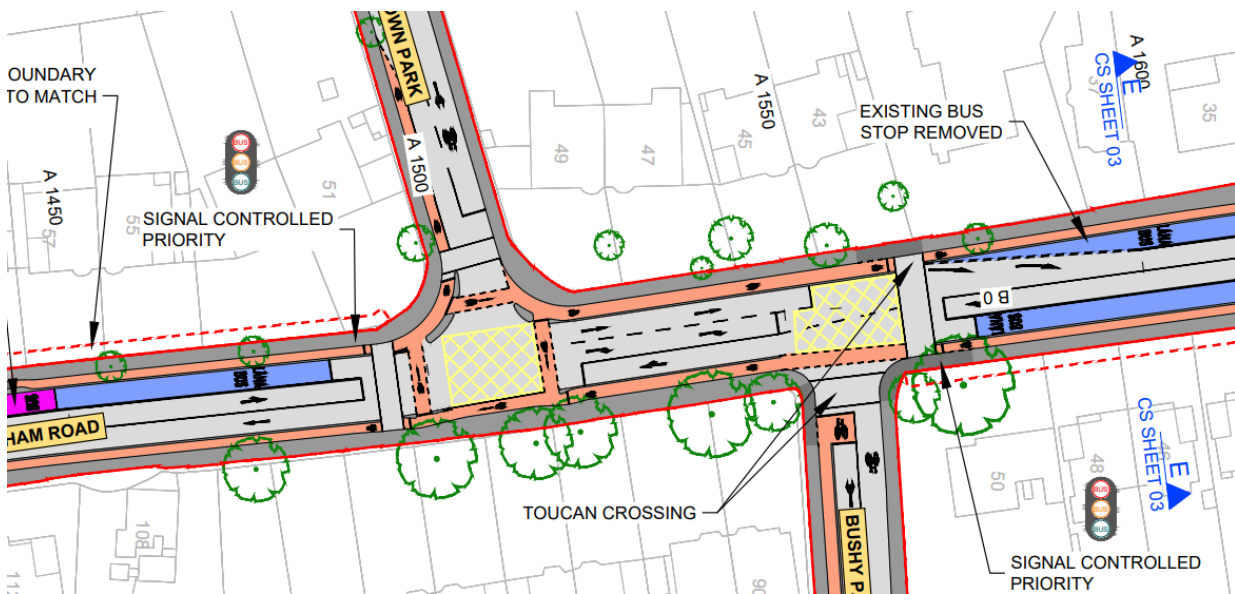


Figure 3.207.3 General Arrangement at Rathfarnham Road

7. Contravention of the development plan zoning objective

The submission noted that the houses and front gardens on Rathfarnham Road are designated as Z2 – Residential Neighbourhoods (Conservation Areas), and therefore the proposed road widening of the road space along the fronts of the houses is a material contravention of the Dublin City Development Plan.

Section 16.3.1.5 of EIAR Volume 2 Chapter 16 Architectural Heritage describes Conservation Areas in the context of the Dublin City Development Plan 2022-2028 (DCC (2022)).

Conservation Areas are areas which, while not to be confused with ACAs, do afford some protection to the architectural heritage under the Dublin City Development Plan 2022-2028 (DCC 2022), specifically under PolicyBHA9:

‘To protect the special interest and character of all Dublin’s Conservation Areas – identified under Z8 and Z2 zoning objectives and denoted by red line conservation hatching on the zoning maps. Development within or affecting a Conservation Area must contribute positively to its character and distinctiveness and take opportunities to protect and enhance the character and appearance of the area and its setting, wherever possible. Enhancement opportunities may include:

1. *Replacement or improvement of any building, feature or element which detracts from the character of the area or its setting.*
2. *Re-instatement of missing architectural detail or important features.*
3. *Improvement of open spaces and the wider public realm and reinstatement of historic routes and characteristic plot patterns.*

4. Contemporary architecture of exceptional design quality, which is in harmony with the Conservation Area.
5. Retention of buildings and features that contribute to the overall character and integrity of the Conservation Area.
6. Changes of use will be acceptable where in compliance with the zoning objectives and where they make a positive contribution to the character, function and appearance of the Conservation Area and its setting. The Council will consider the contribution of existing uses to the special interest of an area when assessing change of use applications and will promote compatible uses which ensure future long-term viability'.

Policy BHA10 states: 'There is a presumption against the demolition or substantial loss of a structure that positively contributes to the character of a Conservation Area, except in exceptional circumstances where such loss would also contribute to a significant public benefit'.

A review of the Dublin City Development Plan 2016 to 2022 (DCC 2016a) indicates that the Proposed Scheme traverses through four CAs. These areas contain structures of Local to National importance and of Low to High Sensitivity. They are described briefly in Table: 16.8 and Section 16.3.1.5.1 to Section 16.3.1.5.4. Further information on each CA is provided in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of this EIAR. There are no equivalent Conservation Areas in the South Dublin or in Dún Laoghaire-Rathdown.

The status of the buildings in this area is acknowledged and assessed in the EIAR.

The proposed land takes on the west side of the Rathfarnham Road will directly impact the boundary treatments to 51 to 71 Rathfarnham Road (CBC1012BTH039, CBC1012BTH040) which are of low sensitivity. These largely consist of cement rendered walls and piers with concrete cappings. Although some interventions have occurred in the past such as the widening of gateways, the boundary treatments are largely intact and consistent and contribute to the character of the houses and the streetscape in general. The removal of these boundaries would have a negative impact. The pre-mitigation Construction Phase impact will be Direct, Negative, Slight Temporary. The proposed mitigation is the recording of the existing boundaries in position prior to the works, labelling the affected masonry, brickwork, railings, gates, gate posts, capping stones prior to their careful removal to safe storage, and their reinstatement on new lines, which reinstate the existing details, and the relationships between the entrances and the historic buildings. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee the labelling, taking down and reinstatement of the affected gates, railings, piers, bricks and masonry. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. With mitigation, the impact magnitude is reduced to Low. The predicted residual impact is Direct, Negative, Not Significant, Temporary

3.208208 – Peter Thornton & Helen Callanan

3.208.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. No assessment of cumulative impact of 12 corridors
2. Lack of specifics provided on benefits of the Proposed Scheme
3. Alternative options
 - a. Harold's Cross Road
 - b. Cashless fare payment
 - c. Improved enforcement
 - d. Bus priority signals
 - e. Park and ride facilities
4. Architectural and cultural heritage

5. Air pollution
6. Impact of traffic redistribution
7. Separate consultation carried out on CBC10 & CBC12
8. Relocation of bus stop 1165 on Terenure Road East
9. Pre-COVID traffic volumes used in analysis.
10. Request oral hearing.

3.208.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.209209 – Philip and Sally Berman

3.209.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options
 - a. Congestion charges
2. Proposed cycle tracks
 - a. Route to avoid bus corridors.
3. Negative effect on businesses
4. Unnecessary change providing no real gains to bus travel times.

3.209.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 of this report.

3.210210 – Philip and Vivienne Mayne & Jacky Mayne

3.210.1 Submission – Templeogue Road

The submission raised the following issues:

1. Lack of consultation
2. Unnecessary change providing no real gains to bus travel times.
3. Proposed bus gates
4. Traffic
 - a. Diverted to residential streets.
5. Access to amenities
 - a. St. Luke's Hospital
 - b. Education
6. Delivery access

7. Alternative options
 - a. Bus priority signals

3.210.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.211211 – Philip O'Reilly

3.211.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Architectural and cultural heritage
 - a. Walls, railings and gates
3. Biodiversity
 - a. Destruction of trees
4. Alternative options
 - a. Metro

3.211.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.3.3 and 2.4.3 of this report.

3.212212 – Philip O'Reilly

3.212.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Alternative options
 - a. Metro
3. Biodiversity
 - a. Destruction of trees
4. Architectural and cultural heritage
 - a. Walls, railings, and gates
5. Bus stops
 - a. Relocations in front of homes
6. Traffic
 - a. Increased congestion

3.212.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.3.3 and 2.4.3 of this report.

3.213213 – Phillip Elliott, Elliott's Food Service

3.213.1 Submission – Rathmines

The submission raised the following issues:

1. Traffic impact on roads surrounding Camden Street
2. Removal of Loading Bays
3. Alternative solution such as rail more appropriate

3.213.2 Response to submission

A detailed responses to Item 3 of this submission is provided in Section 2.1.1 of this report.

- Traffic impact on roads surrounding Camden Street

As noted in section 6.2.2.1 of Chapter 6 of Volume 2 of the EIAR, *to determine the traffic and transport impact that the Proposed Scheme has in terms of an increase in general traffic flows on the direct and indirect study areas, a robust assessment has been undertaken, with reference to Transport Infrastructure Ireland's (TII) most recent Traffic and Transport Assessment Guidelines (TII 2014).*

This document is considered best practice guidance for the assessment of transport impacts related to changes in traffic flows due to proposed developments and is an appropriate means of assessing the impact of general traffic trip redistribution on the surrounding road network

According to Section 1.3 of the Traffic and Transport Assessment Guidelines (TII 2014):

'a Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of a proposed development or re-development, with an agreed plan to mitigate any adverse consequences'.

The guidelines aim to provide a framework to promote an integrated approach to development, ensuring that proposals promote more efficient use of investment in transportation infrastructure which reduces travel demand and promotes road safety and sustainable travel.

The TIA, which supports this EIAR chapter, follows the Traffic and Transport Assessment Guidelines and offers an impartial description of the likely impacts of the Proposed Scheme, outlining both its positive and negative aspects.

Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. Tables 6.63 and Table 6.67 present road links in the indirect study area where link threshold of 100 combined flows is exceeded (in the AM and PM peak hour period respectively). These diagrams and tables are reproduced below with streets relevant to this submission highlighted.

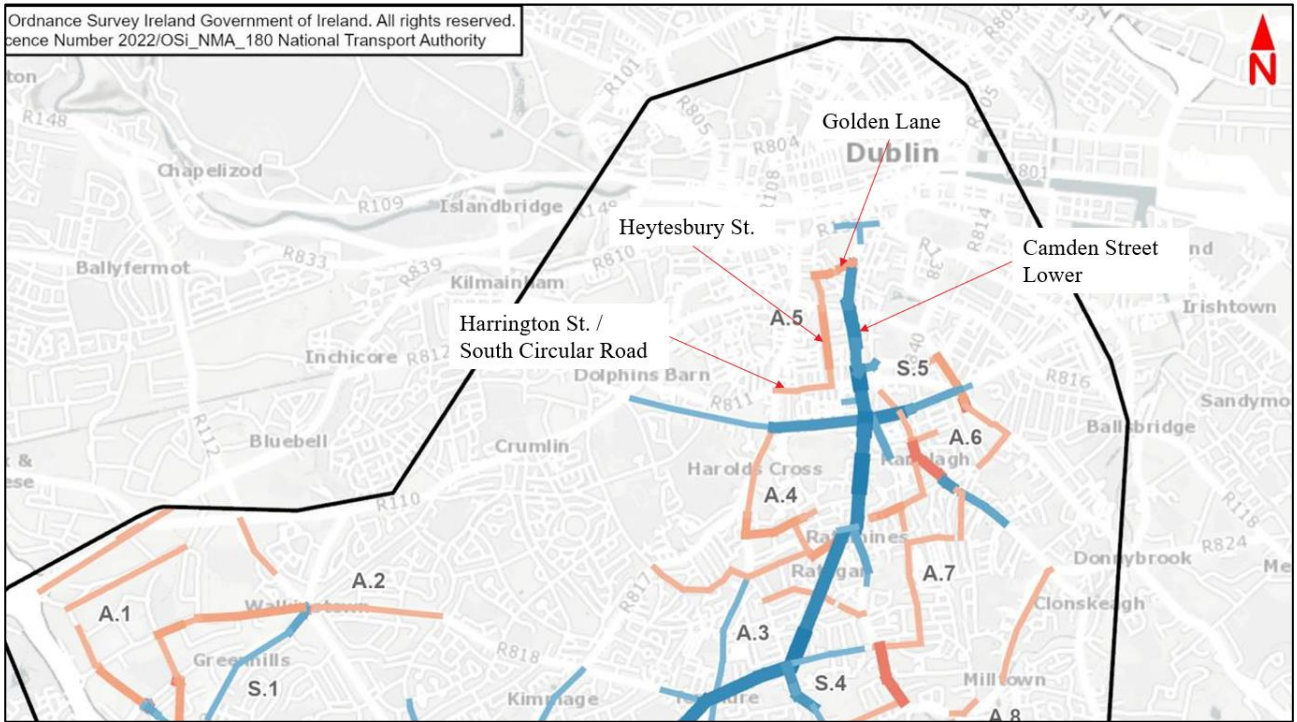


Figure 3.213.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

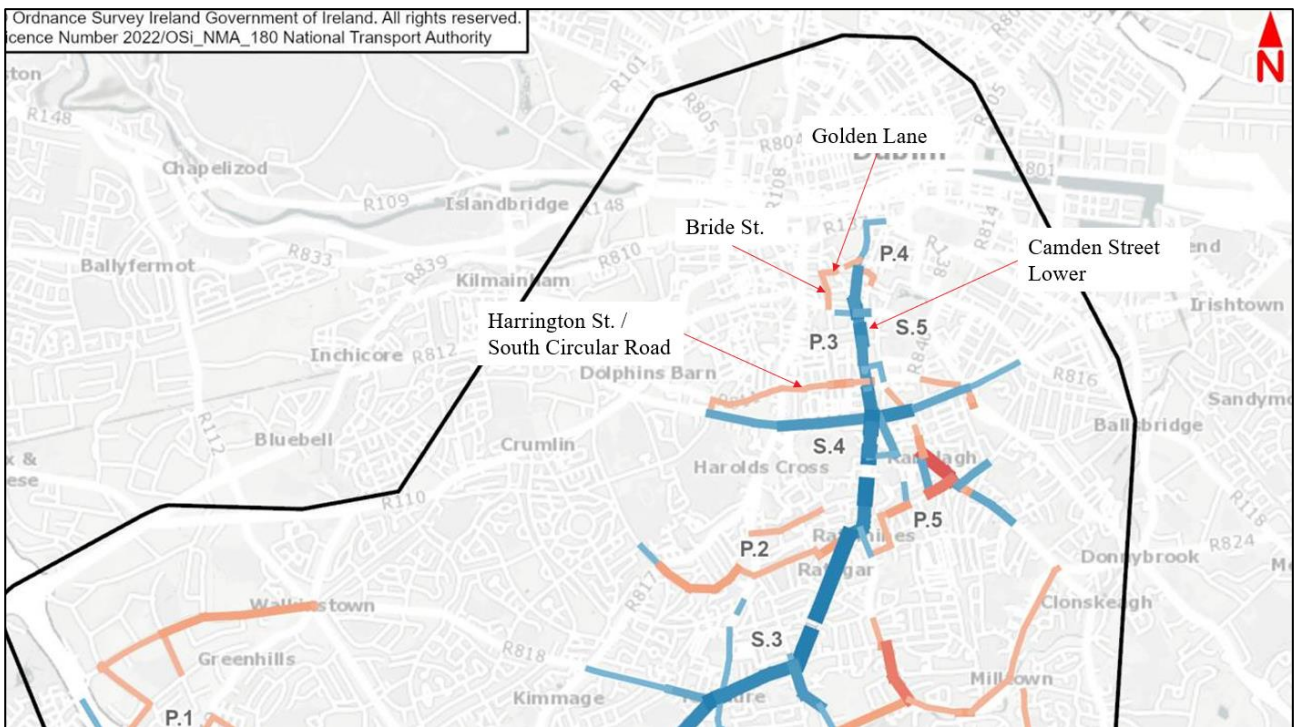


Figure 3.213.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above diagrams show that along Camden Street Lower, traffic volumes are projected to reduce significantly the AM (-300 PCUs) and PM (-287 PCUs) peak hours. The surrounding streets, including Heytesbury Street, Bride Street, South Circular Road/Harrington Street would see increases of 100-200 PCUs in each peak period,

Further junction capacity assessment was undertaken along these road links to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the AM and PM Peak periods, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 16 and Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented in Figure 3.213.3.

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flows		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum VoC	Do Something VoC	
A.7	Northbrook Road	11197	Northbrook Road / Dartmouth Terrace	221	332	8	13	<85%	<85%	Negligible
	Orwell Road	11315	Lower Dodder Road / Orwell Road	1340	1492	51	86	<85%	85%-100%	Low
	Leeson Street Lower	6266	Adelaide Road / Leeson Street Lower / Fitzwilliam Place	1672	1845	73	74	<85%	<85%	Negligible
		6265	Adelaide Road / Leeson Street Lower / Wilton Terrace	1775	2005	36	43	<85%	<85%	Negligible
		6268	Hatch Street Lower / Leeson Street Lower	1405	1600	37	37	<85%	<85%	Negligible
	Leeson Street Upper	11124	Leeson Street Upper / The Applan Way	1800	1864	95	84	85%-100%	<85%	Low Positive
	Lower Dodder Road	11246	Dodder Road Lower / Dodder Road Lower	444	556	15	21	<85%	<85%	Negligible
	Palmerston Park	11311	Palmerston Park / Rathmines Road Upper	1084	1176	51	76	<85%	<85%	Negligible
		11329	Palmerston Park / Sunbury Gardens	952	1308	52	76	<85%	<85%	Negligible
	Palmerston Road	11290	Cowper Road / Palmerston Road	162	348	9	21	<85%	<85%	Negligible
	Ranelagh	11184	Mountpleasant Place / Ranelagh / Ranelagh Road	935	1392	59	91	<85%	85%-100%	Low
	Rathmines Road Upper	11295	Rathmines Road Upper / Frankfort Avenue	773	781	26	53	<85%	<85%	Negligible
Taylors Lane	21148	Palmer Park / Taylors Lane	827	977	27	31	<85%	<85%	Negligible	
	21149	Pearse Brothers Park / Taylors Lane	904	1041	25	29	<85%	<85%	Negligible	
A.8	M50	21225	M50 Jct 12	3941	4023	93	93	85%-100%	85%-100%	Negligible
		Ranelagh	11233	Ashfield Road / Ranelagh	1222	1244	78	79	<85%	<85%
		11250	Cullenswood Road / Ranelagh	1324	1360	54	64	<85%	<85%	Negligible
	Ranelagh Road	11185	Northbrook Road / Ranelagh Road	910	1192	51	75	<85%	<85%	Negligible
A.9	Leeson Street Upper	11261	Ranelagh Road / Beechwood Avenue Lower	1142	1258	79	92	<85%	85%-100%	Low
		6300	Leeson Street Upper / Sussex Road (North)	1314	1597	45	60	<85%	<85%	Negligible
		11138	Leeson Street Upper / Sussex Road (South)	716	904	36	47	<85%	<85%	Negligible
	Ranelagh Road	11201	Ranelagh Road / Mountpleasant Place	948	1314	58	79	<85%	<85%	Negligible
		11338	Ranelagh Road / Mountpleasant Square / Orchard Lane	965	1338	54	77	<85%	<85%	Negligible
		11186	Ranelagh Road / Mountpleasant Terrace / Dartmouth Road	788	917	42	55	<85%	<85%	Negligible
Taylors Lane	21153	Taylors Lane / Whitechurch Road	1256	1384	54	66	<85%	<85%	Negligible	
A.1	Ballymount Avenue	16138	Ballymount Av / Calmount Rd Rbt	492	663	70	65	<85%	<85%	Negligible
	Ballymount Road Lower	16143	Ballymount Road Lower / Robinhood Road	1274	1431	46	45	<85%	<85%	Negligible
	Bride Street	6171	Bride Street / Bishop Street	694	827	36	43	<85%	<85%	Negligible
		6362	Bride Street / Golden Lane	1042	1237	36	39	<85%	<85%	Negligible
		6183	Bride Street / New Bride Street	1623	1813	62	66	<85%	<85%	Negligible
	Grosvenor Place	11242	Grosvenor Place / Effra Road	85	228	3	7	<85%	<85%	Negligible
		11238	Grosvenor Place / Grosvenor Road	438	646	27	33	<85%	<85%	Negligible
	Grove Road	6306	Grove Road / Harolds Cross Road / Parnell Road	2274	2109	72	61	<85%	<85%	Negligible
	Harolds Cross Road	8267	Harolds Cross Road / Mount Drummond Avenue	1333	1445	79	85	<85%	<85%	Negligible
	A.10	Harrington Street	6130	Harrington Street / Heytesbury Street / South Circular Road	1335	1486	47	49	<85%	<85%
South Circular Road		6484	Emorville Avenue / South Circular Road	988	1185	30	38	<85%	<85%	Negligible
		6134	South Circular Road / Bloomfield Avenue	983	1141	27	32	<85%	<85%	Negligible
		6132	South Circular Road / Curzon Street	919	1043	26	30	<85%	<85%	Negligible
Stephen Street Upper		6331	Stephen Street Upper / Longford Street Great	153	274	12	33	<85%	<85%	Negligible
A.11	Harolds Cross Road	8265	Harolds Cross Road / Harolds Cross Road	1508	1631	55	63	<85%	<85%	Negligible
	Stephen Street Upper	6332	Stephen Street Upper / Great Ship Street	353	563	28	44	<85%	<85%	Negligible
A.12	M50	16177	M50 Jct 10	3232	3294	99	97	85%-100%	85%-100%	Negligible
A.2	Bride Street	6449	Bride Street / Bishop Street	627	827	36	43	<85%	<85%	Negligible
A.3	Calmount Road	16118	Calmount Rd Rbt	1538	1594	72	78	<85%	<85%	Negligible
	Golden Lane	6438	Chancery Lane / Golden Lane	501	729	15	24	<85%	<85%	Negligible
		6105	Golden Lane / Stephen Street Upper	255	454	5	13	<85%	<85%	Negligible
		6196	Golden Lane / Whitefriar Street	530	748	23	34	<85%	<85%	Negligible

Figure 3.213.3 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 16

Map ID	Road Name	Junction ID	Junction Name	Peak Hour Traffic Flow		Max Volume over Capacity Ratio (%)		Ranges		Description of Impact
				Do Minimum Flow	Do Something Flow	Do Minimum VoC	Do Something VoC	Do Minimum	Do Something	
P.6	Butterfield Park	21146	Butterfield Park / Ballyroan Road	557	632	30	32	≤85%	≤85%	Negligible
	Butterfield Park	21139	Butterfield Park / Butterfield Orchard	124	353	7	16	≤85%	≤85%	Negligible
	Canal Road	6316	Canal Road / Charlemont Street / Grand Parade / Ranelagh Road	1828	1532	82	76	≤85%	≤85%	Negligible
	Castlewood Avenue	11286	Castlewood Avenue / Cambridge Road	602	824	18	25	≤85%	≤85%	Negligible
	Dodderview Road	9144	Dodderview Road / Fairways / Springfield Avenue	1599	1362	89	91	85%-100%	85%-100%	Negligible
	Dundrum Road	19385	Bird Avenue / Dundrum Road	594	697	32	39	≤85%	≤85%	Negligible
		11327	Dundrum Road / Milltown Bridge Road	997	1086	86	92	85%-100%	85%-100%	Negligible
		21204	Firhouse Road / Spawell Link Road	1542	1556	92	85	85%-100%	85%-100%	Negligible
		6301	Grand Parade / Leeson Street Lower / Leeson Street Upper / Mespil Road	2480	2395	67	58	≤85%	≤85%	Negligible
		19436	Grange Road / Stonemason's Way	1338	1587	56	96	≤85%	85%-100%	Low
		21175	Grange Road / Taylors Lane	866	1059	50	60	≤85%	≤85%	Negligible
	P.7	Ballyboden Road	21144	Ballyboden Road / Whitechurch Road / Willbrook Road	951	791	47	31	≤85%	≤85%
Belgrave Square North		11357	Belgrave Square East / Belgrave Square North / Charleston Road / Mount Pleasant Avenue Upper	945	1036	68	47	≤85%	≤85%	Negligible
		61000	Belgrave Square North / Castlewood Avenue	0	810	0	23	≤85%	≤85%	Negligible
Braemor Road		11297	Braemor Road / Lower Dodder Road	1099	1129	59	68	≤85%	≤85%	Negligible
Castlewood Avenue		40073	Castlewood Avenue / Castlewood Park	516	678	15	28	≤85%	≤85%	Negligible
Leeson Street Upper		11136	Leeson Street Upper / Leeson Street Upper	640	869	35	47	≤85%	≤85%	Negligible
P.8	Charlemont Street	6100	Charlemont Street / Charlemont Mall	836	945	51	55	≤85%	≤85%	Negligible
	Charleston Road	11312	Charleston Road / Cullinstown Road	691	1057	17	32	≤85%	≤85%	Negligible
	Leeson Street Upper	11131	Leeson Street Upper / Dartmouth Road	1060	1228	60	64	≤85%	≤85%	Negligible
P.1	Leinster Road	11287	Charleville Road / Leinster Road	378	450	18	18	≤85%	≤85%	Negligible
		11160	Leinster Road / Leinster Road West	240	391	10	13	≤85%	≤85%	Negligible
	Limekiln Road	9186	Limekiln Avenue / Limekiln Road	360	436	24	40	≤85%	≤85%	Negligible
	South Circular Road	7258	Dufferin Avenue / South Circular Road	1098	1248	46	58	≤85%	≤85%	Negligible
	Wellington Road	9195	Limekiln Road / Wellington Road	1422	1560	69	85	≤85%	≤85%	Negligible
P.2	Parnell Road	7211	Donore Avenue / Parnell Road	1583	1484	98	96	85%-100%	85%-100%	Negligible
P.3	Camden Street	6112	Bride Street / Peter Street	453	684	14	22	≤85%	≤85%	Negligible
	South Circular Road	6484	Emorville Avenue / South Circular Road	865	1079	32	46	≤85%	≤85%	Negligible
		6134	South Circular Road / Bloomfield Avenue	846	1040	28	36	≤85%	≤85%	Negligible
		6132	South Circular Road / Curzon Street	790	979	34	42	≤85%	≤85%	Negligible
		6131	South Circular Road / Kingsland Park Avenue	946	1162	41	51	≤85%	≤85%	Negligible
		7209	South Circular Road / Raymond Street	952	1109	35	40	≤85%	≤85%	Negligible
		7208	South Circular Road / St Albans Road	1117	1267	32	37	≤85%	≤85%	Negligible
		7213	Washington Street / South Circular Road	1000	1141	40	46	≤85%	≤85%	Negligible
	Stephen Street Upper	6332	Stephen Street Upper / Great Ship Street	216	326	17	27	≤85%	≤85%	Negligible
	Clareville Road	8133	Clareville Road / Larkfield Park	647	893	18	26	≤85%	≤85%	Negligible
	Golden Lane	6438	Chancery Lane / Golden Lane	504	648	20	21	≤85%	≤85%	Negligible
M50	16177	M50 Jct 10	3055	3111	89	91	85%-100%	85%-100%	Negligible	
P.5	Wellington Lane	9163	Wellington Lane / Orwell Road Rbt	589	722	31	38	≤85%	≤85%	Negligible
	Ballymount Avenue	16138	Ballymount Av / Calmount Rd Rbt	554	609	37	41	≤85%	≤85%	Negligible
	Ballymount Road Lower	16145	Ballymount Avenue / Ballymount Road Lower	1135	1343	95	96	85%-100%	85%-100%	Negligible
	Clanbrassil Street Lower	6220	Clanbrassil Street Lower / South Circular Road	2343	2591	100	101	>100%	>100%	Negligible
	Clareville Road	8413	Clareville Road / Kenilworth Park	744	935	51	73	≤85%	≤85%	Negligible
	Donore Avenue	7210	Donore Avenue / South Circular Road	1348	1506	85	95	≤85%	85%-100%	Low
	Greenhills Road	24220	Greenhills Road / Castletymon Road	1763	1804	119	124	>100%	>100%	Negligible
		9157	Greenhills Road / Limekiln Road	1606	1710	94	99	85%-100%	85%-100%	Negligible
	11238	Grosvenor Place / Grosvenor Road	393	571	20	27	≤85%	≤85%	Negligible	

Figure 3.213.4 Extracts from Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR: Table 17

The assessment presented in Table 16 and 17 of Appendix A6.4.4 in Volume 4 of the EIAR, shows that the Proposed Scheme would result in negligible traffic impact on the operation of junctions in the vicinity of Camden Street as a result of the Proposed Scheme.

