Lucan to City Centre Core Bus Corridor Scheme

NTA Observations on the Proposed Scheme Submissions

May 2023

BUS CONNECTS

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

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1. Introduction and Overview

1.1 Introduction

This report provides a response to the submissions made to An Bord Pleanála ("the Board") in response to the application under Section 51 of the Roads Act 1993, as amended, for approval of the Lucan to City Centre Core Bus Corridor Scheme ("the Proposed Scheme").

An overview of the submissions is provided in Section 1.2 below. The issues raised in the submissions on the Proposed Scheme, together with responses thereto are provided in Section 2.

Where the same issue is raised in a number of submissions, this report identifies the individuals who raised those issues and provides a composite response to each issue raised.

1.2 Overview of Submissions Received

A total of 81 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.

The 81 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. Issues surrounding the proposals in Palmerstown was the sole topic raised in 66 submissions and was also mentioned in 4 other submissions. The proposed ramps and steps connecting the new bus stops on Chapelizod Bypass to Chapelizod Hill Road was the sole topic raised in 6 submissions and was also mentioned in 2 other submissions. 4 submissions raised various issues along the route of the whole scheme, including Palmerstown and Chapelizod Hill Road, and 3 related to specific individual properties. Table 1.2.1 below sets out the locations referred to, the number of submissions on the Proposed Scheme referring to each location and the key issues raised by the submissions.

Table 1.2.1: Summary of Submissions in Response to the Proposed Scheme

	Location	No. of submissions on the Proposed Scheme referencing this Location	Key Issues Raised
1	Palmerstown	70	1. Routing of bus service through the village 2. Bus stop locations a. Old Lucan Road [new bus stop] b. The Oval [2242, 7239] c. Palmerstown Drive [2201] 3. Traffic impact a. Kennelsfort Road junction i. Removal of left turn slips ii. Banning of left turn from Kennelsfort Road Lower iii. Need for grade separation b. The Oval junction i. Removal of left turn slip exiting The Oval ii. Removal of left turn slip entering The Oval from the R148 iii. Impact of right turn bus lane into Old Lucan Road c. Scheme geometry i. HGV movements and kerb radii ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services d. Traffic volumes i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts ii. Impact on community iii. Outbound lane destination change

	Location	No. of submissions on the Proposed Scheme referencing this Location	Key Issues Raised
			4. Loss of parking/ Parking provision a. Old Lucan Road between M50 and Kennelsfort Road b. Old Lucan Road between Kennelsfort Road and The Oval 5. Proposed cycle track a. Need for a two way cycle track b. Belief that cyclists will stay on the R148 c. Alternative cycle routes d. Deficient existing M50 pedestrian/cycle bridge width e. Need for cycle bridge over R148 f. Contra-flow cycle track 6. Pedestrian facilities a. Pedestrian crossings at Kennelsfort Road junction b. Pedestrian crossings at The Oval c. Walking & running on Old Lucan Road 7. Air pollution and noise pollution during Operation 8. Construction a. Temporary construction compound LU2 i. Trees removal ii. Biodiversity (bats, badgers) iii. Drainage Infrastructure iv. Traffic and amenity Impact of compound b. Reference to The Oval for a compound c. Air pollution and noise pollution during construction 9. Other Common Issues a. Change to 'amenity'/ 'feel' of the heritage part of the village b. Impact on the Woodfarm Cottages and Red Cow Cottages c. Impact on future community events d. Environmental costs/impact of the scheme and its costs return period e. Request for traffic modelling data f. Proposed material and cycleway/ footway cross section g. Traffic Calming of R148 Palmerstown bypass h. Visual Impact / Loss of privacy
2	Chapelizod Hill Road Bus Stops	8	• Advocacy for the Proposed Scheme. • Alternative route for C Spine Bus Services. • Accessibility and the length of the proposed ramps • Consideration of alternatives • Visual impact assessment • Construction impacts • Loss of privacy • Noise impact during operation. • Air quality • Reduction in value of property • Safety of bus stops on the bypass; • Town Planning Considerations;
3	Whole Scheme/ General	4	Department of Housing, Local Government and Heritage • Consideration of the Natura Impact Statement • The presence of light-bellied Brent geese • Tree clearance • Bat activity • Badger activity and Recommended Request for Further Information at Palmerstown • Recommended Planning Conditions Dublin Commuter Coalition • Advocate for the Proposed Scheme • Enforcement • Bus Lane Operating Hours

	Location	No. of submissions on the Proposed Scheme referencing this Location	Key Issues Raised
			• Junction design • Pedestrian Crossings; • Bus Stop Design • Shared Space • Bicycle Parking • Lane Widths • St John's Road West/ South Circular Road junction • Chapelizod Hill Road • Climate Action Plan South Dublin County Council • Advocate for the Proposed Scheme, including Palmerstown • Request that the route is expanded westward to include Lucan village • Comments to the active travel and traffic proposals • Comments on material selection • Comments on the required Construction Management and Traffic Management Plans • Requesting confirmation that the delivery of the Proposed Scheme will not negatively impact on the timing of the delivery of the Lucan Luas extension • Further discussion requested in respect of the land parcels required for the scheme Dublin City Council • Relevant Planning History • Policy Context • Departmental Reports • Planning Assessment • Conclusion • Departmental Recommendations
4	Individual Properties	1	Trustees of Hermitage Golf Club • The submission asserts that the NIS and EIAR are not fit for purposes on the grounds that there is no assessment of the receiving environment, inadequate consideration of alternatives and is in breach of the Climate Action Plan 2021 • The submission claims that the Proposed Scheme contravenes the South Dublin County Council Development Plan 2022-2028. • The submission questions the NTA's power in respect of the CPO • The submission states that the Proposed Scheme will have a devasting impact on the golf club • The submission alleges that there is a complete absence of detail of how the scheme will be implemented enable the scheme to be assessed in accordance with the Habitats Directive
		1	Torcross Unlimited Co - Hermitage Medical Clinic • The extents of the lands are excessive, and unnecessary, for the implementation of the Proposed Scheme • The Proposed Scheme may be a Material Contravention of SDCC Development Plan in respect of the "High Amenity" zoning • The CPO would significantly impact the ability of the clinic to accommodate further expansion • Insufficient commitment to comply with the National Guidelines for the Prevention of Nosocomial Aspergillosis

	Location	No. of submissions on the Proposed Scheme referencing this Location	Key Issues Raised
			• No consultation with Torcross in respect of planting works to replace the lost trees • Refusal to consider that revised bus services and bus stops serving the clinic • No confirmation about how the proposed Scheme will interface with the proposed Metro West
		1	Palmerstown Lodge • Removal of median u-turn facility

Table 1.2.2: Location(s) Referred to by each Submission on the Proposed Scheme (by ABP Reference Number)

No	Location	No	Location	No	Location	No	Location
1	Palmerstown	21	Palmerstown	41	Palmerstown	61	Palmerstown
2	Palmerstown	22	Palmerstown	42	Palmerstown	62	Palmerstown
3	Palmerstown	23	Palmerstown	43	Palmerstown	63	Palmerstown
4	Palmerstown	24	Palmerstown	44	Palmerstown	64	Palmerstown
5	Palmerstown	25	Palmerstown	45	Palmerstown & Chapelizod Hill Road	65	Palmerstown
6	Palmerstown	26	Palmerstown	46	Palmerstown	66	Palmerstown
7	Chapelizod Hill Road	27	Palmerstown	47	Palmerstown	67	Palmerstown
8	Palmerstown	28	Palmerstown	48	Palmerstown	68	Palmerstown
9	Palmerstown	29	Palmerstown	49	Palmerstown	69	Palmerstown
10	Palmerstown	30	Chapelizod Hill Road	50	Chapelizod Hill Road	70	Palmerstown
11	Chapelizod Hill Road	31	Palmerstown	51	Chapelizod Hill Road	71	Palmerstown
12	Palmerstown	32	Palmerstown	52	Palmerstown	72	Whole Scheme
13	Whole Scheme	33	Palmerstown	53	Chapelizod Hill Road	73	Palmerstown
14	Palmerstown	34	Palmerstown	54	Palmerstown	74	Palmerstown
15	Whole Scheme	35	Palmerstown	55	Palmerstown	75	Trustees of Hermitage Golf Club
16	Palmerstown	36	Chapelizod Hill Road	56	Palmerstown	76	Torcross Unlimited Co - Hermitage Medical Clinic
17	Palmerstown	37	Palmerstown	57	Palmerstown	77	Palmerstown
18	Palmerstown	38	Palmerstown	58	Palmerstown	78	Palmerstown Lodge
19	Palmerstown	39	Palmerstown	59	Palmerstown	79	Palmerstown
20	Palmerstown	40	Palmerstown	60	Palmerstown	80	Palmerstown
						81	Whole Scheme

2. Response to Submissions on Proposed Scheme

2.1 Proposed Scheme at Palmerstown

2.1.1 Description of the Proposed Scheme at this Location

As stated in section 4.5.1.1 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

"Between the M50 junction and Kennelsfort Road junction, it is proposed to provide a continuous bus lane and two general traffic lanes in the eastbound direction. In the westbound direction, a bus lane and two general traffic lanes are proposed, with the lane designation amended to separate earlier the general traffic heading toward the M50 and the N4 Lucan Road westbound. This arrangement will allow for a continuous westbound bus lane from the Kennelsfort Road junction and through the M50 interchange.

On the R148 Palmerston bypass modifications are proposed to both the Kennelsfort Road and the Old Lucan Road / The Oval junctions to remove the existing left turn slip lanes. In addition, the left turn movement from Kennelsfort Road Lower to the R148 Palmerstown bypass eastbound is to be prohibited to facilitate new signalised crossings on the east side of the Kennelsfort Road junction to serve the enhanced bus stops, the pedestrian demand and to cater for the proposed two-way cycle track that crosses the R148 Palmerstown bypass at this location. Traffic in Palmerstown village wishing to travel east on the R148 towards the city centre will be able to do so by travelling east along the Old Lucan Road to the junction with The Oval.

In addition, at the signalised junction of the R148 with the Old Lucan Road / The Oval a new westbound, bus only, right turn lane is proposed on the R148 Palmerstown bypass to facilitate new bus services through Palmerstown village. A small area of land acquisition will be required from the western edge of the petrol filling station at this location to accommodate this new bus movement. The existing R148 westbound U-turn facility located some 40m east of the junction with The Oval will be closed.

The existing bus stops on the R148 Palmerstown bypass at Kennelsfort Road and The Oval are to be lengthened and relocated to allow the provision of a bus layby in all cases. In addition, it is proposed to rationalise the bus stops within Palmerstown village with new bus stops provided on the Old Lucan Road immediately west of the junction with Mill Lane.

Between the junction with The Oval and the R833 Con Colbert Road junction, it is proposed to maintain a continuous bus lane and two general traffic lanes in each direction, as per the existing arrangement. The existing bus lane and public transport signals on the westbound on-slip from the R112 Kylemore Road will be retained. New bus stops with laybys are proposed where the R148 Chapelizod bypass crosses Chapelizod Hill Road. These will be connected to Chapelizod Hill Road via a combination of steps and ramps. The existing bridge carrying the R148 Chapelizod Bypass over Chapelizod Hill Road will be widened to accommodate the eastbound bus layby and retaining walls are proposed to support the road widening, steps and ramps. Additionally, the speed limit for the bus lanes along the full length of the R148 Chapelizod bypass will be reduced from 80km/hr to 60km/hr.

A segregated two-way cycle track is proposed to run along the north side of the Old Lucan Road from the foot / cycle bridge crossing the M50, all the way through Palmerstown village connecting to the existing pedestrian priority zone at the start of the R148 Chapelizod bypass. A new Toucan crossing is also proposed on the R112 Lucan Road on the approach to Chapelizod village. The cycle track will be accommodated within the existing road space on the Old Lucan Road, with the lanes for general traffic being narrowed and traffic calmed to reflect the existing 30km/hr speed limit. Several lengths of informal parking will be lost along the northern side of the Old Lucan Road between the M50 and Kennelsfort Road Lower where the two-way cycle track is provided.

Along the Old Lucan Road between Kennelsfort Road Lower and The Oval, the existing pay and display parking on the northern side of the road will be lost to accommodate the two-way cycle track. To offset this loss of parking spaces, the existing parallel pay and display parking spaces on the southern side of Old Lucan Road will be replaced with a higher number of perpendicular parking spaces.

In addition, a new segregated two-way cycle track is proposed along the east side of Kennelsfort Road Lower resulting in the loss of a small number of pay and display parking spaces and resulting in the need for a small area of land acquisition from the frontage of the numbers 20 and 22 (the Palmerstown

Lodge hotel). The proposed two-way cycle track crosses the R148 Palmerstown bypass via the new signalised cycle crossing on the east side of the junction described above and ends at a new Toucan Crossing on Kennelsfort Road Upper to provide a connection to the existing cycle lanes."

Extracts from 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 are included in Figure 2.1.1.1 to Figure 2.1.1.6.

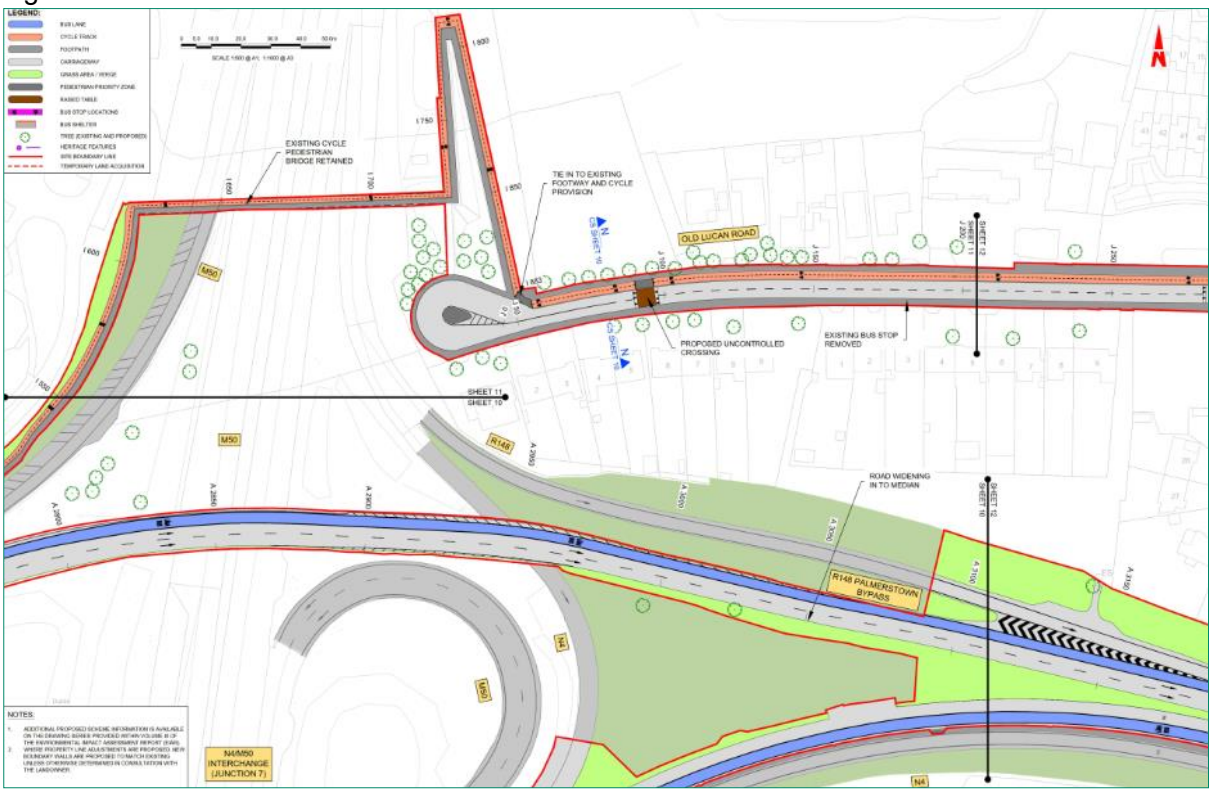


Figure 2.1.1.1: Extract 1 from General Arrangement Drawing (Sheet 11)

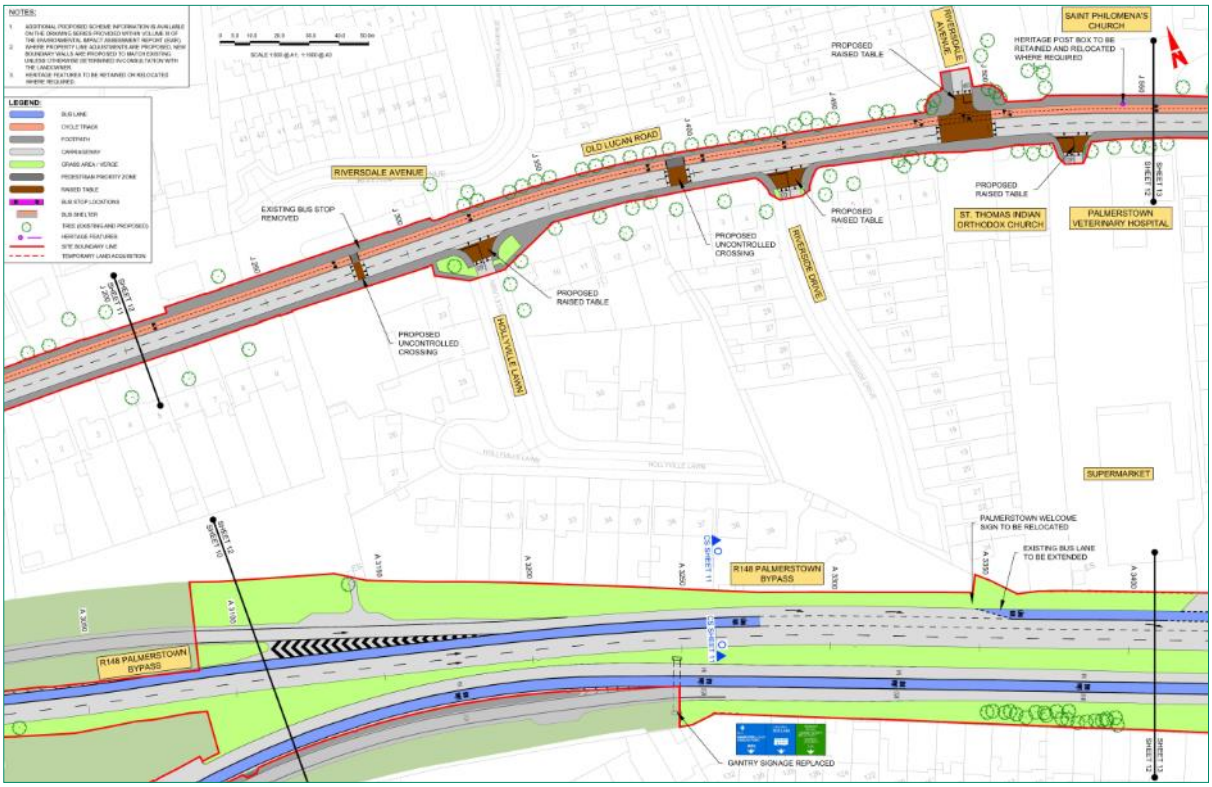


Figure 2.1.1.2: Extract 2 from General Arrangement Drawing (Sheet 12)

Figure 2.1.1.3: Extract 3 from General Arrangement Drawing (Sheet 13)

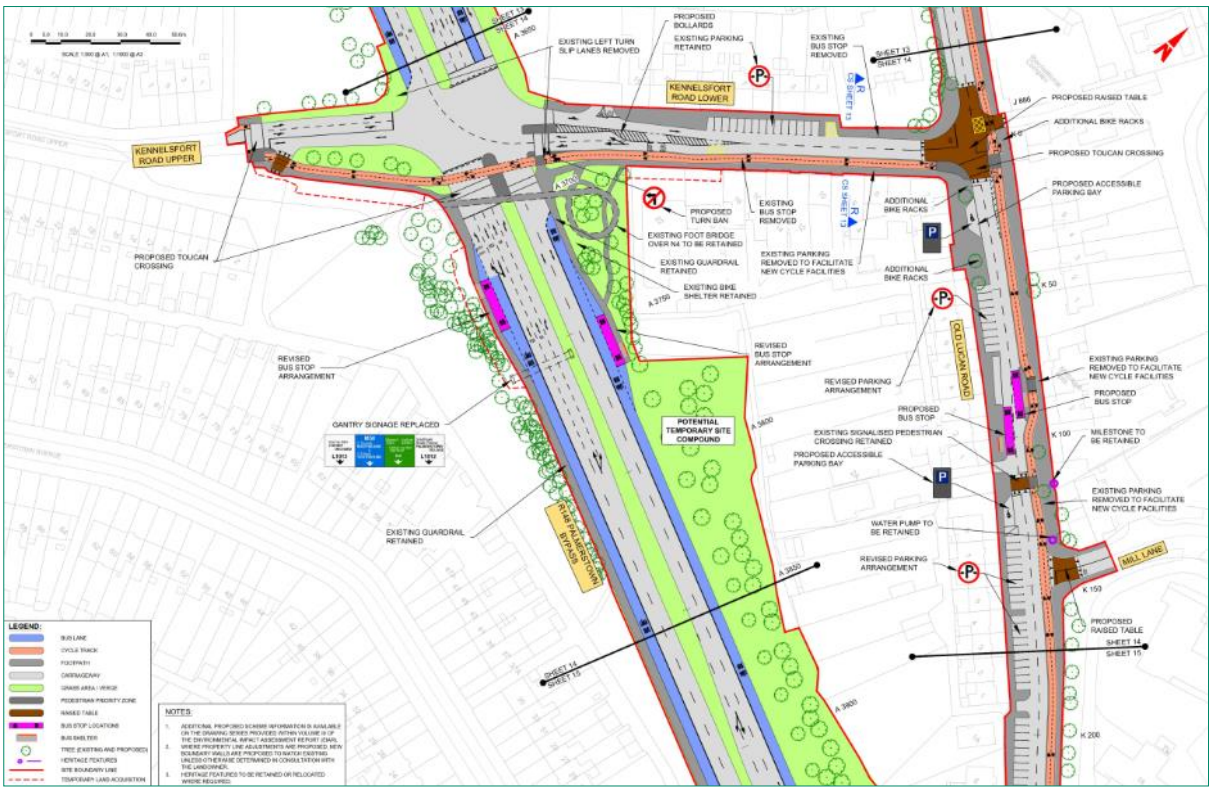


Figure 2.1.1.4: Extract 4 from General Arrangement Drawing (Sheet 14)

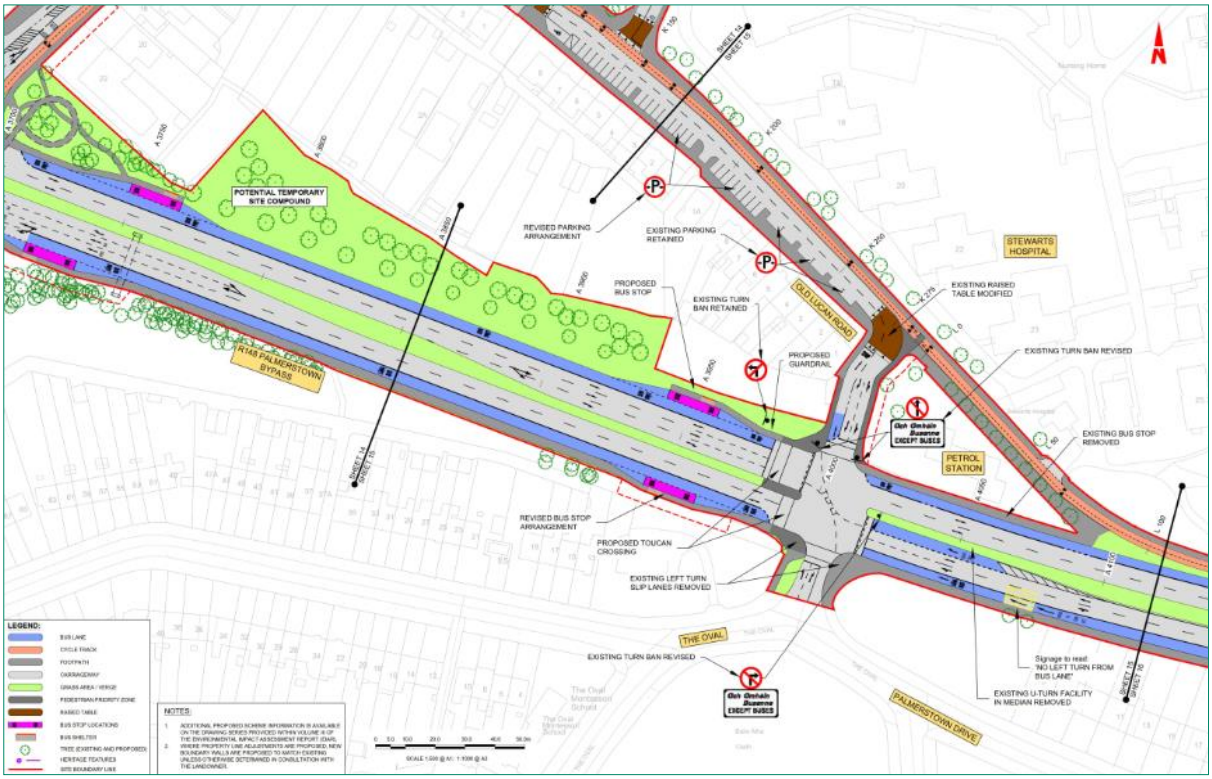


Figure 2.1.1.5: Extract 5 from General Arrangement Drawing (Sheet 15)

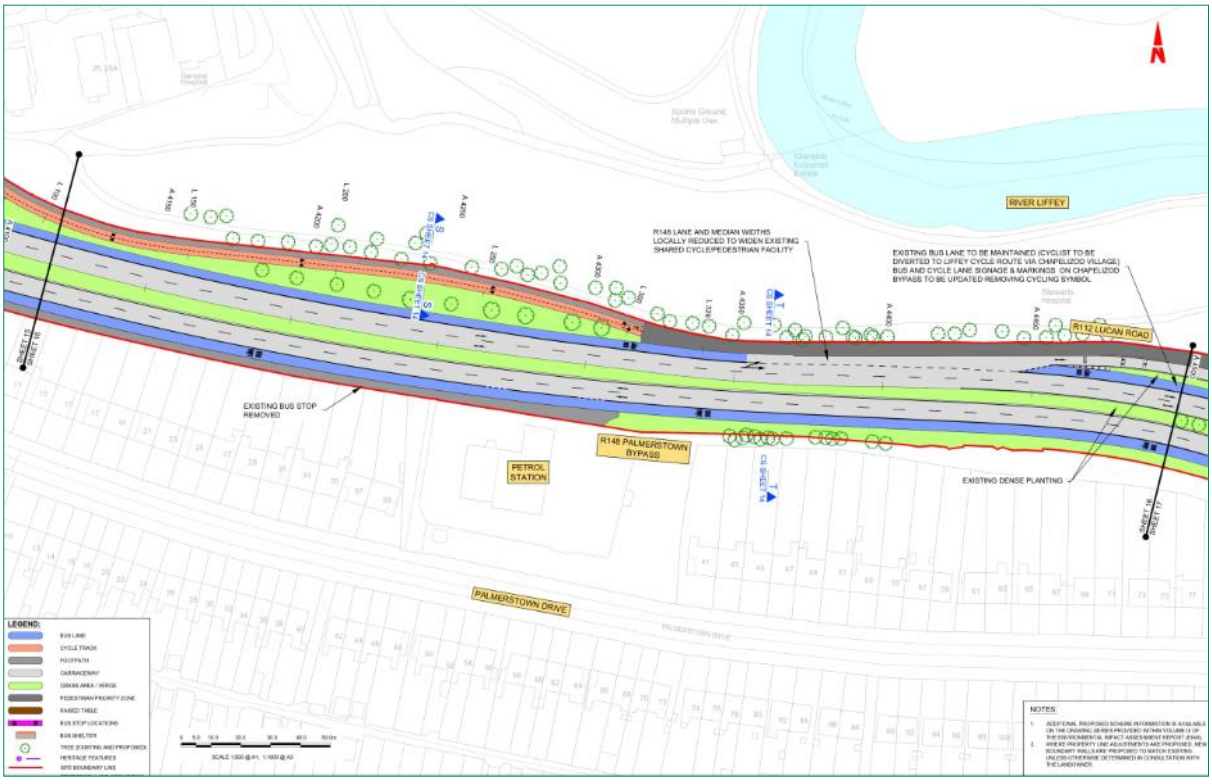


Figure 2.1.1.6: Extract 6 from General Arrangement Drawing (Sheet 16)

Figure 2.1.1.7: Extract 7 from General Arrangement Drawing (Sheet 17)

2.1.2 Overview of Submissions Received

Table 2.1.1 below lists the 70 submissions within which issues were raised in respect of the Proposed Scheme at Palmerstown.

Table 2.1.1: Submissions Made in Respect of Palmerstown

No	Name	No	Name	No	Name
1	Phyllis Arlow & Others	27	Margaret Hickey	56	David O'Mahony
2	Gerald Birney / William Carney	28	Brendan Higgins & Others	57	Eoghan O'Neill
3	Maeve Brophy	29	Chris Jennings	58	Mary & David Ong
4	Aidan Burke	31	Gareth Kelly	59	Brian O'Shea
5	Alma Byrne	32	Mick Kelly & Others	60	Siobhan Garcia
6	Deirdre Cahill & others	33	D. Kennedy Steel Supplies Ltd	61	John O'Gorman
8	Terence Clement Shaw	34	Deborah Kenny	62	Christina Pieri & Others
9	Margaret Cosgrove	35	Michael Knightly	63	James Redmond
10	Dr Aisling Curley	37	Frank Lambe	64	Alan McQuaid
12	Lucy Delaney	38	Brian & Celine Lee	65	Residents of Red Cow Farm
13	Development Applications Unit	39	Sharon Lyons	66	Dr Dan Ring
14	Deirdre Driver	40	Anne Mahon/Roger Berkley	67	Shane King
15	Dublin Community Coalition	41	Donna Manning	68	Saint Philomena's Parish - Martin Duggan & Joseph Scally
16	Martin & Marie Duggan & Others	42	Geraldine McCormack	69	Imelda Scally
17	Lisa Duncan	43	Alan & Eileen McQuaid	70	Craig Scott & Others
18	Geraldine Fagan & Others	44	Fred Meagher and Susan Kerrigan Meagher	71	Nessa Skehan
19	Ben Fehily	45	Cllr. Shane Moynihan	72	South Dublin County Council
20	Sorcha Ford	46	Helen Mullally	73	Tom Sweetman
21	Ailbhe Foy/Joseph Lee	47	Sandra and Laurence Mulvaney	74	The Louis Fitzgerald Group
22	David & Eileen Gaynor	48	Gráinne Ní Mhuirí	77	Sean Traynor
23	Cllr. Paul Gogarty	49	Gary Nolan	79	Kevin and Carmel Whelan & Others
24	Mairéad Harrington	52	Cllr. Guss O'Connell	80	Maura and Joe McCarthy & Others
25	Conor & Suzanne Haugh	54	Sandra O'Connell & Others		
26	Cllr. Alan Hayes	55	Justin O'Connor		

Of the 70 submissions, 60 were from residents, 2 were from businesses, 2 were from Prescribed Bodies, 1 from a community facility, 1 from an organisation and 4 were from elected representatives supporting the residents.

A number of issues were raised and these are listed below and described in Section 2.1.4 below.

Common Issues Raised

1. Routing of bus service through the village
2. Bus stop locations
    a. Old Lucan Road [new bus stop]
    b. The Oval [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
        iii. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Scheme geometry
        i. HGV Movements and kerb radii
        ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Impact on community
        iii. Outbound lane destination change
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
    a. Need for a two way cycle track
    b. Belief that cyclists will stay on the R148
    c. Alternative cycle routes
    d. Deficient existing M50 pedestrian/cycle bridge width
    e. Need for cycle bridge over R148
    f. Contra-flow cycle track
6. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction
    b. Pedestrian crossings at The Oval
    c. Walking & running on Old Lucan Road
7. Air pollution and noise pollution during Operation
8. Construction
    a. Temporary construction compound LU2
        i. Trees removal

ii. Biodiversity (bats, badgers)
iii. Drainage Infrastructure
iv. Traffic and amenity Impact of compound

b. Reference to The Oval for a compound
c. Air pollution and noise pollution during construction

9. Other Common Issues
   a. Change to 'amenity'/ 'feel' of the heritage part of the village
   b. Impact on the Woodfarm Cottages and Red Cow Cottages
   c. Impact on future community events
   d. Environmental costs/impact of the scheme and its costs return period
   e. Request for traffic modelling data
   f. Proposed material and cycleway/ footway cross section
   g. Traffic Calming of R148 Palmerstown bypass
   h. Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod
   i. Population data query

Other Issues Raised

The following issues relating to Palmerstown were raised by a one or two submissions only and the responses are provided under the relevant response in Section 3 of this report.

a. SHD development access / egress– Submission 26
b. Working hours close to construction compound – Submission 26
c. Structural damage to the houses on Kennelsfort Road due to potential increased volume of traffic – Submission 28
d. Environmental Impact Assessment Report Chapter 10, reference to Halston Street – Submission 37
e. Request for an Oral Hearing – Submission 37
f. Request for bike storage facility – Submission 38
g. Assessment of impact on disabled population – Submission 38
h. Safety of crossing two-way cycle track at bus stop – Submission 42
i. Suggested pedestrian bridge Access to laneway between Woodfarm Cottages and Red Cow Cottages - Submission 43
j. Policing of unauthorised parking - Submission 43
k. Access to the laneway to the rear of Red Cow Cottages - Submission 43
l. Support for the proposals along Old Lucan Road – Submission 45
m. Parking space for GoCar – Submission 64
n. Suggested alternatives for village car parking – Submission 67
o. Provision of cycle parking and water stations in the village – Submission 67
p. Location of new pedestrian crossing on Old Lucan Road – Submission 71
q. Access to and protection of businesses during construction – Submission 73
r. Preservation of heritage lighting columns on Kennelsfort Road Lower - Submission 73
s. Query relating to speed limit signs – Submission 73

2.1.3 Common Issues Raised and Responses

2.1.3.1 Routing of bus services through the village

Summary of Issue Raised

While there is broad support for the C-Spine services on the R148 Palmerstown bypass, objections to the proposals to route the no 26 (80) bus service through the east of the village are included in the majority of the Palmerstown submissions. Many observers note the no 26 (80) bus service is nearly always full when it reaches Palmerstown and there is a much better choice of services on the C-Spine.

It is believed the no. 26 (80) routing through Palmerstown village is unnecessary and a degradation of bus services to Palmerstown, in contravention to the stated aims and objectives of the Proposed Scheme to improve bus journey time and reliability.

In addition, some submissions raised the removal of the existing no 18 service from Palmerstown to Sandymount and noted their objections to the bus stop changes as a result of the Bus Network Redesign route changes and the Proposed Scheme infrastructure requirements. Specifically, observers believe the loss of bus service stops 4357, 4359 and 4360 on the west end of Old Lucan Road will exclude a portion of Palmerstown leaving them without a bus service, adding that the age demographic in the village tends to be older people. The stated hope for many observers is that the bus service currently enjoyed by Palmerstown residents will remain unchanged.

A number of submissions highlighted that the healthcare facility on Mill Lane is Stewarts Care Palmerstown, not a hospital requiring frequent bus services.

Several submissions claimed the residents were not consulted on the proposed bus network changes. One submission claimed the public consultation process was run during the Covid lock down and the lack of in person options may have hindered the public access to the consultations specially for the elderly population of the area.

Response to issue raised

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 2019, resulting from previous redesign proposals and with consideration given to issues raised by over 72,000 submissions. Figure 2.1.3.1.1 presents Figure 4.4 of the Preferred Route Option Report showing the routing of bus services along Old Lucan Road between Kennelsfort Road and The Oval.

Figure 2.1.3.1.1: Figure 4.4 of the Preferred Route Option Report showing the Dublin Area Bus Network 2019

The Proposed Scheme at this location will facilitate the Dublin Area Bus Network Redesign.

2.1.3.2 Bus Stop locations

Summary of Issues Raised

A number of submissions expressed concern over the location of the bus stops in the Proposed Scheme.

a. Old Lucan Road [new bus stop]

The proposed location of the new bus stops on Old Lucan Road to serve the number 80 service was the subject of a number or submissions concerned about the impact on the architectural heritage designation of Woodfarm Cottages and Red Cow Cottages, expressing the view that the bus stop would be a centre of antisocial behaviour where there had previously been none, and it would devalue property.

A number of submissions raised a point that the bus stops in both directions are located opposite and would cause traffic blockage if both buses were to stop at the same time.

b. The Oval [2242, 7239]

Stop 2242

A number of observers expressed the view that the Bus Network Redesign Route 26 (80) coupled with the relocation of The Oval bus stop [2242] at the Applegreen petrol station to the west side of the junction precludes people south of Palmerstown bypass from using route 80, forcing them on to the C-Spine and also introducing an additional road crossing.

It was noted in some submissions that the relocation of the bus stop to the western side of The Oval junction will direct pedestrians to walk on the western side of the Old Lucan Road (going to and from Palmerstown Village) which would put them in the conflict with HGV from the Shaws Tree Services.

It was also mentioned that the distance to the new bus stop location will be longer from the Stewarts Care facility.

Stop 7239

One submission noted that the bus stop landing space is very small, and the removal of vegetation from southern side of the road adjacent to the residential properties is concerning as the vegetation offers noise and pollution buffer for residents.

Another submission from the residents of Red Cow Farm expressed the view that privacy would be non-existent as a result of the proposals to remove trees to relocate the bus stop, requesting privacy fencing be provided.

c. Palmerstown Drive [2201]

The impact of the proposed removal of the outbound Palmerstown Drive bus stop (2201) at the location of a pedestrian access to this residential area was raised in 38 submissions, which note the current bus

stop serves a large densely populated area. The submissions state that the nearest bus stop in the Proposed Scheme is a much longer walk, and requires extra crossing of The Oval junction, which it believed is a hardship for elderly/ children and precludes bus use at night.

Response to Issues Raised

Overview of Bus Stop Assessment

Section 4.6.4.5 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.

The outcome of the bus stop review analysis at the locations raised by the submissions is provided below.

a. Old Lucan Road [new bus stop]

The existing bus stops in Palmerstown village are located on Kennelsfort Road Lower. The Bus Stop Review Analysis in Palmerstown village determined that the optimum location within the village centre was on Old Lucan Road, between the junctions with Kennelsfort Road Lower and Mill Lane, which is a more suitable location to accommodate waiting facilities and provide a greater catchment area, whilst also facilitating the rationalisation of stops to improve bus journey times. Therefore, the Proposed Scheme provides paired inbound and outbound stops close to the recently installed signalised pedestrian crossing just west of Mill Lane on Old Lucan Road, as shown in Figure 2.1.3.2.1 below.

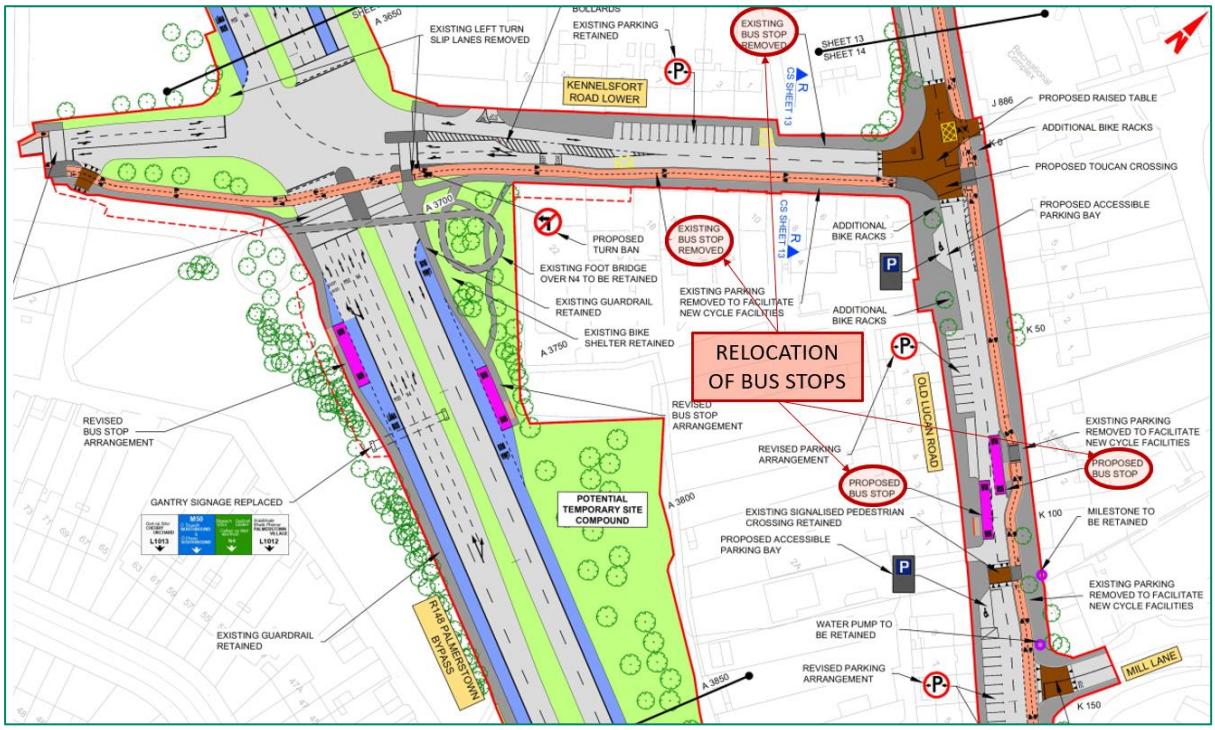


Figure 2.1.3.2.1: Extract 4 from General Arrangement Drawing (Sheet 14)

Architectural heritage impact

The Red Cow Cottages are not listed on the SDCC Register of Protected Structures but the cottages and their gardens are included within an Architectural Conservation Area (ACA). In Section 16.3.1.9, it is acknowledged that the cottages are of architectural heritage interest: "*In addition to the structures included in the RMP, the RPS, NIAH and the DCIHR nine structures or groups of structures were identified along the Proposed Scheme which, while they are not protected, or included in existing inventories, are of architectural, historical or industrial interest…..*". This includes Red Cow Cottages. In Table 16.12, the cottages are listed (Feature ID: CBC0006BTH010) and are categorised as having local significance and of low sensitivity.

In Section 16.5.1.6 of EIAR Chapter 16 Architectural Heritage, it is recognised that the Proposed Scheme shares a boundary with structures of architectural heritage interest (which includes Red Cow Cottages). Section 16.5.1.6 concludes that mitigation measures will be put in place, comprising "*the recording, protection and monitoring of the sensitive fabric prior to, and for the duration of the Construction Phase 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, it is anticipated the magnitude of impact would reduce from Medium to Negligible. The predicted post mitigation impact is Negative, Not Significant and Temporary.*"

Under the Proposed Scheme, bus shelters are proposed in front of number 1 Red Cow Cottages and at the Millbrook Apartments. The proposed shelter at the Milbrook apartments is located on the opposite side of the road to Red Cow Cottages and will not affect the ACA or the cottages. The General Arrangement drawings (Volume 3 of the EIAR, General Arrangement drawings), show that the footpath will be widened significantly in front of numbers one to three Red Cow Cottages and that the proposed shelter will be located at the front of the footpath away from the cottages and outside the ACA.

The Magnitude of impact on the cottages is categorised as Low. The predicted Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the setting of the Red Cow cottages and the streetscape.

Antisocial behaviour

In relation to the potential community impacts arising from crime and antisocial behaviour is set out in EIAR Chapter 10 Population Appendix A10.2 Economic Impact of the Core Bus Corridors, which notes the following:

- *"Good infrastructure has also been shown to have a positive impact on levels of crime, particularly low level crimes such as theft and vandalism. There is evidence from a wide range of studies that redesigned public realm, especially those which are better lit and more visible,*

see significant reductions in the level of crime.

- *A study from Los Angeles in the late 1990s discovered that the location and visibility of bus stops can have an impact on crime. Where bus stops were clearly visible, offered shelter to the user and were on streets with high levels of vehicle traffic, criminal activity was less common. In contrast, crime rates were found to be higher if the bus stop was at an intersection with an alley, next to off-licences, cashpoint services, vacant buildings or on-street parking, or in areas where there was a lot of graffiti and litter."*

Section 4.6.4.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR details the criteria for consideration when locating a bus stop (as noted above).

Bus stops opposite each other causing blockages

As per the criteria for consideration when locating a bus stop (as noted above), where possible it is recommended to site bus stops tail to tail and close to crossings to facilitate interconnectivity. It has not been possible to achieve tail to tail on Old Lucan Road, but head to head is acceptable as there is a distance to the rear of the opposite bus.

The likelihood of two Dublin buses with short dwell times stopping at the same time in the middle of this link is low and the impact on traffic will be negligible.

b. The Oval bus stops [2242, 7239]

Stop 2242

At The Oval junction the inbound bus stop is relocated to the west of the junction where space is available to provide a layby; the petrol station is acting as a constraint to a layby on the east side. In addition, by locating the inbound bus stop on the west side of the junction a single signal controlled pedestrian crossing is now proposed on the west side of the junction side which optimises the operation of the junction incorporating the new outbound bus right turn. The crossing also provides safe pedestrian connectivity to the bus stops and there is a proposed footway on the western side of the Old Lucan Road. There is no significant change to the distance of the bus stop to the Stewarts Care facility.

Stop 7239

The outbound bus stop (7239) is already on the western side of the junction and is proposed to be relocated closer to the junction and the proposed pedestrian crossing. The provision of the layby for the outbound bus stop will involve the removal of some of the existing vegetation in the roadside verge to the rear of the existing footpath. This vegetation loss has been minimised such that some vegetation will remain between the rear of the new footpath and the boundary walls of the nearest residential properties, see Figure 2.1.3.2.2 showing an extract of the Landscaping General Arrangement Drawings included in EIAR Volume 3 Figures Part 1 of 3 Chapter 4 Proposed Scheme Description. The boundary walls themselves are unaffected and no additional boundary treatment works are considered necessary as part of the Proposed Scheme.

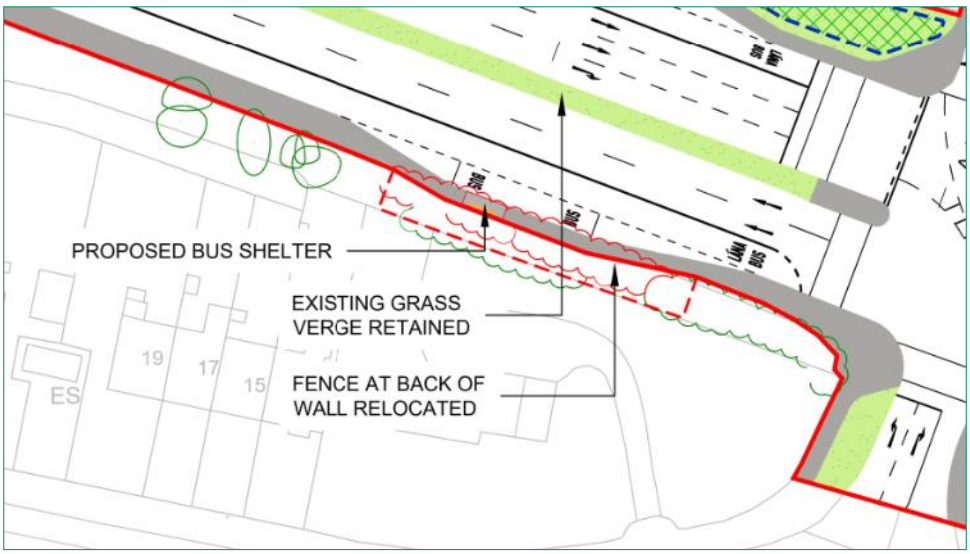


Figure 2.1.3.2.2: Extract from Landscaping General Arrangement Drawings

The changes proposed at this location do not preclude residents from south of Palmerstown bypass from using the bus services along Old Lucan Road in the inbound direction. The improved pedestrian crossing facilities will allow passengers to access the bus services along Old Lucan Road in both directions, should that be their preference, as well as being able to avail of the C-Spine services.

c. Palmerstown Drive bus stop 2201

The existing outbound bus stop at Palmerstown Drive is proposed to be removed for a number of reasons:

- The stop is not paired with an inbound stop;
- The stop is not situated within 100m of a pedestrian crossing;
- Due to the high volume of services a layby is the preferred arrangement and it is not feasible to introduce layby at this location without land take;
- The stop is approximately 220m from the junction with The Oval, which is served by a pair of inbound and outbound layby bus stops with a signalised pedestrian crossing of the R148.

It was concluded that the stop should be removed because the catchment could be served by the stops at The Oval. It is also noted that by providing a new signalised crossing of The Oval as part of the Proposed Scheme a safe route to the bus stops from Palmerstown Drive.

2.1.3.3 Traffic Impact

Overview of Issues Raised

Many submissions expressed concerns about increased congestion on the Core Bus Corridor and throughout the Palmerstown area as a result of the Proposed Scheme in conjunction with significant current and proposed building developments. Observations highlight that traffic on all roads interfacing with the Palmerstown bypass is already very congested at peak times and expressed the view that the proposed changes will make it worse. Submissions believed that the proposals will further sever the community which they believe has been divided since the construction of the Palmerstown bypass.

The various traffic related topics raised will be considered by geography or stand-alone topics in this section.

a) Kennelsfort Road junction

Summary of Issues

i. Removal of left turn slips

Concern was raised about the traffic and environmental impact of the removal of left turn slips from Kennelsfort Road Upper and Lower.

ii. Banning of left turn from Kennelsfort Road Lower

Concern was raised about the introduction of ban on traffic turning left from Kennelsfort Road Lower, with traffic heading for the city having to drive along Old Lucan Road to exit at The Oval junction. Some submissions expressed the view there has been no proper consideration of the impact of this proposal, and further state there is insufficient evidence that the traffic from the church, leisure facilities, industrial premises, shopping facilities, residential including the new 250 apartments scheme nearing completion have been properly considered. It was felt that The Oval junction will not have sufficient capacity to cater for the demand, and therefore the left turn from Kennelsfort Road Lower should be retained.

Several submissions suggested that the proposed signalised crossing on the east side of the Kennelsfort Road junction was unnecessary and removing it would eliminate the need to ban the left turn out.

iii. Need for grade separation

Twelve submissions expressed a view that there was a need for grade separation at the Kennelsfort Road junction, as referenced in SDCC Development Plan 2022 SM3 Objective 17, asserting that this had been proposed previously by the National Roads Authority (NRA).

Response to issues raised

i. Removal of left turn slips

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.*"

Table 3.7 of Appendix A2.1 Planning Report of EIAR Chapter 2 notes that the NTA's Draft GDA Transport Strategy (GDATS) 2022 – 2042 identifies a range of measures to achieve the aims of the Draft GDATS. Measure WALK3 relates to Improved Junctions and sets out how the NTA, in conjunction with local authorities, will implement junction improvements across the GDA to, inter alia, enhance movement by pedestrians and cyclists via a programme of removal of slip lanes at appropriate locations, together with consideration of junction signalling changes to better balance the use of the junction between motorised and vulnerable modes.

Section 4.4.3 of DMURS relates to junction design and sets out how junction design is largely determined by volumes of traffic and while the design of junctions has traditionally prioritised motor vehicle movement, designers must take a more balanced approach to junction design in order to meet the objectives of Smarter Travel and DMURS. Specifically, DMURS states that designers should, inter alia, "*Omit left turn slips, which generally provide little extra effective vehicular capacity but are highly disruptive for pedestrians and cyclists.*"

It is clear from the above that the retention of the existing left turn slip lanes at the Kennelsfort Road junction would be contrary to the requirements of DMURS and measure WALK3 of the Draft GDATS. In relation to achieving the scheme objectives the removal of left turn slip lanes at this location is required to achieving the necessary enhanced pedestrian, cyclist and bus priority infrastructure.

It is also noted that in the South Dublin County Council (SDCC) submission on the Proposed Scheme, see section 2.3.4.2 of this report, they express their support for the removal of all left turn slip lanes at the various junctions along the route.

ii. Banning of left turn from Kennelsfort Road Lower

As set out in Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description: "*the left turn movement from Kennelsfort Road Lower to the R148 Palmerstown bypass eastbound is to be prohibited to facilitate new signalised crossings on the east side of the Kennelsfort Road junction to serve the enhanced bus stops, the pedestrian demand and to cater for the proposed two-way cycle track that crosses the R148 Palmerstown bypass at this location. Traffic in Palmerstown village wishing to travel east on the R148 towards the city centre will be able to do so by travelling east along the Old Lucan Road to the junction with the Oval.*"

The Junction Design Report provided as Appendix A6.3 in the EIAR Volume 4 Part 2 of 4 explains the rationale for the banning of the left turn from Kennelsfort Road Lower noting the following in respect of pedestrian infrastructure:

- *"On the eastern arm of the junction, currently a pedestrian bridge is available to cross Palmerstown Bypass.*
- *It is proposed to provide a new controlled pedestrian staggered crossing, to cater for pedestrians crossing Palmerstown Bypass. This will provide a more convenient and direct crossing facility for particular vulnerable road users. A direct single stage crossing was examined at this location, but this was not achievable as the crossing length would be greater than the desired maximum crossing distance of 19m.*

A direct crossing with a 4m central refuge island was also examined, however this was not feasible at this location due to carriageway width constraints. Any widening of the carriageway would have required removing the existing pedestrian overbridge, whilst also causing carriageway realignment issues."

The Junction Design Report also shows the design evolution for this junction, noting that: "*The proposed junction design has evolved on the BusConnects project from initial Concept Design, Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme.*"

It is noted that the banning of the left turn from Kennelsfort Road Lower was included in the draft Preferred Route Option presented at the second Public Consultation and the third Public Consultation.

The Junction Design Report also provides the following summary of the transport modelling for the junction.

"The existing 4 arm signalised junction is proposed to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure at the junction. The key design rationale was to enhance bus priority at the junction, whilst retaining and enhancing capacity for general traffic."

In relation to the bus priority infrastructure the following is noted:

- *"Inbound, the design proposes Junction Type 2, with a left turning lane inside of the bus lane. This will provide additional capacity into the junction to cater for the projected high volume of left turning vehicles, whilst minimising any delay to bus priority.*
- *The outbound design proposes a Junction Type 3 where the bus lane is curtailed approximately 20m prior to the stop line to facilitate left turning traffic.*
- *A Junction Type 1 design has been tested in LinSig on both inbound and outbound directions. This would require an extra stage in the staging sequence, and the junction analysis results indicated the capacity of the junction would be materially compromised and with queuing exacerbated at the junction and impacting the M50 and N4; and*
- *It is also recognised that the Palmerstown Bypass is the key radial route into the city centre from the M50 and there is a need to balance the competing demands of general traffic and bus priority at this location, particularly with the potential to impact on M50 traffic."*

Finally, it is noted that within the Proposed Scheme general traffic will still be able to proceed straight ahead from Kennelsfort Road Lower to Kennelsfort Road Upper in the Proposed Scheme. This addresses any concerns that traffic from Old Lucan Road will exit at The Oval and potentially rat-run through Turrett Road, rather than turn right and then left at Kennelsfort Road Upper, as they will be able to avail of the straight ahead movement.

In summary, the proposed at-grade signalised pedestrian and cyclist crossings of the R148 Palmerstown bypass on the east side of the Kennelsfort Road junction are proposed to achieve the objectives of the Proposed Scheme at this location. In addition, the proposed crossings will provide enhanced pedestrian and cyclist facilities that will assist in reducing the existing severance issues that some of the submissions highlighted. The NTA is satisfied that the Proposed Scheme at this junction provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

iii. Need for grade separation

SDCC Development Plan 2022 SM3 Objective 17 referred to in submissions reads as follows:

"*To work with the NTA and other state agencies to facilitate the delivery of the Kennelsfort Road-R148 grade separated junction or an equivalent solution to maximise the efficacy of the BusConnects Project*."

The Junction Design Report provided as Appendix A6.3 in the EIAR Volume 4 Part 2 of 4 states that it is recognised that *"the Palmerstown Bypass is the key radial route into the city centre from the M50 and there is a need to balance the competing demands of general traffic and bus priority at this location, particularly with the potential to impact on M50 traffic."*

The Junction Design Report notes the Preferred a Junction Type 1 design has been tested in LinSig on both inbound and outbound directions and that *"this would require an extra stage in the staging sequence, and the junction analysis results indicated the capacity of the junction would be materially compromised and with queuing exacerbated at the junction and impacting the M50 and N4."*

The Junction Design Report notes that, the Proposed Scheme "*proposes Junction Type 2, with a left turning lane inside of the bus lane, which will provide additional capacity into the junction to cater for the projected high volume of left turning vehicles, whilst minimising any delay to bus priority. The outbound design proposes a Junction Type 3 where the bus lane is curtailed approximately 20m prior to the stop line to facilitate left turning traffic."*

The Junction Design Report demonstrates that the Proposed Scheme balances the competing demands of general traffic and bus priority at this location and that a grade separated junction is not required to achieve the objectives of the Proposed Scheme.

b) The Oval junction

Summary of Issues

Fifty four submissions raised concerns about traffic, safety and environmental impact of removal of left turn slip into The Oval from the Palmerstown bypass and removal of the left turn slip exiting from The Oval heading west towards Kennelsfort Road and the M50.

i. Removal of left turn slip exiting The Oval

A number of submissions expressed the view that the left turn slip exiting The Oval is essential to keep traffic moving at peak/ school times. The submissions note the addition of the loss of the slip lane from the R148 into The Oval, coupled with the proposed relocation of the pedestrian crossing to the east side of the junction, and the bus right turn in to Old Lucan Road will result in traffic congestion and impact the schools and SDCC active travel proposals.

Some of the submissions expressed a concern that the exit from the Palmerstown Drive onto the Oval will be impeded without the left turn slip lane due to the longer queues at The Oval junction.

ii. Removal of left turn slip entering The Oval from the R148

A number of submissions have raised safety and congestion concerns about the elimination of the left turn slip into The Oval from the R148 outbound and the requirement in the Proposed Scheme to have to cross the bus lane to turn left into The Oval. Several submissions have expressed the view that there is a risk to west bound cyclists travelling in the bus lane.

Two submissions misinterpreted the proposals believing that left turns in to The Oval were not permitted in the Proposed Scheme, assuming residents of The Oval would have to turn left at Kennelsfort Road Upper and travel up Turret Road, which the submissions state are already a major rat-run, noting that bollards split Palmerstown Avenue, preventing it from being a through route.

iii. Impact of right turn bus lane into Old Lucan Road

A number of submissions express concern for the safety and traffic impact of requiring the no 80 bus to cross two lanes to turn right into Old Lucan Road.

One submission expressed the view that this right turn has been introduced at a very late stage and asserts that it did not undergo a proper consultation process, adding that it has been confirmed by SDCC councillors that this element of the proposal, together with the details of several other elements, was not presented to them before the application was submitted to An Bord Pleanála. Furthermore, the submission states that there is no clear evidence that such an intervention, i.e. the creation of the new entry into Palmerstown Village for one specific bus route, was sought by a majority of the local population and there is no proper justification for its inclusion.

Some submissions suggested that the introduction of this right hand turn and the bus lane along the Old Lucan Road causes a conflict with the vehicles exiting and entering Shaws Tree Services yard.

Response to issues raised

i. Removal of left turn slip exiting The Oval

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.*"

Table 3.7 of Appendix A2.1 Planning Report of EIAR Chapter 2 notes that the NTA's Draft GDA Transport Strategy (GDATS) 2022 – 2042 identifies a range of measures to achieve the aims of the Draft GDATS. Measure WALK3 relates to Improved Junctions and sets out how the NTA, in conjunction with local authorities, will implement junction improvements across the GDA to, inter alia, enhance movement by pedestrians and cyclists via a programme of removal of slip lanes at appropriate locations, together with consideration of junction signalling changes to better balance the use of the junction between motorised and vulnerable modes.

Section 4.4.3 of DMURS relates to junction design and sets out how junction design is largely determined by volumes of traffic and while the design of junctions has traditionally prioritised motor vehicle movement, designers must take a more balanced approach to junction design in order to meet the objectives of Smarter Travel and DMURS. Specifically, DMURS states that designers should, inter

alia, "*Omit left turn slips, which generally provide little extra effective vehicular capacity but are highly disruptive for pedestrians and cyclists.*"

It is clear from the above that the retention of the existing left turn slip lanes at The Oval junction would be contrary to the requirements of DMURS and measure WALK3 of the Draft GDATS. In relation to achieving the scheme objectives the removal of left turn slip lanes at this location is required to achieve the necessary enhanced pedestrian, cyclist and bus priority infrastructure.

In addition, it is important to highlight that the removal of the left turn slip lane exiting The Oval junction does not result in any of the currently permitted left turn movements from being restricted.

It is also noted that in the South Dublin County Council (SDCC) submission on the Proposed Scheme, see section 2.3.4.2 of this report, they express their support for the removal of all left turn slip lanes at the various junctions along the route.

ii. Removal of left turn slip entering The Oval from the R148

As shown on the General Arrangement drawings and system design drawings included in EIAR Volume 3 Figures Part 1 & Part 2 of 3 Chapter 4 Proposed Scheme Description the left turn from the R148 Palmerstown bypass into The Oval will be permitted from the lane adjacent to the bus lane and residents of The Oval will not have to turn left at Kennelsfort Road Upper as submissions suggest.

In respect of the specific concern raised about the safety of the left turn movement from the R148 westbound into The Oval, EIAR Volume 4 Appendices Part 2 or 4 Chapter 6 Traffic and Transport Appendix A6.3 Junction Design Report sets out the indicative method of control for the various signalised junctions along the route of the Proposed Scheme. On page 35 of Appendix A6.3 the sequence of the traffic signal phasing is shown, see Figure 2.1.3.3.1.

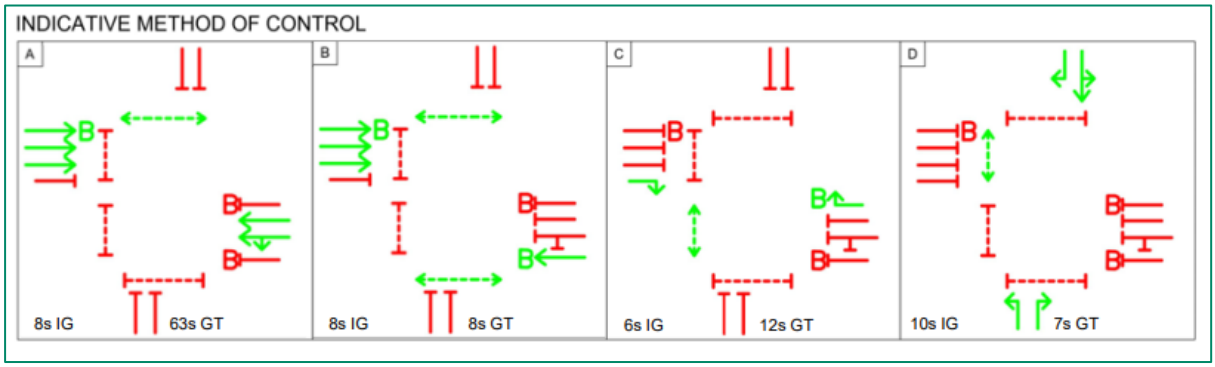


Figure 2.1.3.3.1: Indicative Method of Control for the R148 / The Oval Junction

The indicative method of control shows that in Phase A when general traffic heading westbound on the R148 has a green signal to proceed (to continue straight on or turn left), the bus lane and pedestrians have a red signal. In Phase B when the bus lane and pedestrians have a green signal to proceed, general traffic heading westbound on the R148 (or turning left) has a red signal. This arrangement will remove the potential conflicts that the submission raised as a concern.

Furthermore, the safety implications of the Proposed Scheme have been considered by the designer and 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 Oval junction for any vehicles, cyclists or pedestrians as part of the Road Safety Audit.

Congestion concerns and junction capacity

As set out in Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description: "*at the signalised junction of the R148 with the Old Lucan Road / The Oval a new westbound, bus only, right turn lane is proposed on the R148 Palmerstown bypass to facilitate new bus services through Palmerstown village. A small area of land acquisition will be required from the western edge of the petrol filling station at this location to accommodate this new bus movement.*"

The Junction Design Report provided as Appendix A6.3 in the EIAR Volume 4 Part 2 of 4 explains the rationale for the proposed junction and also shows the design evolution for this junction, noting that: "*The proposed junction design has evolved on the BusConnects project from initial Concept Design,*

Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme."

Section 3.4.3 of EIAR Chapter 3 Reasonable Alternatives highlights that following analysis of the feedback from the third round of public consultation on the Updated Draft Preferred Route Option amendments were made to the junction at The Oval, stating: "*the layout of the Oval junction has been amended to provide an additional lane to cater for the increase in left turning traffic exiting the village."* This design change is shown in Figure 2.1.3.3.2.

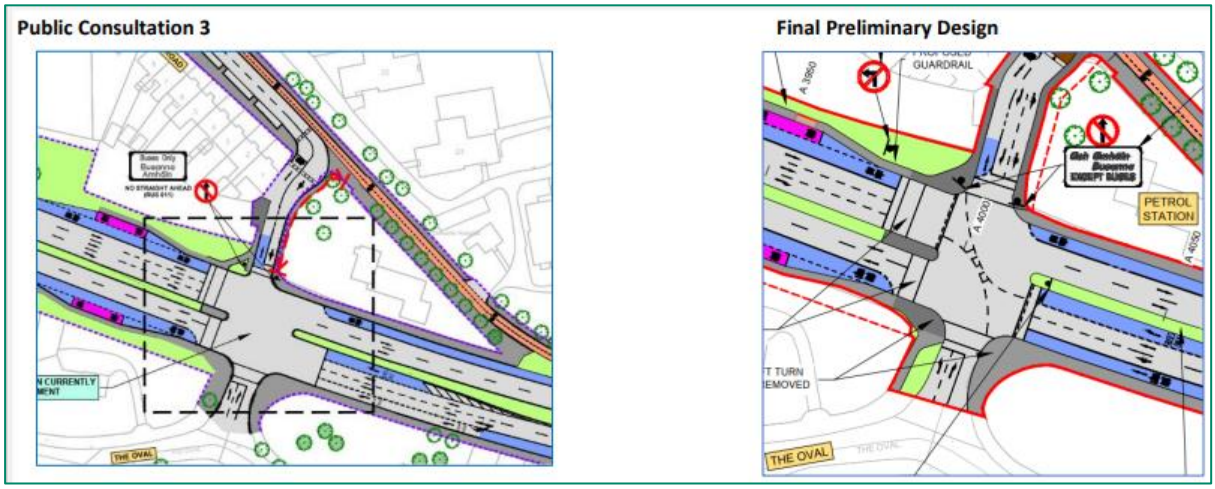


Figure 2.1.3.3.2: Extract from Junction Design Report showing additional exit lane added at the Old Lucan Road arm of the Oval Junction following Third Public Consultation

The Junction Design Report also provides the following summary of the transport modelling for the junction.

"The existing 4 arm signalised junction is proposed to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure. The key design rationale was to provide protected cycle infrastructure and crossing facilities, whilst improving bus priority."

In relation to the bus priority infrastructure the following is noted:

- *"Junction Type 1 is proposed on the CBC arms where both bus lanes are dedicated lanes up to the junction stop line;*
- *For the inbound direction general traffic is not permitted to turn left onto Old Lucan Road as per the existing arrangement, which assists in facilitating a Junction Type 1 inbound; and*
- *For outbound direction, a Junction Type 1 is proposed to enhance bus priority up to the junction stop line. General traffic turning left into the Oval will be required to turn left from Lane 2."*

In summary, the Junction Design Report demonstrates that the Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

iii. Impact of right turn bus lane into Old Lucan Road

Safety

The safety implications of the Proposed Scheme have been considered by the designer and 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 Oval junction for any vehicles, cyclists or pedestrians as part of the Road Safety Audit.

Lack of consultation

The submission is incorrect to assert that this specific proposal has been introduced at a late stage and

has not undergone a proper consultation process. EIAR Volume 4 Appendices Part 2 or 4 Chapter 6 Traffic and Transport Appendix A6.3 Junction Design Report provides details of the various junctions along the Route of the Proposed Scheme. Page 34 of Appendix A6.3 shows that the proposed right turn bus lane was shown on the layout drawings for the draft Preferred Route Option that were put on public display as part of the 2nd round of public consultation in March 2020 and also shown on the scheme layout drawings that were put on public display as part of the 3rd round of public consultation in November 2020. The Public Consultation Report included in the Supplementary Information provided with the application for the Proposed Scheme includes the brochure for the 2nd round of public consultation in March 2020. Section 2.5 on page 11 of this brochure specifically highlights this aspect, see Figure 2.1.3.3.3.

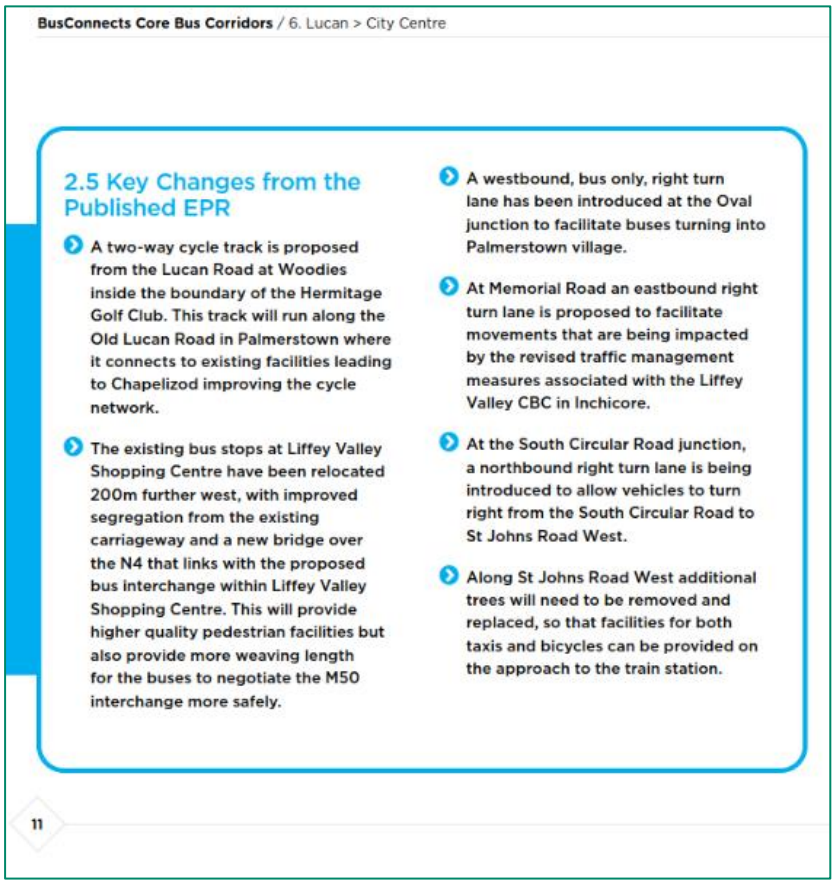


Figure 2.1.3.3.3: Extract from Brochure for 2nd Round of Public Consultation Match 2020

c) Scheme geometry

Summary of Issues

i. HGV Movements and Kerb Radii

Several submissions raised concerns about how the revised narrower carriageway cross section for general traffic will impact the ability of larger vehicles/ articulated vehicles entering and exiting steel fabrication business at the eastern end of Old Lucan Road and the large manufacturing and storage business at the end of Mill Lane.

One submission made reference to the widening of the footpath at the entrance to The Oval and states that this in conjunction with the proposed requirement to cross the bus lane will make the left turn "*a very dangerous manoeuvre",* citing risks of collision between cars, buses and pedestrians crossing.

ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services

A number of submissions mentioned the geometry of the 90° bend on the Old Lucan Road. Concern was expressed that with the new bus services, two lanes of traffic and a two way cycle track there is a possibility that the bus will not be able to make the 90° turn without crossing into the oncoming traffic.

Several submissions raised an issue with the access to the Shaw Tree Services yard especially by large commercial vehicles. The submissions state that at the moment commercial vehicles and residents

accessing garages [behind Saint Fintan's Terrace] off the yard park temporarily in a "designated layby", while the gates to the premisses are open. The submission assert that the Proposed Scheme will remove this facility to provide bus lane from The Oval junction and that vehicles would need to stop on the bus lane or on the proposed footpath. One submission also states that the current road layout is "*based on a legal binding agreement with SDCC*" which facilitates the movement of commercial vehicles to the R148 or to Old Lucan Road and foes on to assert that *"the proposed footpath is in breach of the existing agreement with SDCC"*.

Response to issues raised

i. HGV Movements and Kerb radii

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."*

Table 3.7 of Appendix A2.1 Planning Report of EIAR Chapter 2 notes that the NTA's Draft GDA Transport Strategy (GDATS) 2022 – 2042 identifies a range of measures to achieve the aims of the Draft GDATS. Measure WALK3 relates to Improved Junctions and sets out how the NTA, in conjunction with local authorities, will implement junction improvements across the GDA to, inter alia, enhance movement by pedestrians and cyclists via a programme of removal of slip lanes at appropriate locations, together with consideration of junction signalling changes to better balance the use of the junction between motorised and vulnerable modes.

Section 4.3.3 of DMURS relates to corner radii and discusses the need for "*designers to balance the size of corner radii with user needs, pedestrian safety and the promotion of lower operating speeds."*

Specifically, Section 4.3.3 of DMURS states "*reducing corner radii will significantly improve pedestrian and cyclist safety at junctions by lowering the speed at which vehicles can turn corners and by increasing inter-visibility between users. Reduced corner radii also assist in the creation of more compact junctions that also align crossing points with desire lines and reduce crossing distances."* (see DMURS Figure 4.42 in Figure 2.1.3.3.4).

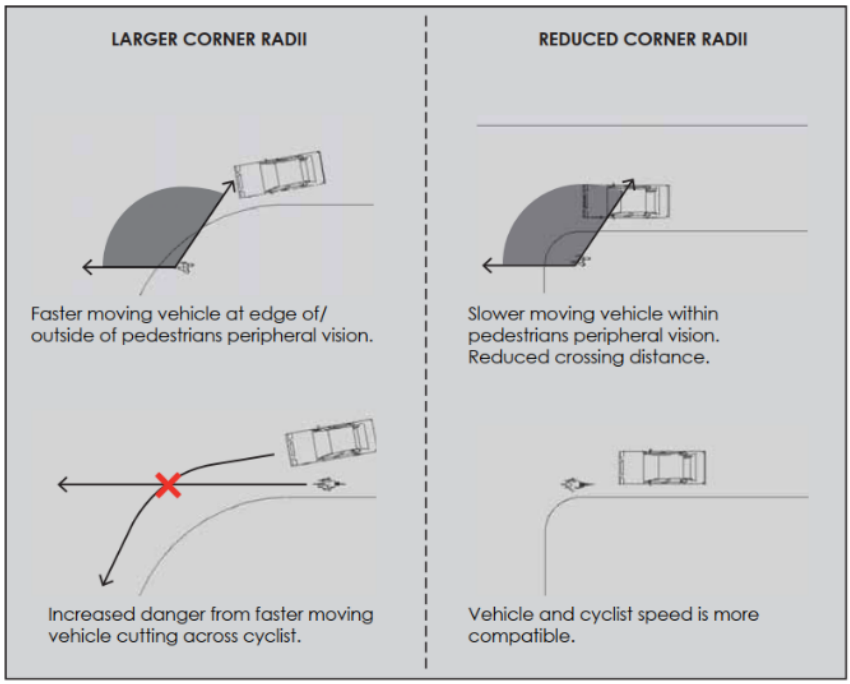


Figure 4.42: Illustration of the benefits of reduced corner radii on pedestrian and cyclist safety (images based on Figures 6.3 and 6.15 of the UK Manual for Streets (2007)).

Figure 2.1.3.3.4: DMURS Figure 4.42 – Benefits of reduced corner radii

DMURS Section 4.3.3 continues: *"In general, on junctions between Arterial and/or Link streets a maximum corner radii of 6m should be applied. 6m will generally allow larger vehicles, such as buses and rigid body trucks, to turn corners without crossing the centre line of the intersecting road."*

Section 4.3.3 of DMURS also states *"designers may have concerns regarding larger vehicles crossing the centre line of the intersecting street or road. Such manoeuvres are acceptable when turning into/or between Local or lightly trafficked Link streets as keeping vehicle speeds low is of higher priority."*

The manoeuvring of HGV's or towed vehicles from accesses on Old Lucan Road which has a 30kph speed limit would align with that strategy, reducing carriageway width and corner radii to maintain a low speed environment.

It is also noted that it is proposed that double yellow line parking restrictions will be included on the northern side of Old Lucan Road adjacent to the two-way cycle track in Palmerstown as currently employed and as noted in section 6.4.6.1.3.4 of Chapter 6 of Volume 2 of the EIAR.

Swept path analysis has been undertaken on the Proposed Scheme geometry at Palmerstown and the layout complies with the design guidance set out in Section 4.3.3 of DMURS, such that the existing levels of accessibility for HGV traffic will be maintained.

In conclusion, it is believed the proposed kerb radii will result in a safer junction for pedestrians and cyclists and it is not believed that this will have a material impact on traffic movement into and out of the junction.

In respect of the specific concern raised about the safety of the left turn movement from the R148 outbound into The Oval, EIAR Volume 4 Appendices Part 2 or 4 Chapter 6 Traffic and Transport Appendix A6.3 Junction Design Report sets out the indicative method of control for the various signalised junctions along the route of the Proposed Scheme. On page 35 of Appendix A6.3 the sequence of the traffic signal phasing is shown, see Figure 2.1.3.3.5.

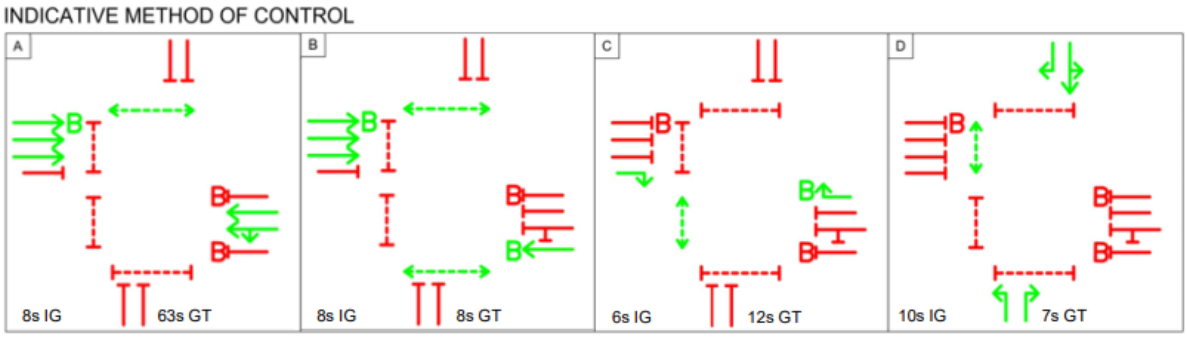


Figure 2.1.3.3.5: Indicative Method of Control for the R148 / The Oval Junction

The indicative method of control shows that in Phase A when general traffic heading westbound on the R148 has a green signal to proceed (to continue straight on or turn left), the bus lane and pedestrians have a red signal. In Phase B when the bus lane and pedestrians have a green signal to proceed, general traffic heading westbound on the R148 (or turning left) has a red signal. This arrangement will remove the potential conflicts that the submission raised as a concern.

Furthermore, the safety implications of the Proposed Scheme have been considered by the designer and 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 Oval junction for any vehicles, cyclists or pedestrians as part of the Road Safety Audit.

ii. 90° bend on the Old Lucan Road and Access to Shaw Tree Services

The existing arrangement and the proposed layout are shown in Figure 2.1.3.3.6. It is noted that large commercial vehicles exit Shaw Tree Services currently and traverse the same 90° bend that bus services will use in the Proposed Scheme.