- Removal of Loading Bays

As noted in section 6.4.6.1.1.4 of Chapter 6 of Volume 2 of the EIAR, the potential impacts of the Proposed Scheme on parking and loading provision have been assessed through a comparison of the availability of spaces or lengths of bay in the Do Minimum and Do Something scenarios. The assessment considers the impact of any changes on the general availability of parking and loading in the vicinity of the Proposed Scheme. This qualitative assessment has also taken into account nearby parking, which is defined as alternative parking locations along side roads within 200 – 250m of the Proposed Scheme.

The contents of Table 6.36 present a summary of the proposed changes to parking and loading along Section 4 of the Proposed Scheme.

Table 6.41: Section 4 – Overall Changes in Parking / Loading Spaces

Location	Parking Type	Number of Parking Spaces		
		Do Minimum	Do Something	Change
Rathmines Road Lower, between Rathmines Road Upper and Grove Road.	Loading Bay	4 loading bays (14 spaces)	6 loading bays (20 spaces)	+ 2 loading bays (+6 spaces)
Military Road	Loading Bay	1	1	0
	Informal Parking: pay and display residential	21	17	-4
Richmond Street South (between Lennox Street and Harcourt Road and Richmond Street)	Pay & display: commercial	8	8	0
	Loading Bays	3 loading bays (6 spaces)	3 loading bays (6 spaces)	0
Camden Street Lower (between Harcourt Road and Montague Street)	Pay & display: commercial	20	13	-7
	Disabled Bay	0	1	+1
	Loading Bay	4 loading bays (8 spaces)	5 loading bays (11 spaces)	+1 loading bay (+3 spaces)
Wexford Street	Loading Bay	2 loading bays (5 spaces)	1 loading bays (2 spaces)	-1 loading bays (-3 spaces)
	Pay & display: commercial	9	0	-9
	Disabled Bay	1	0	-1
Redmond's Hill	Loading Bay	1 loading bay (5 spaces)	1 loading bay (5 spaces)	0
Aungier Street	Loading Bay	3 loading bays (8 spaces)	2 loading bays (5 spaces)	-1 loading bays (-3 spaces)
South Great George's Street	Loading Bay	4 loading bays (11 spaces)	3 loading bays (8 spaces)	-1 loading bay (-3 spaces)
	Taxi Rank	5	5	0
Total		122	102	-20

Table 6.41 shows that in Camden Street Lower, there would be an increase of 1 loading bay as a result of the Proposed Scheme. Further along on Wexford St, there would be a loss of 1 loading bay. In total, there would be no net loss in dedicated loading bays along Camden Street Lower / Wexford Street.

In addition to these dedicated loading bays, it is noted that parking bays proposed along Camden Street Lower will operate as loading bays between the hours of 07:00 – 10:00 as illustrated on the Traffic Sign and Road Marking drawing provided in Volume 3 of the EIAR with relevant extract presented below. This will provide further kerb space for loading activity in this area during peak periods.

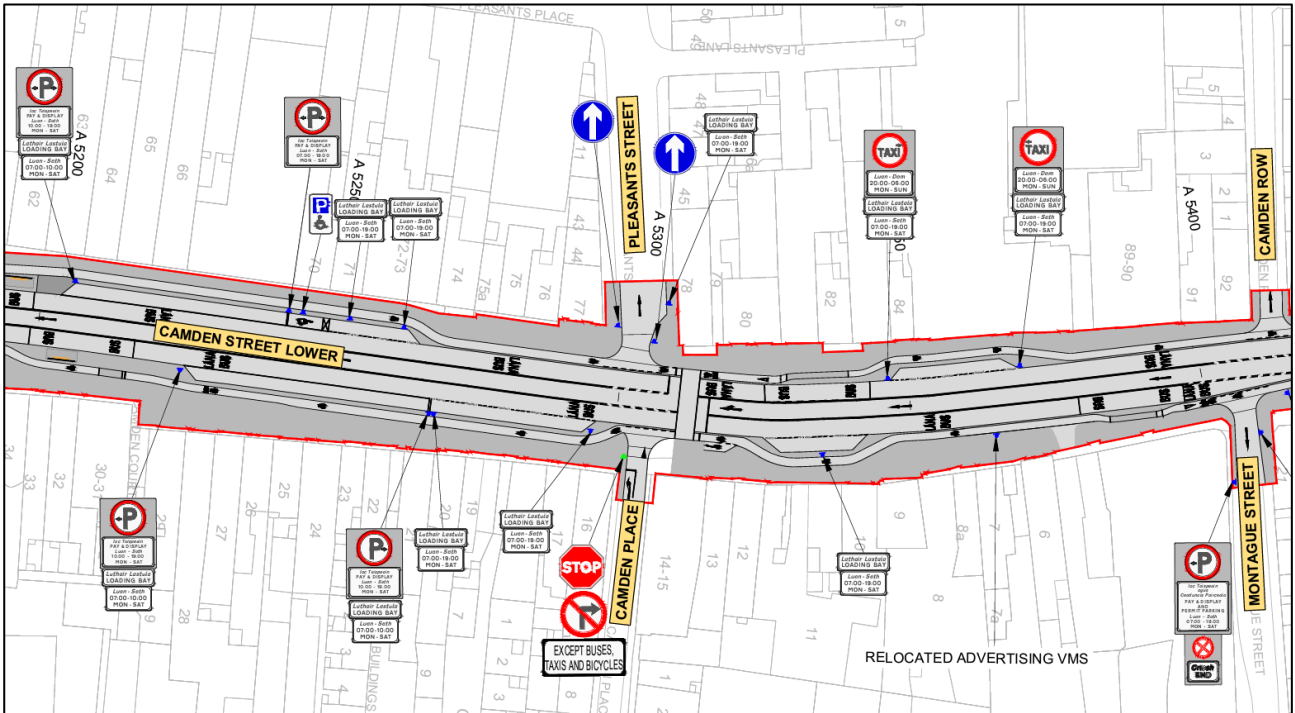


Figure 3.213.5 Extract from Traffic Signs and Road Markings Drawings (Sheet 16)

As noted in section 6.4.6.1.5.4 of Chapter 6 Traffic and Transport of Volume 2 of the EIA:

*As shown in Table 6.41, there are currently approximately 122 parking spaces affected along Section 4 of the Proposed Scheme and it is proposed that 20 of these spaces are removed. The Proposed Scheme will formalise the parking arrangements at these locations to improve the environment, particularly for pedestrians and cyclists. Given the local number of parking spaces being removed and availability of equivalent types of parking along adjacent streets within 200m of these locations (and typically within under 100m), the overall impact of this loss of parking is considered to have a **Negative, Slight and Long-term** effect. This effect is considered acceptable in the context of the aim of the Proposed Scheme, to provide enhanced walking, cycling and bus infrastructure on this key access corridor.*

3.214214 – Ranelagh Village Improvement Group

3.214.1 Submission – Rathmines

The submission raised the following issues:

1. Lack of consultation
2. Proposed bus gates
 - a. Rathmines Road
3. Traffic
 - a. Diverted through Ranelagh
4. Proposed turn bans
 - a. All right turns in Ranelagh village from the south

3.214.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.215215 – Rathfarnham Castle Residents Association

3.215.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Loss of green space
 - a. Amenity
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Alternative options
 - a. Bus priority signals
4. Air and noise pollution, vibration

3.215.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.216216 – Rathfarnham Wood Residents Association

3.216.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. No consideration of Glin River
2. Consideration of alternative options
 - c. Terminate Proposed Scheme at Butterfield Avenue – the submission suggests stopping the scheme at the Butterfield Avenue junction to avoid impacting the Rathfarnham Castle Park
 - d. Acquire land from the houses on the southern side of Grange Road
 - e. Cyclists share bus lanes as proposed elsewhere on the scheme
3. Climate Impact of Tree Removal
4. Biodiversity Impact
5. Landscape and Visual
6. Noise, Vibration and Air Quality
7. Replacement of the Castle Wall
8. Impact on woodland playground
9. Request to improve Nutgrove Avenue cycle facilities
10. Bus Stops
11. Courtyard/stables redevelopment
12. Nutgrove Avenue/Grange Road Junction Signals

3.216.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in response to submission 40 – see section 3.40.2 for more details.

3.217217 – Rathgar Business Association

3.217.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Excessive bus volumes
2. Road widening
3. Alternative options
 - a. Bus priority signals
 - b. Cashless fare payment
 - c. Congestion charges
 - d. Park and ride facilities
4. Biodiversity
 - a. Destruction of trees
5. Proposed removal of loading bays

3.217.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.218218 – Rathgar Medical Practice

3.218.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Negative effect on businesses
 - a. Property access

3.218.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.219219 – Rathgar Residents Association

3.219.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Impacts/costs of the Proposed Scheme outweigh the benefits.
2. Minimal bus journey time improvement
3. Inadequacies in the Consultation Process
4. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
5. Architectural and cultural heritage
6. Noise and air pollution
7. Compulsory Purchase Order on Terenure Road East and Rathfarnham Road
8. Traffic redistribution due to proposed traffic management measures
9. Bus gate
 - a. St Mary's college in Rathmines
10. One-way operation of Rathgar Road
11. Proposed turn bans
12. Negative effect on businesses
 - a. Loss of street parking/ Loading bays
13. Width of Footpaths on Rathgar Road
14. Safety of proposed cycle tracks
15. Outdated Traffic Count Information
16. Changes to work/commuting patterns due to the COVID-19 pandemic
17. Trialling of the Proposed Scheme
18. Alternative options
 - a. Metro
 - b. School buses
 - c. Congestion charges
 - d. Park and ride facilities
 - e. Cashless fare payment
 - f. Bus priority traffic lights
19. No assessment of cumulative impact of 12 corridors
20. Routing of buses via Terenure Road North and Harold's Cross
21. Separate consultation on CBC10 and CBC12

3.219.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.220220 – Rathmines Parish

3.220.1 Submission – Rathmines

The submission raised the following issues:

1. Access to Church of Mary Immaculate, Refuge of Sinners
2. Proposed bus gates
 - a. Rathmines Road
 - b. Limit hours of operation

3.220.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.221221 – Recorder's Residents Association

3.221.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options
 - a. Metro
 - b. Rail
 - c. Cashless fare payment
 - d. School buses
 - e. Bus priority signals
2. Lack of consultation
3. Consideration of what happens to buses in the city centre.
4. No assessment of cumulative impact of 12 corridors
5. Signalisation of Spawell Roundabout
6. Removal of slip lanes at KCR
7. Bus gate
 - a. Closure of Templeogue Road
 - b. Closure of Kimmage Road
8. Bus stop
 - a. Removal of outbound bus stop on Georges Street
 - b. Relocation of bus stop at Rathmines Garda Station
 - c. Increased distance between bus stops
9. Access to amenities
10. Elderly and Disability Access
11. Road widening on Terenure Road East
12. Unnecessary change providing no real gains to bus travel times.
13. Carbon emission increased.

3.221.2 Response to submission

Detailed responses to a number of the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

Issues 6 and 7b relate to proposals under the Kimmage to City Centre Core Bus Corridor Scheme and as such are not features of the Proposed Scheme. Therefore, these issues are not responded to in this Response Document.

In relation to Issue 8, Section 4.6.5.5 of Chapter 4 of the EIAR notes the following in relation to the approach to bus stops:

“To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops have been evaluated as part of a bus stop assessment.

The criteria that are considered when locating a bus stop are as follows;

- *Driver and waiting Passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between bus interchange stops;*
- *Where ideally there is space for a bus shelter;*
- *Location in pairs, ‘Tail to Tail’ opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footpath width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections of route, dropping to approximately 250m in urban centres.

It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided.

The following bus stop designs were considered for use on the Proposed Scheme - the Island Bus Stop, the Shared Landing Bus Stop, the Inline Bus Stop and the Layby Bus Stop.

Further detail on the design and locations of bus stops along the Proposed Scheme are described in Section 4.5.”

Further detail on proposals for individual bus stops are included in the Bus Stop Review Report, included in Appendix H of the Preliminary Design Report in the Supplementary Information.

In relation to the removal of existing bus stop 1283 on South Great George’s Street, this bus stop is currently located 60m from the preceding stop (bus stop 1282) and 200m from the next stop (bus stop 4456) therefore its removal is aligned with the principles of the bus stop review.

In relation to the existing stop at the Garda Station in Rathmines, this stop is proposed to be relocated approximately 100m further south. Figure 3.221.1 is an extract from the Bus Stop Review Report, outlining the rationale for the relocation of this bus stop.

Stop Number	Stop Name	Direction	Latitude	Longitude	Current Distance to previous stop	Current Peak Passenger Demand (Boarding)	Peak Boarding Time	Current Passenger Demand (Alighting)	Peak Alighting Time	Modelled Future Buses per hour (Peak)	Location (mid-block or within 100m of junction)	Before/ After Junction	Distance to controlled pedestrian crossing	Potential for interchange with Orbital Routes	Stop to be amended?	Reason for decision
1077	Garda Station	Outbound	53.321573	-6.266545	217m	50	3:00 pm	35	7:30 am	31	35m	after	35m	Yes, Same Stop	Yes - stop to be moved 100m south	The existing stop is located in shared bus/traffic lane and a stopped bus would therefore restrict movement of traffic. This location allows the stop to be located within a bus lane.

Figure 3.221.1 Extract from Bus Stop Review Report relating to Bus Stop 1077

In relation to Issue 10, as noted in section 4.6.5 Accessibility for Mobility Users of Chapter 4 of Volume 2 of the EIAR:

“The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure. In achieving this aim, the Proposed Scheme has been developed using the PDGB and in accordance with the principles of DMURS and Building for Everyone: A Universal Design Approach (NDA 2020).

The following non exhaustive list of relevant standards and guidelines have informed the approach to Universal Design in developing the Proposed Scheme:

- *Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors (NTA 2020);*
- *Building for Everyone: A Universal Design Approach (NDA 2020);*
- *How Walkable is Your Town? (NDA 2015);*
- *Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland (NDA 2012);*
- *Best Practice Guidelines, Designing Accessible Environments. Irish Wheelchair Association (IWA) (IWA 2020).;*
- *UK DfT Inclusive Mobility (UK DfT 2005);*
- *UK DfT Guidance on the use of tactile paving surfaces (UK DfT 2007); and*
- *BS8300:2018 Volume 1 Design of an accessible and inclusive built environment. External Environment- code of practice (BSI 2012).*

The Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. An Accessibility Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken. The Accessibility Audit provided a description of the key accessibility features and potential barriers to mobility impaired people based on the Universal Design standards of good practice. The Accessibility Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Accessibility Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has implemented the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes.”

As noted in section 4.2 Accessibility for Mobility Impaired Users of the Preliminary Design Report:

“The assessment of the existing street infrastructure and its ability to support access for disabled users have been based mainly on the Irish Wheelchair Association [IWA] ‘Best Practice Guidelines, Designing Accessible Environments’ and The National Disability Authority’s [NDA] ‘Building for Everyone: A Universal Design Approach”.

In relation to Issue 13, Chapter 8 Climate of Volume 2 of the EIAR considers the potential climate impacts of the Proposed Scheme.

The assessment is summarised in Section 8.8.2 which states:

The maintenance CO2e emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO2e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent.

The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions.

It is noted that the implementation of all elements of the BusConnects programme have been considered in the Do Minimum assessment scenario as set out in section 6.4.3.1:

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme of projects (apart from the CBC Infrastructure Works elements) i.e., the new BusConnects routes and services (as part of the revised Dublin Area bus network), new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios.

As such, the benefits contained in the EIAR, and summarised in this section, represents the incremental benefits associated with the infrastructure improvements.

3.22222 – Residents of Brighton Road and Brighton Square

3.222.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increase in traffic Brighton Road
2. Alternative options
 - a. Traffic calming measures on Brighton Road (e.g., low traffic neighbourhood, one-way system, raised tables, horizontal deflections)

3.222.2 Response to submission

In relation to item 1, the submission suggests that the Proposed Scheme will result in additional traffic along Brighton Road. It is submitted that as a result, the Proposed Scheme will result in an unsafe environment for road users.

Section 6.4.6.1.15.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 as reproduced below.

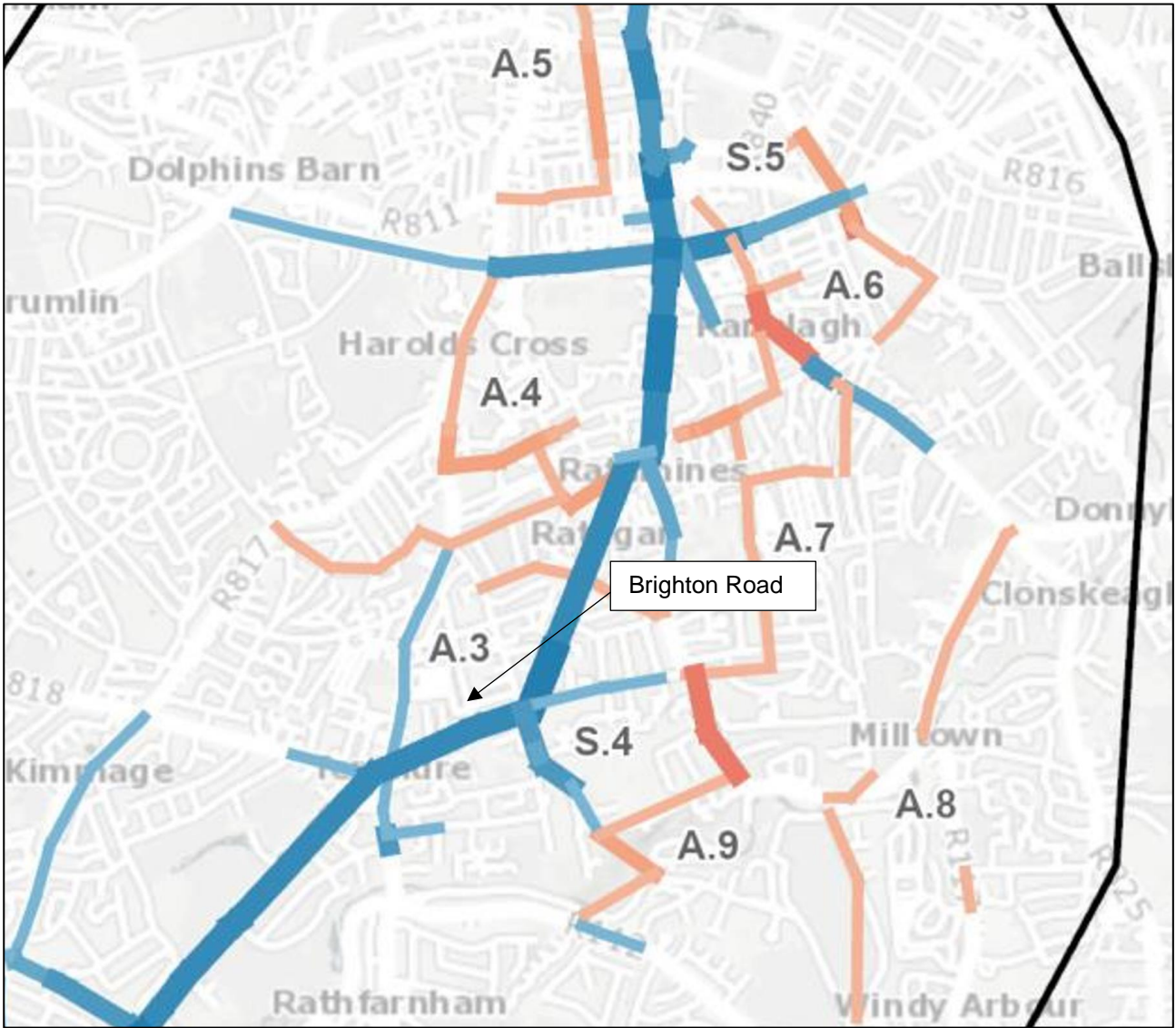


Figure 3.222.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

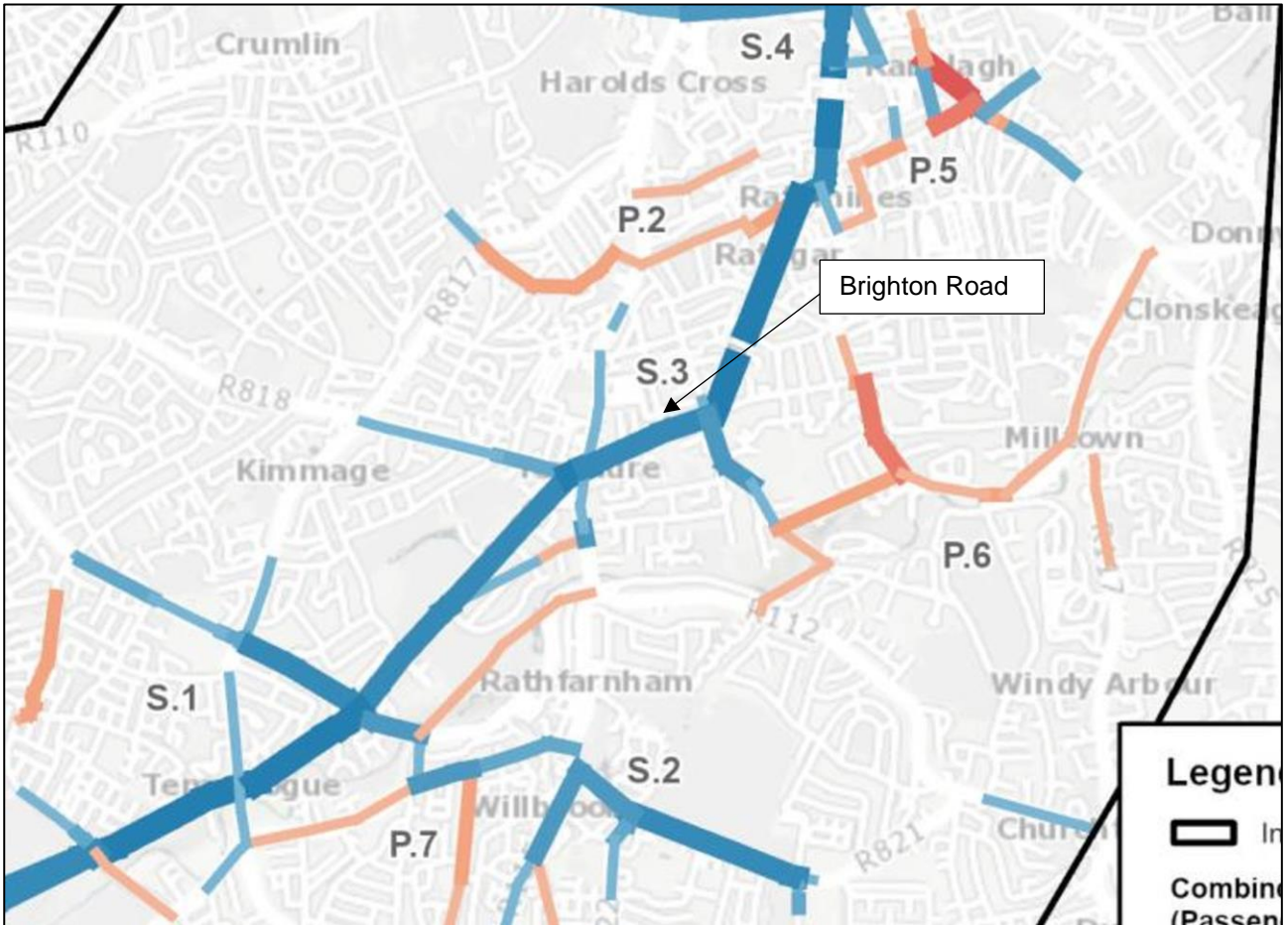


Figure 3.222.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken does not identify any material change in traffic volumes along Brighton Road as a result of the Proposed Scheme i.e. any changes in traffic volumes along Brighton Road are less than 100 passenger car units per hour.

Chapter 6 of the EIAR presents an assessment of pedestrian impacts of the Proposed Scheme. This is summarised in Table 6.32 which is reproduced below.

Table 6.32: Section 3 – Significance of Effects for Pedestrian Impact during Operational Phase

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R114 Terenure Road East / Heathfield Road / Greenmount Road priority junction	A2050	D	B	Medium	Low	Positive Moderate
R114 Terenure Road East / Ferrard Road priority junction	A2150	D	B	Medium	Low	Positive Moderate
R114 Terenure Road East / Brighton Road priority junction	A2250	C	A	Medium	Low	Positive Moderate
R114 Terenure Road East / Rathgar Park priority junction	A2450	C	B	Low	Low	Positive Slight

Table 6.32 shows that there would be a positive moderate impact to the pedestrian environment at the Terenure Road East / Brighton Road junction as a result of the Proposed Scheme.

In terms of Item 2, there are no proposals to introduce any traffic management measures along Brighton Road as part of the Proposed Scheme. However it is noted that the Proposed Scheme does not preclude their introduction in future.

3.223223 – Residents of Fortfield Road

3.223.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Fortfield Road
 - b. Increased volumes of left-turning traffic from Fortfield Road to Bushy Park
2. Proposed turn bans
 - a. Right turn from Fortfield Road to Greenlea Road
 - b. Right turn from Templeogue Road to Rathdown Avenue
 - c. Limit hours of operation
3. Proposed bus gates
 - a. Templeogue Road
 - b. Limit hours of operation
4. Alternative options
 - a. Existing bus priority signals

3.223.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.224224 – Residents of Greenlea Avenue, Drive and Park

3.224.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed turn bans
 - a. Turns from Templeogue Road to Fortfield
2. Access to amenities
3. Traffic
 - a. Increased volumes on Fortfield Road

3.224.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.225225 – Residents of Greenlea Road

3.225.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Greenlea Road
 - b. Increased volumes on Terenure Road East
2. Proposed turn bans
 - a. Right turn Fortfield Road to Greenlea Road
 - b. Proposed elimination of turn bans from Rathfarnham Road to Terenure Road East
3. Access to amenities
4. Proposed bus gates
 - a. Templeogue Road
5. Alternative options
 - a. Existing bus priority signals

3.225.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 and 2.4.3 of this report.

3.226226 – Residents of Lavarna Grove and Lavarna Road

3.226.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Lavarna Grove and Lavarna Road
2. Air pollution
3. Proposed turn bans
 - a. Enforcement

3.226.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.227227 – Residents of Mountpleasant Area

3.227.1 Submission – Rathmines

The submission raised the following issues:

1. Support for the Proposed Scheme generally
2. Support for the proposed Rathmines Road Bus Gate
3. Support for the proposed filtered permeability on Mountpleasant Avenue Lower
4. Issues regarding the proposed general traffic shuttle system on Mountpleasant Avenue Upper
 - a. Pedestrian and cyclist safety
 - b. Carriageway width
 - c. Footpath width
 - d. Cyclist priority
 - e. Incorrect description in EIAR
 - f. Additional traffic due to Gulistan Depot Site development
5. Insufficient Consultation

3.227.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Sections 2.1.1 and 2.5.3 of this report.

The NTA notes and welcomes the support for the Proposed Scheme generally and specific elements of the Proposed Scheme referenced in Issues 1, 2 and 3.

In relation to Issue 4e it is acknowledged that Table 4.27 incorrectly states that:

“Currently vehicles can turn from Mountpleasant Avenue Lower onto Richmond Hill, and similarly can turn from Richmond Hill onto Mountpleasant Avenue Upper.”

This should instead state:

*“Currently vehicles can turn from Mountpleasant Avenue Lower onto Richmond Hill, and similarly can turn from Richmond Hill onto Mountpleasant Avenue **Lower**.”*

Further it is noted that Table 4.27 incorrectly states that:

“As part of the Proposed Scheme, it is proposed to install a modal filter on Mountpleasant Avenue Upper, just north of the junction with Richmond Hill.”

This should instead state:

*As part of the Proposed Scheme, it is proposed to install a modal filter on Mountpleasant Avenue **Lower**, just north of the junction with Richmond Hill.*

Further it is noted that Table 4.27 incorrectly states that:

“Following the implementation of the Proposed Scheme, it will no longer be possible turn from Richmond Hill to Mountpleasant Avenue Upper, or from Mountpleasant Avenue Upper to Richmond Hill.”

This should instead state:

*Following the implementation of the Proposed Scheme, it will no longer be possible turn from Richmond Hill to Mountpleasant Avenue **Lower**, or from Mountpleasant Avenue **Lower** to Richmond Hill.*

In relation to Issue 4f Section 3.7.4.4 of the Planning Report contained in Appendix A2.1 of the EIAR notes that:

“A draft Masterplan for the Gulistan Depot which is a ‘site located in the heart of the Rathmines, to the rear of the Swan Shopping Centre and Rathmines College/former Town Hall. The site comprises a former depot, a bring centre and a defunct ESB premises, now acquired by DCC’ was prepared by DCC in 2021 (DCC 2021a). While the Proposed Scheme does not extend into the masterplan lands it will be accessed through Parker Hill which the Proposed Scheme boundary line is partially located on. The objectives relevant to the Proposed Scheme are set out in Table 4.9.”

The reference to the access on Parker Hill does not state that this will be the only access to the proposed development, but rather that it is the closest interaction between this draft Masterplan and the Proposed Scheme. As outlined in Section 2.5.3 of this report, the traffic modelling has not identified any material change in traffic volumes along Mountpleasant Road Upper during the AM peak and has identified reductions in traffic volumes along this street in the PM peak. The design and assessment of the Proposed Scheme has appropriately considered and assessed this draft Masterplan.

3.228228 – Residents of Mountpleasant Avenue Lower

3.228.1 Submission – Rathmines

The submission raised the following issues:

1. Support for scheme
 - a. Closure of Mountpleasant Avenue Lower to cars

3.228.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.229229 – Residents of Numbers 51-71, Rathfarnham Road

3.229.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Compulsory Purchase Order
 - a. 50 - 71 Rathfarnham Road
2. Architectural and cultural heritage
 - a. Walls, railings and gates
3. No assessment of cumulative impact of 12 corridors
4. Traffic
 - a. Increased congestion on Rathfarnham Road
5. Alternative options
 - a. More green time for inbound Rathfarnham Road traffic at junction with Dodder Park Road
 - b. Leave existing shared bus - cycle lane (instead of dedicated cycle tracks)
6. Property driveway access
7. Unnecessary change providing no real gains to bus travel times.

3.229.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.3.3 of this report.

3.230230 – Residents of Parkmore Drive, Terenure

3.230.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed turn bans
 - a. Right turn from Fortfield Road to Greenlea Road
 - b. Right turn from Templeogue Road to Rathdown Avenue
 - c. Limit hours of operation
2. Proposed bus gates
 - a. Templeogue Road
 - b. Limit hours of operation
3. Alternative options
 - a. Existing bus priority signals
4. Access to amenities
 - a. Bushy Park

3.230.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.231231 – Residents of Terenure Road West

3.231.1 Submission – Templeogue Road

The submission raised the following issues:

1. Proposed bus gates
 - a. Templeogue Road
2. Traffic
 - a. Increased volumes on Terenure Road West
3. Emergency vehicle access
4. Air pollution
5. Biodiversity
 - a. Destruction of trees

6. Character of area

3.231.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.232232 – Residents of The Cloisters and Maple Drive Area

3.232.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Alternative options
 - a. Increased bus service
 - b. Free public transport
2. Bus stops
 - a. Relocation
 - b. Shelters
3. Traffic
 - a. Diverted to residential streets.
 - b. HGVs diverted to residential streets.
4. Proposed bus service
 - a. Reduction in service along Harold's Cross Road
5. Biodiversity
 - a. Destruction of trees
6. Access to amenities

3.232.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

In terms of item 4, the submission notes the need for a bus service along Terenure Road North/Harold's Cross Road. While the Proposed Scheme runs along Terenure Road East/Rathgar Road, the BusConnects Network Redesign does not remove bus services from Terenure Road North/Harold's Cross Road. This is shown in the below extract from the network redesign map which shows route 85 operating at a frequency of up to six buses per hour along Harold's Cross Road from Terenure Cross before joining the F Spine at Harold's Cross Park. It is noted that the F Spine would run along the Kimmage to City Centre Core Bus Corridor Scheme.

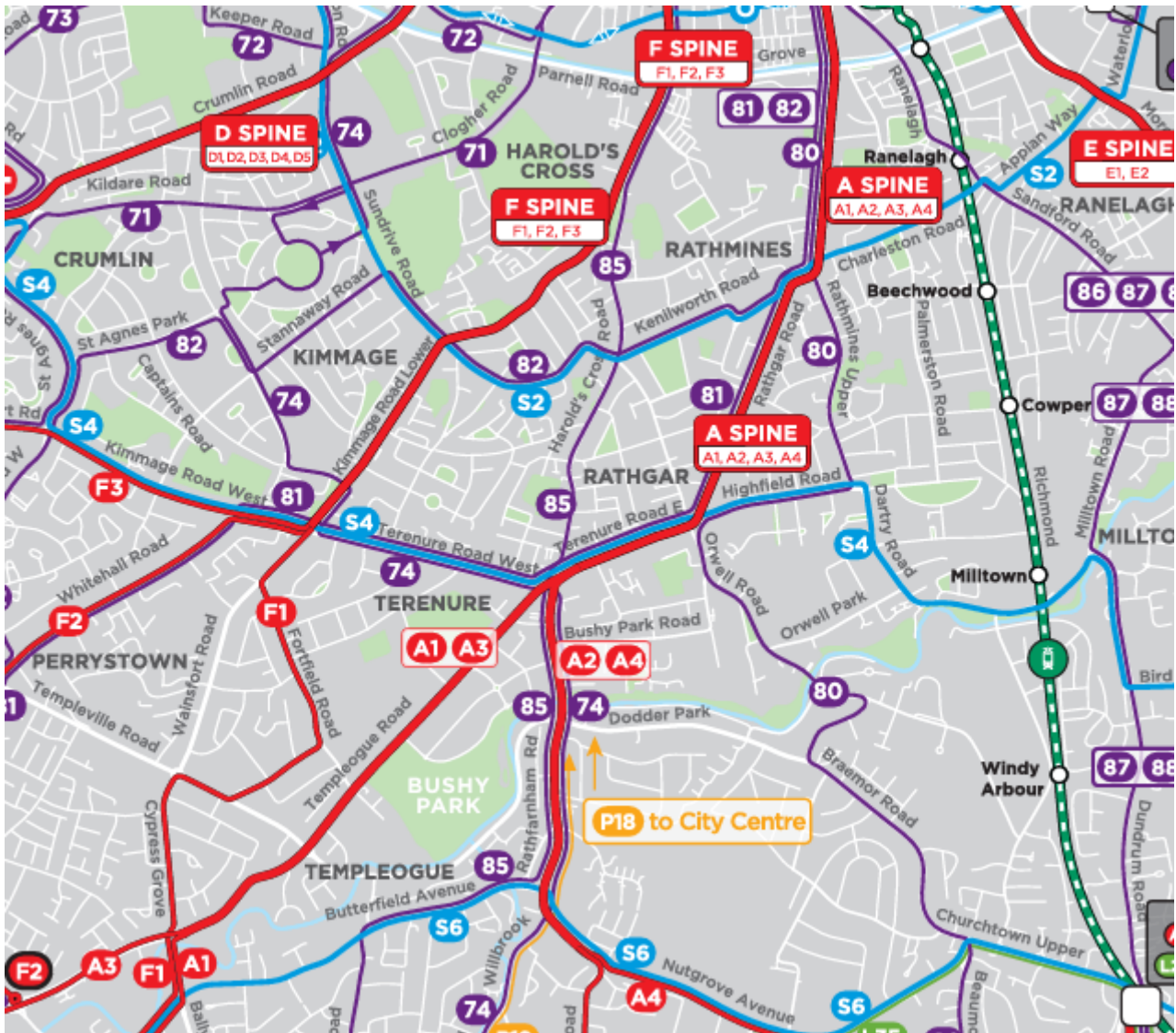


Figure 3.232.1 Extract from BusConnects Network Redesign Map

3.233233 – Residents of Upper Rathmines Road

3.233.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Upper Rathmines Road
 - b. Increased congestion
3. Air and noise pollution
4. Unnecessary change providing no real gains to bus travel times.
5. Proposed turn bans
 - a. Proposed elimination of turn bans from Upper Rathmines Road to Highfield Road
6. Inadequate bus service proposed.

3.233.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.234234 – Ria Duignan

3.234.1 Submission – Rathmines

The submission raised the following issues:

1. Impact of proposed bus gate on access routes
2. Turning Ban at Lissenfield
3. Reduced hours of operation of bus gate

3.234.2 Response to submission

1. Impact of proposed bus gate on access routes

A detailed response to this item is presented in Section 2.5.3.

2. Turning Ban at Lissenfield

The submission raises concern regarding the need for the right turn ban. Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets out turning bans and other traffic management measures which will be implemented on the route to direct traffic away from either the Proposed Scheme corridor (to maximise bus journey time reliability) or to limit use of side streets as a short-cut route by through traffic. An extract from this table is presented in Table 3.234.1.

Table 3.234.1 Extract from Table 4.25 of the Preliminary Design Report

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathmines Road Lower/Williams Park Junction	No Left turn allowed from Rathmines Road Lower onto Williams Park	Bus gate being proposed for Rathmines Village	No traffic allowed to turn left from Williams Park onto Rathmines Road Lower.
Richmond Hill/Rathmines Road Junction	No Right turns from Richmond Hill onto Rathmines Road (06:00-20:00)	Bus gate being proposed for Rathmines Village	Northbound traffic redirected to alternative routes.
Lissenfield/Rathmines Road Junction	No Right turns from Lissenfield onto Rathmines Road (06:00-20:00)	Bus gate being proposed for Rathmines Village	Southbound traffic redirected to alternative routes.
Rathmines Road south of Lissenfield	No Straight ahead for general traffic	Bus gate being proposed for Rathmines Village	Prevent general traffic from going through Rathmines. Traffic must travel elsewhere.
Rathmines Road/Grove Road Junction	No Straight ahead onto South Richmond Street	One-way outbound regime proposed on South Richmond Street	Northbound traffic redirected to alternative routes.

As seen in the Table 3.234.1 above, the No Right turns from Lissenfield onto Rathmines Road is necessary in order to facilitate the proposed bus gate.

3. Reduced hours of operation of bus gate

A detailed response to this item is presented in Section 2.5.3.

3.235235 – Richard Carroll

3.235.1 Submission – Whole Scheme

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. No assessment of cumulative impact of 12 corridors
3. Inadequate bus service proposed.
4. Proposed bus gates
5. Unnecessary change providing no real gains to bus travel times.
6. Compulsory purchase order

3.235.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 of this report.

3.236236 – Rita Delahunty

3.236.1 Submission – Rathmines

The submission raised the following issues:

1. Traffic
 - a. Increased volumes on Castlewood Avenue
 - b. Diverted to residential streets.
 - c. Increased volumes on Villiers Road
 - d. Increased volumes on Highfield Road
2. Alternative options
 - a. Bus priority signals on Rathmines Road
3. One-way operation of Rathgar Road
4. Proposed turn bans
 - a. Existing right-turn bans on Highfield Road to be eliminated.
5. Unnecessary change providing no real gains to bus travel times.

3.236.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.237237 – Rita O Cleirigh

3.237.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Noise and air pollution
2. Biodiversity
 - a. Destruction of trees
3. Traffic
 - a. Increased congestion
 - b. Increased bus volumes
4. Alternative options
 - a. Trial of scheme
 - b. Harolds Cross Road and interconnection in Terenure Village

3.237.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.238238 – Robin Jones

3.238.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Road widening
2. Compulsory Purchase Order
3. Architectural and cultural heritage
 - a. Walls, railings and gates
4. Traffic
 - a. Increased volumes on Terenure Road West
5. Access to amenities
6. Proposed bus gates
 - a. Templeogue Road
 - b. Limit hours of operation
7. No assessment of cumulative impact of 12 corridors
8. Alternative options
 - a. Autonomous cars
 - b. Metro

3.238.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.239239 – Róisín Kennedy and Andrew Folan & Others

3.239.1 Submission – Rathmines

The submission raised the following issues:

1. Lack of consultation
2. Access to amenities
3. Access to Church of Mary Immaculate, Refuge of Sinners
4. Traffic
 - a. Increased volumes on Castlewood Avenue
 - b. Increase volumes on Upper Mount Pleasant Avenue
5. Proposed footpaths
 - a. Narrow widths
6. Loss of on-street parking
7. Character of area
8. Negative effect on businesses

9. Alternative options
 - a. Improved bus service
10. Architectural and cultural heritage
 - a. Walls, railings and gates.

3.239.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.240240 – Ronan & Siobhan Garrigan

3.240.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Proposed turn bans
 - a. Right turn from Fortfield Road to Lavarna Grove
 - b. Request exemption for residents

3.240.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.241241 – Rory and Cliona Carton

3.241.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Highfield Road
3. Proposed cycle tracks
 - a. No cycle track proposed for Highfield Road
4. Proposed turn bans
 - a. Retain existing ban on turns from Upper Rathmines Road to Highfield Road

3.241.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 and 2.4.3 of this report.

3.242242 – Rory and Margaret Crerar and Others

3.242.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Flooding
2. Architectural and cultural heritage
3. Biodiversity
 - a. Flora and fauna
4. Loss of green space
 - a. Amenity
5. Negative effect on businesses
6. Alternative options
 - a. Alternative locations

3.242.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.243243 – Rosemary & Roger Conan

3.243.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Rathmines Road
2. Traffic
 - a. Diverted to residential streets.
3. Alternative options
 - a. Alternating-direction bus priority lanes
 - b. Metro

3.243.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.244244 – Rosemary Ryan

3.244.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Biodiversity
 - a. Destruction of trees
3. Proposed cycle tracks
 - a. No cycle tracks in Terenure village
4. Proposed bus gates
 - a. Templeogue Road
5. Traffic
 - a. Increased congestion
6. Air pollution
7. Access to amenities
8. Lack of consultation

3.244.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.245245 – Rosemary Steen

3.245.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Rathmines Road
2. Traffic
 - a. Increased volumes on Mount Pleasant Avenue Lower
 - b. Increased queuing
3. Alternative options
4. Air and noise pollution
5. Access to amenities

3.245.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.246246 – St. Judes Mens Shed Club

3.246.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
 - a. Increased traffic volumes on Wellington Lane
 - b. Increased congestion at proposed signalised Spawell junction.
2. Proposed bus gates
 - a. Templeogue Road
3. Access to amenities
 - a. Crumlin Children's Hospital

3.246.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

In relation to item 1 a., Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.



Figure 3.246.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)



Figure 3.246.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken identifies a reduction in traffic along Wellington Lane in the morning peak (-291 PCUs as presented in Table 6.60 of Chapter 6 of the EIAR).

During the evening peak, the traffic modelling identifies an increase in traffic along Wellington Road north of Orwell Road (+140 PCUs).

Further junction capacity assessment was undertaken along road links where increases greater than 100PCUs were identified to determine they have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

The full analysis tables for the PM Peak period, demonstrating the Do Minimum and Do Something Peak Hour traffic flows and maximum V / C ratio for each junction assessed is detailed in Table 17 of Appendix A6.4.4 (General Traffic Assessment) in Volume 4 of the EIAR, extracts for which are presented below.

Western Side of Proposed Scheme	P.1	Leinster Road	11287	Charleville Road / Leinster Road	378	450	18	18	s85%	s85%	Negligible
		Leinster Road	11160	Leinster Road / Leinster Road West	240	391	10	13	s85%	s85%	Negligible
		Limekiln Road	9186	Limekiln Avenue / Limekiln Road	360	436	24	40	s85%	s85%	Negligible
		South Circular Road	7258	Durien Avenue / South Circular Road	1058	1248	46	58	s85%	s85%	Negligible
		Wellington Road	9195	Limekiln Road / Wellington Road	1422	1560	69	85	s85%	s85%	Negligible
		Wellington Road	1277	Golden Lane / Wellington Road	1052	1107	55	55	s85%	s85%	Negligible
	P.2	Bride Street	6172	Bride Street / Peter Street	433	604	14	22	s85%	s85%	Negligible
		South Circular Road	6484	Emorville Avenue / South Circular Road	865	1079	32	46	s85%	s85%	Negligible
			6134	South Circular Road / Bloomfield Avenue	846	1040	28	36	s85%	s85%	Negligible
			6132	South Circular Road / Curzon Street	790	979	34	42	s85%	s85%	Negligible
			6131	South Circular Road / Kingstand Park Avenue	946	1162	41	51	s85%	s85%	Negligible
			7209	South Circular Road / Raymond Street	952	1109	35	40	s85%	s85%	Negligible
			7208	South Circular Road / St Albans Road	1117	1267	32	37	s85%	s85%	Negligible
			7213	Washington Street / South Circular Road	1000	1141	40	46	s85%	s85%	Negligible
		Stephen Street Upper	6332	Stephen Street Upper / Great Ship Street	216	326	17	27	s85%	s85%	Negligible
	P.4	Clareville Road	8133	Clareville Road / Larkfield Park	647	893	18	26	s85%	s85%	Negligible
		Golden Lane	6438	Chancery Lane / Golden Lane	504	648	20	21	s85%	s85%	Negligible
		M50	16177	M50 Jct 10	3055	3111	89	91	85%-100%	85%-100%	Negligible
		Wellington Lane	9163	Wellington Lane / Orwell Road Rbt	589	722	31	38	s85%	s85%	Negligible
	P.5	Ballymount Avenue	16138	Ballymount Av / Linnouk Rd Rbt	354	609	37	41	s85%	s85%	Negligible
		Ballymount Road Lower	16145	Ballymount Avenue / Ballymount Road Lower	1135	1343	95	96	85%-100%	85%-100%	Negligible
		Clanbrassil Street Lower	6220	Clanbrassil Street Lower / South Circular Road	2343	2591	100	101	>100%	>100%	Negligible
		Clareville Road	8413	Clareville Road / Kenilworth Park	744	935	51	73	s85%	s85%	Negligible
		Donore Avenue	7210	Donore Avenue / South Circular Road	1348	1506	85	95	s85%	85%-100%	Low
		Greenhills Road	24220	Greenhills Road / Castletymon Road	1763	1804	119	124	>100%	>100%	Negligible
			9157	Greenhills Road / Limekiln Road	1606	1710	94	99	85%-100%	85%-100%	Negligible
		Grosvenor Place	11238	Grosvenor Place / Grosvenor Road	393	571	20	27	s85%	s85%	Negligible

Figure 3.246.3 Extract from Appendix A6.4.4 of EIAR (Table 17)

The assessment presented in Table 17 of Appendix A6.4.4 in Volume 4 of the EIAR, shows that the Proposed Scheme would result in negligible traffic impact Wellington Road/Limekiln Road junction and the Wellington Lane / Orwell Road Roundabout as a result of the Proposed Scheme.