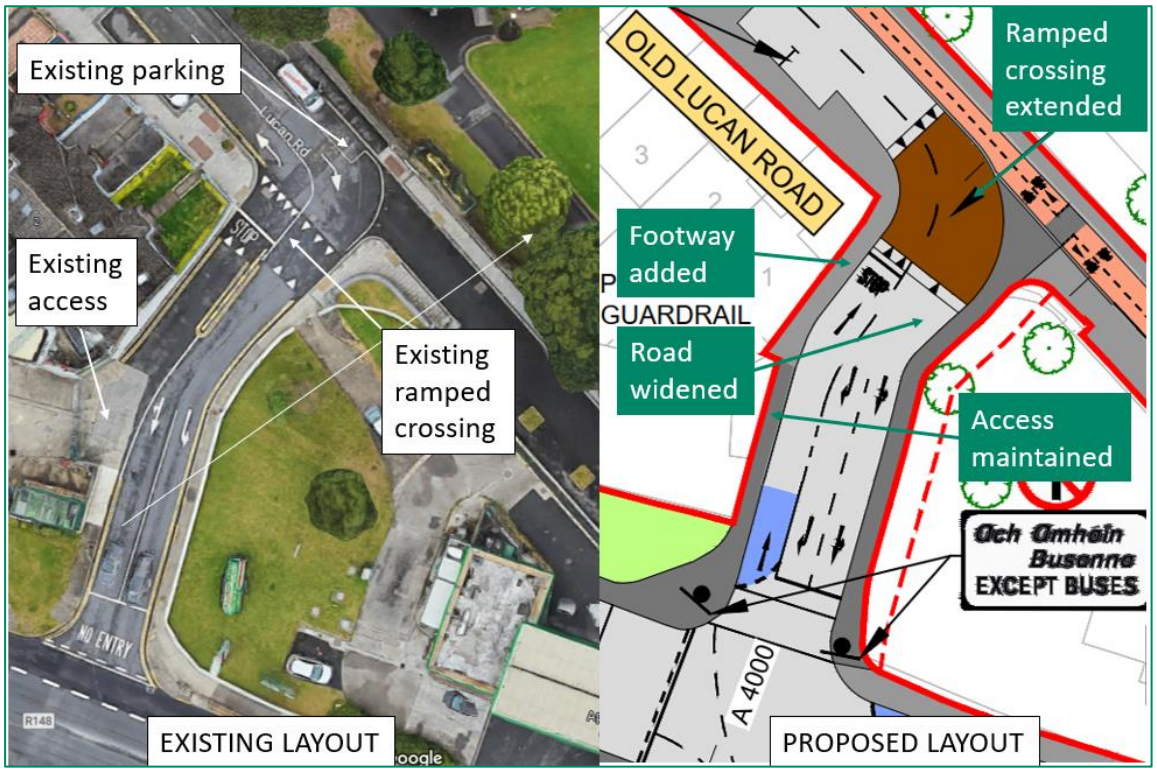


Figure 2.1.3.3.6: Existing and Proposed Layouts of Old Lucan Road approaching The Oval Junction (Image Source: Google)

Swept path analysis has been undertaken on the Proposed Scheme geometry at Palmerstown and the layout at this location complies with the design guidance set out in Section 4.3.3 of DMURS. It is also noted that in the existing layout there is parallel parking along the north side of the Old Lucan Road, which is proposed to be replaced with the two-way cycle track. The existing "STOP" road markings approaching the 90° bend are to be retained and the existing ramped crossing is to be extended.

The road is widened at this location to provide the necessary capacity at The Oval junction (refer to sub-section 2.1.3.3.b.(ii) pf this report): Section 3.4.3 of EIAR Chapter 3 Reasonable Alternatives highlights that following analysis of the feedback from the third round of public consultation on the Updated Draft Preferred Route Option amendments were made to the junction at The Oval, stating: "*the layout of the Oval junction has been amended to provide an additional lane to cater for the increase in left turning traffic exiting the village.*"

The existing access to Shaw Tree Services is maintained in the proposed scheme, with commercial vehicles being able to access both the R148 and the Old Lucan Road as they are able to currently. As can be seen in Figure 2.1.3.3.7 there is no evidence of an existing designated lay-by at this location. It is also noted that the SDCC submission to the Proposed Scheme raises no objection to the proposals at this location and makes no mention any legal agreement in respect of the access, nor was any mention made by SDCC during the extensive consultation with the authority during the development of the Proposed Scheme. No evidence to support any legal agreement has been provided.

Figure 2.1.3.3.7: Existing Access to Shaw Tree Services (Image Source: Google)

In summary the NTA is satisfied that the proposals at this location will provide an improved pedestrian and cyclist environment and will provide for the necessary bus access to the village in a safe and controlled manner around the existing 90° bend without impacting the existing access/egress arrangements to Shaw Tree Services.

d) Traffic volumes

Summary of Issue

i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts

Many submissions highlighted their concern about an increase in traffic volumes in Palmerstown village arising as a result of the proposed no 80 bus service, the various infrastructure proposals, current and proposed building developments, the reconfigured junction operation proposals, and in particular the routing of traffic wishing to turn eastbound towards the city centre from Kennelsfort Road Lower through the east end of the village to exit at The Oval junction. A number of submissions highlighted the importance of considering the cumulative impact of significant current/ proposed developments in the wider community with some submissions questioning if they have been included in the assessment. The overall concern was that there would be severe traffic congestion.

ii. Impact on community

Concerns were also raised about the deterioration of the community in Palmerstown and residential enjoyment of the area as a result of the Proposed Scheme, asserting that the proposals will further sever the community which was divided since the construction of the R148 Palmerstown bypass dual carriageway. It is believed that access to facilities in Palmerstown village will now be even more restricted with these proposals.

Several submissions highlighted that much of the Palmerstown community is elderly, many have mobility and other difficulties, and there are other vulnerable members of the community; noting the Proposed Scheme will negatively impact the ability of the older/ more vulnerable population to move around the community, including by car.

One submission stated that currently it is difficult at busy times to turn left out of The Oval junction to get into the right turn lane for Palmerstown village. The submission asserts that the introduction of a pedestrian crossing and loss of the left turn slip will make this even more difficult to access services in Palmerstown village by private vehicle.

iii. Outbound lane destination change

8 submissions were concerned about the Palmerstown bypass outbound lane destination changes west of the Kennelsfort Road junction, noting the R148/ N4 is the main route from Dublin City to the west, misinterpreting the drawings as showing there would be the loss of a lane which would make congestion and pollution worse.

Response to issue raised

i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts

Traffic Volumes

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 6.4.6.2.8.3 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 Positive, Slight and Long-term whilst the impact of the redistributed general traffic along the surrounding road network will be Negligible."

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 Lucan to City Centre Core Bus Corridor Scheme is that there is a reduction of 4% in the number of people travelling via car along the R148 Palmerstown bypass/ Chapelizod bypass corridor towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 6% in the number of people travelling via car, as shown in Figure 2. 1.3.3.8 and Figure 2.1.3.3.9 (reproduced from diagrams 6.7 and 6.8 in Chapter 6). This will reduce the overall traffic movement along the R148 Palmerstown bypass/ Chapelizod bypass – City Centre corridor.

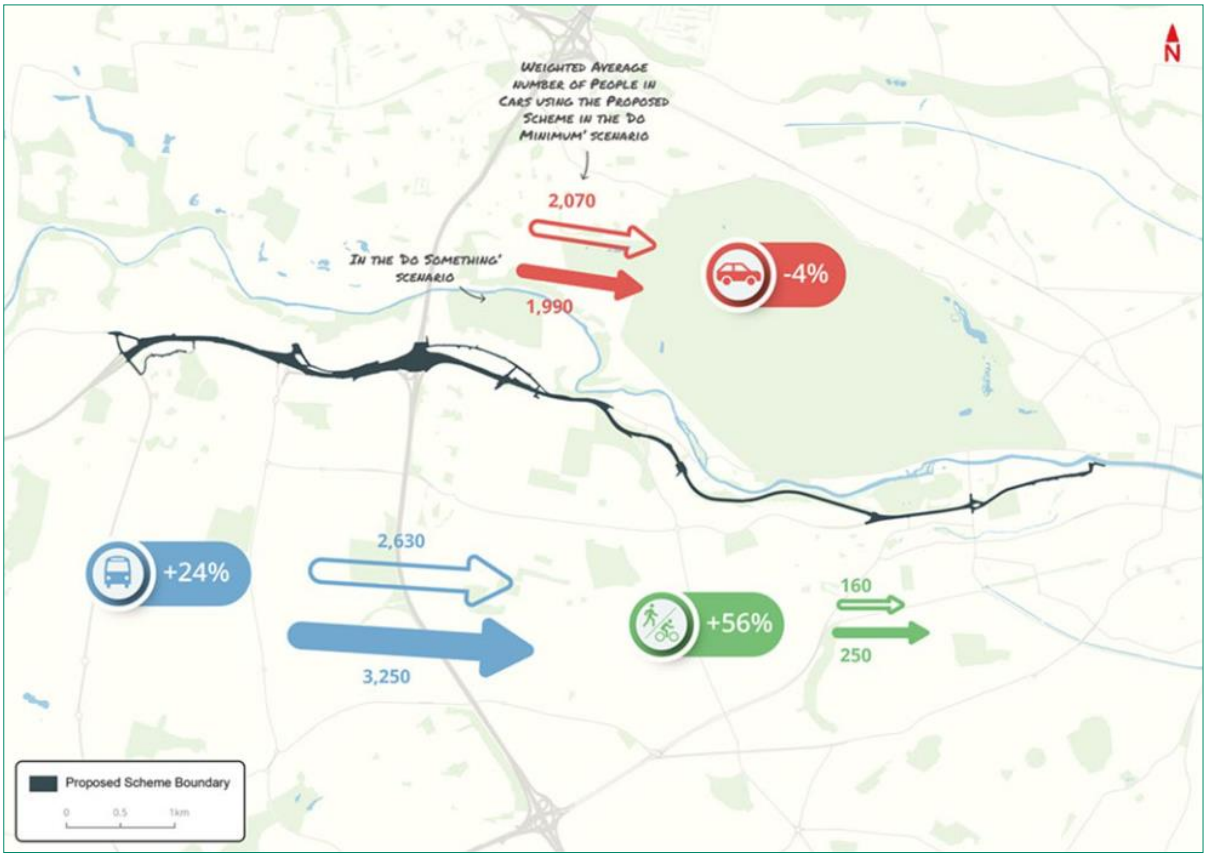


Figure 2.1.3.3.8: People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

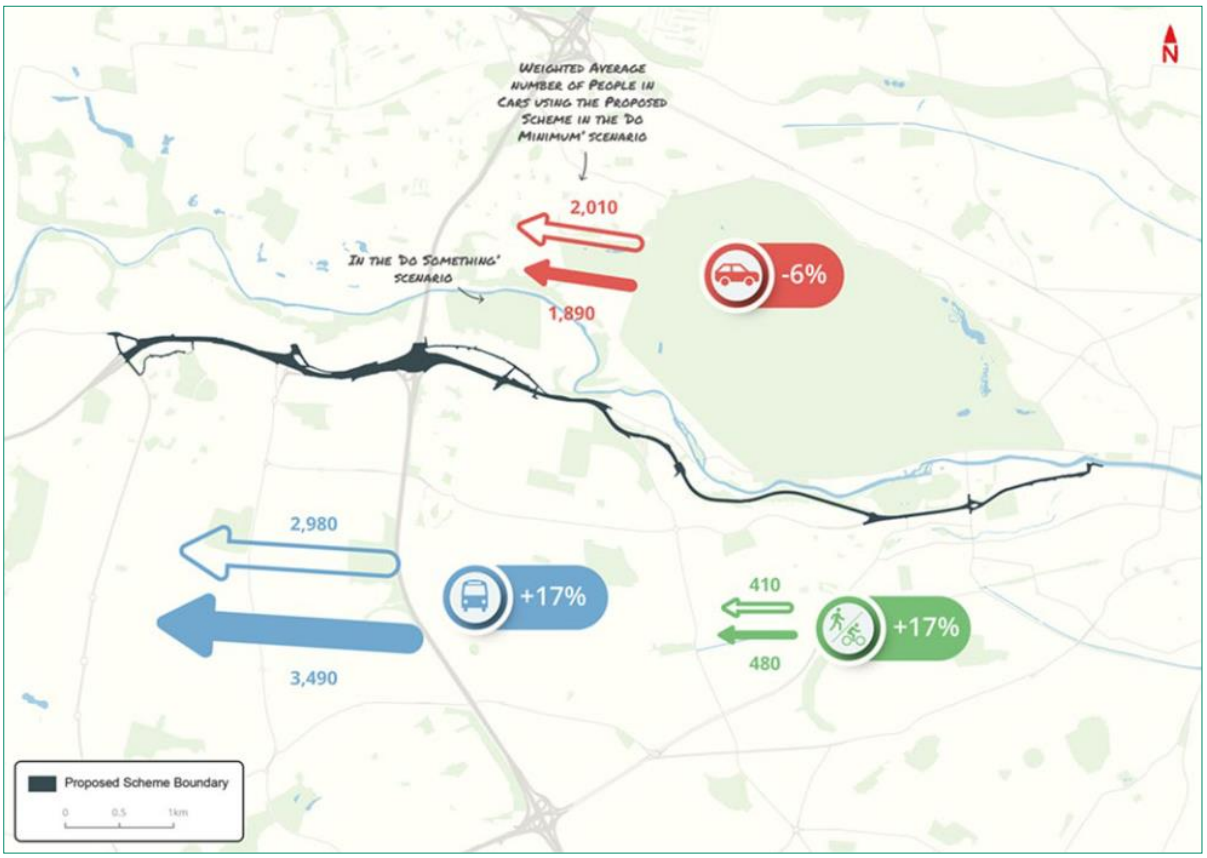


Figure 2.1.3.3.9: People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

Section 6.4.6.2.8.3 Chapter 6 Traffic and Transport of Volume 2 of the EIAR, which sets out the assessment of the impact on traffic and transport associated with the Construction and Operational Phases of the Proposed Scheme, shows that there are some reductions, and no significant increases, in general traffic flows along the direct study area in the 2028 AM peak hour,

Table 6.50 in Section 6.4.6.2.8.3 General Traffic Flow Difference – AM Peak Hour, outlines that there will be a reduction of 213 Passenger Car Units (PCUs) on the R148 at Kennelsfort Road & 108 PCUs at the Oval eastbound during the 2028 AM peak hour. See Figure 2.1.3.3.8 below which presents an extract of Table 6.50 of Chapter 6 of the EIAR:

Table 6.50: Road Links that Experience a Reduction of at least -100 Combined Flows during 2028 AM Peak Hour (Direct Study Area)

Section	Map I.D.	Road Name	Do Minimum Flows (pcu)	Do Something Flows (pcu)	Flow Difference (pcu)
Section 2 – M50 Junction 7 to R148 Con Colbert Road – Palmerstown Bypass and Chapelizod Bypass	A4	Lucan Road	847	726	-121
	A4	R112 Lucan Road at Chapelizod Village	916	799	-117
	A4	R148 East of Old Lucan Rd Jct	2,342	2,217	-125
	A4	R148 Eb Through M50 J7	2,245	2,055	-191
	A4	R148 Lucan Road Eb West Of Kennelsfort Road Lower	2,719	2,506	-213
	A4	The Oval	496	388	-108

Figure 2.1.3.3.8: General Traffic Flow Difference – AM Peak, Reduction ≥ 100 Combined Flows

This reduction in traffic flows is attributed to the Proposed Scheme and the associated modal shift as a result of its implementation. This reduction in general traffic flow has been determined as an overall Positive, Significant and Long-term impact on the direct study area.

For the 2028 PM peak hour, Table 6.55 Section 6.4.6.2.8.4 General Traffic Flow Difference – PM Peak Hour, outlines that there will be a reduction of 175 Passenger Car Units (PCUs) at the Oval northbound during the peak hour and no other decreases of ≥100PCUs. See Figure 2.1.3.3.9 below which presents an extract of Table 6.55 of Chapter 6 of the EIAR:

Table 6.55 Road Links that Experience a Reduction of at least ≥100 Combined Flows during PM Peak Hour (Direct Study Area)

Section	Map I.D.	Road Name	Do Minimum Flows (pcu)	Do Something Flows (pcu)	Flow Difference (pcu)
Section 2 – M50 Junction 7 to R148 Con Colbert Road – Palmerstown Bypass and Chapelizod Bypass	P4	The Oval	407	232	-175

Figure 2.1.3.3.9: General Traffic Flow Difference – PM Peak, Reduction ≥ 100 Combined Flows

As shown in Figure 2.1.3.3.10, Table 6.56 Section 6.4.6.2.8.4 identifies that there will be no increase of general traffic flows of at least 100 PCUs along the Palmerstown bypass during the 2028 PM peak hour, but there will be an increase of 113 PCUs eastbound and 121 PCUs westbound along the Chapelizod bypass.

Table 6.56 Road Links that Experience an Increase of at least +100 Combined Flows during PM Peak Hour (Direct Study Area)

Orientation	Map ID	Road Name	Do Minimum Flows (pcu)	Do Something Flows (pcu)	Flow Difference (pcu)
Section 2 – M50 Junction 7 to R148 Con Colbert Road – Palmerstown Bypass and Chapelizod Bypass	P4	R148 Chapelizod Bypass (Eb between the Oval and Con Colbert Road)	765	878	113
	P4	R148 Chapelizod Bypass (Wb)	1,869	1,990	121

Figure 2.1.3.3.10: General Traffic Flow Difference – PM Peak Hour, Increase ≥ 100 Combined Flows

As set out in Table 6.49 of Chapter 6 of the EIAR, a reduction in general traffic flows of fewer than 100 PCUs is considered 'Not Significant'. Furthermore, as outlined in Diagram 6.28, for an increase in

general traffic flows, only an increase of greater than 100 combined flows was considered for further assessment by way of a traffic capacity analysis on the associated junctions.

For the AM peak hour, the reduction in traffic flow on the Palmerstown bypass will contribute to efficient operation of junctions once the Proposed Scheme is implemented. Similarly, for the PM peak hour, the change in traffic flows of less than 100 PCUs per hour along the Palmerstown bypass and reduction in traffic flow on the Oval will also enable efficient operation of junctions.

In relation the to the specific concern about the traffic volumes along the eastern end of Old Lucan Road, Section 3.4.4.4 of EIAR Chapter 3 Reasonable Alternatives notes that a large number of submissions to the third round of public consultation raised concerns about potential traffic congestion at the Kennelsfort Road and The Oval junctions. In response to the concerns raised in the submissions, a number of design alternatives were considered.

Section 3.4.4.4 states that "*As part of the development of the detailed traffic modelling for the Proposed Scheme, further analysis of the two signalised junctions on the R148 Palmerstown bypass was undertaken. While both junctions were forecast to operate satisfactorily in the future year scenario, it was noted that the single lane exit from the village at the junction with The Oval would be operating particularly close to capacity. As such an alternative design was developed to provide a second lane for traffic exiting the village and provide additional capacity at the junction. Notwithstanding that this alternative increased the land take from the adjacent petrol filling station site, the operational benefits of the alternative design were considered to be such that this alternative design has been included in the Proposed Scheme*."

Cumulative Impact

Appendix A6.1 Transport Impact Assessment, in Volume 4 Part 2 of 4 of the EIAR provides a detailed assessment of transport impact of the Proposed Scheme. The Executive Summary, in describing the cumulative assessment, states: *"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."*

Section 4.3.1 of Appendix A6.1 describes the range of modelling tools developed as part of the assessment which sit within the framework of the NTA's Eastern Regional Model (ERM). The ERM has been used as the primary source for multi-model demand and trip growth and Table 4.2 of Appendix A6.1 identifies the NTA Forecast Planning data (for 2020, 2028 and 2040) as one of the key inputs.

Section 6.1.3.2 discusses future transport demand and sets out that:

"The transport demand changes for the 2028 and 2043 assessment years have been included in the analysis contained within this chapter, using travel demand forecasting, which accounts for increases in population and economic activity, in line with planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for the GDA local authorities.

It is envisaged that the population will grow by 11% up to 2028 and 25% by 2043 (above 2016 census data levels). Similarly, employment growth is due to increase by 22% by 2028 and 49% by 2043 (Source: NTA Reference Case Planning Sheets 2028, 2043). 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."

Section 7.2 provides details of the cumulative assessment for the operational stage and Section 7.2.3 states that:

"Cumulative transport demand for the 2028 and 2043 assessment years have been included in the analysis contained within this chapter, using travel demand forecasting, which accounts for increases in population and economic activity, in line with planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for GDA local authorities.

It is envisaged that the population will grow by 11% up to 2028 and 25% by 2043 (above 2016 census data levels). Similarly, employment is due to grow by 22% by 2028 and 49% by 2043 (Source: NTA Reference Case Planning Sheets 2028, 2043)."

At a local level, in terms of the cumulative impact on transport demand of significant current / proposed developments in the Palmerstown area, the future year travel demand associated with these

developments is included within the modelling as it is part of the planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for GDA local authorities.

In addition to the cumulative transport demand, Section 21.2 of Chapter 21 of the EIAR sets out the methodology adopted for the assessment of cumulative impacts. Section 21.2.2.1 lists the sources for identifying other relevant effects to be included in the cumulative assessment and notes that this included Local Planning Applications – those projects for which planning permission is applied for through the local planning authorities themselves and were identified from local authority planning application lists, and Strategic Housing Developments (SHD) – housing developments of a certain type and scale (e.g., 100 or more houses or student accommodation units) for which applications are lodged directly with An Bord Pleanála.

Figure 21.2 included in EIAR Volume 3 Part 3 of 3 shows the planning applications and other projects within 500m of the Proposed Scheme which were included in the cumulative assessment, see Figure 2.1.3.3.11 below, from which it can be seen that the SHD under construction in Palmerstown is included along with the permitted expansion of the Palmerstown Lodge Hotel.

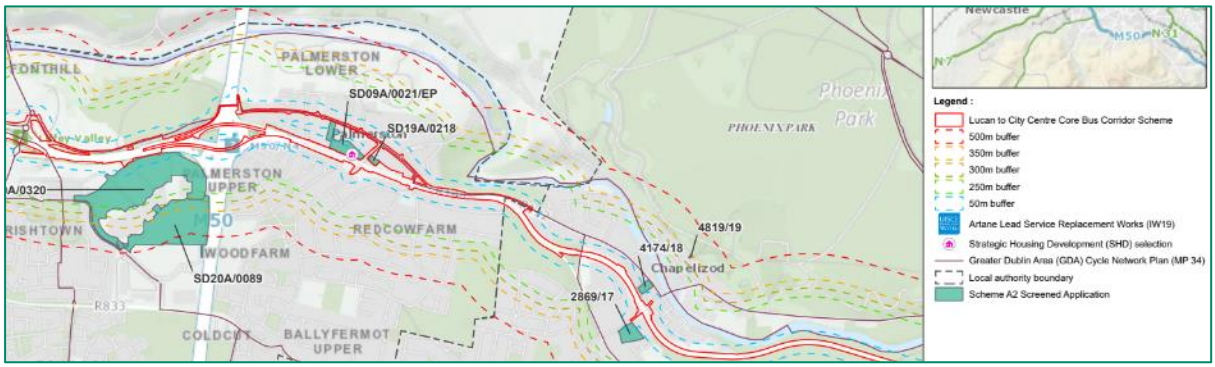


Figure 2.1.3.3.11 Extract from EIAR Figure 21.2 Cumulative Effects: Shortlisted Planning Applications and other Projects within 500m

Section 21.3.2.1. of EIAR Chapter 21 Cumulative Impacts provides a summary of the cumulative impacts on Traffic and Transport, noting that a detailed assessment of this is set out in Appendix A6.1 in Volume 4 of the EIAR (Traffic Impact Assessment Report). This summary states the following:

"The analysis indicates that with the 12 Core Bus Corridor schemes in place, there will be a significant positive impact on sustainable mode share. Cumulatively, the 12 Core Bus Corridor schemes, while supporting less congested bus based public transport and cycling movement, will also act as a constraint to increasing private car traffic within the study area, with the assessment indicating a reduction in car trips below 2020 (Pre-COVID19) levels.

In the 2028 Opening Year AM Peak Hour scenario with the Proposed Scheme and the other 11 Core Bus Corridor 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 Operational Cumulative 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.

Overall, 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 alignments, 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."

ii. Impact on Community

Section 10.4.4.1.1 of Chapter 10 Population of Volume 2 of the EIAR, considers operational phase community amenity impacts and notes the following:

- Community amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.1.1.
- Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from a reduction on general traffic flows along the Proposed Scheme and a Negligible impact from redistributed traffic along the surrounding road network.
- Chapter 7 (Air Quality) identified a Neutral, Not Significant and Long-Term impact on local human receptors from road traffic impacts during the Operational Phase.
- Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible, Short to Medium Term to Negative, Slight, Short to Medium-Term impact from traffic noise along both the Proposed Scheme and in the surrounding roads.

These environmental impacts have been considered together to identify if there will be an in-combination of impacts acting upon the same community facilities. The assessment concluded that these residual air quality, noise, traffic and visual impacts will combine to create a Negative, Slight and Long-Term impact on all receptors located between the M50 Junction 7 and Con Colbert Road, this includes along the Palmerstown bypass. However, it is acknowledged that the majority of community facilities along this stretch of the Proposed Scheme are sheltered by trees, and therefore do not have direct views of the visual impacts and are only likely to experience the noise impacts. (Noise impacts are discussed in section 2.1.3.7 on page 53 of this report.)

It is also noted that the enhanced pedestrian and cyclist facilities provided across the R148 Palmerstown bypass as part of the Proposed Scheme will improve the connectivity for the wider community. Overall, the Palmerstown community area is expected to experience a Negative, Not Significant and Long-Term impact.

iii. Outbound lane destination change

Section 4.5.2.1 of Chapter 4 of Volume 3 of the EIAR notes the following regarding the signage strategy and lane provision on the N4/ R148 Palmerstown bypass:

"In the westbound direction, a bus lane and two general traffic lanes are proposed, with the lane designation amended to separate earlier the general traffic heading toward the M50 and the N4 Lucan Road westbound. This arrangement will allow for a continuous westbound bus lane from the Kennelsfort Road junction and through the M50 interchange."

Figure 2.1.3.3.14 provides an extract of the General Arrangement Drawings from Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR showing the arrangement West of Kennelsfort Road Junction. Also shown is an aerial image of the existing lane arrangement. Heading towards the M50, immediately west of the junction there are two lanes for general traffic in the existing arrangement and also two lanes in the proposed layout. The only change is that destinations are applied earlier to improve the efficiency of the link approaching the M50 junction and to allow for a continuous westbound bus lane. The nearside lane is marked for M50 traffic and this weaves with the proposed bus lane.

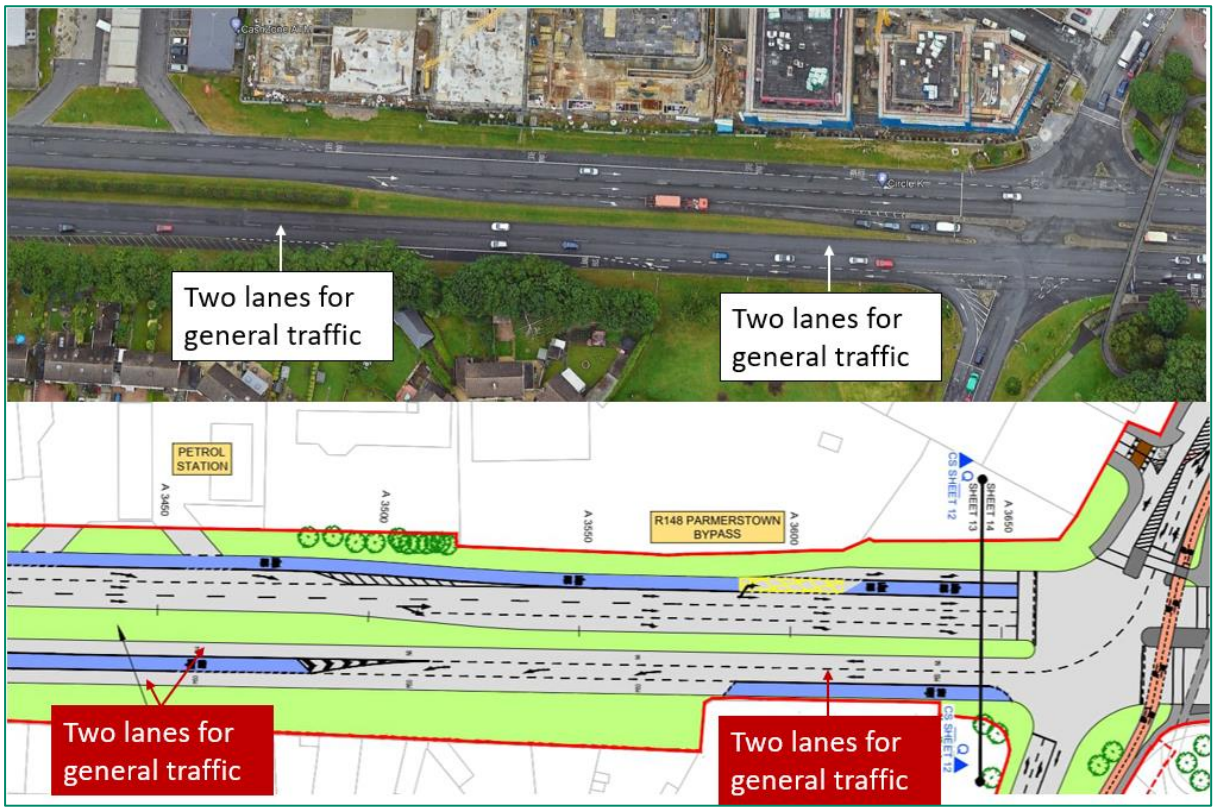


Figure 2.1.3.3.14: Extract of General Arrangement Drawings showing the arrangement West of Kennelsfort Road Junction and aerial image of existing arrangement (Image Source: Google)

The submissions made in respect of this section of the Proposed Scheme appear to have misinterpreted the drawings as showing there would be the loss of a lane for general traffic at this location, leading concerns about congestion and air pollution. However, as the two existing lanes for general traffic are retained.

The safety implications of the Proposed Scheme have been considered by the designer and 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 outbound link between Kennelsfort Road and the M50, in the Road Safety Audit.

2.1.3.4 Loss of parking/ parking provision

Summary of Issue

A number of submissions have raised concerns with the proposed provision of the new two-way cycle track on the north side of Old Lucan Road achieved by narrowing the carriageway, has resulted in the loss of much needed car parking that will impact residents and businesses. Many of these submissions express the view that there is no need for the cycle track as Old Lucan Road is a very safe cycling environment, or cyclists will stay on the R148 Palmerstown bypass as it is more direct.

One submission has stated that the loss of parking spaces is not adequately described in Section 4.5.2.1 of Chapter 4 General Scheme Description and drawings.

Another submission has queried the car parking assessment Option Analysis Table 3-9 of the Preliminary Design Report Appendix G Parking Survey Report, stating that the assessment is not a scientific analysis of the situation, on the basis that while it does say "*there is a significant amount of informal parking on the southern side of Old Lucan Road*", it doesn't say whether there is sufficient parking to cater for existing demand or to cater for immediate future developments that will likely impact on extent and availability of informal parking on Old Lucan Road.

A number of observers have commented that there is no informal parking along the route. All off road parking along Old Lucan Road is private.

a) Old Lucan Road between M50 and Kennelsfort Road

A number of submissions raised concerns for attendees at church services/ funerals, customers of commercial premises, visitors to private dwellings and the unknown impact of visitors to the Strategic Housing Development that is under construction currently.

Regarding the car parking Option Analysis discussed above, a number of observers have commented that there is no informal parking along the route, advising parking at the church, Mr Price and Aldi is not suitable for the general public.

A number of businesses raised concerns about the impact on their businesses of removing public parking along the north side of Old Lucan Road, noting that many businesses have limited customer parking, with submission from Palmerstown House noting their staff have to park on old Lucan Road, as do many of their customers. They also note the parking spaces at Palmerstown House are owned by The Fitzgerald Group are for customers of Palmerstown House only.

b) Old Lucan Road between Kennelsfort Road and The Oval

A number of submissions raised concerns over the loss of parking at the eastern end of the village noting it will impact many residents in some areas that have to park on the road, and the ability to visit business in the village centre. Specific cases are referenced of elderly blue badge holders not now able to park outside their home,

One submission alleges there is an incorrect statement in the report to the effect that "*all properties along Old Lucan Road have off street parking*." The submission notes that Red Cow Cottages have no option other than to park on the road.

Several submissions were very concerned about the inclusion of perpendicular parking on the south side of the road, adding that it was against public bye-laws and sensible driving, and would be more difficult to use for elderly residents and users of Stewarts Care.

Another submission welcomed the proposed additional parking at Red Cow cottages and also the elimination of parking of trucks, buses and other heavy vehicles along the wall of Stewarts Care.

A submission advised the accessible parking space outside no. 8 Red Cow Cottages is not required.

Another submission noted customers of The Coach House Café and Craft Shop at the corner of Mill Lane need the accessible parking space outside no. 2 Clarkeville Terrace, Old Luan Road which is due to be removed in the proposed scheme.

Response to issues raised

In relation to the proposed removal of parking on Old Lucan Road between M50 and R148 Palmerstown bypass, Section 6.4.6.1.3.4 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR, sets out the impact on parking and loading within this section of the Proposed Scheme. The following is noted in this regard:

a. Old Lucan Road between M50 and Kennelsfort Road

Section 4.5.2.1 of Chapter 4 Proposed Scheme Description describes the proposals at this location as follows: "*A segregated two-way cycle track is proposed to run along the north side of the Old Lucan Road from the foot / cycle bridge crossing the M50, all the way through Palmerstown village connecting to the existing pedestrian priority zone at the start of the R148 Chapelizod bypass.*"

"The cycle track will be accommodated within the existing road space on the Old Lucan Road, with the lanes for general traffic being narrowed and traffic calmed to reflect the existing 30km/hr speed limit. Several lengths of informal parking will be lost along the northern side of the Old Lucan Road between the M50 and Kennelsfort Road Lower where the two-way cycle track is provided.

Section 6.4.6.1.3.4 of EIAR Chapter 6 Traffic and Transport reports on the assessment of the impact that the Proposed Scheme will have on parking and loading at this location and states: *"There is currently space for approximately 194 vehicles to park informally on Old Lucan Road between the M50 interchange and Palmerstown Village (Kennelsfort Road Lower). All of the 108 spaces on the north side of the road will be removed to accommodate a proposed 3m-wide, 2-way, cycle track to the north of the road. Double-yellow lines will be introduced to prevent any vehicles parking on the kerb and partially blocking the cycle track. All of the existing informal and paid parking spaces on the south of the road will be retained. The residential properties in this area all have private driveways, and the spaces that will be lost are not associated with any specific residential or commercial properties. The overall impact at this location is considered to be Slight."*

As stated, all of the existing informal and paid parking on the south side of this section of Old Lucan Road will be retained. In respect of St Philomena's church, it is noted that west of the church informal parking on Old Lucan Road will still be permitted for the full length of Old Lucan Road.

In respect of the section of Old Lucan Road in the vicinity of Palmerstown House, it is noted that parking on the north side of the road is prohibited in the existing situation, which will also be the case with the Proposed Scheme. No changes are proposed to the parking arrangements on the south side of the road.

The NTA are satisfied that the impact on parking has been appropriately assessed and that the overall impact at this location is considered to be slight.

b. Old Lucan Road between Kennelsfort Road and The Oval

In respect of this section of Old Lucan Road, Section 6.4.6.1.3.4 states: "*There are currently 18 permit / pay & display spaces and one disabled space on Kennelsfort Road Lower. The 16 spaces on the west side of the road will be retained. The three pay and display spaces, and one disabled space on the east side of the road will be removed to allow provision of a 3.0m wide, two-way, cycle track running from Lucan Old Road across R148 Palmerstown Bypass, to Kennelsfort Road Upper. The overall impact at this location is considered to be Slight.*"

"Between Palmerstown Village and R148 Palmerstown Bypass, there are currently 62 permit / pay & display spaces on Lucan Old Road, which are located in parallel bays to both the north and south of the road. There are also two disabled spaces on the north kerb in this section. These spaces are likely to be used by local residents, and those accessing local businesses. Under the proposals, all of the 29 spaces on the north side of Old Lucan Road would be removed to allow provision of a 3.0m wide, two-way, cycle track alongside the northern footpath. Private properties and business on the north side of the road, between Kennelsfort Road Lower and Mill Lane, have off-street parking available, comprising approximately seven parking spaces. All but one of these residential properties has a private driveway, and the two businesses (Ulster Bank and the Coach House) have private car parks. 14 additional spaces, including one disabled space, are proposed to be created on the south side of the road by converting some of the existing parallel parking to perpendicular spaces, and narrowing the footway. In total this would allow for the provision of 47 spaces, plus two accessible spaces. The overall loss of parking in this location would be 15 permit / pay & display spaces. The overall impact at this location is considered to be Slight."

It should be noted the EIAR Chapter 6 text above only refers to *"private properties and business on the north side of the road, between Kennelsfort Road Lower and Mill Lane, have off-street parking available";* the EIAR correctly reports that Red Cow Cottages do not have off-street parking.

Section 3.4.4.4 of EIAR Chapter 3 Reasonable Alternatives described the design alternatives considered in response to the submission made on the second and third round of public consultations concerning the proposed two-way cycle tracks along the north side of the Old Lucan Road in Palmerstown.

Section 3.4.4.4 notes that a large number of submissions to the third round of public consultation raised concerns about the loss of parking and that in response to the concerns raised in the submissions *"alternative design proposals were considered along Old Lucan Road east of the village centre with a view to reducing the number of on-street parking spaces lost in this part of the village. The design alternatives focused on the reallocation of the available road space width while still providing the new two-way cycle track and the new bus stops in the vicinity of Mill Lane. It was concluded that the new cycle facilities should remain along the north side of the road to allow the retention of parking spaces on the south side where the higher number of residential properties without off-street parking spaces are located. In view of the relatively wide road space on this section of carriageway an alternative proposal was developed to provide parking bays perpendicular to the carriageway. The design was prepared in accordance with the Design Manual for Urban Roads and Streets and allowed the inclusion of an additional 19 car parking spaces compared to the draft Preferred Route Option, while retaining the two-way cycle track and the new bus stops. This design alternative has been included in the Proposed Scheme and of the 62 existing on-street car parking spaces along this section of Old Lucan Road the number that will be lost as a result of the Proposed Scheme has been reduced from 33 to 14."*

In respect of the proposed perpendicular parking spaces proposed, "DMURS" is The Design Manual for Urban Roads and Streets (Government of Ireland 2013) and is the key design guidance relevant for the Proposed Scheme. Section 4.4.9 of DMURS relates to the provision of parking in an urban

environment. It states, "*Perpendicular or angled spaces may be provided in lower speed environments such as Local streets. They may be applied more generally in Centres to cater for increased demands around shopping areas.*" The layout of the proposed perpendicular parking has been designed in accordance with DMURS. It is also noted that there is a section of existing perpendicular parking in the village on Kennelsfort Road Lower.

Accessible Parking

The proposed accessible parking space outside no. 8 Red Cow Cottages is proposed to replace the accessible parking space outside no. 2 Clarkville Terrace which needs to be removed to provide the two-way cycle track, see Figure 2.1.3.2.17. The proximity of the relocated accessible parking space to the proposed pedestrian crossing will ensure customers of The Coach House Café requiring accessible parking will not be discommoded.

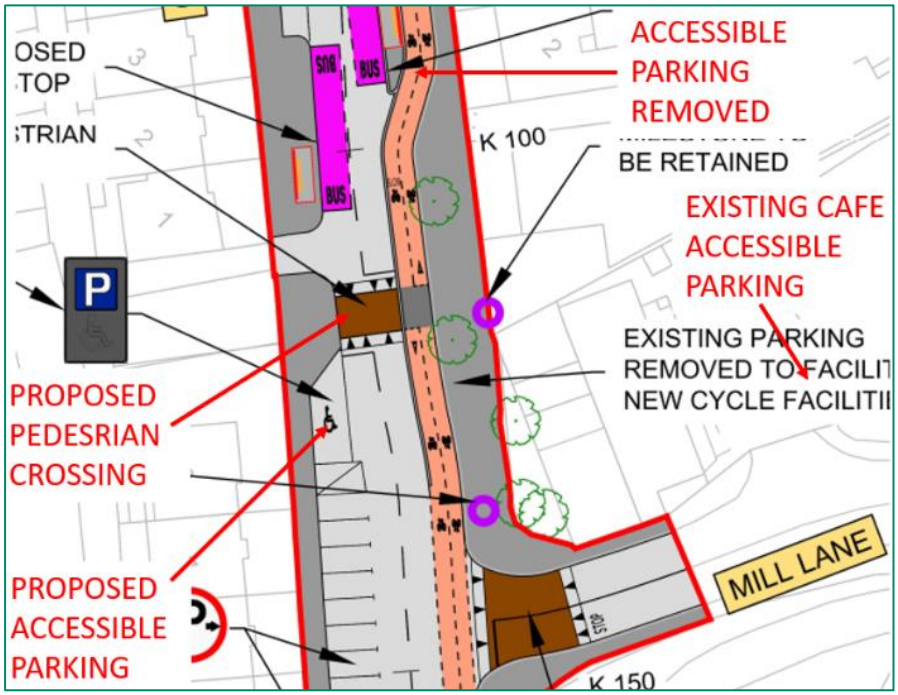


Figure 2.1.3.4.1: Extract of General Arrangement Drawings showing the proposed accessible parking at no. 8 Red Cow Cottages

2.1.3.5 Proposed cycle track

Summary of Issue

a) Need for two way cycle track

A number of submissions state that there is no need for the proposed two-way cycle track on the north side of Old Lucan Road and believe that the impact on the village cannot be justified. They assert that the Old Lucan Road is a very safe cycling environment with no recorded accidents.

b) Belief that cyclists will stay on the R148

Some submissions believe cyclists will stay on the R148 Palmerstown bypass west of The Oval Junction and other submissions believe cyclist will stay on the R148 Chapelizod Bypass asserting that it is a more direct route to the city centre. Several note there are no measures in the Proposed Scheme to encourage cyclists to use the new facility when leaving the city centre.

c) Alternative cycle routes

Seven submissions proposed an alternative cycle route through the old Fassenbridge Garage site (opposite the Old Beehive) and into the SHD apartment development.

d) Deficient existing M50 pedestrian/cycle bridge width

Submissions 31 and 71 expressed the view that the existing pedestrian/ cycle bridge over the M50 is not wide enough to provide a pedestrian and two way cycle facility.

e) Need for a cycle bridge over R148

Several submissions highlighted that drivers regularly break the lights at the Kennelsfort Road junction and suggest a cycle bridge be provided at this location to complement the existing pedestrian bridge.

f) Contra-flow cycle track

Some submissions expressed the view that the two way cycle path as proposed is not safe as the cycling will be contra-flow to the general traffic, adding, with the general traffic increasing in volume and with no obvious separation of cycle path from the carriageway it is perceived to be a hazardous situation.

g) Alternative for one way cycle lanes on Kennelsfort Road Lower

Other submissions note that the existing cycle lanes on Kennelsfort Road Upper are on both sides of the road and that this changes into the two way cycletrack on side of the Kennelsfort Road Lower. It is suggested in the submission that the cycle path on the Kennelsfort Road Lower should follow the Kennelsfort Road Upper configuration.

Response to issues raised

a. Assertion that the cycle track is not needed

As stated in Section 1.2 of EIAR Chapter 1 Introduction, one of the objectives of the Proposed Scheme is to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

Section 2.2.1.3 of Chapter 2 of Volume 2 of the EIAR, Need for the Scheme, sets out The GDA Cycle Network Plan was adopted by the NTA in early 2014 following a period of consultation with the public and various stakeholders. This plan forms the strategy for the implementation of a high quality, integrated cycle network as set out in the GDA Transport Strategy.

Section 2.2.1.3 also highlights that Primary Cycle Route 6 follows the route of the Proposed Scheme from Lucan to the western end of the Chapelizod bypass. Figure 2.3.5.1 reproduces Image 2.1 of Chapter 2, highlighting the section of Primary Cycle Route 6 that runs along Old Lucan Road in Palmerstown.

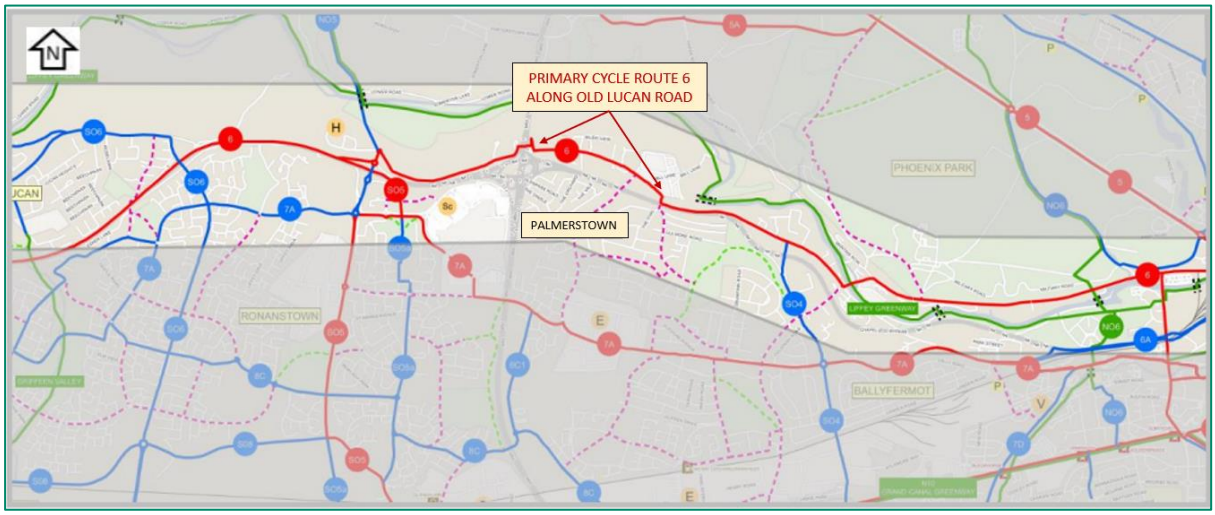


Figure 2.1.3.5.1: Image 2.1 of EIAR Chapter 2 (Extract from GDA Cycle Network Plan) Highlighting the Section of Primary Cycle Route 6 along Old Lucan Road

Section 3.4.1.1.1 of Chapter 3 of Volume 2 of the EIAR, Reasonable Alternatives, describes how consideration was given to alternative cycling route options at Draft Preferred Route Option Stage for the section of the Proposed Scheme from the N4 Junction 3 to Palmerstown.

Section 3.4.1.1.1 states:

"Between the N4 Junction 3 and Old Lucan Road towards Chapelizod the EPR proposed one-way cycle tracks along the N4 between Junction 3 and Junction 2, with a Quiet Street along Old Lucan Road either side of the M50. The public consultation raised concerns around the stop-start nature of the cycle tracks, which would form part of Primary Cycle Route 06."

Section 3.4.1.1.1 states that in the EPR *"East of the M50 the cycle route continues along the Old Lucan Road as a proposed Quiet Street and runs through Palmerstown village to the start of the R148 Chapelizod Bypass. Here it connects to the existing Pedestrian Priority Zone running parallel to the R148 (separated by a verge) and continues downs the R112 Lucan Road towards Chapelizod village. Westbound, from the start of the Chapelizod bypass the route runs along the Old Lucan Road as a proposed Quiet Street through Palmerstown village to the shared pedestrian / cyclist bridge over the M50."*

Section 3.4.1.1.1 continues*: "East of the M50 the option continues as a segregated two-way cycle facility along the northern side of Old Lucan Road, running through Palmerstown village before connecting to the existing Pedestrian Priority Zone at the start of the Chapelizod Bypass. At this point Primary Cycle Route 06 deviates from the BusConnects corridor and continues down the R112 towards Chapelizod village.*

Finally, Section 3.4.1.1.1 confirms that *"the provision of the two-way cycle track was identified as the draft Preferred Route Option as it was considered to provide improved integration (as part of Primary Cycle Route 06), accessibility and safety compared with the EPR."*

It is noted that for the section of the two-way cycle track along the Old Lucan Road the facility is being provided entirely via the reallocation of existing road space. The cycle track will provide the appropriate standard of facility for the Primary Route 6 and will connect the communities along it which are currently have no segregated facilities.

In summary the two-way segregated cycle-track on the north side of the Old Lucan Road at this location is the optimum solution for the routing for the GDA Cycle Network Plan Primary Cycle Route 6 as part of the Proposed Scheme and contributes significantly to achieving the stated scheme's objective in relation to providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

b. Belief that cyclists will stay on the N4 / R148 Palmerstown Bypass / Chapelizod Bypass

In relation to the concern that westbound cyclists will stay on the R148 Palmerstown Bypass, it is noted that from Palmerstown in order for cyclists to avoid having to negotiate the M50 interchange to reach the N4 they avail of the existing cyclists/pedestrian bridge over the M50 which connects the two sections of Old Lucan Road on either side of the M50. As noted in Section 6.2.3 of the Preferred Route Option Report, provided as part of the Supplementary Information, for cyclists heading in a westerly direction, the proposed two-way cycle-track along Old Lucan Road provides a direct route from the R112 Lucan Road in Chapelizod via Palmerstown to the R835 Lucan Road / R136 Ballyowen Road junction at Junction 3 of the N4 west of the M50.

It is also noted that the proposed two-way cycletrack along Old Lucan Road involves reallocation of existing road space and will provide a segregated facility within the existing 30km/hr zone serving the community including the significant adjacent residential areas. This will achieve the stated scheme's objective in relation to providing safe infrastructure for cycling, segregated from general traffic wherever practicable and provide a more attractive, safe and convenient route for westbound cyclists than remaining on the R148.

East of Palmerstown, Section 6.2.3 of the Preferred Route Option Report notes that at the start of the Chapelizod bypass Primary Cycle Route 06 deviates from the route of the Proposed Scheme and continues along the R112 towards Chapelizod village. Section 6.23 also notes that the remaining section of Primary Cycle Route 06 to the city centre will be developed separately and is not part of the Proposed Scheme. As shown in the GDA Cycle Network Plan Primary Cycle Route 06 continues through Chapelizod village, where it crosses the River Liffey and runs along R109 Chapelizod Road / Conyngham Road / Parkgate Street to Frank Sherwin bridge at Heuston station. In comparison to utilising the R148 Chapelizod Bypass from the city centre, Primary Cycle Route 06 will provide a direct cycle facility along roads with lower speeds.

In order to facilitate continuous bus priority on the bus lanes along the R148 Chapelizod Bypass, the existing westbound and eastbound shared cycle / bus lanes will become bus only as part of the Proposed Scheme, as noted in Table 4-2 of the Preliminary Design Report, provided as part of the Supplementary Information. This revised arrangement is shown on the Traffic Signs and Road Markings drawings BCIDA-ACM-TSM_GA-0006_XX_00-DR-CR-9001 from Figures: Part 1 of 3 of Volume 3 of the EIAR, see extract from Traffic Signs and Road Markings drawings below in Figure 2.1.3.5.2. As such cyclists will not be permitted to continue on the R148, with the Primary Cycle Route 06 providing the direct route for cyclists between Palmerstown and the city centre.

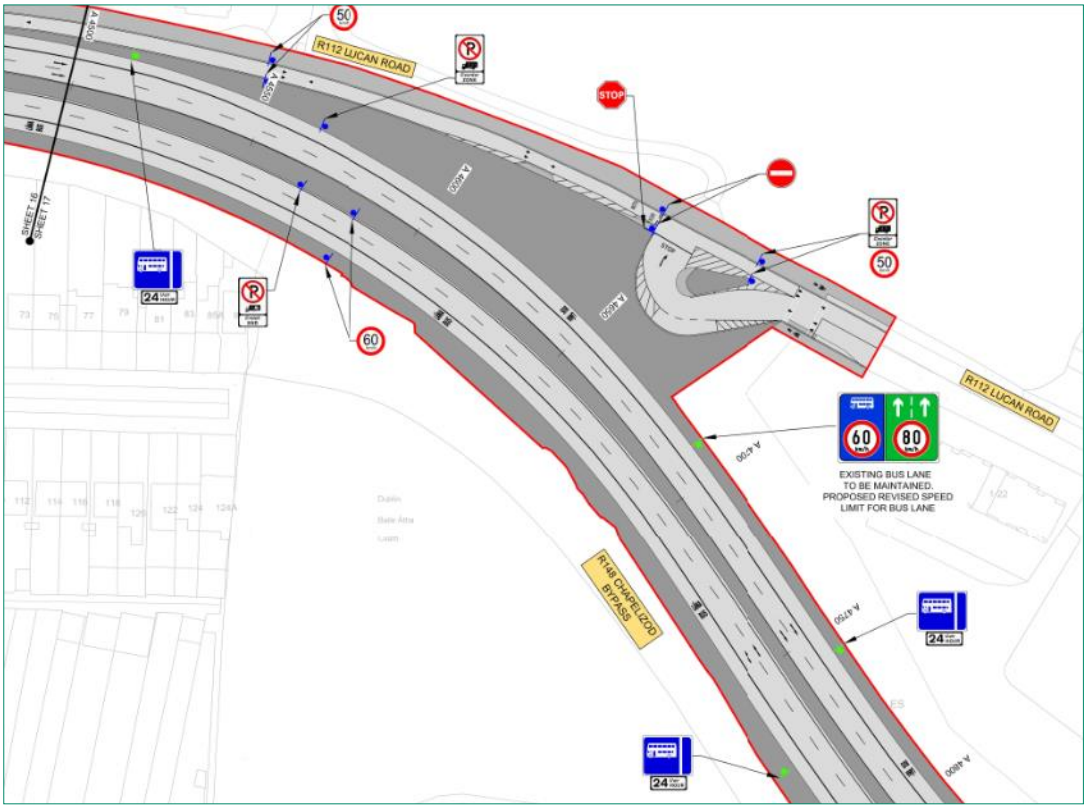


Figure 2.1.3.5.2: Extract from Traffic Signs and Road Markings Drawings

c. Alternative cycle routes

The submissions propose an alternative route for the Primary Cycle Route diverting off the Old Lucan Road at the old Fassenbridge Garage site (opposite the Old Beehive) and into the SHD development. However, it is unclear where the route should continue to after exiting the SHD, although it would be reasonable to assume it would continue along the Palmerstown bypass to connect with the shared area past the Applegreen petrol station at The Oval Junction, see Figures 2.1.3.5.3 and 2.1.3.5.4.

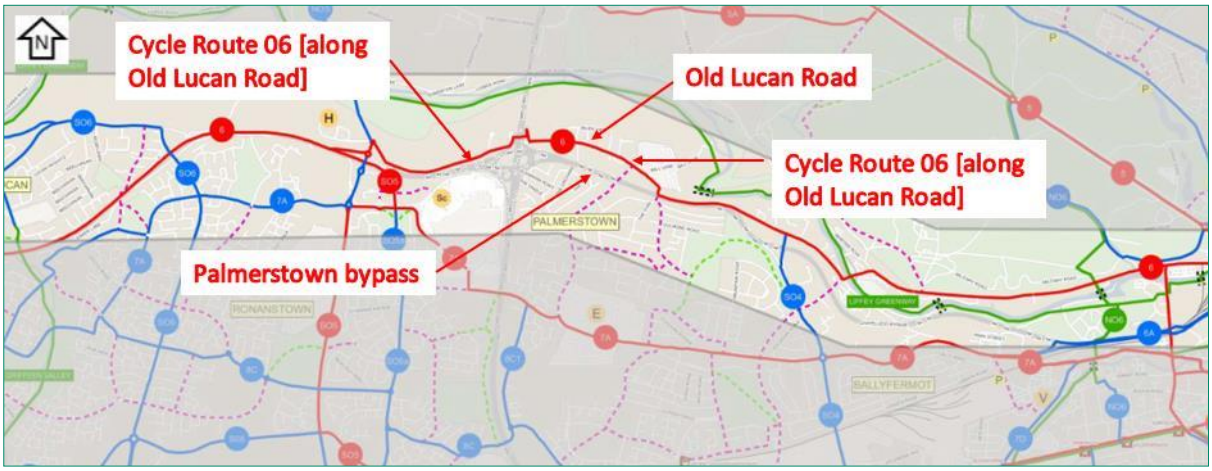


Figure 2.1.3.5.3: Extract from GDA Cycle Network Plan included as Image 2.1 in Chapter 2 Need for the Proposed Scheme in Volume 2 of the EIAR

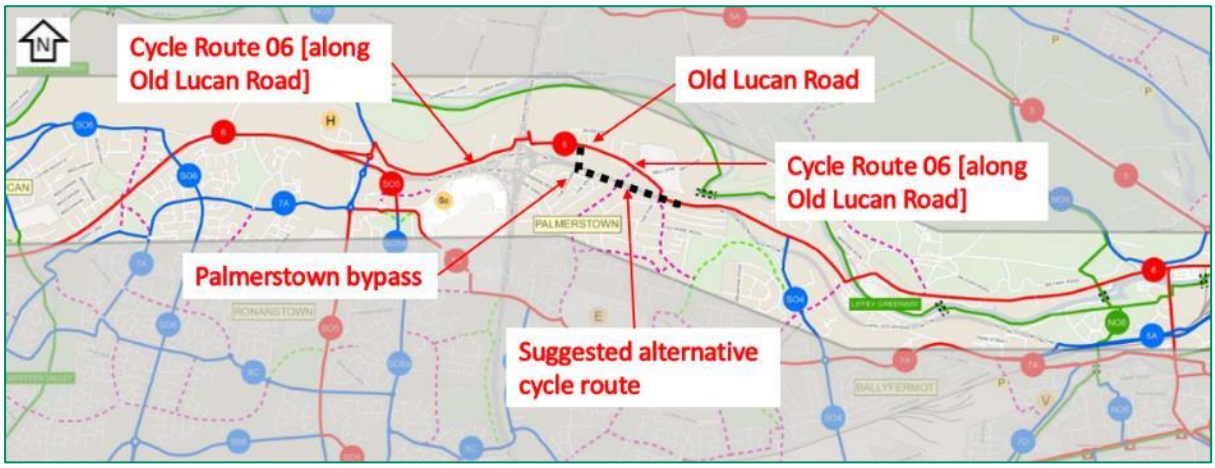


Figure 2.1.3.5.4 Extract from GDA Cycle Network Plan included as Image 2.1 in Chapter 2 Need for the Proposed Scheme in Volume 2 of the EIAR with suggested alternative cycle route shown

As stated in Section 1.2 of EIAR Chapter 1 Introduction, one of the objectives of the Proposed Scheme is to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

This alternative proposal does not meet the objectives of the GDA Cycle Network Plan, as it would require significant public and private commercial land take, potentially affect the viability of impacted businesses and development potential of residual commercial land, and permanent loss of c. 400m of a 3.75m [including buffer – refer to National Cycle Manual width calculator] wide strip of green space.

The Proposed Scheme proposal to reallocate existing road space on Old Lucan Road will provide a segregated two-way cycle track facility within the existing 30km/hr zone serving the community including the significant adjacent residential areas. This is the optimum solution that meets the objectives of both the GDA Cycle Network Plan and the Proposed Scheme.

d. Deficient existing M50 pedestrian/cycle bridge width

Some submissions queried the width of the existing pedestrian / cyclist bridge over the M50. As highlighted in Section 4.5.1.2 and Table 4.3: Reduced Standard Cross Sections on Section 1 – N4 Junction 3 to M50 Junction 7 of EIAR Chapter 4 Proposed Scheme Description, and replicated below in Figure 2.1.3.5.5.

Table 4.3: Reduced Standard Cross Sections on Section 1 – N4 Junction 3 to M50 Junction 7

Location: Road Name	Chainage	Design Speed	Description of Departure	Standard Required	Departure Justification
M50 bridge - Inbound	I625-I883	n/a	Cycle track width = 1.5-2.5m	Cycle Track Width = 2.65m	Existing bridge/conditions are to be retained. Significant works would be required to facilitate widening of existing bridge to meet NCM requirements.

Figure 2.1.3.5.5: Extract of Table 4.3 of EIAR Chapter 4 Proposed Scheme Description

The Proposed Scheme does not include any works to the existing bridge as significant works would be required to facilitate widening of existing bridge to meet the desirable minimum requirements. The NTA is satisfied that a departure from the desirable minimum standards is justified at this location.

e. Need for cycle bridge over R148 at Kennelsfort Road

Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description describes the proposals as follows: *"a new segregated two-way cycle track is proposed along the east side of Kennelsfort Road Lower resulting in the loss of a small number of pay and display parking spaces and resulting in the need for a small area of land acquisition from the frontage of the numbers 20 and 22 (the Palmerstown Lodge hotel). The proposed two-way cycle track crosses the R148 Palmerstown bypass via the new signalised cycle crossing on the east side of the junction described above and ends at a new Toucan Crossing on Kennelsfort Road Upper to provide a connection to the existing cycle lanes."*

Figure 2.1.3.5.6 shows the relevant extract from the General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.

Figure 2.1.3.5.6: Extract of Proposed Scheme General Arrangement Drawings for Kennelsfort Road

In order to provide a cycle bridge at this location space constraints dictate that a looped arrangement would be required similar to the layout of the existing pedestrian bridge at this location. Such an arrangement would increase the distance travelled by cyclists and would provide a far less attractive alternative for cyclists compared to the signalised two-way cycle track crossing included in the Proposed Scheme at this location, with a risk of cyclists seeking to cross the R148 dual carriageway at-grade, as currently happens with pedestrians.

The Proposed Scheme provides the optimum solution for cyclists at this location.

f. Contra-flow cycle track

Contra flow/ Cycle on left

Section 5 of Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR notes the following in relation to the proposed use of a contra-flow / cycle on the left regime:

"The preferred arrangement for a two-way cycle track is for cyclists to 'cycle on the left'. This is contrary to the current guidance provided in the National Cycle Manual, which recommends that the with-flow cyclist be placed closest to traffic to reduce relative speeds (i.e. a 'cycle on the right' regime). Notwithstanding this, a 'cycle on the left' regime is considered best practice in terms of legibility and has been successfully implemented on a number of projects in Ireland to date (e.g. Grand Canal Cycleway, Royal Canal Cycleway and S2S at Clontarf). In certain circumstances, it may be preferable to switch to a 'cycle on the right' regime approaching or at interchanges, and/or junctions to accommodate transitions from a two-way cycling regime to a single direction cycling regime."

The proposed arrangement is in accordance with the PDGB. It is also noted that Old Lucan Road is a low speed environment with a 30km/hr limit.

Section / separation from traffic

The preferred typical footway/ cycle track cross section is in accordance with Figure 8 Appendix A4.1 PDGB (replicated in Figure 2.1.3.5.7 below) and detailed on typical cross section drawings on sheets 8 & 10 of 23 of BCIDA-ACM-GEO_CS-0006_XX_00-DR-CR-9001 Volume 3 Part 1 of 3 of the EIAR.

Figure 2.1.3.5.7: Figure 8 Appendix A4.1 Preliminary Design Guidance Booklet (PDGB)

The proposed arrangement is in accordance with the PDGB.

g. Alternative for one way cycle lanes on Kennelsfort Road Lower

As noted in Section 3.3.4.4 of EIAR Chapter 3 Reasonable Alternatives, the draft Preferred Route Option in Palmerstown presented at the second and third round of public consultations included a two-way cycle track along the east side of Kennelsfort Road Lower, with an associated pedestrian / cyclist crossing of the R148 Palmerstown Bypass dual carriageway. This varied from the proposed arrangement of the Emerging Preferred Route displayed at the first round of public consultation, see Figure 2.1.3.5.8, which provided the continuation of the existing cycle lanes on Kennelsfort Road Upper, which is the alternative proposal suggested by the submissions.

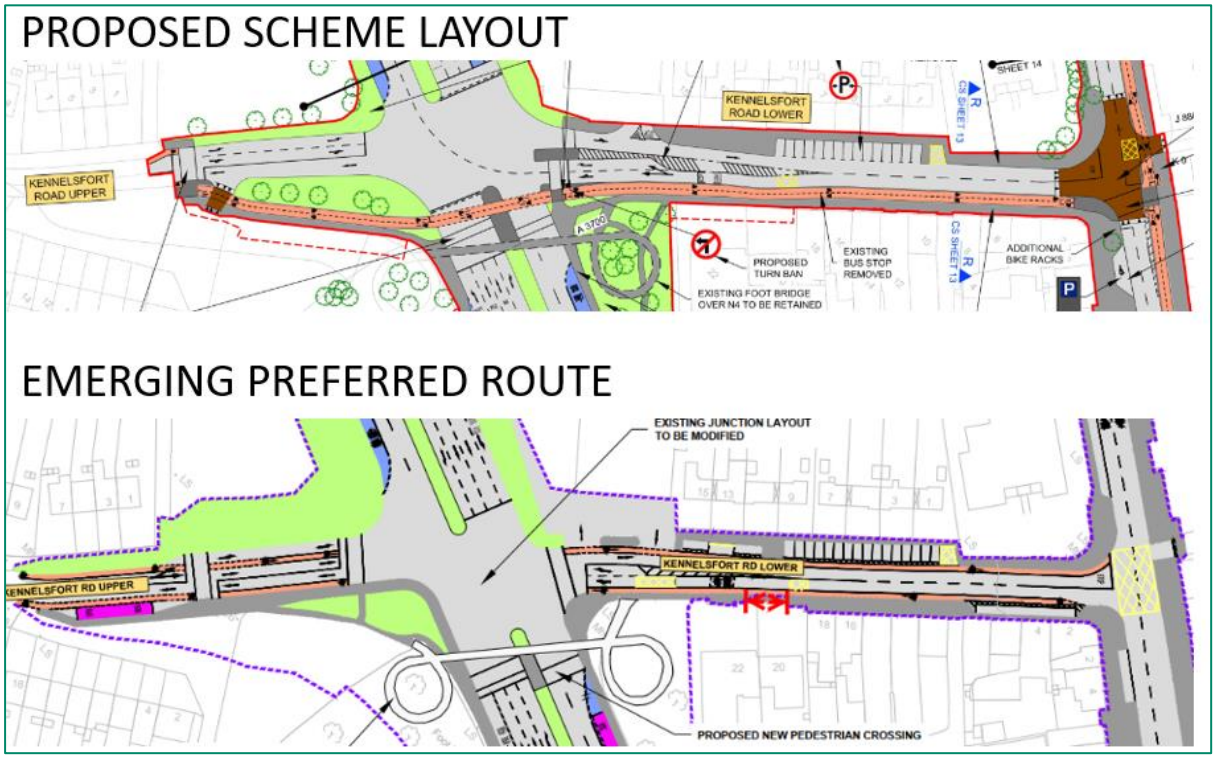


Figure 2.1.3.5.8: Extract of Proposed Scheme compared to Emerging Preferred Route Option

The Emerging Preferred Route arrangement presented safety issues with regards to the crossing of the R148 for cyclists and also with the northbound cycle track passing the line of existing perpendicular parking on Kennelsfort Road Lower. This led to the development of the arrangement included in the Proposed Scheme which addressed these issues and connected to the cycle lanes on Kennelsfort Road Upper via a new Toucan crossing. The Proposed Scheme provides the optimum arrangements for cycle facilities along Kennelsfort Road, including the crossing of the R148 dual carriageway at this location.

2.1.3.6 Pedestrian facilities

Summary of Issues

a) Pedestrian crossings at Kennelsfort Road junction

Several submissions suggested that the proposed signalised crossing on the east side of the Kennelsfort Road junction was unnecessary and removing it would eliminate the need to ban the left turn out of Kennelsfort Road Lower.

A number of submissions mentioned that the longitudinal fall of the footpaths on the approach to Kennelsfort road junction is steep and the crossing will pose a danger for wheelchair users and children on bikes.

b) Pedestrian crossings at The Oval

Several submissions expressed their concern that moving the pedestrian crossing to the west side of The Oval junction coupled with the removal of the Palmerstown Drive bus stop [2201] means pedestrians have now have to make a 3 stage crossing including crossing The Oval junction, which they perceive as dangerous, to avail of inbound bus services, or access Palmerstown village. This is

raised as a particular concern with respect to the elderly and children crossing The Oval which they perceive as a very busy road.

Submissions expressed the view that crossing the Palmerstown bypass is dangerous with not all vehicles stopping at existing pedestrian crossings and called for safety features to be introduced at The Oval given there are 2 schools in the immediate vicinity of the junction. One submission requested a pedestrian / cycle bridge.

c) Walking and Running on Old Lucan Road

Several submissions expressed their concern for the impact of the proposed infrastructure on two local running clubs that use the eastern end of the Old Lucan Road for sections of 5K runs and for interval training, and individuals that walk along Old Lucan Road.

Response to issues

Appendix A6.3 Junction Design Report of chapter 6 Traffic and Transport of the EIAR summarises the junction design objectives, stating junctions will be "……*upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure. The key design rationale was to provide protected cycle infrastructure and crossing facilities, whilst improving bus priority.*"

a. Pedestrian crossings at Kennelsfort Road junction

Crossing Palmerstown bypass

The proposed signalised pedestrian and cyclist crossings of the R148 Palmerstown bypass on the east side of the Kennelsfort Road junction are required at this location to achieve the junction design objective (stated above) of enhancing the pedestrian and cyclist infrastructure, in particular to provide a more convenient and direct crossing facility for vulnerable road users.

As set out in Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description, the proposed junction amendments are provided to: "*…..serve the enhanced bus stops, the pedestrian demand and to cater for the proposed two-way cycle track that crosses the R148 Palmerstown bypass at this location.*"

Appendix A6.3 Junction Design Report of chapter 6 Traffic and Transport of the EIAR includes the following description of proposed pedestrian infrastructure across the R148 at the Kennelsfort Road junction:

"On the eastern arm of the junction, currently a pedestrian bridge is available to cross Palmerstown Bypass.

It is proposed to provide a new controlled pedestrian staggered crossing, to cater for pedestrians crossing Palmerstown Bypass. This will provide a more convenient and direct crossing facility particular vulnerable road users. A direct single stage crossing was examined at this location, but this was not achievable as the crossing length would be greater than the desired maximum crossing distance of 19m.

A direct crossing with a 4m central refuge island was also examined, however this was not feasible at this location due to carriageway width constraints. Any widening of the carriageway would have required removing the existing pedestrian overbridge, whilst also causing carriageway realignment issues."

The indicative signal phasing in Appendix A6.3 Junction Design Report of the Traffic Impact Assessment Report of Volume 4 of the EIAR shown in Figure 2.3.1.6.1 below

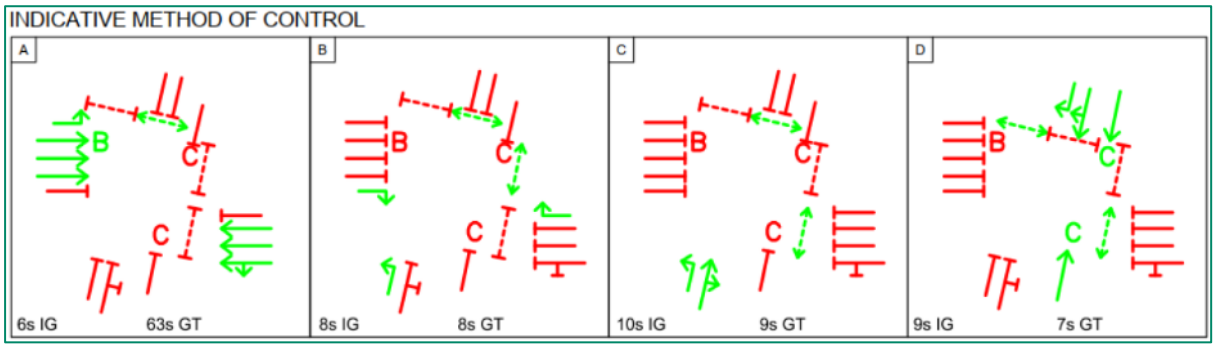


Figure 2.3.1.6.1: Indicative Method of Control for the R148 / Kennelsfort Road Junction

In summary the proposed pedestrian facilities will meet the junction design objectives to provide infrastructure to optimise pedestrian, cyclist and bus priority and improve safety for all users, notably vulnerable users that would struggle to use the existing pedestrian overbridge.

Footway gradient

The gradient and general arrangement of the proposed footway and cycle track has been designed in accordance with DMURS and the National Cycle Manual.

b. Pedestrian crossings at The Oval

A signal-controlled pedestrian crossing is provided on the west side of the junction to provide safe pedestrian connectivity to the relocated bus stops to be close to the western side of the junction.

To facilitate crossing The Oval, a new signalised crossing is proposed with tighter junction radii to shorten the pedestrian crossing length and slow down vehicle movements. Currently this is an informal uncontrolled crossing with large junction radii encouraging higher turning speeds making it unattractive for pedestrian use.

Appendix A6.3 Junction Design Report of chapter 6 Traffic and Transport of the EIAR includes the following description of proposed pedestrian infrastructure at The Oval:

- *"…The current proposal is to relocate the existing crossing to the western side of the junction. The crossing will be upgraded to a toucan crossing. The new location will enhance accessibility to the proposed bus stop locations, which are proposed on the western side of the crossing.*
- *A direct single stage crossing was considered across Palmerstown Bypass however the crossing distance would be greater than 19m and therefore not appropriate for this location. A straight crossing with a 4m central island was considered however this is not proposed due to the impact on carriageway alignment.*
- *It is proposed to introduce direct single stage toucan crossings on both Lucan Old Road and The Oval arms of the junctions. The crossing distances at these proposed crossing points have been minimised by designing a compact junction. The compact junction at the Oval has been achieved by omitted the existing left turn slip [pocket] from Palmerstown Bypass outbound into the Oval."*

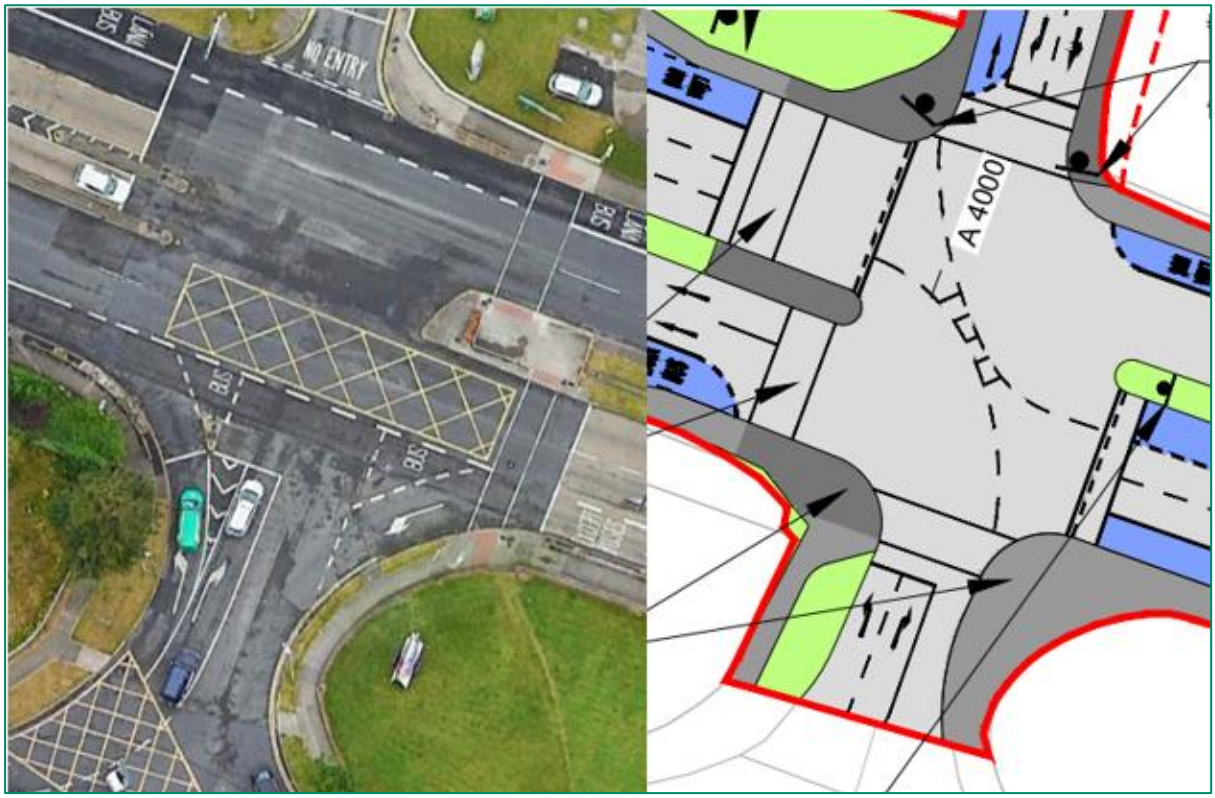


Figure 2.3.1.6.2: Current arrangement (Image source Google) with extract from General Arrangement Drawing at The Oval

It should also be noted that currently pedestrians from the east of The Oval wishing to access the eastern end of Palmerstown village, or the Applegreen petrol station on the northern side of the Palmerstown bypass or the Circle K petrol station on the southern side of the bypass need to use the informal uncontrolled crossing of The Oval arm.

Furthermore, the safety implications of the Proposed Scheme have been considered by the designer and 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 Oval junction for any vehicles, cyclists or pedestrians as part of the Road Safety Audit.

In summary the proposed pedestrian facilities will meet the junction design objectives to provide infrastructure to optimise pedestrian, cyclist and bus priority and improve safety for all users.

c. Walking & Running on the eastern section of Old Lucan Road

Running events

Table 4-2 of the Preliminary Design Report, included as part of the Supplementary Information, provides details of the existing and proposed road cross sections. Alignment K of that table relates to the eastern section of Old Lucan Road, between Kennelsfort Road Lower and Palmerstown Drive. Over this section the existing eastbound footway varies in width between 2.0m and 6.8m, and in the Proposed Scheme varies between 1.8m and 5.5m. The existing westbound footway varies in width between 1.6m and 5.0m, and in the Proposed Scheme varies between 2.2m to 4.6m.

These relatively minor changes to the footway widths included in the Proposed Scheme do not preclude the use of this section of Old Lucan Road for future walking and running events.

2.1.3.7 Air pollution and noise pollution during Operation

Summary of Issue

Many of the submissions felt that the Proposed Scheme will give rise to an increase in noise pollution and a reduction in air quality, arising from an increase in traffic congestion and increase in bus traffic. Concerns were expressed about the adverse consequences to human health and enjoyment of their area.

Response to issue

Air quality

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 between the M50 Junction 7 and Con Colbert Road, the key air quality sensitive receptors being predominately residential dwellings which bound the north and south of the R148 Palmerstown bypass, Chapelizod bypass and Old Lucan Road. In the Palmerstown area the sensitive residential housing estates are The Coppice, Hollyville Lawn, Palmerstown Avenue, Palmerstown Drive and Liffey Street South as shown in Figures 7.1 to 7.8 in EIAR Volume 3 Part 3 of 3 Air Quality.

Other sensitive receptors include Stewarts Care and the Liffey Valley proposed Natural Heritage Area (pNHA).

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). Table 7.33 of Chapter 7 provides a list of the six most impacted receptor locations, which includes location AQ167 on Kennelsfort Road Lower. These are all assessed as experiencing a negligible impact (slight beneficial) due to the Proposed Scheme in terms of the annual mean NO_2 concentration. All other receptors, including others in Palmerstown, are impacted less.