In summary, the assessment presented in the Chapter 6 of the EIAR indicates that while there is some redistribution of traffic as a result of the Proposed Scheme, the traffic impact is considered to be negligible.

3.247247 – Seán Crowe TD

3.247.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact on Rathfarnham Castle Park
 - a. Biodiversity
 - i. Destruction of trees
 - ii. Flora and fauna
 - b. Architectural and cultural heritage
 - i. Walls

3.247.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.248248 – Seán Leake and Morina Carr

3.248.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Proposed bus gates
 - a. Templeogue Road
2. Traffic
 - a. Impact of bus gate on Templeogue Road
 - b. Traffic diverted to residential streets.
 - c. Impact on access routes, in particular for HGVs
3. Cumulative impact of all CBC schemes on traffic not considered in EIAR
4. Unnecessary change providing no real gains to bus travel times.
5. Air pollution
6. Proposed turn bans
 - a. Right turns from Fortfield Road to Greenlea Road
7. Changes to work/travel patterns due to the Covid-19 pandemic
8. Alternative options

- a. Integrated ticketing
 - b. Real-time passenger information
9. DART and Luas extensions
10. Architectural and cultural heritage
- a. Impact on Stone Depot in Bushy Park
11. Impact on pedestrian/cyclist right of way in Bushy Park

3.248.2 Response to submission

Detailed responses to the issues 1-9 have been provided in Section 2.1.1 2.2.3 and 2.4.3 of this report.

In relation to item 10, the impact on the stone depot has been assessed in section 15.4.3.1.2 of Chapter 15 of the EIAR:

The stone depot (CBC1012CH002) at Templeogue Road, is an upstanding stone structure that acts as a bay to the low stone wall along the road. There are no anticipated works to the structure. The closest works will take place to the south of the structure where a grassed path will be formalised as part of the landscape and urban realm works and landscaping works will take place around the structure. The stone depot site has a low sensitivity value and the magnitude of impact is none, therefore there is no potential impact.

In terms of item 11, while there are works proposed within Bushy Park, there will be no material changes to the use of this area as is suggested in the submission. Sheet 35 of the General Arrangement drawings included in Figures: Part 1 of 3 of Volume 3 of the EIAR show the Proposed Scheme in this area and show that a footpath and dedicated cycle track will be provided through Busy Park, parallel to Templeogue Road. There will therefore be no interference with the rights of pedestrians, cyclists and runners currently enjoyed through this area.

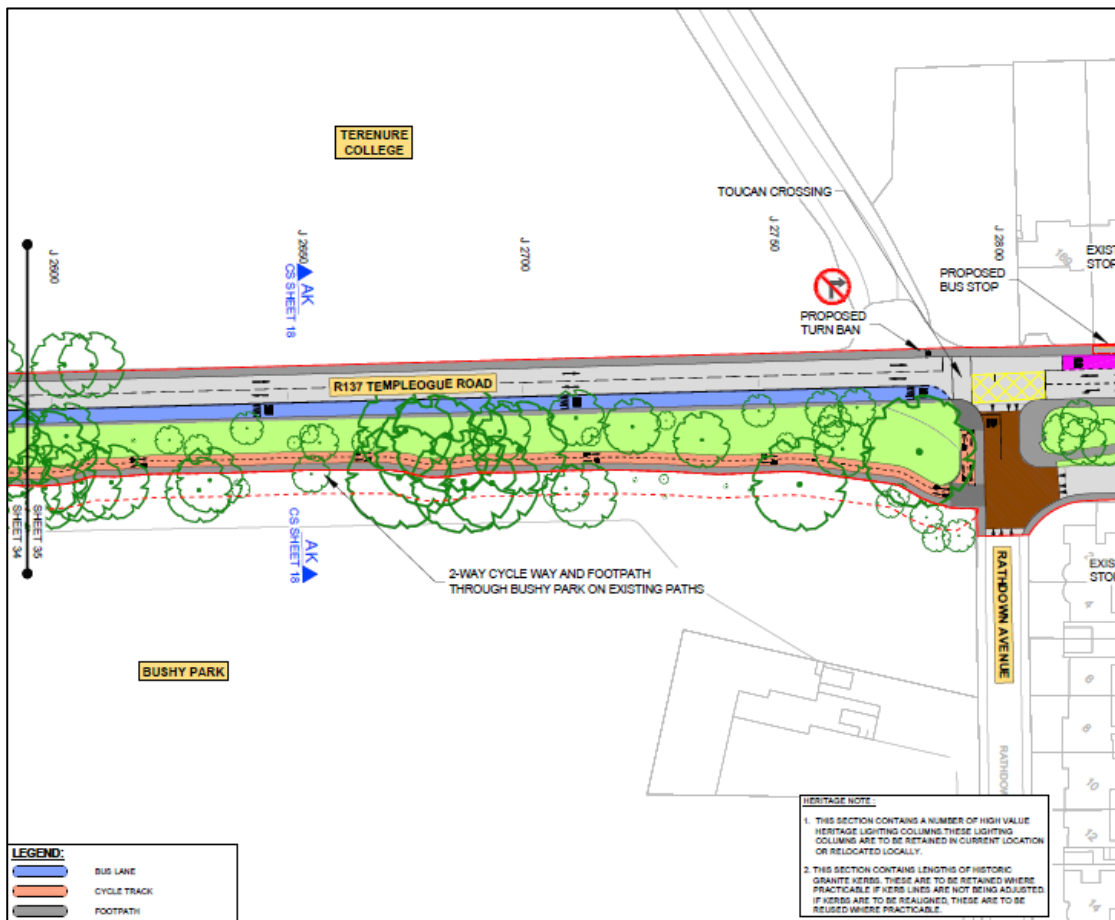


Figure 3.248.1 Extract from General Arrangement Drawings (Sheet 35)

3.249249 – Seán Silke

3.249.1 Submission – Whole Scheme

The submission raised the following issues:

1. Traffic data out of date due to Covid
2. Section 51 and CPO Application should not be made concurrently
3. NTA has not demonstrated need for the scheme and the CPO
4. Existing signal-controlled priority sufficient
5. Inadequate Consultation
6. Cost Benefit Analysis is Required
7. Implementation of other BusConnects measures first
8. Metro is more suitable for this corridor
9. Impact on Heritage Properties on Terenure Road East
10. Congestion at Terenure Cross due to proposed changes
11. Impact on Businesses due to loss of parking/loading
12. Bus Gate Hours of Operation
13. Proposed Cycle Facilities are Insufficient
14. Traffic Impact as a result of Traffic Management Measures
 - b. Traffic rerouting from current corridor to residential streets and impact on these streets
 - c. Traffic rerouting to other routes and resulting congestion (e.g. through Harold's Cross and Ranelagh)
 - d. New access routes to/from the city following implementation of traffic management measures
15. Cumulative Impact of Scheme with Adjacent BusConnects Schemes
16. Contravention of Article 1 of the First Protocol to the European Convention on Human Rights
17. No Funding Approved for the Scheme
18. Common Good
19. Consideration of Alternatives
20. Compliance with Development Plans
21. General Scheme of the Planning and Development (Land Value Sharing and Urban Development Zone) Bill 2022

3.249.2 Response to submission

Items 1 – 15 raises the same concerns as Submission 114. Please refer to refer to Section 3.114 for responses to these items. Responses for items 16 – 21 are presented below.

16. Contravention of Article 1 of the First Protocol to the European Convention on Human Rights

Article 1 of the First Protocol to the European Convention on Human Rights states that:

Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties.

There has been no contravention of Article 1 of the First Protocol which itself qualifies the right to peaceful enjoyment of possessions by reference to the concept of public or general interest. This is also in keeping with Article 40.3.2 of the Constitution which recognises that the exercise of property rights ought to be regulated by the principles of social justice and that the State may delimit the exercise of property rights with a view to reconciling their exercise with the exigencies of the common good.

The Proposed Scheme is being pursued cognisant and in accordance with the principles in relation to compulsory acquisition that were identified by the Supreme Court in the case of *Reid v Industrial Development Agency* [2015] IESC 82 including that the impact on an individual's right to private property occasioned by a compulsory acquisition must be justified or necessitated by the exigencies of the common good, and that the impairment of an individual's rights must not exceed that which is necessary to attain the legitimate object sought to be pursued i.e. it must be proportionate to the ends sought to be achieved.

In this regard, all of the lands included in the Templeogue/Rathfarnham to City Centre Core Bus Corridor Compulsory Purchase Order 2023 are necessary and required for the construction and/or operation of the Proposed Scheme (being for the provision of public transport infrastructure) and to meet the objectives of the Proposed Scheme which are as detailed in section 1.2 of Chapter 1 of the EIAR as follows

- *“Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*
- *Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.”*

It is therefore clear that the Proposed Scheme is in accordance with the concept of public or general interest and is according with the exigencies of the common good. Further, the response to Item 18 below articulates the benefits of the Proposed Scheme and outlines the necessity for the impacts on individuals' property rights in accordance with the exigencies of the common good.

17. No Funding Approved for Scheme

The submission asserts that funding has not yet been approved for the detailed design, the land acquisition or the construction of the scheme.

All major publicly funded infrastructure projects, such as the BusConnects Infrastructure Schemes are subject to the Public Spending Code (gov.ie - [The Public Spending Code \(www.gov.ie\)](http://www.gov.ie)) which requires the production of appropriate economic appraisals and business cases. The Preliminary Business Case for BusConnects schemes is set out at the following link. The document sets out the keys costs and benefits of the schemes.

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA's BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government.”

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- i. As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*
- ii. At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award*

18. Common Good

As noted above in relation to item 16, in relation to compulsory acquisition whereby it impacts on an individual's right to private property same is to be justified or necessitated by the exigencies of the common good.

The Proposed Scheme is clearly being pursued for the common good and that is detailed throughout the EIAR and in particular in Chapter 2: Need for the Proposed Scheme. Section 2.1 of Chapter 2 of the EIAR, sets out that the Proposed Scheme aims to meet growth demand by:

“Enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of ‘People Movement’. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment.”

Section 2.4 notes the following:

The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical double-deck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e. walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043).

The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is an increase of 123% in the number of people travelling by bus, an increase of 79% in people walking or cycling, and a reduction of 30% in the number of people travelling by car along the route of the Proposed Scheme. This is summarised in Image 2.12.

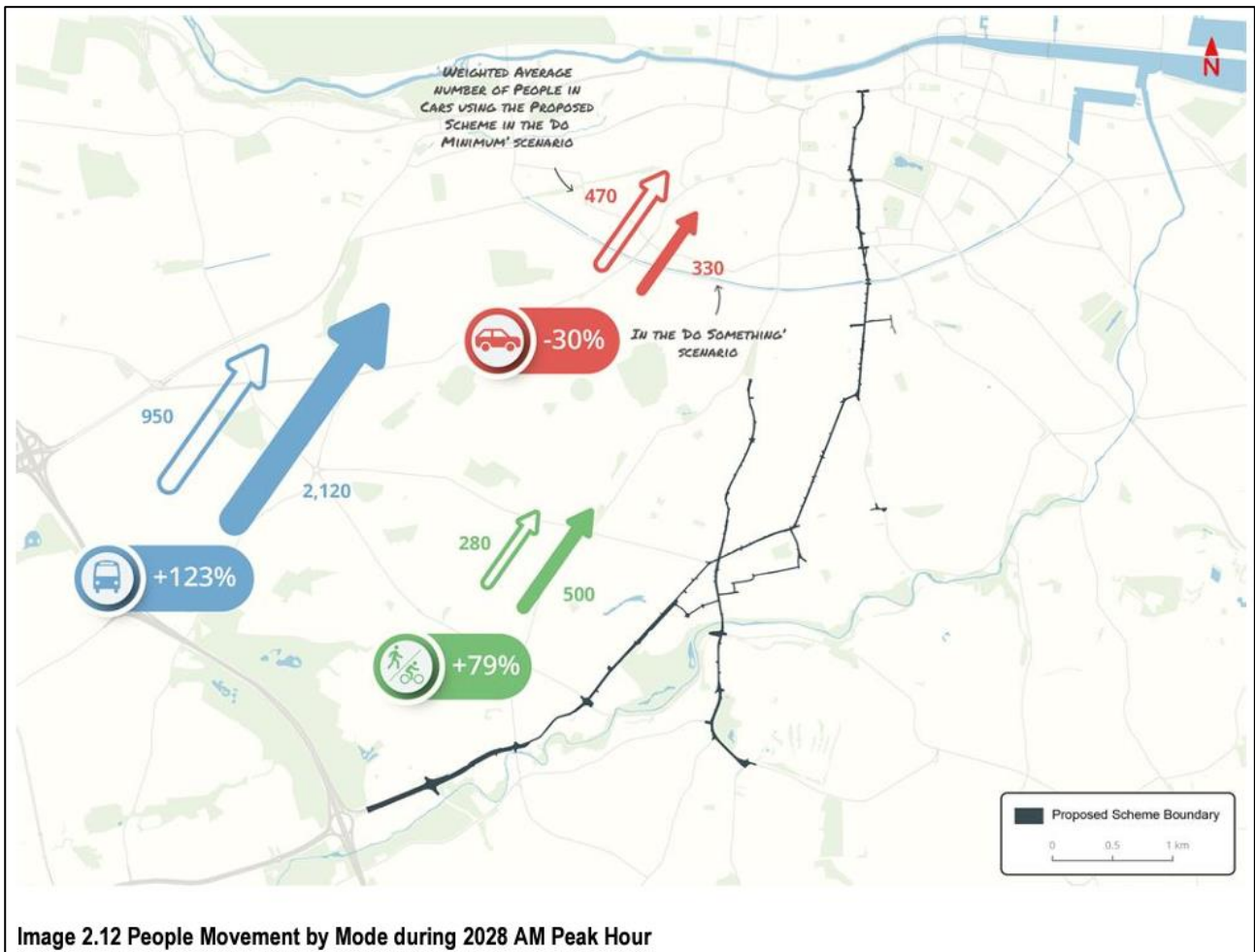


Image 2.12 People Movement by Mode during 2028 AM Peak Hour

In relation to the cumulative impacts on Traffic and Transport and car usage Appendix A6.1 (Transport Impact Assessment) notes the following for Cumulative Assessment:

In general, total trip demand (combining all transport modes) will increase into the future in line with population. In general, total trip demand (combining all transport modes) will increase into the future in line with population and employment growth. A greater share of the demand will be by sustainable modes (Public transport, Walking, Cycling) as facilitated by the GDA Strategy implementation.

The analysis indicates that with the 12 BusConnects Proposed Schemes in place, there will be a high positive impact on sustainable mode share. The Proposed Schemes, along with other GDA Strategy measures, will prevent any increase in private car traffic within the study area and will instead result in a reduction in car trips below 2020 levels.

In the 2028 Opening Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 12% increase in public transport trips, 2% decrease in general traffic trips (i.e. motorists) and a 14% increase in cycling trips in the AM Peak Hour and a 12% increase in public transport, 3% decrease in general traffic and a 12% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario. In the 2043 Design Year scenario, it is estimated that for people travelling within the 500m catchment area (including City Centre) there will be a 6% increase in public transport trips, 6% decrease in general traffic trips (i.e. motorists) and a 10% increase in cycling trips in the morning peak hour and a 7% increase in public transport, 7% decrease in general traffic and a 11% increase in cycling trips each day (7am-7pm) compared to the Do Minimum scenario.

General traffic levels reduce more in 2043 than when compared to 2028 due to the increased level of additional non-bus public transport infrastructure and services (MetroLink, Luas extensions and DART+ from the GDA Strategy) in tandem with the road capacity reduction measures as part of the Proposed Scheme leading to increased usage on all public transport modes.

The modelling outputs for the 2028 Cumulative Opening Year scenario demonstrate that there is a high growth in bus patronage along all the Proposed Schemes in the AM Peak Hour. The bigger increases occur in the inbound direction on the Blanchardstown to City Centre, the Proposed Scheme and the Bray to City Centre scheme where the loadings reach more than 2,000 additional passengers per Hour compared to the Do Minimum scenario.

In the 2028 Opening Year AM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 10% more passenger boardings across all public transport services and 17% more boardings on bus services. In the 2028 Opening Year PM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 11% increase in total passengers boarding Public transport services and 18% more passengers boarding buses services.

In the 2043 Design Year AM and PM Peak Hour scenarios, increase in total passengers boarding all public transport services will be 7% and 8% respectively, and the increase in passengers boarding bus services will increase by 11% and 14% respectively.

*Overall, the Proposed Schemes are expected to deliver a **High Positive** impact for People Movement by sustainable modes.*

The significant benefits of the scheme are elaborated upon throughout the EIAR with a summary of the key benefits presented in Section 2.1.1 of this response. The benefits of the Proposed Scheme clearly demonstrate the common good of the Proposed Scheme as a whole. The impacts on individual property rights are therefore justified and necessitated by the exigencies of the common good.

19. Need for the Scheme and Consideration of Alternatives

Need for the Scheme

The NTA has delineated the necessity of the Proposed Scheme in EIAR Volume 2 Chapter 2 Need for the Proposed Scheme. This section elaborates on the transport requirements of the Proposed Scheme at both regional and local levels. Furthermore, in Section 2.3 of Chapter 2, the document expounds on how the Proposed Scheme aligns with various national and regional policies, including but not limited to the National Development Plan (2021-2030), the Transport Strategy for the Greater Dublin Area (2016-2035), the Climate Action Plan (2023), and the Climate Action and Low Carbon Development (Amendment) Act 2021, often referred to as the 2021 Climate Act.

Section 2.1 outlines the need for the Proposed Scheme stating that:

The key radial traffic routes into and out of Dublin City Centre are characterised by poor bus and cycle infrastructure in places. Effective and reliable bus priority depends on a combination of continuous bus lanes and signal control priority at pinch-points and junctions. Currently bus lanes are available for 30% of Templeogue / Rathfarnham to City Centre, with signal control priority for buses provided over 2% of the Proposed Scheme. Cyclists must typically share space on bus lanes or general traffic lanes with only 15% of the route providing segregated cycle tracks.

Private car dependence has resulted in significant congestion that has impacted on quality of life, the urban environment and road safety. The population of the Greater Dublin Area (GDA) is projected to rise by 25% by 2040 (National Planning Framework, 2018), reaching almost 1.5 million. This growth in population will increase demand for travel necessitating improved sustainable transport options to facilitate this growth.

Section 2.2.1.4 of Chapter 2 states:

The GDA Cycle Network Plan 2013 (hereafter referred to as the GDACNP 2013) (NTA 2013), was adopted by the NTA in early 2014 following a period of consultation with the public and various stakeholders. This plan formed the strategy for the implementation of a high quality, integrated cycle network as set out in the GDA Transport Strategy 2016 - 2035. This is further discussed in Section 2.3.4.5.

Terenure Road East was identified as a primary cycle route (9A), in the GDA Cycle Network Plan 2013, this is further described in the extract below from section 2.2.1.4:

Extracts from the GDA Cycle Network Plan 2013 are shown in Image 2.1 and Image 2.2, which highlights the Proposed Scheme in the context of the planned cycle network. In the GDACNP 2013, there were two primary cycle routes (Cycle Route 9A and Cycle Route 10) and a number of secondary cycle routes (including Routes 9B, S04 and 10) identified along the Proposed Scheme

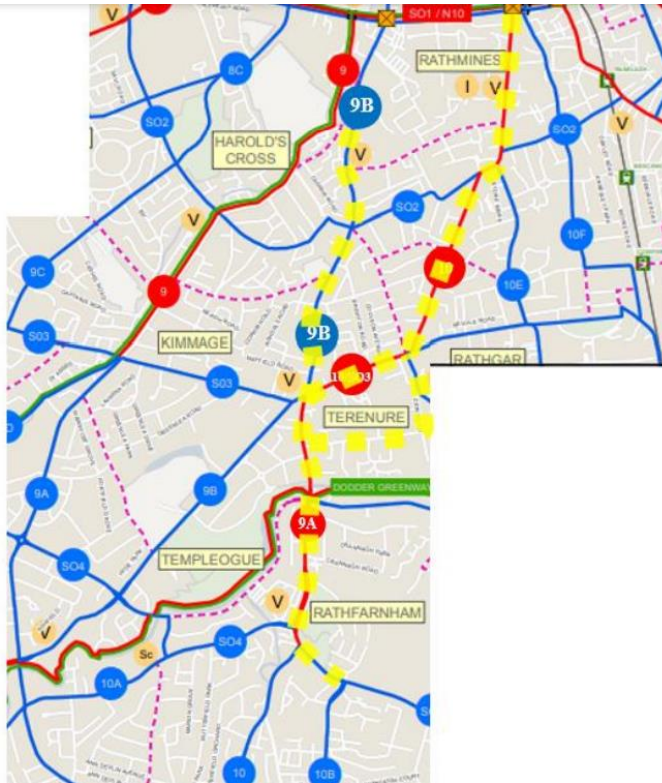


Figure 3.249.1 Extract from 2013 GDA Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

In preparing the GDA Transport Strategy (2022 – 2042) the NTA carried out a review of the GDA Cycle Network Plan. This review culminated in the preparation of the 2022 Greater Dublin Area Cycle Network which was published alongside the GDA Transport Strategy (2022 – 2042). The Proposed Scheme, including the section along Rathfarnham Road is supported by the GDACNP 2013 and the 2022 Greater Dublin Area Cycle Network is needed to address the deficiencies in the very limited segregated cycling infrastructure currently available on this corridor.



Figure 3.249.2 Extract from 2022 Greater Dublin Area Cycle Network (Proposed Scheme Highlighted in Yellow for Information)

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme, Section 2.2.1.4 states:

To inform the preparation of the GDA Transport Strategy 2016 – 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to/from the Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the prior GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes.

The Core Bus Network study included a recommended route from Terenure/Rathfarnham to the City Centre on the basis of the need to serve significant demand along this entire corridor, and the need to address service deficiencies (lack of bus priority and associated journey time reliability) for a high level of scheduled bus services already operating along this corridor.

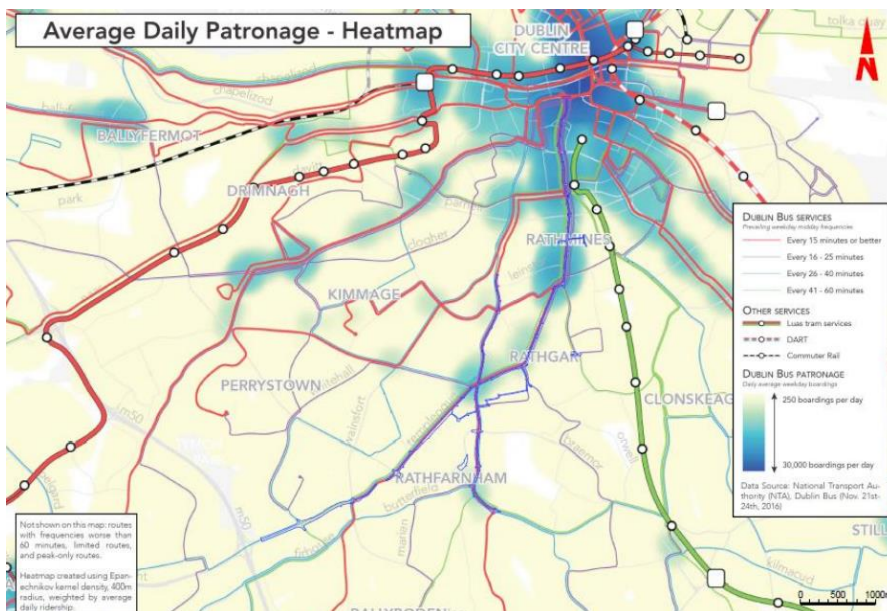


Figure 3.249.3 Average Daily Patronage Heatmap (Dublin Area Bus Network Redesign Revised Proposal ((NTA 2019)). Proposed Scheme Highlighted in Blue for Information

The need for the Proposed Scheme is supported by the objective of the GDA Transport Strategy to provide continuous bus priority, as far as is practicable, along the core bus route, that supports a more efficient and reliable bus service with lower journey times.

Consideration of Alternatives

Article 5(1)(d) of Directive 2011/92/EU as amended by Directive 2014/52/EU (“the EIA Directive”) requires that an Environmental Impact Assessment Report (EIAR) contains ‘a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and the main reasons for the option chosen, taking into account the effects of the project on the environment’.

Chapter 3 of EIAR Volume 2 provides an overview of the various route alternatives that were evaluated during the process of establishing the Proposed Scheme. It also outlines the different stages that were undertaken during the development of the Proposed Scheme.

- 1. Feasibility and Options Reports**, which were associated with the Proposed Scheme (Rathfarnham to City Centre Core Bus Corridor (CBC) Feasibility Study and Options Assessment Report and Terenure to Tallaght CBC Feasibility Study and Options Assessment Report), were prepared in 2017 and set out the initial route options and concluded with the identification of the Emerging Preferred Route;

2. A first round of non-statutory **Public Consultation** was undertaken on the Emerging Preferred Route from 23 January 2019 to 30 April 2019;
3. Development of **Draft Preferred Route Option** (April 2019 to March 2020). Informed by feedback from the first round of public consultation, stakeholder engagement and the availability of additional design information, the design of the Emerging Preferred Route evolved with further alternatives considered;
4. A second round of non-statutory **Public Consultation** was undertaken on the Draft Preferred Route Option from 4 March 2020 to 17 April 2020. Due to the introduction of COVID-19 restrictions, some planned in-person information events were cancelled, leading to a decision to hold a third consultation later in the year;
5. Further development of an updated **Draft Preferred Route Option** was undertaken subsequent to the second round of public consultation, which took account of submissions received, continuing stakeholder engagement and additional design information;
6. A third round of non-statutory **Public Consultation** was undertaken on the updated Draft Preferred Route Option from 4 November 2020 to 16 December 2020; and
7. Finalisation of the **Preferred Route Option**. Informed by feedback from the overall public consultation process, continuing stakeholder engagement and the availability of additional design information, the Preferred Route Option, being the Proposed Scheme, was finalised.

Alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme, such as optimising the road layout in constrained locations including Rathfarnham Road, Rathgar Road, Rathmines Road Lower and Templeogue Road. The iterative development of the Proposed Scheme has also been informed by a review of feedback and new information received during each stage of public consultation and as data, such as topographical surveys, transport and environmental information was collected and assessed. In addition, the potential for climate impact was considered in all phases of the design process for the Proposed Scheme. As the design progressed climate was indirectly affected in a positive way by refining the design at each stage through reducing the physical footprint of the scheme coupled with the inclusion of technological bus priority measures.

Key environmental aspects have been considered during the examination of reasonable alternatives in the development of the Preferred Route Option for the Proposed Scheme. Environmental specialists have been involved in the iteration of key aspects of the Proposed Scheme with the engineering design team.

The Feasibility and Options Reports used a two-stage assessment process to determine the Emerging Preferred Route.

- Stage 1 – an initial high-level route options assessment, or ‘sifting’ process, which appraised routes in terms of ability to achieve scheme objectives and whether they could be practically delivered. The assessment included consideration of the potential high level environmental constraints as well as other indicators such as land take (particularly the impact on residential front gardens); and
- Stage 2 - Routes which passed the Stage 1 assessment were taken forward to a more detailed qualitative and quantitative assessment. All route options that progressed to this stage were compared against one another using a detailed Multi-Criteria Analysis in accordance with the Department of Transport Document ‘Common Appraisal Framework for Transport Projects and Programmes’.

Following completion of Stage 1 initial appraisal, the remaining reasonable alternative options were progressed to Stage 2 of the assessment process. This process involved a more detailed qualitative and quantitative assessment using criteria established to compare the route options.

There were seven (CB1 to CB7) viable route options for Section 2 (Nutgrove Avenue to Terenure Road North – Grange Road, Rathfarnham Road) were taken forward for assessment and further refinement, these are detailed in section 3.3.2.2.2 of the Chapter 3 of the EIAR.

Within the aforementioned route options, there were two constrained locations which required specific consideration. These constrained locations were brought through an initial assessment to determine the optimum layout for these areas to be included in the principal route options listed above. These constrained locations are as follows:

- Terenure Village to Rathgar Village – TVR

- Cycle Route options between Bushy Park Road junction and Grand Canal

A multi-criteria assessment (MCA) was carried out within each of these two sub-sections, as detailed in section 3.3.2.2.1 of Chapter 3.

Following the MCA, Stage 2- Route Options Assessment concluded that sub-option TVR3 was the preferred option for the sub-section along Rathfarnham Road and Terenure Road East to Rathgar Village, stating that:

Sub-option TVR3: *This route sub-option would include the provision of segregated bus facilities along Rathfarnham Road and Terenure Road East in both directions with the exception of a 100m section of Terenure Road East at Terenure Cross where an inbound bus lane would not be provided. Segregated cycle facilities would be provided along the CBC route on Rathfarnham Road and Terenure Road East (with the exception of a 270m section from Terenure Cross to Ferrard Road and a 20m section east of Rathgar Village).*

The assessment sub-criteria which were differentiators between scheme sub-options included Capital Cost, Transport Quality and Reliability, Residential Population and Employment Catchments, Cycle Network Integration, Traffic Network Integration, Key Trip Attractors, Road Safety, Architectural Heritage, Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Sub-option TVR3 was identified as having significant benefits over other sub-options in relation to Cycle Network Integration and Traffic Network Integration, and some benefits over other sub-options with respect to Flora and Fauna, Landscape and Visual, Air Quality, Noise and Vibration and Land Use Character. Following an MCA, sub-option TVR3 was identified as the preferred option for this sub-section and was brought forward for assessment as part of the principal route options.

Following the completion of the public consultation process in relation to the Emerging Preferred Route, various amendments were made to the scheme proposals to address a number of the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, and/or arising from the availability of additional information. These amendments were incorporated into the designs and informed a draft Preferred Route Option. Section 3.4.1.1.3 of Chapter 3 of the EIAR describes the assessment in the section between Terenure and Grosvenor Road:

The EPR Option within this section of the Proposed Scheme proposed to provide bus and traffic lanes in each direction along Terenure Road East, except for a short section between Terenure Cross and Aldi where only an outbound bus lane was proposed. Cycle lanes were proposed in each direction between Ferrard Road and Rathgar Avenue, but none were proposed between Terenure Cross and Ferrard Road. It was highlighted through the public consultation process that this proposal impacted on several properties with heritage value, including the loss of mature trees from within these properties. Additionally, a review of the EPR Option proposals against the detailed topographical survey showed that it was not possible to provide a bus lane and two traffic lanes on Terenure Road East immediately to the east of Rathfarnham Road. On Rathgar Road the EPR Option proposed bus lanes, traffic lanes and cycle tracks in each direction along Rathgar Road. This would result in impact on heritage properties along the length of Rathgar Road as well as the loss of trees from within these properties. These impacts were noted as being of concern to many local residents during the public consultation. Alternative design solutions were therefore explored in this area in determining a draft PRO.

At the draft Preferred Route Option stage, five options were assessed, as follows:

- Option RG1: Option RG1 would provide a general traffic lane in each direction along the entirety of this route section, as well as dedicated bus lanes and cycle tracks along the CBC for the majority of the route section. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. This option is a version of the EPR Option, refined to reflect issues identified upon review of the topographical survey;
- Option RG2: Option RG2 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes in each direction. Under this option, bus lanes would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signal controlled priority.

No cycle facilities would be provided on Terenure Road East under this option. Additional cycle facilities would be provided on Terenure Road North and Harold's Cross Road, linking to the Kimmage to City Centre CBC, and providing an alternative route for cyclists travelling towards the city which would otherwise use Terenure Road East.

Additional secondary cycle facilities would also be provided on Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road, linking back to the CBC at Rathgar Village to provide some level of service for east west cyclists.

A one-way inbound traffic arrangement would be provided on Rathgar Road, with outbound traffic diverted to alternative routes. 1.5m wide cycle tracks would be provided along Rathgar Road;

- Option RG3: Option RG3 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes and cycle tracks in each direction. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. A one-way inbound traffic arrangement would be provided on Rathgar Road, with outbound traffic diverted to alternative routes. 2.0m wide cycle tracks would be provided along Rathgar Road;
- Option RG4: Option RG4 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes in each direction. Under this option, bus lanes would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signal controlled priority. No cycle facilities would be provided on Terenure Road East under this option. Additional cycle facilities would be provided on Terenure Road North and Harold's Cross Road, linking to the Kimmage to City Centre CBC, and providing an alternative route for cyclists travelling towards the city which would otherwise use Terenure Road East. Additional cycle facilities would also be provided on Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road, linking back to the CBC at Rathgar Village to provide some level of service for east-west cyclists. A two-way general traffic arrangement would be provided on Rathgar Road. An inbound bus lane would be provided between Highfield Road and Frankfort Avenue, while north of this point inbound bus priority would be managed through signal controlled bus priority. An outbound bus lane would be provided between Grosvenor Road and Frankfort Avenue, while south of this point outbound bus priority would be managed through signal controlled bus priority. 1.5m wide cycle tracks would be provided along Rathgar Road; and
- Option RG5: Option RG5 would provide a general traffic lane in each direction on Terenure Road East as well as bus lanes and cycle tracks in each direction. Under this option, bus lanes and cycle tracks would not be provided over a short section of Terenure Road East immediately east of Terenure Cross where bus priority would be managed through signalling. A two-way general traffic arrangement would be provided on Rathgar Road. An inbound bus lane would be provided between Highfield Road and Frankfort Avenue, while north of this point inbound bus priority would be managed through signal controlled bus priority. An outbound bus lane would be provided between Grosvenor Road and Frankfort Avenue, while south of this point outbound bus priority would be managed through signal controlled bus priority. 2.0m wide cycle tracks would be provided along Rathgar Road.

Option RG2 – the provision of bus lanes and general traffic lanes on Terenure Road East, a one-way outbound regime on Rathgar Road and alternative cycle facilities on Terenure Road North/Harold's Cross Road and Bushy Park Road, Wasdale Park, Wasdale Grove, Victoria Road, Zion Road and Orwell Road - was identified as the preferred option as it best aligned with the objectives for the Proposed Scheme by providing full physical bus priority throughout the majority of this section and would minimise the impact the curtilage of protected structures and private gardens and trees on Terenure Road East and Rathgar Road through the provision of alternative cycle routes. This option would provide bus priority, and while cycle facilities would not be provided along a section of the CBC, the proposal included an attractive and safe alternative.

In terms of the sub-criteria under the Environment criterion, the preferred option performed significantly better than other options in terms of Architectural Heritage as fewer protected structures would be impacted. In terms of Flora and Fauna the preferred option performed significantly better than other options due to the reduced impacts on existing trees along Rathgar Road. In terms of Landscape and Visual, the preferred option performed significantly better than other options due to the reduced impacts on adjacent residential properties. In terms of Air Quality and Noise and vibration the preferred option performed marginally better than other options due to the fact that traffic would be redirected from the CBC.

In terms of Land Use Character the preferred option performed marginally worse than other options due to the fact that a number of car parking spaces would be removed to facilitate the alternative cycle facility on Terenure Road North/Harold's Cross Road.

A number of other options were also considered in the area. Of relevance to Terenure Road East, the below option was considered:

Option of a bus gate along Terenure Road East between Rathfarnham Road and Rathgar Road. This option was not considered feasible due to the orbital traffic movement function of Terenure Road East and the lack of an alternative route for east-west traffic movements.

In addition, a bus gate at this location was not considered feasible in combination with scheme proposals for a bus gate within Rathmines Village, which is considered a more appropriate location given the inability to introduce other bus priority measures on this road section.

As described in the above paragraphs and in EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report. The design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

The Proposed Scheme will address sustainable mode transport infrastructure deficits while contributing to an overall integrated sustainable transport system as proposed in the GDA Strategy. It will increase the effectiveness and attractiveness of bus services operating along the corridor and will result in more people availing of public transport due to the faster journey times and reliability improvements which the Proposed Scheme provides. This in turn will support the potential to increase the bus network capacity of services operating along the corridor and thereby further increasing the attractiveness of public transport. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth.

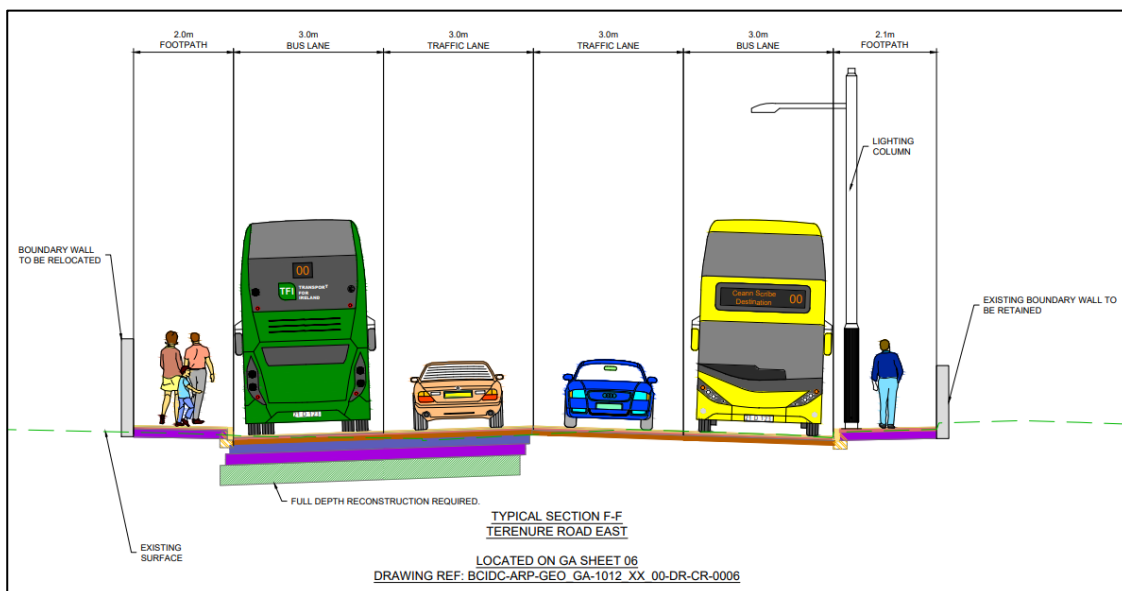


Figure 3.249.4 Typical Cross-section of Proposed Scheme between St Joseph’s School and Greenmount

At the specific area outside 76 Terenure Road East, the proposed cross-section and subsequent land acquisition have been considered and deemed necessary to facilitate the optimum scheme as presented in EIAR Volume 3 Chapter 4 Proposed Scheme Description Figures, General Arrangement drawings. Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath, traffic lane and bus lane. This sets the desirable width of 1.8m for footpaths, 3.0m for traffic (<60km/h), and absolute minimum width of 3.0m for bus lanes. At the location adjacent to 76 Terenure Road East, the minimum cross-section width was applied order to minimise impacts on adjacent properties while also meeting the scheme objectives.

It should be noted that throughout the assessment process, great care was taken to minimise the impact on adjacent properties and to reduce land acquisitions to the extent possible while still meeting the project’s objectives. This approach was adopted to balance the necessity of the development with the preservation of the interests and rights of property owners in the area.

20. Compliance with Development Plans

The submission highlights a significant concern regarding the Proposed Scheme’s alignment with the Development Plans of the Local Authorities it passes.

In EIAR Volume 2 Chapter 2 Need for the Proposed Scheme, the document describes the Proposed Scheme's adherence to national and regional policies, detailed in sections 2.3.3 and 2.3.4. Furthermore, an overview of how the national and regional policies correlate with the scheme is provided in *response ii. Specifically in the context of land acquisition justification and consideration of alternatives*. This response will address the matter of the Proposed Scheme's compliance and alignment with the Development Plans of Local Authorities.

The Proposed Scheme is located within three local authority functional areas, Dún Laoghaire Rathdown County Council (DLRCC), South Dublin County Council (SDCC) and Dublin City Council (DCC). The Proposed Scheme is within DLRCC where it commences from the junction of the R821 and R822 along Grange Road. The Proposed Scheme is within SDCC from the Tallaght Road to the Templeogue Road and Fortfield Road junction. The remainder of the Proposed Scheme is within DCC.

Dún Laoghaire Rathdown County Council Development Plan 2022 – 2028

Section 2.3.5.1 of Chapter 2 described the Dún Laoghaire Rathdown County Council Development Plan 2022 – 2028 in the context of the Proposed Scheme. In Chapter 2, Table 2.12 provides an overview of how the Proposed Scheme aligns with key transport policies outlined in the DLRC Development Plan, specifically those related to bus improvements.

The Dún Laoghaire-Rathdown County Development Plan (DLRCDP) (DLRCC 2022) guides the future growth and development of the functional area of DLRCC. The DLRCDP 2022-2028 was adopted and came into effect in April 2022 and approximately 70m of the Proposed Scheme is within its jurisdiction. A SEA, AA and Strategic Flood Risk Assessment (SFRA) were carried out as part of the DLRCDP.

The vision of the DLRCDP (DLRCC 2022) is to 'embrace inclusiveness, champion quality of life through healthy placemaking, grow and attract a diverse innovative economy and deliver this in a manner that enhances the environment for future generations' (Dún Laoghaire-Rathdown County Development Plan 2022-2028, p.2). The DLRCDP places sustainable transport and mobility as a core principle in the future development of the county.

The DLRCDP (DLRCC 2022) states:

The National Transport Authority's (NTA) 'Transport Strategy for the Greater Dublin Area 2016-2035' provides a framework for the planning and delivery of transport infrastructure and services in the Greater Dublin Area over the medium to long term. The Planning Authority must ensure that the County Development Plan is consistent with the Transport Strategy of the NTA. The Dublin Transport Authority Act 2008 (as amended) provides that the NTA's Transport Strategy, must be reviewed every six years. While the Draft 'Greater Dublin Area Transport Strategy 2022 - 2042' has been published, the 2016 - 2035 strategy is still in place until the Draft is finalised.

The DLRCDP (DLRCC 2022) recognises that increasing capacity on public transport including bus corridors is a means to promoting modal change and active travel. It is noted that under the heading 'Promoting Active Travel: Cycling and Walking' that it states:

The Core Corridors of the BusConnects programme will provide high quality facilities, segregated from the bus lanes and general traffic lanes as far as is practicable. This will enhance safety for cyclists and provide a network of key cycling routes.

The Proposed Scheme will deliver the infrastructure necessary to enhance public transport, walking and cycling networks along the route corridor. It will facilitate a modal shift towards public transport and active travel modes which is a key objective of the DLRCDP (DLRCC 2022).

South Dublin County Council Development Plan (SDCCDP) 2022-2028

Section 2.3.5.3 of Chapter 2 describes South Dublin County Council Development Plan (SDCCDP) 2022-2028 in the context of the Proposed Scheme. In Chapter 2, Table 2.13 provides an overview of how the Proposed Scheme aligns with key transport policies outlined in the SDCC Development Plan, specifically those related to bus improvements.

The South Dublin County Council Development Plan 2022-2028 (hereafter referred to as the SDCCDP 2022-2028) (SDCC 2022) sets the strategy for the proper planning and sustainable development of South Dublin County. A SEA, AA, FRA and NIS were produced as part of the plan.

The development plan came into effect on the 3rd of August 2022 with the exception of two sections which are subject to a Ministerial Direction by the Minister of State at the Department of Housing, Local Government and Heritage, the sections are as follows.

The plan includes ‘a vision for the County’s growing communities, places, housing, jobs, sustainable transport and the delivery of services in a manner which promotes climate action and efficient patterns of land use, paying particular attention to the physical, cultural, environmental and social identities that define areas within the County and support their ongoing evolution and integration with each other’. The transport element of the strategy sets out that it seeks to:

rebalance transport and mobility within the County by promoting ease of movement by sustainable modes (including walking, cycling and public transport). This will provide for the freeing up of road space for essential functions such as, public transport and emergency vehicles. It will also allow for commercial transport which is essential to economic growth. In doing so, the Council will continue to provide for all elements of the transportation network that are within its remit and will engage with external agencies including the National Transport Authority (NTA) and Transport Infrastructure Ireland (TII) to assist the delivery of sustainable transport projects that are provided at a regional or national level.

In addition to the above, it is clear that SDCC has recognised the importance of BusConnects to improving transport and movement within SDCC, as outlined under the heading ‘Travel Mode Share’:

Transition to public transport will be aided by improvements in the pipeline including the roll-out of BusConnects which will include proposals for six new dedicated bus routes through the County. BusConnects will provide a redesigned more efficient bus network with high frequency spines, new orbital routes, and increased bus services.

Furthermore, the SDCCDP 2022-2028 identifies BusConnects as a strategic project ‘that will have the potential over the coming years to have a transformative impact on travel by shifting the dominance of car-based transport towards public transport’.

Dublin City Development Plan 2022 – 2028

Section 2.3.5.3 of Chapter 2 describes the Dublin City Development Plan 2022 – 2028 in the context of the Proposed Scheme. In Chapter 2, Table 2.14 provides an overview of how the Proposed Scheme aligns with key transport policies outlined in the DCC Development Plan, specifically those related to bus improvements.

The 2022 – 2028 DCDP (DCC, 2022) was adopted on the 2nd of November 2022 and came into effect on the 14th of December, it guides how the city will develop to meet the needs of its residents, visitors and workers. A SEA, AA and SFRA were produced as part of the DCDP.

The vision of the DCDP is to establish champion compact city living, distinct character, a vibrant culture, and a diverse, smart, green, innovation-based economy. DCC aims to establish the city as one of Europe’s most sustainable, dynamic, and resourceful city regions. The DCDP places sustainable transport as a core principle in the future development of the city:

Within the next 10 years, Dublin will have an established international reputation as one of Europe’s most sustainable, dynamic and resourceful city regions. Dublin, through the shared vision of its citizens and civic leaders, will be a beautiful, compact city, with a distinct character, a vibrant culture and a diverse, smart, green, innovation-based economy. It will be a socially inclusive city of urban neighbourhoods with excellent community and civic infrastructure based on the principles of the 15-minute city, all connected by an exemplary public transport, cycling and walking system and interwoven with a high quality bio-diverse, green space network. In short, the vision is for a capital city where people will seek to live, work, experience, invest and socialise, as a matter of choice.

In ‘Translating the Core Strategy into Development Plan Policies and Objectives’, the core strategy has the following supports:

The Core Strategy will promote development and appropriate intensification along the routes of the three key public transport projects to be developed over the development plan period comprising Bus Connects (2021 – 2023).

The DCDP recognises that increasing capacity on public transport including bus corridors is a means to promoting modal change and active travel.

The Planning Report presented in Appendix 2.1 of Volume 4 of the EIAR considers the existing policy framework for the Proposed Scheme in the context of relevant legislation, International, European, National, Regional and Local planning strategy, plans and policy documents

21. General Scheme of the Planning and Development (Land Value Sharing and Urban Development Zone) Bill 2022

The NTA has adhered to the correct statutory procedures in relation to the CPO notices. The CPO was made by the NTA in exercise of the powers conferred on them by the Housing Act 1966 (as amended), the Planning and Development Act 2000 (as amended) and the Dublin Transport Authority Act 2008 (as amended). These procedures have not been changed or amended.

In relation to the reference to the Land Value Sharing and Urban Development Zone Bill 2022, the updated general scheme of the Planning and Development (Land Value Sharing and Urban Development Zone) Bill 2022 was published on 13 April 2023, and the provisions within the general scheme of the Bill are subject to change following pre-legislative scrutiny. It is only then that a final Bill will be published. Further, it is only at Bill stage and even if it did apply (which it doesn't as explained below) it is not law until a Bill has been enacted and commenced. Also, the Bill as it currently stands is not applicable to the CPO being pursued here.

The general scheme of the Bill intends, among other things, to enable the State to secure a share of the increase in land value that occurs as a result of certain public zoning and designation decisions and to provide for mechanisms to encourage timely development on land, in particular residential development, and for the designation of Urban Development Zones to enable the strategic and comprehensive development, redevelopment, or improvement of under-utilised urban or suburban areas. Therefore, it does not have any relevance to the procedures for assessing and determining compensation in the context of this CPO.

3.250250 – Senator Mary Seery Kearney

3.250.1 Submission – Whole Scheme

The submission raised the following issues:

1. Benefits of the proposed Scheme do not justify the cost and environmental impacts
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Whitechurch Stream not considered
4. Traffic
 - a. Traffic displaced to residential streets
 - b. Insufficient traffic modelling
5. Air pollution
6. Access to amenities including Bushy Park
7. No assessment of cumulative impact of 12 corridor
8. Impact on visibility/perceived safety from proposed LED lighting
9. Lack of enhanced pedestrian facilities
10. Cycle facilities
 - a. Lack of continuity
 - b. Insufficient width
11. Alternative options
 - a. Metro
 - b. Congestion Charges
12. Turn bans
13. Proposed bus gate
 - a. Limit hours of operation

14. Lack of consultation
15. Request Oral Hearing
16. Bus stop
 - a. Removal of multiple bus stops
 - b. Relocation of bus stop 1159
17. Elderly and Disability Access
18. Access to St Luke's Hospital
19. Pre-COVID traffic volumes used in analysis.
20. Changes to work patterns due to the COVID-19 pandemic
21. Architectural and cultural heritage
 - a. Impact on heritage properties due to CPO
22. Negative impact on businesses

3.250.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

In relation to Issue 8, Section 12.4 of the Preliminary Design Report contained in the Supplementary Information outlines the design approach to Public Lighting. The following is noted:

"All new public lighting will be designed and installed in accordance with the specific lighting and electrical items set out the following National Standards and guides, including but not limited to:

- *Local Authority Guidance Specifications;*
- *EN 13201: 2014 Road Lighting (all sections);*
- *ET211:2003 'Code of Practice for Public Lighting Installations in Residential Areas';*
- *BS 5489-1 'Code of practice for the design of road lighting';*
- *TII Publications: Specification for Road Works, Series 1300 & 1400;*
- *TII Publications Standard Construction Details, Series 1300 & 1400;*
- *IS EN 40 – Lighting Columns;*
- *Institution of Lighting Professionals "GN01 Guidance Notes for Reduction of Obtrusive Light".*

All new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the 'Guidance notes for the Reduction of Light Pollution' issued by the Institution of Lighting Professionals (ILP)."