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 PM_{10} 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. Background pollutant concentrations from 2019 have been used to represent 2028 (opening year), although concentrations are likely to be lower by 2028 than they were in 2019. In addition, older fleet projections were used in the assessment and it is noted that a larger proportion of electric vehicles is planned by the opening year (2028) 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 the DS scenarios. Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Lucan to City Centre Core Bus Corridor Scheme Chapter 07 Page 45 Overall it is considered that the residual effects as a result of the Proposed Scheme's operation will be 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.

Noise

Within Section 9.2.1 of Chapter 9 Noise & Vibration of the EIAR, Table 9.1 identifies the noise sensitive locations (NSLs) along the Proposed Scheme.

Within the M50 Junction 7 to Con Colbert Road section of the Proposed Scheme the key noise sensitive receptors are predominately residential dwellings which bound the north and south of the R148

Palmerstown bypass, Chapelizod bypass and Old Lucan Road. Specifically. Table 1 lists the following sensitive residential housing estates within 50 to 100m of the road edge in the Palmerstown area: The Coppice, Hollyville Lawn, Palmerstown Avenue, Palmerstown Drive and Liffey Street South.

Other sensitive receptors include Stewarts Care and the Liffey Valley proposed Natural Heritage Area (pNHA).

Section 9.4.4.3 of Chapter 9 relates to noise from bus stops and does not highlight any new bus stop proposed with noise sensitive locations in the Palmerstown area.

As noted in Figure 9.4 (Opening Year 2028 Traffic Noise Impact Summary) Not Significant to Slight noise impact is forecast along the Palmerstown bypass and a slight impact on Old Lucan Road, and Figure 9.5 (Design Year 2043 Traffic Noise Impact Summary) of Volume 3 of the EIAR, Not Significant to Slight noise impact is forecast along the Palmerstown bypass and a Not Significant impact on Old Lucan Road.

With respect to operational vibration levels associated with passing buses and other vehicular traffic, section 9.4.4.2 'Operational Vibration Impact Assessment' confirms that predicted levels at distances of 2.5m to 10m from the road edge are negligible in terms of human perception and building response. Consequently, the overall impact is Neutral, Not Significant and Long Term.

Furthermore, mitigation measures are considered in section 9.5.2 'Operational Phase' of Chapter 9 and as noted in Table 9.45, the overall predicted noise and vibration level impacts do not require any mitigation measures.

Section 9.5.2.1 states: "*The impact assessment has determined that traffic noise impacts across the study area for the Proposed Scheme results in a positive to neutral imperceptible short and long-term direct impact along the Proposed Scheme, and negative imperceptible to slight 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.*"

As discussed in Section 9.4.4.1.1.4, of Chapter 9, during the proposed Opening Year (2028), the NTA forecast is for 94% of the city bus fleet to be EVs or HEVs. For the Design Year (2043), the city bus fleet is forecast to be 100% electric.

Section 9.4.4.1.1.4 clarifies that: *"The reference noise levels included within this study are therefore worst-case and reflect a full fleet of ICE vehicles. Due to the absence of reliable published sound emission data relating to Evs and HEVs, the approach for this EIAR is to assume a full fleet of ICE. Given the same fleet type is assumed for both the Do Minimum and Do Something scenarios, the relevant change in noise levels between these scenarios will remain unchanged irrespective of the fleet type used."*

The operation of electric and hybrid buses will eliminate ICE noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source. In addition, the characteristic of noise from EVs is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic. It is noted the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The volume of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment.

Taking into consideration the screening between the nearest NSL and the proposed bus stops in addition to the lower noise emissions from the proposed future bus fleet, the overall impact is determined to be negative, not significant and long term.

Section 9.6.2 sets out the predicted residual impacts for the Operational Phase:

"Once operational, there will be a Positive to Neutral impact along the Proposed Scheme due to a reduction in traffic volumes during both the Opening Year (2028) and the Design Year (2043).

During the Opening Year (2028), an Indirect, Positive, Imperceptible, Short To Medium Term to, Negative, Slight, Short To Medium Term change in traffic noise levels will occur along the surrounding road network outside of the Proposed Scheme. Whilst an element of traffic re-distribution will occur during daytime periods, the resultant noise impacts are negative, slight and short to medium term.

During the Design Year (2043), an Indirect, Positive, Imperceptible, Long Term to Negative, Not Significant to Slight, Long Term change in traffic noise levels will occur along the surrounding road

network outside of the Proposed Scheme. Whilst an element of traffic re-distribution will occur during daytime periods, the resultant noise impacts are Negative, Not Significant to Slight and Long Term.

The Proposed Scheme aligns with the policy objectives of The Dublin Agglomeration NAP 2018 – 2023 (DCC; FCC; SDCC; DLRCC 2018) to reduce traffic noise exposure to populations across the city through the incorporation of improved public transport, increasing bus, train and bicycle journeys and the replacement of diesel fleet to electric and natural gas fleet. The results of the noise assessment for the Operational Phase confirms that with the introduction of the various measures included as part of the Proposed Scheme, a reduction in traffic noise can be achieved along the Proposed Scheme where highest existing traffic noise levels are experienced. The various design measures associated with the Proposed Scheme also align with the various intervention measures recommended within the WHO Environmental Noise Guidelines (WHO 2018) to reduce traffic noise exposure across populations.

There are no significant residual Operational Phase noise or vibration impacts associated with the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).”

The NTA is satisfied that the operational noise impact of the Proposed Scheme in Palmerstown has been assessed appropriately and given that there are no residual noise impacts, no further noise mitigation measures are proposed.

Human health and enjoyment of their area

Section 10.4.4.1.1 of Chapter 10 Population of Volume 2 of the EIAR, considers operational phase community amenity impacts and notes the following:

Community amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.1.1.

Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from a reduction on general traffic flows along the Proposed Scheme and a Negligible impact from redistributed traffic along the surrounding road network.

Chapter 7 (Air Quality) identified a Neutral, Not Significant and Long-Term impact on local human receptors from road traffic impacts during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible, Short to Medium Term to Negative, Slight, Short to Medium-Term impact from traffic noise along both the Proposed Scheme and in the surrounding roads.

These environmental impacts have been considered together to identify if there will be an in-combination of impacts acting upon the same community facilities. The assessment concluded that these residual air quality, noise, traffic and visual impacts will combine to create a Negative, Slight and Long-Term impact on all receptors located between the M50 Junction 7 and Con Colbert Road, this includes along the Chapelizod Bypass. However, it is acknowledged that the majority of community facilities along this stretch of the Proposed Scheme are sheltered by trees, and therefore do not have direct views of the visual impacts and are only likely to experience the noise impacts.

The Palmerstown community area *is expected to experience a Negative, Not Significant and Long-Term impact.* Therefore, no significant residual impacts are predicted.

Chapter 11 in Volume 2 of the EIAR considers the health impacts associated with the Proposed Scheme. As stated in Section 11.2.4.2, the assessment of the Operational Phase of the Proposed Scheme has focused on those potential impacts most likely to be influenced by the Proposed Scheme, namely air quality, noise, community severance, social use of outdoor space, physical activity levels, access and risk of injuries. Table 11.8 in Section 11.4.4.9 9 (page 32 of the chapter) sets out the summary of operational phase impacts. The potential impacts on those aspects listed above range from Neutral and Long-term to Positive, Very Significant and Long-term depending on the aspect (refer to Table 11.8 for the specific potential impacts).

In Section 11.6.2, no significant adverse health impacts were identified from the operation of the Proposed Scheme.

2.1.3.8 Construction

a) Temporary construction compound LU2

Summary of Issues

Several submissions raised concerns regarding the use of the green area north of the R148 Palmerstown bypass [between KRL & The Oval] for a proposed temporary construction compound, LU2.

i. Trees removal

The submissions question the justification to remove semi mature beech trees for a temporary compound. One submission notes this area was cleared in 1984 for widening the N4/ R148 and again 20 years ago when the road was last further widened and links the Natura Report description that habitats in the plan area are of low value to the fact that the trees have not had time to grow.

ii. Biodiversity (bats, badgers)

The submissions highlight the presence of a badger den, foxes and the use of the area for foraging bats [reference to local bat group]. There is a general concern for the cumulative impact of all developments on ecosystems and biodiversity.

The submission also questions if an on-site biodiversity study has been completed for this area, noting the report speaks of a desk study but there seems to be no on-site records. Given there is local knowledge of badgers (a protected species) in this area, this absence is important. The submission states biodiversity Report needs to be much more than a desk study unless it is merely a box ticking exercise.

One submission stated that the temporary use of the green space for compound was not covered in the environmental impact survey for the scheme and this omission puts badgers and bats welfare in question.

iii. Drainage Infrastructure

Two submissions raised concerns that the proposed temporary construction compound will cover an engineered soakaway which manages runoff from the dual carriageway.

One submission alleges that deep basement works during the construction of the SHD development at Palmers gate has increased the water table in the area and caused flooding in the rear gardens of properties at Red Cow Cottages.

iv. Traffic and amenity Impact of compound

Several submissions are concerned of the impact of LU2 temporary construction compound on traffic and amenity, with one submission stating the application is not sufficiently clear on the impacts for the construction period.

Response to issue raised

i. Trees removal

The land in question included in the temporary land acquisition is to provide construction working room and the provision of a contractor's site compound [LU2].

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 2.1.3.8.1 below shows the indicative layout of the construction compound.

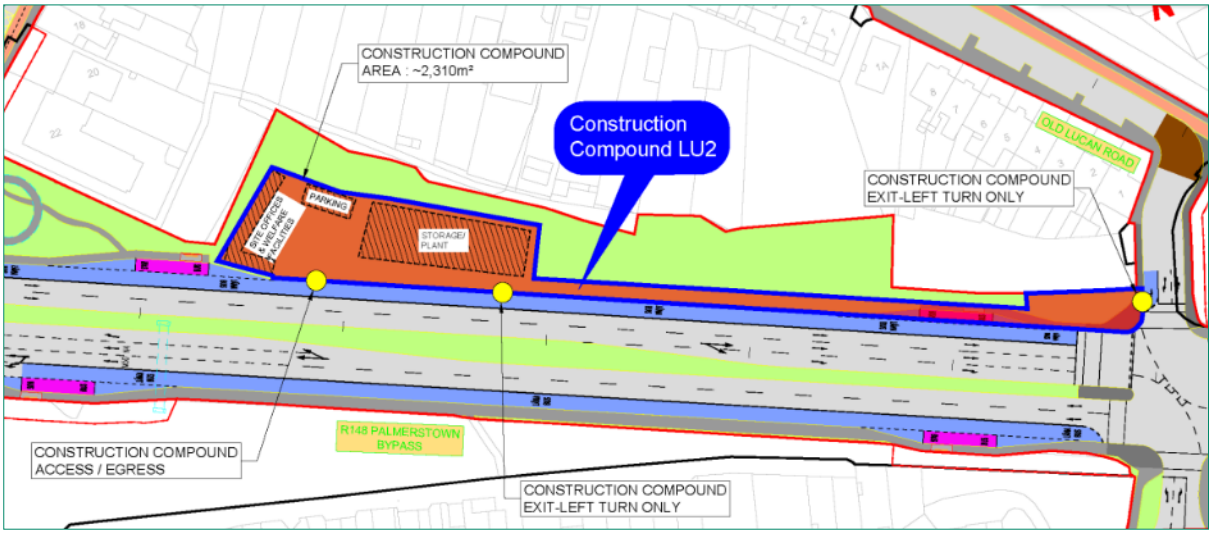


Figure 2.1.3.8.1: Extract of Image 5.1 of Chapter 5 Construction of Volume 2 of the EIAR

Figure 2.1.3.8.2 is an extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR which shows the compound has been positioned to avoid impacting 6 of the 11 semi-mature (Fagus Sylvatica) beech trees. The proposed reinstatement will restore the grassland and plant 32 semi-mature trees, including 5 semi-mature beech in their original locations.

Figure 2.1.3.8.2: Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

As identified in the Landscaping General Arrangement Drawings (contained in Part 1 of 3 of Volume 3 of the EIAR), 5 no. trees will need to be removed to allow the area to be used for Construction Compound LU2 during construction of the Proposed Scheme. These trees are semi-mature non-native trees and these will be replaced following removal of the construction compound (and a total of 32 semi-mature trees will be replanted to replace the trees removed). The loss of these trees is considered to be "not of geographical significance" in accordance with guidance on ecological valuation set out in the NRA's *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (NRA, 2009). Considering the limited number and ages of the trees to be removed in the locality as a result of the Proposed Scheme, and the presence of large amounts of mature woodland in the wider area (e.g. mature woodland along the River Liffey and the Chapelizod Bypass) their removal is not considered significant in the context of the wider landscape.

The area of the compound has been kept to the smallest possible extent so as to minimise the land take on this area and it has been confined to the green area bordering the N4. The compound has been sized and orientated so as to avoid land take into the banked area that extends to the rear of the compound boundary. This area of open space will be reinstated after the Construction Compound use has been finished with.

ii. Biodiversity (bats, badgers)

Ecology Surveys

Chapter 12 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 LU2. Construction Compound LU2 and its habitats are not discussed separately as they are considered together with these habitat types elsewhere in the wider study area.

Results presented in Chapter 12 include those for the desk study and surveys undertaken: Desk study results were presented together with survey results in their relevant sections and all relevant records returned in the desk study are noted. Refer to Chapter 12, Section 12.3 Baseline Environment and Figures 12.1 to Appendix A12.2 Desk Study Appendices Part 3 of 4 Volume 4 of the EIAR.

Survey results comprised of detailed textual descriptions of findings and accompanying figures visually depicting these results. Refer to Chapter 12, Section 12.3 Baseline Environment and the associated figures in Volume 3 of the EIAR.

With regard to local bat populations in the vicinity of Construction Compound LU2, the Proposed Scheme does not result in a significant removal of trees in the area. The small number of trees to be removed are semi-mature non-native trees, with no potential for roosting bats due to the absence of potential roost features. In addition, insects (which are the main food source of bats in Ireland) generally prefer native species as foraging and breeding resources and therefore their potential to be of significance as a foraging area for local bats is not likely.

The multidisciplinary ecological surveys undertaken along the Proposed Scheme identified 4 no. trees with potential roost features which could support roosting bats within 350m of the proposed Construction Compound. All of these trees will be retained as part of the Proposed Scheme.

Habitat surveys were undertaken on the Proposed Scheme in 2021. The habitat types encountered are shown in Figure 12.5 in Volume 3 of the EIAR. Figure 2.1.3.8.3 below is an extract from the drawing, the area in which the Construction Compound LU2 is situated can be seen. The amber line denotes the line of semi mature trees. In addition, multidisciplinary surveys for mammals and trees and structures with bat roost potential were carried out in 2022. No evidence of badger at the proposed Construction Compound LU2 location was noted and the trees being removed did not exhibit any suitability to be used by roosting bats, during these surveys.

Figure 2.1.3.8.3: Habitat Survey Results Sheet 5 of 8 [Figure 12.5] from Figures: Part 1 of 3 of Volume 3 of the EIAR

Further to the issues raised in the submissions regarding the presence of bats, badgers, foxes at the location of the proposed site for Construction Compound LU2, a walkover survey of the area was undertaken on 14th March 2023 in order to validate the results of the earlier surveys. This walkover survey confirmed the findings of the earlier surveys with no evidence noted of badger at the proposed Construction Compound LU2 location.

The walkover survey checked the area for badger activity and for the presence of potential bat roost features on the trees within the footprint of the proposed Construction Compound LU2 and its immediate vicinity. No evidence of badger activity (e.g. snuffle holes or trails), or badger setts were recorded within the footprint, however the woodland to the east on the grounds of Stewart's Care Hospital was considered for possible badger territory due to its foraging potential for the species and relative privacy from human activities. With regard to potential roost features on trees, no suitable features (e.g. knotholes, broken branches) were recorded within any of the trees within the survey area.

Although the grassland may be used by commuting and/or foraging wildlife, such as badgers, it has little value to them as a refuge or otherwise, due to its open nature and location next to a busy transport corridor (and associated collision risk, disturbance effects as a result of artificial lighting etc). The woodland habitats to the north of the Construction Compound (which are more suited for wildlife) will remain unaffected as they lie outside the Proposed Scheme boundary and there are mitigation measures, such as directional lighting, in place within the EIAR chapter to avoid impacts on these habitats and potential wildlife within, during the Construction Phase.

The NTA are satisfied that the biodiversity assessment has correctly assessed the potential impacts of the Proposed Scheme and has also proposed a comprehensive suite of mitigation measures including for bats and badgers), which will be implemented during the construction phase. The measures related to bats and badgers are equally applicable for the area occupied in the short-term for Construction Compound LU2, in so far as they are relevant.

Natura Report

It is noted that there is a concern regarding the classification of the habitats in the Natura Impact Statement. The assessment has been undertaken in accordance with appropriate guidance and the NTA are satisfied that the biodiversity assessment has correctly assessed the potential impacts of the Proposed Scheme.

Monitoring of Ecological Mitigation Measures

Section 12.5.1 of the EIAR outlines the comprehensive mitigation and monitoring measures to be implemented during the Construction Phase. These include the following monitoring measures which are of relevance to the protection of bats and badger:

- *Section 12.5.1.4.1.1 Protection of Bats during Vegetation Clearance states the following:*
  - *A qualified arborist engaged by the appointed contractor will assess the condition of, and advise on any repair works necessary to, any trees which are to be retained or that lie outside of the Proposed Scheme footprint but whose RPA is impacted by the works;*
- *Section 12.5.1.4.2.1 Disturbance / Displacement states the following:*
  - *the NTA will ensure that a confirmatory pre-construction check of all suitable badger habitat will be completed within 12 months prior to any construction works commencing.*

The full suite of mitigation and monitoring measures, relevant to all aspects of biodiversity can be found in Section 12.5 of the EIAR.

iii. Drainage Infrastructure

Infrastructure & utilities

As noted in Section 19.5.1.1 of Chapter 19 Material Assets of Part 2 of the EIAR:
"Consultation has been undertaken with the major utility companies regarding the design, potential interfaces and measures required to protect or divert the infrastructure which is interfacing with the Proposed Scheme design. All utility companies for which diversions are proposed will continue to be consulted, with NTA oversight when designing any diversions to ensure that proposed diversions

conform to the utility provider's requirements, where practicable and acceptable to the NTA, and to ensure that service interruptions are kept to a minimum."

The drainage records received and consultations with appropriate stakeholders to date have not highlighted the presence of an engineered soakaway at the location of temporary construction compound LU2. Ongoing consultations with stakeholders and further utility surveys will help refine the engineering of the proposed site compound services and supplies and avoid interrupting any supplies or causing flooding.

Section 13.5 of Chapter 13 (Water) in Volume 2 of the EIAR sets out the mitigation measures to be employed with respect to the surface water environment. A surface water management plan has been prepared which is included in CEMP (in Appendix A5.1 in Volume 4 of the EIAR). In addition, specific surface water mitigation measures are set out in section 13.5.2.2 for the construction compounds including Construction Compound LU2.

Compound extents

As shown in Figure 2.2.10 an extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR, it is noted that the footprint of the proposed temporary construction compound LU2 is limited to the extents of the area maintained by South Dublin County Council by mowing and does not impact any ditches or hedgerows; see earlier response at (ii) above which addresses the ecological aspects raised.

Flood Risk

A specific issue has been raised in relation to the deep basement construction works for the SHD under construction on Kennelsfort Road Lower, which the submissions assert has caused flooding in the gardens of properties at Red Cow Cottages on Old Lucan Road. While the SHD site is adjacent to the route of the Proposed Scheme, it is outside the extents of this application. The issue in not therefore relevant to the Proposed Scheme.

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) and further investigation of the flood risk in the form of a Stage 2 FRA is not required. Refer to section 5.5 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.

No past flood events have been identified along or near the Proposed Scheme

iv. Traffic and amenity Impact of compound

Construction Traffic Management Plan

Construction Compound requirements to facilitate the Construction Phase of the Proposed Scheme are illustrated in Section 5.7 in Chapter 5 (Construction) in Volume 2 of the EIAR.

Figure 2.2.9 above shows the indicative layout of the temporary construction compound LU2 and access arrangements.

Section 5.1 of Chapter 5 (Construction) of the EIAR describes the construction phasing and programme as well as the construction activities necessary to undertake the works. Section 5.8 presents the

temporary traffic management measures, including the staging measures to be carried out (i.e. how vehicles, cyclists and pedestrians will be impacted and safely catered for, during the works). The construction traffic management measures have been developed in accordance with the Traffic Signs Manual. Construction traffic management measures are included in the (Draft) Construction Traffic Management Plan (CTMP) in Appendix A5.1 CEMP in Volume 4 of the EIAR.

The appointed contractor's CTMP shall include measures for managing traffic accessing and egressing the Construction Compounds.

Table 5.2 of the CEMP summaries the Construction Phase mitigation outlined in the relevant EIAR assessment chapter.

Section 5.2.3 (Construction Traffic Management Plan Contents) of the (CTMP) in Appendix A5.1 CEMP in Volume 4 of the EIAR gives a detailed overview of the requirements of the CTMP to be prepared by the appointed contractor during the Construction Phase of the Proposed Scheme. It states the following:

"The appointed contractor shall address the following aspects, in addition to any other aspects identified by the appointed contractor during the preparation of the CTMP:

- *Access and egress;*
- *Construction Compounds;*
- *Routing of construction vehicles;*
- *Pedestrian (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians,*
- *pushchair users etc.) and cyclist provisions;*
- *Public transport provisions;*
- *Parking and access;*
- *Lighting;*
- *CSMMP;*
- *Traffic management signage;*
- *Timings of material deliveries;*
- *Traffic management speed limits;*
- *Vehicle cleaning;*
- *Road cleaning;*
- *Road condition;*
- *Road closures and diversions;*
- *Enforcement of Construction Traffic Management Plan;*
- *Interface with other projects;*
- *Emergency procedures during construction; and*
- *Communication.*

Further details on issues to be addressed are provided in Section 5.2.3.1 to Section 5.2.3.19."

Amenity impact during construction

The Construction Compounds will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). Once the construction compound is no longer required it will be removed and the area reinstated. The proposed reinstatement will restore the grassland and plant 32 semi-mature trees, including the 5 semi-mature beech trees in their original locations, which have to be removed to allow for the set up the Construction Compound.

b) Reference to The Oval for a compound

Summary of Issue

Submission 21 has called for clarity on the use of half of the green area at The Oval for plant storage during construction of the green space beside the entrance to Palmerstown Drive.

Response to issue

The green area to the entrance to The Oval/ Palmerstown Drive is not proposed to be used as a temporary construction compound during the works. Construction compound proposals are described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR and the impact of their usage is assessed in various other chapters of the EIAR. Temporary site compound LU2 located in the green area north of the R148 Palmerstown bypass [between Kennelsfort Road Lower & The Oval] is the only construction compound in this section of the Proposed Scheme. Figure 2.2.9 below shows the indicative layout of the temporary construction compound LU2.

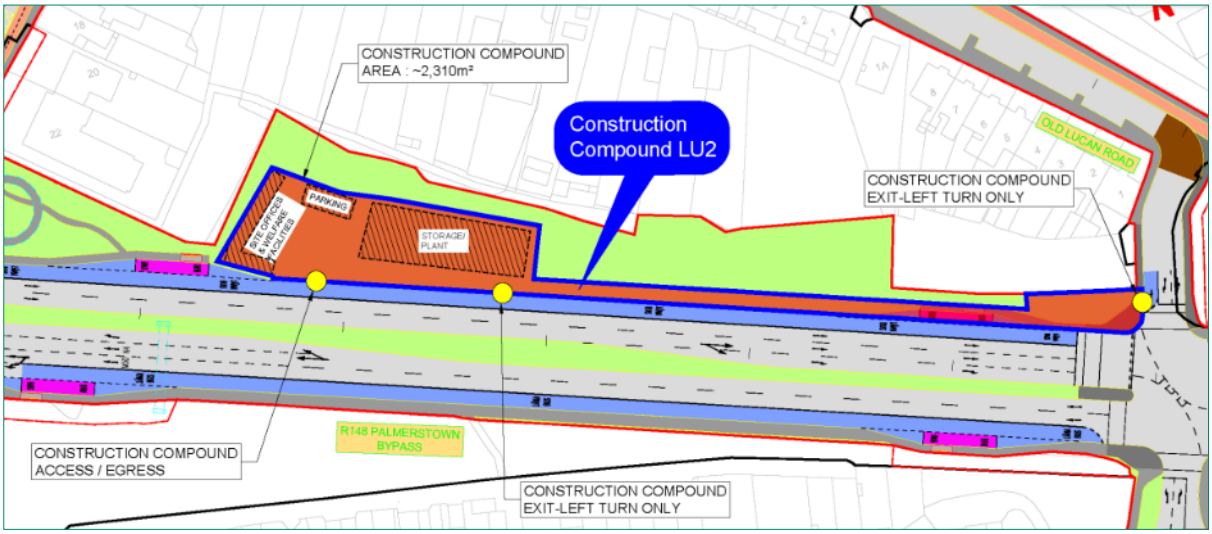


Figure 2.1.3.8.4: Extract of Image 5.1 of Chapter 5 Construction of Volume 2 of the EIAR

c) Air pollution and noise pollution during construction

Summary of Issue

A number of submissions raised concerns that the Proposed Scheme will give rise to an increase in noise pollution and a reduction in air quality during the construction phase.

Response to issue

Air quality - Construction Traffic Dust Assessments

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 between the M50 Junction 7 and Con Colbert Road, the key air quality sensitive receptors being predominately residential dwellings which bound the north and south of the R148 Palmerstown bypass, Chapelizod bypass and Old Lucan Road. In the Palmerstown area the sensitive residential housing estates are The Coppice, Hollyville Lawn, Palmerstown Avenue, Palmerstown Drive and Liffey Street South as shown in Figures 7.1 to 7.8 in EIAR Volume 3 Part 3 of 3 Air Quality.

Other sensitive receptors include Stewarts Care and the Liffey Valley proposed Natural Heritage Area (pNHA).

Section 7.2.4.4 acknowledges that the greatest potential impact on air quality during the Construction Phase is from construction dust emissions, PM_{10} / PM2.5 emissions and the potential for nuisance dust. As further stated in Section 7.2.4.4 an appraisal has been carried out to assess the risk to sensitive receptors as a result of dust soiling, health impacts and ecology impacts due to the Construction Phase in accordance with the IAQM's Guidance on the Assessment of Dust from Demolition and Construction (IAQM 2014). This appraisal reviews the sensitivity of the site's location with respect to dust nuisance,

human health and ecological impacts and then calculates a risk of impact using the magnitude of site activities.

Section 7.4.2.3.3 of Chapter 7 identifies the predicted changes in concentration and impact on mean annual concentration at each of the ambient receptors in the context of the TII significance criteria (TII 2011) for the construction stage.

Table 7.27 of Chapter 7 provides a list of the 27 most impacted receptor locations, which includes AQ196 and AQ200 located in Palmerstown. All these locations are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. These are all assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. All other receptors, including others in Palmerstown, are impacted less.

A slightly beneficial impact is estimated at 24 of these receptors and a moderate beneficial impact is expected at one receptor. All beneficial impacts are modelled along the Proposed Scheme due to the diversion of traffic off these routes. A slight adverse impact is expected at two receptors – but these are not in the Palmerstown Area.

As shown in Table 7.27 in Chapter 7 the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact and 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 are overall neutral and short-term.

Section 7.5 of Chapter 7, sets out the mitigation measures that the appointed contractor will implement to ameliorate air quality impacts during the construction phase.

Section 7.6.1 sets out the predicted residual air quality impacts during 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 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 will be 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).

Construction noise

Within Section 9.2.1 of Chapter 9 Noise & Vibration of the EIAR, Table 9.1 identifies the noise sensitive locations (NSLs) along the Proposed Scheme.

Within the M50 Junction 7 to Con Colbert Road section of the Proposed Scheme the key noise sensitive receptors are predominately residential dwellings which bound the north and south of the R148 Palmerstown bypass, Chapelizod bypass and Old Lucan Road. Specifically, Table 9.1 lists the following sensitive residential housing estates within 50 to 100m of the road edge in the Palmerstown area: The Coppice, Hollyville Lawn, Palmerstown Avenue, Palmerstown Drive and Liffey Street South.

Other sensitive receptors include Stewarts Care and the Liffey Valley proposed Natural Heritage Area (pNHA).

Section 9.4.3.2 of Chapter 9 considers construction noise and Section 9.4.3.2.2 specifically considers construction noise from *"Road Widening, Road Upgrade and Utility Diversion Works"*, which is applicable to the works in Palmerstown. Table 9.28 provides the predicted noise levels for Road Widening, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs. The total predicted cumulative construction noise levels (CNL) for these works at the closest NSL façades on the east side of Kennelsfort Road Lower are 83 dB $L_{Aeq,T}$ & between 73 to 83 dB $L_{Aeq,T}$ at the south of Old Lucan Road in the absence of any noise mitigation. Making reference to the CNLs in Table 9.28 the potential noise impacts at the closest NSLs are assessed to range between Negative, Not Significant to Very Significant, and Temporary during the daytime evening and weekend periods in the absence of noise mitigation.

Construction compound noise

Section 9.4.3.2.3 considers noise arising from Construction Compound areas used for storage, offices and material handling, generators etc. Table 9.30 summarises the potential noise impacts from the

various construction compounds, which includes LU2, as shown in Figure 2.1.3.8.4 on the previous page of this report. This identifies that construction compound LU2 will not be used for crushing activities and that there is the potential for exceedance of evening & weekend criteria without noise mitigation.

Section 9.4.3.5 provides a summary of potential construction noise impacts and states that: *"It should be noted that the calculations set out in Section 9.4.3.2 are indicative and are used for the purposes of comparison only with the adopted criteria. Where exceedance of the recommended criteria is expected, the use of noise mitigation measures will be used as part of the construction works. Further details of the noise mitigation measures are set out in Section 9.5.1.1."*

Table 9.44 sets out the predicted construction phase impacts following the implementation of mitigation. The noise impacts associated with Construction Compounds is predicted to not significant and temporary at distances greater that 10m from Construction Compound LU2.

Construction traffic noise

Section 9.4.3.4 of Chapter 9 relates to noise from construction traffic. For the majority of the 1km study area, traffic noise impacts are determined to be positive, imperceptible, and temporary impact to negative, slight to moderate and temporary impact due to the negligible to low volume of additional traffic along the road network during the Construction Phase scenario. Table 9.41 identified Old Lucan Road as the only road within the Palmerstown section of the study area calculated above the potential significance threshold. This is defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr and an increase in noise level greater than 3 dB.

During the assessed Construction Year 2024, the highest potential noise impacts are calculated along Old Lucan Road. The change in traffic noise is defined as moderate with traffic noise level calculated at the closest NSLs along this road categorised as medium. The overall impact is determined to be negative, moderate and temporary. As noted above, the construction traffic volumes used in the assessment is based on the reasonable worst case peak scenario which reflects a 'worst case day' under which the construction of multiple work sections are taking place concurrently. The impacts described in Table 9.41 therefore reflect a potential worst case period over the full Construction Phase duration. During all other periods with lower construction traffic volumes or during periods with minimal traffic management measures, traffic noise impacts will be lower than those assessed. For all other roads across the study area, a Positive, Slight and Temporary to Negative, Slight to Moderate, and Temporary impact is calculated. Slight to Moderate impacts are identified along roads in the study area where a minor change in noise level (1 dB increase) is calculated and the noise level category is medium – high, resulting in a combined significance rating of slight to moderate. The overall construction traffic noise impacts across the full study area are presented in Figure 9.3 in Volume 3 of this EIAR.

Noise Mitigation Measures

Section 9.5.1 sets out the noise abatement measures that the appointed contractor will be required to take during the construction phase. Section 9.5.1.1 states that: *"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."* It also states 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)*"

Section 9.5.1.1 also states that *"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."*

Specifically, Section 9.5.1.1. states that *"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 9.8: and Table 9.11)."*

In relation to the selection of quiet plant, Section 9.5.1.1.1 describes how the least noisy item of plant will be selected wherever practicable (e.g. plant items with sound attenuation incorporated) and notes that: "*The appointed contractor will evaluate the choice of excavation, breaking or other working method taking into account various ground conditions and site constraints. Where alternative lower noise generating equipment are available that will provide equivalent structural / excavation / breaking results, these will be selected to control noise within the relevant thresholds, where it is practicable to do so."*

In relation to controlling the noise at source, Section 9.5.1.1.2 sets out a number of measures that *"will be implemented, if required, by the appointed contractor to control noise at source in order to remain below the threshold values for noise set out in Table 9.8: which relate to specific site considerations.*

- *For mobile plant items such as dump trucks, planers, excavators and loaders, the installation of an acoustic exhaust, utilising an acoustic canopy to replace the normal engine cover and / or maintaining enclosure panels closed during operation can reduce noise levels by up to 10 dB;*
- *For percussive tools such as pneumatic concrete breakers and tools a number of noise control measures include fitting a muffler or sound reducing equipment to the breaker 'tool' and ensuring any leaks in the air lines are sealed;*
- *The Construction Compounds are in close proximity to NSLs (refer to Table 9.30Table 9.30) and a strict noise control policy relating to materials handling will be applied. Noisy items of plant will be sited away from noise sensitive boundaries.*
- *Where compressors, generators and pumps are located in proximity to NSLs and have the potential to exceed the construction noise thresholds, these will be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation; and*
- *Resonance effects in panel work or cover plates can be reduced through stiffening or the application of damping compounds, while other noise nuisance can be controlled by fixing resilient materials in between the surfaces in contact."*

Construction Working hours

In relation to working hours, section 9.5.1.1.4 of Chapter 9 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 9.42), other construction activities will be scheduled to not result in significant cumulative noise levels".*

Section 9.6.1 of Chapter 9 Noise and Vibration of Volume 2 of the EIAR states that once the various mitigation measures are put in place, noise impacts associated with the Construction Phase will be Negative, Not Significant to Moderate, and Temporary during all key construction phases during daytime periods.

During evening periods, noise impacts associated with the Construction Phase will be Negative, Not Significant to Significant and Temporary within 20m of the works depending on the specific activities. 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).

Summary of construction noise impacts

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 at this location.

Section 9.6.1 sets out the predicted residual impacts during the construction phase as follows:

"Given the linear nature of the works, noise emissions related to construction works will be of temporary impact at any one area as the works progress along the length of the Proposed Scheme. The application of the proposed noise thresholds and restricted hours of operation, along with the implementation of appropriate noise control measures, will ensure that noise impact is controlled within acceptable limit values.

During the Construction Phase of the Proposed Scheme, noise levels at properties closest to working areas will be temporarily increased. The most appropriate noise mitigation measures for each work area will be determined taking account of the various control measures included within Section 9.5.1.1 and the CEMP in Appendix A5.1 in Volume 4 of the EIAR and Chapter 5 (Construction). The various mitigation measures will be selected in order to control CNLs to within the limit values included in Table 9.8 as far as practicable.

Once the various mitigation measures are put in place, noise impacts associated with the Construction Phase will be Negative, Not Significant to Moderate, and Temporary during all key construction phases during daytime periods.

During evening periods, noise impacts associated with the Construction Phase will be Negative, Not Significant to Significant and Temporary within 20m of the works depending on the specific activities. 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)."

The assessment of the impact of the construction noise on properties in the Palmerstown area been assessed in accordance with the appropriate guidance documents.

2.1.3.9 Other Common Issues

a) Change to 'amenity'/ 'feel' of the heritage part of the village

Summary of Issue

Many submissions expressed concerns about the impact on the community from increased congestion throughout the greater Palmerstown area as a result of the Proposed Scheme in conjunction with significant current and proposed building developments. Concerns were also raised about the adverse increase in air and noise pollution and, the deterioration of the community in Palmerstown and residential enjoyment of the area. Stating that the proposals will further sever the community which was divided since the construction of the Palmerstown bypass.

Some submissions believe the Proposed Scheme will change the character of the area. At the moment this part of the Village is perceived as a quiet, historical and charming with a high quality of life for the residents.

Several submissions highlighted that much of the Palmerstown community is elderly, many have mobility and other difficulties, and there are other vulnerable members of the community; noting the Proposed Scheme will negatively impact the ability of the older/ more vulnerable population to move around the community, including by car.

Response to issue raised

Community Impact

Section 10.4.4.1.1 of Chapter 10 Population of Volume 2 of the EIAR, considers operational phase community amenity impacts and notes the following:

- Community amenity impacts arise from a combination of traffic, air quality, noise and visual impacts as discussed in Section 10.2.4.1.1.

- Chapter 6 (Traffic & Transport) identified a Positive, Slight and Long-Term impact from a reduction on general traffic flows along the Proposed Scheme and a Negligible impact from redistributed traffic along the surrounding road network.
- Chapter 7 (Air Quality) identified a Neutral, Not Significant and Long-Term impact on local human receptors from road traffic impacts during the Operational Phase.
- Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible, Short to Medium Term to Negative, Slight, Short to Medium-Term impact from traffic noise along both the Proposed Scheme and in the surrounding roads.

These environmental impacts have been considered together to identify if there will be an in-combination of impacts acting upon the same community facilities. The assessment concluded that these residual air quality, noise, traffic and visual impacts will combine to create a Negative, Slight and Long-Term impact on all receptors located between the M50 Junction 7 and Con Colbert Road, this includes along the Chapelizod Bypass. However, it is acknowledged that the majority of community facilities along this stretch of the Proposed Scheme are sheltered by trees, and therefore do not have direct views of the visual impacts and are only likely to experience the noise impacts set out in Chapter 9 (Noise and Vibration).

Table 10.13 of Chapter 10 summarises the predicted residual population impacts during the operation of the Proposed Scheme. In terms of community amenity the Palmerstown community area is expected to experience a Negative, Not Significant and Long-Term impact, while there are predicted to be positive impacts in terms of community and commercial amenity Therefore, no significant residual adverse impacts are predicted.

Quality of life/ 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 in Palmerstown, 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 along the route. 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.

b) Impact on the Woodfarm and Red Cow Cottages

Summary of issue

A number of submissions mentioned the protected status of Red Cow Cottages and Woodfarm Cottages on Old Lucan Road. It was queried how the visual impact on the protected structures was taken into account. A number of submissions expressed the view that proposed bus shelter at the bus stop on Old Lucan Road will diminish the cottages' historical character and queried the width of the footway.

Response to issue

Architectural Heritage

The Red Cow Cottages are not listed on the SDCC Register of Protected Structures but the cottages and their gardens are included within an Architectural Conservation Area (ACA). In Section 16.3.1.9, it is acknowledged that the cottages are of architectural heritage interest: *"In addition to the structures included in the RMP, the RPS, NIAH and the DCIHR nine structures or groups of structures were identified along the Proposed Scheme which, while they are not protected, or included in existing inventories, are of architectural, historical or industrial interest….."*. This includes Red Cow Cottages. In Table 16.12, the cottages are listed (Feature ID: CBC0006BTH010) and are categorised as having local significance and of low sensitivity.

In Section 16.5.1.6, it is recognised that the Proposed Scheme shares a boundary with structures of architectural heritage interest (which includes Red Cow Cottages) and states that: *"There is potential*

for damage to the fabric or boundaries, and an adverse visual impact is anticipated on its setting during construction. Taking account of the sensitivity of these sites, potential Construction Phase impact is Negative, Slight and Temporary.

Mitigation is the recording, protection and monitoring of the sensitive fabric prior to, and for the duration of the Construction Phase 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, it is anticipated the magnitude of impact would reduce from Medium to Negligible. The predicted post mitigation impact is Negative, Not Significant and Temporary."

Under the Proposed Scheme, bus shelters are proposed in front of number 1 Red Cow Cottages and at the Millbrook Apartments. The proposed shelter at the Milbrook apartments is located on the opposite side of the road to Red Cow Cottages and will not affect the ACA or the cottages. The general arrangement drawings (Volume 3 of the EIAR, General Arrangement drawings), show that the footpath will be widened in front of numbers one to three Red Cow Cottages and that the proposed shelter will be located at the front of the footpath away from the cottages and outside the ACA.

Footway width

The footway at the location of the proposed bus stop outside Red Cow Cottages is significantly wider than the existing footway, as shown in Figure 2.1.3.9.1 which is an extract of the General Arrangement drawings appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR, with the existing kerbline from topographical survey overlaid as a red dashed line.

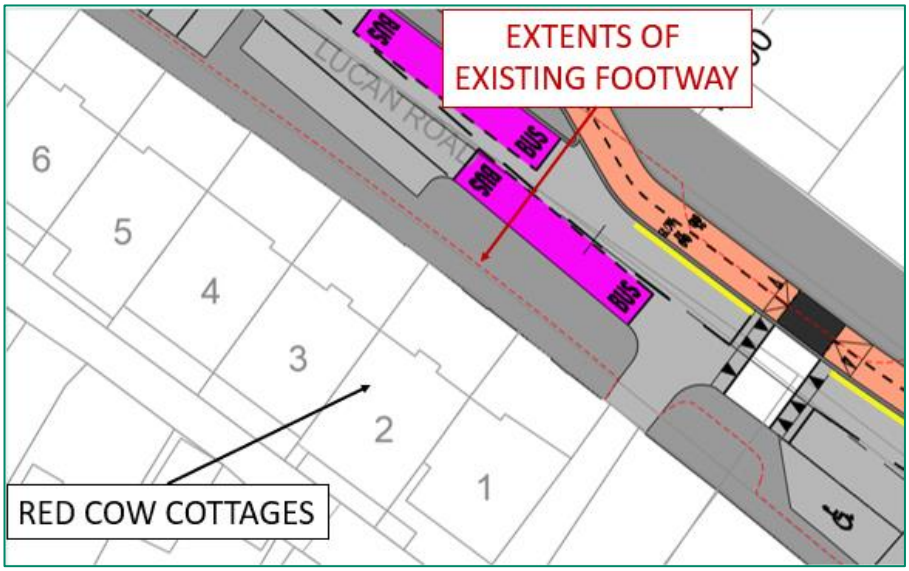


Figure 2.1.3.9.1: Extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR, with kerbline [red dash line] from topographical survey overlaid.

c) Impact on future community events

Summary of issue

A number of submissions highlighted their concern that the proposed changes at the eastern end of the Palmerstown village (currently a quieter area in Palmerstown) will prohibit events that have taken place on the Roadway (through local temporary closure). These events include Céile at the Crossroads, local parades, The Bikers of Eire Christmas Event, lighting up of the Palmerstown Village Christmas Tree etc.

Response to issue

The Proposed Scheme does not preclude the application for temporary local closures.

d) Environmental costs/impact of the scheme and costs return period

Summary of issue

A number of submissions questioned the environmental costs/impact of the Proposed Scheme and its costs return period.

Response to issue

Environmental Assessment

Section 1.5.1 of Chapter 1 Part 2 of the EIAR states the following:

"As set out in the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) (hereinafter referred to as the "2018 Guidelines"), the 2014 EIA Directive requires that public and private projects that are likely to have significant effects on the environment shall be made subject to an assessment prior to development consent being given. As set out in the 2018 Guidelines, Environmental Impact Assessment (EIA) is a process to be undertaken in respect of applications for specified classes of development listed in the EIA Directive before a decision in respect of development consent is made. The process involves the preparation of an Environmental Impact Assessment Report (EIAR) by the applicant, consultations with the public, relevant prescribed bodies and any other affected Member States, and an examination and analysis of the EIAR and other relevant information leading to a reasoned conclusion by the competent authority on the likely significant effects of the proposed development on the environment. Again, as observed in the 2018 Guidelines, the provisions of the 2014 EIA Directive are aimed at enhancing the EIA process through ensuring the completeness and quality of the EIAR submitted by the applicant and the examination undertaken by the competent authority and by providing for early and effective public participation before the development consent decision is made.

The EIA Directive requires that public and private projects that are likely to have significant effects on the environment be made subject to an assessment prior to development consent being given. The requirements of the 2014 EIA Directive were transposed into Irish law with the enactment of a number of implementing legislative measures, including S.I. No. 296/2018 - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (hereinafter referred to as the 2018 EIA Regulations), with effect from 1 September 2018. Further, S.I. No. 279/2019 – European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations 2019 amended the provisions of the Roads Act and the Roads Regulations 1994 (S.I. No. 119/1994).

It is pursuant to the provisions of the amended Roads Act and Roads Regulations 1994 that this EIAR has been prepared in respect of the Proposed Scheme. 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.

Accordingly, this EIAR contains all of the information prescribed by the relevant provisions of Article 5 of and Annex IV to the EIA Directive, and Section 50(2) of the Roads Act."

Multi Criteria Analysis (MCA)

As noted in Section 3.3.2 of Chapter 3 of Part 2 of the EIAR design options have been '*evaluated using 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. The indicative scheme for each route option was then progressed to 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.'*

Section 3.3 of EIAR Chapter 3 Reasonable Alternatives provides a detailed summary of the MCA assessments, with further details provided in the Preferred Route Option Report, including Appendix F (the Lucan to City Centre Core Bus Corridor Options Study Feasibility Report, December 2016), provided in the Supplementary Information submitted with the application for the Proposed Scheme.

Business Case

The details of the cost of the Proposed Scheme are not finalised due to ongoing impacts of inflation and scheduling of construction subject to decision of the statutory planning application. 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 the 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."

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/

e) Request for traffic modelling data

Summary of issue

One submission suggests that there is no substantive data provided in the application that assesses the traffic impact of the proposed changes to the road network and another submission indicates that there are no traffic surveys included in the application. It was suggested in submission 38 that an animated model of traffic flows, particularly commercial traffic through OLR, is shared by the NTA as part of the project.

Response to issue

Traffic impact assessment and surveys

Chapter 6 Traffic and Transport of Volume 2 of the EIAR considers the potential traffic & transport impacts associated with the Construction and Operational Phases of the Lucan to City Centre Core Bus Corridor Scheme. Section 6.2 outlines the methodology for assessing the traffic and transport related impacts of the Proposed Scheme, and section 6.3 "*provides an overview of the existing traffic and transport conditions within the redline boundary of the Proposed Scheme. The baseline conditions have been informed by several site visits of the local environment, comprehensive traffic surveys, and a desktop review of the most recent aerial photography*".

A Traffic Impact Assessment (TIA) has been prepared which presents a comprehensive review of the traffic and transportation impacts associated with the Proposed Scheme, which has informed the production of the EIAR Chapter 6 Traffic & Transport. The TIA should be read in conjunction with the EIAR chapter and is included as Appendix A6.1 (Transport Impact Assessment Report) in Volume 4 part 2 of 4 of the EIAR.

Section 5 of Appendix A6.1 provides an overview of the existing traffic and transport conditions and Section 5.2 provides details of the extensive traffic count data that was gathered for the Proposed Scheme, comprising junction turning counts and automated traffic counts on the various road links.

Section 6.2.5.2 of EIAR Chapter 6 discusses the data collection undertaken to inform the quantitative assessment. Further detail can be found in Appendix A6.2 (Transport Modelling Report) of Volume 4 part 2 of 4 of the EIAR.

Animated traffic models

Section 3.2.1 of Appendix A6.2 Traffic Modelling Report sets out the multi-tiered transport modelling approach that has been adopted. It explains that there are four tiers of transport modelling which have been used to assess 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." Section 3.2.4 of Appendix A6.2 provides details of the Proposed Scheme micro-simulation model and Section 3.2.5 states that: "*The Proposed Scheme micro-simulation model has provided key information on end-to-end bus and car journey times along the Proposed Scheme. The Proposed Scheme micro-simulation model is supplied traffic flow information from the LAM and uses consistent information from the junction design models, in terms of signal plans, green times, staging, phasing and offsets. 3D Visualisations of sections of the Proposed Scheme have been developed based on the 2D models to help visualise and demonstrate the benefits and impacts of the scheme to stakeholders. Overall, the Proposed Scheme micro-simulation model has provided key transport metric inputs to the TIA in terms of operational features, vehicle interaction, person level delay and bus journey time and reliability performance."*

f) Proposed material and cycleway/ footway cross section

Summary of issue

A number of submissions (70, 59, 46, 45, 42) queried what kind of materials are proposed for finished surfaces within Palmerstown village pointing out that this information is not included in the application. The residents expressed the view that the materials used should complement the historical character of the Village. Several submissions also queried the proposed separation of the cycle track from the traffic and footpaths. Submissions noted that the excessive use of bollards and street furniture should be avoided.

Response to issue

Materials

Landscape General Arrangement drawings BCIDA-ACM-ENV_LA-0006_XX_00-DR-LL-9001 showing the proposed material types are included on the Volume 3 Part 1 of 3 of the EIAR. An extract is provided in Figure 2.1.3.9.2 which shows that concrete paving is proposed for the footways on Old Lucan Road, as distinct from poured concrete footpaths on the R148 Palmerstown bypass.

Figure 2.1.3.9.2: Extract from Landscape General Arrangement Drawings (Sheet 14)

Cross Section / separation

The preferred typical footway/ cycle track / traffic lane separation is in accordance with Figure 8 Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR, replicated in Figure 2.1.3.9.3 below.

Figure 2.1.3.9.3: Figure 8 Appendix A4.1 Preliminary Design Guidance Booklet (PDGB)

The physical separation between footway/ cycle track / traffic lane is detailed on typical cross section drawings on sheets 8 & 10 of 23 of BCIDA-ACM-GEO_CS-0006_XX_00-DR-CR-9001 Volume 3 Part 1 of 3 of the EIAR, see Figure 2.1.43.9.4 below. This shows that where there is a one-way cycle track this will be separated from general traffic / bus lanes by a kerb which will be 120mm high and 250mm wide.

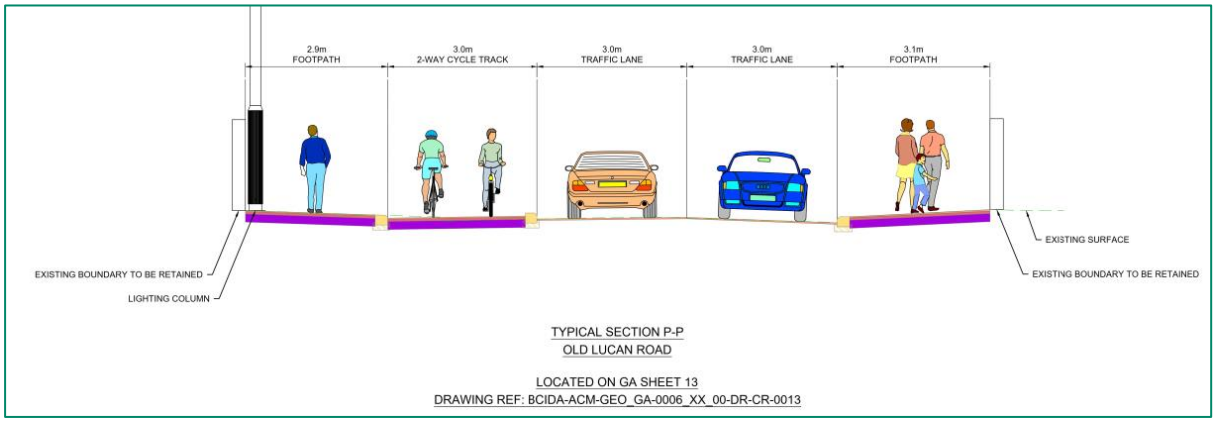


Figure 2.1.3.9.4: Extract of Typical Cross Section Drawings for Old Lucan Road

Character/ Clutter

Section 17.4.1.4.4 of Chapter 17 Landscape and Visual of Volume 2 of the EIAR sets out the general landscape / townscape and visual measures included within the Proposed Scheme, which includes the following:

"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 17.4.4.1.2 of Chapter 17 Landscape and Visual of Volume 2 of the EIAR notes the following: "*There will be improvements to the streetscape of Old Lucan Road with the provision of crossing points in sett paving and an improved paving scheme to the shared space area at the eastern end. There will also be improvements to some sections of R148 Palmerstown bypass…."*

g) Traffic Calming of R148 Palmerstown bypass

Summary of issue

Two submissions raised the point that in their view the R148 at Palmerstown should not be called a bypass or treated as a bypass. It was suggested that it's a road going through the middle of Palmerstown village and therefore it should be fitted with appropriate traffic calming measures.

Response to issue

The R148 Palmerstown bypass is one of the main arterial routes from Dublin City to the M50 and the west via the N4/N5/N6. No changes to the status or standard of the road at this location are required to achieve the Proposed Scheme's objectives and no such changes are included in the Proposed Scheme.

h) Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod

Summary of issue

Three submissions suggested that opening the Old Lucan Road behind the Applegreen petrol station to traffic in the direction of Chapelizod (eastbound) would be beneficial in the context of the capacity of The Oval junction.

Response to issue

Figure 2.1.3.9.5 shows the suggestion superimposed on the relevant extract of the General Arrangement drawings, immediately to the east of The Oval junction.

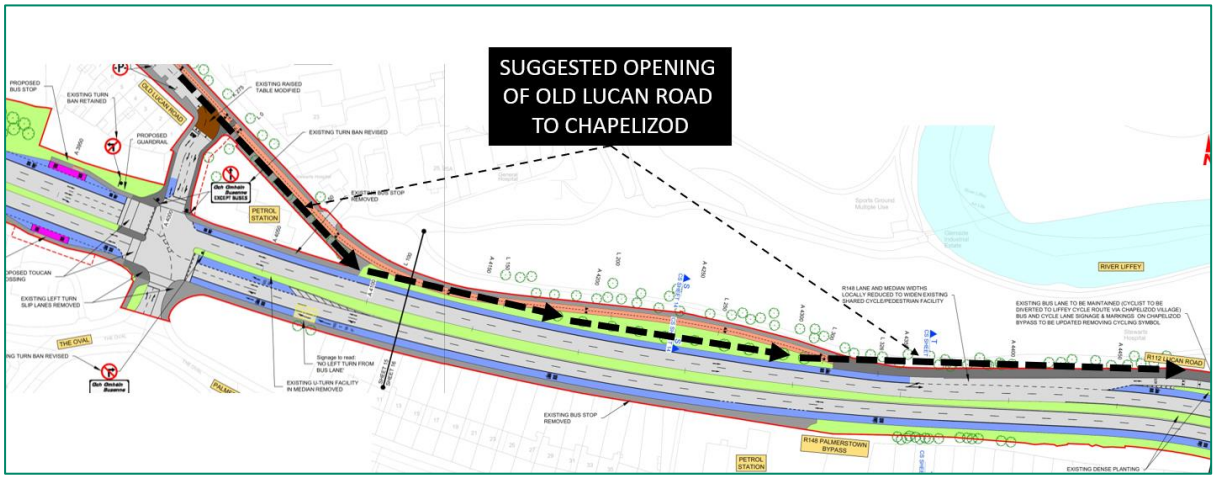


Figure 2.1.3.9.5: Extract of General Arrangement Drawings at the Oval Junction (Sheets 15 & 16)

Section 2.1.3.3 (b) of this report (on pages 30-31) discusses The Oval junction in summary the Junction Design Report demonstrates that the Proposed Scheme at The Oval provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

An arrangement that opens Old Lucan Road behind the petrol station as suggested is not necessary to meet the Proposed Scheme objectives.

Furthermore, Chapter 12 of the EIAR notes the Liffey Valley is a proposed Natural Heritage Area (pNHA) and Special Amenity Area Order (SAAO) and it would not be possible to accommodate an extra segregated traffic lane between the end of Old Lucan Road and the R112 slip to Chapelizod that would be needed without impacting the pNHA/ SAAO. In the absence of the extra segregated lane, traffic would have to join the R148 via another signal-controlled junction just east of The Oval junction; a merge arrangement would not be possible due to the proximity of the diverge to the R112 which would create a road safety issue.

i) Population Data Query

Summary of issue

Two submissions believed that there are ambiguities in the analysis of the population of Palmerstown, citing that areas of Palmerstown Court, Palmerstown Manor and Whitethorn estates were attributed to Ballyfermot not Palmerstown in the population modelling.

Response to issue

The submission contends that certain areas of Palmerstown have been wrongly attributed to Ballyfermot, and that these residents have not subsequently been considered in assessments. The implication would then appear to be that some of the statistics in the baseline description in Chapter 10

chapter should therefore change (overall population, travel to work and transport nodes), and furthermore that this should feed specifically through to addressing impacts on these residents.

However, this is not the case as assessments in the population chapter are carried out at a community level, utilising a series of 'community areas' across Dublin, and as such are not dependent on detailed population figures. Moreover, the 'community areas' used in Chapter 10 Population are not based on particular administrative (or descriptive) areas but were drawn-up to cover the whole of Dublin for consistent assessment of all the BusConnects schemes. Section 10.2.1.1 in Chapter 10 in Volume 2 of the EIAR provides information on the study area which have been informed CSO 2016 Census parish boundaries: "

"….The study area for the assessment of impacts on community amenity consists of 'community areas', which are informed by the Central Statistics Office (CSO) 2016 Census parish boundaries (CSO2016a). Community areas that will either be intersected by or experience displaced traffic as a result of the Proposed Scheme have been included in the study area…..". This included the Palmerstown area.

Boundary differences would also not materially affect amenity assessments in the population chapter. Amenity assessments cross-reference impacts on traffic, noise, air quality and landscape with community and commercial receptors, and conclusions are drawn on the overall amenity impact across the whole of each community area related to a scheme. It is considered that the Census and demographic information included in the assessment baseline, provides the appropriate level of detail to inform the population assessment. However, the assessment does not directly pivot off population (or other demographic) figures.

The NTA are satisfied that the Population assessment as set out in Chapter 10 has provided an appropriate assessment of the potential population impacts at a community level as a result of the Proposed Scheme.

2.1.3.10 Other Issues Raised

The following issues relating to Palmerstown were raised by a single submission only and the responses are provided under the relevant response in Section 3 of this report.

a) SHD development access / egress– Submission 26
b) Working hours close to construction compound – Submission 26
c) Structural damage to the houses on Kennelsfort Road due to potential increased volume of traffic – Submission 28
d) Environmental Impact Assessment Report Chapter 10, reference to Halston Street – Submission 37
e) Request for an Oral Hearing – Submission 37
f) Request for bike storage facility – Submission 38
g) Assessment of impact on disabled population – Submission 38
h) Safety of crossing two-way cycle track at bus stop – Submission 42
i) Suggested pedestrian bridge Access to laneway between Woodfarm Cottages and Red Cow Cottages - Submission 43
j) Policing of unauthorised parking - Submission 43
k) Access to the laneway to the rear of Red Cow Cottages - Submission 43
l) Support for the proposals along Old Lucan Road – Submission 45
m) Parking space for GoCar – Submission 64
n) Suggested alternatives for village car parking – Submission 67
o) Provision of cycle parking and water stations in the village – Submission 67
p) Location of new pedestrian crossing on Old Lucan Road – Submission 71
q) Access to and protection of businesses during construction – Submission 73
r) Preservation of heritage lighting columns on Kennelsfort Road Lower - Submission 73
s) Query relating to speed limit signs – Submission 73

2.2 Chapelizod Hill Road Bus Stops

2.2.1 Description of the Proposed Scheme

As described in section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description, on the R148 Chapelizod Bypass between the junction with The Oval and the R833 Con Colbert Road junction, it is proposed to maintain a continuous bus lane and two general traffic lanes in each direction, as per the existing arrangement.

New bus stops with laybys are proposed where the R148 Chapelizod bypass crosses Chapelizod Hill Road. These will be connected to Chapelizod Hill Road via a combination of steps and ramps. The existing bridge carrying the R148 Chapelizod Bypass over Chapelizod Hill Road will be widened to accommodate the eastbound bus layby and retaining walls are proposed to support the road widening, steps and ramps. Additionally, the speed limit for the bus lanes along the full length of the R148 Chapelizod bypass will be reduced from 80km/hr to 60km/hr.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.2.1, with Knockmaree Apartments highlighted in yellow.

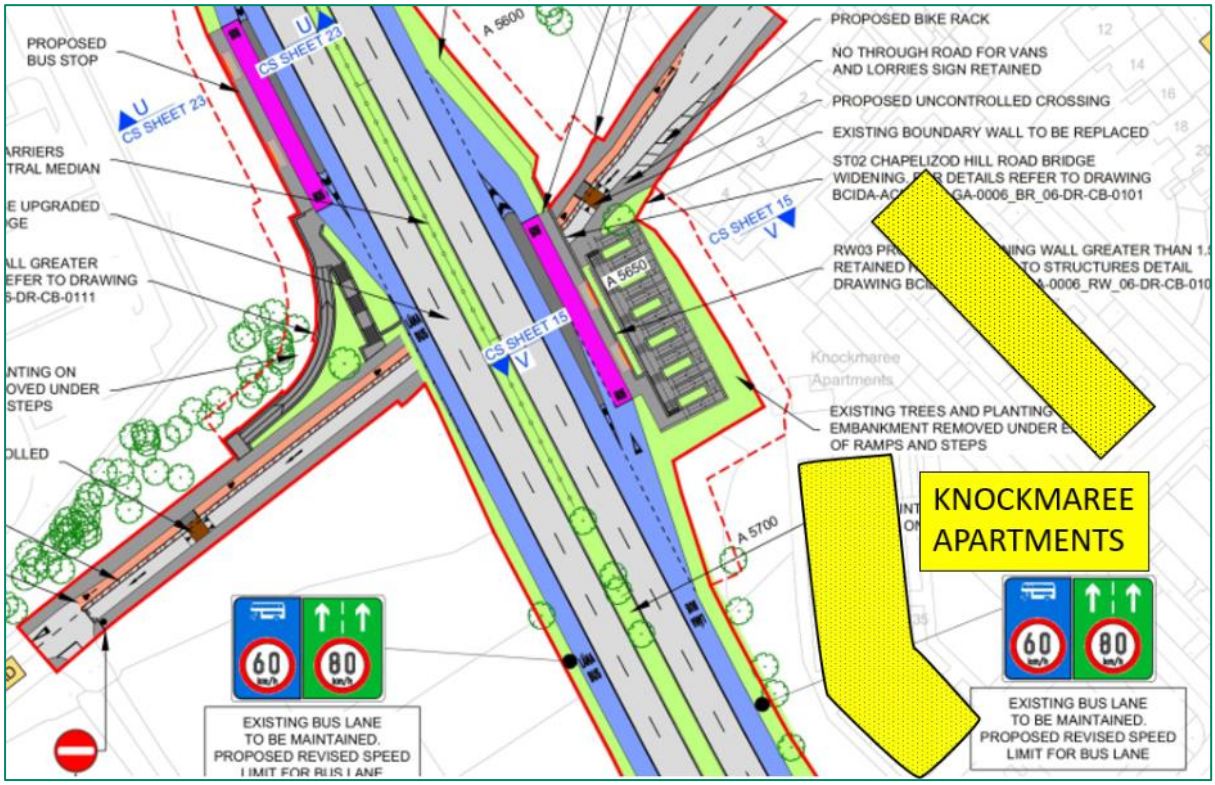


Figure 2.2.1: General Arrangement of Proposed Scheme at Knockmaree Apartments

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at Knockmaree Apartments is shown in Figure 2.2.2, with Knockmaree Apartments highlighted in yellow.

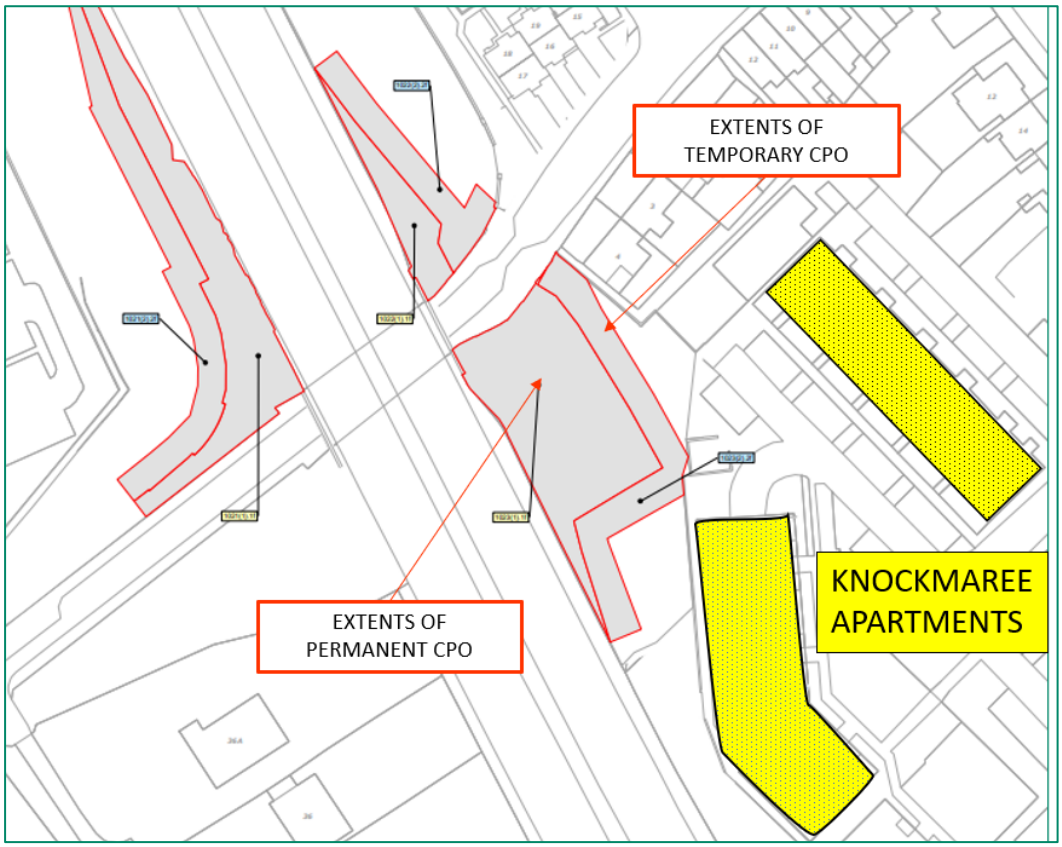


Figure 2.2.2: Extract from CPO Deposit Maps at Knockmaree Apartments

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.2.3.

Figure 2.2.3: Proposed Land Acquisition lines adjacent to Knockmaree Apartments

As described in section 4.5.2.8 of EIAR Chapter 4 Proposed Scheme Description, relating to landscape and urban realm, ramps and steps are proposed to create connections from Chapelizod Hill Road to the new bus stops on the Chapelizod Bypass.

This has been achieved on the northern side of the bypass by utilising a switch back ramp arrangement with integrated steps. The ramp is integrated into the buffer planting edge using green wall systems to create a soft interface with the existing context while retaining existing tree planting. High quality paving will delineate the ramp access on Chapelizod Hill Road connecting the ramp access space and creating a newly defined area in the public realm. Ornamental planting within the ramp structure will create a pleasant walking area to the new bus stops on Chapelizod Bypass.

The walkway on the south side of the bypass will integrate into the existing landscape to create a gradual walking route and steps to the bus stop. Existing planting will be retained and supplemented to further enhance the walkway into the urban realm. Image 4.2 from section 4.5.2.8 of EIAR Chapter 4 is shown in Figure 2.2.4 and the relevant extract from the Landscaping General Arrangement drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 is shown in Figure 2.2.5.

Figure 2.2.4: Proposed Landscape and Urban Realm adjacent to Knockmaree Apartments

Figure 2.2.5: Extract from Landscaping General Arrangement Drawings

The relevant extract from the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.2.6.

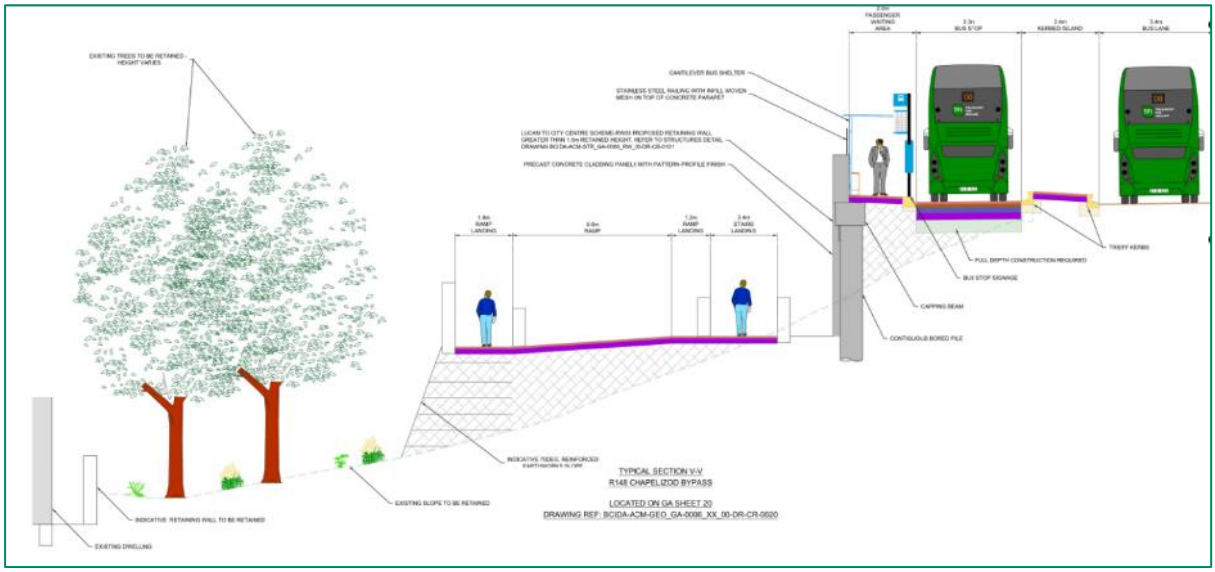


Figure 2.2.6: Typical Cross-section Adjacent to Knockmaree Apartments

The following figures from the EIAR, Volume 3, Part 3 of 3, Chapter 17 Landscape and Visual, Figure 17.2 Photo-montages are shown in Figures 2.2.7 and 2.2.9 below;

- Figure 17.2.0.4 View location (aerial photograph of the location)
- Figure 17.2.8.1 View 2 from the north – as existing
- Figure 17.2.8.2 View 2 from the north – as proposed

Figure 2.2.7: View Location

Figure 2.2.8: View from the north – as existing

Figure 2.2.9: View from the north – as proposed

2.2.2 Overview of Submission Received

As shown in Table 2.2.1 below, nine submissions were made in relation to the Proposed Scheme at this location. Seven of these (numbers 7, 11, 30, 36, 50, 51 and 53) solely related to this location; the other two submissions (numbers 15 and 45) also raised issues with other locations along the route of the Proposed Scheme.

Table 2.2.1: Submissions Made in Respect of Chapelizod

No	Name	No	Name	No	Name
7	Chapelizod Residents Association	30	Senator Mary Seery Kearney	50	Cuan Ó Seireadáin
11	Suzanne Davis	36	Knockmaree Management Company	51	Desmond O'Carroll & Others
15	Dublin Commuter Coalition	45	Cllr Shane Moynihan	53	Naomi Louisa O'Connell

2.2.3 Overview of Issues Raised

i) Two submission (30 & 45) fully supported the proposals. Two further submissions (36 and 50) expressed support for the principle of access to the proposed bus corridor for residents of Chapelizod but raised issues with the proposed solution on the south side of Chapelizod Hill Road.

ii) Submission 7 raised issues about the C-spine bus routing on the bypass as opposed to through the village and suggested an alternative.

iii) Two submissions (7 and 36) raised accessibility issues the length of the proposed ramps coupled with the existing steep slope to them from Chapelizod village. While recognising the benefits of providing access for all one submission questioned the demand from the village for the proposed bus services on the bypass and expressed the view that usage would be low and suggested that a lift should be considered as an alternative solution. Two submissions (11 and 36) raised issues related issues associated with the consideration of alternatives in relation to the previous draft Preferred Route proposal for the ramps to be located on the north side of Chapelizod Hill Road, arguing that a greater number of residential properties are impacted by the Proposed Scheme than would have been impacted by the draft Preferred route proposals.

iv) Four submissions (7, 11, 36 and 50) raised concerns about the visual impact arising from the loss of trees and one submission expressed the view that the visual impact assessment associated with the loss of trees has not been adequately assessed as the trees were not included in the Arboricultural tree survey, and as a consequence "*the conclusions of the Arboricultural Impact Assessment within the EIAR are therefore deeply flawed*."

v) Four submissions (11, 36, 50 and 51) raised concerns about the impacts during construction associated with the structural integrity of the Knockmaree apartments arising from the piling required for the bridge and embankment widening, construction noise, working hours, dust and light pollution.

vi) Three submissions (7, 11 and 36) also raised concerns about reduced privacy for residents of Knockmaree Apartments as they believed they would be overlooked from proposed bus stop.

vii) Four submissions (11, 36, 50 and 51) raised concerns in relation to the noise impact on the apartments during operation.

viii) Two submissions (11 and 36) stated that the loss of trees and increase in traffic will cumulatively have the potential to reduce the air quality of the surrounding residential areas and requested that the bus stop be relocated away from the largest density of population.

ix) Two submissions (11 and 36) expressed the view that the Proposed Scheme would have a material and significant reduction in value of property adjoining and close to the application site.

x) Submission 15 raises a safety concern with locating a bus stop on the bypass and notes an opportunity for a mobility filter on Chapelizod Hill Road.

xi) Submission 36 raised two queries in relation to Town Planning; the land use zoning being Z9 (to provide for Amenity / Open Space Lands / Green Network), and the proximity of the Architectural Conservation Area on Chapelizod Hill Road.

2.2.4 Details of Issues Raised and Responses

2.2.4.1 Advocacy for the Proposed Scheme

Summary of Issue

Two of the submissions fully support the proposed bus stops; one acknowledges the improved connectivity they will bring and the other seeks a planning condition that obliges the prioritisation of this aspect of the Proposed Scheme within the overall construction period.

The two other submissions expressed support for the principle of access to the C-Spine bus services on the R148 Chapelizod Bypass that the Proposed Scheme will provide for residents of Chapelizod; however, they raised issues with the proposed steps and ramps being on the south side of Chapelizod Hill Road.

Response to Issue

The NTA welcomes the support expressed for this important element of the Proposed Scheme, which will enable residents of Chapelizod to access the C Spine bus services on the R148 Chapelizod Bypass, as shown in Figure 2.2.10 which shows an extract from final output from the Bus Network Review in the area between the M50 and the City Centre.

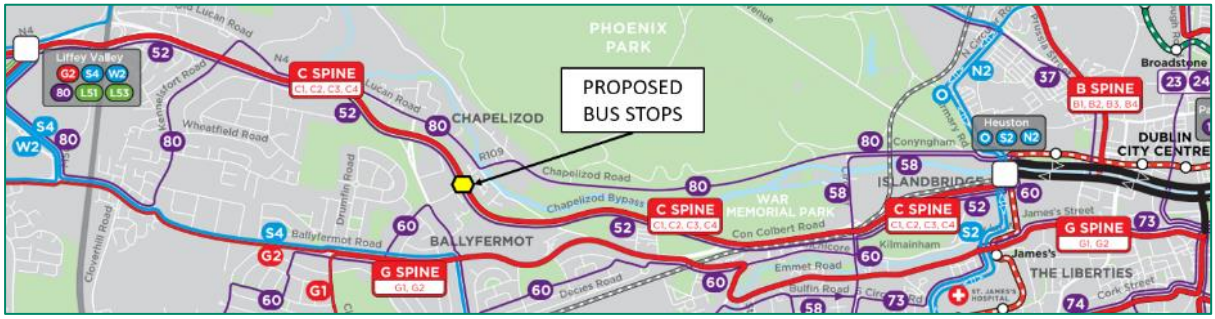


Figure 2.2.10 Extract from Figure 4.4 of the Preferred Route Option Report showing the Dublin Area Bus Network 2019

2.2.4.2 Alternative Route for C Spine Services on the R148 Chapelizod Bypass

Summary of Issue

Submission 7 asserts that an alternative route option for the Proposed Scheme should be considered, namely one that leaves the R148 Chapelizod Bypass and travels though Chapelizod village instead, on the basis that the bus stops on the Chapelizod Bypass will not be accessible to wheelchair users.

Response to Issue

The NTA is satisfied that a comprehensive process was undertaken in relation to the route selection for the Proposed Scheme. Section 3.3 of EIAR Chapter 3 Reasonable Alternatives provides a detailed summary of this, with further details provided in the Preferred Route Option Report, including Appendix F (the Lucan to City Centre Core Bus Corridor Options Study Feasibility Report, December 2016), provided in the Supplementary Information submitted with the application for the Proposed Scheme.

Specifically, Section 3.3 of EIAR Chapter 3 describes the route alternatives which were considered as part of the process to establish the Proposed Scheme. Section 3.3.2 of Chapter 3 describes how following the 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 qualitive assessment using criteria established to compare the route options.

Section 3.3.2.3 of EAR Chapter 3 explains how "*following the Stage 1 sifting process three viable route options for the sub-section of the route from Kennelsfort Road Upper to Con Colbert Road were taken forward for assessment and further refinement as follows:*

- *Route Option CZ01 (comprising CR1, CR12, CR27 and CR10 in Image 3.11): Using the existing bus lanes on the R148 (Palmerstown Bypass) before diverting to the R112 Lucan Road and travelling through Chapelizod;*

- *Route Option CZ02 (comprising CR1 and CR2 in Image 3.11): remains on the R148 (Palmerstown Bypass and Chapelizod Bypass) for its entire length, using the existing bus lanes along this road. These bus lanes have recently been upgraded to the required standard and works to the junction at Kylemore Road to provide bus priority are due to be completed in the near future [works now completed]; and*
- *Route Option CZ03 (comprising CR1, CR12, CR23, CR24, CR25, CR15, CR16 and CR17 in Image 3.11): Travels along the R148 (Palmerstown Bypass) before diverting to the R112 (Lucan Road and Kylemore Road) and Ballyfermot Road (R833) and re-joining the R148 at Con Colbert Road junction.*"

Route Option CZ01 is the same as the alternative route option suggested by the submission, and Route Option CZ02 is the route followed by the Proposed Scheme.

Image 3.11 of EIAR Chapter 3 shows the route options for the sub-section of the route from Kennelsfort Road Upper to Con Colbert Road, as shown in Figure 2.2.11.

Figure 2.2.11 Route options from Kennelsfort Road Upper to Con Colbert Road

Section 3.3.2.3 of EAR Chapter 3 states the conclusion of the assessment: *"Following a detailed MCA, Route Option CZ02 was identified as the preferred option for this section and was brought forward into the Emerging Preferred Route."*

Section 3.3.2.4 of EIAR Chapter 3 relates to the sub-section of the route from Con Colbert Road to the city centre and states that: "*Following the Stage 1 sifting process four viable route options for sub-section SAS4 were taken forward for assessment and further refinement as follows:*

- *Route Option CT01 (comprising CR3, CR4, CR6, CR7 and CR8 in Image 3.12): Using the R148 (St. John's Road West) from Con Colbert Road to the City Centre via the North and South Quays;*
- *Route Option CT02 (comprising CR3, CR4, CR6, CR22, CR11, CR7 and CR8 in Image 3.12): The same as CZ01 from Con Colbert Road to the R111 (South Circular Road) junction, and from there travelling along the R111 and R109 (Conyngham Road) adjacent to the Phoenix Park before joining the quays and;*
- *Route Option CT03 (comprising CR10, CR4, CR6, CR22, CR11, CR7 and CR8 in Image 3.12): Beginning at the end point of Route Option CZ01 from Study Area Sub-Section 3 and travelling along the R109 (Conyngham Road) until joining the quays; and*
- *Route Option CT04 (comprising CR10, CR4, CR6, CR22, CR7 and CR8 in Image 3.12): Beginning at the end point of Route Option CZ01 from Study Area Sub-Section 3 and travelling along the R109 (Chapelizod Road) to the R111 (South Circular Road) junction same as route option CT03.*"

For this section, Route Option CT03, which connects to the end point of Option CZ01, is the same as the alternative route option suggested by the submission, and Route Option CT01 is the route followed by the Proposed Scheme.

Image 3.11 of EIAR Chapter 3 shows the route options for the sub-section of the route from Con Colbert Road to the city centre, as shown in Figure 2.2.12.

Figure 2.2.12 Route options from Con Colbert Road to city centre

Section 3.3.2.4 of EAR Chapter 3 states the conclusion of the assessment: *"Following a detailed MCA, Route Option CT01 was identified as the preferred option for this section and was brought forward into the Emerging Preferred Route."*

As described above, for both of the above sub-sections of the route of the Proposed Scheme the Emerging Preferred Route identified as the preferred option from detailed Multi Criteria Analysis (MCA) was the route which the Proposed Scheme follows.

Section 5 of the Preferred Route Option Report, provided in the Supplementary Information submitted with the application for the Proposed Scheme, describes that the assessment process and details that led to the selection of the Emerging Preferred Route (outlined in the Lucan to City Centre Core Bus Corridor Options Study Feasibility Report December 2016) were reviewed at the start of the development of the Preferred Route Option. In Section 5.3.1 it is confirmed that "*the assessment of the various route options remained valid and that the EPR identified in the Feasibility Report along the N4 / R148 corridor remained the optimum routing for the Proposed Scheme."*

The NTA is therefore satisfied that a comprehensive process was undertaken in relation to the route selection for the Proposed Scheme and that the proposed route is the optimum one in respect of achieving the objectives of the Proposed Scheme.

2.2.4.3 Scale / Length of Ramps and Consideration of Alternatives

Summary of Issue

Two submissions 36 highlighted the length of the proposed ramps and the existing steep slope to them from Chapelizod village. While recognising the benefits of providing access for all, one submission questioned the demand from the village for the proposed bus services on the bypass and expressed the view that usage would be low. Submission 7 asserts that that the proposed bus stop design breaches Document M of the Building Regulations with regard to height and distance specifically in relation to wheelchair users. It notes that that the maximum gradient allowed for wheelchair users under Building Regulations (Technical Guidance Document M) is 1 in 12. The submission also states that the gradient of the existing Chapelizod Hill Road is 1 in 12 close to the village, increasing to 1 in 10 at the location of the proposed ramps, and also acknowledges that it is not practicable to introduce ramps along Chapelizod Hill Road to make the route accessible by wheelchair users, noting the number of landings and the extents of handrails that would be required.

Two submissions, (11 and 36) questioned the consideration of alternatives in relation to the previous draft Preferred Route proposal for the ramps to be located on the north side of Chapelizod Hill Road, arguing that a greater number of residential properties are impacted by the Proposed Scheme than would have been impacted by the draft Preferred route proposals. Submission 36 suggested that a lift should be considered as an alternative solution and also questioned the consideration of alternatives in relation to the previous draft Preferred Route proposal for the ramps to be located on the north side

of Chapelizod Hill Road, arguing that a greater number of residential properties are impacted by the Proposed Scheme than would have been impacted by the draft Preferred route proposals.

Response to Issue

Scale and Length of Ramps

In relation to the scale and length of the proposed ramps, it is accepted that the existing gradient of Chapelizod Hill Road is steeper than the maximum permitted under Building Regulations for wheelchair users. This is noted in the Accessibility Audit, Appendix I of the Preliminary Design Report included as part of the Supplementary Information provided with the application for the Proposed Scheme. The Accessibility Audit notes that the change in level between Chapelizod Hill Road and the R148 is significantly in excess of the 2m maximum permitted for wheelchair use for any series of ramps. However, it also recognises that longitudinal gradients on Chapelizod Hill Road from the village exceeds the maximum permitted gradient for wheelchair use and cannot be altered. In these circumstances it is accepted that the proposed bus stops are not accessible to wheelchair users as a result of the gradient of the existing Chapelizod Hill Road and the height change between the existing road and the proposed bus stops.

However, it is noted that there are, and will continue to be, bus services through Chapelizod village in addition to the bus services along the R148 Chapelizod Bypass, as shown in Figure 2.2.10 above. This arrangement provides the optimum solution in terms of providing accessibility to bus services while achieving improved bus journey times.

Furthermore, as described in Section 4.10.3 of the Preliminary Design report included as part of the Supplementary Information provided with the application for the scheme, the layout of the steps and ramps included in the Proposed Scheme are designed to have a maximum slope of 1 in 15 for sections of 5m. This complies with Building Regulations Technical Guidance Documents K and M in respect of all users except those in wheelchairs. The NTA considers that the provision of steps alone would not be acceptable from the point of view of wider accessibility and that a pedestrian ramp is a necessary and appropriate alternative to steps, for example serving passengers with restricted mobility and those with child buggies.

Provision of pedestrian ramps to each of the two bus stops is preferable to providing lifts as they allow for a free flow of movement of pedestrians that do not wish to avail of steps. There is also a far lower level of maintenance needed with a ramp as opposed to a lift, which avoids the circumstance of the steps being the only means of accessing the bus stops in the event of a mechanical failure.

In summary, the NTA is satisfied that the proposed steps and ramps at this location provide the optimum arrangement to maximise the accessibility of the C Spine bus services to residents of Chapelizod given the existing topographical constraints.

Consideration of Alternatives

In relation to the consideration of alternatives in relation to the previous draft Preferred Route proposal for the ramps to be located on the north side of Chapelizod Hill Road,

Section 3.4.4.5 of EIAR Chapter 3 Reasonable Alternatives discusses the evolution of the design for the Chapelizod Hill Road Steps and Ramps as follows.

"The proposals for the Proposed Scheme have consistently included the provisions of new bus stops on the R148 Chapelizod Bypass from the Emerging Preferred Route through to the draft Preferred Route Option. Access to these bus stops from Chapelizod village was provided via ramps on the northern side of Chapelizod Hill Road. The design of these connections was developed as part of the normal design process and included preparation of a number of alternative layout arrangements for the ramps, as well as the addition of steps. The design alternatives sought to minimise the impact on the vegetation and trees on the existing R148 Chapelizod bypass embankment, while providing the shortest possible length of ramp without compromising the safety and security of the pedestrians and cyclists using the ramp. The solution adopted in the draft Preferred Route Option comprised a series of short ramps that interacted with the steps at each return to avoid any long isolated lengths of ramp while allowing for the inclusion of landscaping proposals.

A number of design alternatives were also considered for the widening of the existing R148 Chapelizod Bypass embankment with a view to minimising the number of trees that would be lost. These design alternatives included different construction methods. The final design included in the Proposed Scheme

comprises a reinforced earth embankment that will be able to be constructed entirely from the R148 Chapelizod bypass, thus minimising the impact on the existing trees and planting.

While the provisions of the new bus stops on the R148 Chapelizod Bypass was supported by some submissions made in the three rounds of public consultation, there were no submissions that specifically commented on the layout of the ramps and steps. However, following the third round of public consultation, the BusConnects Infrastructure team identified some concerns in respect of the visual impact of the proposed ramps on properties in Chapelizod Court. As a result, consideration was given to a further alternative design option that moved the ramps and steps to the southern side of Chapelizod Hill Road. The principles of this alternative maintained a series of short ramps that interacted with the steps at each return. This solution reduced the overall height, and hence length of the ramps as the height of the R148 Chapelizod Bypass reduces in a southerly direction. This had benefits for people using the ramps as well as requiring a reduced area and hence loss of trees and vegetation.

In addition to these end-use operational benefits, it was considered that the alternative design proposal would be better in terms of a reduced landscape and visual impact compared to the draft Preferred Route Option layout. It was also concluded that there would be no significant difference between the alternatives in terms of air quality, noise and biodiversity. Therefore this alternative design of the ramps and steps has been included in the Proposed Scheme."

As described in Section 4.10.3 of the Preliminary Design report included as part of the Supplementary Information provided with the application for the scheme, the layout of the steps and ramps included in the Proposed Scheme are designed to have a maximum slope of 1 in 15 for sections of 5m, complying with Building Regulations Technical Guidance Documents K and M. The switch back design that interacts with the steps provides the most efficient layout and hence requires the minimum amount of landtake. The Proposed Scheme includes the minimum number of ramps to provide the 5.0m height increase necessary.

As mentioned in Section 3.4.4.5 of Chapter 3, the overall length of the ramps is reduced in the Proposed Scheme from the layout on northern side of the road which was included in the draft Preferred Route Option. This reduced length arises from the height of the R148 Chapelizod Bypass being lower on the southern side of Chapelizod Hill Road, as shown on the Proposed Elevation of the Chapelizod Hill Road retaining wall shown on the Bridges and Major Structure drawings in EIAR Volume 3 Chapter 4 Part 2 of 2, see Figure 2.2.13. It is noted that the submissions states that the steps and ramps are "*seeking to facilitate the c. 10m differential*". This is incorrect. The overall height required for the ramps in the Proposed Scheme is 5.0m, compared to approximately 7.0m for the previous alternative in the draft Preferred Route Option.

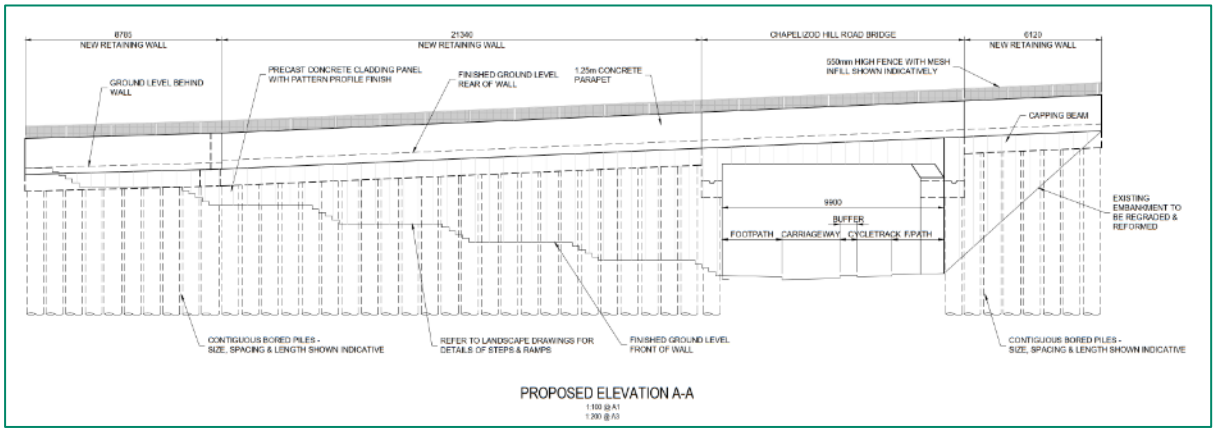


Figure 2.2.13: Elevation of Chapelizod Hill Road Retaining Wall

As identified in Section 3.4.2 of Chapter 3 Reasonable Alternatives, following the Draft Preferred Route Option Consultation (March 2020) one of the key changes included in the updated design of the Draft Preferred Route Option was that the new bus stops on Chapelizod bypass were lengthened, segregated and bus laybys introduced, with the existing bridge being widened on the north side.

Section 3.4.3 explains that further consideration following Updated Draft Preferred Route Option Consultation (November 2020) resulted in the new ramps and steps on Chapelizod Hill Road serving the proposed bus stops being moved to the southern side of the road, resulting in a reduction in height (reduced to 5.0m from 7.0m as described above) and length of the ramps from approximately 177m to

approximately 138m, as well as reducing the overall area of the new facility, with environmental advantages associated with reduced earthworks, and reduced land-take.

As described in Section 3.4.4.5 this reduction in height and length had benefits for people using the ramps as well as requiring a reduced area and hence reduced loss of trees and vegetation. The Draft Preferred Route Layout and the Proposed Scheme layout are compared in Figure 2.2.14.

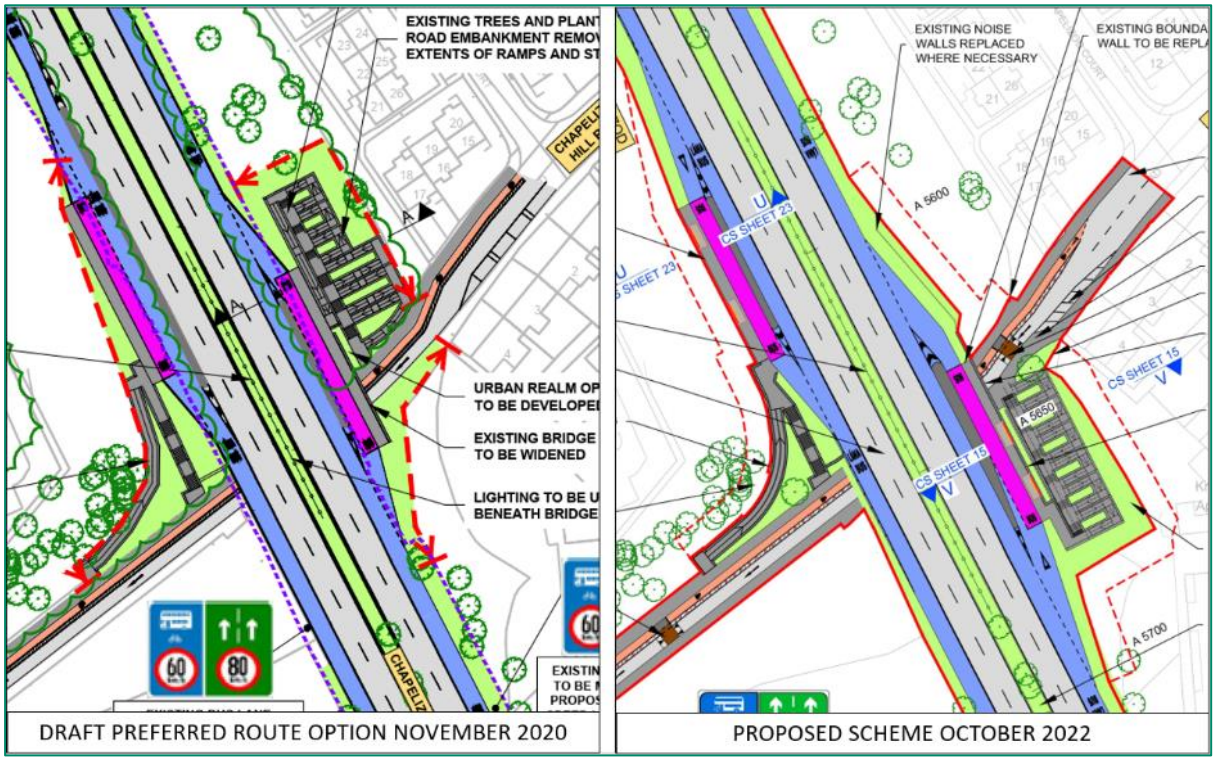


Figure 2.2.14: Draft Preferred Route Option compared to the Proposed Scheme

In summary, the NTA is satisfied that of the various alternative layouts and arrangements considered, the layout of the ramps and steps included in the Proposed Scheme minimise the landtake and impact on the vegetation and trees on the existing R148 Chapelizod bypass embankment, while providing the shortest possible length of ramp for end user without compromising their safety and security.

2.2.4.4 Arboricultural Impact Assessment

Summary of Issue

Submission 36 expressed the view that "*the conclusions of the Arboricultural Impact Assessment Report, included as Appendix A17.1 of the EIAR are deeply flawed*." The basis for this assertion is that there are no details on "*the species, quality, condition, spread or maturity*" of the trees that are to be removed in the vicinity of Knockmaree Apartments in the Arboricultural Impact Assessment Report.

Response to Issue

The conclusions of the Arboricultural Impact Assessment Report Appendix A17.1, which relate to the entire route, are:

i. One hundred and fifty four individual trees, 14 tree groups and one hedge are to be removed to facilitate the Proposed Development, this includes 57 individual trees and part of one tree group of moderate quality (Category B) and 97 individual trees, four full groups, one hedge and part of nine tree groups of low quality (Category C). No trees identified as high quality (Category A) are to be removed.

ii. Twenty-five individual trees, two full groups and part of eight tree groups of uncategorised trees are also to be removed. Categorisation and further assessment of these trees will be completed as part of the detailed design tree surveys.

iii. 17 trees of very low quality (Category U) are also recommended for removal to facilitate the Proposed Development and the future use of the scheme. These trees are arguably not suitable for long-term retention and their removal is justified regardless of the Proposed Development.

iv. The design has been developed to minimise the impact on trees, and trees are proposed to be retained where careful construction methodologies will allow their retention. Trees are to be removed due to a direct conflict with the Proposed Development and where specialist methodologies or design tweaks are not considered practical to facilitate their retention.

v. Tree loss will be mitigated with a robust and high-quality scheme of new tree planting as detailed in proposed Landscape General Arrangement Plans.

vi. Soil structure for areas of new tree planting where the ground is currently unsurfaced will either be protected using ground protection or fenced exclusion zones; or the soil structure will be ameliorated or replaced following the completion of construction works on Site.

Figure 2.2.15 provides an extract of the Tree Protection Plan drawings included within Appendix A17.1 of the EIAR Volume 4 Part 4 of 4Chapter 17 Landscape (Townscape) and Visual Appendices. While this indicates that the trees to be lost at this specific location were not categorised, they were identified in the topographical survey and are hence accurately quantified. Categorisation of these trees will be completed as part of the detailed design tree surveys.

Figure 2.2.15: Extract of Appendix A17.1 Tree Clearance Plans at Chapelizod Hill Road

In addition, the area of land in question forms the embankment of R148 Chapelizod Bypass dual carriageway and in Section 12.4.3.4.1.2 of EIAR Chapter 12 Biodiversity it is noted that *"A significant portion of mixed broadleaved woodland habitat (WD1) will be removed along Chapelizod Hill Road and the Chapelizod Bypass, to facilitate the provision of bus stop lay-bys and associated access ramps and stairs, and necessitating widening of the existing bridge deck. Considering the existing width of this habitat at this location, and the fact that a large portion of the habitat will be retained, thereby avoiding complete fragmentation, this impact will be significant at the local level only."*

As such, while the category of each individual tree to be removed was not recorded, given that the location and number of trees / tree groups was identified by the topographical survey and that the area is identified as mixed broadleaved woodland habitat, the conclusions of the Arboricultural Impact Assessment Report are valid.

2.2.4.5 Visual Impact Assessment

Summary of Issue

Four submissions (7, 11, 36 and 49) raised concerns about the visual impact arising from the loss of trees. Specifically, submission 36 queries the findings of the landscape and visual impact assessment; in particular the view is expressed that "*Table 17.8 that outlines the operational impact of the proposed development is in conflict with the main body of the assessment.".*

Response to Issue

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 Knockmaree apartments, 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 Construction and Operational Phase of the Proposed Scheme.

Section 17.4.3 reports the assessment of the Construction Phase and Section17.4.3.1.2 provides the impact on Townscape and Streetscape Character. It states that: "*There will be substantial works at Chapelizod Hill Road with removal of existing woodland planting along the R148 Chapelizod Bypass, loss of portions of landscape areas and introduction of a new ramp structure and steps. The construction works will not alter the existing streetscape or townscape character along this section the Proposed Scheme but will result in a temporary increase in construction activity, presence of machinery and visual clutter, and a localised reduction of screening between the R148 and Knockmaree Apartments at Chapelizod Hill Road."*

In summary Section 17.4.3.1.2 states that *"The magnitude of change in the overall baseline environment is low / medium and locally very high to areas around the R148 Chapelizod Bypass bridge at Chapelizod Hill Road.*

The potential overall townscape / streetscape effect of the Construction Phase within this section is assessed to be Negative, Slight / Moderate and Temporary / Short-Term. The effect will be Locally Negative, Significant and Temporary / Short-Term around the R148 bridge at Chapelizod Hill Road."

Section 17.4.3.2.8 assesses the townscape / streetscape and visual impact of the Construction Phase on residential properties will be Negative, Moderate / Significant and Temporary / Short-Term. It also notes that "*the construction of the Proposed Scheme will involve works to the wooded embankment of the R148 adjacent to Knockmaree Apartments. This will include construction of new built elements, and loss of woodland which has a screening function between the R148 and the properties, and this will result in visual impacts on Knockmaree Apartments. The sensitivity is high and the magnitude of change is high*."

Section 17.4.3.2.9 considers the impact on trees and vegetation in the construction phase of the Proposed Scheme and notes that construction will require removal of existing trees and other plantings at specific locations along the road corridor. It identifies six notable locations along the route, one of which is Chapelizod Hill Road. Overall, the sensitivity is medium / high and the magnitude of change is high / very high. The potential townscape and visual effect of the Construction Phase on trees and plantings is assessed to be Negative, Significant / Very Significant and Temporary / Short-Term.

Section 17.4.4 reports the assessment of the operational phase and Section 17.4.4.1.2 considers the impact on Townscape and Streetscape Character, in which it states that "*The baseline townscape is of medium sensitivity and operation of the Proposed Scheme will involve some changes to townscape / streetscape characteristics, most notably at Chapelizod Hill Road where there will be continued effects from removal during construction of wooded areas to the edge of the R148 and the provision of a new access ramp and steps to the bus stops on the R148 Chapelizod Bypass. The negative impacts from tree loss at this location will be partially compensated by the proposed replacement planting scheme including some ornamental planting, as well as an improved paving scheme including natural stone*."

Section 17.4.4.2.5 considers the impact on amenity designations. In respect of Knockmaree Apartments it states that "*The Operation Phase of the Proposed Scheme will include a substantial change to the small open space / wooded embankment adjacent to Knockmaree Apartments and to the western side of the R148 Chapelizod Bypass with continuing effects resulting from the substantial removal of trees and vegetation during the Construction Phase, and introduction of new ramps and steps to the bus stops on the R148. There will be an increase in pedestrian access and the provision of some replacement planting but there will be an overall increase in built form and a loss of vegetation, resulting*

in a negative effect. The effect will be neutralised with the growth of replacement planting over the long-term. The sensitivity is medium / high and the magnitude of change is medium / high. The potential townscape / streetscape and visual effect of the Operational Phase on this open space is assessed to be Negative, Significant and Short-Term reducing to Neutral, Moderate, Long-Term."

Section 17.4.4.2.8 considers the impact on properties and notes that the Proposed Scheme "*will involve changes to the wooded embankment of the R148 adjacent to Knockmaree Apartments. This will include introduction of new built elements, and loss of woodland which has a screening function between the R148 and the properties, and this will result in visual impacts on Knockmaree Apartments. The negative effect resulting from the loss of trees will be reduced over time with the growth of replacement planting over the long-term, but the screening effect will not be fully restored. The sensitivity is high and the magnitude of change is medium / high. The potential visual effect of the Operational Phase on these properties is assessed to be Negative, Moderate / Significant and Short-Term becoming Negative, Slight, Long-Term.*"

Section 17.4.4.2.9 reports the impact on trees and vegetation: It notes that the magnitude of change is locally high at spaces adjacent to R148 Chapelizod Bypass/ Chapelizod Hill Road, although replacement tree planting will reduce effects over time. It states that *"The potential townscape / streetscape and visual effect of the Operational Phase on trees and plantings at spaces adjacent to R148 / Chapelizod Hill Road is assessed to be Negative, Significant, Short-Term becoming Negative, Moderate, Long-Term."*

In relation to the submissions query relating to Table 17.8, which provides a summary of the potential operational phase impacts (at 1 year post-Construction Phase), the following visual impacts are noted for this location:

- Amenity Designations: Open space adjacent to Knockmaree Apartments:
    - Baseline Sensitivity: Medium/High
    - Magnitude of Change: Medium / High
    - Significance and Quality of Impacts: Negative Significant Short-Term
- Properties: Permanent acquisition from Knockmaree Apartments
    - Baseline Sensitivity: High
    - Magnitude of Change: Medium / High
    - Significance and Quality of Impacts: Negative Moderate/Significant Short-Term
- Trees and Vegetation: Adjacent to R148 / Chapelizod Hill Road
    - Baseline Sensitivity: Medium / High
    - Magnitude of Change: High
    - Significance and Quality of Impacts: Negative Significant Short-Term

These statements made in Table 17.8 are identical to the statements made in the main body of the text and the submission is incorrect to assert that they are in conflict.

In terms of the predicted operational phase impacts, Table 17.10 (page 42 of Chapter 17) provides a summary (at 15 years post-construction) for this location:

- Amenity Designations: Open space adjacent to Knockmaree Apartments:
    - Significance and Quality of Impacts: Neutral Moderate and Long-Term
- Properties: Permanent acquisition from Knockmaree Apartments
    - Significance and Quality of Impacts: Negative Slight and Long-Term
- Trees and Vegetation: Adjacent to R148 / Chapelizod Hill Road
    - Significance and Quality of Impacts: Negative Moderate and Long-Term

The NTA is satisfied that the assessment has been carried out according to best practice and guidelines relating to landscape (townscape), that a detailed and comprehensive assessment has been undertaken of the impacts associated with the Construction and Operational Phase of the Proposed Scheme, and that the stated conclusions of the visual impact assessment are valid.

2.2.4.6 Construction Impacts

Description of construction works

Section 5.3.2.3 of EIAR Chapter 5 Construction provides the following description of the construction works in Section 2c: Chapelizod Bypass, Chapelizod Hill Road Bridge. *"Section 2c is located on the Chapelizod Bypass, with works concentrated at the Chapelizod Hill Road Bridge, including a section of Chapelizod Hill Road. The existing Chapelizod Bypass and existing Chapelizod Hill Road Bridge will be widened to facilitate bus stop laybys on either side of Chapelizod Bypass at this location. As part of the structural works, a new pedestrian ramp and stair access will be constructed on each side of the Chapelizod Hill Road Bridge, incorporating two retaining walls (RW03 and RW04). Further information on the Chapelizod Hill Road Bridge Widening (Structure Reference: 02) construction methodology is provided in Section 5.5.4.1.2.*

The construction activities at Section 2c along Chapelizod Hill Road will comprise reconstruction, resurfacing of the roads, footpaths, and cycle tracks, new kerbs, new road markings, new street furniture and landscaping works. Boundary walls (with railings) will be replaced along Chapelizod Hill Road either side of Chapelizod Hill Road Underbridge and finished to match the detailing of village improvement scheme in Chapelizod Village Centre. Noise walls along the northern side of Chapelizod Bypass at the Chapelizod Hill Road Underbridge will be replaced where necessary. Trees and vegetation on both sides of the Chapelizod Bypass, in the areas under the proposed ramps and steps will be removed. Utility (foul water infrastructure) diversions and / or protections will be required. The expected construction duration will be approximately six months.

The construction works on the rest of the Chapelizod Bypass will be limited to the installation of new road signage and road markings."

Summary of Issue

Four submissions (11, 36, 49 and 50) raised concerns about the impacts during construction associated with the structural integrity of the Knockmaree apartments arising from the piling required for the bridge and embankment widening, construction noise, inadequate mitigation measures, working hours, dust and light pollution.

Response to Issue

Concern about structural integrity of Knockmaree arising from the construction vibration from piling

The submission expresses concern about the impact on the structural integrity of the apartments and requests that a full structural survey of the apartments is undertaken prior to the undertaking of the works.

Section 9.4.3.3 of EIAR Chapter 9 Noise and Vibration assess construction vibration states the following: "*The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions. Depending on the method and equipment used, there is the potential for some vibration relating to piling operations. In terms of piling, low vibration methods involving bored or augured piles are proposed for the Proposed Scheme. This piling method significantly minimises the levels of both noise and vibration generated as it is a non-percussive piling technique. For the purposes of this assessment, the expected vibration levels during piling have been determined through reference to published empirical data. BS 5228–2 (BSI 2014b) includes measured magnitude of vibration associated with rotary bored piling using a 600mm pile diameter for bored piling into soft ground over rock (Table D.6, Ref. No. 106). Table 9.39 reproduces those associated with rotary bored piling using a 600mm pile diameter during varying aspects of the operation."*

Section 9.4.3.3 goes on to state that: "*The vibration magnitudes outlined in Table 9.39 indicate that at distances of 5m, vibration magnitudes are orders of magnitude below those associated with any form of cosmetic damage to structurally sound and protected and historic buildings or structures (Refer to Table 9.11).* [Note - Table 9.11 sets out the Recommended Construction Vibration Thresholds for Buildings.] *The vibration magnitudes are also imperceptible to not significant in terms of human response to vibration at these distances. Referring to the vibration magnitudes above and Table 9.12, the impact is determined to be Negative, Imperceptible to Not Significant and Temporary."*

In Section 9.5.1.2. which addresses with the vibration mitigation during the construction phase it states that: *"On review of the likely vibration levels associated with construction activities, construction activities along the Proposed Scheme will not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings. Vibration from construction activities will be limited to the values set out in Table 9.11 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.11."*

In the case of vibration levels giving rise to human discomfort it states in Section 9.5.1.2 that in order to minimise such impacts, the following measures shall be implemented during the Construction Phase:

- A clear communication programme will be established by the NTA to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects as per Table 9.12. The nature and duration of the works will be clearly set out in all communication circulars as necessary;
- Activities capable of generating significant vibration effects with respect to human response (as per Table 9.12) will be restricted to daytime hours only, as far as practicable; and
- Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible.

Table 9.44 provides a summary of the predicted construction phase impacts (post mitigation and monitoring). In relation to construction vibration, the predicted impact is no greater than negative, slight and temporary.

In summary the NTA is satisfied that vibration magnitudes will be below those associated with any form of structural damage to structurally sound structures and will not be significant in terms of human response to vibration. The NTA is satisfied that appropriate mitigation is contained in the EIAR with regard to construction vibration and therefore do not consider that there is any justification for a structural survey of the apartments to be undertaken prior to the undertaking of the works.

Construction noise

The submission expresses the view that the predicted construction noise levels are extreme, that no modelling of the construction activities at the key works locations has been undertaken and that the EIAR claims that piling works in excess of 30m would not have a significant noise impact and "*underplays by a significant margin the impacts"* on Knockmaree as alleged by the submission.

Section 9.2.2 of Chapter 9 confirms that "*The assessment has been undertaken with reference to the most appropriate guidance documents relating to environmental noise and vibration"* and goes on to list out these guidance documents.

Section 9.4.3.2 of Chapter 9 considers construction noise and Table 9.28 provides the predicted noise levels for Road Widening, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs. The total predicted cumulative CNL for these works at the closest NSL façades on Chapelizod Hill Road are between 73 to 83 dB LAeq,T in the absence of any noise mitigation. Making reference to the CNLs in Table 9.28 the potential noise impacts at the closest NSLs are assessed to range between Negative, Not Significant to Very Significant, and Temporary during the daytime evening and weekend periods in the absence of noise mitigation.

Section 9.4.3.2.5 of Chapter 9 considers piling and notes that in the M50 Junction 7 to R148 Con Colbert Road geographical section of the Proposed Scheme, the provision of the Chapelizod Hill Road bridge is proposed, which will require bored pile foundations. It also notes that the nearest NSLs are between 10m to 50m from the proposed bored piling works. It goes on to state: "*The indicative predicted cumulative noise levels for these works at the closest NSL façades are between 66 to 80 dB LAeq,T in the absence of any noise mitigation. Making reference to the CNLs in Table 9.34 the potential noise impacts at the closest NSLs range between Negative, Not Significant to Significant, and Temporary during the daytime period and Negative, Not Significant to Very Significant, And Temporary during the evening and weekend periods in the absence of noise mitigation."*

Section 9.4.3.2.7 of Chapter 9 notes that the widening of the Chapelizod Hill Road bridge is proposed in the M50 Junction 7 to Con Colbert Road geographical section of the Proposed Scheme. It also notes that during the less intrusive works, the nearest NSLs are within 10m of the proposed works and states: "*The highest predicted cumulative noise level for these works is in the order of 80 dB LAeq,T in the absence of any noise mitigation. Making reference to the CNLs in Table 9.38 the potential noise impacts*

at the closest NSLs range between Negative, Moderate to Significant, and Temporary during the daytime period and Negative, Significant to Very Significant, and Temporary during the evening and weekend periods in the absence of noise mitigation".

The NTA is satisfied that the assessment of the impact of the construction noise has been assessed in accordance with the appropriate guidance documents and that appropriate modelling of the specific construction activities at the key works locations has been undertaken.

Mitigation Measures and Construction Working hours

The submission states that the EIAR appears to have failed to consider the changes in work practices in respect of residents now working from home and take issue with the effectiveness of the proposed mitigation measures. The submission requests that stricter construction hours are attached to any grant of permission.

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 5.1 (Construction Environmental Management Plan) in Volume 4 of the EIAR).

Section 9.5.1.1 of EIAR Chapter 9 states that: *"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."* It also states 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)*"

Section 9.5.1.1 also states that *"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."*

Specifically, Section 9.5.1.1. states that *"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 9.8: and Table 9.11)."*[Note - Table 9.8 of Section 9.2.4.1 of EIAR Chapter 9 sets out the Construction Noise Threshold (CNT) Levels for the Proposed Scheme].

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."*

However, the contractor will also have to take account of sensitive receptors (in particular any nearby residential areas). Section 9.5.1.1.4 goes on to state: "*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 9.42), 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 at this location.

Construction Dust

Section 5.5.1.1 of EIAR Chapter 7 Air Quality states: "In order to ensure that no significant dust nuisance occurs, a series of mitigation measures that are applicable to the Construction Phase of the Proposed Scheme will be implemented. In summary, the mitigation measures will include

- *Public roads outside the Proposed Scheme will be regularly inspected for cleanliness and cleaned as necessary;*
- *Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays (or similar dust suppression methods) will be used as required if particularly dusty activities associated with the construction contract are necessary during dry or windy periods;*
- *During movement of dust-generating materials both on and off-site, trucks will be covered with tarpaulin and before entrance onto public roads, trucks will be checked to ensure the tarpaulins are properly in place; and*
- *The appointed contractor will provide a site hoarding of 2.4m height along boundaries where sensitive receptors are located, at a minimum, and at the Construction Compounds, which will assist in minimising the potential for dust impacts off-site.*

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."

Table 7.38 of Chapter 7 summarises the predicted construction phase dust impacts following the implementation of the above mitigation measures as Neutral and Short-term.

Construction Lighting

In respect of any temporary lighting arrangements during construction Section 5.5.2.9 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."

Section 5.5.2.9 goes on to state that: "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 cowled and angled downwards to minimise spillage of light from the site."

The NTA is satisfied that the measures outlined above will ensure that any spillage of temporary construction lighting will be minimised.

2.2.4.7 Loss of Privacy

Summary of Issue

Three submissions (7, 11 and 36) also raised concerns about reduced privacy for residents of Knockmaree Apartments as they believed they would be overlooked from proposed bus stop.

Response to Issue

The submission raises concern about a loss in privacy arising from passengers waiting at the bus stops overlooking the apartments.

As shown on the Bridges and Major Structure drawings in EIAR Volume 3 Chapter 4 Part 2 of 3, and as described in Section 8.3.2 of the Preliminary Design Report included as part of the Supplementary Information, a concrete parapet will be provided to prevent falls from height; a solid concrete parapet

has been chosen to limit the environmental effects of glare from vehicles on the Chapelizod bypass on the surrounding residential area.

An additional 0.55m high steel fence with mesh infill will be provided to the top of the concrete parapet to minimise antisocial behaviour and people sitting on the parapet while waiting for an oncoming bus. This combination will allow passive surveillance of the bus stops from the road and steps / ramps to further minimise antisocial behaviour.

During a consultation meeting with the Knockmaree Management Company and the Knockmaree Residents Association in April 2021 concerns were raised about security and loss of privacy arising from passengers waiting at the bus stop over-looking the apartments. In response to these concerns the design was developed to include a 2.0m high wall to the outer edge of the ramps and steps, as shown in the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description see Figure 2.2.16.

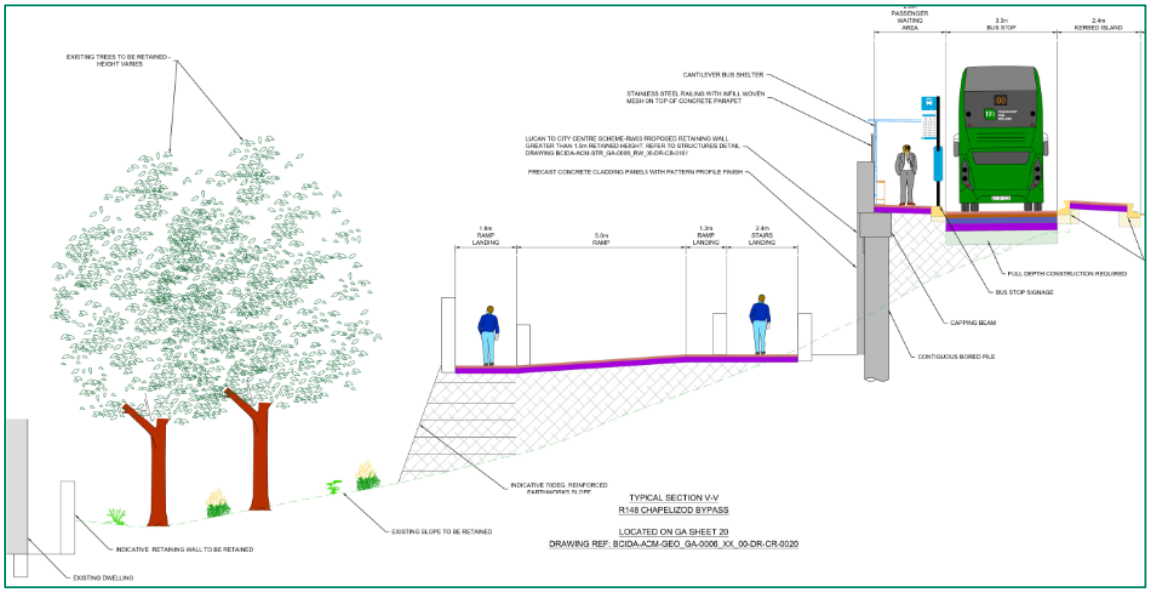


Figure 2.2.16: Typical Cross-section Adjacent to Knockmaree Apartments

Figure 2.2.17 shows the extents of the both the 1.25m parapet wall and 2.0m high solid wall relative to the Knockmaree Apartments which will maintain privacy and provide security.

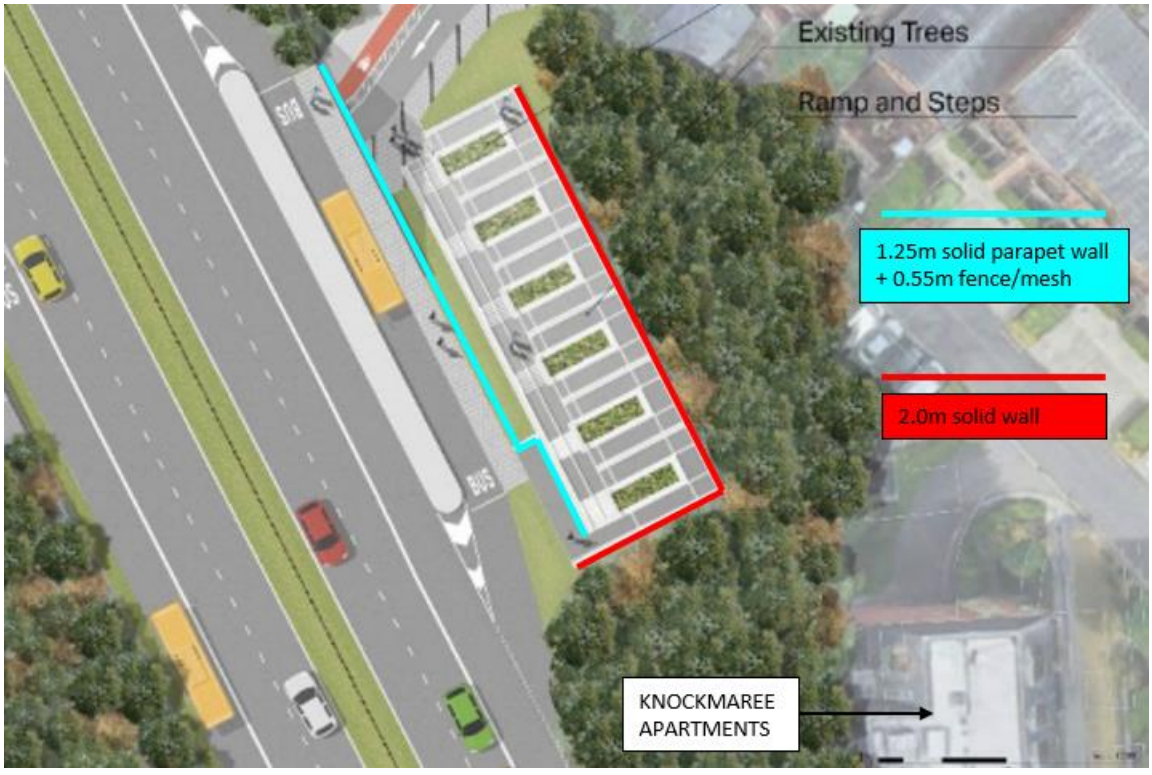


Figure 2.2.17: Proposed Walls Adjacent to Knockmaree Apartments

In summary, the NTA is satisfied that as a result of the proposed 2.0m high wall to the outer edge of the ramps and steps, the proposed native planting and the retained trees / planting outside of the lands to be acquired there will be no significant loss of privacy as a result of the Proposed Scheme.

2.2.4.8 Noise Impact During Operation

Summary of Issue

Three submissions (11, 36 and 50) raised concerns in relation to the noise impact during operation. Submission 36 asserts that impact of traffic noise following completion in 2028 has not been undertaken in relation to Knockmaree. It also asserts that the existing noise barriers on the R148, were erected prior to the construction of Knockmaree Apartments, are sub-standard as they are only 1.2m high.

Response to Issue

Within Section 9.2.1 of Chapter 9 Noise & Vibration of the EIAR, Table 9.1 identifies the noise sensitive locations (NSLs) along the Proposed Scheme.

Within the M50 Junction 7 to Con Colbert Road section of the Proposed Scheme the key noise sensitive receptors are predominately residential dwellings which bound the north and south of the R148 Palmerstown and Chapelizod Bypass and along the Old Lucan Road. Specifically, Table 1 lists the sensitive residential housing estates within 50 to 100m of the road edge and this list Knockmaree Apartments at Chapelizod Hill Road.

Section 9.4.4.3 of Chapter 9 relates to noise from bus stops and notes that new bus stops are proposed with noise sensitive locations in proximity at Chainage A5+560, Chapelizod Bypass east. It also notes that the closest noise sensitive locations to the new bus stop along the Chapelizod Bypass at Chainage A+560 are residential properties along Chapelizod Hill Road. It goes on to state that: *"The new bus stop at this location have been designed to reduce noise impacts through the incorporation of a solid wall along the top of the ramp will be a minimum height of 1.2m. In addition, the existing noise barriers along the Chapelizod Bypass will be retained or replaced in proximity to the new bus stop."* The Fencing and Boundary Treatment Drawings in EIAR Volume 3 Chapter 4 Part 1 of 3, see Figure 2.3.15 and the typical cross section in Figure 2.2.18 above confirm this.

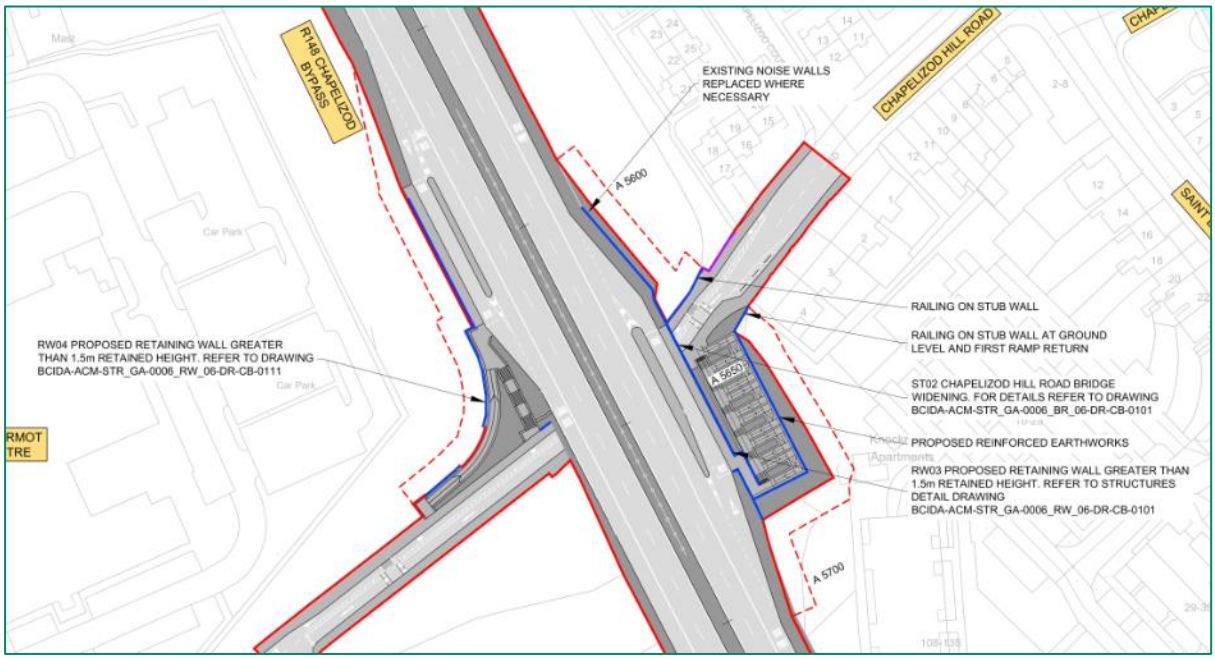


Figure 2.2.18: Extract from Fencing and Boundary Treatment Drawings

As discussed in Section 9.4.4.1.1.4, Of Chapter 9, during the proposed Opening Year (2028), the NTA forecast is for 94% of the city bus fleet to be EVs or HEVs. For the Design Year (2043), the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses will eliminate ICE noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source. In addition, the characteristic of noise from EVs is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic. It is noted the bus stops along the

Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The volume of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment.

Taking into consideration the screening between the nearest NSL and the proposed bus stops in addition to the lower noise emissions from the proposed future bus fleet, the overall impact is determined to be negative, not significant and long term.

The NTA is satisfied that the operational noise impact of the Proposed Scheme on Knockmaree Apartments has been assessed appropriately and given the predicted impacts, no further noise mitigation measures are proposed.

Existing Noise Barriers on R148

As regards the submission's assertion that the existing R148 noise barriers (that were built before the construction of the apartments) are sub-standard, this is a baseline issue and not a matter that relates to the Proposed Scheme. It is also noted that Section 9.4.4.3 of Chapter 9 states "*the existing noise barriers along the Chapelizod Bypass will be retained or replaced in proximity to the new bus stop*."

2.2.4.9 Air Quality during Operation

Summary of Issue

Two submissions (11 and 36) expressed the view that the loss of trees and increase in traffic would reduce air quality of surrounding residential areas.

Response to Issue

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 between the M50 Junction 7 and Kennelsfort Road Junction, the key air quality sensitive receptors being predominately residential dwellings which bound the north and south of the R148 Chapelizod Bypass, which includes Knockmaree Apartments.

Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration (between the Do Minimum and Do Something in 2028) of each of the ambient receptors in the context of the TII significance criteria (TII 2011). As shown in Table 7.33 and Figure 7.3 in Volume 3 of the EIAR the majority of modelled receptors, including receptor location AQ250 at Knockmaree, are estimated to experience a negligible impact due to the Proposed Scheme in terms of the annual mean NO2 concentration.

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 PM2.5 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. Background pollutant concentrations from 2019 have been used to represent 2028 (opening year), although concentrations are likely to be lower by 2028 than they were in 2019. In addition, older fleet projections were used in the assessment and it is noted that a larger proportion of electric vehicles is planned by the opening year (2028) than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

In terms of the residual air quality impacts in the operational phase due to the Proposed Scheme, Section 7.6.2 states the following:

"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 the DS scenarios. Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Lucan to City Centre Core Bus Corridor Scheme Chapter 07 Page 45 Overall it is considered that the residual effects as a result of the Proposed Scheme's operation will be neutral and long-term."

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

2.2.4.10 Property Value

Summary of Issue

Two submissions (11 and 36) expressed the view that the Proposed Scheme would have a material and significant reduction in value of property adjoining and close to the application site.

Response to Issue

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 Knockmaree Apartments, 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. The Proposed Scheme includes a public realm improvement on Chapelizod Hill Road as part of the proposals.

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 along the route. 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 The evidence suggests that all public realm improvements generate value, regardless of the size of the investment or the neighbourhood. 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 the residential properties within the Knockmaree Apartments.

2.2.4.11 Safety of Bus Stops

Summary of Issue

Submission 15 raises a safety concern with locating a bus stop on the bypass, which it asserts is a hostile environment for pedestrians and notes an opportunity for a mobility filter on Chapelizod Hill Road.

Response to Issue

As shown in Figure 2.2.1 the Proposed Scheme includes segregated bus laybys to serve the new bus stops on the Chapelizod Bypass. In addition, a 60km/hr speed restriction is proposed for the bus lanes along the bypass, an approach which has been successfully applied for a number of years elsewhere

in Dublin, for example on the N11 Quality Bus Corridor along the N11 dual carriageway. Furthermore, the safety implications of the Proposed Scheme have been considered by the designer and 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. The Road Safety Audit did not raise any concerns or observations in respect to the proposed bus stops.

The NTA notes the suggestion made to provide a local mobility filter on Chapelizod Hill Road by restricting the road under the bridge to use by pedestrians and cyclists only. Such a proposal is not included as it is not required to achieve the Proposed Scheme objectives. It is also noted that the Proposed Scheme would not preclude the future introduction of such a measure at a future date should the local authority wish to give consideration to this.

2.2.4.12 Town Planning Considerations

Summary of Issue

Submission 36 raised two queries in relation to Town Planning; the land use zoning being Z9 (to provide for Amenity / Open Space Lands / Green Network), and the proximity of the Architectural Conservation Area on Chapelizod Hill Road.

Response to Issue

Z9 Amenity / Open Space / Green Network

While Section 17.3.3.2 of EIAR Chapter 17 Landscape and Visual notes that land zoning beside the route of the Proposed Scheme at this location is '*Objective Z9: To preserve, provide and improve recreational amenity and open space and green networks'*, the land to be acquired forms the planted embankments of the R148 dual carriageway, as stated in In Section 17.4.1.4.2 where it is noted that the Proposed Scheme includes "*Changes to woodland / planted slopes of N4 at Chapelizod Hill Road including provision of pedestrian access steps and ramps close to Knockmaree Apartments (Ch.A5550 to A5710)".* In this context the land in question does not serve as an area of recreational amenity to the community.

In addition, the area of land in question forms the embankment of R148 Chapelizod Bypass dual carriageway and in Section 12.4.3.4.1.2 of EIAR Chapter 12 Biodiversity it is noted that *"A significant portion of mixed broadleaved woodland habitat (WD1) will be removed along Chapelizod Hill Road and the Chapelizod Bypass, to facilitate the provision of bus stop lay-bys and associated access ramps and stairs, and necessitating widening of the existing bridge deck. Considering the existing width of this habitat at this location, and the fact that a large portion of the habitat will be retained, thereby avoiding complete fragmentation, this impact will be significant at the local level only."*

Architectural Conservation Area (ACA)

Section 16.3.1.4.1 of EIAR Chapter 16 Architectural Heritage describes the Chapelizod and Environs ACA and states: *"The ACA comprises the historic core of Chapelizod Village with outlying housing developed through the eighteenth and nineteenth centuries. It is characterised by its varied building types of two, three and four storeys high on narrow fronted plots and clustered around an ancient church and a wedge-shaped market square. The ACA is of Regional importance and Medium sensitivity."*

"The ACA is largely outside of the study area, with the Proposed Scheme following the Chapelizod Bypass to the south. There is an overlap where the ACA extends to include the gardens of 688-698 Old Lucan Road, and along Chapelizod Hill Road."

Section 16.4.3.2 considers the construction phase impacts on the ACA and states the following. "*There are no construction works proposed within the ACA boundary, and no direct Construction Phase impacts are anticipated. The Chapelizod Bypass will be widened locally to accommodate new bus stop lay-bys, and new ramps and steps (and associated retaining walls), will be added to accommodate access between the bus stops and Chapelizod Hill Road. The new structures will be outside of the ACA boundary but removal of trees and the provision of the proposed bus shelters, the ramps and steps and thee widening of the bridge on the north-east side of the Bypass will have a visual impact on the ACA and on 1-4 Chapelizod Hill (NIAH 50080360). There is also a potential for damage to these structures. The magnitude of impact on the ACA Medium. The potential Construction Phase impact on the Chapelizod and Environs ACA is Negative, Moderate and Long-Term."*

Section 16.4.4.2.1 considers the operational phase and notes that "The Chapelizod and Environs ACA is of Medium sensitivity. Two groups of houses (NIAH 50080353 and NIAH 50080360) are included in both the ACA and the study area, both of which are also included in the NIAH and are of Low sensitivity.

Chapelizod Bypass will be widened locally to accommodate new bus stop lay-bys, and new ramps and steps (and associated retaining walls), will be added to accommodate access between the bus stops and Chapelizod Hill Road. The new structures will be outside of the ACA boundary but removal of trees and the provision of the proposed bus shelters, the ramps and steps and thee widening of the bridge on the north-east side of the Bypass will have a visual impact on the ACA and on 1-4 Chapelizod Hill (NIAH 50080360).

Alternate options were explored for providing access between Chapelizod Hill Road and the Bypass. The proposed location allows for the retention of a band of the existing trees which will help to screen the ACA from the Proposed Scheme. The existing sloping ground will be utilised to mediate between the levels and to reduce the extent of excavation required. The magnitude of impact on the ACA is Low. The potential Operational Phase impact on the Chapelizod and Environs ACA is Negative, Slight and Long-Term."

Section 16.4.4.3.1 considers the Liffey Valley Conservation Area*: "The Liffey Valley Conservation Area is of Medium sensitivity. There is an overlap between the Chapelizod and Environs ACA and the Liffey Valley Conservation Area. The potential impacts of the Proposed Scheme on the ACA are assessed above. There will be an Operational Phase impact on the Conservation Area as a result of the local widening of Chapelizod Bypass and the access infrastructure to the bus stops at the Chapelizod Hill Road. The magnitude of impact is Low. The potential Operational Phase Impact is Negative, Slight and Long-Term."*

It is also important to note that following the implementation of mitigation measures, no significant architectural heritage impacts are predicted (including to the ACA or CA). Section 16.6 of Chapter 16 states that once the mitigation measures have been applied, there will be no significant residual impact on the architectural heritage resource as a result of the construction or operation of the Proposed Scheme.

In summary, the NTA is satisfied that the EIAR demonstrates that the two planning considerations highlighted by the submission have been appropriately considered and adequately assessed.

2.3 Whole Scheme

2.3.1 Overview of Submissions

Three submissions were made which relate to the whole scheme; these are listed below and detailed in the following sub-sections:

- 13 Development Applications Unit
- 15 Dublin Commuter Coalition
- 72 South Dublin County Council
- 81 Dublin City Council

2.3.2 13 – Development Applications Unit

Overview of submission

The submission raises the following points and issues:

1. Consideration of the Natura Impact Statement
2. The presence of light-bellied Brent geese
3. Tree clearance
4. Bat activity
5. Badger activity and Recommended Request for Further Information
6. Recommended Planning Conditions
7. Archaeology

2.3.2.1 Natura Impact Statement (NIS)

Summary of Issue

The submission considers the NIS submitted in support of the Proposed Scheme and notes that "*Various measures are set out in the NIS which will be employed to prevent pollutants being mobilised into surface water runoff during the construction of the scheme*." It goes to state that *"The Department accepts this conclusion that the employment of such measures during construction should prevent any negative impacts on European sites originating from the proposed scheme." The submission also states that "the mitigation measures which are to be adopted in order to prevent mobilisation of pollutants from the proposed development into surface water runoff into the Liffey should also prevent any negative impacts on fish species inhabiting the latter river, including salmon. Eel and lamprey species."*

Response to Issue

The NTA welcomes the Department's review and acceptance of the proposed mitigation measures set out in the NIS.

2.3.2.2 Presence of Light-bellied Brent Geese

Summary of Issue

The submission notes the presence of recorded droppings of light-bellied Brent geese from the Liffey Gaels pitches adjacent to the eastern end of the Chapelizod bypass, noting that this is adjacent to where temporary construction compound LU3 is proposed to be located. It suggests that additional survey work of the Liffey Gaels pitches will be necessary before the commencement of the bus corridor and that the area of the temporary construction compound should be reinstated so that they can be used by the Brent geese to forage in the future.

Response to Issue

In respect of the additional survey work prior to commencement, Section 12.5.1.5.2.1 of EIAR Chapter 12 Biodiversity describes the measures to prevent disturbance and displacement impacts during construction of wintering birds, such as light-bellied Brent geese: "*The following mitigation measures that will be put in place at the Construction Compound by the appointed contractor to minimise disturbance to SCI bird species include additional survey work as set out below:*

- *The appointed contractor will undertake the establishment of the construction compound LU3 outside of the wintering bird season (October to March). However, where the construction programme does not allow this seasonal restriction to be observed, then the construction compounds will be inspected by a suitably qualified ecologist as engaged by the appointed contractor, for the presence of wintering birds prior to establishment. Where wintering birds are observed the suitably qualified ecologist will, in discussion with the appointed the contractor, advise how works will be appropriately undertaken;*
- *Hoarding of the Construction Compounds will be in place prior to the arrival of wintering birds and will be retained on all sides of the compound for the duration of the works;*
- *The use of lighting at Construction Compounds where required shall be such that it is not excessively tall thus providing an obstacle to low-flying birds potentially moving between feeding sites. Furthermore, and where security lighting is not required, lighting should not be continuously on when compound is closed. Sensor-operated lighting timers as necessary should be installed; and*
- *In addition to lighting at the Construction Compound aligning with Section 12.5.1.4.1.4 the lighting column heights will be considered by the appointed contractor, so as not to act as an obstacle to birds."*

The NTA notes that it is also proposed to utilise Construction Compound LU3 for the purposes of the Liffey Valley to City Centre Core Bus Corridor Scheme as well as the Proposed Scheme. The NTA confirms that upon completion of whichever of the two schemes is undertaken last the site will be reinstated to its present condition.

2.3.2.3 Tree Clearance

Summary of Issue

The submission notes the number of trees to be felled along the route of the Proposed Scheme many of which are likely to be used for nesting by bird species. In the absence of a breeding bird survey the Department recommends that *"the exemptions provided for in the Wildlife Acts, 1976 to 2022, which permit clearance of vegetation for development purposes even during the usually closed bird breeding season from March to August, should not apply in the case of the currently proposed project."*

Response to Issue

This specific issue is addressed in EIAR Chapter 12 Biodiversity Section 12.5.1.5.1.2. Under the sub-title 12.5.1.5.1.2 Mortality Risk, it sets out that: *"Where practical, vegetation (e.g., hedgerows, trees, scrub, bankside vegetation and grassland) will not be removed, between the 01 March and the 31 August, to avoid direct impacts on nesting birds.*

Where the construction programme does not allow this seasonal restriction to be observed, then these areas will be inspected by a suitably qualified ecologist as engaged by the appointed contractor, for the presence of breeding birds prior to clearance.

Areas found not to contain nests will be cleared within three days of the nest survey, otherwise repeat surveys will be required. Vegetation clearance will not commence where nests are present, works will resume when birds have fledged and nests are no longer in use, or an agreement is reached with NPWS."

The NTA considers that the proposed mitigation measures above represent an acceptable approach to be adopted.

2.3.2.4 Bat Activity

Summary of Issue

The submission notes that no bat roosts were identified along the route of the Proposed Scheme. It notes that five trees which are proposed to be felled were identified as displaying potential roost features and that the EIAR contained specific mitigation measures for the felling of these five trees. The submission concludes that if these mitigation measures are implemented in full, the effects of the proposed development on bat species should be minimised.

Response to Issue

The NTA welcomes the Department's review and acceptance of the proposed mitigation measures set out in the EIAR.

2.3.2.5 Badger Activity and Recommended Request for Further Information

Summary of Issue

The submission notes that no badger sett was identified along the route of the Proposed Scheme. However, it cites that a badger sett was recorded approximately 12 years ago located in an abandoned car embedded into a ditch on the northern boundary of the Palmerstown bypass, adjacent to the proposed temporary construction compound LU2. It expresses the view that it is quite likely that badgers are still resident in this sett and recommends that survey work to establish the present status of the sett is required before any permission is granted for the establishment of a construction compound in the relevant area.

Response to Issue

Multidisciplinary surveys for mammals and trees and structures with bat roost potential were carried out in 2022. No evidence of badger at the proposed Construction Compound LU2 location was noted and the trees being removed did not exhibit any suitability to be used by roosting bats, during these surveys.

Further to the issue raised in the submissions regarding the presence of bats, badgers, foxes at the location of the proposed site for Construction Compound LU2, a walkover survey of the area was undertaken on 14th March 2023 in order to validate the results of the earlier surveys. This walkover survey confirmed the findings of the earlier surveys with no evidence noted of badger at the proposed Construction Compound LU2 location.

The walkover survey checked the area for badger activity and for the presence of potential bat roost features on the trees within the footprint of the proposed Construction Compound LU2 and its immediate vicinity. No evidence of badger activity (e.g. snuffle holes or trails), or badger setts were recorded within the footprint, however the woodland to the east on the grounds of Stewart's Care Hospital was considered for possible badger territory due to its foraging potential for the species and relative privacy from human activities. With regard to potential roost features on trees, no suitable features (e.g. knotholes, broken branches) were recorded within any of the trees within the survey area.

Although the grassland may be used by commuting and/or foraging wildlife, such as badgers, it has little value to them as a refuge or otherwise, due to its open nature and location next to a busy transport corridor (and associated collision risk, disturbance effects as a result of artificial lighting etc). The woodland habitats to the north of the Construction Compound (which are more suited for wildlife) will remain unaffected as they lie outside the Proposed Scheme boundary and there are mitigation measures, such as directional lighting, in place within the EIAR chapter to avoid impacts on these habitats and potential wildlife within, during the Construction Phase.

Section 12.5.1.1.2.1 notes that: *"Badger could potentially establish new territory within the ZoI of the Proposed Scheme. Therefore, the NTA will ensure that a confirmatory pre-construction check of all suitable badger habitat will be completed within 12 months prior to any construction works commencing."*

Given that the previous badger activity at Palmerstown was recorded about 12 years ago and that no evidence was noted of badger at the proposed Construction Compound LU2 location in March 2023, it is considered that the appropriate approach at this location in Palmerstown is to complete a pre-

construction survey of all suitable badger habitat within 12 months prior to any construction works commencing, as set out in Section 12.5.1.1.2.1, which is in line with the NRA's Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes (NRA, 2005b). The results of this survey will dictate any further mitigation deemed necessary, as advised by the suitably experienced and qualified ecologist, employed by the appointed contractor.

2.3.2.6 Recommendations

Summary of Issue

The submission made the following five recommendations:

1) A finalised CEMP is to be submitted to the planning authority for its written agreement before any works on the Proposed Scheme commence;
2) Construction Compound LU3 shall be reinstated to its present condition upon completion of the proposed bus corridor works;
3) Clearance of woody vegetation shall only be undertaken in the period from September to February inclusive;
4) Measure in the EIAR re bat roosts be implemented
5) Bat friendly lighting plans

Response to Issue

In relation to recommendation 1 it is highlighted that the NTA is taking over the role of the Road Authority for the purposes of obtaining planning permission for the twelve Core Bus Corridor schemes and that the subsequent construction of the Proposed Scheme will be undertaken directly by the NTA via their contractors, which will include consideration of the CEMP.

In relation to recommendation 2, the NTA notes that it is also proposed to utilise Construction Compound LU3 for the purposes of the Liffey Valley to City Centre Core Bus Corridor Scheme. The intention is that upon completion of whichever of the two schemes is undertaken last the site is to be reinstated to its present condition. In both statutory applications there is a commitment to reinstate the site.

In relation to recommendation 3, the NTA has set out the appropriate mitigation in EIAR Chapter 12 Biodiversity Section 12.5.1.5.1.2 Mortality Risk.

The NTA has set out appropriate mitigations in regard to recommendations 3, 4, and 5, in Table 5.2 of EIAR Volume 4 Appendix A5.1 Construction Environmental Management Plan (CEMP). 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.

2.3.2.7 Archaeology

Summary of Issue

The submission states that the Department has reviewed the EIAR and is *"broadly in agreement with the findings in relation to Archaeology and Cultural Heritage as set out therein."* It goes onto recommend four conditions of any grant of permission, relating to:

- All mitigation measure in relation to archaeology and cultural heritage as set out in the EIAR to be implemented in full;
- The CEMP shall include the location of any and all archaeological or cultural heritage constraints as set out in the EIAR;
- A Project Archaeologist shall be appointed; and
- A final archaeology report to be provided following completion of all archaeological work on site.

Response to Issues

The NTA welcomes the Department's review.

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 contains the construction phase mitigation measures, which are also 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.

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 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. All archaeological issues will have to be resolved to the satisfaction of the DHLGH and the NMI."

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 in Section 15.5.1. 1.1:

"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."

With regard to the provision of a final archaeology report, it is acknowledged in Section 15.5.1.1 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)….."

2.3.3 15 – Dublin Commuter Coalition

Overview of submission

This submission raised the following issues:

1. Advocate for the Proposed Scheme
2. Enforcement
3. Bus Lane Operating Hours
4. Junction design
5. Pedestrian Crossings;
6. Bus Stop Design
7. Shared Space
8. Bicycle Parking
9. Lane Widths
10. St John's Road West/ South Circular Road junction
11. Chapelizod Hill Road
12. Climate Action Plan

2.3.3.1 Advocate for the Proposed Scheme

Summary of issue

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 notes that the Dublin Commuter Coalition has been engaging with the NTA over the last three years and they believe the project will be a catalyst for greater usage of public transport and active travel. The submission states its support for the project and has requested modifications to the Proposed Scheme design.

Response to issue

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 advocacy group 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.

2.3.3.2 Enforcement

Summary of issue

The submission has outlined its views in relation to the importance of camera enforcement for lawful use of bus lanes such that the benefits of the Proposed Scheme will be realised by passengers.

Response to issue

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 INT20 – Enforcement of Road Traffic Laws* of the Draft Greater Dublin Area Transport Strategy 2022-2042. 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.

2.3.3.3 Bus Lane Operating Hours

Summary of issue

The submission sets out the benefits of all bus lanes and gates being operational 24/7.

Response to issue

All bus lanes will operate 24 hours a day 7 days a week. It should be noted that no bus gates are part of the Proposed Scheme.

2.3.3.4 Junction Design

Summary of issue

The submission has queried the design approach undertaken by the NTA in relation to adopting international best practice and queries the safety rationale for the junction designs in the Proposed Scheme. The submission requested that Dutch-style junctions be used throughout the Proposed Scheme.

Response to issue

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) 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 4.5, Table 4.12, Table 4.18, Table 4.25 and Table 4.32 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 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, 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 2.3.3.1, 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:

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.

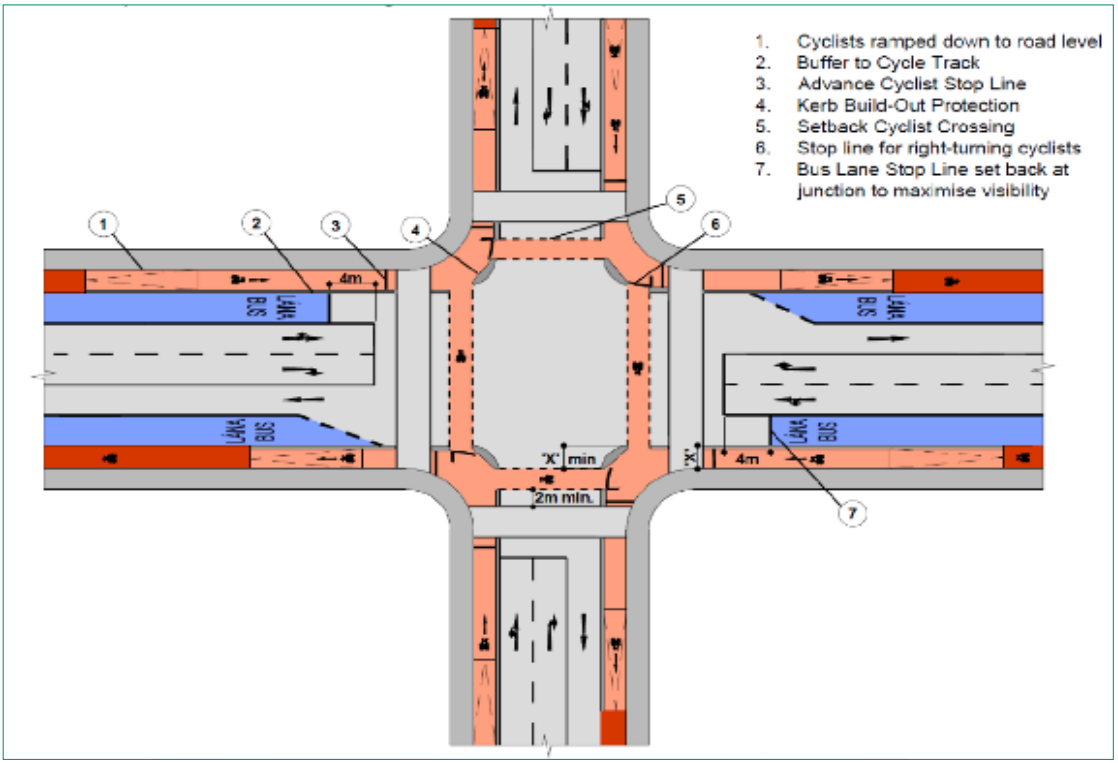


Figure 2.3.3.1: Typical Junction Layout from BusConnects Design Guidance Booklet

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 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.

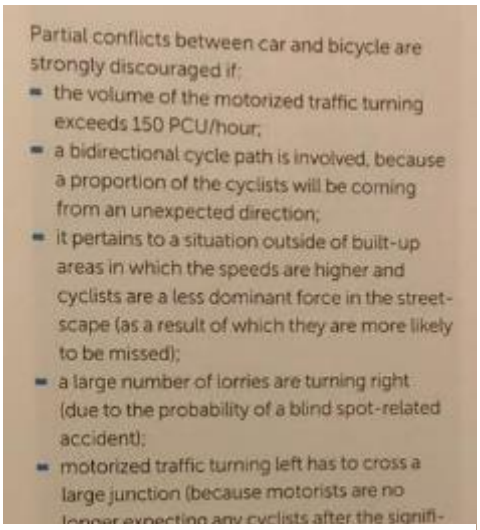
It is for these reasons that the layout of the 'dutch style' junctions described in the submission have not been adopted for junctions on the Proposed Scheme.

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 2.3.3.2.

Figure 2.3.3.2: 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, which are outlined below. Heavy turning volumes, HGV movements (difficulty with blind spots), high speed environments etc. 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.


Partial conflicts between car and bicycle are strongly discouraged if:

- the volume of the motorized traffic turning exceeds 150 PCU/hour;
- a bidirectional cycle path is involved, because a proportion of the cyclists will be coming from an unexpected direction;
- it pertains to a situation outside of built-up areas in which the speeds are higher and cyclists are a less dominant force in the street-scape (as a result of which they are more likely to be missed);
- a large number of lorries are turning right (due to the probability of a blind spot-related accident);
- motorized traffic turning left has to cross a large junction (because motorists are no

Figure 2.3.3.3: Extract from Dutch Design Guide Ontwerpwijzer Fietsverkeer

The Dutch themselves 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 PCU[1]s per hour. See the above extract from Ontwerpwijzer Fietsverkeer which identifies the above threshold in Figure 2.3.3.4.

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.

[1] Vehicle to Passenger Car Unit (PCU) conversation as per TfL Values; Pedal Cycle - 0.2, Motor Cycle – 0.4, Passenger Car/LGV – 1.0, Medium Goods Vehicle (MGV/OGV1) – 1.5, Buses and Coaches – 2.0 and Heavy Goods Vehicle (HGV/OGV2) – 2.3

Nine of the fourteen 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 turning cars. 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 nine 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.

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."

2.3.3.5 Pedestrian Crossings

Summary of issue

The submission has queried the design rationale for providing two stage crossings on the Proposed Scheme asserting that they are inconsistent with DMURS and drastically increase the time taken for pedestrians to navigate crossings and junctions, in particular at junctions Memorial Road/ Con Colbert Road junction and Con Colbert Road/ South Circular Road/ St. John's Road junction. The submission also notes some junctions are missing pedestrian crossings at one or more arms.

Response to issue

The NTA acknowledges the comments raised in the submission and note that the Proposed Scheme will increase the number of controlled pedestrian crossings from 20 in the existing to 28 in the Proposed Scheme, equating to a 40% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 1 in the existing to 19 in the Proposed Scheme, representing a significant 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 Memorial Road/ Con Colbert Road junction and Con Colbert Road/ South Circular Road/ St. John's Road junction direct single movement crossings were explored in accordance with the approach set out in Section 5.6 of the PDGB. However, at these 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.

As summarised in the Junction Design Report, at the R136 Ballyowen Road / Lucan Road Junction a pedestrian crossing is not proposed on the western arm (as per existing scenario) of the junction for the following reasons:

1) No immediate desire line identified; and
2) To optimise the junction operation.

As summarised in the Junction Design Report, the Palmerstown bypass / Kennelsfort Road Lower / Kennelsfort Road Upper junction currently has no at grade pedestrian crossing of the R148 Palmerstown bypass. It is proposed to provide an at grade signalised crossing of Palmerstown bypass on the eastern side only. A crossing is not proposed on the western arm for the following reasons:

1) No immediate desire line identified;
2) To align with the two-way cycle track on the east side of Kennelsfort Road Lower to Kennelsfort Road Upper; and
3) To optimise the junction operation.

As summarised in the Junction Design Report, at the Palmerstown Bypass / The Oval junction a pedestrian crossing is not proposed on the western arm (as per existing scenario) of the junction for the following reasons: 1) To enhance accessibility to the proposed bus stop locations. 2) To optimise the junction operation.

As summarised in the Junction Design Report, at the Con Colbert Road / Memorial Road Junction the pedestrian crossing has been moved to the western arm to be on the same side as the bus stops for the junction for the following reasons:

1) No immediate desire line identified;

2) To enhance accessibility to the proposed bus stop locations; and

3) To facilitate the Liffey Valley to City Centre Bus Corridor Scheme requirement right turn pocket.

Refer to Figure 2.3.3.4 below from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR.

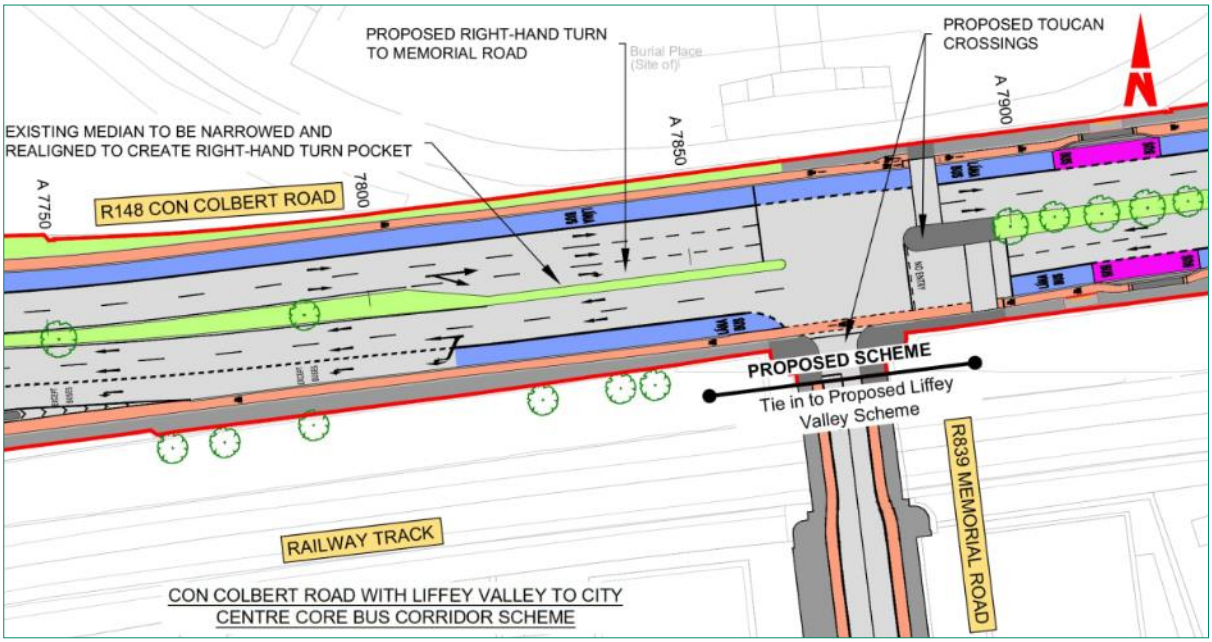


Figure 2.3.3.4: Extract from General Arrangement Drawings

As summarised in the Junction Design Report, at the St Johns Road West / HSQ Junction a pedestrian crossing is not proposed on the western arm (as per existing scenario) of the junction for the following reasons: 1) No immediate desire line identified. 2) To optimise the junction operation.

2.3.3.6 Bus Stop Design

The submission raises concerns about the proposed bus stop designs and in particular the width of bus stop islands that are proposed which may lead to pedestrian and cyclist conflicts. The submission highlights a particular concern for restricted pedestrian/ cyclist provision at the bus stops at the Memorial Road/ Con Colbert Road junction, and suggests removing one general traffic lane on Con Colbert Road which it believes would provide sufficient room to build a safer environment for all ages accessing Memorial Gardens and its schools and clubs by foot, bicycle and bus.

Response to issue

The NTA welcomes Dublin Commuter Coalition's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops. In Section 11 of EIAR Chapter 4 of Part 2 of the EIAR, Proposed Scheme Description Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) of Part 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 CBC project 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, as at the Memorial Road/ Con Colbert Road junction bus stops, 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.

In relation to the specific suggestion that one of the two lanes on Con Colbert Road could be removed to provide increased space of other modes, the existing number of lanes are justified by the current and forecast traffic volumes as described in the following section of Appendix A6.1 Traffic Impact Assessment to EIAR Chapter 6 Traffic and Transport, contained Volume 4 Part 2 of 4 of the EIAR. This approach complies with DMURS, section 4.4.1 of which states: "*Designers should minimise the width of the carriageway by incorporating only as many lanes as needed to cater for projected vehicle flows and by reducing the size of individual lanes to meet predominant user needs.*"

Section 6.3 of Appendix A6.1 assesses the operation phase of the Proposed Scheme. Table 6.38 and Table 6.39 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the AM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. Con Colbert Road west of South Circular Road is listed as experiencing a reduction in 2028 PM peak hour flow of 249 pcu from 1970 in the Do Minimum Scenario to 1721 in the Do Something scenario. Despite this forecast reduction, the forecast flow still exceeds the accepted practical capacity of a single lane urban road in accordance with TA79 Determination of Urban Road Capacity, demonstrating that two lanes will still be required for general traffic with the Proposed Scheme in place.

Table 6.43 and Table 6.44 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the PM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. Table 6.44 identifies that the R148 Con Colbert Road will experience an increase in 2028 PM peak hour flow of 241 pcu from 1051 in the Do Minimum Scenario to 1292 in the Do Something scenario. This forecast flow exceeds the accepted practical capacity of a single lane urban road in accordance with TA79 Determination of Urban Road Capacity, demonstrating that two lanes will still be required for general traffic with the Proposed Scheme in place.

In summary, the NTA is satisfied that the existing two lanes for general traffic are necessary in each direction on Con Colbert Road between the eastern end of the R148 Chapelizod Bypass and the R111 South Circular Road. Given the site constraints of the Memorial Gardens to the north and the rail line to the south, the maximum practicable space has been provided for pedestrians, bus passengers and cyclists.

2.3.3.7 Shared Space

Summary of issue

The submission notes that the Proposed Scheme includes for the provision of shared space for pedestrians and cyclists at a number of junctions and asserts that this is an unsuitable arrangement for busy urban junctions. The submission requests that pedestrians and cyclists be segregated at all junctions for the safety and comfort of everyone.