In line with these guidance documents, and industry best practice, LED lighting will be provided. The Proposed Scheme will provide sufficient lighting in all areas. The following is noted in Section 12.4.1 of the Preliminary Design Report:

"Where significant alterations are proposed to the existing carriageways, the preliminary street lighting design ensures that the current standard of public lighting is maintained or improved."

In relation to Issue 9, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 2 of 4, Chapter 6 Traffic and Transport Appendices) Appendix 4 and summarised in Section 8 of Appendix A6.1 - Traffic Impact Assessment Report and Section 6.4.6.1.6 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

The Proposed Scheme will increase the number of controlled pedestrian crossings from 76 in the Do Minimum to 106 in the Do Something scenario, equating to a 39% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 30 in the Do Minimum to 105 in the Do Something scenario, equating to a 250% increase. It is further noted that the Proposed Scheme proposes to increase footpath widths at critical locations with high pedestrian demand, such as on Rathmines Road Lower and in Terenure Village.

Chapter 6 of the EIAR outlines a Level of Service (LoS) assessment carried out in respect of pedestrian facilities. Section 6.4.6.2 of Chapter 6 notes the following in relation to the assessment of Pedestrian Infrastructure:

“Pedestrian Infrastructure: The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment was undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The results of the impacted junctions demonstrate that the LoS during the Do Minimum scenario consists predominantly of the low C / D / E ratings. During the Do Something scenario, i.e. following the development of the Proposed Scheme, the LoS consists predominantly of the highest A / B ratings, with the exception of two Cs. Overall, the improvements to the quality of the pedestrian infrastructure will have a Positive, Significant and Long-term effect in all four sections of the Proposed Scheme.”

In relation to Issue 10, the GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Rathfarnham Road between Dodder Park Road and Castleside Drive as well as along Templeogue Road between number 210 Templeogue Road and 248 Templeogue Road wherein general traffic will be managed by signals to facilitate bus priority along these constrained section of the Proposed Scheme.

At the constrained section of the Proposed Scheme along Rathfarnham Road where a segregated inbound cycle track could not be achieved, a shared bus/cycle lane is provided over a length of approximately 260m. At the constrained section of the Proposed Scheme along Templeogue Road shared bus/cycle lanes are provided over the majority of this section, with the exception of a short 170m long section where outbound cyclists would share with general traffic.

Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of EIAR outlined the extensive options assessment exercise which has been undertaken to determine the Preferred Route. In constrained locations, a balanced approach has been taken in selecting the Preferred Route Option. In some locations this has resulted in no segregated cycle facility being provided. It is noted that in these areas, cyclists will share with the bus lane and the speed limit has been reduced to 30km/h.

Table 4.1 of EIAR Volume 4 Proposed Scheme Description provides a summary of changes as a result of the Proposed Scheme. The table notes that in the existing scenario, 28% of cycling facilities, covering 11km in both directions, are segregated. However, under the Proposed Scheme, 85.4% of cycling facilities will be segregated, totalling 23.3km. This represents a substantial 112% increase in segregated cycling facilities along the proposed route.

Table 3.250.1 Summary of Changes as a result of the Proposed Scheme (Table 4.1 in EIAR Chapter 4)

Features	Existing (km)	Proposed Scheme (km)
Bus Lanes		
Inbound	4.4	6.1
Outbound	1.5	5.4
Bus Priority Through Traffic Management		
Inbound	0.1	2.9
Outbound	0.3	3.0
Total Bus Priority (both directions)	6.3	17.4 (+175%)
Bus Measures		
Proportion of Route with Bus Measures	32%	87%
Cycle Facilities Segregated		
Inbound	1.3	9.6
Outbound	1.8	10.3
Cycle Facilities – Non segregated		
Inbound	3.3	1.7
Outbound	4.6	1.7
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	11	23.3 (+112%)
Proportion segregated	28%	85.4%
Other Features		
Number of Pedestrian Signal Crossings	76	106
Number of Residential Properties with Land Acquisition	Not applicable	72

Section 4.6.1 of the Chapter 4 of the EIAR outlines the cycling provision provided as part of the Proposed Scheme. The following is noted in relation to cycle track width:

“The desirable minimum width for a single direction, with flow, raised adjacent cycle track is 2.0m. Based on the National Cycle Manual (NCM) this allows for overtaking within the cycle track. The minimum width is 1.5m. The desirable width for a two-way cycle track is 3.25m with a 0.5m buffer between the cycle track and the carriageway.”

Where practicable, 2.0m wide cycle tracks have been provided along the route of the Proposed Scheme. It is noted that the proportion of segregated cycle facilities along the route will increase from 28% to 85.4% following the implementation of the Proposed scheme, resulting in significantly enhanced cycle facilities along this important link.

It is acknowledged that due to significant constraints in available width along the route of the Proposed Scheme, that in some locations, cycle facilities of a narrower width than the desirable minimum of 2.0m have been proposed, including on Rathfarnham Road, Rathgar Road, Camden Street Lower and on Templeogue Road. Typical cross-sections are provided within Appendix B4 of the PDR which detail the proposed cycle track widths. The options selection process which has informed the design of the Proposed Scheme in each location is document in the Preferred Route Options Report, which is included in the Supplementary Information of the submission.

3.251251 – Senator Michael McDowell

3.251.1 Submission – Whole Scheme

The submission raised the following issues:

1. Traffic
 - a. Increased congestion
 - b. Increased volumes on Castlewood Avenue, Belgrave Square, Charleston Road

- c. Increased congestion in Ranelagh
 - d. Impact of turn bans on access in Ranelagh
2. Changes to work/travel patterns due to the Covid-19 pandemic
3. Environmental impact assessment of traffic impacts required.
4. One-way operation of Rathgar Road
5. Proposed bus gates
 - a. Rathmines Road

3.251.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.252252 – Sharon McCaffrey

3.252.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Changes to work/travel patterns due to the Covid-19 pandemic
2. Alternative options
 - a. Metro
3. One-way operation of Rathgar Road
 - a. Impact on access
4. Proposed bus gate in Rathmines
 - a. Impact on access
5. Unnecessary change providing no real gains to bus travel times.
6. Traffic
 - a. Diverted to residential streets.
7. Biodiversity
 - a. Destruction of trees on Terenure Road East
8. Request oral hearing.

3.252.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.253253 – Shauna & Ray Clarke & Others

3.253.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Proposed bus gates
 - a. Olney Crescent / Grove
 - b. Limit hours of operation
2. Traffic impact of:
 - a. Proposed bus gate on Templeogue Road
 - b. Turn bans from Templeogue Road to Rathdown Avenue and Rathdown Park
 - c. Diverted from Templeogue Road to Rathfarnham Road
3. Alternative options
 - a. Relocation proposed Olney bus gate further from Terenure village.

3.253.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 and 2.2.3 of this report.

3.254254 – Simon Harrison and Maire Redmond

3.254.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact of proposed construction compound adjacent Woodview Cottages
 - a. Biodiversity
 - i. Flora and fauna
 - b. Traffic
 - i. High volume of Trucks
 - c. Loss of green space
 - i. Amenity
 - d. Air and noise pollution
 - e. Flooding

3.254.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.255255 – South Dublin County Council

3.255.1 Submission

The issues raised in this submission are summarised in Section 2.6.6.1.

3.255.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.6.2 to 2.6.6.9 of this report.

3.256256 – St. Jude’s GAA Club

3.256.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
 - a. Increased congestion at proposed signalised Spawell junction.
2. No consideration of what happens buses in the City Centre
3. Alternative options
 - a. Metro
4. Access to amenities

3.256.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.257257 – St. Louis High School

3.257.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Rathmines Road
2. Access to Church of Mary Immaculate, Refuge of Sinners
3. Impact on Access to/from north of bus gate

3.257.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.258258 – Stephanie Frame

3.258.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. One-way operation of Rathgar Road
2. Traffic
 - a. Increased volumes on Highfield Road
3. Access to amenities
4. Air pollution
5. CPO
6. Biodiversity
 - a. Destruction of trees on Terenure Road East
7. Inadequate bus service proposed on Templeogue Road.
8. Alternative options
 - a. Light Rail

3.258.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.259259 – Stephen Bailey

3.259.1 Submission – Rathgar Road

The submission notes support for the Rathgar Road Residents Association submission.

3.259.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 3.219.2 of this report.

3.260260 – Stephen Garland

3.260.1 Submission – Whole Scheme

The submission raised the following issues:

1. Unnecessary change providing no real gains to bus travel times.
2. Traffic
 - a. Increased volumes on Terenure Road West
3. Alternative options

- a. Tram / Luas
 - b. Metro
 - c. Congestion charges
 - d. Close city centre car parks
4. Lack of consultation
 5. Alternative less intrusive measures should be considered (removal of car parking)
 6. Road widening
 7. Biodiversity
 - a. Destruction of trees on Terenure Road East
 8. Proposed turn bans

3.260.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.261261 – Stephen Woulfe

3.261.1 Submission – Whole Scheme

The submission raised the following issues:

1. Alternative options
 - a. Tram / Luas
 - b. Metro
2. Lack of consultation
3. Flawed modelling
4. Air pollution
5. Character of area
6. No assessment of cumulative impact of 12 corridors
7. Traffic baseline data out of date (Covid-19)
8. Changes to work/travel patterns due to the Covid-19 pandemic
9. Significant impacts providing no real benefits.

3.261.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 of this report.

3.262262 – Stonepark Investments Limited

3.262.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Visibility Splays

2. Proposed toucan crossing
3. Reduced parking

3.262.2 Response to submission

1. Visibility Splays

Section 4.8.1 of the Preliminary Design Report included in the Supplementary Information submitted as part of the planning documents outlined the visibility assessment undertaken at minor and major junctions, as well as individual properties and single dwellings:

An assessment of visibility at major and minor junctions has been completed along the route. In accordance with DMURS, the SSD parameters for relevant design speeds has been adopted as the Y-Distance visibility to be achieved while an X-Distance of 2.4m (reduced to 2.0m as a relaxation) has been implemented.

An assessment of the junction visibility at accesses serving individual properties and single dwellings has been undertaken, ensuring that the existing visibility splay “X” and “Y” are maintained or improved.

SSD STANDARDS																													
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Figure 3.262.1 Reduced SSD standard for application within cities towns and villages. Reduced forward visibility increases driver caution and reduces vehicle speeds (Table 4.2 from DMURS)

Visibility splays along the Proposed Scheme were assessed in accordance with the Design Manual for Urban Roads and Streets (DMURS) which is the overarching design guidance for urban roads in Ireland. The visibility at Earl Court complies with the Stopping Sight Distance (SSD) requirements specified for a 30km/h urban road in DMURS.

If the CPO is confirmed by An Bord Pleanála, reinstatement of property frontage including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

2. Proposed Toucan Crossing

Regarding the concern raised about drivers leaving Earl Court having difficulty seeing the traffic signal head, the Junction System Design drawings in EIAR Volume 3 Chapter 4 include a proposed secondary signal head on the southern side of the crossing. The secondary signal head is angled to face oncoming traffic from Terenure Village and will be visible to drivers exiting from Earl Court.

It is noted that there is currently no yellow box provided at the entrance to Earl Court. While a toucan crossing is located nearby, it is not considered necessary to include a yellow box at this location. However, should an issue with access be identified in future, a yellow box may be considered appropriate and could be installed by the local authority. It is noted that the Proposed Scheme would not preclude this being introduced.

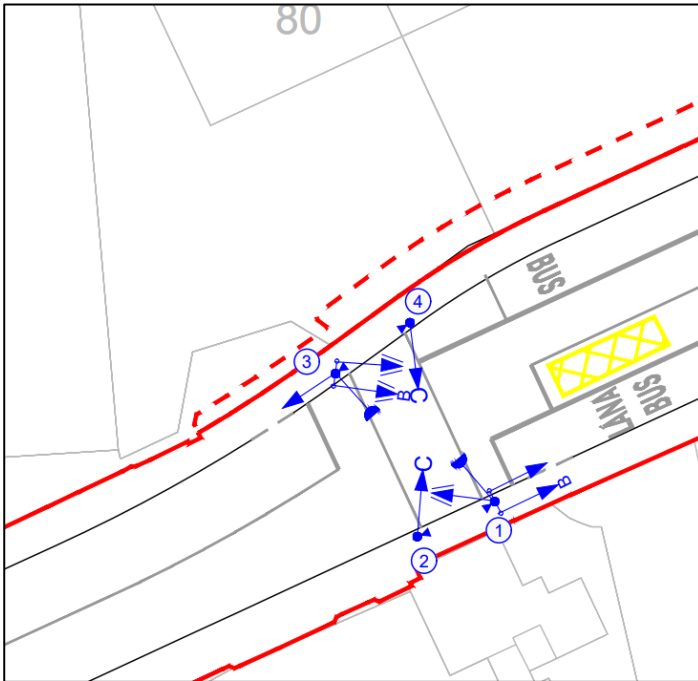


Figure 3.262.2 Traffic signal arrangement extracted from Junction System Design

3. Reduced Parking

The permanent acquisition will result in the maximum loss of 3.7m of lands on the eastern end of the property, which narrows to 0.3m on the western end. An additional 2.0m will be temporarily required at the boundary wall and 1.0m at the driveway to allow for the construction of boundary treatment works and tying into the existing garden/driveway. It is acknowledged that the proposed land acquisition may lead to the loss of one parking space in the front area of the property. However, it is emphasised that the proposed changes will not significantly impact the residents' ability to park generally at the property.

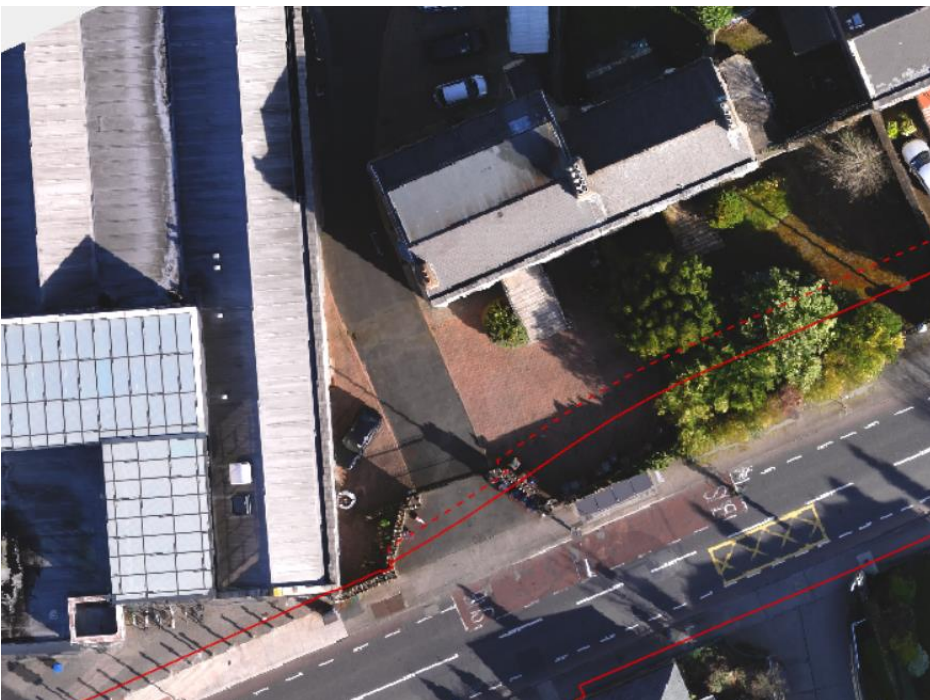


Figure 3.262.3 Proposed Permanent and Temporary land acquisition at Earl Court

In relation to the impact on property value the aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly improve transport services for all that live along the route of the Proposed Scheme, including on Rathfarnham Road, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix assesses what the economic impact of the provision of bus corridor infrastructure on the communities along the route using evidence from international Case Studies for similar schemes. This economic impact includes effects on property values. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes: "*Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area.*" and "*Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm.*"

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties on Rathfarnham Road.

If the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent/valuer in preparing, negotiating, and advising on compensation.

Reinstatement of property frontage including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIAR or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application

3.263263 – Susan Coleman and Declan O'Neill

3.263.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Pre-COVID traffic volumes used in analysis.
2. Change in working work patterns due to COVID-19
3. Traffic
 - a. Diverted traffic to residential areas.
 - b. Increased congestion
 - c. Impact of traffic management on access routes
4. Safety of vulnerable pedestrian, children and cyclist
5. Lack of consultation
6. Air pollution
7. Unnecessary change providing no real gains to bus travel times.
8. Biodiversity
 - a. Destruction of trees
9. Negative impact on property value
10. Alternative option

- a. Metro
- b. Tram
- c. Increase bus capacity.

3.263.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.264264 – Susan Kearney, Mary Duff & Iona Whelan

3.264.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Impact of proposed construction compound adjacent Woodview Cottages
 - a. Flooding
 - b. Noise and air pollution
 - c. Biodiversity
 - i. Destruction of trees
 - ii. Flora and fauna
 - d. Loss of green space
2. Increased traffic volumes on Dodder Road due to Templeogue Road bus gate

3.264.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.265265 – Susan McNamara

3.265.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Biodiversity
 - a. Destruction of trees in Rathfarnham Castle
 - b. Flora and fauna
2. Impact on playground in Rathfarnham Castle
3. Road widening and impact on Rathfarnham Castle
4. Alternative options for cyclists

3.265.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.266266 – Tara Delaney

3.266.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Negative impact on resident accessing their home.
2. Access to amenities
3. Traffic
 - a. Increases volume on Highfield Road

3.266.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.267267 – Templeogue Wood Residents Association

3.267.1 Submission – Templeogue Road

The submission raised the following issues:

1. Traffic
 - a. Increased congestion
 - b. Diverted traffic to residential area.
 - c. Increased volume
 - d. Impact on access to amenities
2. Turns bans.
3. Alternative option
 - a. Congestion charges
 - b. Metro
 - c. Park and ride facilities
4. Biodiversity
 - a. Destruction of trees
5. Lack of consultation
6. Negative impact on resident accessing their home.
7. No assessment of cumulative impact of 12 corridors
8. Justification for corridor routing along Rathgar Road and not Harold's Cross

9. Elderly and Disability Access
10. Proposed bus gate
 - a. Limit hours of operation
 - b. Impact on traffic
11. Cost benefit analysis
12. Pre-COVID traffic volumes used in analysis.

3.267.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.268268 – Terenure & Templeogue Sustainable Community Association CLG

3.268.1 Submission – Whole Scheme

The submission raised the following issues:

1. Request Oral Hearing
2. Templeogue Road Bus Gate
3. Traffic Redistribution
4. Road Safety
5. Rathmines Road Bus Gate
6. Access to amenities
7. Elderly and Disability Access
8. Assessment of Alternatives:
 - a. Rathgar Road
 - b. Rathmines Road
9. Alternative options
 - a. Bus priority signals
 - b. Park and ride facilities
 - c. Cashless fare payment
 - d. Congestion charges
 - e. Metro
 - f. Tram / Luas
 - g. BRT
10. Error in Chapter 3 referring to Option S2-20
11. Predicted increase in trips on the corridor is unprecedented
12. Traffic
 - a. Diverted to residential areas
 - b. Traffic Management Measures
 - c. Increased congestion

13. Robustness of Transport Modelling including validation of predicted increase in cycling volumes
14. Robustness of Business Case
15. Request for additional studies/reviews to be undertaken

3.268.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3, 2.4.3 and 2.5.3 of this report.

In relation to Issue 10, the NTA acknowledges that there is an error in Section 3.3.2.1.2 of Chapter 3 of the EIAR which refers to Option S2-20. This should refer instead to Option S2-10.

“To determine the impact that the Proposed Scheme has on modal share in the direct study area as a result of its implementation, the weighted average number of people moved by each mode (Car, Bus, Active Modes) has been extracted from the ERM / LAM. The analysis compares the Do Minimum and Do Something scenarios both in the inbound and outbound direction in the AM and PM peak hours (8-9am, 5-6pm) for each forecast year (2028, 2043).

As outlined previously, the same demographic assumptions (population, employment levels) are included in both the Do Minimum and Do Something scenarios. The bus network and frequency assumptions are also the same in both scenarios and are in line with the BusConnects bus network proposals. It is acknowledged, therefore, that the assessment is conservative in terms of the level of people movement that is predicted in the Do Something scenario. The Do Something scenario will facilitate opportunities to increase bus network capacity operating along the corridor due to the extensive priority provided. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth. In the absence of the delivery of the Proposed Scheme, growth along this key corridor would continue to contribute to increased congestion and operational issues on the road network. The Proposed scheme delivers a reliable alternative to car-based travel that can support future sustainable growth and provide a positive contribution towards reducing carbon emissions.”

In relation to Issue 13, the NTA is satisfied that the transport modelling carried out to inform the design and assessment of the Proposed Scheme, as extensively documented in Chapter 6 of the EIAR and its associated Appendices, is robust. In relation to cycling trips, the following is noted in Section 6.4.6.1.8.1 of Chapter 6 of the EIAR:

“The Proposed Scheme will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridor. The transport modelling is conservative in terms of the predicted cycling mode share. The Proposed Scheme has been designed to cater for much higher levels of cycling uptake than modelled outputs, to cater for long-term trends in travel behaviours as people make sustainable travel lifestyle choices, which would otherwise not be achievable in the absence of the Proposed Scheme.”

In relation to Item 14, all major publicly funded infrastructure projects, such as the BusConnects Infrastructure Schemes are subject to the Public Spending Code (gov.ie - [The Public Spending Code \(www.gov.ie\)](http://www.gov.ie)) which requires the production of appropriate economic appraisals and business cases. The Preliminary Business Case for BusConnects schemes is set out at the following link. The document sets out the keys costs and benefits of the schemes.

<https://www.nationaltransport.ie/planning-and-investment/transport-investment/projects/busconnects/busconnects-dublin-preliminary-business-case/>

Pending planning approval, the progression of the Proposed Scheme to construction stage will be subject to formal business case approvals. As noted on NTA's BusConnects Dublin Preliminary Business Case website:

The BusConnects Dublin Preliminary Business Case prepared by NTA was approved by the NTA Board for submission to the Department of Transport (DoT) and onwards submission to the Department of Public Expenditure and Reform (DPER) for review. Further to DoT and DPER review (including independent review by JASPERS and the Major Projects Advisory Group (MPAG)) elements of the PBC around inflation and costs were updated to inform the Government decision.

In March 2022, the Government granted Approval in Principle to the NTA to enable the submission of statutory consent applications for the Core Bus Corridor elements of the programme to An Bord Pleanála (Decision Gate 1) and to commence the tender process for the Next Generation Ticketing element of the programme (Decision Gate 2). This Preliminary Business Case reflects the document as considered by Government with a Cover Note which sets out the revisions to inflation assumptions and costs arising from the consideration of the PBC from Government.”

Section 16 of the BusConnects Dublin Preliminary Business Case sets out the next steps and approvals:

The current approval being sought is a PSC Gate 1 approval in principle to proceed with CBC statutory processes and a PSC Gate 2 approval to commence the NGT tender process. Individual elements or projects will require further approvals as the BusConnects Dublin programme progresses. For example:

- *As further projects or components of these projects (e.g. singular CBCs within a CBC Lot) within the BusConnects Dublin programme (e.g. each CBC Lot) proceed to Decision Gate 2 (Pre-Tender Approval)*

At Decision Gate 3 (Approval to Proceed) as projects or components of these projects within the BusConnects Dublin programme seek approval to proceed to contract award

The NTA has complete confidence in the robustness of the Business Case.

In relation to Issue 15, the NTA notes that comprehensive studies and analysis have been undertaken to inform the design and assessment of the Proposed Scheme. The requirement or otherwise for additional reviews is a matter for An Bord Pleanála to decide.