Response to issue

The National Cycle 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 National Cycle 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.

2.3.3.8 Cycle Parking

Summary of issue

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.

Response to issue

As noted in Section 4.6.3 of Chapter 6 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-ACM-UBR_ZZ-0006_XX_00-DR-LL-9001) in Volume 3 of this EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

2.3.3.9 Lane Widths

Summary of issue

The submission has queried the design rationale for providing traffic lanes widths of 3.3m and up to 3.5m for general traffic which encourages speeds well beyond the proposed speed limits. Noting, that often these excessive widths are proposed beside cycle lanes with inadequate width or areas with shared space for pedestrians and cyclists which is undesirable.

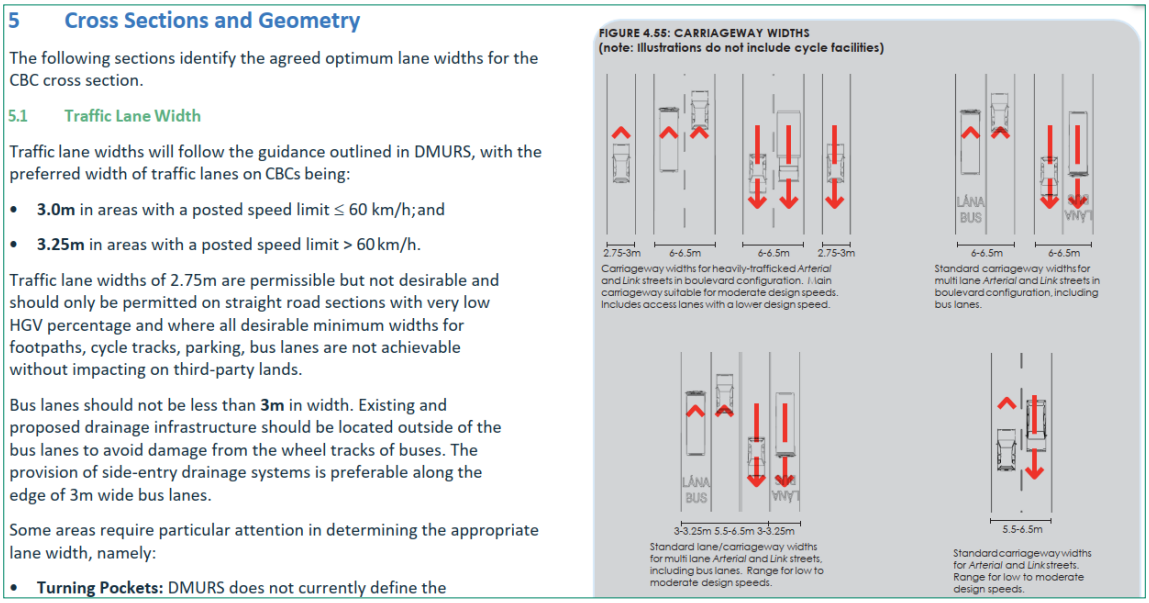
Extracts from the Typical Cross Section drawings BCIDA-ACM-GEO_CS-0006_XX_00-DR-CR-9001 are included to illustrate:

- *Typical Section T-T, R148 Palmerstown bypass, Sheet 14 of 23*
- *Typical Section Y-Y, R148 Con Colbert Road, Sheet 17 of 23*
- *Typical Section AC-AC, St. John's Road West, Sheet 21 of 23*

Response to issue

Section 4.4.1 of DMURS states *"In new designs the standard lane width on Arterial and Link Streets should lie in the range of 2.75m to 3.5m. Within this range the preferred values are 3.0m and 3.25m."*

Section 5.1 of the Preliminary Design Guidance Booklet (PDGB), which is included as EIAR Volume 4 Part 1 of 4 Appendix A4.1 identifies preferred widths to be adopted in the design of the Proposed Scheme, 3.0m in areas with a speed limit of ≤ 60km/h & 3.25m in areas with a speed limit of >60km/h.



5 Cross Sections and Geometry

The following sections identify the agreed optimum lane widths for the CBC cross section.

5.1 Traffic Lane Width

Traffic lane widths will follow the guidance outlined in DMURS, with the preferred width of traffic lanes on CBCs being:

- **3.0m** in areas with a posted speed limit ≤ 60 km/h; and
- **3.25m** in areas with a posted speed limit > 60 km/h.

Traffic lane widths of 2.75m are permissible but not desirable and should only be permitted on straight road sections with very low HGV percentage and where all desirable minimum widths for footpaths, cycle tracks, parking, bus lanes are not achievable without impacting on third-party lands.

Bus lanes should not be less than **3m** in width. Existing and proposed drainage infrastructure should be located outside of the bus lanes to avoid damage from the wheel tracks of buses. The provision of side-entry drainage systems is preferable along the edge of 3m wide bus lanes.

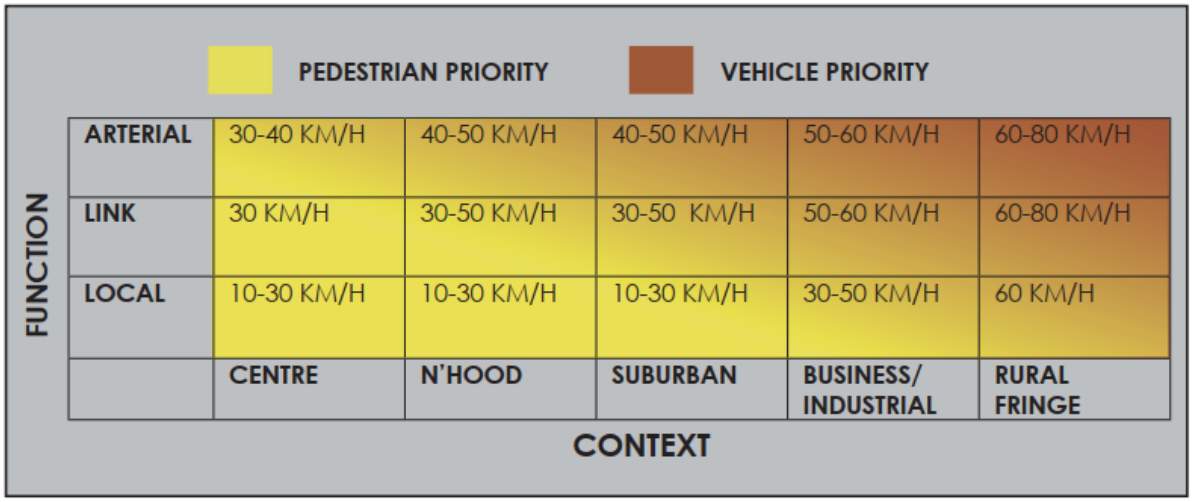
Some areas require particular attention in determining the appropriate lane width, namely:

- **Turning Pockets:** DMURS does not currently define the

Figure 2.3.3.5: Extract from Preliminary Design Guidance Booklet (PDGB) 5: Cross Sections and Geometry

3.5m min lane widths are required for roads with a design speed of 85 km/h (80km/h speed limit) in accordance with TII publication DN-GEO-03036-06.

Additionaly, Table 4.1 of DMURS (as shown in Figure 2.3.3.6), Design speed selection matrix indicating the links between place, movement and speed that need to be taken in to account in order to achieve effective and balanced design solutions, highlights vehicle priority for roads with a design speed of 85km/h.



PEDESTRIAN PRIORITY — VEHICLE PRIORITY

FUNCTION	CENTRE	N'HOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL FRINGE
ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H
LINK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H
LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H
CONTEXT					

Figure 2.3.3.6: Extract from DMURS, Table 4.1: Design speed selection matrix indicating the links between place, movement and speed that need to be taken in to account in order to achieve effective and balanced design solutions

Typical Section T-T, R148 Palmerstown bypass

Design Speed at this location at the start the Chapelizod bypass is 85km/h (80km/h speed limit) – 3.5m lane width as existing is appropriate

Typical Section Y-Y, R148 Con Colbert Road, Sheet 17 of 23

Design Speed at this location at the start of Con Colbert Road is 70km/h (60km/h speed limit. It is noted that this location is in a zone of transition between the 3.5m wide lanes of the R148 Chapelizod bypass and 3.0m wide lanes of Con Colbert Road (Typical Section Z-Z, Sheet 18 of 23), which applies from the junction with R839 Memorial Road at Ch. 7900, as described in Table 4-2 of the Preliminary Design Report, provided as part of the Supplementary Information.

Typical Section AC-AC, St. John's Road West, Sheet 21 of 23

Design Speed at this location at the start of Con Colbert Road is 40km/h (30km/h speed limit) – 3.0m lane width is the lane design width generally along St. John's Road West, except for locations where vehicle tracking has indicated local widening is required, e.g. Chainage A9100 - A9150 (Ref Figure 2.3.3.7 below) inbound and A9600 – A9694, both directions.

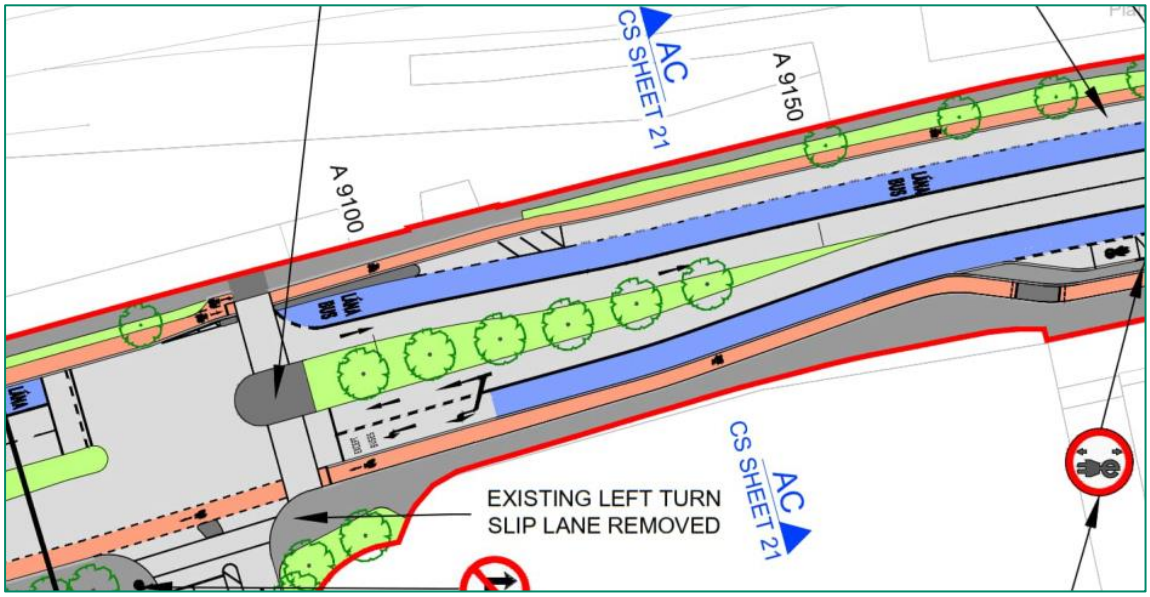


Figure 2.3.3.7: Extract from General Arrangement Drawings (Sheet 30)

2.3.3.10 St. John's Road West/ South Circular Road junction

Summary of issue

The submission suggests retaining the relative geometry of the existing junction is a significant missed opportunity to work in concert with the other stakeholders in the vicinity (CIE/ Irish Rail) to provide a significant redesign and re-engineering of this significant junction, suggesting due to the constraints of surrounding land uses and national transport infrastructure (Heuston mainline railway), there has been a hesitancy to provide a solution suitable to all road users for an improved public realm and provision of active travel.

The submission notes particular concern for use of shared space where turning movements may be required for cyclists, and provision of new updated landscaping does not enhance the public realm, rather in many instances it reduces the available space for the segregation of walking and cycling.

Response to issue

Significant redesign and re-engineering of junction

Consultation with Irish Rail has occurred throughout the design development of the Proposed Scheme in relation to the Kildare Route Project and Dart+ West. This consultation has highlighted their ongoing design option development and the key constraints, which have informed the Proposed Scheme design, e.g. maximising the increase in the set-back of the carriageway edge from the existing bridge parapet at the South Circular Road junction bridge OBC1.

As noted in the Section 3.2.5 of the Preliminary Design Report in the Supplementary Information, Irish Rail have confirmed their proposed design for the Kildare Route Project will stay within the limits of the existing structures at R148 / South Circular Road Junction. Consequently, the Proposed Scheme layout is designed within these constraints.

Notwithstanding the above, Section 4.4 of EIAR Chapter 4 Proposed Scheme Description notes the following in respect of the redesign of the signalised gyratory of this junction: *"The existing layout with multiple slip lanes facilitates the movement of vehicles, but provides poor facilities for pedestrians, cyclist and buses. Pedestrians and cyclists have to walk a significant distance off their desire line to cross the road at a signalised crossing, which many are observed not to do, resulting in unsafe conditions for these vulnerable road users at a very busy junction.*

Having considered the objectives for the Proposed Scheme and using the principles set out in the PDGB an amended traffic signal-controlled junction arrangement was developed to address the issues outlined above. This layout could be used to control the flow of traffic and provide a high level of priority for buses on all arms of the junction and improve cycle and pedestrian facilities. On the eastbound and westbound approaches to the junction the existing left turn slip lanes will be removed. In order to improve the standard of pedestrian and cyclist facilities at this junction, the number of general traffic lanes through the junction will be reduced in the eastbound, northbound and southbound directions and the R111 South Circular Road is widened along the western edge through the junction to facilitate the inclusion of segregated cycle tracks in each direction. For cyclists, taking into account the high traffic volumes and speeds, a fully segregated facility is provided where cyclists are segregated in both space and time from moving vehicles, which significantly enhances the safety of these vulnerable road users. The revised layout is typical of junctions along the corridor that have been developed to meet the objectives of the project.

As it is an area of high activity the junction redesign proposals at the R148 Con Colbert Road / R111 South Circular Road junction, include a number of public realm upgrades including widened footways, high quality hard and soft landscaping and street furniture being provided, which contribute towards a safer, more attractive environment for pedestrians.

Additionally, on the R111 South Circular Road northbound a short right turn lane is provided to facilitate future bus movements and compensate for restricted turns included in the Liffey Valley to City Centre Core Bus Corridor Scheme."

Shared Space

Refer to Section 2.3.3.3, part vii) above for response

2.3.3.11 Chapelizod Hill Road

Summary of issue

The submission raised some safety issues with regards to the suitability of a bus stop on the Chapelizod bypass and the acknowledgement that it is not practicable to introduce ramps along Chapelizod Hill Road to make the route accessible by wheelchair users, noting the number of landings and the extents of handrails that would be required.

Refer to Sections 2.2.4.3 and 2.2.4.11 for details of these issues.

Response to issue

Refer to Sections 2.2.4.3 and 2.2.4.11 for the response to these issues.

2.3.3.12 Climate Action Plan

Summary of issue

The submission stated their belief that because of flaws outlined [within the submission] the project as proposed, is not compliant with the legally binding Climate Action Plan (CAP) to achieve a 50% reduction in transport emissions by 2030.

Response to issue

With regard to compliance Climate Action and Low Carbon Development (Amendment) Act 2021 and the Climate Action Plan 2021, this has been detailed in the EIAR.

Section 2.3.3.9 of Chapter 2 in Volume 2 of the EIAR (as well as Section 3.5.9 of the Planning Report contain in Appendix A2.1 of Volume 4 of the EIAR) addresses the Climate Action and Low Carbon Development (Amendment) Act 2021. Section 2.3.3.9 states that: "…. *The implementation of the Proposed Scheme will deliver transport infrastructure required to support a significant shift towards sustainable transport options that will in turn support the targets set out in the Climate Action and Low Carbon Development (Amendment) Act 2021. This supports the need for the Proposed Scheme."*

Section 2.3.3.10 of Chapter 2 in Volume 2 of the EIAR (as well as Section 3.5.10 of the Planning Report contain in Appendix A2.1 of Volume 4 of the EIAR) addresses the Climate Action Plan 2021. Section 2.3.3.10 states that: *"….BusConnects is referenced as a major transport project that will help to deliver the 500,000 additional sustainable journeys…."* Provision of BusConnects infrastructure is one of the actions contained in the Climate Action Plan 2021: "*Commence delivery of BusConnects Core Bus Corridor Infrastructure Works."*

Chapter 8 (Climate) provides the assessment of the potential climate impacts associated with the Construction and Operation of the Proposed Scheme.

The delivery of the Proposed Scheme will deliver the transport infrastructure required to provide sustainable transport options that will support the key actions set out in the Climate Action Plan 2021. The Proposed Scheme will expand, enhance and connect to pedestrian and cycle networks and will assist in facilitating the delivery of modal shift. BusConnects will support the delivery of an efficient low carbon and climate resilient public transport service, contributing to emission reduction target achievement. BusConnects will contribute to Ireland's journey to a low carbon / carbon neutral, energy efficient and reliable transport system which aligns with Government net zero policy commitments and enable customers to make sustainable choices.

Since the planning application was made for the Proposed Scheme, the Climate Action Plan 2021 has been updated by the Climate Action Plan 2023. The CAP 2023 sets out the sectoral emissions ceilings and the implementation of carbon budgets. The CAP is a roadmap to deliver a halving of Irelands emissions by 2030. The transport sector has an aim of a 50% reduction in emissions by 2030. The 'Avoid' (reduce or avoid the need for travel – land use planning), 'Shift' (Shift to more environmentally friendly modes – public transport, active travel), 'Improve' (Improve the energy efficiency of vehicle technology- vehicle efficiency, clean fuels) approach has been adopted to help achieve these targets. CAP 2021 targets have been updated to include '*a 20% reduction in total vehicle kilometres, a reduction in fuel usage, and significant increases to sustainable transport trips and modal share'*

Section 15.3.3 of the CAP 2023 with regard to '*Avoid and Shift'* sets out the following: *'Greater prioritisation and reallocation of existing road space towards public transport and active travel will be a key supporting element for the new DMS. This already forms a crucial element of the BusConnects programme in each of our five cities. It is also a key recommendation from the OECD's Redesigning Ireland's Transport for Net Zero report.'*

Section 15.3.3 of the CAP 2023 with regard to '*Shift'* outlines the following in regard to '*Major Public Transport Infrastructure Programme': 'Key milestones have already been achieved on major infrastructural projects, including BusConnects in each of our 5 cities and the Greater Dublin Area's DART+ Programme and Metrolink, which will continue to be progressed through public consultations and the planning systems.'*

Table 15.7 of the CAP 2023 sets out the *'Key Actions to Deliver Abatement in Transport for the Period 2023-2025'* includes under the measure *'Major Public Transport Infrastructure Programme'* and the heading *'Shift'* (inter alia) '*Advance BusConnects programme in 5 cities'* under the actions for 2023, 2024 and 2025.

The delivery of the Proposed Scheme will provide the transport infrastructure required to deliver sustainable transport options that will support the key actions set out in the Climate Action Plan 2023. The Proposed Scheme will expand, enhance and connect to pedestrian and cycle networks and will assist in facilitating modal shift. The targets set out within CAP 2023 are closely linked to the delivery of key transport infrastructure projects, such as the BusConnects Programme and therefore the Proposed Scheme.

2.3.4 72 – South Dublin County Council (SDCC)

2.3.4.1 Overview of submission

This submission raised the following issues:

i. Advocate for the Proposed Scheme
ii. Request that the route is expanded westward to include Lucan village
iii. Comments to the active travel and traffic proposals
iv. Comments on material selection
v. Comments on the required Construction Management and Traffic Management Plans
vi. Requesting confirmation that the delivery of the Proposed Scheme will not negatively impact on the timing of the delivery of the Lucan Luas extension
vii. Further discussion requested in respect of the land parcels required for the scheme

2.3.4.2 Advocate for the Proposed Scheme

Summary of Issue

The submission outlines the numerous policy objectives within the County Development Plan 2022-2028. It 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";*
- *"provides a good balance between servicing existing communities while not seriously and adversely affecting residential amenities, given its routing along existing major roadways and the limited land take identified"*
- will deliver the *"wider remit of smarter travel given proposed improvements to walking and cycling infrastructure, as well as general amelioration in quality of the public realm"*

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 submission highlights SDCC's support for the following aspects of the Proposed Scheme:

- the removal of left turn slip lanes at various junctions;
- the movement of bus stops at Liffey Valley Shopping Centre and associated new pedestrian bridge;
- the proposal for a segregated two-way cycle track on the northern side of the N4 between the entrance to the Hermitage Golf Club and Junction 2 of the N4;
- the upgrade to the following junctions in Palmerstown:
    - R148 Palmerstown bypass / Kennelsfort Road;
    - Old Lucan Road / Kennelsfort Road Lower; and
    - R148 Palmerstown bypass / The Oval.

Response to Issue

The support for the scheme is noted and welcomed by the NTA.

2.3.4.3 Expansion of the Route Westward to Include Lucan village

Summary of Issue

The submission requests that the route of the Proposed Scheme is extended westwards to include Lucan village.

Response to Issue

Section 4.1 of the Preferred Route Option (PRO) Report included with the Supplementary Information explains the rationale for the start of the scheme being Junction 3 of the N4 to the east of Lucan village. It explains that in the 'Lucan to City Centre Core Bus Corridor Options Study Feasibility Report' completed in 2016, the defined study area was divided into the following four sections:

- Section 1: N4 Junction 5 (Celbridge / Leixlip) to N4 Junction 3 (Ballyowen / Lucan);
- Section 2: N4 Junction 3 (Ballyowen / Lucan) to Kennelsfort Road;
- Section 3: Kennelsfort Road to Con Colbert Road; and
- Section 4: Con Colbert Road to City Centre.

Section 4.1 of the PRO Report states 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). Jarrett Walker and Associates, a transport planning practice with specific expertise in bus network redesign, was appointed to provide advice and technical support.*
>
> *"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."*

Figure 4-2 of the PRO Report indicated the final output from the Bus Network Review in the vicinity of the western end of the Lucan to City Centre CBC and this is replicated in Figure 2.3.4.1.

Figure 2.3.4.1 Replication of Figure 4-2 of the PRO Report

As stated in Section 4.1 of the PRO Report

> *"This illustrates that the C-Spine route from the City Centre along the R148 and the N4 terminates at N4 Junction 3 (Ballyowen / Lucan). West of this point, there is a three-way split of future services, with some branch routes (C1 and C2) running along Ballyowen Road, other branch routes (C3 and C4) running though Lucan village and various peak time routes continuing along the N4.*
>
> *As such, the decision was taken to exclude the section of the route between the N4 Junction 5 and Junction 3 in the Emerging Preferred Route Option for the Lucan to City Centre CBC and commence the Proposed Scheme at N4 Junction 3 (Ballyowen / Lucan) to serve the C-Spine route."*

2.3.4.4 Active Travel Proposals

Summary of Issue

Numerous minor design comments were submitted in respect of the active travel proposals shown the General Arrangement Drawings.

Response to Issue

The NTA welcomes the various detailed comments made and notes that they are not material to the design intent of the Proposed Scheme. Subject to statutory approval by the Board, it is appropriate that these are considered at the detailed design stage.

2.3.4.5 Material selection

Summary of Issue

The submission requests that no kerb integrated drainage is included in the Proposed Scheme, explaining that they are difficult to maintain and replace. The submission also requests that coloured bound surfacing products are not used, or used sparingly throughout the design, explaining that it is hard to procure in small quantities for maintenance repairs.

Response to Issue

As set out in Table 9-5 of the Preliminary Design Report, provided as part of the Supplementary Information, combined kerb and drainage units or slot drains with a parallel carrier drain are proposed at two locations:

- A2840 - A3200 Eastbound, at the very start of the R148 Palmerstown Bypass where it crosses the M50; over this section there is a narrow section of widening to the existing carriageway on the southern side, leading to the need to replace a length of existing combined kerb and drainage units; and
- A3200 - A3680 – Eastbound, on the R148 Palmerstown Bypass at the location of the eastbound merge from the M50 southbound as far as the Kennelsfort Road junction; over this section there is a narrow section of widening to the existing carriageway on the northern side, leading to the need to replace a length of existing concrete slot drains.

These two locations have a relatively flat longitudinal gradient and the provision of combined kerb and drainage units, or slot drains with a parallel carrier drain, represents the optimum drainage design at these locations.

Section 7.2.1 of the Preliminary Design Report sets out that new cycle track pavements should be designed considering the requirements of the BusConnects Preliminary Design Guidance Booklet (PDGB), which is included as EIAR Volume 4 Part 1 of 4 Appendix A4.1. This booklet notes that reference should be made to the guidance provided in the National Cycle Manual (NCM) with regards to cycle track materials selection.

The NCM sets out a clear rationale for the provision of red coloured cycle lanes at a variety of locations as they provide additional legibility to all traffic (vehicles, cyclists), particularly at junctions, to improve safety.

The PDGB includes the following statements in respect of coloured materials:

- Section 5.5 Cycle Track Material: 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).
- Section 5.5 Cycle Track Material: 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.
- Section 7 Signalised Junctions: As a principle, cycle facilities should be coloured through junctions. Bus lanes are not to be coloured.
- Section 8.3 On-Road Cycle Lane: The cycle lane should be coloured red across the mouth of the junction to highlight the need for drivers to yield to cyclists in the cycle lane.

The Proposed Scheme therefore includes the use of coloured materials as set out in the PGDB which represents an appropriate use of such material in the context of cyclist safety, as set out in the NCM.

2.3.4.6 Construction Management and Traffic Management Plans

Summary of Issue

The submission makes a number of points in relation to the future construction management plans and lists twelve specific items that a future Construction Traffic Management Plan should include. It also notes that a Project Construction Waste and Demolition Management Plan be prepared that addresses intended construction waste management and traffic issues that may arise from such a plan.

Response to Issue

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 and 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 list 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.

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 2.3.4.1 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 2.3.4.1: Summary of Where SDCC Points are Addressed by the CEMP

Aspect Listed in CEMP Section 5.2	SDCC Point Raised
Access and egress;	(ix) Access arrangements (x) Measures to obviate queuing on adjoining road network
Construction Compounds;	(ii) on-site car parking (v) Location of materials compound (vi) Security fencing
Routing of construction vehicles;	(ix) Routes to be used by construction traffic
Pedestrian (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users etc.) and cyclist provisions;	(xii) Arrangements for pedestrians
Public transport provisions;	

Aspect Listed in CEMP Section 5.2	SDCC Point Raised
Parking and access;	
Lighting;	
CSMMP;	
Traffic management signage;	
Timings of material deliveries;	
Traffic management speed limits;	
Vehicle cleaning;	(i) Vehicle cleansing / wheel washing
Road cleaning;	(iv) Road sweeper
Road condition;	
Road closures and diversions;	
Enforcement of Construction Traffic Management Plan;	
Interface with other projects;	
Other Sections of CEMP	SDCC Point Raised
Table 5.2 Mitigation and Monitoring	(ii) Dust suppression measures (xi) Measures to protect watercourses
CDRWMP	(viii) Use and control of spoil
Other Comments	SDCC Point Raised
Details of Contractor not yet known	(vii) Name and address of site manager

2.3.4.7 Timing of the delivery of the Lucan Luas extension

Summary of Issue

The submission expresses concern that the Proposed Scheme may impinge on the delivery of the proposed Lucan Luas extension.

Response to Issue

The NTA notes that Luas Lucan is included in the Greater Dublin Area (GDA) Transport Strategy 2022-2042 as Measure LRT4: *"It is intended to develop a light rail line from Lucan to the City Centre, supplementing and complementing the planned bus system, to serve the overall public transport needs in this area."*

Figure 19.1 of the GDA Transport Strategy 2022-2042 provides the timeframe for Luas Lucan as 2031-3036, on the basis that the BusConnects Core Bus Corridors are implemented in the 2022-2030 timeline, see Figure 2.3.4.2.

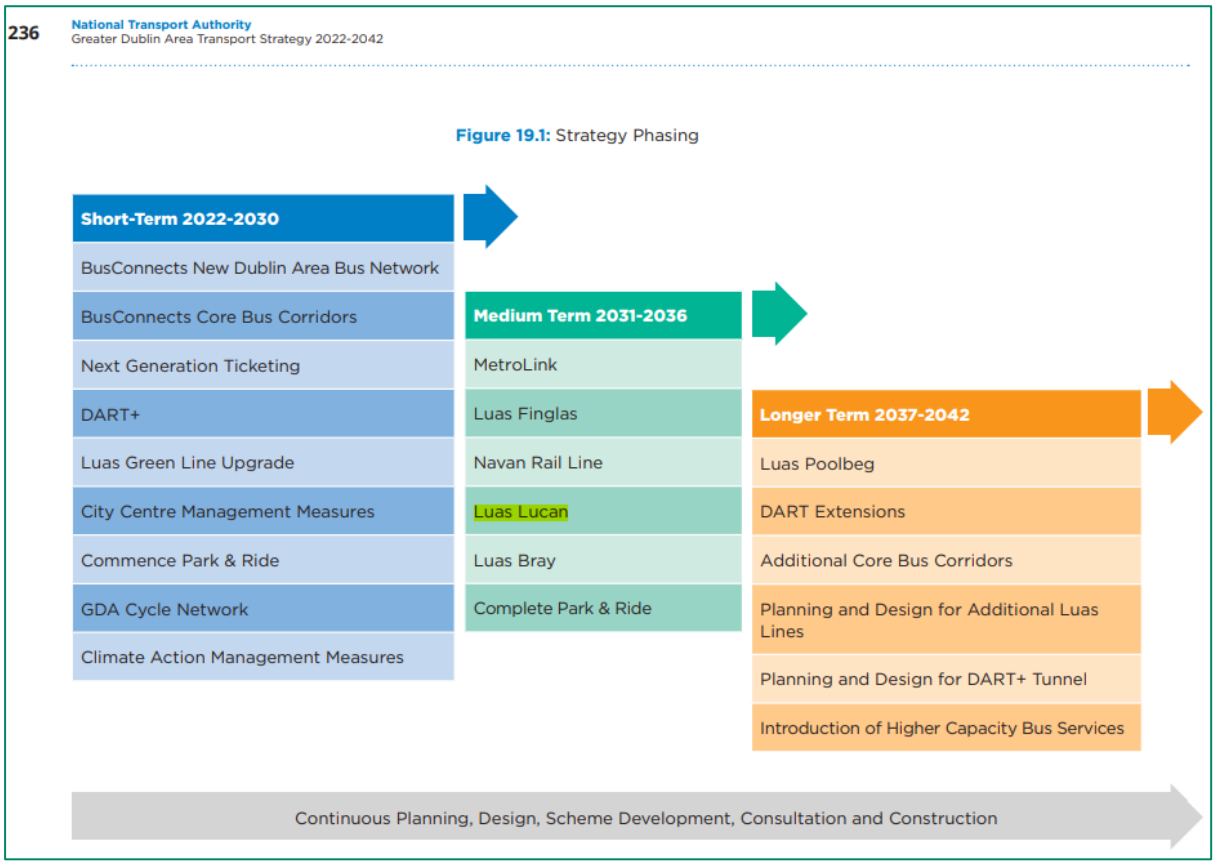


Figure 2.3.4.2 Figure 19.1 of the GDA Transport Strategy 2022-2042

As can be seen from Figure 2.3.4.2, the BusConnects Core Bus Corridors and Luas Lucan are both stated, and complementary, component parts of the GDATransport Strategy 2022-2042. The Core Bus Corridors are to be delivered in the short-term and Luas Lucan in the medium term. The proposed Scheme will not impinge on the delivery of the Luas Lucan.

2.3.4.8 Land Parcels

Summary of Issue

The submission states the SDCC's Economic and Development Section is in favour of the Proposed Scheme and will assist with any land agreements and access permissions, noting that further detailed discussions of the plots of land identified in the CPO for which SDCC has been notified as a potential interested party. It then provides a detailed commentary in relation to each of the said plots of land.

Response to Issue

The NTA welcomes the offer of assistance and further detailed discussions in relation to the plots, subject to receiving the necessary statutory approval for the Proposed Scheme. The NTA also notes that SDCC have not submitted any objection to the CPO for the Proposed Scheme.

2.3.5 81 – Dublin City Council (DCC)

2.3.5.1 Overview of submission

Dublin City Council's (DCC) submission comprised of 50 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 and Liaison with DCC

B. DCC's Support for the Proposed Scheme

C. Certain Observations Raised/Clarification Sought by DCC

- Response to Section 2.1 Relevant Planning History
- Response to Section 2.2 Policy Context
- Response to Section 2.3 Departmental Reports
- Response to Section 2.4 Planning Assessment (sub-sections 2.4.1 to 2.4.11)
- Response to Section 2.5 Conclusion
- Response to Appendix 1 Proposed Conditions and Departmental Recommendations

2.3.5.2 Introduction

The Lucan 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.

2.3.5.2 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 Blanchardstown 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.

2.3.5.3 B - DCC's Support for the Proposed Scheme

In its submission, DCC confirmed its support for the Proposed Scheme, and stated in their section 2.5 Conclusion on page 39 of the submission:

"The proposed Lucan 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 2016-2022 as well as the draft Dublin City Development Plan 2022-2028."

DCC further confirmed (at pages 39-40 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 pages 12-13 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 15) states that: "*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."*

Equally, on page 15 of its submission, DCC noted that *'Chapter 8 of the current Dublin City Plan (2022-28) 'Movement and Transport' "sets out the Council's policies and objectives which are relevant to Bus Connects, which include, inter alia, policies in relation to sustainable transport, modal shift and supporting and facilitating the development of an integrated public transport network, with efficient interchange between transport modes, serving the existing and future needs of the city."*

The submission goes on to state that *"In general, the Proposed Scheme is supported by the high level policies in place [in] the current Dublin City Development Plan 2022-2028."*

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 area along the proposed route includes land with Z1 (residential), Z4 (district centres), Z5 (city centre), Z6 (employment enterprise), Z9 (open space) and Z10 (mixed uses) zoning objectives and states that *"For the most part, the proposed scheme with the City Council area is situated on land witing the existing public road, in particular the Chapelizod Bypass here there is no specific zoning objective."*

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".* The submission 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 pages 16 and 17 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 as providing the opportunities:

- *To provide better and safer cycling environment for all ages and abilities*
- *Help the bus maintain a steady speed and so achieve its journey times and even headways by removing bicycles from potentially being a source of delay in the bus lane."*

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 31 of the DCC submission, the Conservation Section stated that: *"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."*

On page 36 of the DCC submission, the City Architects Department *"welcomes 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 *"the proposals for public realm upgrades, including widened footpaths, high quality hard and soft landscaping contribute towards a safer, more attractive environment for pedestrians 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."*

2.3.5.4 C - Certain Observations / Clarifications 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 2.3.5.3 - 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 *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.

2.3.5.4.1 DCC Section 2.1 Relevant Planning History

Observations raised / clarifications sought

DCC, in this section 2.1 of its submission, listed five significant planning applications along, and adjacent to, the Proposed Scheme.

Response

DCC, in this Section 2.1 of its submission, lists five significant planning applications along, and adjacent to, the Proposed Scheme. The NTA notes that three of the planning applications listed are identified in the application documentation – in EIAR Volume 4 Appendices Part 4 of 4, Appendix A21.1 Summary of Stages 1 and 2:

- **42a Parkgate Street, Dublin 8:** Permission granted for 321 no. buy to rent (BTR) residential apartments with amenity facilities, commercial office (c. 3698sq m) and retail (c. 214 sq. m), accommodated in 5no. blocks ranging in height from 8 to 13 storeys. (Reg Ref: SHD ABP306569/20),
- **42a Parkgate Street, Dublin 8 [eastern apex of the site]:** Permission granted for 30-storey residential building including residential, café/ restaurant, replacement office use and ancillary accommodation and works facilities, commercial office (c. 3698sq m) and retail (c. 214 sq. m), accommodated in 5no. blocks ranging in height from 8 to 13 storeys (Reg Ref: ABP-310567-21 SHD0012/21 (given as SHD0021/21 in DCC submission)) - [otherwise consented development under ABP-306569-20]); and
- **Faulkner Industries Factory, Chapelizod Hill Road, Chapelizod, Dublin 8**: Permission granted for 171no. apartments. (Reg Ref: 2869/17).

The other two planning applications that DCC refer to are:

- **Grounds of the former De La Salle National School, Balllyfermot Road, Balllyfermot, Dublin 10**: Permission granted by An Bord Pleanála for 865 no. [927 – 62 refused, Condition 2] apartments and duplex/ triplex units, ranging in height from 2 to 13 storeys. (Reg Ref: SHD0011/22) note – this development is located on the Ballyfermot Road on the route of the Liffey Valley Core Bus Corridor Scheme;
- **Heuston South Quarter, St John's Road West / Military Road, Kilmainham, Dublin 8**: Permission granted for 399 no. 'BTR' residential apartments and associated ancillary residential uses including a retail unit at ground floor level, and ancillary and associated development. (Reg Ref: SHD0023/21).

A further review has been undertaken on a precautionary basis to identify other relevant strategic housing developments/significant infrastructure developments that may have been planned during and since the preparation of the EIAR. No significant residual cumulative impacts are considered likely from any schemes identified, in cumulation with the Lucan to City Centre scheme. Should the developments begin construction prior to the Proposed Scheme, the NTA will work with the local authority to ensure both schemes are compatible. The Proposed Scheme will benefit those developments in terms of providing enhanced overall public transport, cycling and walking connectivity. Should the developments begin construction prior or during the Construction Phase of the Proposed Scheme as acknowledged in Section 5.9 of Chapter 5 of Volume 2 of the EIAR interface liaison will be undertaken on a case-by-case basis with other projects if required to ensure that cumulative impacts are managed appropriately: *"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".*

2.3.5.4.2 DCC Section 2.2 Policy Context

Observations raised / clarifications sought

In their submission DCC set out the Policy Context.

Response

In its submission, DCC confirmed its support for the Proposed Scheme, and stated in their conclusion on page 39 of the submission:

"The proposed Lucan 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."

In relation to planning policy, the NTA welcomes (at pages 12-13 of the 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.

It is noted that the adopted Dublin City Development Plan 2022 – 2028 is supportive of BusConnects. The adopted Plan includes the Proposed Scheme at Figure 8-3 'BusConnects' in which it outlines each of the BusConnects 'Radial Core Bus Corridors'. It also refers to BusConnects as a '*Key strategic transport project'* that forms part of the '*expansion of an integrated public transport system for the Dublin region*.' It goes on to say '*Dublin City Council actively supports all measures being implemented or proposed by other transport agencies to enhance capacity on existing lines/services and provide new infrastructure.*'

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.

The NTA note that the Draft Dublin City Development Plan 2022-2028 was adopted in December 2022 and that the EIA had regard to the draft plan, noting the following from section 6 of Chapter 2 of Volume 2 of the EIAR:

"The Dublin City Development Plan 2022-2028 is set to be adopted in 2022. Although the draft Dublin City Development Plan 2022-2028 is subject to change, it is clear that BusConnects is an important consideration, and its development is to be considered as part of the shaping of emerging policy for the city."

In addition to the above, the Draft Dublin City Plan Development Plan 2022 – 2028 was considered within EIAR Volume 4 Appendices Part 1 of 2, Appendix A2.1 Planning Report. The Planning Report sets out the status of the Plan at the time of writing and outlines some of its key objectives from Chapter 8 (Sustainable Movement and Transport) including the following key excerpts:

- *'Sustainable and efficient movement of people and goods is crucial for the success and vitality of the city.'*
- *'The policy approach promotes the integration of land use and transportation, improved public transport and active travel infrastructure, an increased shift towards sustainable modes of travel and an increased focus on public realm and healthy placemaking, while tackling congestion and reducing transport related CO2 emissions';*
- It also commented under the heading 'Sustainable Modes' that *'Key strategic transport projects such as the proposed Metrolink, DART+, BusConnects programme and further LUAS Line and rail construction and extension will continue the expansion of an integrated public transport system for the Dublin region and have the potential for a transformative impact on travel modes over the coming years. Dublin City Council actively supports all measures being implemented or proposed by other transport agencie*s to enhance capacity on existing lines/services and provide new infrastructure.'

It is noted that the adopted Dublin City Development Plan 2022 – 2028 is supportive of BusConnects. The adopted Plan includes the Proposed Scheme at Figure 8-3 'BusConnects' in which it outlines each of the BusConnects 'Radial Core Bus Corridors'. It also refers to BusConnects as a '*Key strategic transport project'* that forms part of the '*expansion of an integrated public transport system for the Dublin*

region.' It goes on to state that '*Dublin City Council actively supports all measures being implemented or proposed by other transport agencies to enhance capacity on existing lines/services and provide new infrastructure.*'

In the context of the above, it is clear that the Dublin City Development Plan 2022 – 2028 supports the Proposed Scheme.

Some additional observations by DCC over and above those already provided within Table 3.8 of the Planning Report in relation to the Dublin City Development Plan 2016-2022 are welcomed, including that the Proposed Scheme is consistent with Policy MT2 [SMT1 Dublin City Development Plan 2022 – 2028] of the Development Plan, which sets out the necessity to continue to promote modal shift from private car use towards more sustainable forms of transport such as cycling, walking and public transport, which directly aligns with the Proposed Scheme objectives.

Similarly, it is acknowledged that Policy MT7 and MT23 [SMT8, SMT11, SMT12, SMT14 & SMT19 Dublin City Development Plan 2022 – 2028] of the Development Plan have a direct correlation with the Proposed Scheme's objectives given the various improvements to thoroughfares and junctions, the implementation of parts of the Greater Dublin Area cycle network and improved pedestrian facilities which will provide for the needs of people with mobility impairment and/or disabilities including the elderly and parents with children.

The DCC submission notes the Strategic Development and Regeneration Areas (Section 2.2.2.1.1) that the Core Bus Corridor passes within or alongside. The NTA notes that the Proposed Scheme aligns with the objectives for the SDRA 7 (Heuston and Environs) as set out with EIAR Volume 4 Appendices Part 1 of 2, A2.1 Planning Report for the Proposed Scheme.

2.3.5.4.3 DCC Section 2.3 Departmental Reports

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.

2.3.4.4.4 DCC Section 2.4 Planning Assessment

DCC Section 2.4.1 Planning Policy

Observations raised / clarifications sought

The submission notes that the Proposed Scheme is supported by the RSES, stating that it not only seeks an improved and enhanced bus network but also places cycling at the core of its transport objectives. The submission also makes reference to the policies and objectives Dublin City Development Plan 2022-2028.

Response

This is responded to in section 2.3.5.4.2 of this report above.

DCC Section 2.4.2 EIAR

Observations raised / clarifications sought

The submission states 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 goes on to say that *"the content [of the EIAR] points generally to the development having negligible impact on the existing environment".*

Response

The NTA notes the view expressed by the submission.

DCC Section 2.4.3 Natura 2000

Observations raised / clarifications sought

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 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 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."*

Response

The NTA notes the view expressed by the submission.

DCC Section 2.4.4 Zoning and Other Designations

Observations raised / clarifications sought

In relation to zoning, the NTA notes that DCC set out the view on page 14 of its submission that the area along the proposed route includes land with Z1, Z4, Z5, Z6, Z9 and Z10 zoning objectives and states that *"For the most part, the proposed scheme with the City Council area is situated on land witing the existing public road, in particular the Chapelizod Bypass here there is no specific zoning objective."*

The submission also notes that the Proposed Scheme traverses the Zone of Archaeological Constraint for Recorded Monument DU018-20 (Historic City) from Con Colbert Road and St John's Road West, and is located within the Zone of Archaeological Interest in the Dublin City Development Plan 2022-2028.

The submission highlights that the secondary elements associated with the Proposed Scheme, such as bus shelters, stops and real time information signage fall within the definition of *"public service installation"* as defined in the Dublin City Development Plan 2022-2028.

The closing sentence of this section of the submission states: *"Overall, [it] is considered that the proposals would be compatible and consistent with the zoning objectives for the area."*

Response

The NTA notes the view expressed by the submission.

In relation to archaeology, further detailed observations / clarifications are included in section 2.4.8 of DCC's submission and responses to those are provided in the relevant sub-section of this report below.

DCC Section 2.4.5 Impact on Amenity

Observations raised / clarifications sought

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".* The submission 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."*

Response

The NTA notes the view expressed by the submission.

DCC Section 2.4.6 Strategic Observations from the Forward Planning Department

Observations raised / clarifications sought

The submission states that the *"City Council supports the improvement of public transport and cycling which allow for higher density development, therefore creating a more sustainable interaction between land-use and transport.* Chapter 8 of the Dublin City Development Plan (2022-28) 'Movement and Transport' *sets out the Council's policies and objectives which are relevant to Bus Connects, which include, inter alia, policies in relation to sustainable transport, modal shift and supporting and facilitating*

the development of an integrated public transport network, with efficient interchange between transport modes, serving the existing and future needs of the city."

The submission goes on to state that *"In general, the Proposed Scheme is supported by the high level policies in place [in] the current Dublin City Development Plan 2022-2028."*

Response

The NTA notes the view expressed by the submission.

DCC Section 2.4.7 Environment and Transportation Department Comments

DCC Section 2.4.7.1 General Comments

Observations raised / clarifications sought

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: *"[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.

Response

The NTA notes the view expressed by the submission.

DCC Section 2.4.7.2 Traffic Division

Observations raised / clarifications sought

i. The submissions asserts that the corridor cannot be operated in isolation and must be a managed corridor under the DCC traffic control system.
ii. The submissions expressed disappointment in respect of the reduction in private car journeys of between 4% and 6% in the peak periods.
iii. The submission queries the speed limit signs shown at two locations (Con Colbert Road and St John's Road West).
iv. The submission suggest that the layout of the South Circular Road junction could be reviewed at detailed design stage.
v. The submission queries the network redesign proposal for shared use of the Luas tracks along Steeven's Lane with bus services.

Response

i) Traffic Control System

On page 16 of its submission, DCC stated:

"The Traffic Section is supportive of the integrated sustainable transport proposals and recognizes 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 6.4.6.3 of Chapter 6 Traffic and Transport, the micro-simulation modelling demonstrates that bus journey times will improve by up to 19% during the AM and PM Peak hours of the 2028 Opening and 2043 Design Year. On an annual basis this equates to 5,400 hours of bus vehicle savings in 2028 and 5,600 hours in 2043.

Similarly, bus network resilience is a key performance criteria as set out in the EIAR Section 6.4.6.2.7.2 of Chapter 6 Traffic and Transport wherein the Proposed Scheme was tested with an additional 10 buses per hour (from 55 to 65 inbound and 43 to 53 outbound) at the busiest section. As can be seen from Table 6.48 (Figures 2.3.5.1) and Diagram 6.25 of the above referenced chapter (Figure 2.3.5.2), 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.

Table 6.48: F9 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	25.1	26.0	3.6%	18.0	18.3	1.5%
2028 Outbound PM	20.8	21.1	1.7%	18.9	19.0	0.6%

Figure 2.3.5.1: Average Bus Journey Times form Chapter 6 of EIAR Volume 2

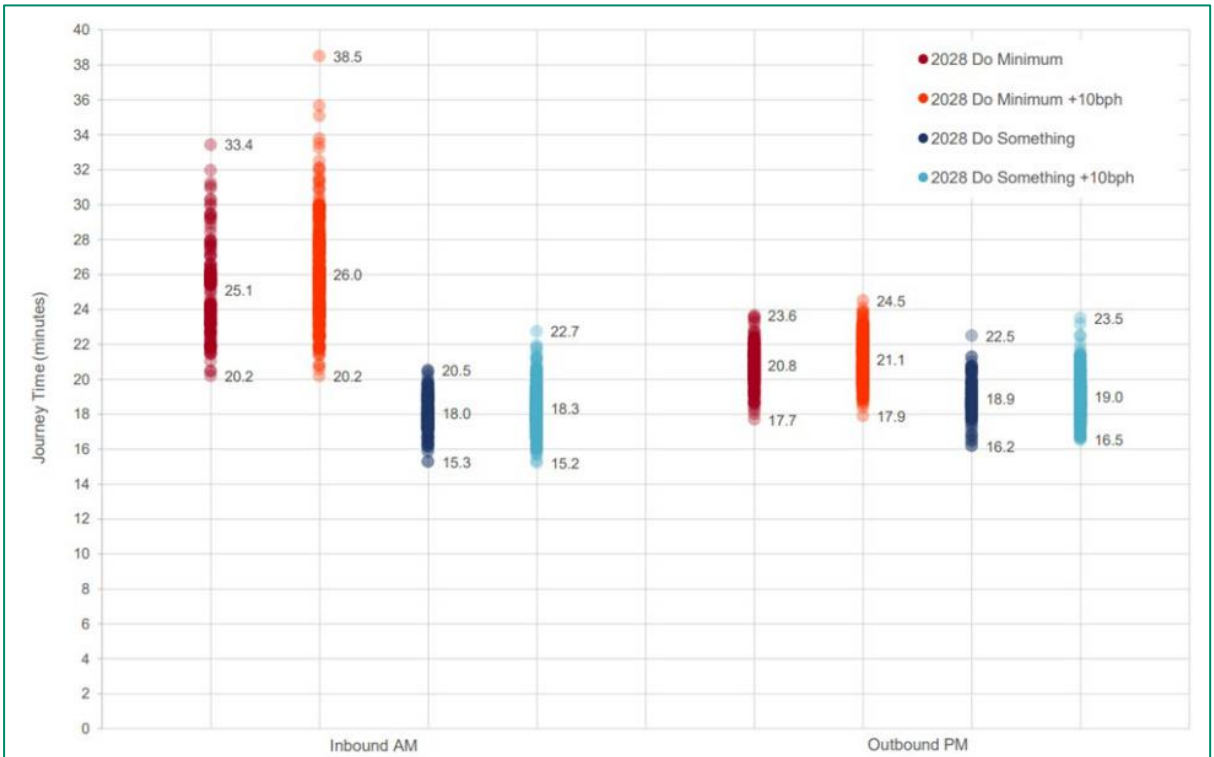


Diagram 6.25: Resilience Testing Bus Journey Time Reliability Indicators - Scenario Testing– Opening Year (2028)

Figure 2.3.5.2: Resilience Testing Bus Journey Time Reliability Indicators from Chapter 6 of EIAR Volume 2

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.

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".*

ii) Reduction in private car journeys

The Proposed Scheme will assist to promote a reduction in private car journeys in the morning and evening peak hours by 4% and 6% respectively. It is noted in DCCs response that the projected reduction is relatively low in comparison to other [BusConnects] corridors. It should be acknowledged when comparing the Proposed Scheme with other corridors, the following factors will attribute to the projected reduction in private car journeys:

- The Proposed Scheme is located along an existing Bus Corridor, which benefits from some established bus priority in the form of bus lanes on the links and existing services. The Proposed Scheme will deliver significant improvements to bus priority, walking and cycling, in particular at junctions. However, when comparing the Proposed Scheme with other routes, the level of proposed new bus lane infrastructure is not as significant due to the good levels of existing provision.
- The Proposed Scheme will deliver bus priority improvements at approximately 13 no. existing signalised junctions. The no. of signalised junctions along the Proposed Scheme is significantly less than other corridors due to the existing conditions i.e. the Proposed Scheme travels along the N4 (3 lane dual carriageway) and the R148 Palmerstown bypass / Chapelizod Bypass (2 lane dual carriageway) where the road network acts as a key arterial corridor into Dublin City Centre, as opposed to other routes whereby the route passes through more urban areas and subsequently more junctions, whereby measures can be proposed to enhance bus priority through a junction. However, the Proposed Scheme has significantly less junctions in both existing conditions and proposed than other corridors, the opportunity for reduction in private car travel is less.
- The Proposed Scheme proposes a bus lane along the majority of the scheme, which is achievable due to the available width of the existing carriageway. In comparison, other corridors where road cross section is constrained in locations, measures are required to facilitate bus priority such as Bus Gates. This has a more significant impact to private vehicular travel and can result in significant reduction in car use along a corridor. Consequently, the Proposed Scheme will have a reduced impact upon reducing private vehicular modes due to the absence of measures such as Bus Gates, which would reduce capacity for general traffic;

Tables 6.36 and 6.37 of EIAR Chapter 6 Traffic and Transport provide details of the forecast modal shift along the route of the Proposed Scheme in 2028, see Figure 2.3.5.3 and Figure 2.3.5.4.

Table 6.36: 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	2,070	43%	1,990	36%	-80	-4%
		Public Transport	2,630	54%	3,250	59%	620	24%
		Walking	140	3%	140	3%	0	0%
		Cycling	20	0%	110	2%	90	450%
		Combined Walk/Cycle	160	3%	250	5%	90	56%
		Tot. Sustainable Modes	**2,790**	**57%**	**3,500**	**64%**	**710**	**25%**
		Total	**4,860**	**100%**	**5,490**	**100%**	**630**	**13%**

Figure 2.3.5.3: Table 6.36 from Chapter 6 of EIAR Volume 2

Table 6.37: 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	2,010	37%	1,890	32%	-120	-6%
		Public Transport	2,980	55%	3,490	60%	510	17%
		Walking	400	7%	400	7%	0	0%
		Cycling	10	0%	80	1%	70	700%
		Combined Walk/Cycle	410	8%	480	8%	70	17%
		Tot. Sustainable Modes	**3,390**	**63%**	**3,970**	**68%**	**580**	**17%**
		Total	**5,400**	**100%**	**5,860**	**100%**	**460**	**9%**

Figure 2.3.5.4: Table 6.37 from Chapter 6 of EIAR Volume 2

As can be seen from these Figures, the total number of hourly trips along the route of the Proposed Scheme in the Do-Minimum scenario is relatively high, both in terms of general traffic and public transport, reflecting the status of the route as a key arterial corridor into the city centre. It is also noted that the increase in the total number of trips by sustainable modes increase by 710 to 3,500 (+25%) in the AM peak hour and by 580 to 3,970 (+17%) in the PM peak hour. These hourly totals for trips by sustainable modes are amongst the highest of the twelve core bus corridor schemes.

In relation to the detail design stage and the request to tighten up junctions, the design of the Proposed Scheme has been undertaken in accordance with DMURS guidelines on reducing corner radii to ensure reduced speeds of turning vehicles to improve road safety. In addition, the proposed corner radii along the Proposed Scheme have been designed being cognisant of the requirements of larger vehicles turning at respective junctions along the scheme, in accordance with DMURS, and swept path assessments have been undertaken at all junctions to inform the proposed radii. The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division comments as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout preparation of the construction-stage documents and during the construction works.

iii) Speed Limit

The Traffic Signs and Road Markings (TSRM) drawings in EIAR Volume 3 Chapter 4 Part 1 of 3 include more signage detail than the General Arrangement drawings, which for clarity purposes only show proposed speed limit changes.

TSRM Sheet 25 shows 60km/h on the inbound aproach to Con Colbert Road – see Figure 2.3.5.5 below.

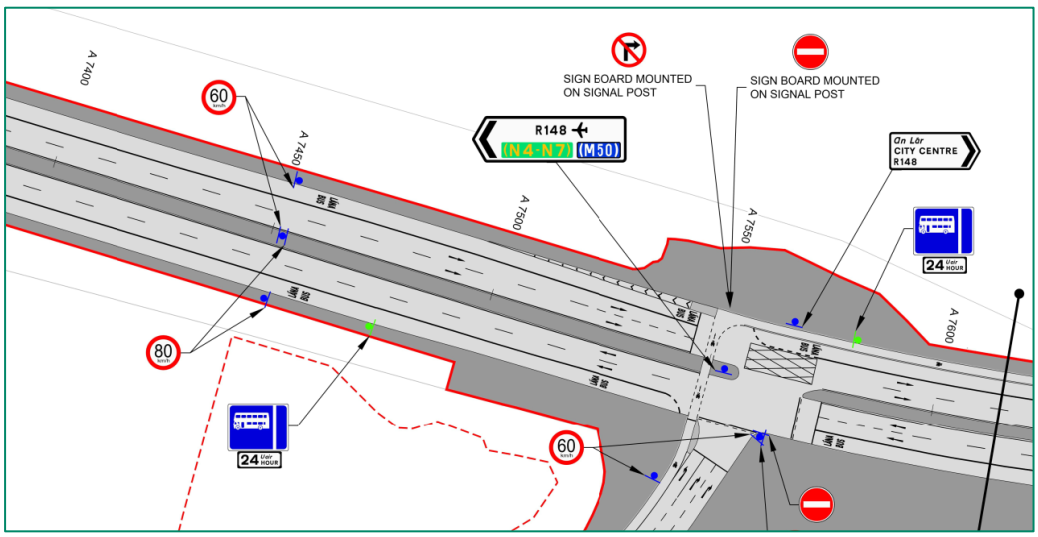


Figure 2.3.5.5: Extract of Traffic Signs and Road Markings drawings at the Con Colbert Road junction (Sheet 25)

TSRM Sheet 30 shows 50km/hr dropping to 30km/hr on the inbound approach to Military Road and 30km/hr increasing to 60km/hr just past the junction outbound – see Figure 2.3.5.6 below.

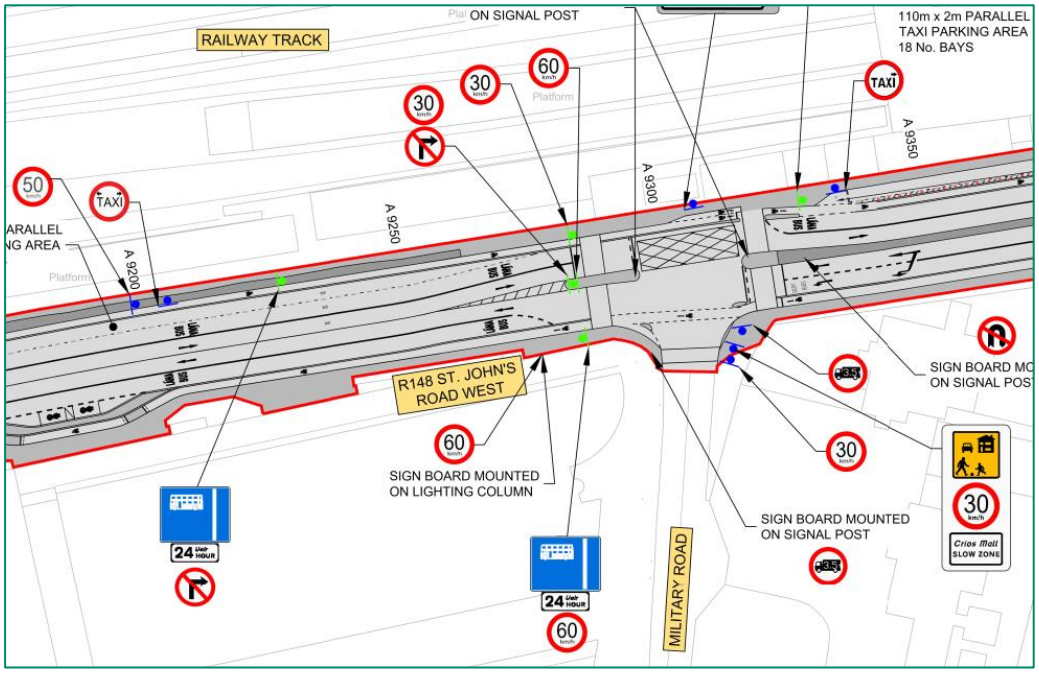


Figure 2.3.5.6: Extract of Traffic Signs and Road Markings drawings at the Con Colbert Road junction (Sheet 30)

iv) Layout of the South Circular Road junction

In relation to the specific suggestion that one of the two lanes on Con Colbert Road could be removed to allow for better cycling and walking facilities, the existing number of lanes are justified by the current and forecast traffic volumes as described in the following section of Appendix A6.1 Traffic Impact Assessment to EIAR Chapter 6 Traffic and Transport, contained Volume 4 Part 2 of 4 of the EIAR. This approach complies with DMURS, section 4.4.1 of which states: "*Designers should minimise the width of the carriageway by incorporating only as many lanes as needed to cater for projected vehicle flows and by reducing the size of individual lanes to meet predominant user needs.*" TII design standard DN-GEO-03031 Rural Road Link Design states that "for Urban Roads to refer to UK DMRB TA 79 for guidance on assessing the Traffic Capacity of Urban Roads."

Section 6.3 of Appendix A6.1 assesses the operation phase of the Proposed Scheme. Table 6.38 and Table 6.39 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the AM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. Con Colbert Road west of South Circular Road is listed as experiencing a reduction in 2028 PM peak hour flow of 249 pcu from 1970 in the Do Minimum Scenario to 1721 in the Do Something scenario. Despite this forecast reduction, the forecast flow still exceeds the accepted practical capacity of a single lane urban road in accordance with TA79 Determination of Urban Road Capacity, demonstrating that two lanes will still be required for general traffic with the Proposed Scheme in place.

Table 6.43 and Table 6.44 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the PM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. Table 6.44 identifies that the R148 Con Colbert Road will experience an increase in 2028 PM peak hour flow of 241 pcu from 1051 in the Do Minimum Scenario to 1292 in the Do Something scenario. This forecast flow exceeds the accepted practical capacity of a single lane urban road in accordance with TA79 Determination of Urban Road Capacity, demonstrating that two lanes will still be required for general traffic with the Proposed Scheme in place.

In summary, the existing two lanes for general traffic are necessary in each direction on Con Colbert Road between the eastern end of the R148 Chapelizod Bypass and the R111 South Circular Road.

Given the site constraints of the Memorial Gardens to the north and the rail line to the south, the maximum practicable space has been provided for pedestrians, bus passengers and cyclists.

v) Network redesign proposal – Steeven's Lane

The NTA note the network redesign proposal for shared use of the Luas tracks along Steeven's Lane with bus services is a separate project and the design of that project has not yet been finalised.

DCC Section 2.4.7.3 Roads Division

Observations raised / clarifications sought

i. The submission raised a number of queries in respect of the facilities for cyclists and pedestrians.

ii. The submission raised a number of detailed queries in respect of the South Circular Road junction.

iii. The submission queried if the proposed lane widths were adequate at various locations.

iv. The submissions asserts that the existing indented parking on the south side of St John's Road West, within which two existing electric vehicle (EV) charging points are to be relocated, is private and not taken in charge by Dublin City Council.

v. The submission raised a number of detailed queries in respect of the Proposed Scheme in the vicinity of Heuston Station.

vi. The submission requests clarity on how pedestrian priority across cycle tracks at shared landing bus stops will be enforced for vulnerable users at the Con Colbert Road Bus stops [sheet 26] and scheme wide.

vii. The submission makes a suggestion to reroute cycle track on northern side of R112 Lucan Road.

viii. The submission requests clarity on provision for mobility impaired at Chapelizod Hill Road, stating that commuters would need to negotiate a long and steep footpath (Chapelizod Hill Road) to access either of the Bus stops, which would likely also need retrofitting to make it accessible for all.

ix. In relation to the Con Colbert Road Junction the submission queries if the segregated cyclists are using same signalling and question the advantage of removal of the slip road.

x. The submission recommends a straight through pedestrian crossing at Memorial Road Junction instead of a staggered crossing.

Response

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division comments as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout preparation of the construction-stage documents and during the construction works. Responses to the detailed queries raised are provided as follows:

i. Facilities for Cyclists & Pedestrians

Pedestrian & Cyclist Provision

The NTA notes the request by the Roads Division that, across the scheme area, pedestrians should be ensured priority through signage and other appropriate measures, further requesting that this be made a condition.

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 1 of 2, Chapter 6 Traffic and Transport Appendices) Appendix 04 and summarised in Appendix A6.1 Traffic Impact Assessment Report, Section 8. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

EIAR Volume 2 Main Chapter, Chapter 6 Traffic and Transport, Section 6.4.6.1.5.1 describes that the Proposed Scheme will increase the number of controlled pedestrian crossings from 20 in the Do Minimum to 28 in the Do Something scenario. Additionally, there will be an increase in the number of raised table crossings on side roads from 1 in the Do Minimum to 19 in the Do Something scenario, representing a significant increase.

Pedestrian Priority at Bus Stops

The DCC submission states it is not clear how pedestrian priority across cycle tracks will be enforced for vulnerable users at the South Circular Road / Con Colbert Road bus stop and scheme wide.

The NTA welcomes DCC's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops and notes that EIAR Volume 2 Main Chapters, Chapter 4, Proposed Scheme Description and Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridor, Section 11, set out the key measures to address the concerns raised in relation to vulnerable users at these locations which is further elaborated in Section 4.11 PDR Chapter 4 Preliminary Design, 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.

ii. South Circular Road (SCR) Junction

Orientation of cycle tracks

The DCC submission states the SCR junction is complicated and convoluted and there are several locations where pedestrians have to cross cycle tracks to get to crossing points due to lengthy deflections of the cycle track away from the carriageway (i.e. on the NW & SE corners of the junction), adding that as a general rule, it is better to keep cycle tracks closer to the carriageway and any crossing points outside cycle crossings to reduce the need for pedestrians to cross over cycle tracks without the aid of signals. DCC states consideration should be given to reorienting some of the cycle tracks to reduce the requirements for footpaths to cross over cycle tracks and for all users to be controlled by signals wherever crossovers occur.

The proposed cycle tracks will be segregated from the carriageway by a new verge where space permits, as per the BusConnects Design Guide. The R148 carriageway is a busy arterial route for vehicles in and out of Dublin City, the proposed verge will assist to improve the quality of service and experience for cyclists by enhancing segregation from vehicles.

Locations are proposed where pedestrians will cross the cycle track, which is consistent with the BusConnects Design Guide for a Junction Type 4. The proposed arrangement will allow for reduced pedestrian crossing distances across the R148 carriageway.

Operation of cycle crossings of carriageway

The DCC submission states the workings of the cycle track is unclear, specifically querying if cycle carriageway crossings will be signalised and how cyclists will avoid conflict with vehicles.

The proposed cyclist crossings will be signalised. As shown on the System Design Drawings included in EIAR Volume 3 Figures Part 2 of 3, Chapter 4 for this respective junction, the cyclist crossings are proposed to be signalised, with proposed dedicated cyclist signal heads. The Indicative Method of Control on the System Design drawing illustrates cyclists crossing the junction without any conflicting vehicular movements. To achieve this, 'holding the left' vehicular movements are proposed whilst the cyclist crossing stage is on. This will provide cyclists with safe and direct crossings at the junction.

Footway width

The DCC submission states the footpath at the North East & South East of the junction is extremely narrow, suggesting the grass verge should be narrowed to increase space for pedestrians.

For the majority of the Proposed Scheme minimum lane widths for traffic have been adopted. with footway widths of 2m or wider proposed, apart from at a limited number of stretches where a width of between 1.8m and 2.0m is proposed due to the presence of localised space constraints.

At the North East corner of this junction it is proposed to retain the existing 2m wide footpath.

At the South East corner of this junction the footway is 2m generally, with a pinch point where the footway has been narrowed to 1.8m locally due to the constraint of the Royal Hospital/ burial ground on the south side and railway structures constraining the alignment on the north side. Figure 2.3.5.7 shows the relevant extract from the General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.

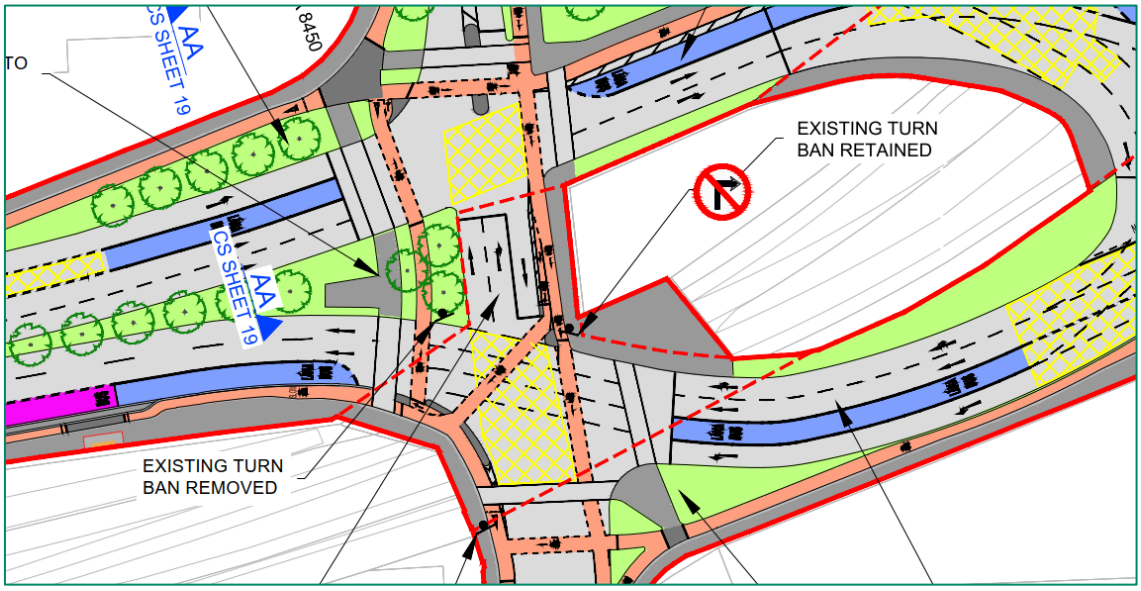


Figure 2.3.5.7: Extract of General Arrangement drawing at the South Circular Road junction (Sheet 28)

iii. Lane Widths

The submission queried if the proposed lane widths were adequate at various locations along Con Colbert Road and St John's Road west and if there was adequate width to achieve minimum lane widths.

Section 5.1 of the PDGB (Appendix A4.1 of EIAR Volume 4) states: *"Traffic lane widths will follow the guidance outlined in DMURS, with the preferred width of traffic lanes on CBCs being:*

- *3.0m in areas with a posted speed limit ≤ 60 km/h; and*
- *3.25m in areas with a posted speed limit > 60km/h.*

Traffic lane widths of 2.75m are permissible but not desirable and should only be permitted on straight road sections with very low HGV percentage and where all desirable minimum widths for

footpaths, cycle tracks, parking, bus lanes are not achievable without impacting on third-party lands.

Bus lanes should not be less than 3m in width. Existing and proposed drainage infrastructure should be located outside of the bus lanes to avoid damage from the wheel tracks of buses. The provision of side-entry drainage systems is preferable along the edge of 3m wide bus lanes."

This is in accordance with Section 4.1.1 of DMURS sets out the standards for carriageway widths, stating that for Arterial streets should lie in the range of 2.75m to 3.5m.

Table 4-2 of the Preliminary Design Report, included as part of the Supplementary Information details the existing and proposed lane widths.

Sheets 26, 27, & 28 – Con Colbert Road / St John's Road West (posted speed limit ≤ 60 km/h)

All lane widths are proposed as 3m, in accordance with DMURS and the PDGB, and these widths can be accommodated within the existing available road space.

Sheet 29 – St John's Road West (posted speed limit ≤ 60 km/h)

The lane widths approaching the SCR junction are 3.0m in accordance with DMURS and the PDGB, and these widths can be accommodated within the existing available road space.

iv. EV Charging Points, South Side of St John's Road West

In relation to the submission's assertion that the existing indented parking bays are in private ownership, the NTA note the property register for this location includes the acquisition by Dublin City Council (DCC) from the Minister of Finance on 27th August 1974 of the plot shown below in Figure 2.3.5.8.

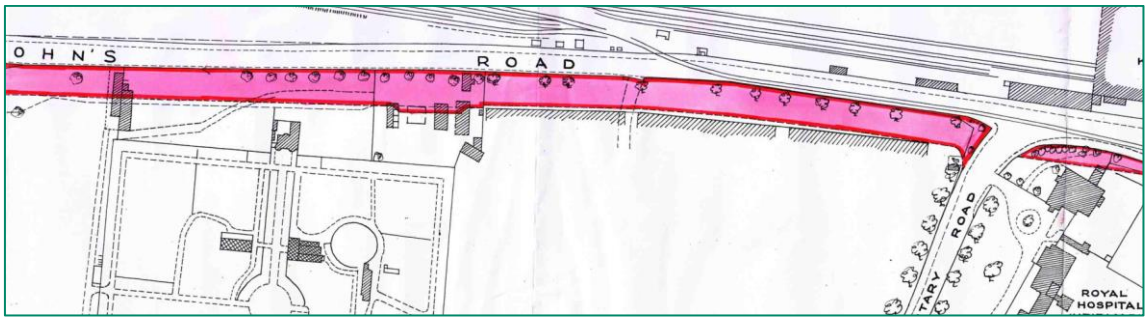


Figure 2.3.5.8: Land acquisition plot

The above confirms that extents of the Proposed Scheme on the south side of St John's Road West at this location are contained within the land acquired by DCC in 1974.

v. Heuston Station

Footway widths

The DCC submission states the footpaths at a number of locations around Heuston Station are extremely narrow. Specifically, in relation to the two bus stops at Heuston Station, the submission states that given the large volume of pedestrians that regularly use this area to enter and exit the station, footpath widths should be maximised, reducing the cycle track & islands.

North East of St John's Road West

It is noted that pedestrians will be able to continue to use the Heuston Station portico arch (which is not included as part of the Proposed Scheme) to continue along the footway or access the proposed bus layby. At this location, the proposed cycle track has been narrowed to 1.5m around the bus stop, in accordance with section 11.1 of the PDGB. This approach has maximised the footway widths at this location, as shown in Figure 2.3.5.9.

Figure 2.3.5.9: Extract of General Arrangement drawing at Heuston Station/ Dr. Steevens' Hospital (Sheet 31) and Image from Google Maps

Western side of the bus stop on south side of St John's Road West

As noted in Section 14.7.6: in the Preliminary Design Report "*The proposed road alignment has been designed to maintain the majority of existing trees, in particular a large Category A tree located at the northwest corner of the existing lawn*". Additionally, the length of the bus layby is constrained by the pedestrian crossing and protected boundary pier at the vehicular entrance to Dr Steevens' Hospital. Operationally it is not possible to shorten the proposed bus layby. This approach has maximised the footway widths at this location, as shown in Figure 2.3.5.10.

The NTA notes DCC's suggestion to relocate the Heritage Lamp post at this location. In this regard the NTA will continue the very positive and constructive liaison with DCC throughout the detailed design and construction process.

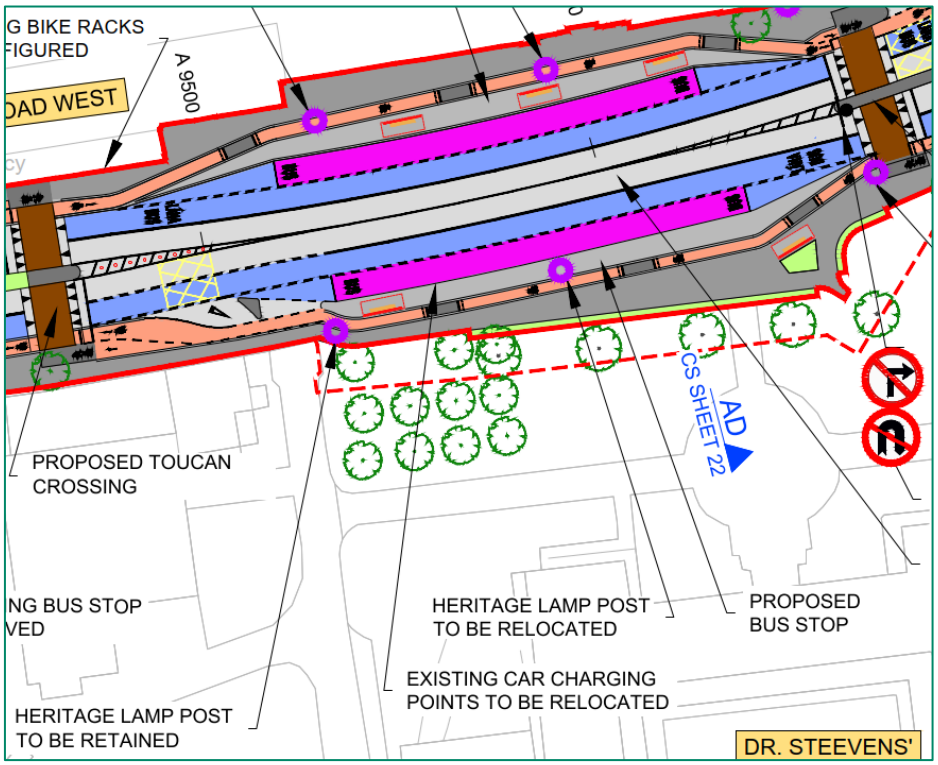


Figure 2.3.5.10: Extract of General Arrangement drawing at Heuston Station/ Dr. Steevens' Hospital (Sheet 31)

Adjacent Guinness Brewery Wall

The proposed footway is a minimum 2.0m wide at this location. Further widening is constrained by the adjacent Guinness Brewery boundary wall, a protected structure [ref Table 16.7 of Chapter 16 Architectural Heritage, Volume 2 EIAR], the Luas station opposite and a tight reverse curve carriageway alignment. The footway widths at this location have been maximised.

Pedestrian Conflict

The DCC submission notes the cycle track cuts through the island at the western side of the junction of St John's Road West and Victoria Quay, suggesting consideration should be given to rerouting the cycle track along the outer edge of the island to avoid conflict with pedestrians on what is a busy route in to and out of the station.

The NTA notes these comments. This is also a key route for cyclists and it gives cyclists an opportunity for a more direct facility that reduces conflict between cyclists and vehicles. Additionally, the crossing point has been set back from the junction to provide a landing buffer area.

vi. *Shared Landing Bus Stop Operation*

As set out in Section 11.1 of Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) of EIAR Chapter 4 Proposed Scheme Description, an island bus stop is the preferred bus stop option where space constraints allow. However, as noted in Section 11.2 of the PDGB, in constrained locations, where insufficient width is available to provide an island bus stop, a shared landing area bus stop arrangement may be considered. This design avoids conflict between cyclists and stopping buses and a 1:20 ramp is provided on the cycle track to raise the cycle track to the level of the footpath/island area. On approach to the shared landing area bus stop, the cycle track is intentionally narrowed and yellow bar markings proposed also to promote a low-speed single file cycling arrangement on approach to the bus stop.

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. At the proposed bus stop location, an island bus stop would result in additional land take, therefore, a shared bus stop landing zone has been adopted so as to avoid landtake on railway or school grounds.

vii. Cycle track on northern side of R112 Lucan Road – Sheet 17.

The submission states the cycle track merges with the footpath on the northern side of the R112 Lucan Road and asks that consideration be given to re-routing the cycle track along the outside of the footpath to reduce the likelihood of pedestrian/ cyclist conflict.

The NTA notes the existing arrangement on the north side of the R112 with a pedestrian priority area / shared area transitioning to a cycle lane adjacent the footway is being retained in the Proposed Scheme at this location.

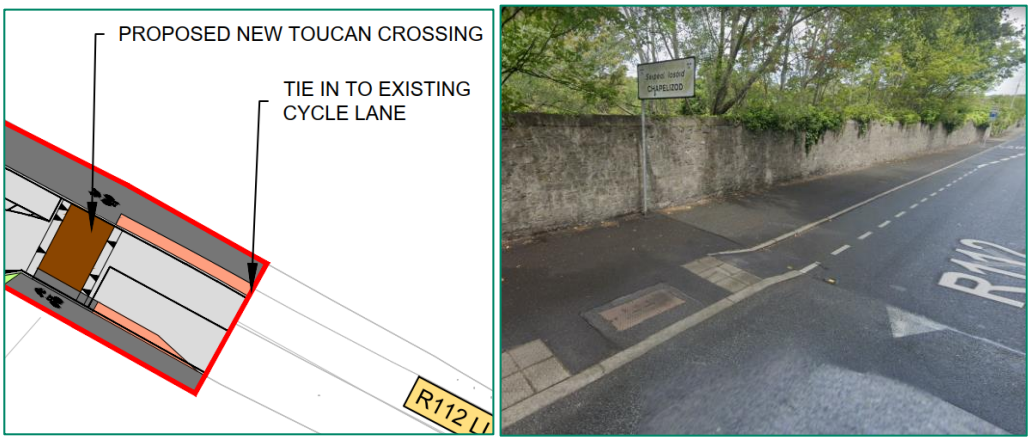


Figure 2.3.5.11: Extract of General Arrangement drawing [Sheet 17] & Google Streetview image of shared area transition to cycle lane at R112 Toucan Crossing

viii. Provision for mobility impaired at Chapelizod Hill Road – Sheet 25

The submission requests clarity on provision for mobility impaired at Chapelizod Hill Road, stating that commuters would need to negotiate a long / steep footpath (Chapelizod Hill Road) to access either of the Bus stops, which would likely also need retrofitting to make it accessible for all.

The response to this item is included in Section 2.2 of this report.

ix. Con Colbert Road Junction – Cycle crossing

The submission suggests segregated cyclists should use the same signalling as general traffic, adding that the advantage of removal of the slip road is unclear.

As part of the Proposed Scheme the cyclist push button is proposed to be supplementary to standard detection for cyclists, i.e. ground or overhead detection, to ensure that if the detection is not functioning cyclists can push a button to trigger a cyclist crossing stage. Given the edge of town location, this will assist to cater for cyclist crossing movements if detection isn't working.

The proposed left turn slip removal is consistent with DMURS to reduce vehicular turning speeds at junctions. Given the proposed controlled cyclists crossing at the junction, removing the left turn slip will improve cyclist safety.

x. The submission recommends a straight through pedestrian crossing at Memorial Road Junction instead of a staggered crossing in accordance with DMURS.

As indicated in the Junction Design Report, Appendix A6.3 of EIAR Volume 4 Part 2 of 4 - a straight crossing was considered at this junction. However, owing to the crossing distance being greater than 19m, a two stage crossing is proposed in accordance with Section 5.6 of Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) of Volume 4 Part 1 of 4. A two stage straight crossing was also considered, but the minimum island width required is 4m, and due to carriageway width constraints, it was not feasible to achieve a 4m wide island. Therefore, a conventional staggered crossing has been proposed at this location.

DCC Section 2.4.7.4 Environmental Protection Division

Observations raised / clarifications sought

i. The submission notes that enclosed drainage channels are not accepted by DCC
ii. The submission recommends that sustainable drainage systems should be incorporated into the Proposed Scheme.
iii. The submission requests pre and post construction surveys of the surface water sewers.
iv. The submission queries if the risk of flooding from the proposed development has been reduced as far as is reasonably practicable.
v. The submission includes 13 detailed comments along the length of the scheme.

Response

i. 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 Volume 2 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 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.

ii. Sustainable Drainage and Permeability

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.

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 2.3.5.12 below which is a reproduction of Table 13.12 in Chapter 13 of Volume 2 of the EIAR. It is noted that no new outfalls are proposed as part of the Proposed Scheme.

Existing Catchment Reference	Water body	Approx. Impermeable Surface Area m²			SuDS Measures Proposed
		Existing	Additional	Percentage change (%)	
6.1	Liffey_170	56,047	2,629	5	OSP, tree pits
6.2	Liffey_180	112,576	2,372	2	OSP. bioretention
6.3	Liffey_180	77,684	1,257	2	OSP, bioretention
6.4	Liffey_180	25,635	87	<1	None required
6.5	Liffey_190	10,840	988	9	OSP. bioretention
6.6	Liffey_190	6,427	0	0	None required
6.7	Liffey_190	10,189	0	0	None required
6.8	Liffey_190	32,172	44	<1	OSP
6.9	Liffey Estuary Upper	22,916	-258	-1	OSP, change from hard standing to permeable grassed median
6.10	Liffey Estuary Upper	35,232	-622	-2	OSP, change from hard standing to permeable grassed median
6.11	Liffey Estuary Upper	3,172	150	5	OSP

Figure 2.3.5.12 Extract from EIAR Chapter 13 detailing change in impermeable surface area and proposed SuDS features *[Note: Filter Drains (FD) Tree Pits (TP) Sealed Drains (SD) Oversized pipes (OSP)]*

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. The NTA will consider the guidance set out in this document in the preparation of the construction-stage documents. The NTA will continue to liaise closely with DCC Drainage Planning, Policy and Development 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.

iii. Surveys of the surface water sewers.

It is intended that necessary additional surveys on the location and condition of surface water infrastructure sewers will be undertaken by the NTA in the preparation of the construction-stage documents.

iv. 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.

v. Drainage Design Comments

1. DCC stated runoff management throughout the scheme should be evaluated on a case by case basis, requesting an explanation of how runoff is managed for bridges.

Response:

The approach to drainage at structures is detailed in Section 9.6 (Drainage at New Bridge Structures) of the Preliminary Design Report in the Supplementary Information.

Runoff from proposed bridges ST01 and ST03 will be drained by linear gullies at the end of the end of the bridge structures. New surface water drainage pipes will convey the flow to the current drainage network. Further detail to be provided at preparation of the construction-stage documents. Bridge widening at ST02 will drained by linear gullies and conveyed to bio-retention areas.

2. DCC stated that while an increase in permeable areas in some sections is welcome, consideration should still be given to SuDS treatment of runoff whenever possible. Nature based solutions should be used throughout rather than oversized pipes.

Response:

Preference has been given to nature based SuDS solutions (tree pits/rain gardens interlinked by filter drains) where practicable. 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.

At the locations referenced by DCC:

Potential Tree pit use:

- (C75 to C125) – There was no space available in the public realm to accommodate the SuDS solution due to the presence of existing underground utilities in the footway and adjacent grassed area. In these situations, the practicable solution was to employ oversized pipes.
- (N125 to N170) – This can be reviewed in the preparation of the construction-stage documents in the context of it being in alignment with and consistent with the EIAR.
- (A7600 to A7775) – Not replacing the trees on north side of road and proposing to use the existing storm drain in the median. This can be reviewed in the preparation of the construction-stage documents in the context of it being in alignment with and consistent with the EIAR.
- (A8775 TO A8850) – Not replacing the trees on north side of road and the gradient across the central median is too steep to accommodate tree pits.
- (A9100 to A9150) – It is not possible to accommodate tree pits due to the presence of existing underground utilities [GNI, EIR, existing storm and foul sewers]. Additionally, tree planting is not proposed on the northern side of the road and the carriageway is in camber and therefore not draining to the median where replacement tree planting is proposed.

Potential Pond/ Swale

- D0 to D75 - An earlier proposal to include SuDS features at this location was subsequently removed from the Proposed Scheme due to the concentration of utilities.

3. DCC stated that while compensation of hardstand with soft stand areas is welcomed, more detail is to be provided in the specific areas to clarify the workings throughout, this should be as noted in the legend with areas, flow control and allowable discharge rates etc. provided.

Response:

This can be reviewed in the preparation of the construction-stage documents in the context of it being in alignment with and consistent with the EIAR.

4. DCC stated drainage design should be sense checked as there appears to be unnecessary elements included such as rodding eyes at C 180.

Response:

This is a rodding point to be used instead of a manhole at this location, as a “near surface drainage solution” CKD or similar is proposed due to the tree root protection zones in this vicinity, so a manhole cannot be used in this section.

5. DCC stated a design check is required around the bridges as some details are missing from the explanation and solution, particularly at B0 to B50 where gullies are described but none are shown on the drawing.

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report.

6. DCC stated that while planting of new trees is welcomed, what is the rational of removing trees in the Hermitage Golf Club are only to replace them with new ones, questioning if all options have been explored for the selection of temporary works areas.

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. However, in simple terms any trees to be removed are necessary for purposes of achieving the Proposed Scheme objectives.

7. DCC stated that the design should be checked around discharge location at F20, Discharge IL for the proposed network is 47.73m where the existing invert level of SWMH1012339 is 48.12m.

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. However, consideration has been given to this comment and the NTA are satisfied that the design model is robust at this location.

8. DCC stated that the design should be checked around the discharge to the existing network at location H35, as it's unclear.

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. The proposed drainage network arrangement is consistent with the drawing legend. The drainage arrangement shows the drainage diversion around the proposed pedestrian bridge structure.

Figure 2.3.5.13 shows the relevant extract from the Proposed Surface Water Drainage Works drawings contained in EIAR Volume 3 Part 2 of 3 Chapter 4.

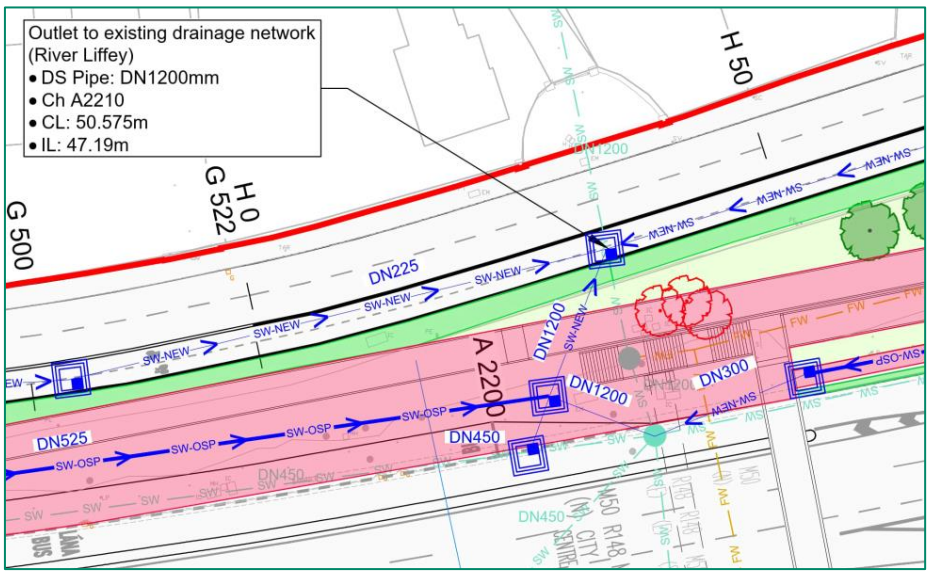


Figure 2.3.5.13: Extract of Proposed Surface Water Drainage Works drawings at the proposed N4 Liffey Valley Pedestrian Bridge (Sheet 8)

9. DCC stated that the design should be checked/ clash detection to be undertaken around the location of proposed pipe networks as clashes can occur as has occurred with DN375 at Ch. A3030, manhole at Ch. L4250 and proposed tree with DN225 at Ch. A8770.

Response:

The first location is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. In relation to the other two locations, the network arrangement may be further refined in the preparation of the construction-stage documents utilising data from detailed utility surveys currently being commissioned. It is noted that manholes are shown oversized for clarity.

10. DCC stated that the hardstand areas to be confirmed as proposed additional hardstand at Ch. A3150 seems to be existing and not proposed which will affect the hardstand calculations

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. However, the area in question is a grass median currently. Refer to Figure 2.3.5.14 below.

Figure 2.3.5.14: Aerial Image at Ch. A3150 [Google maps]

11. DCC stated that the design should be checked around Ch A3700 as the design shows infrastructure outside the redline boundary.

Response:

This area is in the jurisdiction of South Dublin County Council (SDCC), see section 2.3.4 of this report. However, this manhole will be positioned within the proposed works area.

Figure 2.3.5.15 shows the relevant extract from the Proposed Surface Water Drainage Works drawings contained in EIAR Volume 3 Part 2 of 3 Chapter 4.

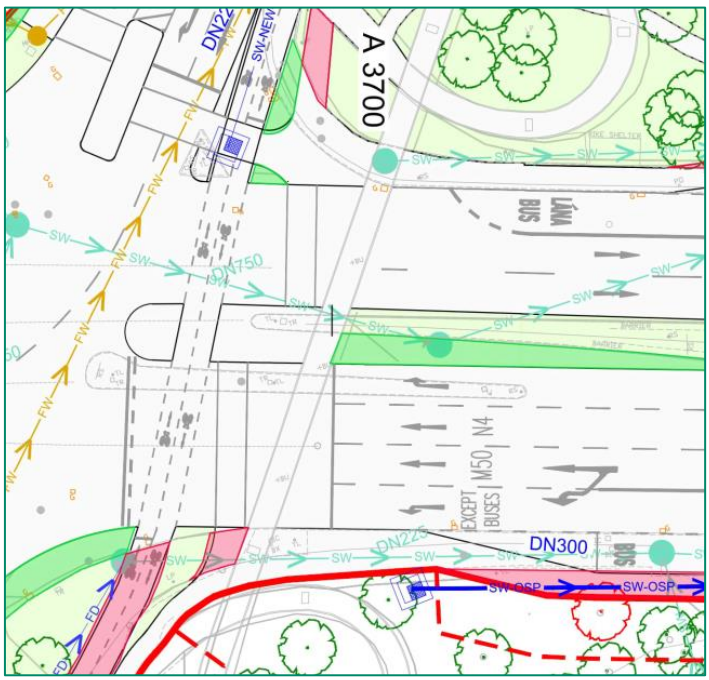


Figure 2.3.5.15: Extract of Proposed Surface Water Drainage Works drawings Ch. A3700 (Sheet 13)

12. DCC requested that the detailed gully and swale design is to be approved where additional required within the DCC boundaries.

Response:

The NTA will continue the very positive and constructive liaison with DCC throughout the preparation of the construction-stage documents and during the construction works.

13. DCC stated that the design should be checked around the provision of new trees on HSE lands which could be potentially protected by cultural and Heritage status, Ch. A9550 at Dr. Steevens' Hospital.

Response:

The NTA notes the DCC comment. Dr. Steevens' Hospital is a protected structure and the potential impacts associated with the Proposed Scheme have been assessed in Chapter 16 (Architectural Heritage), in Volume 2 of the EIAR.

Summary

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Drainage comments provided in the Appendix as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout the preparation of the construction-stage documents and during the construction works.

DCC Section 2.4.7.5 Water Framework Directive

Observations raised / clarifications sought

i. The submission queries the assessment of the impact of the Proposed Scheme on water quality

Response

i. Water Framework Directive/ Water Quality

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.

The design of the Proposed Scheme has taken account of the requirement under the EU Water Framework Directive to protect and improve water quality in all waters, including surface waters. This includes recognition that the surface water drainage network impacted by the Proposed Scheme outfalls to a number of protected waterbodies that are identified as Priority Areas for Action under the Water Framework Directive's 2nd and 3rd River Basin Management Plans, and that 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.

General

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Drainage comments provided in the Appendix as

these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout the preparation of the construction-stage documents and during the construction works.

DCC Section 2.4.8 City Archaeologists Comments

Observations raised / clarifications sought

i. The submission states that the Archaeology Section of DCC concurs with the findings of the archaeological assessment and supports the proposed mitigation measures set out in Section 15.5 of the EIAR.

ii. Further to the recommendations in the EIAR, the submission recommends that monitoring be undertaken in the vicinity of Recorded Monument DU018-029 (House) where road widening is proposed, as well during the removal of a strip of land to the front of the landscaped grounds at the site of Dr. Steevens' Hospital DU18-020 (Hospital).

iii. The submission makes 10 recommendations in Appendix 1.

Response

i. Findings of the archaeological assessment

The NTA acknowledge that DCC's Archaeology Section states that it concurs with the findings of the archaeological assessment in the EIAR and supports the proposed mitigation measures in it.

ii. Monitoring

The NTA notes the recommendation set out in DCC's submission that monitoring be undertaken in the vicinity of the Recorded Monument DU018-029, where it states that road widening is proposed. However, the NTA can confirm that no road widening is proposed at this location.

Section 15.3.3.2 in Chapter 15 (Archaeological and Cultural Heritage), in Volume 2 of the EIAR (and identified on Figure 15.1, sheet 11 of 14 in Volume 3 of the EIAR), states that the site of the house is located beneath the south carriageway of the Chapelizod Bypass.

Section 15.4.3.2.1.2 states that: *"No recorded archaeological sites / monuments will be impacted by this section of the Proposed Scheme. No ground-breaking works are proposed at the site of a 16th century / 17th century house (RMP DU018-029) located beneath the south carriageway of the Chapelizod Bypass."*

The NTA notes the recommendation set out in the DCC Report that monitoring be undertaken during the removal of a strip of land to the front of the landscaped grounds at the site of Dr. Steevens' Hospital DU18-020. Section 15.5.1.5 addresses archaeological monitoring in the scheme section from Con Colbert Road to the City Centre, which includes the area at Dr. Steevens' Hospital: *"Archaeological monitoring (as defined in section 15.5.1) under licence will take place, where any preparatory ground-breaking or ground reduction works are required (as defined in section 15.4.1), at the following locations:*

- *Within the designated ZAP for the Historic City of Dublin (DU018-020) along Con Colbert Road and St John's Road West, which is an area of particularly high archaeological potential associated with Viking, early medieval and medieval activity; and*
- *At the site of the 19th century gas house (DCIHR 18-10-025).*

It is in these areas 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."

iii. Recommendations

The NTA's response to the recommendations included in Appendix 1 is set out in section 2.3.5.6 of this report below.

DCC Section 2.4.9 Conservation Section Comments

Observations raised / clarifications sought

i. The submission welcomes the comprehensive assessment on architectural heritage submitted as part of the EIAR and in general agrees with the findings regarding mitigation and protection measures.

ii. The submission states that a number of policies and provisions, in particular from the Dublin City Development Plan 2022-2028, should be taken into account in the consideration of all proposed routes and their impacts on the architectural and built heritage of the city.

iii. The submission quotes the Dublin City Tree Strategy 2016 to 2020 and recommends that all mature and historic trees are retained and protected as far as is practicably possible and requests 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.

iv. The submission references the Architectural Heritage Protection Guidelines for Planning Authorities 2011.

v. The submission asserts that that the negative visual impact of the proposed bus shelters to the north of Dr Steevens' Hospital and to the southern boundary of the Irish War Memorial Gardens have not been assessed adequately.

vi. The submission states that some elements of the architectural heritage have not been correctly represented or have been incorrectly labelled.

vii. The submission identifies 9 'key impacts' as considered by DCC

viii. Buildings and other non-protected structures and historic landscapes include on the NIAH

ix. Architectural Conservation Areas and Conservation Areas

x. Potential impacts on historic paving and kerbing, historic street furniture, lamp standards and other features

xi. Recommendations

Response

i. Findings of the architectural heritage assessment

The NTA acknowledge that the DCC Conservation Section 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. The NTA note 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.

ii. Dublin City Development Plan

At the time the Lucan to City Centre Core Bus Corridor Scheme was submitted to An Bord Pleanála, the previous Dublin City Development Plan (for the period 2016-2022) was in force. However, both the 2016-2022 plan and the draft (as it was at the time the Lucan scheme was lodged) 2022-2028 plan, were considered in the assessment undertaken in Chapter 16 (Architectural Heritage) in Volume 2 of the EIAR. Section 16.2.4 sets out the relevant guidelines, policy and legislation which informed the assessment and states: *"….The architectural heritage assessment is guided by the provisions of the relevant statutory instruments and relevant guidelines for the protection of the architectural heritage including:*

- *The Dublin City Development plan 2016-2022 (DCC 2016);*
- *The Draft Dublin City Development Plan 2022-2028 (DCC 2021)."*

The DCC report details a number of policies of relevance from the 2022-2028 plan:

- *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.*

As mentioned previously both the 2016-2022 plan and the draft (as it was at the time the Lucan scheme was lodged) 2022-2028 plan, were considered in the assessment undertaken in Chapter 16 (Architectural Heritage) in Volume 2 of the EIAR. Section 16.3.1.2 in Chapter 16 of Volume 2 of the EIAR references Policy CHC2 from the 2016 Development Plan, which dealt with protected structures and is broadly aligned with Policy BHA2 from the 2022 Development Plan.

Section 16.3.1.4.1 and 16.3.1.5 in Chapter 16 of Volume 2 of the EIAR references Policy CHC4 from the 2016 Development Plan, which dealt with development in Conservation Areas and is broadly aligned with Policy BHA7 from the 2022 Development Plan.

With regard to Policy BHA8 and BHA10 relating to demolition or substantial loss of a structure in an Architectural Conservation Area or Conservation Area, it is not considered that the works proposed as part of the scheme will give rise to non-compliance with these policies.

BHA9 addresses enhancement opportunities in Conservation Areas which may include improvement to public spaces and the wider public realm. One of the objectives of the Proposed Scheme as set out in Section 1.2 of Chapter 1 in Volume 2 of the EIAR is: *"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."*

BHA15 relates to Twentieth Century Buildings and Structures to encourage their appropriate development and to ensure their character is not compromised. It is not considered that the works proposed as part of the scheme will give rise to non-compliance with this policy.

Section 16.3.1.10 in Chapter 16 of Volume 2 of the EIAR references Policy CHC15 from the 2016 Development Plan, which dealt with historic ground surfaces and is broadly aligned with Policy BHA18 from the 2022 Development Plan. BHA18 references a specific guidance document – Paving: The Conservation of Historic Ground Surfaces (2015). 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.

BHA24 relates to the reuse and a 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.

Section 16.3.1.2 in Chapter 16 of Volume 2 of the EIAR references Policy CHC9 from the 2016 Development Plan, which dealt with archaeological heritage and is broadly aligned with Policy BHA26 from the 2022 Development Plan. Section 15.5.1 in Chapter 15 in the Volume 2 of the EIAR, sets out the archaeological mitigation which will be implemented, including archaeological monitoring.

The NTA note that in Section 2.5 (Conclusion) of the DCC report with regard to compliance with European, national and local policies and requirements that it states: *"…..Dublin City Council is satisfied that the application generally accords with all such requirements in addition to being consistent with, and supported by, the statutory Dublin City Development Plan 2022-2028."*.

iii.Dublin City Tree Strategy 2016 to 2020.

The Dublin City Tree Strategy 2016 to 2020 is referenced in EIAR Volume 2 Main Chapters, Chapter 17 Landscape (Townscape) and Visual (in Section 17.2.2.2 and 17.2.3).

The Conservation section says that where these 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 4.6.12.4 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 4.6.12.5 describes the typical planting typologies that will be employed on the Proposed Scheme. With regard to new street trees, in Section 4.6.12.5.1, 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 4.6.12.5.2 states: *"…..Elsewhere along the Proposed Scheme there are a range of existing mature and immature 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…"*

iv. Architectural Heritage Protection Guidelines for Planning Authorities 2011

The DCC report references the Architectural Heritage Protection Guidelines for Planning Authorities 2011. 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.

The DCC report references the following guidelines - Paving: The Conservation of Historic Ground Surfaces (2015). 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 DCC report 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.

The NTA acknowledge that the DCC Conservation Section 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. The NTA note 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.

v. Assessment of Visual Impact of Proposed Bus Shelters at Dr. Steevens' Hospital and Irish War Memorial Gardens

The Conservation Section notes that the proposed truncation of the garden to the north of Dr. Steevens' Hospital to facilitate the scheme will have a permanent negative impact on the character of this nationally significant building.

Section 16.4.3.3 of Chapter 16 assess the works that are required in the vicinity of Dr. Steevens' Hospital to facilitate the construction of the Proposed Scheme:

"….The Proposed Scheme includes the provision of a bus waiting area on St John's Road West, between the Dr Steeven's Hospital and the Liffey Quays Conservation Areas. No historic fabric will be directly impacted but one existing tree will be removed from the grounds of the Hospital. The boundary of the garden to the north of Dr Steevens' Hospital will be altered to expand the public realm to respond to the architectural context, and to accommodate waiting passengers. Taking account of the sensitivity of the Royal Hospital Kilmainham and Dr. Steeven's Hospital Conservation Areas, the potential Construction Phase impact is Negative, Significant and Temporary…"

Section 16.4.4.3.2 addresses the operational phase impacts on the Dr. Steevens' Hospital Conservation Area:

"The Dr Steevens' Hospital Conservation Area is of High sensitivity. The Proposed Scheme includes the provision of a bus lay-by on St John's Road West, between the Dr Steeven's Hospital and the Liffey Quays Conservation Areas. The alterations to the landscaping design of the expanded the public realm has been designed to respond to the elevation of Dr Steeven's Hospital, and to the existing geometries on the site, including the central doorway and the symmetrical breakfronts in addition to accommodating waiting passengers. It is anticipated that they will have a Positive impact, the magnitude of which is Medium. The potential Operational Phase Impact on the Dr Steevens' Hospital Conservation Area, is Positive, Moderate and Long-Term."

The Conservation Section notes the negative visual impact of the proposed bus shelters to the north of Dr. Steevens' Hospital and to the southern boundary of the Irish War Memorial Gardens and states that these elements have not been adequately assessed within the impact assessment.

As stated in the previous response above the operational impact of the Proposed Scheme is considered in Section 16.4.3.3, which acknowledges the provision of a bus lay-by. Taking account of the alterations to the landscaping design and public realm, the potential Operational Phase Impact on the Dr. Steevens' Hospital Conservation Area, is Positive, Moderate and Long-Term.

In section 17.4.1.2 of Chapter 17 in Volume 2 of the EIAR, it sets out the design changes which have been incorporated into the Proposed Scheme design which have led to a reduction in predicted landscape and visual effects. With regard to Dr. Steevens' Hospital it states:

"….A landscaping and urban realm proposal has been developed for the proposed bus layby on the south side of St John's Road West in recognition of the importance of the facade of Dr. Steevens' Hospital. Key considerations were the presence of a mature tree at the western end of the hospital lawn and the important view from Heuston Station of the northern façade of the hospital. An alternative arrangement was developed with a new two bay bus lay by in front of the hospital and the existing single in-lane bus stop in front of the Revenue Commissioners building retained which allows retention of the tree. The paving patterns in front of the hospital were designed to follow the building lines to reinforce the central entrance. The proposed glass bus shelter is to be located discretely to the side, so as not to obstruct the approach to or the views of the historic doorway."

Section 17.4.4.1.3 addresses the impact on the townscape and streetscape character during the operational phase on the R148 Con Colbert Road to City Centre – St. John's Road West. It acknowledges that: *"…The most notable impacts will be at Dr. Steevens' Hospital where changes include reduction of existing lawn / landscape area for provision of a bus stop and an extension of the roadside footpath into a public paved area accommodating a cycle track and bus shelter. Although there will be an impact on the setting of the hospital, the setback boundary and paved area will be aligned to the geometry of the hospital grounds layout, will include a paved stone feature aligned to the entrance path. There will also be provision of new trees within the hospital's grounds to consolidate the new boundary…."*

Section 17.4.4.2.5 addresses amenity designations and states: *"…There will be notable changes to the open space fronting Dr. Steevens' Hospital, which is directly impacted by the introduction of new built elements such as bus shelters, set back of boundaries, loss of plantings and overall area during the Construction Phase. There will be some replacement tree and shrub / hedge planting to and some public realm improvements to the setting. The sensitivity is medium / high and the magnitude of change is high. The potential townscape / streetscape and visual effect of the Operational Phase on the open space at Dr. Steevens' Hospital is assessed to be Negative, Moderate / Significant and Short-Term becoming Neutral, Moderate, Long-Term."*

Table 17.11 in Chapter 17 provides a summary of the predicted operational phase visual impacts (at 15 years post-construction). With respect to the Proposed Scheme in the vicinity of Dr. Steevens' Hospital, the townscape sensitivity is medium to very high, the magnitude of change is from medium to high and the predicted impact is Neutral, Moderate and Long-Term.

With regard to the Irish War Memorial Gardens, it is acknowledged that it is a protected structure, for example in Section 16.3 of Chapter 16 and Table 17.6 in Chapter 17 of Volume 2 of the EIAR.

Section 16.3.1.5.1 in Chapter 16 states that: *"…The War Memorial Gardens are a Protected Structure of National importance and High sensitivity. No other features of architectural heritage interest were identified which fall within both the Conservation Area and study area boundaries."*

In Section 16.4.3.1 addresses potential impacts to protected structures which includes the Irish War Memorial Gardens, it states that: *"… Indirect Construction Phase impacts are anticipated*

where there is potential for damage to the fabric or boundaries and where an adverse visual impact is anticipated on the settings of these protected structures during construction. The magnitude of impact is Medium. Due to the sensitivity of the structures, the potential Construction Phase impact is Negative, Significant and Temporary."

Following the implementation of the mitigation outlined in Section 16.5.1.1, the predicted post mitigation impact is categorised as Negative, Not Significant and Temporary. No significant impact has been predicted in the operational phase.

Section 17.4.4.1.3 addresses the impact on the townscape and streetscape character during the operational phase on the R148 Con Colbert Road to City Centre – St. John's Road West. It acknowledges that: *"… The operation of the Proposed Scheme includes changes along the landscape corridor of the River Liffey including the adjacent War Memorial Gardens and Royal Hospital Kilmainham, however, the amenities will not be directly impacted. There will be improvements to the setting of these amenities which will lead to positive effects in the long-term.*

vi. Corrections identified to Labelling/Representation in Documents & Maps Submitted

The Conservation Section states that a feature has been used twice on Figure 16.1 (Sheet 12 of 14) in Volume 3 of the EIAR.

CBC006BTH013 is labelled twice on Sheet 16 of Figure 16.1 both of which relate to the railway at Con Colbert Road, St John's West (Industrial Heritage Site). This industrial heritage site is of Regional and Medium sensitivity which will not be directly impacted by the Proposed Scheme.

vii. Key Impacts

Protected Structures (& proposed) and their setting

a) The Conservation Section notes that several protected structures are included on the subject map sheets and that these structures are located on or adjacent to the route boundary. The submission requests that all protected structures in close proximity to the construction are to be adequately protected and all proximate works are to be supervised by a conservation professional.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (protected structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

b) The Conservation Section notes some highly significant and sensitive protected structures are located on or adjacent to the proposed bus corridor (including Irish War Memorial Gardens, Dr. Steevens' Hospital, Heuston Station and Royal Hospital Kilmainham). The Conservation Section state that the importance rating of each protected structure has been accurately noted with Chapter 16 (Architectural Heritage).

The NTA acknowledges that the Conservation Section says that the importance rating of each protected structure has been accurately noted with Chapter 16.

c) The Conservation Section notes that a cycle track and bus lane will run alongside the southern boundary of the Irish War Memorial Gardens and considers that the bus shelter is located too close to the entrance gates and will impact visually on the southern boundary of the designed landscape. They state that the significance of the impact has not been adequately commented on within the visual impact assessment of the EIAR and go on to say that an alternative location to the east should be considered for the shelter (and the design of the shelter carefully considered).

The response to the adequacy of the visual impact assessment is covered in sub-item (v) above.

The response in respect of the location of the bus shelter is provided below.

Overview of Bus Stop Assessment Methodology

Section 4.6.4.5 of Chapter 4 Proposed Scheme Description EIAR Volume 2 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."

Bus Stop Review Analysis

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 (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 analysis at Islandbridge/ Memorial Gardens gate [Bus stop 7435] is provided below. Figure 2.3.5.16 shows the relevant extract from the General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.

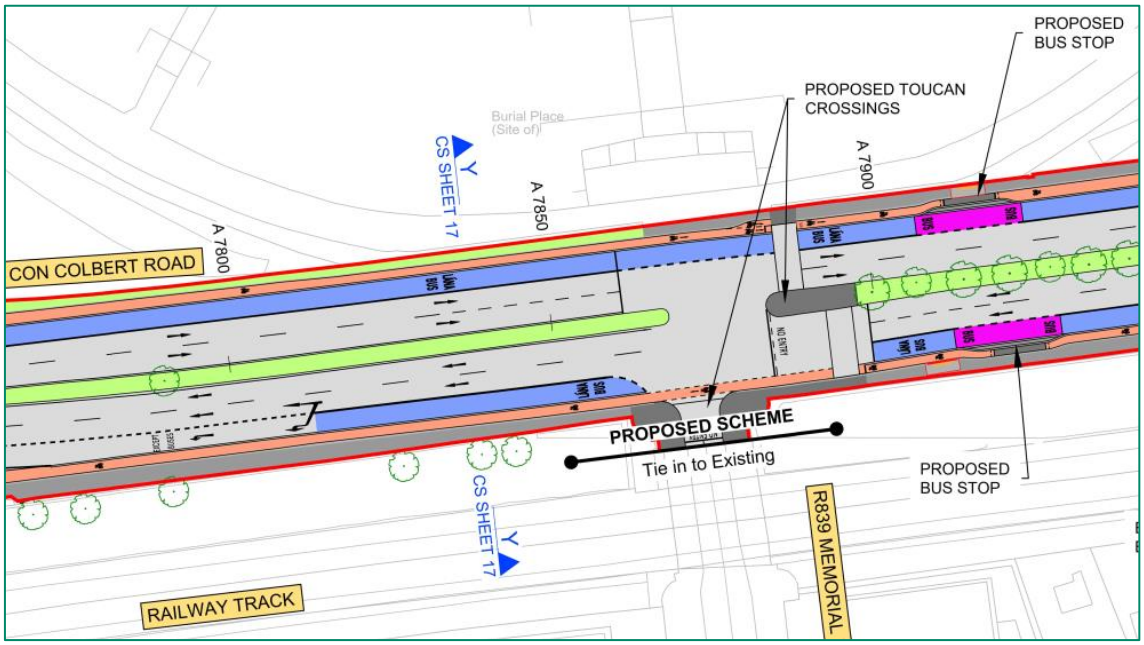


Figure 2.3.5.16: Extract of General Arrangement drawings at the Memorial Gardens Bus Stop [Sheet 26]

The existing inbound bus stop at Islandbridge/ Memorial Gardens gate is to be retained and proposed to be relocated closer to the junction for the following reasons:

- It is proposed to be located immediately adjacent to a controlled pedestrian crossing, &
- It is proposed to be located near the entrance to memorial gardens.

A layby bus stop was considered at this location but due to the existing land constraints associated with the existing Memorial Gardens and boundary wall, a layby at this location was deemed not feasible.

Section 17.4.4.1.3 in Chapter 17 of Volume 2 of the EIAR addresses the impact on the townscape and streetscape character during the operational phase on the R148 Con Colbert Road to City Centre – St. John's Road West. It acknowledges that: *"… The operation of the Proposed Scheme includes changes along the landscape corridor of the River Liffey including the adjacent War Memorial Gardens and Royal Hospital Kilmainham, however, the amenities will not be directly impacted. There will be improvements to the setting of these amenities which will lead to positive effects in the long-term.*

The Conservation Section states that there must be adequate protection of the formal entrance gates and railings of the Irish War Memorial Gardens on the west side of the South Circular Road located adjacent to the development site during the construction stage.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (protected structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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) The Conservation Section notes that Clancy Barracks is set back from the roadway and will be neutrally impacted.

The NTA notes what the Conservation Section says with regard to Clancy Barracks. There will be no direct impact on Clancy Barracks from the Proposed Scheme.

e) The Conservation Section notes that the Proposed Scheme will pass alongside the northern boundary of the grounds of the Royal Hospital Kilmainham and states that the walled garden/garden building will be neutrally impacted.

The NTA notes what the Conservation Section says with regard to Royal Hospital Kilmainham. There will be no direct impact on the Royal Hospital Kilmainham from the Proposed Scheme.

f) The Conservation Section notes that the Proposed Scheme will pass alongside enclosed graveyards (which are bounded by random-coursed stone walls) at the northwest corner of the grounds of the Royal Hospital Kilmainham. The Conservation section states that the boundary walls must be protected during the construction phase.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (protected structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

g) The Conservation Section notes that the Proposed Scheme will pass directly south of Heuston Station and that adequate protection must be provided to the building fabric of the south elevation to mitigate potential physical damage during development works.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (protected structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."

h) The Conservation Section states that the impacts on the Dr. Steevens' Hospital have not been adequately assessed within the impact assessment. They also state that the bus shelter proposed to the north of the façade of Dr. Steevens' Hospital should not be located in that position.

Refer to Section c) above for an overview of the bus stop assessment methodology.

Bus Stop Review Analysis

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 analysis summarises that the existing outbound bus stop at Dr. Steevens' Hospital Bus Stop [Bus stop 2637] is proposed to be relocated east to a new location to allow for a double bus stop and layby to be introduced and to be situated adjacent to a pedestrian crossing. A double stop layby is proposed due to the high volume of services.

The analysis also notes that the existing in-line bus stop caters for 3 buses and that it was not feasible to accommodate a triple stop in front of the Dr. Steevens' Hospital due to the constraint of an existing mature tree. Therefore, the existing inline stop has been retained to supplement the proposed double layby.

Section 3.4.4.7 of EIAR Chapter 3 Reasonable Alternatives expands on the summary of the bus stop analysis by providing the following detailed commentary on the design alternatives considered at this location.

"The draft Proposed Route Option presented at the second round of public consultation included the existing bus stops on St John's Road West opposite the southern entrance to Heuston Station retained largely in their existing format. Subsequent to this, as part of the development of design proposals of the Proposed Scheme, the size and layout of all bus stops along the corridor were assessed in terms of future forecast bus services. With Heuston Station being an important public transport interchange serving cross country rail services, Luas services and the Proposed Scheme, it was determined that a significant improvement was required to the existing bus stop provision. The bus stop assessment concluded that in order to serve adequately the mixture of Dublin bus services and regional bus services that use the corridor the layout of the bus stops should incorporate three bus bays situated in a layby.

A number of design alternatives were considered to satisfy this requirement. In the inbound direction, space was available in the area of the existing bus stop by reallocating the existing road space. However, in the outbound direction there was no such existing road space available and alternatives were explored involving utilising the front lawned area of the Health Service Executive's Dr Steevens' Hospital. Key considerations were the presence of a mature tree at the western end of the hospital lawn and the important view from Heuston Station of the northern façade of the hospital. The provision of a three bay layby bus stop arrangement could not be achieved without the loss of this tree. Therefore, an alternative arrangement was developed with a new two bay bus lay by in front of the hospital and the existing single in-lane bus stop in front of the Revenue Commissioners building retained.

A landscaping and urban realm proposal was developed for the new bus layby in recognition of the importance of the facade of Dr. Steevens' Hospital. The paving lines were designed to follow the building lines to reinforce the central entrance. The bus shelter was located to the side of the central entrance, so as not to obstruct the approach to or the views of the historic doorway. It was concluded that while the alternative proposals would have an adverse impact on Dr Steevens' hospital, the operational needs at this location were important enough to justify the impact, recognising that the impact of the bus stops had been minimised as far as possible by a reduction in scale, and by the provision of a sensitive landscaping proposal. Therefore, the alternative bus stop arrangements has been incorporated into the Proposed Scheme."

Furthermore, it is noted that following the 3rd round of public consultation, in order to minimise the extent of land acquisition from the front of Dr Steevens' Hospital the design of the road alignment was modified to remove the existing median in St John's Road West, thereby allowing the proposed bus layby to be moved further north away from the building.

The following Figures illustrate the above mentioned points.

- Figure 2.3.5.17 shows the relevant extract from the general arrangement layouts presented at the 3rd round of public consultation, contained in the Public Consultation Report provided in the Supplement Information.
- Figure 2.3.5.18 shows the relevant extract from the General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.
- Figure 2.3.5.19 shows the relevant extract from the Landscape General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.
- Figure 2.3.5.20 shows View 07 'as existing view' of Dr Steevens' Hospital as shown in Figure 17.2 Photomontages contained in EIAR Volume 3 Part 3 of 3 Chapter 4.
- Figure 2.3.5.21. shows View 07 'as proposed view' of Dr Steevens' Hospital as shown in Figure 17.2 Photomontages contained in EIAR Volume 3 Part 3 of 3 Chapter 4.

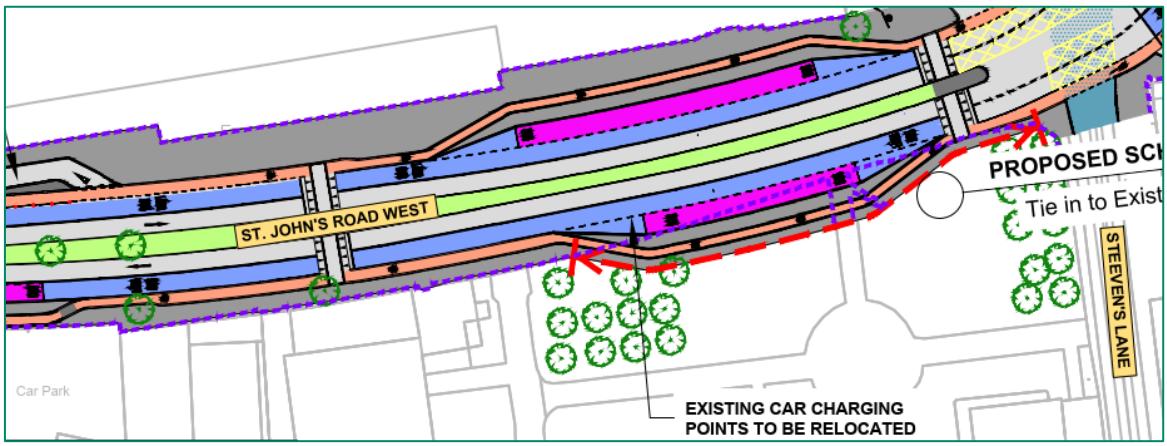


Figure 2.3.5.17 Extract from the general arrangement layouts presented at the 3rd round of public consultation

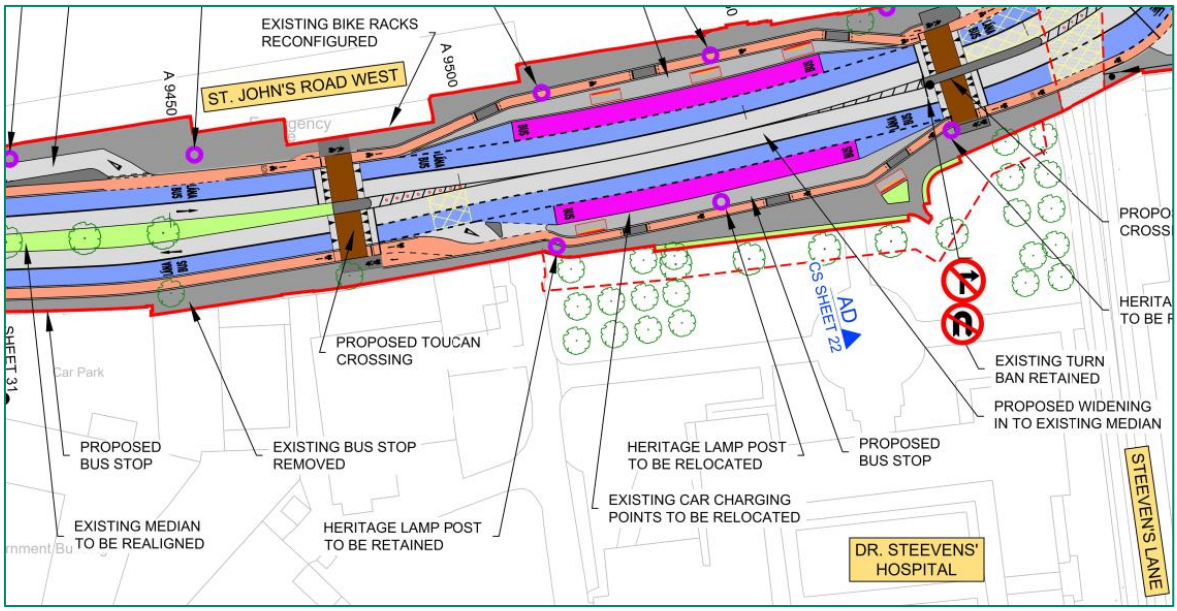


Figure 2.3.5.18 Extract from the General Arrangement drawings [Sheet 31]

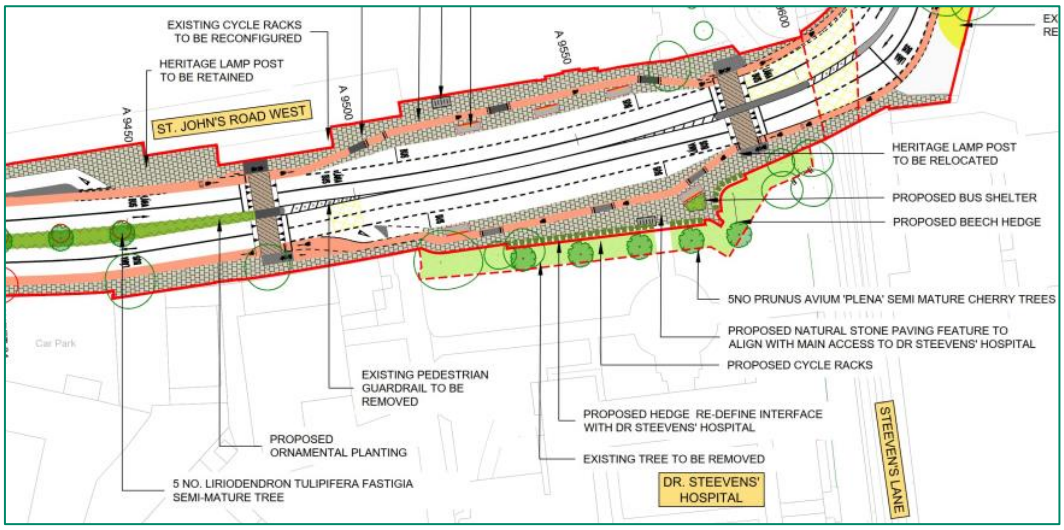


Figure 2.3.5.19: extract from the Landscape General Arrangement drawings [Sheet 31]

Figure 2.3.5.20 View 07: As existing view of Dr Steevens' Hospital

Figure 2.3.5.21: View 07: As proposed view of Dr Steevens' Hospital

Section 17.5.2.1 of EIAR Chapter 17 Landscape and Visual provides the following commentary in respect of the above photomontages.

"17.5.2.1.7 Photomontage View 07: View from North across St. John's Road towards north elevation of Dr. Steevens' Hospital

View 07: As Existing Figure 17.2.7.1 shows the proposed view from St John's Road West at Heuston Station looking across the road to the south. The focus of the view is Dr. Steevens' Hospital, a protected structure. Landscaped areas with formal arrangements of lawns, trees and shrubs, visible to the front of the building have a positive contribution to the setting of the building and to the overall streetscape. A chain and post boundary separates this area from the roadside footpath. An ornamented lighting column can be seen to the southern edge of the road to the left of the view. In the foreground is the road and concrete central reservation with galvanised pedestrian guardrails which detract from the visual amenity of the view. The character is of a historic landmark building within a spacious landscape setting adjacent to a substantial urban road corridor.

View 07: As Proposed Figure 17.2.7.2 shows the proposed view from St John's Road West looking across the road to the south. The view shows a change to the road layout with a movement of the central median, introduction of two new bus stops and a new cycle track and paved area in the foreground. Land is acquisitioned from the Dr Steevens' Hospital grounds to accommodate the new bus stop on the southern side of the road and a new bus shelter, hedge and tree planting is introduced in front of the building. The bus shelter slightly obscures the historic hospital building but this is minimised by the glass panel construction. The central median has been removed. There is slight change in the character of the view and a positive impact on visual amenity through the removal of the central median with the safety guardrail. The new tree planting helps to further 'green' the streetscape, however, it should be noted that the proposed trees are shown without leaf with minimal screening of the historic hospital building. The screening effect will increase outside of the winter period reducing visibility of the façade which is a valued feature in the streetscape."

The operational impact of the Proposed Scheme on architectural heritage is considered in Section 16.4.3.3 of Chapter 16 in Volume 2 of the EIAR, which acknowledges the provision of a bus lay-by. Taking account of the alterations to the landscaping design and public realm, the potential Operational Phase Impact on the Dr. Steevens' Hospital Conservation Area, is Positive, Moderate and Long-Term.

In section 17.4.1.2 of Chapter 17 in Volume 2 of the EIAR, it sets out the design changes which have been incorporated into the Proposed Scheme design which have led to a reduction in predicted landscape and visual effects. With regard to Dr. Steevens' Hospital it states:

"….A landscaping and urban realm proposal has been developed for the proposed bus layby on the south side of St John's Road West in recognition of the importance of the facade of Dr. Steevens' Hospital. Key considerations were the presence of a mature tree at the western end of the hospital lawn and the important view from Heuston Station of the northern façade of the hospital. An alternative arrangement was developed with a new two bay bus lay by in front of the hospital and the existing single in-lane bus stop in front of the Revenue Commissioners building retained which allows retention of the tree. The paving patterns in front of the hospital were designed to follow the building lines to reinforce the central entrance. The proposed glass bus shelter is to be located discretely to the side, so as not to obstruct the approach to or the views of the historic doorway."

Section 17.4.4.1.3 addresses the impact on the townscape and streetscape character during the operational phase on the R148 Con Colbert Road to City Centre – St. John's Road West. It acknowledges that: *"…The most notable impacts will be at Dr. Steevens' Hospital where changes include reduction of existing lawn / landscape area for provision of a bus stop and an extension of the roadside footpath into a public paved area accommodating a cycle track and bus shelter. Although there will be an impact on the setting of the hospital, the setback boundary and paved area will be aligned to the geometry of the hospital grounds layout, will include a paved stone feature aligned to the entrance path. There will also be provision of new trees within the hospital's grounds to consolidate the new boundary…."*

Section 17.4.4.2.5 addresses amenity designations and states: *"…There will be notable changes to the open space fronting Dr. Steevens' Hospital, which is directly impacted by the introduction of new built elements such as bus shelters, set back of boundaries, loss of plantings and overall area during the Construction Phase. There will be some replacement tree and shrub / hedge planting*

to and some public realm improvements to the setting. The sensitivity is medium / high and the magnitude of change is high. The potential townscape / streetscape and visual effect of the Operational Phase on the open space at Dr. Steevens' Hospital is assessed to be Negative, Moderate / Significant and Short-Term becoming Neutral, Moderate, Long-Term."

Table 17.11 in Chapter 17 provides a summary of the predicted operational phase visual impacts (at 15 years post-construction). With respect to the Proposed Scheme in the vicinity of Dr. Steevens' Hospital, the townscape sensitivity is medium to very high, the magnitude of change is from medium to high and the predicted impact is Neutral, Moderate and Long-Term.

i) The Conservation Section notes that St. James' Gate Brewery lies to the east of the Proposed Scheme and that adequate protection must be provided to the sites western boundary wall to mitigate potential physical damage during development works.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (protected structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

viii Buildings and other non-protected structures and historic landscapes include on the NIAH

a. The Conservation Section states that NIAH 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 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (NIAH structures): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

b. The Conservation Section states the front boundary railings of 1-4 St. Laurence's Cottages are to be adequately protected.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (Architectural Conservation Areas): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

c. The Conservation Section notes that adequate protection of the ironwork railings of 1-4 St. Laurence's Cottages must be provided.

Refer to response at (b) above.

d. The Conservation Section notes the development of ramps and steps directly to the south of 1-4 St. Laurence's Cottages and that the removal of trees and construction of steps and ramps will permanently alter the setting of the terrace with Chapelizod Architectural Conservation Area (ACA).

Section 16.5.1.2 in Chapter 16 addresses the impact on ACAs. The predicted post mitigation impact in architectural heritage terms is Negative, Not Significant and Temporary.

Section 17.4.3.2.1 (at page 25) of Chapter 17 in Volume 2 of the EIAR discusses the construction stage impact of the proposed development on ACAs, noting that the "*potential townscape / streetscape and visual effect of the Construction Phase on the ACA is assessed to be Negative, Significant and Temporary / Short-Term.*"

While acknowledging localised changes in this sensitive area, Section 17.4.4.2.1 (at page 32) of Chapter 17 in Volume 2 of the EIAR notes that the "*potential townscape / streetscape and visual effect of the Operational Phase on the Conservation Areas is assessed to be Negative, Moderate and Short-Term becoming Neutral, Moderate, Long-Term.*"

Table 17.10 in Section 17.6 (at page 48), of Chapter 17 in Volume 2 of the EIAR assesses that following mitigation / replanting measures in the area the residual impact on the ACA will be Negative, Slight / Moderate and Long-Term.

e. The Conservation Section states that the cast-iron post box (NIAH 50080037) should be relocated to a suitable position outside of Heuston Station and that a method statement for removal, storage and protection, moving and reinstallation of the post box must be prepared by a conservation professional.

Text Section 16.5.1.7.1 in Chapter 16 sets out the mitigation that will be implemented with regard to post boxes which includes NIAH 50080037 (also identified as CBC0006PB003). The following mitigation will be implemented: *"….Mitigation is the recording of the post boxes in position prior to the works, labelling the affected fabric prior to their careful dismantling and removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. The works to the historic fabric shall be carried out in accordance with the methodology provided in Appendix A16.3….".*

ix. Architectural Conservation Areas and Conservation Areas

a. The Conservation Section notes the development of ramps and steps will require the removal of trees and construction of steps and ramps will permanently alter the setting of the terrace with Chapelizod Architectural Conservation Area (ACA). They say that temporary landtake during construction will impact the southwest boundary of the ACA.

Section 16.5.1.2 in Chapter 16 addresses the impact on ACAs. The predicted post mitigation impact in architectural heritage terms is Negative, Not Significant and Temporary.
Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (Architectural Conservation Areas): *"The proposed mitigation is the recording, protection and monitoring of the sensitive fabric 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."*

b. The Conservation Section states that the widening of road bridge may have direct physical of vibrational impacts on the terraced houses of Chapelizod Hill Road if adequate protect is not provided.

Section 9.4.3.3 in Chapter 9 in Volume 2 of the EIAR provides an assessment of potential construction vibration impacts during construction activities associated with the scheme.
It acknowledges that vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.11 in Chapter 9. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.11 of Chapter 9.

Section 9.5.1.2 addresses construction phase vibration mitigation and states: *"On review of the likely vibration levels associated with construction activities, construction activities along the Proposed Scheme will not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings. Vibration from construction activities will be limited to the values set out in Table 9.11 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.11."*

Table 9.44 in Chapter 9 provides a summary of the predicted construction phase noise and vibration impacts following the implementation of mitigation. Predicted vibration impacts from activities such as bored piling or ground-breaking activities within 10m of occupied residential buildings are predicted to range from negative, imperceptible to not significant and temporary to negative slight and temporary.

c. The Conservation Section notes that the Chapelizod Bypass route runs along the southwest boundary of the Liffey Valley Conservation Area lying north of the Chapelizod Bypass and that Chapelizod ACA, Irish War Memorial Gardens, Dr. Steevens' Hospital, Heuston Station and Royal Hospital Kilmainham lie within the conservation area.

The NTA notes this point. The potential impact on Conservation Areas is considered in Chapters 16 and 17 in Volume 2 of the EIAR.

x Potential impacts on historic paving and kerbing, historic street furniture, lamp standards and other features

The Conservation Section states that details of the proposed relocation of historic lamp posts must be provided and that the supervision of the work by a conservation professional will be required.

Section 22.14 in Chapter 22 in Volume 2 of the EIAR summarises the mitigation which will be implemented by the appointed contractor with regard to architectural heritage features (Lamp posts): *"The proposed mitigation is the recording of the lamp posts in position prior to the works, labelling the affected fabric prior to their careful dismantling and 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 of the lamp post. 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 Conservation Section makes the same points with respect to the relocation of a cast-iron post-box (NIAH 50080037) located south of Heuston Station.

Section 16.5.1.7.1 in Chapter 16 sets out the mitigation that will be implemented with regard to post boxes which includes NIAH 50080037 (also identified as CBC0006PB003). The following mitigation will be implemented: *"….Mitigation is the recording of the post boxes in position prior to the works, labelling the affected fabric prior to their careful dismantling and removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. The works to the historic fabric shall be carried out in accordance with the methodology provided in Appendix A16.3…."*.

The Conservation Section notes the presence of cast-iron electrical cabinets at St. John's Road West and Dr. Steevens' Hospital and that there is the potential for damage during the development of the route. They say that supervision of the work by a conservation professional will be required.

Street furniture such as the cast-iron electrical cabinets will be subject to mitigation in the form of recording, protection and monitoring prior to and during the Construction Phase in accordance with the methodology provided in Appendix A.16.3.
The Conservation Section states that temporary and permanent landtake for ramps and steps will require the removal of trees and planting on the Chapelizod Bypass embankments.

Table 17.10 in Section 17.6 (at page 48), of Chapter 17 in Volume 2 of the EIAR acknowledges that following mitigation / replanting, the removal of trees and vegetation will have residual Negative, Slight / Moderate and Long-Term impact on area (ACA).

The Conservation section notes boundary treatments shall be reinstated to match existing, but goes on to say pending agreement on more detailed design with the Planning Authority and having regard to the provisions of the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the relevant DHLGH Advice Series publications.

Section 5.5.2.1 addresses boundary treatment. It states that: *"….Liaison with impacted landowners will be carried out in advance of commencement of boundary works to properties…."* and also that: *"…Existing boundary walls or fencing being relocated will be constructed to match the existing conditions, unless otherwise agreed…."*
In relation to having regard to the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the relevant DHLGH Advice Series publications, Section 16.5.1 of Chapter 16 states: *"Proposed mitigation measures for architectural heritage features are outlined below and detailed in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. The methodology has been prepared in accordance with the Architectural Heritage Protection: Guidelines for Planning Authorities (DEHLG 2011) and Paving: the conservation of historic ground surfaces (McLoughlin, DAHG 2017)…..".*

The Conservation section requests that where cycleways are in close proximity to protected structures and within ACAs that an alternative high quality surface in lieu of red tarmacadam is provided.

The NTA note this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included in Appendix O of the Preliminary Design Report in the Supplementary Information 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.

Utilities and traffic signage

The Conservation Section says that careful consideration shall be given to the siting of associated utilities and traffic management signage in relation to protected structures and Conservation Areas, historic paving and street furniture and they recommend rationalisation of all signage across all 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.

Mitigation measures

The Conservation Section states that mitigation is required to mitigate visual impact of bus stops/shelters/information post sited near or fronting protected structures and ACAs. They also say that new kerbing/paving associated with bus stops etc should be of an appropriate material and colour, particularly where adjacent to historic paving/kerbing that is in situ.

Palette of Materials

Please refer to response to Point 4. DCC Section 2.4.10 *City Architects Division Comments* immediately following this section.

Bus Shelters

Please refer to response to Point 2. DCC Section 2.4.10 *City Architects Division Comments* immediately following this section.

Further, a comprehensive review of existing bus stops along the route of the Proposed Scheme has been carried out and is documented in Appendix H of the Preliminary Design Report contained in the Supplementary Information. Refer to Chapter 4 in Volume 2 of the EIAR (Section 4.5) for the location of bus stops.

xi Conservation – Recommendations

The NTA's response to the recommendations included in Appendix 1 is set out in section 2.3.5.6 of this report below.

DCC Section 2.4.10 City Architects Division Comments

Observations raised / clarifications sought

On page 36 of the DCC submission, the City Architects Division welcomed 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.

The City Architects Division 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 9 specific elements. These are summarised and responded to below.

1. Local Public Realm Improvement Schemes

The submission makes reference to six locations of images of proposed public realm locations. However, the locations are not along the route of the Proposed Scheme and appear to relate to another project. As such the NTA is unable to make a response to the queries raised.

2. Bus Shelter Design

DCC note 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 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 4.14.6 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 2.3.5.22 below provides an example image of the preferred full end panel shelter arrangement.

Figure 2.3.5.22: Standard 3 Bay Reliance Mark Shelter with full width advertising panel

Section 4.14.6 of the Preliminary Design Report goes on to state that: *"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 in the following sections.*

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 2.3.5.23 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."

Figure 2.3.5.23: Example of a 3-Bay Reliance Cantilever Shelter with full width roof and half end panels (source: JC Decaux)

"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 2.3.5.24: Example of a 3-Bay Reliance Cantilever shelter with a narrow roof configuration with and without half end

The provision of bus shelters in proximity to buildings of architectural significance, has been assessed in EIAR Volume 2, Chapter 16 Architectural Heritage. Within Section 16.4.4.1 two locations were identified where the Proposed Scheme will have an indirect visual impact on a Protected Structure during the Operational Phase and one of these is located within DCC's administrative area as follows.

"At Dr Steevens' Hospital (DU018-020341), which is a High sensitivity structure. Prior to the construction of St James's Gate Brewery, the hospital building fronted to the east, and there was a Nurse's Home, Fever Hospital and high boundary walls (now demolished) in front of the northern elevation. These structures were demolished when the hospital closed in 1987, at which time the central pedimented breakfront and northern garden was added. The Proposed Scheme addresses the symmetry and geometry of the northern façade in the proposed paving design, while extending the public realm to accommodate waiting passengers and new bus stops. No historic fabric will be impacted, as the existing garden dates from c.1987. The proposed works will have a positive

impact on the setting of the building, the magnitude of which is Medium. The potential Operational Phase impact is Positive, Moderate and Long-Term."

Section 16.4.4.2 notes the following with respect to Architectural Conservation Areas (ACA) and Conservation Areas within DCC's administrative area:

The Chapelizod and Environs ACA

"The Chapelizod and Environs ACA is of Medium sensitivity. Two groups of houses (NIAH 50080353 and NIAH 50080360) are included in both the ACA and the study area, both of which are also included in the NIAH and are of Low sensitivity.

Chapelizod Bypass will be widened locally to accommodate new bus stop lay-bys, and new ramps and steps (and associated retaining walls), will be added to accommodate access between the bus stops and Chapelizod Hill Road. The new structures will be outside of the ACA boundary but removal of trees and the provision of the proposed bus shelters, the ramps and steps and thee widening of the bridge on the north-east side of the Bypass will have a visual impact on the ACA and on 1-4 Chapelizod Hill (NIAH 50080360).

Alternate options were explored for providing access between Chapelizod Hill Road and the Bypass. The proposed location allows for the retention of a band of the existing trees which will help to screen the ACA from the Proposed Scheme. The existing sloping ground will be utilised to mediate between the levels and to reduce the extent of excavation required. The magnitude of impact on the ACA is Low. The potential Operational Phase impact on the Chapelizod and Environs ACA is Negative, Slight and Long-Term."

The impact on 1-4 Chapelizod Hill Road (NIAH 50080360) is assessed in Section 16.4.4.4 (National Inventory of Architectural Heritage (NIAH) Structures) as follows: *"There will be an Operational Phase visual Impact on the setting of 1-4 Chapelizod Hill Road, which are within the Chapelizod and Environs ACA (assessed in Section 16.4.4.2 above) as a result of the widening of the Chapelizod Bypass, removal of trees and the provision of access infrastructure (ramps and steps) between Chapelizod Hill Road and the new bus stops on the Bypass. The terrace is of Low sensitivity. The magnitude of the visual impact in the setting of the terrace is Medium. The potential Operational Phase impact is Negative, Slight and Long-Term."*

3. 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 note 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.

4. Palette of Materials

DCC 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.

Heritage features to be retained are noted on the General Arrangement Drawings in Volume 3 of the EIAR, where applicable. Figure 2.3.5.25 shows an extract of Sheet 31 at Heuston Station where heritage features to be retained or relocated are noted.

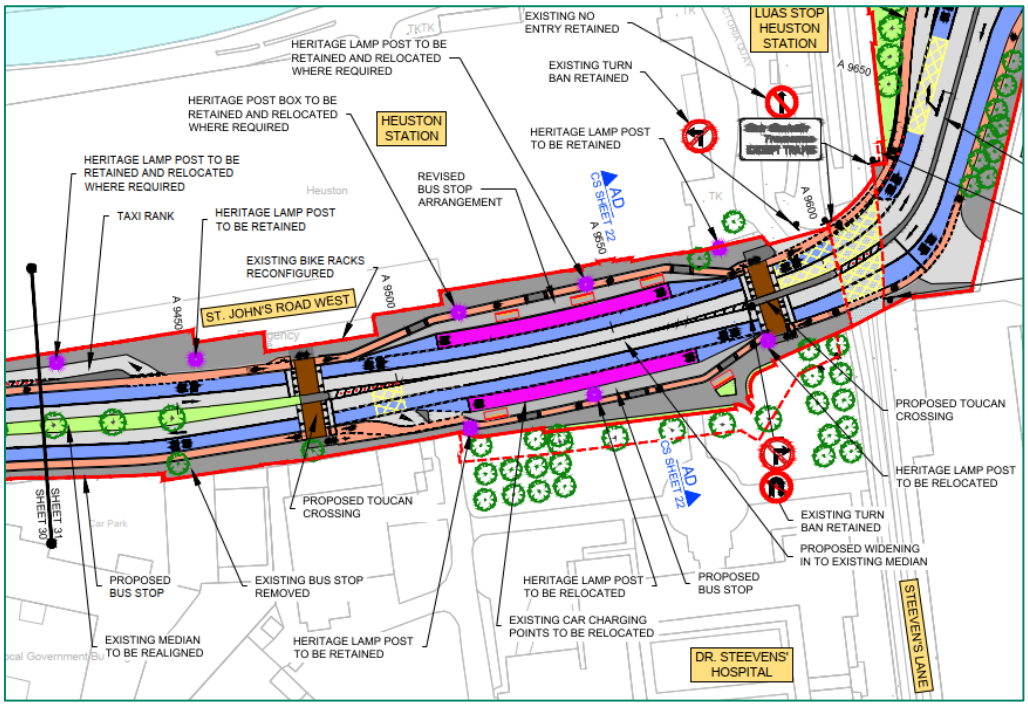


Figure 2.3.5.25: Heritage Notes on Sheet 31 of the General Arrangement Drawings

Paving and surface treatments of architectural heritage value were identified at 1 location as indicated in Chapter 16 (Table 16.16) in Volume 2 of the EIAR. Further information is provided in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of the EIAR.

Proposed mitigation measures for architectural heritage features (including historic paving) are outlined below and detailed in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR. The methodology has been prepared in accordance with the Architectural Heritage Protection: Guidelines for Planning Authorities (DAHG 2011a) and Paving: the conservation of historic ground surfaces (McLoughlin 2017).

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."

5. 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 (and perhaps specific urban villages) 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 16.4.3.8 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. The 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 including in relation to the final detailing of new street furniture.

6. 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 note 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 13.5 of the Preliminary Design Report notes the following: *"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 otherwise noted on the drawings."*

As stated in Chapter 16 (section 16.1) in Volume 2 of the EIAR, the impacts on boundary treatments have been assessed as part of the Architectural Heritage assessment, with appropriate mitigation measures outlined where necessary.

7. Integration of the materials palette of the proposed scheme with existing private landing areas and recently upgraded areas of the public footpath

DCC noted that a strategy for the resurfacing of private landings should be developed (with the owner's consent) and the retention/replacement of newly resurfaced areas of public footpath should be devised so a consistent paving palette is used throughout the Proposed Scheme.

The NTA notes this comment. In relation to Private Landings, these have not been included within the Proposed Scheme red line boundary unless necessary to deliver the Proposed Scheme.

If these private landings were to be resurfaced, it would require significant additional compulsory land acquisition to deliver, which would not align with the ethos of this scheme to minimise compulsory land acquisition.

Sections 4.6.12.1 and 4.6.12.2 of Chapter 4 of Volume 2 of the EIAR note the following:

"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 proposals 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."

"Through the process of developing the Proposed Scheme, a typology and palette of proposed materials was developed to create a consistent design response for various sections of the route. The proposed materials were based on the existing landscape character, existing materials, historical materials while also identifying areas for betterment through the use of higher quality surface materials. The Landscaping General Arrangement drawings (BCIDC-ACM-UBR_ZZ-0006_XX_00-DR-LL-9001) in Volume 3 of this EIAR illustrate these elements."

There is a range of material typologies listed in section 4.6.12.2 of Chapter 4, which includes the following:

*"**No change.** - In addition to areas with proposed material changes, there were also areas identified where no change in materials would be required. For example, where pavement has recently been laid and is in good condition. The design also explores opportunities where good quality kerbs such as granite kerbs could be reused, which would have both cost and sustainability advantages."*

8. 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.

The 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.

9. City Arts Officer Comments

The NTA notes the comments of the City Arts officer in relation to their request to apply for the Per Cent Art scheme as part of the development of the Proposed Scheme. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Arts Officers comments. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

DCC Section 2.4.11 City Parks, Biodiversity and Landscape Division Comments

Observations raised / clarifications sought

i. The submission makes a number of points in relation to the landscape proposals and new trees.

ii. The submissions requests clarity on the proposed quantity of compensatory tree planting along the route of the Proposed Scheme

Response

The NTA notes the general comments on the Proposed Scheme in this section and the recommendations in the Appendix.

An arboricultural survey has been undertaken for the Proposed Scheme to identify the condition of potentially impacted trees. This survey is included in EIAR Volume 4 Appendices Part 4 of 4 Appendix 17.1, Arboricultural Impact Assessment.

The Landscape Proposals for the Scheme including the maturity of the new trees utilised are outlined on the Landscaping General Arrangement drawings, Appendix B5 of the Preliminary Design Report. These landscape proposals include the number of new trees, hedge planting and planting species.

The maintenance period is addressed in the Construction Environmental Management Plan in EIAR Volume 4 Appendices Part 1 of 4 Appendix 5.1 and EIAR Chapter 2 Need for the Proposed Scheme, and Chapter 5 Construction.

NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking onboard the DCC Parks, Biodiversity and Landscape Division 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.

EIAR Volume 2 Main Chapters, Chapter 17, Landscape (Townscape) and Visual, documents the potential landscape (townscape) and visual impacts associated with the Construction and Operational Phases of the Proposed Scheme. The impacted trees are presented in the EIAR Volume 3 Figures, Chapter 4 Proposed Scheme Description, 5. Landscaping General Arrangements and further described in EIAR Volume 4 Appendices Part 2 of 2, Appendix A17.1 Arboricultural Impact Assessment.

Despite the best efforts to protect trees, especially trees of a mature and significant stature there will be inevitable impacts on local trees.

- *As stated in the Preliminary Design Report, new street trees are proposed where footways are wide enough and below-ground services allow. For the section of the Proposed Scheme between the Con Colbert Road junction and Heuston Station, sheet 25 to sheet 31 of the Landscape General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4 show that approximately 33 trees will be lost and approximately 139 new trees are proposed.*

2.3.5.4.5 Conclusion

DCC is supportive of the Proposed Scheme and stated in their conclusion on pages 40-41 of the submission: *"The proposed Lucan 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.

2.3.5.4.6 Appendix 1 – Proposed Conditions and Departmental Recommendations

DCC have set out at the start of their appendix three suggested conditions, followed by a series of recommendations from the various departments.

Proposed Condition 1:

The first suggested condition requested by DCC states:

"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."

Response

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 suggested condition requested by DCC states:

"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."

Response:

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 suggested condition requested by DCC states:

"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."

Response:

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.

Departmental Recommendations

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 Road 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

Chapter 7 (Air Quality) and Chapter 9 (Noise and Vibration) in Volume 2 of the EIAR, both contain an assessment of the potential air and noise impacts which could arise from the construction of the Proposed Scheme (the construction strategy is set out in Chapter 5 in Volume 2 of the EIAR). Chapters 7 and 9 also contain comprehensive suite of measures to mitigate the potential air and noise impacts which could arise from the construction of the Proposed Scheme. These mitigation measures broadly align with the 'good practice' measures set out in the DCC Air Quality Monitoring and Noise Control Unit's Good Practice Guide for Construction and Demolition. These mitigation measures are also contained within the Construction Environmental Management Plan in Appendix A5.1 in Volume 4 of the EIAR.

Archaeology Department

The NTA notes the recommendation set out in the Appendix by the Archaeology Department and has set out in the EIAR the intention to appoint a Project Archaeologist. With regard to the depositing of an archaeological paper archive, the NTA will liaise with DCC in regard to archival processes.

The NTA notes the recommendation set out in the DCC Report Appendix 1, from the DCC Archaeology Section that archaeological monitoring take place at the two locations identified above. As confirmed above by the NTA, no road widening is taking place in the vicinity of Recorded Monument DU018-029.

With regard to the recommendation that monitoring be undertaken during the removal of a strip of land to the front of the landscaped grounds at the site of Dr. Steevens' Hospital DU18-020. Section 15.5.1.5 addresses archaeological monitoring in the scheme section from Con Colbert road to the City Centre, which includes the area at Dr. Steevens' Hospital:

"Archaeological monitoring (as defined in section 15.5.1) under licence will take place, where any preparatory ground-breaking or ground reduction works are required (as defined in section 15.4.1), at the following locations:

- *Within the designated ZAP for the Historic City of Dublin (DU018-020) along Con Colbert Road and St John's Road West, which is an area of particularly high archaeological potential associated with Viking, early medieval and medieval activity; and*
- *At the site of the 19th century gas house (DCIHR 18-10-025).*

It is in these areas 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."

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 also recommends that the primary archaeological paper archive for all excavations 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 archival processes.

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. These issues 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.

In relation to conservation, the submission has recommended specific measures at five locations, listed a) to e) on page 46 of the submission.

a. Project to be revised at Dr. Steevens' Hospital to ensure protection/retention of the garden, with details of the revision submitted to the Planning Authority for agreement.

   Section 3.4.4.7 of Chapter 3 of the EIAR discussed the requirement for and options assessment undertaken for provision of bus stops at Heuston Station/ Dr. Steevens Hospital. It states:

   'The draft Proposed Route Option presented at the second round of public consultation included the existing bus stops on St John's Road West opposite the southern entrance to Heuston Station retained largely in their existing format. Subsequent to this, as part of the development of design proposals of the Proposed Scheme, the size and layout of all bus stops along the corridor were assessed in terms of future forecast bus services. With Heuston Station being an important public transport interchange serving cross country rail services, Luas services and the Proposed Scheme, it was determined that a significant improvement was required to the existing bus stop provision. The bus stop assessment concluded that in order to serve adequately the mixture of Dublin bus services and regional bus services that use the corridor the layout of the bus stops should incorporate three bus bays situated in a layby.

   A number of design alternatives were considered to satisfy this requirement. In the inbound direction, space was available in the area of the existing bus stop by reallocating the existing road space. However, in the outbound direction there was no such existing road space available and alternatives were explored involving utilising the front lawned area of the Health Service Executive's Dr Steevens' Hospital. Key considerations were the presence of a mature tree at the western end of the hospital lawn and the important view from Heuston Station of the northern façade of the hospital. The provision of a three bay layby bus stop arrangement could not be achieved without the loss of this tree. Therefore, an alternative arrangement was developed with a new two bay bus lay by in front of the hospital and the existing single in-lane bus stop in front of the Revenue Commissioners building retained.

   A landscaping and urban realm proposal was developed for the new bus layby in recognition of the importance of the facade of Dr. Steevens' Hospital. The paving lines were designed to follow the building lines to reinforce the central entrance. The bus shelter was located to the side of the central entrance, so as not to obstruct the approach to or the views of the historic doorway. It was concluded that while the alternative proposals would have an adverse impact on Dr Steevens' hospital, the operational needs at this location were important enough to justify the impact, recognising that the impact of the bus stops had been minimised as far as possible by a reduction in scale, and by the provision of a sensitive landscaping proposal. Therefore, the alternative bus stop arrangements has been incorporated into the Proposed Scheme.'

   Section 4.5.3.2 of Chapter 4, Proposed Scheme Description notes the following in respect of land acquisition at Dr. Steevens Hospital:

   'The extents of this land acquisition have been minimised by the removal of the central kerbed median between the two signalised crossings of the R148 St John's Road West…..'

   With regard to the request for revised layout at Dr. Steevens' Hospital being submitted to the Planning Authority, 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 and Archaeology Sections of Dublin City Council 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.

b. Alternatives to the proposed bus shelters to the north of Dr. Steevens' Hospital and to the south of the Irish War Memorial Gardens should be presented for agreement to the Planning Authority.

The design requirement, options considered for proposed Bus Stop at Dr. Steevens' Hospital, are addressed in Point a. immediately above and the Bus Stop Assessment described in response to *DCC Section 2.4.9 Conservation Section Comments*, Section vii, Part h. in the main body of the report above. There are no further options that will meet the Proposed Scheme objectives.

The design requirement, options considered for proposed Bus Stop at War Memorial Gardens, are addressed in response to *DCC Section 2.4.9 Conservation Section Comments*, Section vii, Part c. in the main body of the report above. There are no further options that will meet the Proposed Scheme objectives.

With regard to the request for revised layout at Dr. Steevens' Hospital being submitted to the Planning Authority, 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 and Archaeology Sections of Dublin City Council 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.

c. Relocation of a cast-iron post box and two heritage lamp posts – the new location and detailed method statements for the works shall be submitted to the Planning Authority for agreement.

Section 16.5.1.7.1 in Chapter 16 sets out the mitigation that will be implemented with regard to post boxes which includes NIAH 50080037 (also identified as CBC0006PB003). The following mitigation will be implemented: *"….Mitigation is the recording of the post boxes in position prior to the works, labelling the affected fabric prior to their careful dismantling and removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. The works to the historic fabric shall be carried out in accordance with the methodology provided in Appendix A16.3…."*.

Section 16.5.1.7.2 in Chapter 16 sets out the mitigation that will be implemented with regard to lamp posts. The following mitigation will be implemented: *"….Mitigation consists of 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. The works to the historic fabric should 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 regard to the request for location and detailed method statements for the cast-iron post box and two heritage lamp posts to be submitted to the Planning Authority for agreement, 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 Archaeology Section of Dublin City Council 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.

d. Consideration should be considered to the rationalisation of signage across the route 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.

e. 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 note this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included in Appendix O of the Preliminary Design Report in the Supplementary Information 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

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.

2.4 Individual Properties

2.4.1 Overview of Submissions

Three submissions were made in respect of individual properties.

- Hermitage Golf Club
- Hermitage Clinic
- Palmerstown Lodge

2.4.2 75 – The Trustees of Hermitage Golf Club

2.4.2.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.1.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, on the northern side of the N4 between the entrance to the Hermitage Golf Club and Junction 2 of the N4 a segregated two-way cycle track is included in the Proposed Scheme.

Land acquisition will be required from the Hermitage Golf Club to provide this cycle track which will connect with the existing foot / cycle bridge over the N4 adjacent to the Mount Andrew estate / St Loman's Hospital access.

A piled retaining wall is proposed for the new boundary and 15m high sports netting is proposed adjacent to the relocated boundary for a 130m length opposite Ballyowen Lane, as well as infill planting to the roadside boundary and southern edge of the fairway.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.4.2.1.

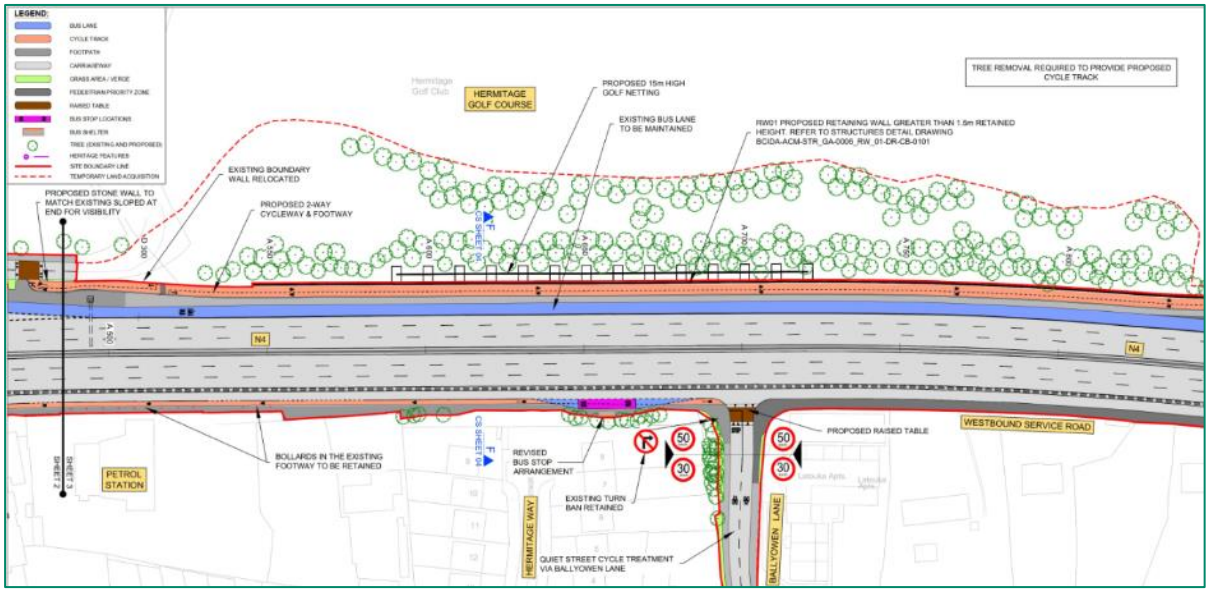


Figure 2.4.2.1: General Arrangement of Proposed Scheme adjacent to Hermitage Golf Club

The relevant extract from the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.4.2.2.