3.269269 – Terenure College Rugby Football Club

3.269.1 Submission – Templeogue Road

The submission raised the following issues:

1. Welcome the Proposed Scheme.
2. Reduction of bus service on Templeogue Road
3. Proposed bus gate
 - a. Limit hours of operation
4. Existing bus priority signal on Templeogue Road is adequate.
5. Impact of Turn bans
 - a. Right turn bans into Rathdown.
 - b. Right turn ban into Greenlea
 - c. Right turn ban into Lavarna
 - d. Enforcement
6. Traffic
 - a. Insufficient signage to direct vehicles away from Templeogue Bus Gate
 - b. Diverted traffic to residential area.
 - c. Increased volume on Fortfield Road
 - d. Traffic congestion
7. Safety of vulnerable pedestrian, children and cyclist
8. Biodiversity
 - a. Destruction of trees on Terenure Road East

9. Negative impact on businesses
 - a. Impact on access routes
10. Access to amenities
11. Bus stops
 - a. Removal of 1159 bus stop at Terenure College
 - b. Relocation of bus stops at Lakelands Park
12. Compulsory Purchase Order on Templeogue Road

3.269.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.270270 – Terenure Residents Association

3.270.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Proposed bus gate on Templeogue Road and Rathmines
 - a. Limit hours of operation
 - b. Traffic diverted traffic to residential streets.
2. Access to amenities
3. Cumulative impact of all CBC schemes on traffic not considered in EIAR
4. Traffic baseline data out of date (Covid-19)
5. Negative impact on businesses
6. Architectural and cultural heritage
7. Biodiversity
 - a. Destruction of trees
8. Compulsory Purchase Order on Rathfarnham Road
9. Compulsory Purchase Order Terenure Road East
10. Part M of Building Regulations
11. Contravention of DCC Development Plan
12. Redistribution of traffic
13. Request oral hearing
14. Noise and air pollution
15. Unnecessary change providing no real benefits
16. Alternative options
 - a. Light Rail
 - b. Metro

- c. Park and Ride
- 17. Proposed turn bans
- 18. Public Realm in Terenure Village
- 19. Proposed footpath
 - a. Narrow footpath on Terenure Road North

3.270.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3, 2.3.3 and 2.4.3 of this report.

In relation to Issue 10, as set out in Section 4.5 of the Preliminary Design Report in the Supplementary Information, a detailed 3d road alignment model has been prepared to inform the design of the Proposed Scheme:

As part of preliminary design, the 3D road alignment design has been developed on the principles of the Preferred Route Option. The proposed alignment has also taken into consideration public consultation, traffic impact and environmental impact assessments, in addition to a peer review exercise in collaboration with the other Engineering Designers (EDs) for the Proposed Scheme.

The 3D highway design, including the horizontal and vertical alignments, 3D modelling corridors and the associated highways related design features required for all roads included in this preliminary design, has been developed using Civil 3D software. In collaboration with the other EDs for the other CBC schemes, the 3D models have been produced in accordance with the BusConnects BEP.

As part of the alignment design process, the horizontal and vertical design has been optimised to minimise impact to the existing road network and adjoining properties where feasible. Horizontal and vertical alignments have been developed to define the road centrelines for the proposed route layout while also taking cognisance of the existing road network.

In terms of the horizontal alignments, due consideration has been given to aligning the centrelines as close to existing as practicable. However, the overriding determining factor for locating the horizontal alignment is to ensure it is positioned in the centre of the proposed carriageway.

This is ideally along a central lane marking on the carriageway, in order to minimise rideability issues for vehicles crossing the crown line.

In the case of developing the vertical alignment along the route, a refinement process has been undertaken to minimise any impact to existing road network and develop the proposed carriageway levels as close to existing as practicable. In most circumstances however, due to a change in cross-section, due consideration is given to the resulting level difference at the outer extents of the carriageway, particularly through urban areas where a difference in existing and proposed footpath levels will require additional temporary land-take to facilitate tie-in.

Notwithstanding the above, it is important to note that the design of the Proposed Scheme has been carried out so as to minimise impacts on adjacent properties and at this location is such that it will not result in any increase to the maximum driveway gradients at this property. This has been achieved through a combination of the following design measures aimed at minimising the impact on adjacent properties:

- Raising the centreline level of the road m at this location (as presented in the Mainline Plan and Profile drawings provided the Volume 3 of the EIAR); and
- Retaining existing footpath gradients.

The works may require minor regrading works within some properties but will not result in an increase to the maximum gradient experienced in these properties.

In relation to Issue 11, Section 3.7.4 of the Planning Report included in Appendix A2.1 of the EIAR extensively outlines how the Proposed Scheme is in alignment with the Dublin City Development Plan 2022-2028. The following is noted in Section 3.7.4.1 of this report:

“It is clear that BusConnects and the delivery of same is an important objective of the DCDP. The DCDP fully supports the BusConnects Programme of works and its policy/objectives are aligned with the Proposed

Scheme. The Proposed Scheme will deliver the infrastructure necessary to provide a sustainable transport system, to support the enhancement and growth of the cycle and pedestrian network and achieve a modal shift.”

In relation to Issue 18, the NTA welcomes the support within the submission for the enhanced paving within Terenure Village. The submission notes that no other public realm improvement is proposed within Terenure Village. Sections 14.7.2 and 14.7.3 of the Preliminary Design Report note the following proposals within Terenure Village:

“Leading into Terenure Village, the roadway will be rationalised to provide continuous pedestrian and cycle facilities which will upgrade the appearance and integrity of the public realm. New tree planting will be incorporated to replace existing trees felled and the overall quality of the public realm will be upgraded as it leads into the village core beyond...

Terenure Road East will incorporate wider footpaths within the village core and reduced carriageways so as to enhance pedestrian facilities. Widened footpaths will be built using quality material commensurate with that of the built context of the village so as to enhance the character of the village locality.

Immediately east of the village, Terenure Road East will be widened and this will require encroachment into private properties, including associate tree felling and realignment of boundary walls and gates. New tree planting will be provided post construction to mitigate the loss of existing trees.”



Figure 14.3: Terenure Village

In relation to Issue 19, as set out in section 4.6.2.1 of Chapter 4 of Volume 2 of the EIAR:

“The desirable minimum width for a footpath is 2.0m. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footpath width for road sections as 1.8m based on the width required for two wheelchairs to pass each other. Building for Everyone: A Universal Design Approach (NDA 2020), defines acceptable minimum footpath widths at specific pinch points as being 1.2m wide over a two-metre length of path.

In line with the Road User Hierarchy designated within DMURS, at pinch points the width of the general traffic lane should be reduced first, then the width of the cycle track should be reduced before the width of the footpath is reduced, where practicable.

Throughout the Proposed Scheme, footpath widths of two metres or wider have been proposed, however where this has not been achieved, deviations from standard have been required as outlined in Section 4.5.”

The proposed footpath width in the location referenced, i.e. at the Post Office/Centra, has been reduced very slightly to a proposed width of approximately 2.9m, which is considered sufficient in this location.

3.271271 – Terenure Road East Residents' Group

3.271.1 Submission – Whole Scheme

The submission raised the following issues:

1. No assessment of cumulative impact of 12 corridors
2. Lack of specifics provided on benefits of the Proposed Scheme
3. Alternative options
 - a. Harold’s Cross Road
 - b. Cashless fare payment
 - c. Improved enforcement
 - d. Bus priority signals
 - e. Park and ride facilities
4. Architectural and cultural heritage
5. Air pollution
6. Impact of traffic redistribution
7. Separate consultation carried out on CBC10 & CBC12
8. Relocation of bus stop 1165 on Terenure Road East
9. Pre-COVID traffic volumes used in analysis.
10. Request oral hearing.

3.271.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.272272 – Terenure Road West Residents' Group

3.272.1 Submission – Whole Scheme

The submission raised the following issues:

1. Proposed bus gate on Templeogue Road and Rathmines Road
 - a. Limit hours of operation
2. Existing bus priority signal on Templeogue Road is adequate.
3. Impact of Turn bans
 - a. Right turn bans into Rathdown

- b. Right turn ban into Greenlea
 - c. Right turn ban into Lavarna
 - d. Enforcement
4. Traffic
 - a. Insufficient signage to direct vehicles away from Templeogue Bus Gate
 - b. Diverted traffic to residential area.
 - c. Increased volume on Fortfield Road
 - d. Traffic congestion
5. Safety of vulnerable pedestrian, children and cyclist
6. Biodiversity
 - a. Destruction of trees on Terenure Road East
7. Negative impact on businesses
 - a. Impact on access routes
8. Access to amenities
9. Bus stops
 - a. Removal of 1159 bus stop at Terenure College
 - b. Relocation of bus stops at Lakelands Park
10. Compulsory Purchase Order on Templeogue Road

3.272.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.273273 – Teresa & Vincent Lambe

3.273.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Negative impact on Rathgar village and the surrounding area
2. Lack of consultation
3. Impact on Architectural and cultural heritage

3.273.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.4.3 of this report.

3.274274 – Tesco Ireland Limited

3.274.1 Submission – Whole Scheme

The submission raised the following issues:

1. Welcome the Proposed Scheme.
2. Requests policing of proposed loading bays to ensure it is used as intended.
3. Further consideration of details at entrance/exit to Tesco car park on Terenure Road North.

3.274.2 Response to submission

The NTA notes the support for the Proposed Scheme.

In terms of Item 2, the NTA acknowledges the request for improved policing of loading bays. Enforcement is a matter for An Garda Síochána.

In terms of Item 3, the principle for the details of the entry/exit to the Tesco car park on Terenure Road North are set out in the Preliminary Design Guidance Booklet provided Appendix 4.1 of the EIAR. Section 8.1 presents the preferred arrangement for side roads. The details with respect to this proposal will be considered further at the next design stage.

3.275275 – The Barber Family

3.275.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Impact the quality of resident's life.
2. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
3. Unnecessary change providing no real gains to bus travel times.
4. Architectural and cultural heritage
5. Traffic
 - a. Diverted traffic to residential area.
 - b. Increased Volume
 - c. Increased congestion
 - d. Inadequate traffic modelling and counts
6. Lack of consultation
7. Air pollution
8. No environmental assessment of cumulative impact of 12 corridors
9. Cycle track
 - a. Safety of vulnerable cyclist due to gaps in segregated cycling infrastructure
 - b. Cycle tracks were not provided on Terenure Road East
10. Bus Stops

- a. Removal of bus stops
11. Change in working work patterns due to COVID-19
12. Pre-COVID traffic volumes used in analysis.
13. Elderly and Disability Access
14. Access to amenities
15. Alternative option
 - a. Metro
 - b. Tram/ Luas
16. Request oral hearing.

3.275.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.2.3 and 2.4.3 of this report.

3.276276 – The Rathmines Initiative

3.276.1 Submission – Rathmines

The submission raised the following issues:

1. Lack of consultation
2. Traffic
 - a. Increased Volume on roads around Rathmines such as Castlewood and Charleston Road
 - b. Increased congestion
3. Proposed bus gates
 - a. Limit hours of operation
 - b. Diverted traffic to residential area.
 - c. Access to Rathmines church (Church of Mary Immaculate, Refuge of Sinners)
 - d. Access to amenities
4. Turn bans.
5. Enforcement of speed limits
6. Insufficient width for Mountpleasant Avenue shuttle system to operate.

3.276.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.5.3 of this report.

3.277277 – The Richview Residents Association

3.277.1 Submission – Rathmines

The submission raised the following issues:

1. Architectural and cultural heritage on Terenure Road East
 - a. Walls, railings and gates
2. Biodiversity
 - a. Destruction of trees
3. Proposed bus gates
 - a. Limit hours of operation
 - b. Justification for location
 - c. Impact on access routes
 - d. Traffic diverted to residential streets.
 - e. Access to Rathmines church (Church of Mary Immaculate, Refuge of Sinners)
4. Impact of proposed one-way on Rathgar Road
5. Loss of on-street parking on Rathmines Road
6. Proposed turn bans
7. Change in working work patterns due to COVID-19
8. Inadequate consultation

3.277.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.278278 – Thomas Michael Larkin

3.278.1 Submission – Rathmines

The submission raised the following issues:

1. Proposed bus gates
 - a. Rathmines Road
2. Access to amenities
 - a. St. Mary's College
3. Access to Church of Mary Immaculate, Refuge of Sinners
4. Negative impact on businesses
5. Traffic

3.278.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.279279 – Thomas Sexton

3.279.1 Submission – Rathfarnham Road

The submission raised the following issues:

1. Necessity of road widening
2. Removal of tree
3. No consideration of Glin River
4. Consideration of alternative options
5. Climate Impact of Tree Removal
6. Biodiversity Impact
7. Landscape and Visual
8. Noise, Vibration and Air Quality

3.279.2 Response to submission

Items 3 – 8 raises the same concerns as Submission 40. Please refer to Section 3.40 for responses to these items. See below for response to item 1 and 2.

1. Necessity of road widening

EIAR Volume 2 Chapter 3 Consideration of Reasonable Alternatives and Preferred Route Option Report provides an overview of the various route alternatives that were evaluated during the process of establishing the proposed scheme. It also outlines the different stages that were undertaken during the development of the proposed scheme. As described in the above documents the design of the Proposed Scheme has evolved through comprehensive design iteration, with particular emphasis on minimising the potential for environmental impacts where practicable, whilst ensuring the objectives of the Proposed Scheme are attained.

For the section between adjacent to 9 Rathfarnham Road, three options (SA1 to SA3) have been developed during the development of the Emerging Preferred Route (EPR). The assessment process of three options is described in section 5.4 of the Rathfarnham to City Centre Core Bus Corridor Feasibility Study and Options Assessment (FSOA), included in appendix I2 of the supplementary documents submitted alongside the planning application.

Following the review of the EPR and submissions received as part of the public consultation within the section between Nutgrove Avenue to Willbrook Road, it was decided that alternative options could be feasible within this section of the Proposed Scheme. For this reason, two alternative options (RC1 and RC2) have been developed. The alternative options are described in detail in section 4.4.1.1 of the Preferred Route Option Report included in the supplementary documents submitted alongside the planning application.

A detailed response to the optioneering process complete for Grange Road and Rathfarnham Road is provided in Section 2.3.3 of this report.

Section 5 of Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR sets out the guidance for the proposed cross-sectional width of all proposed facilities including footpath and cycle tracks. This sets the desirable width of 2.0m for footpaths and desirable width of 2m for cycle tracks. The proposed land acquisition represents the minimum required to achieve the optimal cross-section, as detailed in the EIAR Volume 2 Chapter 4 and the Preferred Route Option Report.

Providing the optimum cross-section described in the above paragraphs achieves the project objectives of enhancing the potential for cycling and walking by providing safe infrastructure. EIAR Volume 2 Chapter 6 Traffic & Transport, section 6.4.6.1 outlines the qualitative assessment process that was undertaken to assess the quality of the cycling and pedestrian infrastructure of the Proposed Scheme in context of changes in physical provision between the Do Minimum and So Something Scenarios.

Pedestrian Infrastructure

Table 6.27 in section 6.4.6.1.3.1 of Chapter 6 demonstrates that the scheme will have a long-term positive impact on the quality of the pedestrian infrastructure between the R821 Nutgrove Avenue and R137 Terenure Road North.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R821 Nutgrove Avenue / R821 Grange Road / R822 Grange Road signalised junction	A000	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / R821 Grange Road / R115 Willbrook Road signalised junction	A350	D	A	Medium	Medium	Positive Significant
R115 Rathfarnham Road / L8451 St Mary's Avenue priority junction	A375	D	A	Medium	High	Positive Very Significant
R114 Rathfarnham Road / R115 Rathfarnham Road / R114 Butterfield Avenue signalised junction	A475	E	A	High	Medium	Positive Very Significant
R114 Rathfarnham Road / L4014 Main Street / L8103 Castleside Drive signalised junction	A750	D	A	Medium	Medium	Positive Significant
R114 Rathfarnham Road / L8122 Crannagh Road priority junction	A900	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / L8068 Brookvale Road priority junction	A1000	D	B	Medium	Low	Positive Moderate

R114 Rathfarnham Road / L8384 Rathfarnham Park priority junction	A1150	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / R112 Dodder Park Road / R112 Dodder View Road signalised junction	A1250	C	A	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Westbourne Road priority junction	A1400	D	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Rathdown Park signalised junction	A1500	E	B	Medium	Low	Positive Moderate
R114 Rathfarnham Road / Bushy Park Road signalised junction	A1550	C	B	Low	Medium	Positive Moderate
R114 Rathfarnham Road / Fergus Road priority junction	A1650	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Cormac Terrace priority junction	A1700	D	B	Medium	High	Positive Very Significant
R114 Rathfarnham Road / Beechlawn Way priority junction	A1750	D	B	Medium	High	Positive Very Significant
R137 Terenure Road North / R114 Terenure Road East / R114 Rathfarnham Road / R137 Terenure Place priority junction	H000	D	A	Medium	High	Positive Very Significant
Orwell Road / Zion Road signalised junction (along alternative quiet route for cyclists)	B900	E	A	High	High	Positive Profound
Section Summary		D	A	Medium	Medium	Positive Significant

Figure 3.279.1 Section 2 -Significance of Effects for Pedestrian Impact during Operational Phase (Table 6.27 of EIAR Chapter 6)

The LoS during the Do Minimum scenario ranges between C and E, with three of the 17 impacted junctions along this section given a low E rating. The LoS will improve to an A / B rating at all impacted junctions in the Do Something scenario.

This is as a result of the proposed improvements to the existing pedestrian facilities in the form of additional crossing locations, increased pedestrian directness, provision of traffic calming measures to reduce vehicle speeds, improved accessibility and increased footway and crossing widths. All proposed facilities have been designed in accordance with the principles of DMURS and the National Disability Authority (NDA) 'Building for Everyone: A Universal Design Approach' (NDA 2020) with regards to catering for all users, including those with disabilities.

*Overall, it is anticipated that there will be **Positive, Significant and Long-term** effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor.*

Cycling Infrastructure

Table 6.28, in section 6.4.6.1.3.2 of Chapter 6 outlines the qualitative assessment along section 2 of the Proposed Scheme in relation to cycling impact during the operation phase.

Location	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
R821 Nutgrove Road to Butterfield Avenue	A000 – A475	C	A	Medium	High	Positive Very Significant

R114 Butterfield Avenue to Main Street	A475 - A750	C	A	Medium	Medium	Positive Significant
R112 Dodder View Road to Rathdown Park	A1250 - A1500	C	B	Low	Medium	Positive Moderate
Rathdown Park to R137 Terenure Road North	A1500 - H000	C	B	Low	High	Positive Moderate
Alternative Quiet Route: Bushy Park Road to Orwell Road	A1550 - A2500	D	C	Low	Low	Positive Slight
Alternative Route: Orwell Road to R114 Terenure Road East	A2500	D	A	High	High	Positive Profound
Section Summary		C	B	Low	High	Positive Moderate

Figure 3.279.2 Section 2 - Cycling Impact during Operational Phase (Table 6.28 of EIAR Chapter 6)

As set out in 6.4.6.1.3.2:

Table 6.28 demonstrates demonstrate that the scheme will have a **Positive, Moderate and Long-term effect** on the cycling environment between the R821 Nutgrove Avenue and R137 Terenure Road North.

The LoS rating during the Do Minimum scenario ranges between C and D, with two of the six impacted routes along this section being given a low D rating. These ratings have been determined using the previously referenced assessment criteria set out in Table 6.20. The LoS in the Do Something scenario is C for one route, B for two route and A for three routes. This is as a result of improved segregation for cyclists and junction treatment in the form of cycle lanes traversing priority junctions and continuing through signalised junctions with protected treatment as part of the Proposed Scheme.

Further details on the significant benefits of the Proposed Scheme are presented in Section 2.1.1

2. Removal of Tree

EIAR Volume 4 Part 2 Chapter 17 Appendix A17 provides the Arboricultural Impact Assessment Report (AIAR), which includes detailed drawings showing all trees that are to be removed. It can be seen from these drawings that there is one tree proposed to be removed at No. 9 Rathfarnham Wood. This tree has been surveyed and assessed as part of the AIAR, and has been categorised as follows:

- An 16m tall mature Beech displaying overall good condition, of Category B2 and with 20+ estimated remaining years;

Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the Landscape General Arrangement drawings included in EIAR Volume 3 Chapter 4.

Along the eastern section of Rathfarnham Road between entrance to Rathfarnham Wood residential estate and Willbrook Road it is proposed to plant 13 No. Acer Campestre 'Elsrijk' Semi-Mature Field Maple Trees. Along the Proposed Scheme there will be substantial replanting of trees as detailed in section 17.4.4.2.9 of Chapter 17. As states in section 12.5.1.2.1 of Chapter 12, 400 trees will be planted throughout the scheme resulting in a net increase of 231 trees along the Proposed Scheme.

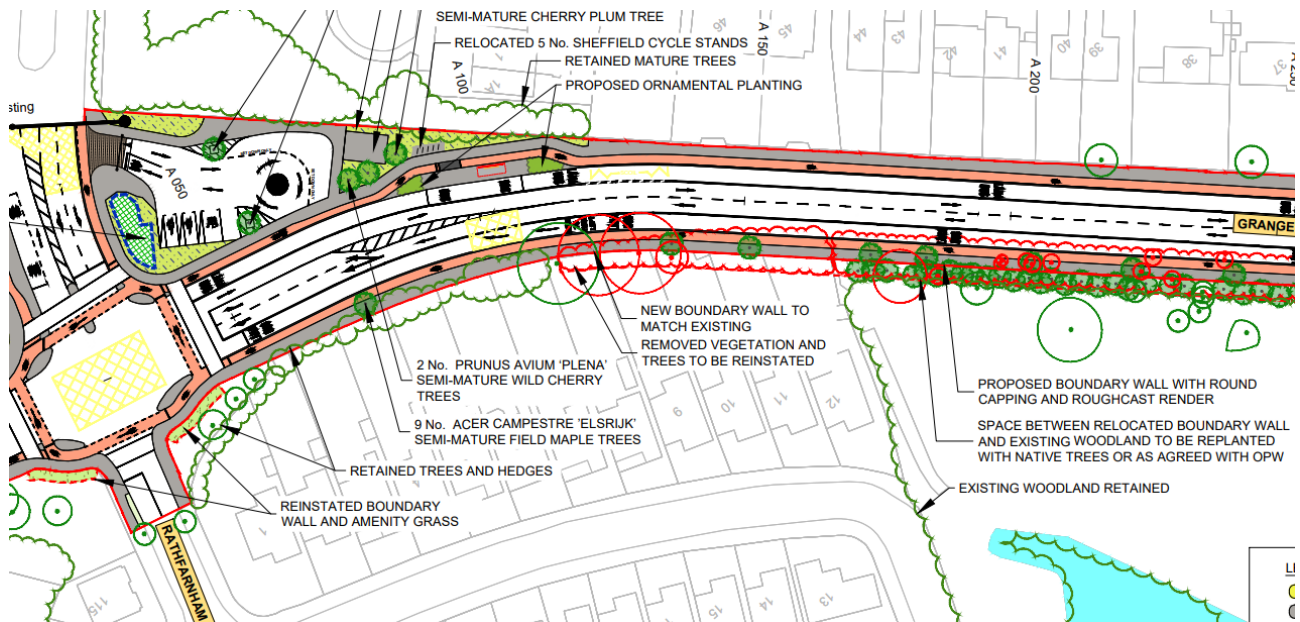


Figure 3.279.3: Extract from Landscaping General Arrangement Drawings (Sheet 1)

Table 4 of Appendix A17.1 notes that there will be 935 trees retained as part of the Proposed Scheme with a total of 169 trees identified for removal. Table 14.1 of the Preliminary Design Report in the Supplementary Information notes that there will be 400 new trees planted, resulting in an overall net increase of 24% in individual trees as a result of the Proposed Scheme.

In relation to the concern raised relating to impact on trees within proximity of the tree proposed for removal. A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities

Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project-specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (BCIDC-ARP-ENV_LA1012_XX_00-DR-ES-0001 in the Arboricultural Impact Assessment).

These methods are further elaborated upon in Section 6.3 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR.

Given the constraints of the site, incursions into the RPA may be unavoidable therefore the mitigation measures as set out in the method statement are to be adhered to. The Arboricultural Method Statement included as Appendix B sets out the methodology for specific activities near retained trees. The following general principles as outlined below have been applied:

- *The extent of resurfacing has not been fully determined at this stage. Where resurfacing of existing hard surfacing is required, this will be applied over the existing wearing course or on the existing intact subbase following the careful removal of the wearing course.*
- *New surfacing on existing unsurfaced ground within a significant proportion of an RPA will be achieved using a three-dimensional cellular confinement system (e.g. Cellweb or equivalent), installed without excavation using no dig techniques.*
- *Where existing verges or footways are to be widened out into the existing carriageway, kerb stones and haunching will be carefully removed by hand to protect adjacent tree roots. The Proposed Scheme will likely result in improved growing conditions for trees where carriageway is replaced by less heavily engineered footway or verge.*

- *Where the existing road carriageway is to be widened requiring a section of cut into a tree RPA or where new drainage cannot feasibly be adjusted to fully avoid the RPA, tree retention will be feasible where trees are considered on balance to be of an age, condition and species which will tolerate the degree of disturbance required (generally not more than a maximum of 20% of the overall RPA) and that this is preferable to the loss of the tree. The area of excavation nearest the tree will be carried out by hand and roots will be carefully assessed by an arboriculturist and pruned as required. New kerb stones and any haunching will be the narrowest profile feasible and alternative methodologies such as reinforced bridged/lintel sections of kerb can be applied, should significant roots need to be retained and worked around.*
- *Where a new boundary wall is to be constructed within an RPA, alternative footings utilising low diameter pads or piles will be carefully located to avoid tree roots (via hand dug trial holes) and will support floating beams set at or above ground level, unless trial holes (under arboricultural supervision) determine that limited careful excavation is viable to allow beams to be set into the ground.*
- *The position of new lamp columns, signs and bus shelter footings can be locally adjusted to avoid significant roots and tree canopies and the lowest diameter footings feasible will be employed (such as screw piles or equivalent). Footings will be hand dug within RPAs.*
- *All new or diverted utilities will avoid the RPA of retained trees where practicable. Where this is not practicable, they will be installed using trenchless methods or via careful excavation in accordance with BS5837: 2012 and guidance from the National Joint Utilities Group (NJUG) Volume 4. Utilities to be removed will be cut off and left in situ where feasible to minimise disturbance or will be removed via careful excavation.*

Section 6.5 of the Arboricultural Impact Assessment Report presented in Appendix 17.1 of the EIAR further states methods for protection of retained trees:

Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant, root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area, special measures such as the use of ground protection (or retention of existing hard surfacing) and arboricultural supervision are generally required. In some cases, existing boundary walls and fences can be employed as a tree protection barrier where they are robust and sufficient to prevent access or damage.