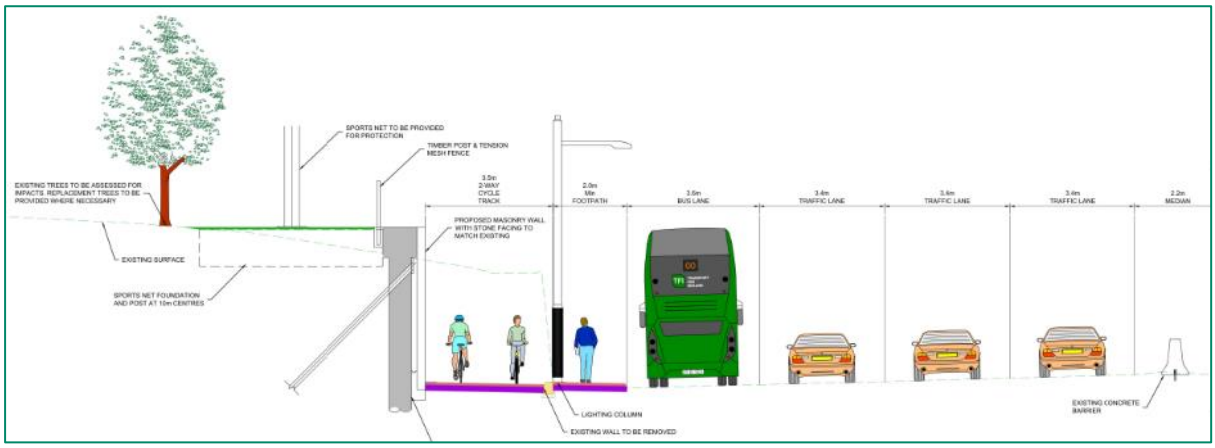


Figure 2.4.2.2: Typical Cross-section Adjacent to the Hermitage Golf Club

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Hermitage Golf Club is shown in Figure 2.4.2.3.

Figure 2.4.2.3: Extract from CPO Deposit Maps at Hermitage Golf Club

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.4.2.4.

Figure 2.4.2.4: Proposed Land Acquisition lines adjacent to Hermitage Golf Club

The following figures from the EIAR, Volume 3, Part 3 of 3, Chapter 17 Landscape and Visual, Figure 17.2 Photo-montages are shown in Figures 2.4.2.5 to 2.4.2.9 below;

- Figure 17.2.0.2 View locations (aerial photograph of the location)
- Figure 17.2.2.1 View 2 from the east – as existing
- Figure 17.2.2.2 View 2 from the east – as proposed
- Figure 17.2.3.1 View 3 from the west – as existing
- Figure 17.2.3.2 View 3 from the west – as proposed

Figure 2.4.2.5: View Locations

Figure 2.4.2.6: View 2 from the east – as existing

Figure 2.4.2.7: View 2 from the east – as proposed

Figure 2.4.2.8: View 3 from the west – as existing

Figure 2.4.2.9: View 3 from the west – as proposed

2.4.2.2 Summary of Issues raised

i) The submission raises a concern about the extents to which the NTA's GDA Strategy 2016-2035 is appropriate to be relied upon as "*the fundamental document guiding this Scheme*."

ii) The submission asserts that the EIAR is not fit for purposes on the grounds that

a) there is no description, or assessment, of the receiving environment

b) no description of the hermitage;

c) inadequate consideration of alternatives, including alternatives which would avoid any impact on Hermitage lands; and

d) is a breach of the Climate Action and Low Carbon Development Acts of 2015 and 2021 and the Climate Action Plan 2021.

iii) The submission expresses the view that the effects of the Proposed Scheme on the Hermitage Golf Club are "*devasting*", "*will lead to the complete destruction and obliteration of this facility*" and will "*render it incapable of functioning in the manner that it has hereto, or at all, as a championship course and will as a minimum require a complete redesign and in addition require additional land if it is to continue to function as a championship course*."

iv) The submission claims that the Proposed Scheme contravenes the South Dublin County Council Development Plan 2022-2028

v) The submission appears to question the appropriateness of the NTA's application for approval of the Proposed Scheme under section 51 of the Roads Act 1993 (as amended) and makes a request for a preliminary hearing

vi) The submission asserts that the NIS does not comply with the Habitats Directive as there is a complete absence of detail of how the scheme will be implemented to enable the scheme to be assessed

2.4.2.3 Reliance on GDA Strategy 2016-2035

Summary of Issue

The submission raises an issue with the reliance placed by the NTA on the Transport Strategy for the Greater Dublin Area 2016 to 2035 as a "*fundamental document guiding this Scheme*".

Response to Issue

The GDA Transport Strategy is a statutory strategy as required under section 12 of the Dublin Transport Authority Act 2008 (as amended) with the objective "*to provide a long-term strategic planning framework for the integrated development of transport infrastructure and services in the GDA*". It should also be noted that section 31J of the Planning and Development Act 2000 (as amended) states:

> *"31J. In any case in the GDA where –*
>
> *(a) a planning or local authority, a regional assembly, State authority or An Bord Pleanála is carrying out any relevant function under or transferred by Part II, X, XI or XIV, or*
>
> *(b) a planning authority or An Bord Pleanála in carrying out any relevant function under any other Act,*
>
> *the transport strategy of the DTA shall be a consideration material to the proper planning and sustainable development of the area or areas in question."*

The consideration of the application for approval under section 51 of the Roads Act 1993 (as amended) is a relevant function of the Board as transferred under Part XIV of the Planning and Development Act 2000 (as amended) and therefore the GDA Transport Strategy is a consideration material to the proper planning and sustainable development of the area or areas in question and it is entirely appropriate for the NTA to have referenced the GDA Transport Strategy in the EIAR for the Proposed Scheme.

In addition, Section 2.3 of EIAR Chapter 2 Need for the Proposed Development sets out the policy context for the Proposed Scheme and details 31 policies that are relevant to, and support the development of, the Proposed Scheme; two international policies, fifteen national policies, six regional policies and eight local policies. The GDA Transport Strategy 2016-2035 is included as one of the six regional policies listed in Section 2.3.

Contrary to what the submission suggests, it is evident that the NTA has not placed undue reliance on the GDA Transport Strategy 2016-2035.

2.4.2.4 EIAR – Assessment of Receiving Environment

Summary of Issue

The submission asserts that

a) there is no description, or assessment, of the receiving environment and no description of the Hermitage;

b) inadequate consideration of alternatives, including alternatives which would avoid any impact on Hermitage land; and

c) is a breach of the Climate Action and Low Carbon Development Acts of 2015 and 2021 and the Climate Action Plan 2021

Response to Issue

The EIAR was prepared by an environmental team led by Jacobs Engineering in collaboration with the Engineering Design Team led by AECOM and the details of the competent experts who were responsible for each section of the EIAR are set out in Table 1.5 in Chapter 1 of the EIAR.

The EIAR for the Proposed Scheme includes full and complete information of the likelihood of significant effects on the environment of the Proposed Scheme in accordance with the EIA Directive, to enable and assist the Board to carry out an EIA.

a) Assertion that there is no description, or assessment, of the receiving environment and no description of the Hermitage

The presence of the Hermitage Golf Club has been described and assessed, and the potential impacts arising as a result of the Proposed Scheme has been considered fully in the EIAR.

The following paragraphs provide a non-exhaustive list of instances in the EIAR assessments where the receiving environment and the Hermitage Golf Club have been referenced:

- Section 4.5.1.1 in Chapter 4 (Proposed Scheme Description) of Volume 2 of the EIAR provides a general overview of the Proposed Scheme. In relation to the Proposed Scheme elements and their interaction with the Golf Club, it states the following:

  "On the northern side of the N4 between the entrance to the Hermitage Golf Club and Junction 2 of the N4 a segregated two-way cycle track is included in the Proposed Scheme. Land acquisition will be required from the Hermitage Golf Club to provide this cycle track which will connect with the existing foot / cycle bridge over the N4 adjacent to the Mount Andrew estate / St Loman's Hospital access. A piled retaining wall is proposed for the new boundary and 15m high sports netting is proposed adjacent to the relocated boundary for a 130m length opposite Ballyowen Lane, as well as infill planting to the roadside boundary and southern edge of the fairway…"

- Section 5.3.1.4 in Chapter 5 (Construction) of Volume 2 of the EIAR describes the construction of the Proposed Scheme where it interacts with the Golf Club:

  "At Hermitage Golf Club the boundary wall will be demolished, relocated and reconstructed, incorporating a new retaining structure (RW01). Sports netting approximately 15m in height will be provided behind this retaining wall. Trees along the Hermitage Golf Club boundary will be removed and replaced. The construction activities along the local road providing access to Hermitage Golf Club will comprise quiet street treatment, including road markings and ramped pedestrian / cyclist crossing points at each end. The existing entrance gates and barrier to the Hermitage Golf Club will be unaffected by the proposed works. Further information on the construction methodology at Hermitage Golf Club is provided in Section 5.5.4.3."

- Section 5.5.4.3 in Chapter 5 of Volume 2 of the EIAR lists the main works to be carried out at the Golf Club and the anticipated sequencing of the construction activities. It acknowledges that the works area will be accessed directly from the N4 and that golf will continue to be playable on the holes adjacent to the temporary land acquisition during construction works.

- Section 7.2.1 in Chapter 7 of Volume 2 of the EIAR sets out the study area for the air quality assessment:

"The study area for this assessment covers the length of the Proposed Scheme, approximately 9.6 kilometres (km) from the N4 Junction 3 to the Frank Sherwin Bridge in the City Centre, and the area either side of the Proposed Scheme up to a maximum distance of 350 metres (m) during construction, and 200m during the Operational Phase. For the Construction Phase assessment, the focus is on air quality sensitive receptors adjacent to the proposed works (e.g. utility diversions, road widening works, road excavation works (where required), road reconfiguration and resurfacing works) that are susceptible to dust impacts but also those receptors along construction traffic access routes or routes along which traffic is redistributed within the study area (please see Chapter 5 (Construction) of this EIAR for more information on construction traffic access routes). The extent of the overall study area is typically up to a maximum of 350m from a specific area of construction work, as per the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction."

The Hermitage Golf Club falls within the study area assessed.

- Section 9.2.1 in Chapter 9 of Volume 2 of the EIAR sets out the study area for the noise and vibration assessment:

  "The study area for this assessment covers the length of the Proposed Scheme, approximately 10 kilometres (km) from the N4 Junction 3 and the Frank Sherwin Bridge in the City Centre, and the area either side of the Proposed Scheme (and other diverted routes) up to a maximum distance of 300m during the Construction Phase and extending out to 1km from the Proposed Scheme boundary during the Operational Phase. The study area for potential noise and vibration impacts during both Construction and Operational Phases relate to areas of potentially impacted NSLs, which include areas where people spend significant periods of time and where concentration, sleep and amenity are important considerations. Examples of these NSLs include residential dwellings, schools and other educational establishments, hospitals and nursing homes, hotels and other short term accommodation buildings, buildings of religious sensitivity, recreational and noise sensitive amenity areas and offices. Vibration sensitive locations (VSLs) include buildings with vibration sensitive equipment (sensitive equipment within laboratories, highly sensitive medical equipment etc.) and structures that are structurally unsound. For the Construction Phase, the assessment of the study area is focused on NSLs and VSLs adjacent to the works required to construct the Proposed Scheme, e.g., utility diversions, road widening works, road excavation works (where required), road reconfiguration and resurfacing works, and construction traffic access routes within the study area. The extent of the overall study area is typically up to 300m from a specific area of construction work with the key impacted study areas focused within 50m to 100m depending on the noise and vibration sources in question and the local area under consideration."

  The Hermitage Golf Club falls within the study area assessed.

- In Chapter 10 (Population), at Section 10.3.2 (Community Baseline), the Hermitage Golf Club is in the list that identifies *"….notable community receptors along the Proposed Scheme which draw a large number of users…."*. *The Golf Club has been recognised in the baseline and has been considered in the assessment.*
- In Section 10.4.3.1.1 (Community Assessment), the impact on the Golf Club is acknowledged: *"….Notable community facilities allocated adjacent to the Proposed Scheme and likely to experience a Negative, Moderate and Short-Term impact on amenity are:… Hermitage Golf Club;…"*
- In Section 10.4.3.1.2.1 (Land take) with respect to land take during the construction phase it states*: "Hermitage Golf Club, located in Lucan community area, is expected to experience a Negative, Moderate and Short-Term effect during construction due to the larger scale of land take…."*
- In Section 10.4.4.1.1 (Community Amenity) it states*: "Amenity designations are expected to experience impacts during the Operational…….and Short-Term impact on Hermitage Golf Club."*
- In Section 10.4.4.1.2.1 (Land take) with respect to land take during the operation phase it states: *"Hermitage Golf Club……, located in Lucan, require permanent land take as a result of the Proposed Scheme and will experience a Negative, Slight and Long-Term impact."*
- In Section 10.4.4.1.2.2 (Accessibility) with respect to accessibility during the operation phase it states*: "Notable community facilities located along the Proposed Scheme where accessibility will be improved are: Hermitage Golf Club,……."*

- In Chapter 12 (Biodiversity), the affected area within the Hermitage Golf Club is fully considered. There are numerous references to the Hermitage Golf Club, which shows that it was considered in the baseline and in the assessment. Some of these instances are listed for information.
  - Section 12.2.1 sets out the study area for the baseline surveys undertaken (which includes the relevant area so the Golf Club – refer to Table 12.2. Section 12.2.3.4 states with regard to mammals that *"The Hermitage Golf Club was surveyed for signs of mammals in June 2022. The presence / absence of these species was surveyed through the detection of field signs such as tracks, markings, feeding signs, and droppings as well as by direct observation".*
  - Section 12.2.3.5.1 addresses the walked bat transects surveys undertaken and it states the following with respect to the Hermitage Golf Club:

    "Three additional transects, located within the grounds of Hermitage Golf Club, were surveyed in June 2022; CBC0006BT004 ran from east to west behind the wide strip of vegetation which fronts onto the N4 (i.e. the fairway of the 16th hole), while CBC0006BT005 ran along the fairway of the 15th and 17th holes in the south-western portion of the Golf Club, and CBC0006BT006 was located along the Golf Club's western boundary. These additional walked transect routes are also shown on Figure 12.1.1 in Volume 3 of this EIAR. Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Lucan to City Centre Core Bus Corridor Scheme Chapter 12 Page 7 Transect surveys at the Hermitage Golf Club were conducted on one occasion, on the 23rd June 2022. A second survey was scheduled, however, permission to access the grounds to carry out this survey was not granted. Considering the data collected in June 2022 (within the optimal survey period for bats), the previous data collected in 2021 and overall habitat suitability of the Golf Club to support populations of bats, the absence of a second survey later in the 2022 season is not considered a significant limitation for the purposes of this assessment. The assessment presented here has also considered the overall habitat suitability of the Hermitage Golf Club lands for use by bats."
  - Section 12.2.3.5.2 addresses building inspection for bats at the Hermitage Golf Club: *"One unoccupied building, located along the western boundary of the Hermitage Golf Club, was examined externally for its potential to support roosting bats, during a multidisciplinary survey of the Golf Club lands on 23rd June 2022. Potential access/egress points were recorded, where present, and a general assessment of the buildings suitability for roosting bats was undertaken. This building is not contained within the temporary or permanent land take boundary of the Proposed Scheme." Section 12.2.3.5.3 states: "Trees within the Hermitage Golf Club were assessed during a multidisciplinary survey of the lands on the 23rd June 2022."*
  - Section 12.3.8.1 sets out in detail the bat surveys that were undertaken at the Golf Club. Section 12.3.8.2 addresses the evidence of badgers and states the following with regard to the Golf Club: *"….. Evidence of badger activity was recorded in one location over the course of the multi-disciplinary surveys carried out along the Proposed Scheme - within the grounds of the Hermitage Golf Club. It should be noted that no setts (badger resting places) were recorded along the Proposed Scheme, including within the boundary of the Hermitage Golf Club, during any multidisciplinary surveys undertaken. Within the Hermitage Golf Club badger faeces was recorded in multiple locations and snuffle holes (signs of badger foraging behaviour) was also recorded."*
  - Section 12.3.9.2 addresses wintering birds and says: "…*Given the habitats present at Hermitage Golf Club, it is likely that winter bird species may utilise some of the lands within. This has been considered in this impact assessment and appropriate mitigation measures have been prescribed as a result."*
  - Within Section 12.4 (Potential Impacts), the main characteristics of the Proposed Scheme of relevance to the ecological assessment are outlined. The potential ecological impacts to the Hermitage Golf Club are then set out for each of the relevant species. Following this in Section 12.5 the proposed mitigation and monitoring measures are set out, a number of which specifically reference the Hermitage Golf Club.
- In Section 16.3 (Baseline Environment) in Chapter 16 (Architectural Heritage) it states the following: *"….The historic landscape character of the study area comprises a string of demesnes between the Old Lucan Road and the River Liffey including St. Edmondsbury (NIAH 2223), Woodville (NIAH 2233), Hermitage (NIAH 2240), Fonthill (CBC0006BTH020), Quarryvale (NIAH 2248), Brooklawn (NIAH 2256), Newtown Park (Riversdale) (NIAH 2264), Palmerston (NIAH*

2273), and Inchicore (NIAH 2300). The legacy of these landscapes is strongly felt in the modern streetscape, especially at Woodville which is retained as farmland, Hermitage which is in use as a golf course, Quarryvale, Brooklawn and Palmerston. All of these landscapes retain historic houses, boundary treatments and parkland…."

- Table 16.10 describes the Hermitage as *"Former demesne landscape associated with Hermitage (SDCC RPS 002), now in use as a golf course and club house" and having a regional significance and medium sensitivity.*
- In Section 16.4 (Potential Impacts), the Hermitage Golf Club has been considered for example in Table 16.17 and Table 16.18. Section 16.5.1.5 sets out the mitigation that will be implemented during the construction phase (the recording, protection and monitoring of the sensitive fabric prior to, and for the duration of the Construction Phase in accordance with the methodology provided in Appendix A16.3 Methodology for Works affecting Sensitive and Historic Fabric in Volume 4 of this EIAR).
- In Chapter 17 (Landscape (Townscape) and Visual), the Hermitage Golf Club is fully considered. In Table 17.6 is it listed as both a *'Key Townscape Feature'* and under '*Amenity Designation'*. Section 17.4.1.2 addressing the development of the Proposed Scheme design acknowledges that one of the design changes incorporated into the Proposed Scheme was the inclusion of substantial native replacement tree planting at the Golf Club, which will result in a net-gain in tree cover over the long-term.
- The key construction characteristics of the Proposed Scheme as they pertain to the Golf Club are acknowledged in Section 17.4.1.3.1: *"….Works along boundary with Hermitage Golf Club, including temporary and permanent land acquisition from the golf club, resulting in limited impact on existing entrance, and impact on boundary with N4 resulting in loss of boundary planting within the golf course (Ch.A490 to Ch.A930);…"*
- The key characteristics of the Proposed Scheme of particular relevance to the townscape and visual assessment during the Operational Phase are acknowledged in Section 17.4.1.4: *"…Substantial changes to N4 with boundary setback and changes to boundary planting within Hermitage Golf Club including provision of substantial replacement tree planting to restore screening (Ch.A480 to Ch.A940);…"*
- Section 17.4.3.1 sets out the construction phase impact on Townscape/Streetscape Character including at the Hermitage Golf Club. In Section 17.4.3.2.5, the construction phase impact on 'Amenity Designation' is described. The section acknowledges that *"…The most substantial works within an amenity area occur at Hermitage Golf Club, where the existing N4 boundary and some boundary planting (providing screening, shelter and safety) is removed due to works on the golf course lands. There will be loss of land and construction of a new boundary wall with tall sports netting. The sensitivity is high and the magnitude of change is very high. The potential townscape / streetscape and visual effect of the Construction Phase on Hermitage Golf Club is assessed to be Negative, Very Significant and Temporary / Short-Term…"*
- It is acknowledged in Section 17.4.3.2.8 that construction of the Proposed scheme will require temporary land acquisition from the Hermitage Golf Club, while Section 17.4.3.2.9 will require tree removal at certain location and *"…Most notably these include the tree belt on the boundary of Hermitage Golf Club, which provides screening, shelter and safety…"*
- The Hermitage Golf Club is included in Table 17.7 which provides a summary of potential construction phase impacts (and Table 17.8 which provides a summary of potential operational phase impacts).
- Section 17.4.4.1 sets out the operational phase impact on Townscape/Streetscape Character including at the Hermitage Golf Club *" The baseline townscape is of low sensitivity and operation of the Proposed Scheme will involve modest changes to the existing road infrastructure but with substantial changes along the boundary with Hermitage Golf Club, where the existing largely non-native tree planting will have been removed during construction, and the stone boundary wall set back. A section of 15m high sports netting provided to the boundary as a safety measure will be a prominent visual feature visible from the N4 and the golf club. Native tree planting will be reinstated to the boundary and internally within the golf club grounds to restore the screening effect, and over time this will establish to a band of trees, wider than that which currently exists that will provide an adequate buffer between the N4 and the golf club, and which will aid in screening the sports netting…"*

- In Section 17.4.4.2.5, the operational phase impact on 'Amenity Designation' is described. The section acknowledges that *"….The Operational Phase of the Proposed Scheme will have the most substantial changes at Hermitage Golf Club, where the existing N4 boundary and boundary plantings are removed, and the boundary set back reducing the width of the tree belt screening the N4. However, once established the proposed replacement planting will restore the screening effect. The sensitivity is high and the magnitude of change is high. The potential townscape / streetscape and visual effect of the Operational Phase on Hermitage Golf Club is assessed to be Negative, Significant and Short-Term becoming Positive, Moderate, Long-Term."*
- It is acknowledged in Section 17.4.4.2.8 that operation of the Proposed scheme will require permanent land acquisition from the Hermitage Golf Club, while Section 17.4.4.2.9 addresses tree planting: *"….The magnitude of change is low, but locally high at Hermitage Golf Club and at spaces adjacent to R148 Chapelizod Bypass/ Chapelizod Hill Road. Replacement tree planting will reduce effects over time, particularly at Hermitage Golf Club where the effect will be positive in the long-term…"*
- The Hermitage Golf Club is included in Table 17.8 which provides a summary of potential operational phase impacts (at 1 year post construction).
- The Hermitage Golf Club is included in Table 17.9 which provides a summary of predicted construction phase impacts (and Table 17.10 which provides a summary of predicted operational phase impacts post mitigation.
- The Hermitage Golf Club is discussed in Section 17.5.2.1 in the review of photomontages (Views 1, 2 and 3 are relevant to the Golf Club).
- Section 17.6 addresses the residual impacts and the Hermitage Golf Club is considered in both the Construction and Operational phase impacts.

b) Assertion that there is inadequate consideration of alternatives, including alternatives which would avoid any impact on Hermitage land

Section 1.2 of EIAR Chapter 1 Introduction sets out the objectives of the Proposed Scheme, the first two of which are:

- *"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;"*

Measures to provide bus priority already exist along the section of the N4 adjacent to the Hermitage Golf Club in the form of continuous bus lanes. However, the existing cycling infrastructure is limited to a 2.0m wide shared pedestrian / cyclist facility.

Section 2.2.1.3 of Chapter 2 of Volume 2 of the EIAR, Need for the Proposed Development, describes the proposed GDA Cycle Network Plan, which was adopted by the NTA in 2014. Specifically, it is noted that Primary Route 06 follows the route of the Proposed Scheme at this location.

In order to achieve the stated scheme objectives, a comprehensive process was undertaken in relation to the consideration of alternatives and Section 3.3 of EIAR Chapter 3 Reasonable Alternatives provides a detailed summary of this, with further details provided in the Preferred Route Option Report, including Appendix F (the Lucan to City Centre Core Bus Corridor Options Study Feasibility Report, December 2016), provided in the Supplementary Information submitted with the application for the Proposed Scheme.

Section 3.3.3 of Chapter 3 of Volume 2 of the EIAR, Reasonable Alternatives, describes how the consideration of alternative cycling route options was fundamental in the process of defining the Emerging Preferred Route. It is noted that the proposal to locate a two-way cycle track on the northside of the N4 which is incorporated into the Proposed Scheme:

- reduces the number of intersections with junctions and accesses to private properties
- provides all the necessary components of the GDA Cycling Strategy in this area

- introduces a new link between Ballyowen Lane and Ballyowen Road, providing a coherent network that links all main origin and destination zones / centres for cyclists, with minimal detours and interruptions minimised.
- The introduction of a segregated two-way cycle track will eliminate the need for cyclists to use the shared area at Junction 2 of the N4 in the westbound direction

Section 3.3.3 also states that the proposal for a two-way cycle track on the northside of the N4 is a significant improvement on the Emerging Preferred Route (EPR) proposals which contained detours and gaps in the westbound direction. The Proposed Scheme provides a more direct route for westbound cyclists than the EPR proposals and also provides for several links from areas south of the N4 and R148 facilitating a more direct route for eastbound cyclists from those areas. The Proposed Scheme will reduce journey times for cyclists using the route by reducing the stop-start nature of the EPR proposals, which was raised as an issue at the first Non-Statutory Public Consultation.

Section 3.4.4.2 of Chapter 3 relates to the two-way Cycle Track along N4 between Junction 3 and Junction 2 and explains that the draft Preferred Route Option presented at the second and third round of public consultations included proposals for a two-way cycle track located on the northern side of the N4 / R148 between the start of the Proposed Scheme at Junction 3 of the N4 and the start of the R148 Chapelizod Bypass. As described in the Preferred Route Options Report, this cycle track was developed in response to the submissions made in the first round of public consultation about the poor quality of cyclist facilities on the route, and in order to provide an appropriate standard of cyclist provision for the Primary Cycle Route 06 included in the GDA Cycle Network.

In response to the third round of public consultation, concerns were raised by the Hermitage Golf Club in respect of the impact of the two-way cycle track on their existing boundary with the N4, relating to the number of trees that would be lost. In particular, a suggestion was made that the two-way cycle track should be located on the south side of the N4 between the R136 Ballyowen Road and the existing pedestrian / cyclist bridge crossing the N4 immediately east of the golf club lands and west of the access to St Loman's Hospital.

Consideration was given to this suggested alternative design option, with the two-way cycle track on the south side of the westbound off slip of the N4 at Junction 3 and connecting to the draft Preferred Route proposals on the north side of the N4 east of the golf club via the existing pedestrian / cyclist bridge. This alternative design option would require the existing westbound service road and off-slip to be widened on the southern side over its full length to accommodate the two-way cycle track. This would require the removal of a significant line of mature trees that will impact the rear gardens of 21 residential properties adjacent to the N4 westbound off-slip, including land acquisition from 16 of these properties. In addition, land acquisition and associated tree loss would be required from a further seven residential properties and two commercial properties adjacent to the westbound service road either side of Ballyowen Lane. It is also noted that the existing pedestrian / cyclist bridge over the N4 is not of sufficient width to provide segregated facilities and would require a new parallel cyclist bridge for the two-way cycle track.

When compared to the draft Preferred Route Option, the significant adverse impact on property and comparable length of tree loss associated with the alternative design resulted in this design alternative being rejected.

Therefore, the Proposed Scheme retains the two-way segregated cycle track on the north side of the N4, as included in the draft Preferred Route Option. Consideration was also given to a suggestion that the existing bus lane, or one of the general traffic lanes, be removed to accommodate the two-way cycle track within the existing road reservation. The removal of the bus lane was discounted as it would be directly contrary to the scheme objectives, and the possible removal of a general traffic lane was also discounted on the grounds of road traffic demand and associated road safety.

Sections 3.4.1 to 3.4.4 of Chapter 3 of the EIAR discuss various design alternatives considered following each of the three rounds of public consultation. During this period, a number of design alternatives were considered that sought to minimise the impact on the Hermitage Golf Club.

Specifically, following the second round of public consultation and a meeting with representatives of the golf club, the cycle track alignment was amended to minimise the land take at the eastern end of the golf club lands close to two tee boxes. This is evidenced by Figure 2.4.2.10 which shows an extract from the scheme brochure presented as part of the second round of public consultation, as included in the Appendix to the Public Consultation Report 2018-2022 provided as part of the Supplementary Information provided with the application for the Proposed Scheme.

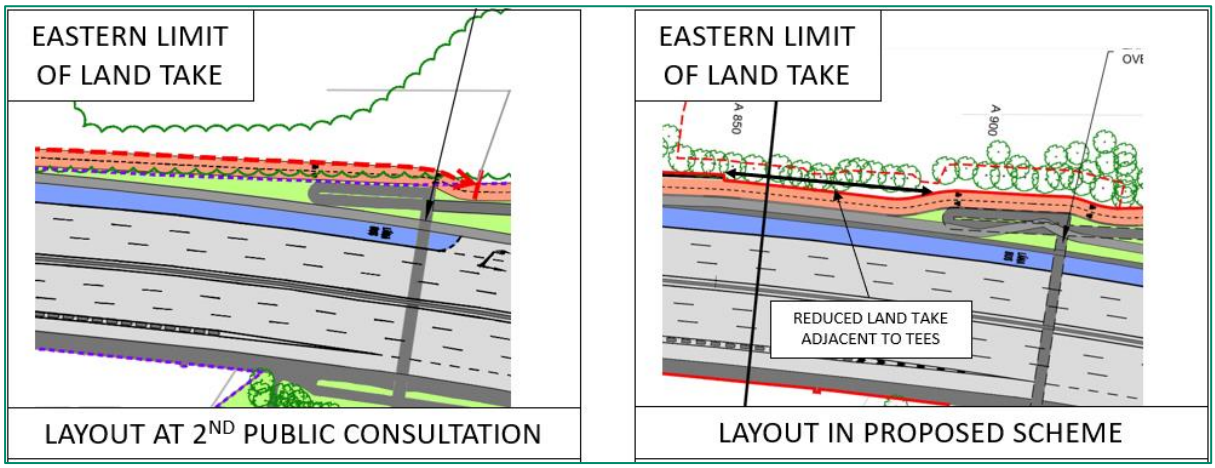


Figure 2.4.2.10: Reduction in land take at eastern limit of Hermitage Golf Club Lands

Following the third round of public consultation, at the western end of the new boundary wall the alignment of the proposed cycletrack was amended to avoid any impact on the existing entrance gate and barrier to the golf club. This is evidenced by Figure 2.4.2.11 which shows an extract from the scheme brochure presented as part of the third round of public consultation, as included in the Appendix to the Public Consultation Report 2018-2022.

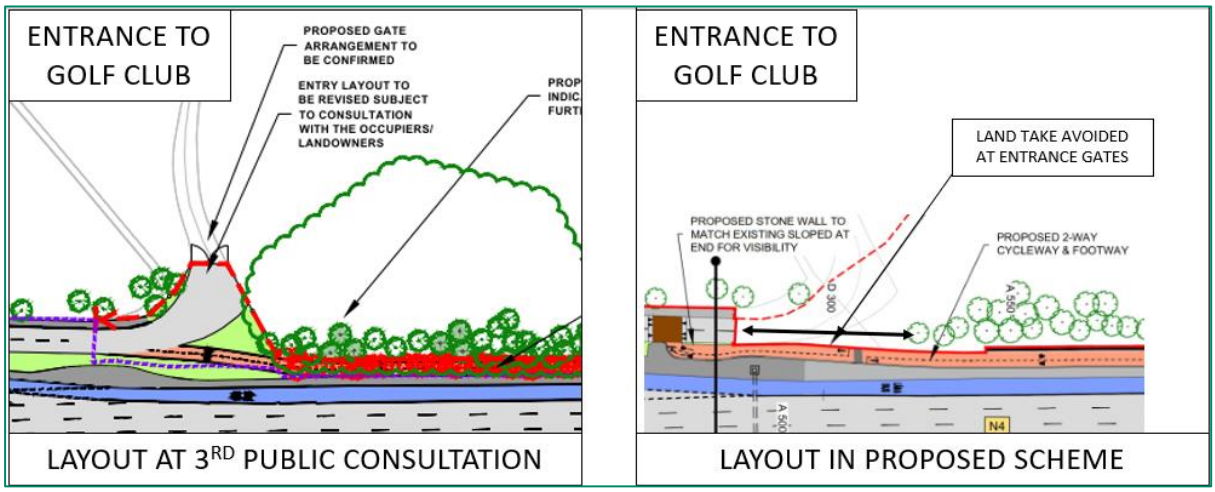


Figure 2.4.2.11: Avoidance of any impacts on the entrance to the Hermitage Golf Club

A number of design alternatives were also considered for the new boundary wall with a view to minimising the number of trees that would be lost. These design alternatives included different construction methods. As described in detail in Section 5.5.4.3 of EIAR Chapter 5 Construction, the final design included in the Proposed Scheme is the alternative that will result in the fewest number of trees lost and comprises a continuous piled retaining wall that will be able to be constructed entirely from the N4. In addition, the final design includes a substantial number of new trees replanted on the golf club's side of the new boundary wall to reinstate the visual boundary. As stated in Section 5.5.4.3. the works area for the new boundary wall for the Hermitage Golf Club will be accessed directly from the N4 such that *"Golf will continue to be playable on the holes adjacent to the temporary land acquisition during construction works."*

Alternatives that would avoid any impact on the Hermitage Golf Club

The submission has proposed two alternative treatments for the N4 national road at this location that would avoid any impact on the Hermitage Golf Club. These are –

- The removal of a lane or lanes from the main carriageway; and
- The application of a 60km/h speed limit and a reduction in carriageway lane widths to urban design standards (DMURS).

In developing the preliminary design of the Proposed Scheme along the section of the N4 between Junction 3 and the M50 extensive consultation was held with Transport Infrastructure Ireland (TII). A fundamental point to recognise is that the N4 national road has strategic importance as it serves both the N4 connection to Sligo (and the N5 to Westport and Castlebar) and the M6 motorway to Galway. It also provides access to the Dublin Port Tunnel and Dublin Airport via the M50 motorway.

It is noted the original N4 Lucan Bypass was improved in the period from 2007 to 2009 under the Lucan Bypass Upgrade scheme which was developed by South Dublin County Council in agreement with the National Roads Authority (now known as TII). Under this scheme the original dual carriageway road was upgraded to a three-lane dual carriageway with dedicated bus lanes. This widening was facilitated by the removal and paving of the grass median. The width of the bus lanes was increased from 3.0m to 3.5m. The design speed for this scheme was reduced from 100km/h to 85km/h in order to achieve the required stopping sight distances and to minimise the land acquisition required, and the maximum legal speed limit at this location is currently 80km/h. The existing traffic flows at that time and the traffic flows predicted for future years justified the provision of the three-lane dual carriageway. The scheme was approved by An Bord Pleanala in 2005.

As set out in Section 3.4.4.2 of EIAR Chapter 3 Reasonable Alternatives, following the third round of public consultation "*consideration was given to a suggestion that the existing bus lane, or one of the general traffic lanes, be removed to accommodate the two-way cycle track within the existing road reservation. The removal of the bus lane was discounted as it would be directly contrary to the scheme objectives, and the possible removal of a general traffic lane was also discounted on the grounds of road traffic demand and associated road safety.*"

The existing number of lanes are justified by the current and forecast traffic volumes as described in the following section of Appendix A6.1 Traffic Impact Assessment to EIAR Chapter 6 Traffic and Transport, contained Volume 4 Part 2 of 4 of the EIAR.

Section 5 of Appendix A6.1 provides details of the baseline environment and Table 5.2 provides details of the data collected from various automatic traffic counts (ATCs). ATCs 6.2A and 2.B were located on the N4 west of Fonthill (ie between Junction 3 and Junction 2 of the N4 which is the section of the N4 that passes the boundary with the Hermitage Golf Club. In Table 5.2 the baseline AM peak hour eastbound movement is 4315 vehicles and the westbound PM peak hour movement is 4735 vehicles.

The generally accepted practical capacity of a single traffic lane on a national road is between 1600 and 1700 vehicles per hour (or 1700 to 1850 passenger car units (pcu) per hour), as explained in TII research document "*A Study of Lane Capacity in the Greater Dublin Area*"[2]. It is clear from this research and the recorded baseline flows that three lanes are required to accommodate the baseline traffic demand.

Section 6.3 of Appendix A6.1 assesses the operation phase of the Proposed Scheme. Table 6.25 and Table 6.26 provides details of the forecast modal shift along the Proposed Scheme in the 2028 AM peak hour and PM peak hour respectively. This show that along the Proposed Scheme there is forecast to a 4% reduction in general traffic trips in the AM peak hour and a 6% reduction in the PM peak hour. Section 6.3.3.1.7 provides the assessment of the impact on general traffic, noting that TII's Traffic and Transport Assessment Guidelines (May 2014) have been used to identify the Advisory Thresholds for Traffic and Transport Assessment where national roads are affected.

Table 6.38 and Table 6.39 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the AM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. The N4 between Junction 3 and Junction 2 is not listed in either table, confirming that the changes in traffic flows on that link are not significant.

Table 6.43 and Table 6.44 list the road links along the route of the Proposed Scheme that experience a reduction or an increase in traffic flows of at least +/- 100 pcu during the PM peak hour when comparing the Do Minimum Scenario with the Do Something scenario. Table 6.43 identifies that the N4 between Junction 2 and Junction 3 will experience a reduction in 2028 PM peak hour flow of 312 pcu from 4526 in the Do Minimum Scenario to 4214 in the Do Something scenario. Despite this reduction, the forecast flow still exceeds the accepted practical capacity of two lanes, demonstrating that between Junction 3 and Junction 2 of the N4 three lanes will still be required for general traffic with the Proposed Scheme in place.

[2] https://www.tii.ie/tii-library/strategic-planning/transport-research-and-information-notes(trins)/A-Study-of-Lane-Capacity-in-the-Greater-Dublin-Area.pdf

It is also noted that merging, diverging and weaving traffic movements are required on the approach to and from each junction and to the west of the junction with the M50. Aside from the capacity / operational issues identified with the traffic demand, any reduction in the number of lanes would give rise to safety concerns.

In respect of an alternative to reduce the speed limit and reduce the lane widths on the section of the N4 between Junction 3 and Junction 2, the design principle adopted for national road speed limits / design speeds is that they are chosen to meet the project objectives and safety criteria. As noted above, this approach was adopted for the N4 Lucan Bypass Upgrade scheme which was designed for an 85 km/h speed (80km/h operational speed limit). Any proposal to apply a special speed limit of 60km/h to this section of the N4 national road would require the approval of TII. There would be operational, safety and enforcement issues associated with any proposed reduction in speed limit. No proposals to further reduce the speed limit at this location were raised by TII during the extensive consultation held with them during the development of the Proposed Scheme.

In addition, the application of DMURS to a national road requires the written consent of TII. Reference to Table 4.4 of TII standard DN-FGEO-03036 shows that an 11.0m carriageway width is required for urban all-purpose dual 3 lane carriageway roads; it is noted that the existing cross section at this location is approximately 10.2m. No proposals to further reduce the lane widths at this location were raised by TII during the extensive consultation held with them during the development of the Proposed Scheme. In accordance with TII design standards,

Setting aside these fundamental issues associated with narrowing the traffic lanes, it is noted that submission states that by narrowing the six traffic lanes to 3.0m would only release a 2.4m wide corridor. This is still significantly less than the 3.5m width required for the two-way cycle track as per the proposed cross -section and as such land acquisition would still be required from the Hermitage Golf Club. It should also be noted that full depth construction and significant drainage works would be necessary to move the central median barrier associated with any reduction in the speed limit and lane widths. Furthermore, these works would need to extend from N4 junction 3 to the M50 interchange, a length of approximately 2km. the scale of such an intervention that still required land acquisition renders this alternative infeasible.

c) Assertion that there is a breach of the Climate Action and Low Carbon Development Acts of 2015 and 2021 and the Climate Action Plan 2021

The Hermitage Golf Club has stated that the lack of consideration of an alternative that involved the removal of an existing inbound lane of traffic on the N4 (or a lane in both directions), which would have avoided impacts on the Hermitage Golf Club meant that there is a breach of the Climate Action and Low Carbon Development Acts of 2015 and 2021 and the Climate Action Plan 2021. The response provided previously above demonstrates that the removal of a traffic lane was considered (and this is documented in Chapter 3 (Reasonable Alternatives)), but this alternative was discounted on the basis of road traffic demand and road safety grounds.

With regard to compliance Climate Action and Low Carbon Development (Amendment) Act 2021 and the Climate Action Plan 2021, this has been detailed in the EIAR.

Section 2.3.3.9 of Chapter 2 in Volume 2 of the EIAR (as well as Section 3.5.9 of the Planning Report contain in Appendix A2.1 of Volume 4 of the EIAR) addresses the Climate Action and Low Carbon Development (Amendment) Act 2021. Section 2.3.3.9 states that: "…. *The implementation of the Proposed Scheme will deliver transport infrastructure required to support a significant shift towards sustainable transport options that will in turn support the targets set out in the Climate Action and Low Carbon Development (Amendment) Act 2021. This supports the need for the Proposed Scheme."*

Section 2.3.3.10 of Chapter 2 in Volume 2 of the EIAR (as well as Section 3.5.10 of the Planning Report contain in Appendix A2.1 of Volume 4 of the EIAR) addresses the Climate Action Plan 2021. Section 2.3.3.10 states that: *"….BusConnects is referenced as a major transport project that will help to deliver the 500,000 additional sustainable journeys…."* Provision of BusConnects infrastructure is one of the actions contained in the Climate Action Plan 2021: "*Commence delivery of BusConnects Core Bus Corridor Infrastructure Works."*

Chapter 8 (Climate) provides the assessment of the potential climate impacts associated with the Construction and Operation of the Proposed Scheme.

The delivery of the Proposed Scheme will deliver the transport infrastructure required to provide sustainable transport options that will support the key actions set out in the Climate Action Plan 2021.

The Proposed Scheme will expand, enhance and connect to pedestrian and cycle networks and will assist in facilitating the delivery of modal shift. BusConnects will support the delivery of an efficient low carbon and climate resilient public transport service, contributing to emission reduction target achievement. BusConnects will contribute to Ireland's journey to a low carbon / carbon neutral, energy efficient and reliable transport system which aligns with Government net zero policy commitments and enable customers to make sustainable choices.

Since the planning application was made for the Proposed Scheme, the Climate Action Plan 2021 has been updated by the Climate Action Plan 2023. The CAP 2023 sets out the sectoral emissions ceilings and the implementation of carbon budgets. The CAP is a roadmap to deliver a halving of Irelands emissions by 2030. The transport sector has an aim of a 50% reduction in emissions by 2030. The 'Avoid' (reduce or avoid the need for travel – land use planning), 'Shift' (Shift to more environmentally friendly modes – public transport, active travel), 'Improve' (Improve the energy efficiency of vehicle technology- vehicle efficiency, clean fuels) approach has been adopted to help achieve these targets. CAP 2021 targets have been updated to include '*a 20% reduction in total vehicle kilometres, a reduction in fuel usage, and significant increases to sustainable transport trips and modal share'*

Section 15.3.3 of the CAP 2023 with regard to '*Avoid and Shift*' sets out the following:

'Greater prioritisation and reallocation of existing road space towards public transport and active travel will be a key supporting element for the new DMS. This already forms a crucial element of the BusConnects programme in each of our five cities. It is also a key recommendation from the OECD's Redesigning Ireland's Transport for Net Zero report.'

Section 15.3.3 of the CAP 2023 with regard to '*Shift'* outlines the following in regard to '*Major Public Transport Infrastructure Programme':*

'*Key milestones have already been achieved on major infrastructural projects, including BusConnects in each of our 5 cities and the Greater Dublin Area's DART+ Programme and Metrolink, which will continue to be progressed through public consultations and the planning systems.'*

Table 15.7 of the CAP 2023 sets out the *'Key Actions to Deliver Abatement in Transport for the Period 2023-2025'* includes under the measure *'Major Public Transport Infrastructure Programme'* and the heading *'Shift'* (inter alia) '*Advance BusConnects programme in 5 cities'* under the actions for 2023, 2024 and 2025.

The delivery of the Proposed Scheme will provide the transport infrastructure required to deliver sustainable transport options that will support the key actions set out in the Climate Action Plan 2023. The Proposed Scheme will expand, enhance and connect to pedestrian and cycle networks and will assist in facilitating modal shift. The targets set out within CAP 2023 are closely linked to the delivery of key transport infrastructure projects, such as the BusConnects Programme and therefore the Proposed Scheme.

2.4.2.5 Effects of the Proposed Scheme on the Hermitage Golf Club

Summary of Issue

The submission is concerned that the impacts on the golf club will "*lead to the complete destruction and obliteration of this facility*" and will "*render it incapable of functioning in the manner that it has hereto, or at all, as a championship course and will as a minimum require a complete redesign and in addition require additional land if it is to continue to function as a championship course.*"

Response to Issue

Operational Phase

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.4.2.12. This shows that the permanent land acquisition line is contained within the existing mass of trees on the golf club side of the existing boundary wall with the N4.

Figure 2.2.4.12: Proposed Land Acquisition lines adjacent to Hermitage Golf Club

Figure 2.2.4.13 shows the permanent and temporary land acquisition lines overlain on aerial photography relative to the nearest playing part of the golf course, namely the fairway of the 16th hole. The temporary land acquisition line abuts the southern edge of the fairway of the 16th hole to allow the proposed additional in-fill tree planting to be undertaken.

Figure 2.2.4.13: Proposed Land Acquisition lines adjacent to Hermitage Golf Club

As regards the impact on the Hermitage in the operational phase, Section 17.4.4.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual assesses the impact of the Proposed Scheme on amenity designations and notes that: "*The Operational Phase of the Proposed Scheme will have the most substantial changes at Hermitage Golf Club, where the existing N4 boundary and boundary plantings are removed, and the boundary set back reducing the width of the tree belt screening the N4. However, once established the proposed replacement planting will restore the screening effect. The sensitivity is high and the magnitude of change is high.*"

As regards this replacement tree planting, Figure 2.2.4.14 shows an extract of the Landscape General Arrangements drawings included as Figure 05 in EIAR Volume 3 – Figures Part 1 of 3. This shows that approximately 190 replacement and additional trees are proposed within the area of the temporary land acquisition, providing substantial in-fill planting towards the edge of the fairway of the 16th hole, and a significant amount of replacement planting along the new boundary with the N4, particularly in the vicinity of the tees for the 17th and 7th holes.

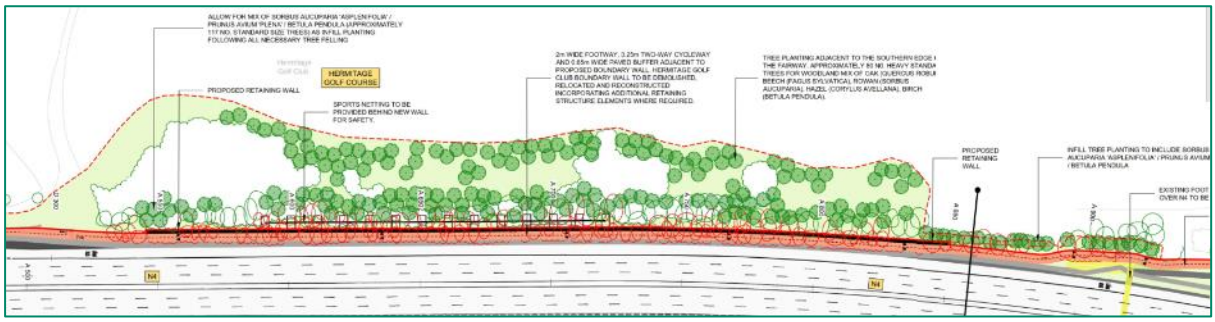


Figure 2.2.4.14: Extract from Landscape General Arrangement drawings at Hermitage Golf Club

Section 17.4.4.2.9 assesses the impact of the Proposed Scheme on trees and vegetation. It states that "*A substantial number of trees will have been removed during the Construction Phase. The Operational Phase of the Proposed Scheme will not impact directly on additional trees but the negative effects will remain until replacement planting is established. There is also substantial additional tree planting proposed into various open spaces, road medians and roadside areas, which will lead to an overall positive effect in the long term."* In respect of this location the assessment concludes that the overall magnitude of change is low, but "*locally high*" at Hermitage Golf Club.

Section 17.4.4.2.9 goes on to state that "*Replacement tree planting will reduce effects over time, particularly at Hermitage Golf Club where the effect will be positive in the long-term." In summary the assessment concludes that "The potential townscape / streetscape and visual effect of the Operational Phase on trees and plantings at Hermitage Golf Club is assessed to be Negative, Significant, Short-Term becoming Positive, Moderate, Long Term."*

Also, it may be noted that the proposed acquisition of part of the Hermitage Golf Club amounts to a total of 1,775m^2 in proposed permanent landtake and this is from a total landholding by the Hermitage Golf Club of approximately 506,000m^2, or 0.35%. The overall extents of the Hermitage Golf Club are shown in Figure 2.2.4.15, from which it can be seen that the CPO land acquisition is remote from the overwhelming majority of the Hermitage Golf Club lands.

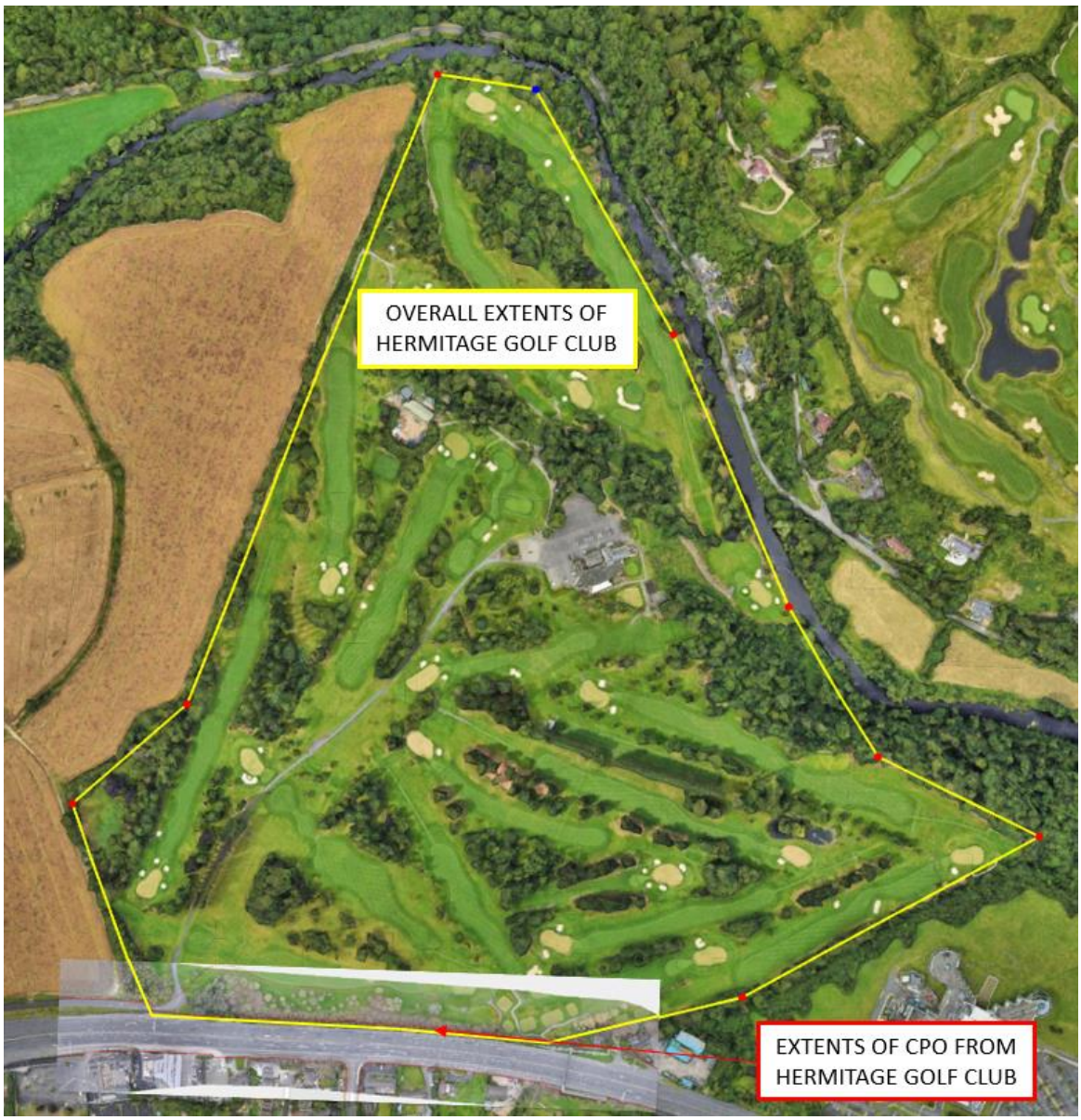


Figure 2.2.4.15: Overall Extents of Hermitage Golf Club

In summary, the submission offers no evidence to support its assertion that the Proposed Scheme will "*lead to the complete destruction and obliteration of this facility*" and will "*render it incapable of functioning in the manner that it has hereto, or at all, as a championship course and will as a minimum require a complete redesign and in addition require additional land if it is to continue to function as a championship course."* In terms of the operational phase impact on the Hermitage the negative significant impact in the short term will be adequately mitigated in the long term such that the impact becomes moderate positive.

Construction Phase

As stated in Section 5.5.4.3. of EIAR Chapter 5 Construction, the works area for the new boundary wall for the Hermitage Golf Club will be accessed directly from the N4 such that *"Golf will continue to be playable on the holes adjacent to the temporary land acquisition during construction works."*

Section 5.3.1.4 states that: "*At Hermitage Golf Club the boundary wall will be demolished, relocated and reconstructed, incorporating a new retaining structure (RW01). Sports netting approximately 15m in height will be provided behind this retaining wall. Trees along the Hermitage Golf Club boundary will be removed and replaced.*"

Section 5.5.4.3 provides further details as follows: "*Hermitage Golf Club Works will be carried out at Hermitage Golf Club, including:*

- *Overlay works along sections of the access road;*

- *Removal and reconstruction of the boundary wall (incorporating a retaining wall (RW01)); • Construction of two-way cycle track adjacent to the boundary wall;*
- *Tree and vegetation removal and replacement; and*
- *Erection of sports netting (130m in length and 15m in height) to ensure that the existing risk of golf balls reaching the N4 is not increased and could be reduced.*

It is anticipated that the construction methodology will be carried out in the following sequence:

- *Implementation construction traffic management measures, as per Table 5.10 (including closure of the bus lane, footway, and cycle track, diversion of the footway and cycle track and implementation of a speed limit);*
- *Erection of site security fencing behind the existing boundary wall;*
- *Demolition of free-standing section of the boundary wall to create a temporary construction access (from the N4);*
- *Erection of a temporary support to the existing retaining wall on the N4 side;*
- *Felling of trees and erection of golf netting foundations;*
- *Construction of a temporary piling platform where trees have been felled;*
- *Installation of piles for the proposed retaining wall (RW01), (piling rig to access the cleared area from the temporary construction access from the N4);*
- *Demolition of existing retaining wall, and excavation to level (from the N4);*
- *Facing / cladding of proposed retaining wall (stone from the existing wall will be taken down and set aside for reuse. The retaining wall will be clad to match the masonry cladding of the existing retaining wall);*
- *Construction of cycle track; and*
- *Landscaping.*

The works area will be accessed directly from the N4. Golf will continue to be playable on the holes adjacent to the temporary land acquisition during construction works."

A number of design alternatives were also considered for the new boundary wall with a view to minimising the number of trees that would be lost. These design alternatives included different construction methods. In summary the above extract from Chapter 5 of the EIAR demonstrates that the design proposals at this location have been developed with the intent of minimising the impact on the Hermitage Golf Club during the construction phase.

Overall, the submission offers no evidence to support its assertion that the Proposed Scheme will "*lead to the complete destruction and obliteration of this facility*" and will "*render it incapable of functioning in the manner that it has hereto, or at all, as a championship course and will as a minimum require a complete redesign and in addition require additional land if it is to continue to function as a championship course."*

2.4.2.6 Alignment with the South Dublin County Council Development Plan 2022-2028

Summary of Issue

The submission claims that the Proposed Scheme contravenes the South Dublin County Council Development Plan 2022-2028

Response to Issue

Pages 53 to 56 of the Planning Report which was included at Appendix A2.1 in Volume 4 of the EIAR for the Proposed Scheme sets out in detail how the Proposed Scheme aligns with South Dublin County Council Development Plan 2022-2028 ("SDCCDP 2022-2028").

The Planning Report states that: "*At a strategic level, the SDCCDP 2022-2028 supports an integrated transport network that offers enhanced access and mobility throughout the county. The Proposed Scheme will help to deliver the infrastructure required to facilitate the 'integrated transport network' sought by the SDCCDP 2022-2028. In addition to the above, the extensive number of policies and objectives relevant to the Proposed Scheme and its compliance with same has been set out in Table 1.3 in Appendix 1 (Local Policy) of this Report*."

South Dublin County Council ("**SDCC**") set out in their submission to An Bord Pleanála (the "**Board**") dated 11 January 2023 (which is on An Bord Pleanála's website) that they "*are of the view that it* [the Proposed Scheme] *aligns with the policies of the County Development Plan (2022-2028)"*. SDCC set out the policies and objectives from their development plan which support the Proposed Scheme on pages 4 and 5 of their submission to the Board.

- SM3 Objective 1 in the Development Plan relates to the targets of modal shift to bus usage and includes "*A network of continuous bus priority and safe cycling infrastructure along 16 corridors*" and says "*It is anticipated that a planning application for the radial core bus corridor infrastructure will be submitted by the NTA to An Bord Pleanála with construction expected to take place within the lifetime of the plan*". This Proposed Scheme is one of the radial core bus corridor infrastructure projects which involves continuous bus priority and safe cycling infrastructure as anticipated under the Development Plan.
- SM2 Objective 2*: "To create a comprehensive County-wide network supported by sustainable movement studies and other permeability measures, consisting of legible, sign-posted and well-maintained: (i) Safe cycling routes through the implementation of the Greater Dublin Cycle Network Plan, NTA (2011) and the Cycle South Dublin project; and (ii) Walking routes that link communities to key destinations, amenities and leisure activities".* The Proposed Scheme includes various elements of the Greater Dublin Cycle Network Plan, specifically Primary Route 6 which is proposed to be delivered via the cycle track on the northside of the N4 at this location.
- SM3 Objective 2*: "To facilitate and secure the implementation of major public transport projects as identified within the NTA's Transport Strategy for the Greater Dublin Area (2016-2035) as updated to 2042, or any superseding document, including BusConnects, the DART expansion programme along the Kildare route, the opening of the new rail station at Kishogue and the Luas to Lucan."*
- SM3 Objective 11: *"To facilitate the delivery of the BusConnects Core Bus Corridors and seek additional bus corridor and orbital routes to serve the County by securing and maintaining any required route reservations and to ensure the BusConnects Corridors do not adversely affect the village life and livelihoods of any of our County Villages."*

In addition, the Lucan to City Centre Scheme Core Bus Corridor Scheme is specifically identified in Table 7.2 of the Development Plan.

The objection on behalf of the Hermitage Golf Club incorrectly seeks to suggest that all major development contemplated within the lifetime of a development plan must be provided for in the development plan and that the Proposed Scheme "*has no such status*" and would therefore amount to a material contravention of the development plan. In doing so, the objection refers to the case of *Roughan v Clare County Council*[3] in support of their position that "*in order for major development to proceed it must be specifically provided for in the statutory development plan*". This case related to a situation where the relevant proposed development (a traveller halting site) was omitted entirely from the relevant development plan such that the planning authority effectively failed to disclose in advance in its development plan its intention to carry out the impugned development and that is what gave rise to a material contravention. As set out in detail in the Planning Report, and indeed in the submission by SDCC, the Proposed Scheme is explicitly referenced in the SDCCDP 2022-2028 and so there can be no suggestion that there was a failure to disclose the intention to carry out the Proposed Scheme. Reliance on this case is therefore misplaced.

The lands at the Hermitage Golf Club are zoned "*High Amenity – Liffey Valley*" under the SDCCDP 2022-2028. It is noted on page 14 of Chapter 17: Landscape and Visual of the EIAR that the SDCCDP 2022-2028 states that "*development within this designation should be designed and sited to minimise visual impacts and preserve the amenity value of the river valley including its landscape value and views and vistas of the river valley*". It is further explained on page 26 of Chapter 17 that "*the works at the Hermitage Golf Couse will have an impact on the High Amenity designation for the Liffey Valley (HA-LV), where there will be substantial removal of screening trees between the N4 and the amenity area*" and the potential effects during the construction phase have been designated to be "*Negative, Moderate*

[3] (unreported, High Court, 18 December 1996, Barron J)

and Temporary/Short-Term" and that as per page 33, this will move to being "*Neutral, Slight/Moderate, Long-Term*" when the proposed tree planting reinstates the screening over time. Careful consideration has therefore been given to the zoning of this area and the need for mitigation measures and it has been appropriately assessed in the EIAR.

In EIAR Volume 2 Chapter 17, Landscape and Visual, Section 17.3.3.1 identifies SDCC policy NCBH7 and states that "*this relates to the protection of the Liffey River Valley and Special Amenity Area Order (SAAO). Zoning Objective 'High Amenity – Liffey Valley' (HA-LV) relates to designated land within the Liffey River Valley to the north of the N4, including parts of the study area, and states that development within this designation should be designed and sited to minimise visual impacts and preserve the amenity value of the river valley including its landscape value and views and vistas of the river valley."*

In Section 17.4.3.2.5 of Chapter 17 of the EIAR it is assessed that the works at the Hermitage Golf Club will have an impact on the High Amenity designation for the Liffey Valley (HA-LV) "*where there will be the substantial removal of screening trees between the N4 and the amenity area."* Section 17.4.3.2.5 notes that the proposed works will result in notable local changes to the High Amenity designation at the golf course and states that: "*These impacts will occur on the edge of the designation with limited influence beyond this. The sensitivity is high and the magnitude of change is medium. The potential townscape / streetscape and visual effect of the Construction Phase on the HA-LV designation is assessed to be Negative, Moderate and Temporary / Short-Term."*

The Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts on the Liffey Valley (HA-LV) are summarised in Table 17.7 in relation to the Construction Phase, with the impact assessed as Negative Moderate Temporary / Short-Term, and in Table 17.8 in relation to the Operational Phase, with the impact is assessed as Negative Moderate Short-Term. In Table 17.11 in relation to the predicted operational phase (at 15 years post-construction) the impact is assessed as Neutral Slight / Moderate Long-Term.

2.4.2.7 Appropriateness of the NTA's application for approval of the Proposed Scheme under section 51 of the Roads Act 1993 (as amended) and request for a Preliminary Hearing

Summary of Issue

The submission on page 5 suggests that:- "*While this submission raises significant and substantial issues of law relating to procedures, it is critical that these matters must be determined before the formal process proceeds any further and in that regard it is submitted that it would be appropriate for the Board to conduct a preliminary hearing in respect of the legal issues that arise in respect of the proposed acquisition with the intention of stating a case for the consideration of the High Court as to the manner in which it is appropriate for it to proceed. This would deal inter alia whether it is appropriate that the NTA, operating under the Housing legislation is entitled to compulsorily acquire lands for a Road Authority and whether it is appropriate for that (sic) the NTA as either Housing or Road Authority can apply Section 51 to the particular scheme that is the subject matter of this application*".

Response to Issue

Chapter 1 of the EIAR sets out the correct process/procedure that is being followed, which is summarised as follows.

The NTA made this application for approval of the Proposed Scheme under section 51 of the Roads Act 1993 (as amended) (the "Roads Act") as this is a "proposed road development" which is subject to an environmental impact assessment under section 50 of the Roads Act.

While there appears to be some confusion in the submission in relation to correct approval process for 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 the Roads Act as follows:

Section 50 of the Roads Act 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 does not fall under the list of projects identified in Annex I of the EIA Directive. Moreover, the Proposed Scheme does not meet or exceed the thresholds under Section 50 of the Roads Act and/or Article 8 of the Roads Regulations 1994, such that it would automatically trigger the requirement for an EIA.

An EIA Screening Report was prepared, the purpose of which, in accordance with Section 50(1)(c) of the Roads Act, was to consider whether the Proposed Scheme would be likely to have significant effects on the environment. It is considered that the Proposed Scheme is likely to have significant effects on the environment and, as such, requires an EIA to be carried out prior to a decision being made to grant development consent. This is reflected in an EIA Screening Determination made by the NTA on 9th August 2021.

While section 47 of the Roads Act is mentioned in the submission, 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 Roads Act.

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 Introduction of the EIAR, 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 the 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 function 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 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"

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 is entirely misconceived.

It is further noted that the submission appears to be suggesting that ABP hold a preliminary hearing into:

(i) the NTA's entitlement to compulsory acquire lands under the 2000 Act and the Housing Act 1966 (as amended) for the Proposed Scheme, and

(ii) the appropriateness of an application under section 51 of the Roads Act by the NTA for approval of the Proposed Scheme,

with a view ultimately to ABP stating a case to the High Court on these issues.

In light of the clarifications above, confirming that the NTA has the power to acquire lands by means of a compulsory purchase order in accordance with Part XIV of the 2000 Act, there is simply no basis for a preliminary hearing to be held into the statutory basis for either of the applications before the Board (as appears to be suggested in the submission) given that the legislative basis for the NTA's application under section 51 of the Roads Act is clear, and the legislative basis for the associated 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 also clear. Further any suggestion that a case needs to be stated to the High Court on a question of law is equally misconceived for the same reasons.

2.4.2.8 NIS Compliance with Habitats Directive

Summary of Issue

On pages 6 and 7 of the submission on behalf of the Hermitage Golf Club, there are allegations in relation to the lack of information in the NIS in particular in relation to the hydrological connection between the River Liffey (which they say is immediately adjacent to the Hermitage Golf Club) with the SACs and SPAs in Dublin Bay

Response to Issue

The NIS is cognisant of the hydrological connectivity of the Proposed scheme to Dublin Bay and the NIS has appropriately considered the potential in-combination impacts. The following is a brief summary of how these issues have been addressed in the NIS.

Section 3.1 of the NIS provides an overview of the Proposed Scheme and also the main characteristics of the of the construction phase that have the potential for ecological impact

In Section 5.10 of the NIS is acknowledged that the Proposed Scheme is *"….hydrologically connected to Dublin Bay via the River Annfield (Liffey_180), River Camac (Camac_040), Grand Canal, River Liffey (Liffey_180 and Liffey_190 sections), the Liffey Estuary Upper and Liffey Estuary Lower. 92 Details on the water quality of each watercourse, as sourced from the Environmental Protection Agency (EPA), and the distances from the proposed crossing point to downstream waterbodies are also provided in Table 6…."*

Section 6.2 of the NIS addresses habitat degradation/effects on QI/SCI species as a result of hydrological impacts. It acknowledges that the *"The Proposed Scheme has the potential to result in habitat degradation/ effects on QI/ SCI species as a consequence of hydrological impacts during the both the construction and operation phases. The release of contaminated surface water runoff and/or an accidental spillage or pollution event into any surface water features during construction, or operation, has the potential to affect water quality in the receiving aquatic environment, which in tum can affect any species which utilise this aquatic environment."*

It goes on to say: *"However, the Proposed Scheme is hydrologically connected to Dublin Bay via the River Liffey (Liffey_180 and Liffey_190), River Camac (Camac_040), Liffey Estuary Upper and Liffey Estuary Lower, as well as a network of established combined sewer/surface water pipes which discharge via Ringsend WwTP….."*

It also states that: *" In the absence of mitigation, the associated effects of a reduction of surface water quality could potentially extend for a considerable distance downstream of the discharge point or location of the accidental pollution event. Such an occurrence, of a sufficient magnitude, either alone or in combination with other pressures on water quality, could undermine the conservation objectives of the European sites downstream in Dublin Bay….."*

Section 6.2 finishes by saying: *"…As the Proposed Scheme has the potential to result in habitat degradation and effects on SCI bird species and QI marine mammal species associated with European sites located in Dublin Bay, as the result of hydrological impacts, there is the potential for in combination effects to occur."*

Section 9 of the NIS deals with the 'In-Combination Assessment'. This section 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 (ZoI). The section lists the 16 European sites within the ZoI of the Proposed Scheme. The in-combination assessment examines the potential for any plans and projects which have the potential to impact on the European sites within the ZoI of the Proposed Scheme. These include any national, regional and local land use plans or any existing or proposed projects that could potentially affect the ecological environment within the ZoI of the Proposed Scheme. These are presented in Section 9.1, Table 32, with the assessment presented in Table 33 and 34. The conclusion of the In-Combination Assessment is given in Section 9.3 of the NIS. The section ends by stating: *"…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".*

Therefore, as mentioned previously, the NIS is cognisant of the hydrological connectivity of the Proposed scheme to Dublin Bay and the NIS has appropriately considered the potential in-combination impacts.

2.4.3 76 - Torcross Unlimited Company - Hermitage Medical Clinic

2.4.3.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in section 4.5.1.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, on the northern side of the N4 between the entrance to the Hermitage Golf Club and Junction 2 of the N4 a segregated two-way cycle track is proposed which will connect with the existing foot / cycle bridge over the N4 adjacent to the Mount Andrew estate / St Loman's Hospital access.

Eastwards of this location the two-way cycle track continues on the north side of the N4 and will require land acquisition from the Hermitage Medical Clinic. A retaining wall is proposed for the new boundary. The two-way cycle track will then run along the north side of the eastbound off-slip at Junction 2.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.4.3.1 and the proposed permanent and temporary land acquisition lines adjacent to the Hermitage Medical Clinic are shown in Figure 2.2.2.

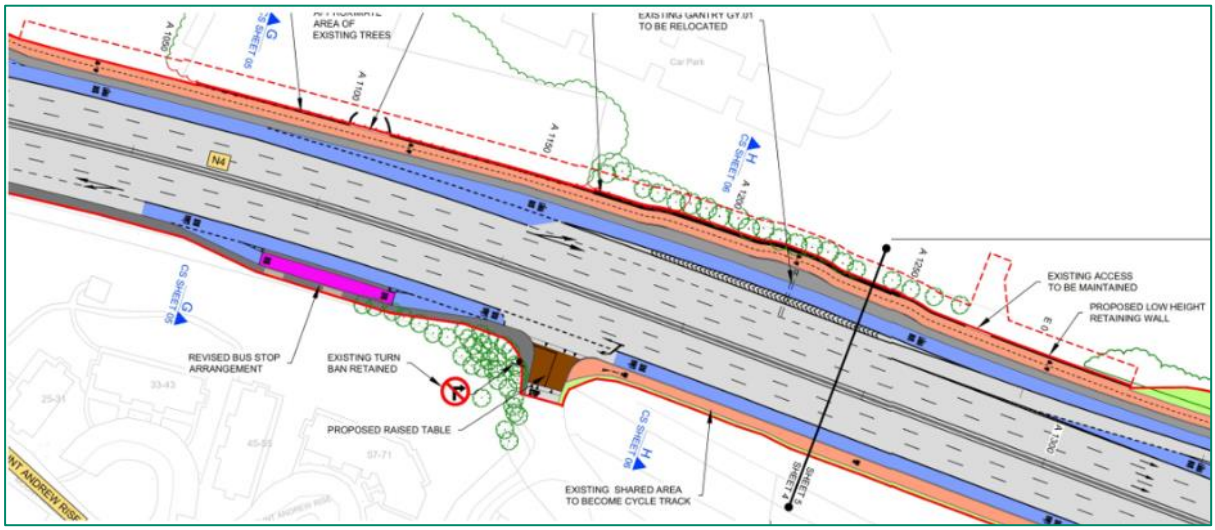


Figure 2.4.3.1: General Arrangement of Proposed Scheme adjacent to Hermitage Medical Clinic

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Hermitage Medical Clinic are shown in Figure 2.4.3.2.

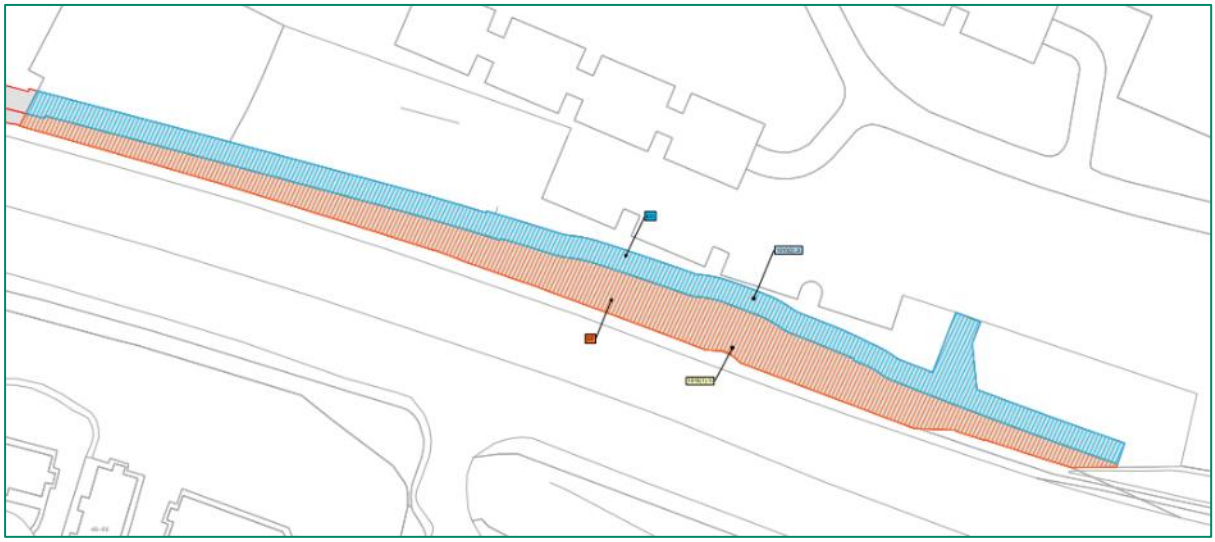


Figure 2.4.3.2: Extract from CPO Deposit Maps at Hermitage Medical Clinic

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.4.3.3.

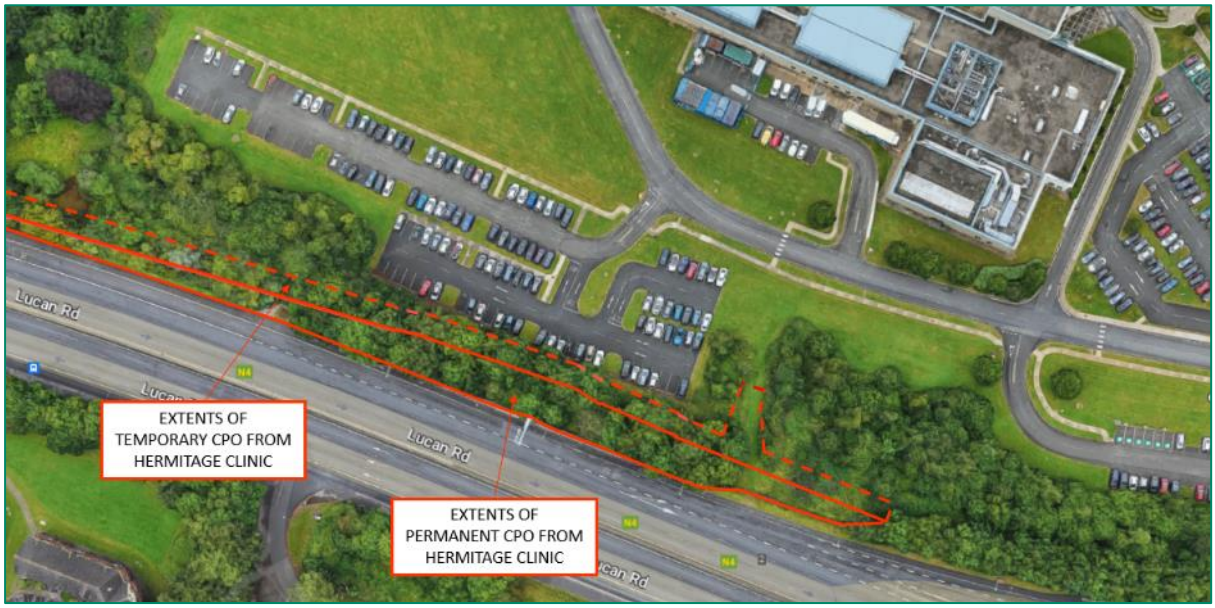


Figure 2.4.3.3: Proposed Land Acquisition lines adjacent to Hermitage Medical Clinic (Image Source: Google)

The relevant extract from the typical cross-sections in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figures 2.4.3.4 and 2.4.3.5.