3.280280 – Tom Kelly

3.280.1 Submission – Whole Scheme

The submission raised the following issues:

1. Inadequate consultation
2. Section 51 and CPO Application should not be made concurrently
3. Changes to work patterns due to the COVID-19 pandemic
4. Implementation of other BusConnects measures first
5. Metro is more appropriate for this corridor
6. Existing bus priority signal on Terenure Road East is adequate
7. Traffic impact of the Proposed Scheme at Terenure Cross
8. Impact on protected structures
9. Removal of Parking in Terenure Village
10. Removal of Trees and increased noise

3.280.2 Response to submission

1. Inadequate consultation

A detailed response to this item is presented in Section 2.1.1.

2. Section 51 and CPO Application should not be made concurrently

It was entirely appropriate and proper for the NTA to make (i) an application to the Board for confirmation of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme Compulsory Purchase Order 2023 (the “CPO”) and (ii) an application to the Board for approval of the Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme (the “Proposed Scheme”) under section 51 of the Roads Act 1993 (as amended) (the “Roads Act”).

As the Board will be aware, section 51(7)(b) of the Roads Act provides as follows:

“(7) (b) Where an application for approval under this section [being section 51 of the Roads Act 1993 (as amended) which is what has occurred here in relation to the Proposed Scheme] relates to a proposed road development, and

- i. a scheme submitted to the Minister [now An Bord Pleanála] for approval under section 49, or*
- ii. an application submitted to the Minister [now An Bord Pleanála] for a bridge order under the Act of 1946, or*
- iii. a compulsory purchase order submitted to the Minister [now An Bord Pleanála] for confirmation [which is what has occurred here with this CPO],*

*relate wholly or partly to the same proposed road development, the Minister [now An Bord Pleanála] shall make a decision on such approval and on the approval of such scheme or the making of such bridge order or the confirmation of such compulsory purchase order **at the same time.**”* (emphasis added)

As the NTA’s application for approval of the Proposed Scheme under section 51 of the Roads Act and the CPO submitted to the Board for confirmation “*relate wholly or partly to the same proposed road development*”, the Board is therefore statutorily required to make its decisions at the same time. Therefore, it is not open to the Board to accede to the request made on behalf of the objector to first make a decision in relation to the application for approval of the Proposed Scheme under section 51.

Further, there are very many practical reasons including in relation to the efficient use of the decision maker’s resources as to why it is entirely appropriate to deal with the section 51 application and the related application for confirmation of the CPO together. Indeed, this is also in ease of those who may wish to make an objection and/or submission both in writing and/or at any oral hearing that may be held in relation to the section 51 application and the application for confirmation of the CPO.

3. Changes to work patterns due to the COVID-19 pandemic

A detailed response to this item is presented in Section 2.1.1.

4. Implementation of other BusConnects measures first.

A detailed response to this item is presented in Section 2.1.1..

5. Metro is more appropriate for this corridor

A detailed response to this item is presented in Section 2.1.1.

6. Existing bus priority signal on Terenure Road East is adequate.

A detailed response to this item is presented in Section 2.4.3.

7. Traffic impact of the Proposed Scheme at Terenure Cross

The submission raised a concern with the proposed layout at the Terenure Cross junction, in particular the introduction of a right turn for buses from Rathfarnham Road to Terenure Road East noting that this would create congestion at the junction.

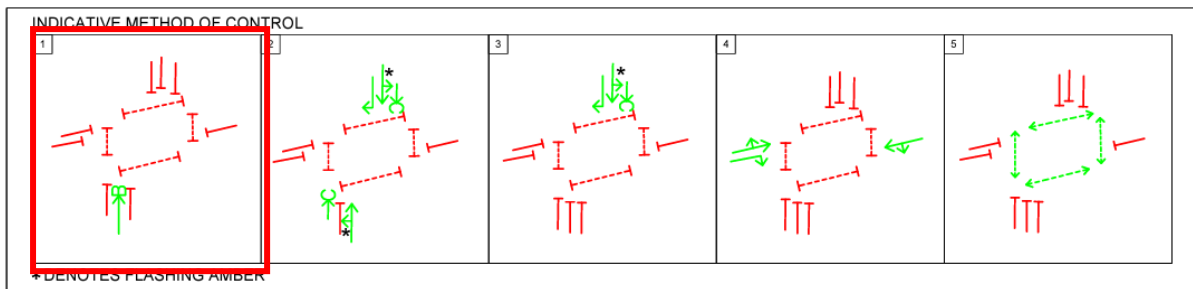
Section 4.16 of the Preliminary Design Report provided in the Supplementary Information sets traffic management measures which will be implemented on the route to facilitate the Proposed Scheme. An extract from this table is presented in Table 3.280.1 below.

Table 3.280.1 Extract from Table 4.25 of the Preliminary Design Report

Location	TM measure implemented	Reason for Mitigation	Impact of Mitigation
Rathfarnham Road/Castleside Drive/Main Street Junction	Bus Priority Signals at Rathfarnham Road/Castleside Drive/Main Street Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Dodder Park Road Junction	Bus Priority Signals at Rathfarnham Road/Dodder Park Road Junction	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Rathfarnham Road/Rathdown Park Junction	Inbound Bus Priority Signal at Rathfarnham Road/Rathdown Park	To allow for bus priority on Rathfarnham Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.
Terenure Road East/Terenure Road West Junction	Right turn for buses from Rathfarnham Road to Terenure Road East introduced through bus priority signal	To allow for bus movements in this direction as per the A spine in the New Dublin Area Bus Network	Buses allowed to turn right from Rathfarnham Road onto Terenure Road East.
Terenure Road East/Greenmount Road Junction	No Right turn allowed from Greenmount Road onto Terenure Road East	To mitigate against inbound traffic bypassing right turn ban at Terenure Cross	No right turn from Greenmount Road onto Terenure Road East for general traffic.
Rathgar Road/Highfield Road Junction	Inbound Bus Priority Signal	To allow for bus priority on Rathgar Road	Improved reliability for bus journey times along the corridor, and improved flexibility in junction stage and operation.

As can be seen in the Junction System Design drawings included in Volume 3 of the EIAR, it is proposed that buses turning right from Rathfarnham Road would do so in its own stage to remove any potential safety issues. An extract from the staging diagrams is presented below with the relevant stage highlighted.

Figure 3.280.1 Extract from Junction System Design Drawings (Sheet 8)



The Junction Design Report in Appendix A6.3 of the EIA Volume 4 Part 2 of 4 presents a LinSig analysis for all major junctions along the Proposed Scheme with the assessment for Terenure Cross presented on page 34. This illustrates that the junction would be operating at capacity in both the morning and evening peaks. While the junction may be congested during the peak periods, it will be safer for pedestrians and cyclists through the introduction of shorter, more direct pedestrian crossings as well as upgrading crossings to toucan crossings. The proposed arrangement will also ensure that buses have priority through the junction.

8. Impact on protected structures on Terenure Road East

A detailed response to this item is presented in Section 2.4.3.

9. Removal of Parking in Terenure Village

A detailed response to this item is presented in Section 2.4.3.

10. Removal of Trees and increased noise

It is noted that this submission claims that the road would be 20m closer to their house. As noted in the introduction to this response, the Proposed Scheme will result in c. 3.8m of land to be permanently acquired to construct the outbound bus lane and footpath on the southern side of Terenure Road East. The proposals will result traffic shifting c. 3.8m towards the property.

Any land temporarily acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question. If the CPO is confirmed by An Bord Pleanála, reinstatement of property frontage including boundary walls, gates, railings, driveway, footpath and landscaping will be on a like for-like basis and detailed accommodation works plans will be prepared in consultation with landowners in line with any formal agreements and in accordance with any embedded mitigations identified in the EIA or conditions/modifications from An Bord Pleanála in relation to the Proposed Scheme application.

In relation to increase in noise levels, section 9.4.4.1 of EIA Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that *“Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to indirect, positive, imperceptible to slight, and short to medium term to negative, slight to moderate, and short to medium term once the Proposed Scheme becomes operational.”* It goes on to state that *“There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB.”* Table 9.39 lists these roads and Terenure Road East is not included, indicating that there are no potential significant noise impacts envisaged along Terenure Road East.

EIA Volume 4 Part 2 Chapter 17 Appendix A17 provides the Arboricultural Impact Assessment Report (AIAR), which includes detailed drawings showing all trees that are to be removed. It can be seen from these drawings that there is Two trees proposed to be removed at No. 2 The Townhouses, Terenure Road East. These trees have been surveyed and assessed as part of the AIAR, and has been categorised as follows:

- An 24m tall mature Sycamore displaying overall good condition, of Category B2 and with 20+ estimated remaining years;
- An 24m tall mature Sycamore displaying overall good condition, of Category B2 and with 20+ estimated remaining years.

Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in the Landscape General Arrangement drawings included in EIAR Volume 3 Chapter 4. Along the section of Terenure Road East between Greenmount Road and Ferrard Road, it is proposed to plant 5 No. Pyrus Calleryana 'Chanticleer' semi-mature Callery pear trees. Along the Proposed Scheme there will be substantial replanting of trees as detailed in section 17.4.4.2.9 of Chapter 17. As states in section 12.5.1.2.1 of Chapter 12, 400 trees will be planted throughout the scheme resulting in a net increase of 231 trees along the Proposed Scheme.

As shown on the Landscape General Arrangement drawings in Volume 3 of the EIAR, it is noted that approximately 19 street trees are proposed along Terenure Road East between the Rathfarnham Road/Terenure Place/Terenure Road North junction and the Rathgar Road/Orwell Road junction, with the proposed removal of approximately 18 street trees, resulting in a net gain of approximately 1 tree along this section of the Proposed Scheme. Approximately 107 trees are being retained along this section.

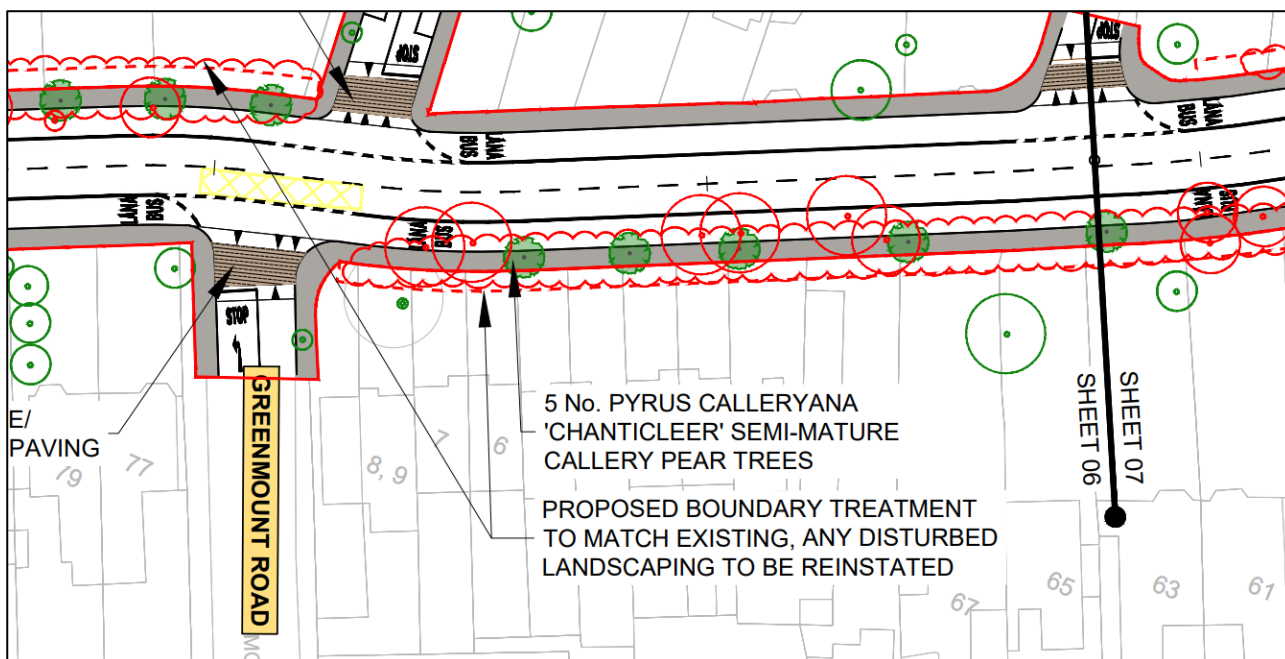


Figure 3.280.2 Landscape General Arrangement Drawings at Terenure Road East

Further details on tree loss and noise impacts along Terenure Road East are presented in Section 2.4.3.

3.281281 – Transport Infrastructure Ireland

3.281.1 Submission – Whole Scheme

The submission raised the following issues:

1. No specific comments

3.281.2 Response to submission

This submission is noted.

3.282282 – Una Lyons

3.282.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Negative impact on Highfield Road
2. Traffic
 - a. Increased volume
 - b. Increased congestion
3. Safety of vulnerable pedestrian, children and cyclist
4. Access to amenities

3.282.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.283283 – Una O'Neil

3.283.1 Submission – Templeogue Road

The submission raised the following issues:

1. Conversion of Spawell roundabout to signalised junction.
2. Traffic
 - a. Diverted to residential streets.
3. Safety of vulnerable pedestrians
4. Unnecessary change providing no real gains to bus travel times.
5. No consideration of what happens buses in the City Centre
6. Alternative options
 - a. Metro

3.283.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

3.284284 – Ursula Budd & Michael McArdle

3.284.1 Submission – Terenure and Rathgar

The submission raised the following issues:

1. Character of the area

2. Traffic
 - a. Increased volume in Highfield Road
 - b. Increased emission due to congestion

3. Loss of on-street parking
4. Architectural and cultural heritage
5. Alternative options
 - a. Cashless fare payment
 - b. Park and ride facilities
 - c. Congestion charges
 - d. Alternative route via Harolds Cross Road
6. No assessment of cumulative impact of 12 corridors
7. Unnecessary change providing no real gains to bus travel times.
8. Traffic baseline data out of date (Covid-19)
9. Biodiversity
 - a. Destruction of trees
 - b. Flora and fauna
10. Noise and air pollution
11. Compulsory Purchase Orders on Terenure Road East
12. Bus gates
 - a. St Mary's College in Rathmines
13. Negative impact on businesses
14. Proposed footpath on Rathgar Road is too narrow.

3.284.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1, 2.4.3 and 2.5.3 of this report.

3.285285 – Wainsfort and College Residents Association

3.285.1 Submission – Templeogue Road

The submission raised the following issues:

1. Welcome the Proposed Scheme.
2. Traffic
 - a. Increased traffic on some roads as a result of the proposed bus gate and turn bans (Cypress Grove Road, Templeville Road, Fortfield Road, Wainsfort Road, Wainsfort Park, Wainsfort Grove)
3. Access to amenities
4. Negative impact on businesses
5. No consideration of what happens buses in the City Centre
6. Proposed bus gates

- a. Limit hours of operation
- 7. No assessment of cumulative impact of 12 corridors
- 8. Lack of consultation

3.285.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to item 2, Section 6.4.6.1.15 of Chapter 6 of Volume 2 of the EIAR presents the results of the traffic assessment undertaken. Diagram 6.40 and 6.41 illustrates the flow difference (Do Minimum vs. Do Something) on road links in the study area during the 2028 AM and PM peak hours respectively. These diagrams are reproduced below.



Figure 3.285.1 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year (Diagram 6.40 from Chapter 6 of the EIAR)

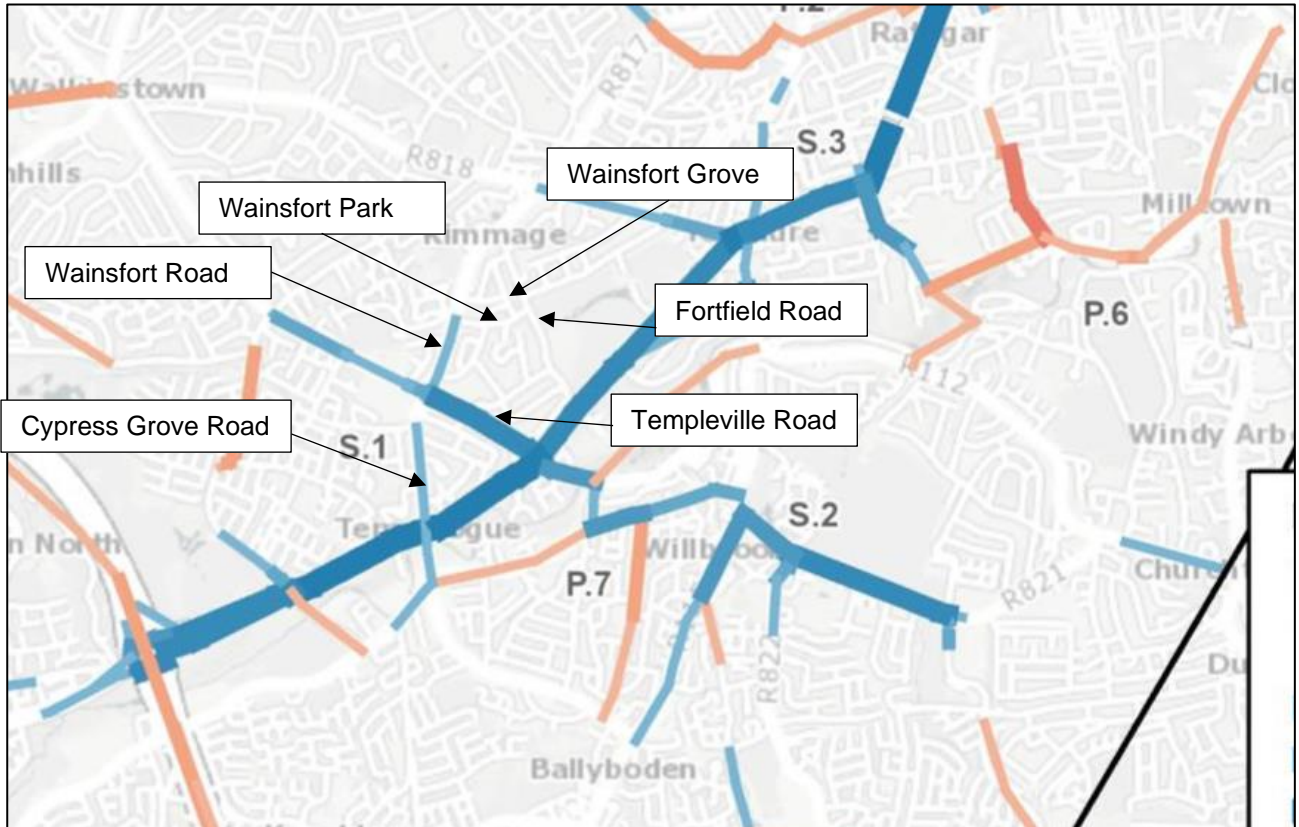


Figure 3.285.2 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year (Diagram 6.41 from Chapter 6 of the EIAR)

The above figures show that the traffic modelling undertaken does not identify any increases in traffic volumes along any of the roads noted as a result of the Proposed Scheme and in fact shows a reduction in traffic on most roads. This is function of traffic distributing more widely away from the area due to the presence of the bus gate

3.286286 – WORK Residents Association

3.286.1 Submission – Templeogue Road

The submission raised the following issues:

1. The Proposed Scheme will not meet the transport demand for the area.
2. Metro alternative
3. No assessment of cumulative traffic impact of 12 corridors
4. Proposed Turn bans
5. Hours of operation of proposed bus gates
6. Dispute predicted traffic reduction on specific roads.
7. Changes to Spawell Roundabout
8. Gap in scheme in the city centre
9. Negative impact on businesses
10. Query regarding right turn lane at Springfield Avenue Junction
11. Support for proposed cycle infrastructure
12. Support for proposed works at Templeogue Arch

3.286.2 Response to submission

Detailed responses to issues 1 – 5, 8 and 9 raised by this submission have been provided in Section 2.1.1 and 2.2.3 of this report.

In relation to issue 6, the NTA notes that the submission disputes the predicted reduction in general traffic volumes on Wellington Lane, Cypress Grove Road and Templeville Road in the AM peak. The NTA is confident that the traffic modelling carried out is rigorous and robust.

In relation to issue 7, the F2 service will be able to turn right at the new signalised junction at Spawell and turn around using the M50 junction 11 interchange roundabout.

In relation to issue 10, the submission states the following:

“Chapter 4 – Proposed Scheme Description

Page 4 of 84: in the section of the proposed CBC from Templeogue Village to Springfield Avenue there is a Bus Lane and a General Traffic lane. General inbound through traffic may divert left at the junction with Templeville Road R.112 or divert tight on to R.112 Springfield Avenue and the R.114 Butterfield Avenue. It is not clear from the information provided by the NTA whether there will be a “Right Turn” feeder land or feeder signal to indicate to vehicles to turn right. More information is necessary.”

Figure 3.286.1 is an extract from the Junction Systems Design Drawings included as Appendix B10 to the Preliminary Design Report in the Supplementary Information. The bus lane and general traffic lane continue to the stop line at the junction, and both left turning and right turning general traffic turn from the general traffic lane, as indicated by the road marking circled in red.

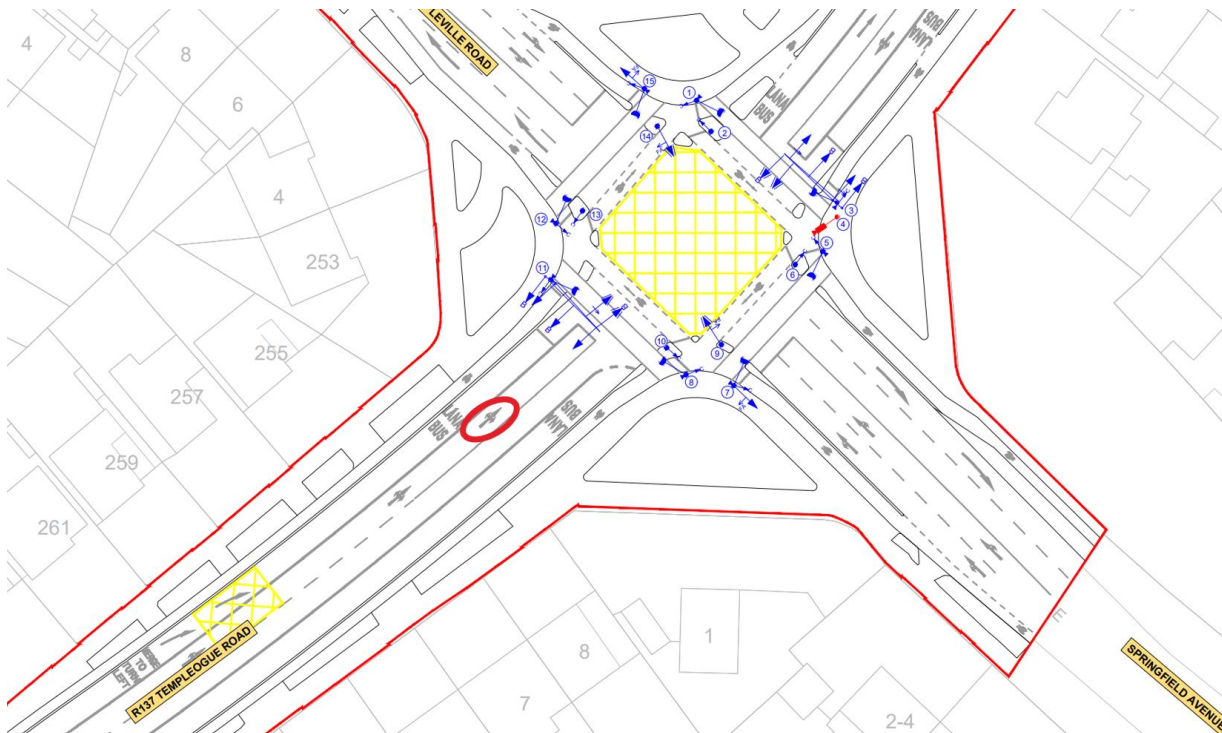


Figure 3.286.1 Extract from Junction Systems Design Drawings at Templeogue Road / Springfield Avenue junction

In relation to issues 11 and 12 the NTA welcomes the support for the proposed cycle infrastructure included within the Proposed Scheme as well as the proposed modifications at the Archway on Templeogue Road.