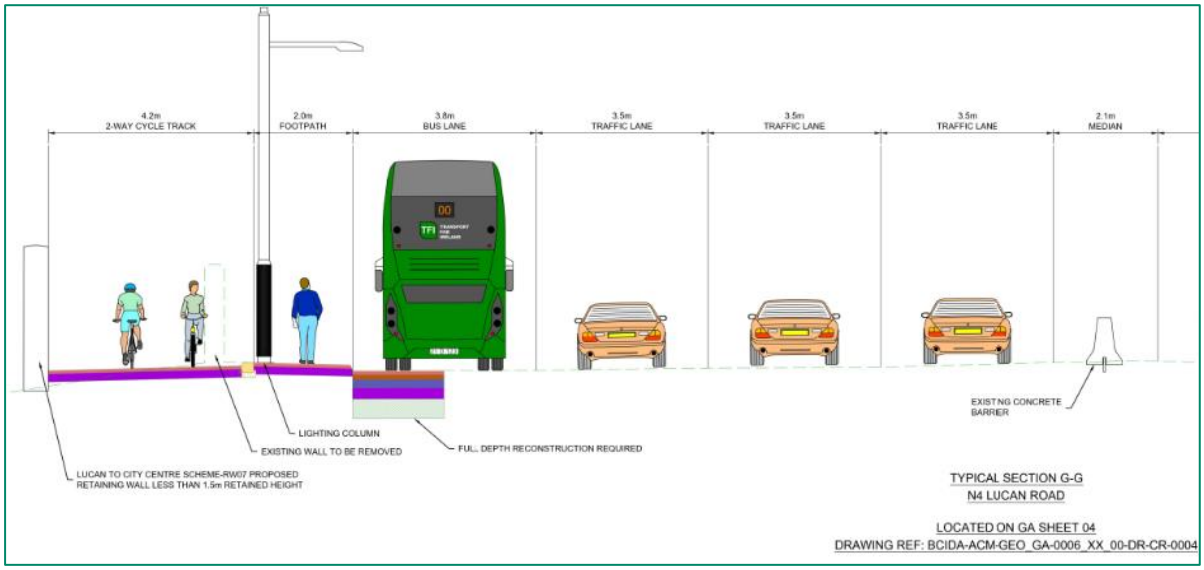


Figure 2.4.3.4: Typical Cross-section G-G Adjacent to the Hermitage Medical Clinic

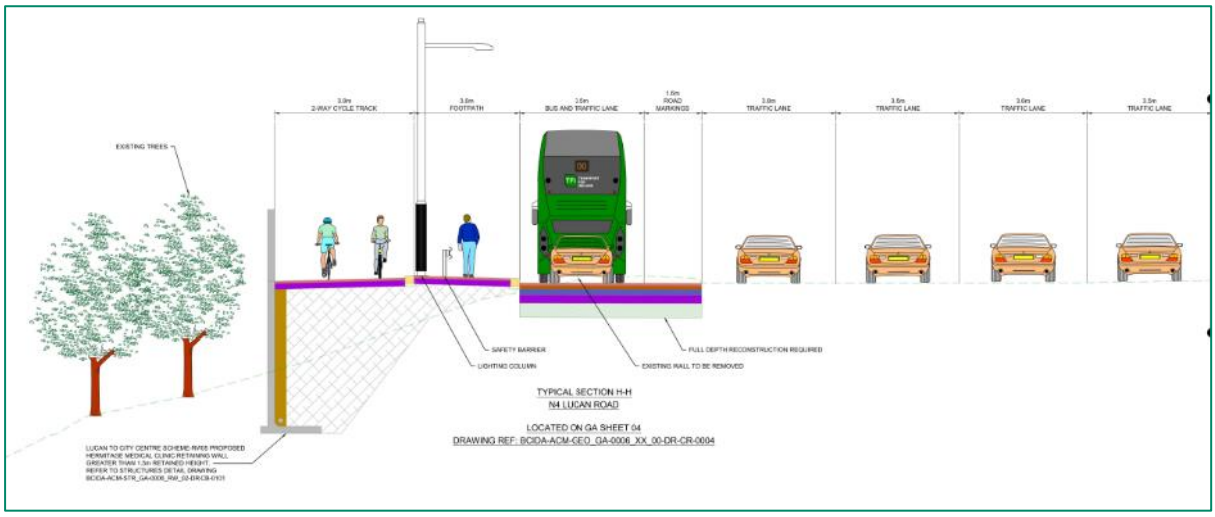


Figure 2.4.3.5: Typical Cross-section H-H Adjacent to the Hermitage Medical Clinic

2.4.3.2 Issues raised

i) The submission stated that the extents of the lands to be acquired are excessive, and unnecessary, for the implementation of the Proposed Scheme.

ii) The submission stated that the Proposed Scheme (including the loss of mature trees) may be a Material Contravention of the SDCC Development Plan in respect of the "High Amenity" zoning of the land to be acquired and related policies. It also highlights that there is a significant view identified as to be protected in the Development Plan.

iii) The submission states that the CPO would significantly impact the ability of the clinic to accommodate further planned expansion, highlighting that the lands between the existing clinic buildings and the N4 is the area where expansion is planned. Specifically. the submission asserts that the *"lands immediately adjacent to the proposed CPO land acquisition are therefore essential to the future expansion of the Hermitage Clinic. If the proposed CPO land take proceeds, it would significantly impact the Hermitage Clinic and the ability to accommodate further expansion of the clinic's facilities in the future."*

iv) The submission expressed the view that the concerns in relation to the National Guidelines for the Prevention of Nosocomial Aspergillosis and, if the Scheme is approved, is seeking a robust planning condition requiring agreement between the Hermitage Medical Clinic and the NTA's contractor.

v) The submission highlighted that no consultation had been held with Torcross in respect of planting works to replace the lost trees and expressed concern in relation to the height of the retaining wall on the Hermitage Clinic side of the proposed boundary.

vi) The submission states that the NTA has refused to consider provision of new bus stops / relocation of existing bus stops to facilitate improved access to the Hermitage Clinic.

vii) The submission states that the NTA has not confirmed how the Proposed Scheme will interface with the proposed Metro West.

2.4.3.3 Response to Issues raised

i. Extents of lands to be acquired

As described in section 4.5.1.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, at this location the Proposed Scheme design includes a two-way cycletrack on the northern side of the N4, and a continuous bus lane at the eastbound diverge to Junction 2 of the N4. These design proposals are required to achieve the Proposed Scheme objectives and land acquisition is necessary to accommodate the design proposals. The need for these design proposals is set out below.

Two-way Cycletrack

Section 2.2.1.3 of Chapter 2 of Volume 2 of the EIAR, Need for the Scheme, sets out how there is a need to provide segregated cycle facilities in accordance with the proposed GDA Cycle Network Plan,

which was adopted by the NTA in 2014. Specifically, it is noted that Primary Route 6 follows the route of the Proposed Scheme at this location.

Section 3.3.3 of Chapter 3 of Volume 2 of the EIAR, Reasonable Alternatives, describes how the consideration of alternative cycling route options was fundamental in the process of defining the Emerging Preferred Route. It is noted in Section 3.3.3. that the proposal to locate a two-way cycle track on the northside of the N4 provides the following benefits:

- It reduces the number of intersections with junctions and accesses to private properties;
- It provides all the necessary components of the GDA Cycling Strategy in this area;
- It introduces a new link between Ballyowen Lane and Ballyowen Road, providing a coherent network that links all main origin and destination zones / centres for cyclists, with minimal detours and interruptions minimised; and
- the introduction of a segregated two-way cycle track will eliminate the need for cyclists to use the shared area at Junction 2 of the N4 in the westbound direction.

Section 3.3.3 also states that the proposal for a two-way cycle track on the northside of the N4 is a significant improvement on the Emerging Preferred Route (EPR) proposals which contained detours and gaps in the westbound direction.

Section 3.3.3 concludes the Proposed Scheme provides a more direct route for westbound cyclists than the EPR proposals and also provides for several links from areas south of the N4 and R148 facilitating a more direct route for eastbound cyclists from those areas. It also concludes that the Proposed Scheme will reduce journey times for cyclists using the route by reducing the stop-start nature of the EPR proposals, which was raised as an issue at the first Non-Statutory Public Consultation.

In summary the two-way segregated cycle-track on the north side of the N4 at this location, and the associated permanent and temporary land take, is necessary for the Proposed Scheme to achieve the scheme's objectives.

Continuous Bus Lane

As shown in Figure 2.4.3.6 below the existing eastbound bus lane at the diverge for Junction 2 of the N4 is discontinuous, with a gap introduced by the parallel diverge lane for general traffic.

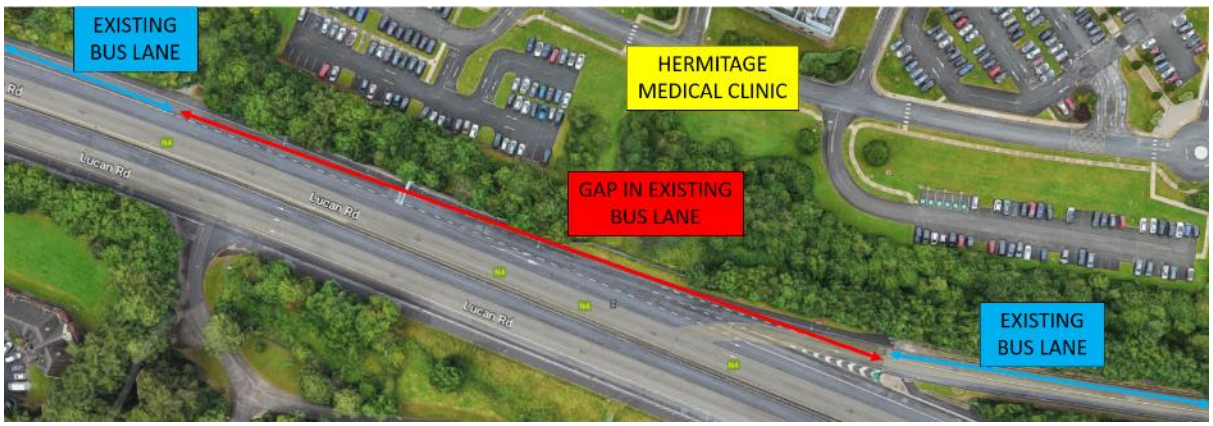


Figure 2.4.3.6: Existing discontinuous bus lane adjacent to Hermitage Medical Clinic (Image Source: Google)

As set out in Section 3.4.2 of EIAR Chapter 3, the draft Preferred Route Option was published in March 2020 as part of the second round of public consultation; and Section 3.4.3 sets out how this was followed by a third round of non-statutory public consultation on the updated draft Preferred Route Option took place from the 04 November to 16 December 2020, In both these draft versions of the Preferred Route Option a gap was retained in the bus lane at this location, see Figure 2.4.3.7. While this arrangement including land acquisition for the proposed two-way cycletrack, it did not require any further land acquisition for the bus lane.

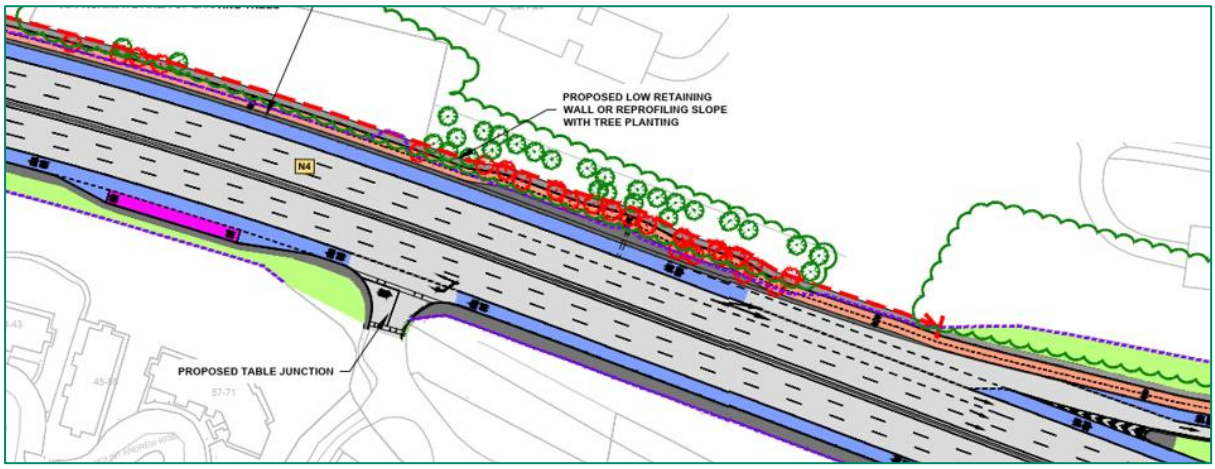


Figure 2.4.3.7: Draft Preferred Route Option for bus lane adjacent to Hermitage Medical Clinic

In July 2022 Transport Infrastructure Ireland (TII) published a new design standard DN-GEO-03087 entitled "Hard Shoulder Bus Priority Measures on Dual Carriageways and Motorways (July 2022)". This standard is directly applicable for the N4 national primary road at this location where there already is a bus lane in lieu of a hard shoulder. In accordance with this design standard a continuous bus lane is required in situations where the bus lane follows the diverge lane, as is the case with the Proposed Scheme.

Therefore, the design alternative that formed the draft Preferred Route Option was no longer in accordance with the relevant design standard and the design was amended to include a continuous bus lane in the eastbound direction at the diverge to Junction 2 of the N4, as described in section 4.5.1.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description.

This layout is shown on General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description, see extract in Figure 2.4.3.8.

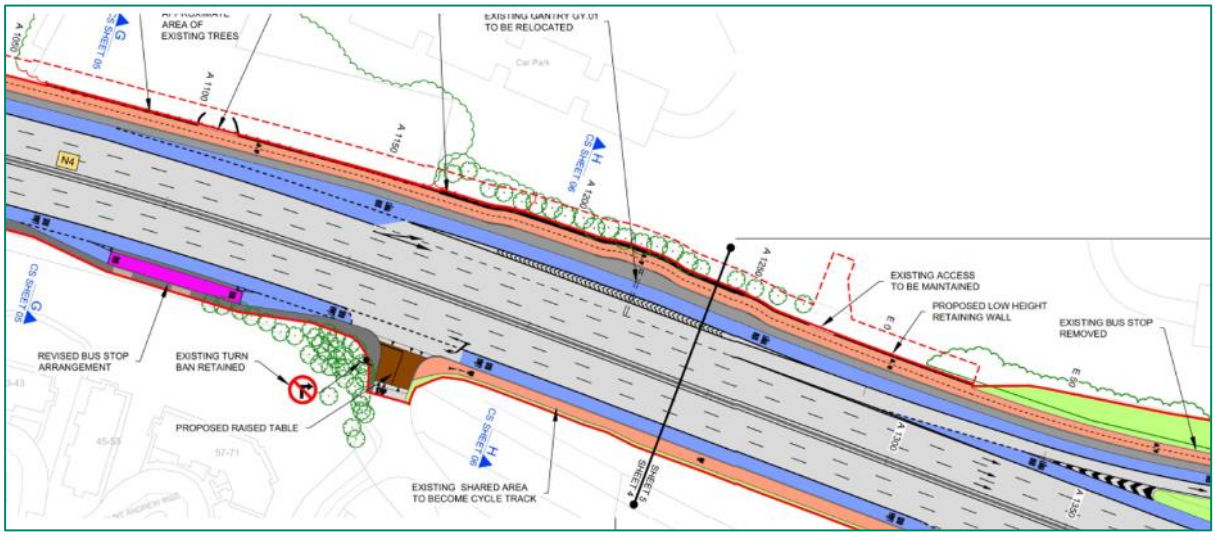


Figure 2.4.3.8: Proposed Continuous Bus Lane adjacent to Hermitage Medical Clinic

In summary the continuous bus lane on the eastbound carriageway of the N4 at this location, and the associated permanent and temporary land take, is necessary for the Proposed Scheme to comply with the appropriate design standard.

It is also noted that the design of the proposed retaining wall that will form the new boundary to the Hermitage Medical Clinic minimises the necessary land acquisition; details of the retaining wall are shown in the Bridges and Major Retaining Structures Drawings in the EIAR, Volume 3, Part 2 of 3, Chapter 4 Proposed Scheme Description.

ii. Compliance with South Dublin County Development Plan

The submission stated that the Proposed Scheme (including the loss of mature trees) may be a Material Contravention of the SDCC Development Plan in respect of the "*High Amenity*" zoning of the land to be

acquired and related policies. It also highlights that there is a "*significant view*" identified as to be protected in the Development Plan.

The potential effects of the Proposed Scheme on the High Amenity zoning and the significant view of the Liffey Valley in the vicinity of the Hermitage Medical Clinic have been fully assessed in the EIAR.

High Amenity Zoning

The Proposed Scheme is along the edges of the HA-LV zoning objective and will increase the width of an existing transport corridor that already forms part of the character of the area. The zoning objective does not place a moratorium upon the enhancement of roads infrastructure within the area. Indeed, in regard to the zoning objective, the South Dublin County Council Development Plan 2022-2028 sets out a list of potential uses that are "*not permitted*" and within this substantial list road and cycle infrastructure is not included.

It is noted that the land acquisition required for the Proposed Scheme is a very small proportion of the lands within the wider zoning objective and therefore will not significantly detract from the zoning objectives stated aims. Furthermore, with regard to the submission point raised regarding 'Future Interface with the Proposed Metro West' (refer to item vii below for the response), it is noted that the South Dublin County Development Plan 2022-2028 includes a 'Long Term High Capacity Public Transport Route' through the HA-LV zoning objective so the principle of such works within the zoning is considered acceptable.

While some existing roadside planting will be removed, few if any mature trees are impacted as the subject planting was only established on following previous road widening in the late 1980s / early 1990s.

In response to the query relating to the High Amenity zoning, EIAR Volume 2 Chapter 17, Landscape and Visual, Section 17.3.3.1 identifies SDCC policy NCBH7 and states that "*this relates to the protection of the Liffey River Valley and Special Amenity Area Order (SAAO). Zoning Objective 'High Amenity – Liffey Valley' (HA-LV) relates to designated land within the Liffey River Valley to the north of the N4, including parts of the study area, and states that development within this designation should be designed and sited to minimise visual impacts and preserve the amenity value of the river valley including its landscape value and views and vistas of the river valley."*

In Section 17.4.3.2.5 of Chapter 17 of the EIAR it is assessed that the works at the Hermitage Medical Clinic will have an impact on the High Amenity designation for the Liffey Valley (HA-LV) *"with the removal of screening trees to the boundary with the N4, including a complete removal of a 40m section. However, landscape character at the clinic grounds has been significantly eroded by the presence of the car parking and road infrastructure within the grounds and the changes there will have a minimal effect on the character or amenity value of the HA-LV designation."*

The Significance and Quality of Townscape / Streetscape / Visual Effects / Impacts on the Liffey Valley (HA-LV) are summarised in Table 17.7 in relation to the Construction Phase, with the impact assessed as Negative Moderate Temporary / Short-Term, and in Table 17.8 in relation to the Operational Phase, with the impact is assessed as Negative Moderate Short-Term. In Table 17.11 (page 49 of Chapter 17) in relation to the predicted operational phase (at 15 years post-construction) the impact is assessed as Neutral Slight / Moderate Short-Term.

Significant View

In EIAR Volume 2 Chapter 17, Landscape and Visual, Section 17.3.3.1 identifies that the *"Development Plan indicates an objective to Protect and Preserve Significant Views from the eastbound lane of the N4 at the N4 / Fonthill Road Junction looking north towards the Liffey Valley, although this is now almost completely screened by roadside tree planting."*

In relation to the Construction Phase, Section 17.4.3.2.7 states*: "Views towards the Liffey Valley are identified for protection north from Junction 2 of the N4, Fonthill. Although the designation exists, in reality the views from the N4 towards the valley are almost entirely screened by roadside tree planting therefore sensitivity is low. Works to the Hermitage Medical Clinic will occur in the foreground of the view with the removal of trees potentially opening up views slightly to the north."* The section concludes that *"The sensitivity is low and the magnitude of change is low. The potential townscape / streetscape and visual effect of the Construction Phase on Preserved Views / Scenic Views is assessed to be Neutral, Slight and Temporary / Short-Term."*

In relation to the operational Phase, Section 17.4.4.2.7 states: "*A view is identified for protection north from N4 at Junction 2, Fonthill, however, the existing view is almost completely screened by roadside tree planting and therefore sensitivity is low.*" The section goes on to state that. *"There is potential for a slight opening up of the view with removal of tree planting at the Hermitage Medical Clinic, although the boundary wall will be raised and proposed planting will reinstate this screening over the medium to long-term. The sensitivity is low and the magnitude of change is low. The potential townscape / streetscape and visual effect of the Operational Phase on preserved views / scenic views is assessed to be Neutral, Slight and Short-Term becoming Neutral, Imperceptible, Long-Term."*

In addition, it is noted that South Dublin County Council ("**SDCC**") set out in their submission to An Bord Pleanála (the "**Board**") dated 11 January 2023 (which is on An Bord Pleanála's website) that they "*are of the view that it* [the Proposed Scheme] *aligns with the policies of the County Development Plan (2022-2028)".* SDCC set out the policies and objectives from their development plan which support the Proposed Scheme on pages 4 and 5 of their submission to the Board.

iii. Impact of the Proposed Scheme on future expansion

The submission asserts that the *"lands immediately adjacent to the proposed CPO are therefore essential to the future expansion of the Hermitage Clinic. If the proposed CPO land take proceeds, it would significantly impact the Hermitage Clinic and the ability to accommodate further expansion of the clinic's facilities in the future."*

In support of the above statement the submission refers to a permitted planning permission for a multi-storey car park (MSCP), planning reference SD17A/0251. Figure 2.4.3.9 provides an extract from this permission and shows the location of the proposed MSCP. Figure 2.4.3.10 shows the location of the MSCP relative to the Proposed CPO.

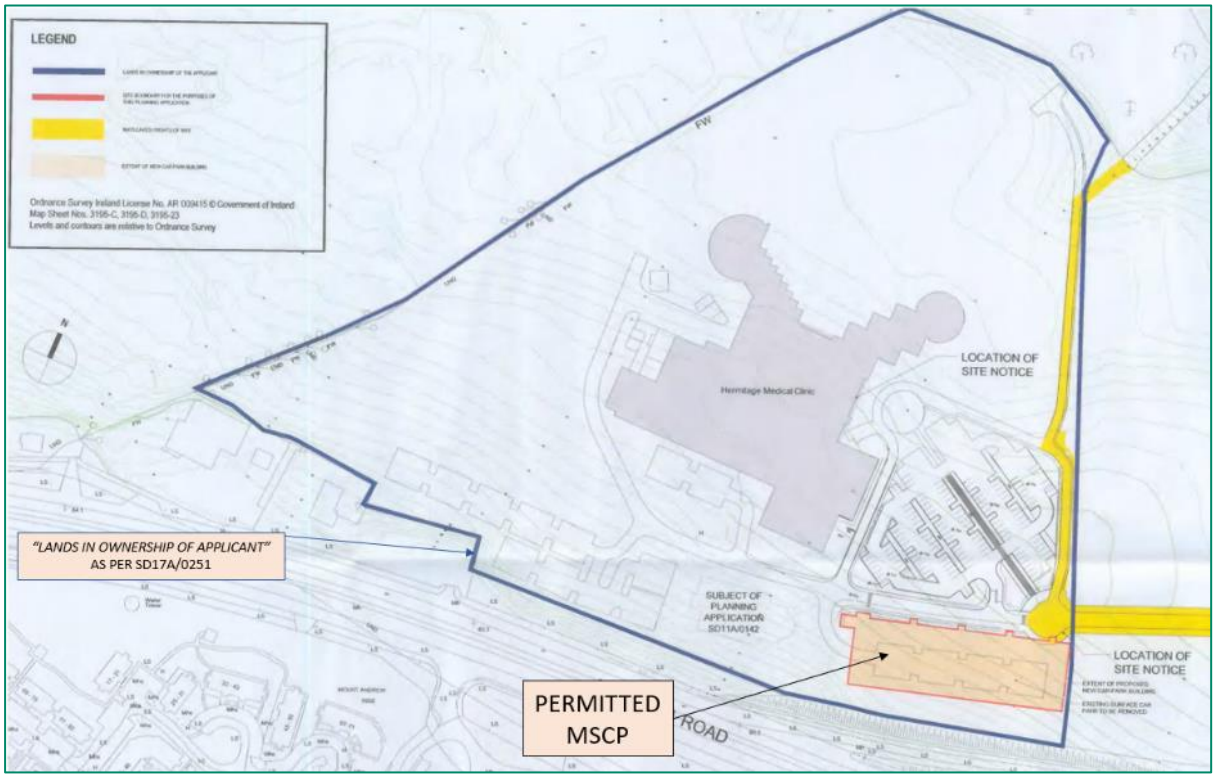


Figure 2.4.3.9: MSCP - Planning Permission SD17A/0251 (Image Source: SDCC Planning Portal)

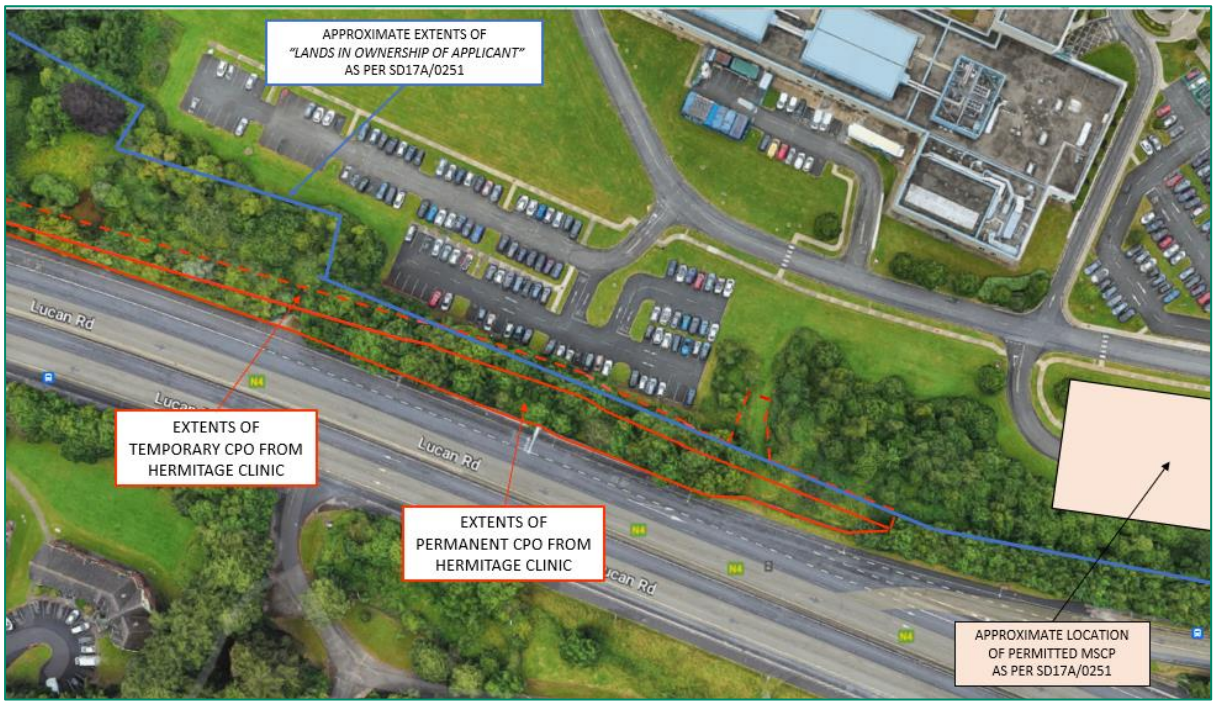


Figure 2.4.3.10: Location of Permitted MSCP Relative to Proposed CPO (Image Source: Google)

The above Figures show that the permitted MSCP is not adjacent to the proposed CPO.

In addition, the Proposed Scheme adjacent to the Hermitage Medical Clinic as described in Section 2.2.1 earlier and as shown in Figure 2.4.3.10 the proposed permanent and temporary land acquisition is limited to the planted side slope supporting the N4 and does not impact the existing car park.

The existing car park and side slope supporting the N4 as viewed from the Hermitage Medical Clinic are shown in Figure 2.4.3.11.

Figure 2.4.3.11: Existing Hermitage Medical Clinic Car Park and Side Slope to N4 (Image Source: Google)

In Section 10.4.4.1.2.1 of Chapter 10 Population of the EIAR the landtake impacts on the Hermitage Medical Clinic are described as "Negative, Slight and Long-Term".

In summary the submission does not provide any evidence to substantiate the statement *"If the proposed CPO land take proceeds, it would significantly impact the Hermitage Clinic and the ability to accommodate further expansion of the clinic's facilities in the future."* The submission makes the case that the MSCP under planning reference SD17A/0251 was to be located '***proximate***' to the area of the CPO. The proposed development of the CPO lands is limited to the edges of the wider subject lands

and in no way precludes the MSCP being constructed. Also, whilst the works for the Proposed Scheme have a locational requirement to be situated adjacent to the existing road it is not understood why the future development of the wider subject lands is entirely dependent upon on development / extension being accommodated solely adjoining the N4, given the substantial overall size of these lands.

iv. Operation Concerns - Nosocomial Aspergillosis

The submission expressed the view that the National Guidelines for the Prevention of Nosocomial Aspergillosis have not been addressed by the NTA and, if the Proposed Scheme is approved, is seeking a robust planning condition requiring agreement between the Hermitage Medical Clinic and the NTA's contractor.

In relation to the concern expressed about dust arising from the construction of the Proposed Scheme, Section 5.3.1.4 the EIAR Chapter 5 Construction states: "*The appointed contractor will liaise with the Hermitage Clinic in advance of the commencement of construction works to inform them of the proposed construction management arrangements. Refer to Chapter 7 (Air Quality) for more information on the dust mitigation measures which will be implemented by the appointed contractor. The expected construction duration will be approximately 18 months*."

Section 7.4.2.1 of EIAR Chapter 7 Air Quality describes how the assessment of necessary dust mitigation measures has been undertaken in accordance with the Institute of Air Quality Management (IAQM) guidelines (IAQM, 2014) which outline the assessment criteria for assessing the impact of dust emissions from construction activities based on both receptor sensitivity and the number of receptors affected.

In relation to construction dust Section 7.2.4.4 identifies hospitals as a high sensitivity receptor and Section 7.5.1.1 states that the dust mitigation measures during the construction will include:

- *Public roads outside the Proposed Scheme will be regularly inspected for cleanliness and cleaned as necessary;*
- *Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays (or similar dust suppression methods) will be used as required if particularly dusty activities associated with the construction contract are necessary during dry or windy periods;*
- *During movement of dust-generating materials both on and off-site, trucks will be covered with tarpaulin and before entrance onto public roads, trucks will be checked to ensure the tarpaulins are properly in place; and*
- *The appointed contractor will provide a site hoarding of 2.4m height along boundaries where sensitive receptors are located, at a minimum, and at the Construction Compounds, which will assist in minimising the potential for dust impacts off-site.*

Section 11.4.3.4 of EIAR Chapter 11 Human Health makes direct reference to the Hermitage Clinic and the perceived risk of Nosocomial Aspergillosis. In this section, the risk has been deemed as negative, not significant and short-term, based on the nature of the proposed construction works, the duration of the works and the proposed mitigation measures for dust suppression in this area during the construction stage.

Within Table 5.2 (Mitigation and Monitoring Measures (Construction Phase) of EIAR Volume 4 Appendices Chapter Appendix A5.1 Construction Environmental Management Plan (CEMP), on page 9 it states that the "*In advance of construction works in the vicinity of the Hermitage Medical Clinic, the appointed contractor will liaise with the Hospital to inform them of the proposed construction management arrangements*."

v. Loss of Trees and Proposed Retaining Wall

In relation to the concerns raised about the planting works to replace the lost trees as a consequence of the Proposed Scheme, Section 4.6.12 of EIAR Chapter 4 Proposed Scheme Description provides an overview of the landscape design principles and approach. Section 4.5.1.8.1 of Chapter 4 describes the approach taken in respect of the Hermitage Medical Clinic boundary and states that "*Existing*

boundary walls will be set back and replaced to accommodate a 2m wide footway, 3.25m two-way cycle way and a 0.65m wide buffer strip adjacent to the proposed boundary wall. The existing boundary walls are to be demolished, relocated and reconstructed incorporating additional retaining structure elements where required." It goes on to state that "*Existing trees along the boundaries will be retained where possible and replacement planting will be proposed where appropriate"*.

The Landscaping General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description include 11 new heavy standard trees (defined as 12-14cm girth, 300-350cm height in accordance with BS3936-1) in the area of temporary land acquisition at the location where existing trees are lost, see extract in Figure 2.4.3.12.

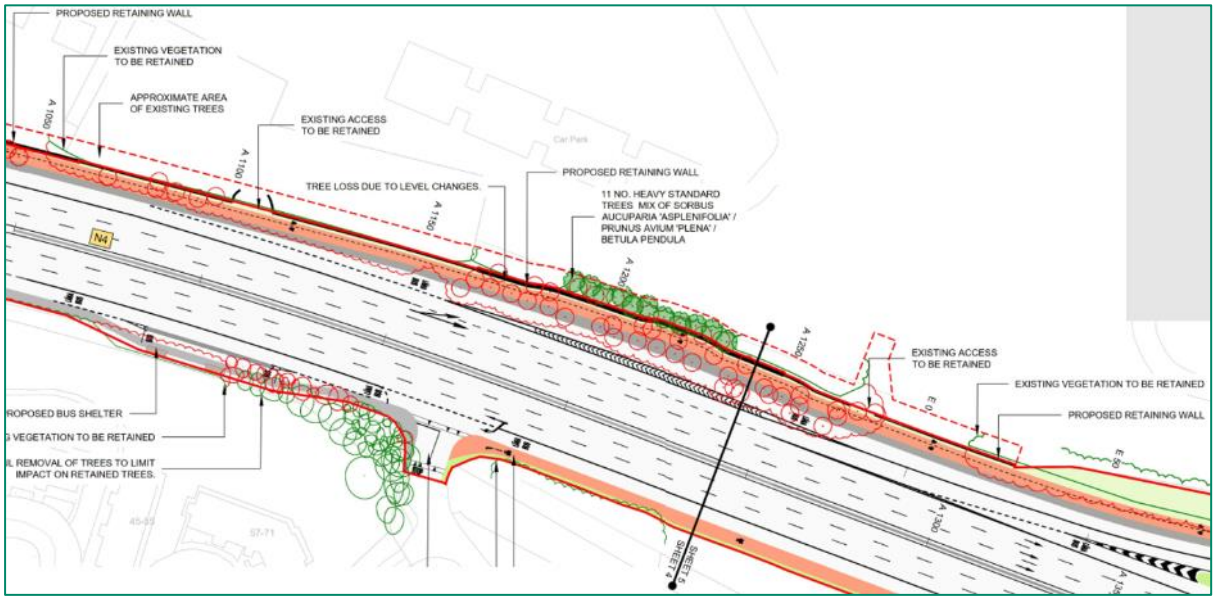


Figure 2.4.3.12: Extract from Landscape General Arrangement drawings at Hermitage Clinic

Section 17.4.4.2.7 of EIAR Chapter 17 Landscape and Visual states that. *"There is potential for a slight opening up of the view with removal of tree planting at the Hermitage Medical Clinic, although the boundary wall will be raised and proposed planting will reinstate this screening over the medium to long-term. The sensitivity is low and the magnitude of change is low. The potential townscape / streetscape and visual effect of the Operational Phase on preserved views / scenic views is assessed to be Neutral, Slight and Short-Term becoming Neutral, Imperceptible, Long-Term."*

As regards the concern in relation to the height of the retaining wall on the Hermitage Clinic side of the proposed boundary, it is noted that the Bridges and Major Retaining Structures Drawings in the EIAR, Volume 3, Part 2 of 3, Chapter 4 Proposed Scheme Description indicate that the maximum height of the front of the proposed retaining wall (ie facing the Hermitage Medical Clinic) is 4.5 to 5.0m. The reference in the submission to a height of over 8m appears to relate to the height to the underside of the foundation.

It is also noted that the height of the proposed wall on the roadside of the boundary is 2.0m, which is higher than the existing boundary wall, and was determined as the appropriate height to provide enhanced security to the site by preventing ease of access as highlighted and requested by the Hermitage Medical Clinic in the letter from the Chief Executive dated 1st December 2020.

vi. Servicing of Hermitage Clinic by Public Transport

The issue of the bus service routing within the Hermitage Medical Clinic property is outside the scope and objectives of the Proposed Scheme.

It is noted that the "Dublin Area Bus Network Redesign" which is entirely separate and distinct from the Proposed Scheme 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 Redesign was published in August 2018 and is currently being implemented. The C-Spine BusConnects services commenced in early 2022 and are routed along the route of the Proposed Scheme at this

location, providing improved frequency and operating hours within walking distance of the Hermitage Medical Centre.

Further network improvements, including new orbital services (W2 & W4) which will provide improved connectivity to the South Dublin area are anticipated to commence next year, which will also assist in patients / staff accessing the Hermitage Medical Centre by public transport.

vii. Future Interface with Metro West

In response to the assertion that the NTA has not confirmed how the Proposed Scheme will interface with the proposed Metro West, it is necessary to indicate that Metro West is not included in the Transport Strategy for the Greater Dublin Area (2016-2035) that was current at the time that the application for approval of the Proposed Scheme was made to An Bord Pleanála. It is also necessary to indicate that Metro West is not proposed in the latest Transport Strategy for the Greater Dublin Area (2022-2042), which was published in January 2023.

South Dublin County Development Plan SM3 Objective 13 states*: "To support new Bus Rapid Transit (BRT) lines as a means of providing new public transport links, where rail options are demonstrated by the NTA not to be achievable over the period of the County Development Plan 2022-2028, including for the planned Metro (Metrowest) and along the Outer Ring Road and Adamstown-Citywest corridors*"

The reference to '*Long Term High Capacity Public Transport Routes'* on the SDCC Development Plan zoning maps on the Road to the east of the main Hermitage facility also comments under '*function*' '*Future Provision'* which is understood to mean that there are no definitive plans but that the council seeks to maintain options generally along the corridor specified within the Plan for '*Long Term High Capacity Public Transport'*. This does not mean specifically MetroWest, it could form any number of public transport options and that has yet to be determined.

In regard to '*Long Term High Capacity Public Transport',* SM3 Objective 7 is relevant and sets out the following: *"To support and encourage the NTA in investigating high-capacity public transport solutions for Dublin southwest, including examining the feasibility of Metro and/or Luas serving areas including Ballyboden, Ballycullen / Oldcourt, Firhouse, Kimmage, Knocklyon, Rathfarnham, South Tallaght, Templeogue and Terenure and the feasibility of linking the red and green Luas to maximise public transport links and permeability in Dublin southwest*."

It is clear that the objective seeks to *'investigate'* '*Long Term High Capacity Public Transport Routes'* and supports the NTA in examining the feasibility of public transport options including Luas and Metro.

Thus, Metrowest is only cited in the context of SDCC supporting new Bus Rapid Transit where rail options (such as Metrowest) are demonstrated not to be achievable over the period 2022-2028. By not including Metrowest in the Transport Strategy for the Greater Dublin Area (2022-2042) the NTA has simply demonstrated that Metrowest is not achievable over the period 2022-2028, and indeed over the period 2022-2042.

Should an approval under Section 51 of the Roads Act 1993 (as amended) for the Proposed Scheme be granted, any further future transport proposals at this location that are not included in the lifetime of the Transport Strategy for the Greater Dublin Area (2022-2042) would be required to consider how they would interface with the Proposed Scheme.

In addition, it is noted that South Dublin County Council ("**SDCC**") set out in their submission to An Bord Pleanála (the "**Board**") dated 11 January 2023 (which is on An Bord Pleanála's website) that they "*are of the view that it* [the Proposed Scheme] *aligns with the policies of the County Development Plan (2022-2028)"*.

2.4.4 78 – Palmerstown Lodge

2.4.4.1 Description of the Proposed Scheme at this Location

As described in section 4.5.1.2 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, at the signalised junction of the R148 with the Old Lucan Road / The Oval a new westbound, bus only, right turn lane is proposed on the R148 Palmerstown bypass to facilitate new bus services through Palmerstown village. A small area of land acquisition will be required from the western edge of the petrol filling station at this location to accommodate this new bus movement. The existing R148 westbound u-turn facility located some 40m east of the junction with The Oval will be closed.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.4.4.1.

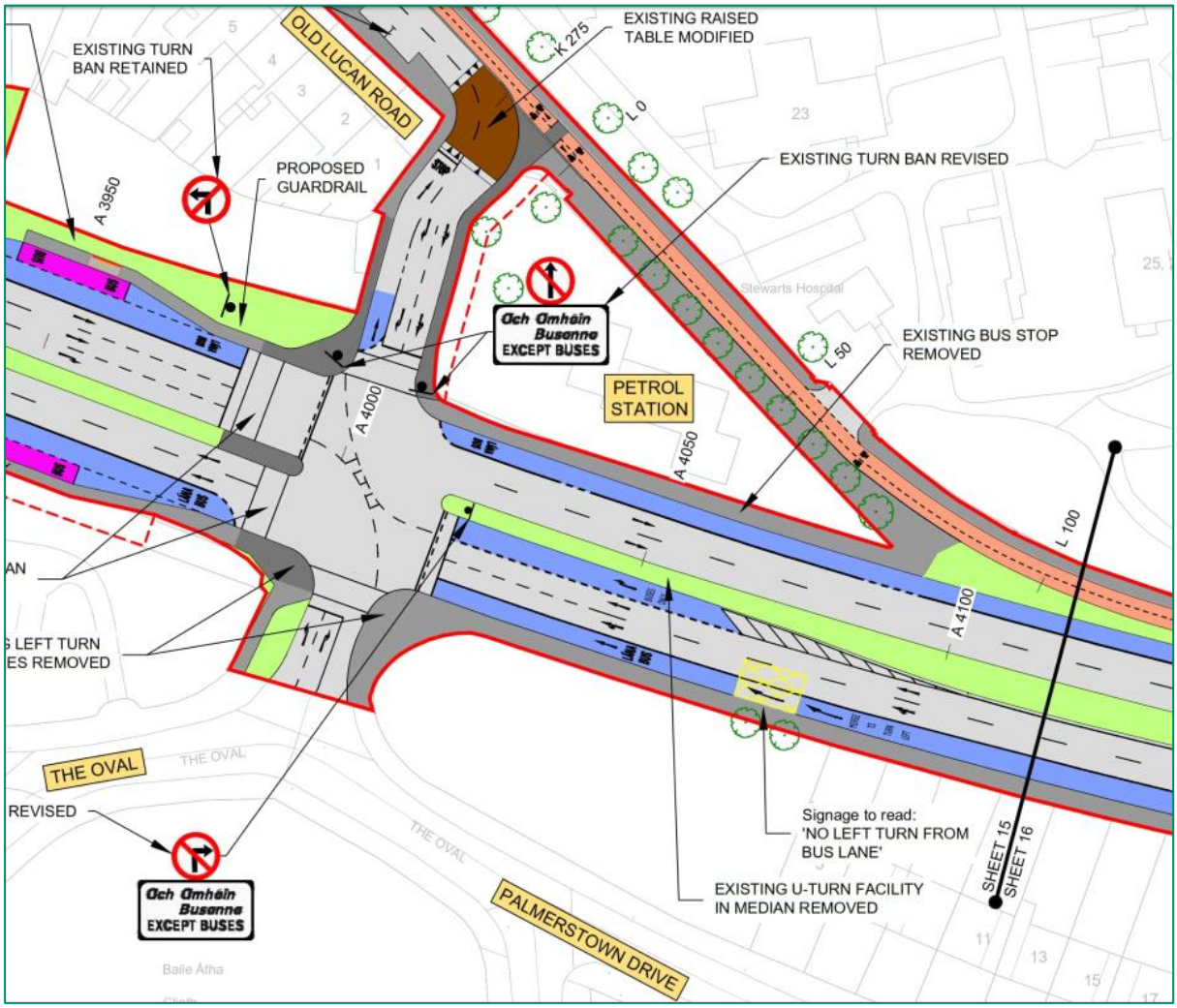


Figure 2.4.4.1 General Arrangement of Proposed Scheme at The Oval Junction

2.4.4.2 Issue raised

The submission noted concerns regarding the proposal to remove the u-turn facility described above. The property owner of Palmerstown Lodge advised that they live on the short one-way stretch of R112 Lucan Road and stated that it is the only way to access their property from the city direction when driving. They added that having consulted a valuer, they believe the proposal will have an impact on the value of their property.

The location of the property and the existing u-turn facility are shown in Figure 2.4.4.2.

Figure 2.4.4.2 Location of Palmerstown Lodge and Existing U-turn Facility (Image Source: Google)

2.4.4.3 Response to Issue raised

It is not possible to maintain a safe u-turn facility at this location or one further east along the R148 Palmerstown bypass median.

With the Proposed Scheme in place, in order to access the property when driving from the city, one alternative route available is to continue west on the R148 to the junction with Kennelsfort Road, then turn right towards Palmerstown village, then right on to Old Lucan Road, arriving back to the R148; this represents an additional driving distance of approximately 900m, as shown in Figure 2.4.4.3.

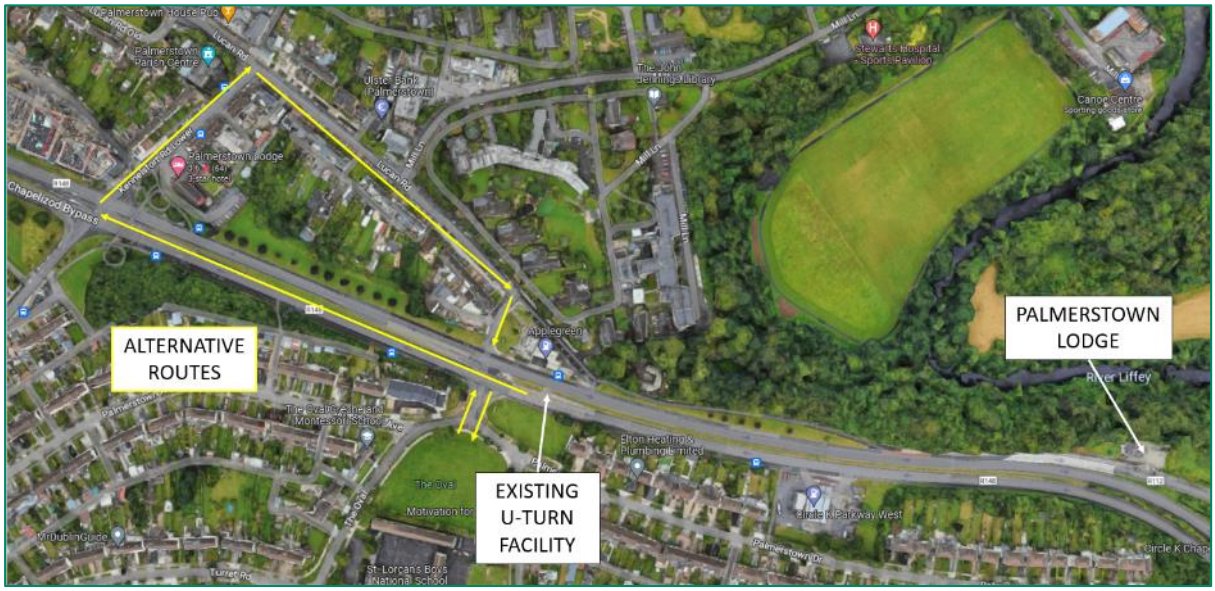


Figure 2.4.4.3 Alternative Routes to Access Palmerstown Lodge (Image Source: Google)

A second alternative route would be to turn left from the R148 at the junction with The Oval, then undertake a turn-around manoeuvre in the residential estate to return to the R148 junction and then turn right; this would represent an additional driving distance of approximately 100m.

3. Responses to Individual Submissions on the Proposed Scheme

3.1 01 – Phyllis Arlow and others

3.1.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Need for grade separation
3. The Oval junction
    a. Removal of left turn slip exiting The Oval
4. Loss of parking / parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
5. Other Common Issues
    a. Impact on the Woodfarm and Red Cow Cottages

3.1.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.2 02 – Gerald Birney and William Carney

3.2.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road

3.2.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.3 03 – Maeve Brophy

3.3.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village

2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
4. Traffic volumes
    a. Outbound lane destination change
5. Other Common Issues
    a. Impact on the Woodfarm and Red Cow Cottages

3.3.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.4 04 – Aidan Burke

3.4.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stops
    a. The Oval [2242, 7239]
    b. Palmerstown Drive [2201]
3. Scheme geometry
    a. HGV movements and kerb radii

3.4.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.5 05 – Alma Byrne

3.5.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip existing The Oval
        ii. Removal of left turn slip entering The Oval from the R148

iii. Impact of Impact of right turn bus lane into Old Lucan Road

c. Traffic volumes

i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts

3.5.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.6 06 – Deirdre Cahill, Elaine Sweeney, Ruth Sliney, Sinead Griffin, Amy O'Riordan

3.6.1 Submission – Palmerstown

The submission raised the following issues:

1. Bus Stop locations
   a. The Oval [2242, 7239]
   b. Palmerstown Drive [2201]
2. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
      ii. Banning of left turn from Kennelsfort Road Lower
   b. The Oval Junction
      i. Removal of left turn slip entering The Oval from the R148
   c. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
3. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Road junction

3.6.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.7 07 – Chapelizod Residents Association

3.7.1 Submission – Chapelizod Hill Road Bus Stops

Description of issues raised in this submission is included in section 2.2.3 of this report

3.7.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.4 of this report.

3.8 08 – Terence Clement Shaw

3.8.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village

2. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. Oval junction
        i. Removal of left turn slip entering The Oval from the R148
    c. Scheme geometry
        i. HGV movements and kerb radii
        ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change
3. Loss of parking/ Parking provision
    a. Old Lucan Road between Kennelsfort Road and The Oval
4. Proposed cycle track
    a. Need for the two way cycle track
5. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction
6. Other Common Issues
    a. Request for traffic modelling data

3.8.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.9 09 – Margaret Cosgrove

3.9.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. The Oval [2242, 7239]
3. Construction
    a. Temporary construction compound
        i. Biodiversity (bats, badgers)
        ii. Tree removal

3.9.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.10 10 – Dr Aisling Curley

3.10.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
    a. Need for the bus routes/bus services separation
2. Bus Stop locations
    a. Old Lucan Road (new stop)
    b. The Oval [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impacts
    a. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Other Common Issues:
    a. Impact on the Woodfarm and Red Cow Cottages (Heritage)
    b. Environmental cost/impacts of the scheme and its cost return period

3.10.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.11 11 – Suzanne Davis

3.11.1 Submission - Knockmaree

Description of issues raised in this submission is included in section 2.2.3 of this report

3.11.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.12 12 – Lucy Delaney

3.12.1 Submission – Palmerstown

The submission raised the following issues:

1. Traffic impact
    a. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
2. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
3. Pedestrian facilities
    a. Pedestrian crossings at The Oval

3.12.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.13 13 – Department of Housing, Local Government and Heritage (Development Applications Unit)

3.13.1 Submission – whole scheme

Description of issues raised in this submission is included in section 2.3.2 of this report.

3.13.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.2 of this report.

3.14 14 – Deirdre Driver

3.14.1 Submission – Palmerstown

The submission raised the following issues:

1. Traffic impact
    a. The Oval junction
        i. Removal of left turn slip exiting The Oval
2. Loss of parking
    a. Old Lucan Road between M50 and Kennelsfort Road
3. Pedestrian facilities
    a. Pedestrian crossings at The Oval

3.14.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.15 15 – Dublin Commuter Coalition

3.15.1 Submission – General and Con Colbert Road to St Johns Road & Chapelizod

Description of issues raised in this submission is included in section 2.3.3 of this report.

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.

3.16 16 – Martin & Marie Duggan, Gerard Duggan & Clodagh Fox, Christy & Claire O'Brien, Gerard Blake

3.16.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. The Oval [2242, 7239]

b. Palmerstown Drive [2201]

3. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip exiting The Oval
      ii. Removal of left turn slip entering The Oval from the R148
4. Loss of parking
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track
6. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Road junction
   b. Pedestrian crossings at The Oval

3.16.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.17 17 – Lisa Duncan

3.17.1 Submission – Palmerstown

The submission raised the following issues:

1. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
      ii. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip exiting The Oval
      ii. Removal of left turn slip entering The Oval from the R148
2. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Road junction
   b. Pedestrian crossings at The Oval
3. Air pollution and noise pollution during Operation

3.17.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.18 18 – Geraldine Fagan, Michael Fagan, Mairead Sinclair and Susan Birkett

3.18.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. The Oval [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
    a. Need for the wo way cycle path
    b. Alternative cycle routes
6. Air pollution and noise pollution during Operation
7. Construction
    a. Badgers and bats
8. Other Common Issues
    a. Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod

3.18.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.19 19 – Ben Fehily

3.19.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148

3.19.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.20 20 – Sorcha Ford

3.20.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. The Oval [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Impact of right turn bus lane into Old Lucan Road
4. Other common issues
    a. Environmental cost/impact of the scheme and its costs return period

3.20.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.21 21 – Ailbhe Foy and Joseph Lee

3.21.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Outbound lane destination change
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track

   a. Need for two way cycletrack
   b. Cyclists will stay on the R148
6. Pedestrian facilities
   a. Pedestrian crossings at the Kennelsfort junction
   b. Pedestrian crossing at The Oval
7. Construction
   a. Temporary construction compound
      i. Traffic and amenity impact of compound
8. Other common issues
   a. Impact on the Woodfarm and Red Cow Cottages

3.21.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.22 22 – David & Eileen Gaynor

3.22.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. The Oval [2242, 7239]
   b. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval

3.22.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.23 23 – Paul Gogarty

3.23.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
      ii. Need for grade separation

4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction

3.23.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.24 24 – Máiréad Harrington

3.24.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Pedestrian facilities
    a. Pedestrian crossings at the Kennelsfort junction
    b. Pedestrian crossings at the Oval
6. Air pollution and noise pollution during Operation
7. Construction
    a. Reference to The Oval for the compound

3.24.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.25 25 – Conor & Suzanne Haugh

3.25.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Impact of right turn bus lane into Old Lucan Road
    c. Scheme geometry
        i. HGV Movements and kerb radii
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change
4. Pedestrian facilities
    a. Pedestrian crossing at Kennelsfort junction
5. Other common issues
    a. Impact on the woodfern and Red Cow Cottages (Heritage)

3.25.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.26 26 – Cllr. Alan Hayes

3.26.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road
    b. The Oval [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
        iii. Need for grade separation
    b. The Oval junction

   i. Removal of left turn slip entering The Oval from the R148
   c. Scheme geometry
      i. HGV movements and kerb radii
      ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services
   d. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
      ii. Outbound lane destination change
4. Loss of parking
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track
   b. Cyclists will stay on the R148
   c. Alternative cycle routes
6. Pedestrian facilities
   a. Pedestrian crossings at the Kennelsfort junction
   b. Pedestrian crossings at The Oval
7. Air pollution and noise pollution during Operation
8. Construction
   a. Temporary construction compound
      i. Biodiversity (bats, badgers)
      ii. Drainage infrastructure
9. Other common issues
   a. Impact on the Woodfarm and Red Cow Cottages
   b. U-turn in centre island removed at The Oval junction
10. Working times for construction activities

    Working times for construction activities should be restricted due to the proximity of residents to the proposed compound area in Palmerstown.

11. Entry only from Kennelsfort Road Lower to the Strategic Housing Development

    Submission 26 highlights that a High Court action is underway challenging right of way from the SHD development into the adjacent business park and exiting on to Old Lucan Road. If successful, the action would result in refuse trucks needing to enter/ exit from Kennelsfort Road Lower. The submission references page 32 of EIAR Chapter 4 Proposed Scheme Description asserting that the Proposed Scheme "is presented on the premise of an entry only from Kennelsfort Road Lower to the Strategic Housing Development." The submission requests that the Inspector note the discrepancies at this location

3.26.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 9 of this submission have been provided in Section 2.1.3 of this report.

A detailed response in relation to point 10 of this submission have been provided in Section 2.1.3.8 c) of this report.

Point 11 - Entry only from Kennelsfort Road Lower to the Strategic Housing Development

Page 32 of EIAR Chapter 4 Proposed Scheme Description states the following: *"Construction is underway on a strategic housing development (SHD) of 250 no. apartments on the north-west corner of the R148 Palmerstown bypass/Kennelsfort Road Junction, Palmerstown. This will include provision of a left-in left-out access arrangement, with bollards in the centre of Kennelsfort Road to enforce the left only egress, and segregated pedestrian and cycle access. Service vehicles entering the site will be restricted to one way only traffic movements, with service vehicles entering the subject site from Kennelsfort Road Lower and exiting onto the Old Lucan Road."*

The statement on page 32 accurately reflects the access/egress arrangements included in the approved SHD application in 2020. As the submission notes, if the High Court action is successful, then refuse trucks would need to enter and exit from Kennelsfort Road Lower. In such circumstances the left-in left-out arrangement would still apply and therefore no changes would be required to the Proposed Scheme.

3.27 27 – Margaret Hickey

3.27.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
3. Construction
    a. Biodiversity (bats, badgers)

3.27.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.28 28 – Brendan Higgins, Kevin Higgins, Kelly Higgins, John Roche and Theresa Moylan

3.28.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Need for grade separation
3. Proposed cycle track
    a. Need for two way cycle track
    b. Alternative cycle routes
4. Construction
    a. Biodiversity (bats, badgers)
5. Structural damage to the houses on Kennelsfort Road due to potential increased volume of traffic

3.28.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 4 of this submission have been provided in Section 2.1.3 of this report.

Point 5, Structural damage to the houses on Kennelsfort Road due to the increased volume of traffic

Section 2.1.3.3.d of this report provides a comprehensive response to concerns raised about a potential increase in traffic volumes in Palmerstown. This concludes that the modelled forecasts for the 2028 opening year indicate that one of the impacts of the proposed Lucan to City Centre Core Bus Corridor Scheme is that there is a reduction of 4% in the number of people travelling via car along the R148 Palmerstown bypass/ Chapelizod bypass corridor towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 6% in the number of people travelling via car, as shown in Figure 2.1.21 and Figure 2.1.22 (reproduced from diagrams 6.7 and 6.8 in Chapter 6). This will reduce the overall traffic movement along the R148 Palmerstown bypass/ Chapelizod bypass – City Centre corridor.

Given the forecast reduction in traffic volumes the concern about potential structural damage is unfounded.

3.29 29 – Chris Jennings

3.29.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road (new stop)
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
    c. Scheme geometry
        i. HGV movements and kerb radii
4. Loss of parking
    a. Old Lucan Road between Kennelsfort Road and The Oval
5. Other common issues
    a. Impact on Woodfarm and Red Cow Cottages (Heritage)

3.29.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.30 30 – Senator Mary Seery Kearney

3.30.1 Submission – Chapelizod

Description of issues raised in this submission is included in section 2.2.3 of this report

3.30.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.31 31 – Gareth Kelly

3.31.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change
4. Proposed cycle track
    a. Deficient existing M50 pedestrian/cycle bridge width
5. Pedestrian facilities
    a. Pedestrian crossings at The Oval
6. Air pollution and noise pollution during Operation
7. Other common issues
    a. Impact on the Woodfarm and Red Cow Cottages
    b. Request for traffic modelling data
    c. Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod

3.31.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.32 32 – Mick Kelly, Helen Mullaly, Lil Collins, Leonie Newman, Tara Doherty

3.32.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact

a. Kennelsfort Road junction
    i. Removal of left turn slips
b. The Oval junction
    i. Removal of left turn slip exiting the Oval

3. Air pollution and noise pollution during Operation
4. Construction
    a. Temporary construction compound
        i. Biodiversity (bats, badgers)

3.32.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.33 33 – Daniel Kennedy, Dan Kennedy, June Kennedy, Darren Kennedy (D. Kennedy Steel Supplies Ltd)

3.33.1 Submission - Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Impact of right turn bus lane into Old Lucan Road
    c. Scheme geometry
        i. HGV movements and kerb radii
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
3. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
4. Proposed cycle track
    a. Need for the two way cycle track
5. Other common issues
    a. Proposed materials and cycleway/footway cross section

3.33.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.34 34 – Deborah Kenny

3.34.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. The Oval [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Pedestrian facilities
    a. Walking & running on Old Lucan Road
6. Air pollution and noise pollution during Operation

3.34.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.35 35 – Michael Knightly

3.35.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Scheme geometry
        i. HGV movements and kerb radii
    b. Traffic volumes
        i. Outbound lane destination change
3. Loss of parking/ Parking provision
    a. Old Lucan Road between Kennelsfort Road and The Oval
4. Proposed cycle track
    a. Need for the two way cycle track
    b. Cyclists will stay on R148

3.35.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.36 36 – Knockmaree Management Company CLG Marston Planning Consultancy

3.36.1 Submission – Knockmaree

Description of issues raised in this submission is included in section 2.2.3 of this report

3.36.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.37 37 – Frank Lambe

3.37.1 Submission - Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Oval Junction [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Pedestrian facilities
    a. Pedestrian crossings on The Oval junction
6. Other common issues
    a. Change to ‘amenity’ / ‘feel’ of the heritage part of the Village
    b. Request for traffic modelling data
7. Environmental Impact Assessment Report Chapter 10 – reference to Halston Street

    It is noted in the submission that the EIA report Chapter 10 Population a reference made to Halston Street which it suggests is a mistake, as Halston Street is not located within Palmerstown area.

8. Oral hearing

   The submission raises a request that An Bord Pleanála hold an Oral Hearing to consider the application due to its complexity and the significant impact on the community.

3.37.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 6 of this submission have been provided in Section 2.1.3 of this report.

9. Environmental Impact Assessment Report Chapter 10 issues

The NTA believes that the contention that reference to 'Halston Street' has been included in error (because this road is located away from the Proposed Scheme) stems from a misunderstanding of terminology. References to 'Halston Street' in Chapter 10 (Population) in Volume 2 of the EIAR, are to the community area named Halston Street, and not the specific road called Halston Street. Community areas included in the assessment are listed in the chapter and shown in Figure 10.1 in Volume 3 of the EIAR. For reference, community areas are included in the assessment if a scheme is located within or close to the community area. The Proposed Scheme ends where St. John's Road West meets Victoria Quay at Frank Sherwin Bridge, which is on the boundary between the James's Street and Halston Street community areas, hence the inclusion of both areas in the assessment.

10. Oral hearing

The request for an Oral Hearing is a matter for An Bord Pleanála to consider.

3.38 38 – Brian and Celine Lee

3.38.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
      ii. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip exiting The Oval
      ii. Removal of left turn slip entering The Oval from the R148
      iii. Impact of right turn bus lane into Old Lucan Road
   c. Scheme geometry
      i. HGV movements and kerb radii
   d. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track
   b. Cyclists will stay on the R148

6. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction
7. Air pollution and noise pollution during Operation
8. Other common issues
    a. Request for traffic modelling data
9. Bike storage facility

    The submission suggest that the provision of bike storage facility should be considered.
10. Assessment of impact on disabled population

    The submission notes that according to census data some areas of the Palmerstown Village have a high proportion (up to 23%) of residents with bad and very bad health. It suggests that there should be a study on the effects of the proposed changes on the disabled population carried out by an independent reviewer.

3.38.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 8 of this submission have been provided in Section 2.1.3 of this report.

9. Bike storage facility

As noted in Section 4.6.3 of Chapter 6 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-ACM-UBR_ZZ-0006_XX_00-DR-LL-9001) in Volume 3 of this EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR. The provision of additional bike storage facilities does not form part of the Proposed Scheme.

10. Impact on disabled population

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 *design "….has been informed by the principles of DMURS, 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 2020), Inclusive Mobility (UK Department for Transport 2005), Guidance on the Use of Tactile Paving Surfaces (UK DfT 2021), and BS8300:2018 Volume 1 Design of an accessible and inclusive built environment – External Environment – code of practice….."*. 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 11.5 shows that approximately 4.2% 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 2,218 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: "…*However, the Proposed Scheme is expected to address some gaps in existing provision, as well as upgrade some pedestrian and cycle routes to a better standard (segregated instead of delineated with painted white lines). Assuming these design measures are correctly installed, the urban environment would be easier and safer for a wider variety of pedestrians, including the visually impaired, wheelchair users and people with mobility difficulties, parents with young children and pushchair users. This would help to reduce health inequalities in terms of accessibility in the urban environment, particularly for people with disabilities…."*

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.

3.39 39 – Sharon Lyons

3.39.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Oval Junction [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slip
        ii. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Pedestrian facilities
    a. Walking & running on Old Lucan Road

6. Air pollution and noise pollution during Operation

3.39.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.40 40 – Anne Mahon and Roger Berkley

3.40.1 Submission – Palmerstown

The submission raised the following issues:

1. Bus Stops
    a. Palmerstown Drive [2201]
2. Traffic impact
    a. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
    b. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts

3.40.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.41 41 – Donna Manning

3.41.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
    a. Public consultation on the bus routes
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
    b. Oval Junction [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
        iii. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change

4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Junction
    b. Pedestrian crossings on The Oval junction
6. Proposed bus route alternative

    It is proposed in the submission to create the bus lane along R112 to Chapelizod for the use of buses and cyclists only.

3.41.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 6 of this submission have been provided in Section 2.1.3 of this report.

In relation to Point 6, the alternative bus route, this issue is addressed by the response provided in Section 2.1.3.1 of this report.

3.42 42 – Geraldine McCormack

3.42.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
        ii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Air pollution and noise pollution during Operation
5. Other common issues
    a. Change to ‘amenity’ / ‘feel’ of the heritage part of the village
    b. Impact on the Woodfarm and Red Cow Cottages
    c. Traffic Calming of R148 Palmerstown bypass
6. Safety of crossing two-way cycle track at bus stop

Submission 41 raised a concern regarding pedestrian safety with the need for pedestrians to cross the two-way cycle track to get into the bus stop area on the northern side of the Old Lucan Road.

3.42.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 5 of this submission have been provided in Section 2.1.3 of this report.

6. Safety of crossing two-way cycle track at bus stop

It is proposed to adopt an island bus stop arrangement on the north side of Old Lucan Road in accordance with Figure 34a of Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) reproduced in Figure 3.42.1 and as shown on General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR, extract shown in Figure 3.42.2.

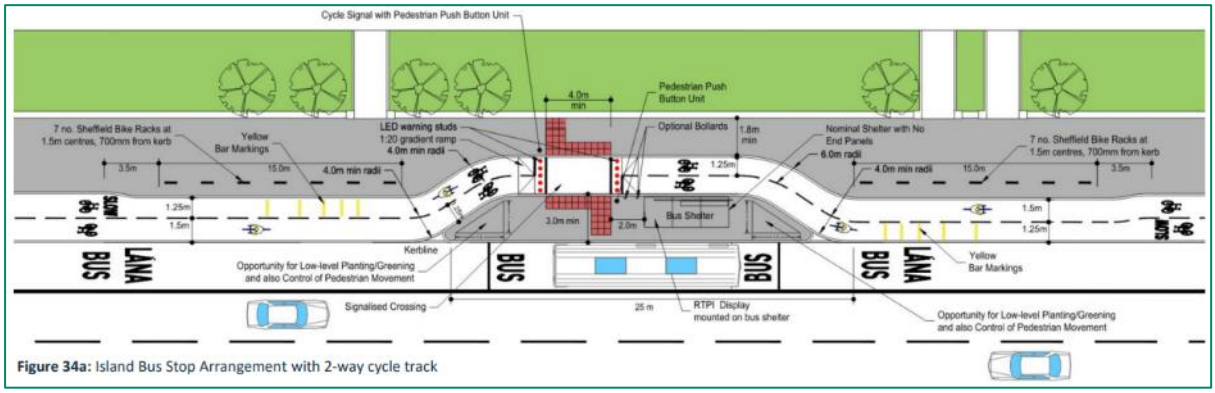


Figure 3.42.1: Figure 34a Appendix A4.1 Preliminary Design Guidance Booklet (PDGB)

Figure 3.42.2: Extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

Section 11.1 of Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) notes the following:

"Island Bus Stops are the preferred bus stop option to be used as standard on the CBC project where space constraints allow

The key design features and considerations relating to island bus stops are listed below:

- *Conflict between cyclists and stopping buses is removed as cyclists are deflected 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 required (as provided for example at junctions on the Grand Canal Cycle Route in Dublin). Visually impaired pedestrians may call for a fixed green signal when necessary and the cycle signal will change to red.*
- *The cycle track should be deflected behind the bus stop sufficiently to reduce cycling speed for safety through the crossing area so cyclists can give way to pedestrians crossing to the bus stop area. Recommended minimum radii are indicated in Figure 34. The cycle track will rise in level to meet the footpath level. (Yellow bar markings could also be provided to alert approaching cyclists but the narrowing and deflection should suffice when the approaching cycle track is the nominal 2m width);*

- *The cycle track should narrow from 2.0m to 1.5m for single file cycling through the bus stop, as overtaking is not required in this area;*
- *Appropriate signage and lighting should be provided at these locations to ensure that all road users are aware of the potential conflicts in this area; and*
- *At least 2m must be provided between the bus shelter and crossing to ensure sufficient visibility."*

The safety implications of the Proposed Scheme have been considered by the designer and 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 island bus stops as part of the Road Safety Audit.

3.43 43– Alan & Eileen McQuaid

3.43.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
   b. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
3. Loss of parking/ Parking provision
   a. Old Lucan Road between Kennelsfort road and The Oval
4. Proposed cycle track
   a. Need for cycle bridge over R148
5. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Junction
   b. Pedestrian crossings on The Oval
6. Suggested pedestrian bridge over the R148 at the Oval junction

The submission suggests that with the schools located on southern side of The Oval junction a pedestrian bridge would be a safe crossing solution for children crossing R148.

7. Policing of unauthorised parking

The submission suggests that rigorous policing by parking wardens will be required to avoid unauthorised parking of trucks, buses and heavy vehicles on the Old Lucan Road.

8. Access to the laneway to the rear of Red Cow Cottages

Submission 43 raised concerns about how the revised narrower carriageway cross section will impact the ability of vehicles towing caravans & boats exiting the shared laneway between Woodfarm Cottages & Red Cow Cottages.

3.43.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 5 of this submission have been provided in Section 2.1.3 of this report.

6. Suggested pedestrian bridge over the R148 at the Oval junction

Figure 3.43.1 shows the relevant extract from the General Arrangement drawings contained in EIAR Volume 3 Part 1 of 3 Chapter 4.

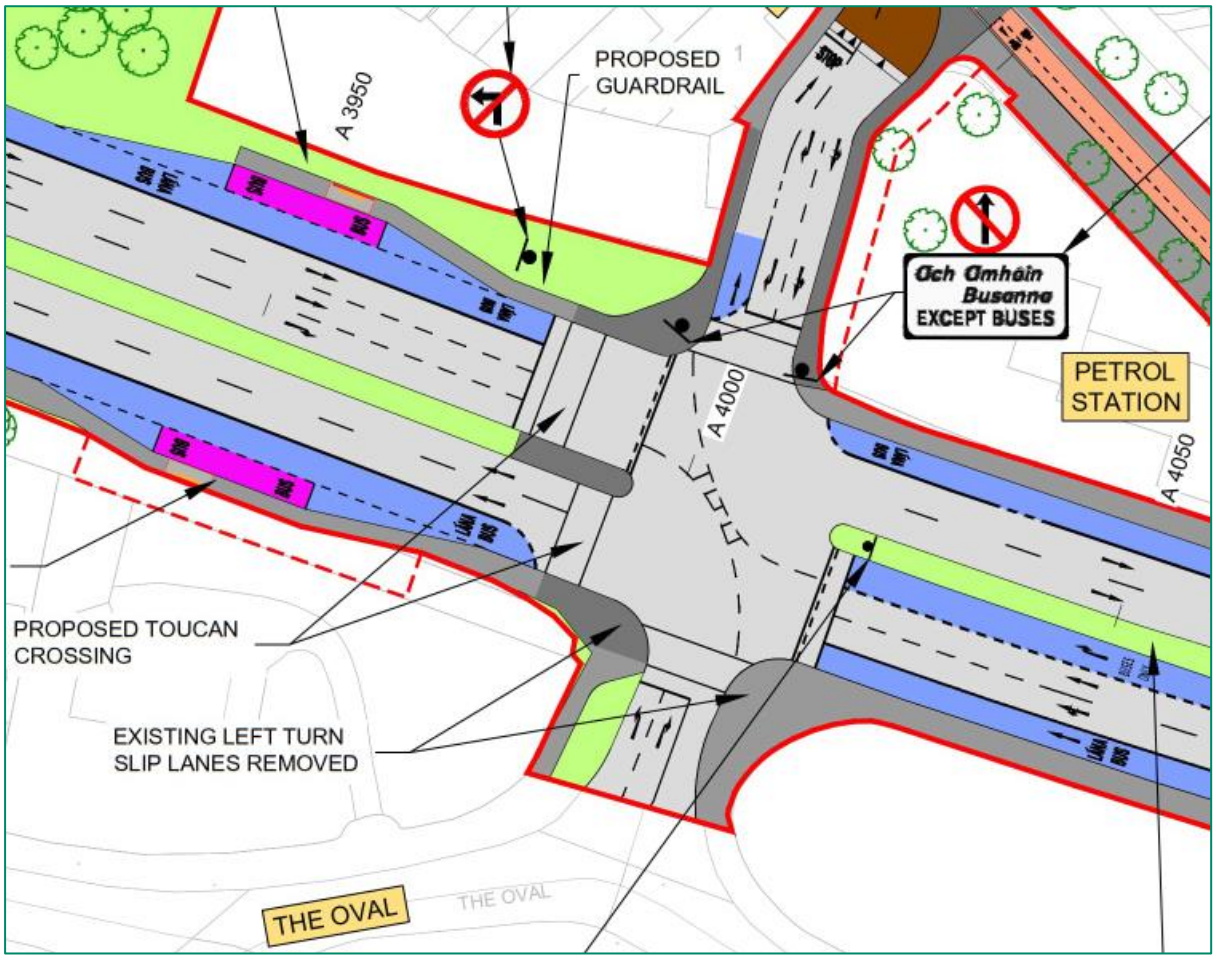


Figure 3.43.1: Extract of General Arrangement Drawings for The Oval (Sheet 15)

The inbound bus stop is relocated to the west of the junction where space is available to provide a layby; the petrol station is acting as a constraint to a layby on the east side. By locating the inbound bus stop on the west side of the junction a signal controlled Toucan crossing is now proposed on the west side of the junction side which optimises the operation of the junction incorporating the new outbound bus right turn. This crossing provides safe pedestrian connectivity between Old Lucan Road and The Oval.

The removal of the left turn slip lanes on The Oval arm of the junction will reduce the pedestrian crossing distance and provides a signal controlled crossing of The Oval where none exists presently.

In order to provide a pedestrian bridge at this location, a ramped, or looped, arrangement would be required, similar to the layout of the existing pedestrian bridge at the Kennelsfort Road junction. Such an arrangement would increase the distance travelled by pedestrians and would provide a far less attractive alternative to the signalised crossings included in the Proposed Scheme, with a risk of pedestrians seeking to cross the R148 dual carriageway at-grade, as currently happens at the Kennelsfort Road junction. In addition, in order to avoid the demolition of private property, a pedestrian bridge would need to span the junction diagonally between the public lands in the north-west and south-east corners of the junction.

The Junction Design Report, Appendix A6.3 of EIAR Volume 4 Part 2 of 4, also provides the following summary of the design for this junction.

"The existing 4 arm signalised junction is proposed to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure. The key design rationale was to provide protected cycle infrastructure and crossing facilities, whilst improving bus priority."

The Junction Design Report demonstrates that the Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

7. Policing of unauthorised parking

The NTA acknowledges the comments raised in relation to enforcement. Enforcement of road traffic laws, including parking is a matter for local authority Traffic Wardens and An Garda Síochána.

8. Access to the laneway to the rear of Red Cow Cottages

Section 4.3.3 of DMURS states "*designers may have concerns regarding larger vehicles crossing the centre line of the intersecting street or road. Such manoeuvres are acceptable when turning into/or between Local or lightly trafficked Link streets as keeping vehicle speeds low is of higher priority.*"

The manoeuvring of HGV's or towed vehicles from accesses on Old Lucan Road which has a 30kph speed limit would align with that strategy, reducing carriageway width and corner radii to maintain a low speed environment.

It is also noted that it is proposed that double yellow line parking restrictions will be included on the northern side of Old Lucan Road adjacent to the two-way cycle track in Palmerstown as currently employed and as noted in section 6.4.6.1.3.4 of Chapter 6 of Volume 2 of the EIAR.

3.44 44 – Fred Meagher and Susan Kerrigan Meagher

3.44.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between Kennelsfort road and The Oval
5. Air pollution and noise pollution during Operation
6. Construction
    a. Temporary construction compound
        i. Biodiversity (bats, badgers)
        ii. Trees removal
        iii. Drainage infrastructure
7. Other common issues
    a. Change to 'amenity' / 'feel' of the village
    b. Impact on the Woodfarm and Red Cow Cottages

3.44.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.45 45 – Cllr. Shane Moynihan

3.45.1 Submission – Palmerstown and Chapelizod Hill Road Bus Stops

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Kennelsfort Road [2241 and 4401]
    b. The Oval [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
    c. Scheme geometry
        i. HGV movements and kerb radii
4. Pedestrian facilities
    a. Pedestrian crossings on The Oval junction
5. Other common issues
    a. Impact on future community events
    b. Proposed materials and cycleway/footway cross section
6. An advocate for traffic calming measures in the Palmerstown Village

    The submission notes that the proposed traffic calming measures within the Palmerstown Village are welcomed as they will enhance the 30km/h speed limit that is currently in place.
7. Support for bus stop at the low bridge on the Chapelizod bypass

    The submission endorses the need for additional new bus stops on the Chapelizod bypass to improve connectivity to the village via Chapelizod Hill Road.

3.45.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 5 of this submission have been provided in Section 2.1.3 of this report.

6. Support for Traffic Management proposals on Old Lucan Road

The NTA welcomes the councillors support expressed for this important element of the Proposed Scheme.

7. Support for new bus stop at the low bridge on the Chapelizod bypass

The NTA welcomes the councillors support expressed for this important element of the Proposed Scheme.

3.46 46 – Helen Mullally (and neighbours)

3.46.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village

2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
3. Traffic impacts
    a. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Construction
    a. Temporary construction compound
        i. Biodiversity (bats, badgers)
        ii. Trees removal
5. Other common issues
    a. Change to 'amenity' / 'feel' of the heritage part of the village
    b. Impact on the Woodfarm and Red Cow Cottages
    c. Impact on future community events
    d. Proposed materials and cycleway/footway cross section

3.46.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.47 47 – Sandra & Laurence Mulvaney

3.47.1 Submission – Palmerstown

The submission raised the following issues:

1. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
2. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
3. Proposed cycle track
    a. Need for the two way cycle track

3.47.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.48 48 – Gráinne Ní Mhuirí, Adrienne and John Dunne

3.48.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations

a. Palmerstown Drive [2201]

3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval
      ii. Removal of left turn slip entering The Oval from the R148
      iii. Impact of right turn bus lane into Old Lucan Road
   c. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track
6. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Road junction

3.48.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.49 49 - Gary Nolan

3.49.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval
      ii. Removal of left turn slip entering The Oval from the R148
3. Pedestrian facilities
   a. Pedestrian crossings on The Oval
4. Construction
   a. Trees removal
5. Other common issues
   a. Impact on the Woodfarm and Red Cow Cottages

3.49.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.50 50 – Cuan Ó Seireadáin

3.50.1 Submission – Knockmaree

Description of issues raised in this submission is included in section 2.2.3 of this report.

3.50.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.51 51 – Desmond O'Carroll, Caroline O'Connor and Goretti Slavin

3.51.1 Submission – Knockmaree

Description of issues raised in this submission is included in section 2.2.3 of this report.

3.51.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.52 52 – Cllr Guss O'Connell

3.52.1 Submission – Palmerstown

The submission raised the following issues and requested an Oral hearing:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
    b. Oval Junction [2242, 7239]
    c. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slip
        ii. Banning of left turn from Kennelsfort Road Lower
        iii. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track

a. Need for the two way cycle track
b. Alternative cycle routes
c. Need for cycle bridge over R148

6. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Junction
   b. Pedestrian crossings on The Oval junction
7. Air pollution and noise pollution during Operation
8. Construction
   a. Temporary construction compound
      i. Biodiversity (bats, badgers)
      ii. Drainage infrastructure
      iii. Traffic and amenity impact of the compound
9. Other common issues
   a. Impact on the Woodfarm and Red Cow Cottages

3.52.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.53 53 – Naomi Louisa O'Connell

3.53.1 Submission – Knockmaree

Description of issues raised in this submission is included in section 2.2.3 of this report

3.53.2 Response to submission

This submission is listed in Table 2.2.1 in Section 2.2.2 of this report as being one of the 9 submissions made in respect of the Chapelizod part of the proposed scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.54 54 – Sandra O'Connell, Máiréad O'Byrne and Eilís Young, Marian and Mona Murphy

3.54.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
      ii. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip entering The Oval from the R148
      ii. Impact of right turn bus lane into Old Lucan Road
   c. Scheme geometry

i. HGV movements and kerb radii

4. Loss of parking/ Parking provision
   a. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track
6. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Road junction
   b. Pedestrian crossings on The Oval

3.54.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.55 55 – Justin O'Connor

3.55.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Oval Junction (222 and 7239)
   b. Palmerstown Drive [2201]
3. Traffic impact
   a. The Oval junction
      i. Removal of left turn slip entering The Oval from the R148
      ii. Impact of right turn bus lane into Old Lucan Road
4. Loss of parking/ Parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track

3.55.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.56 56 – David O'Mahony

3.56.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction

i. Removal of left turn slip exiting the Oval
ii. Impact of right turn bus lane into Old Lucan Road

3. Loss of parking/ Parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort road and The Oval
4. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Junction

3.56.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.57 57 – Eoghan O'Neill

3.57.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. The Oval [2242, 7239]
   b. Palmerstown Bypass (2201)
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
      ii. Banning of left turn from Kennelsfort Road Lower
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval
4. Air pollution and noise pollution during Operation

3.57.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.58 58 – Mary Ong & David Ong

3.58.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slip
      ii. Banning of left turn from Kennelsfort Road Lower
      iii. Need for grade separation

b. The Oval junction
    i. Removal of left turn slip exiting The Oval junction
    ii. Removal of left turn slip entering The Oval from the R148
    iii. Impact of right turn bus lane into Old Lucan Road
c. Scheme geometry
    i. HGV movements and kerb radii
d. Traffic volumes
    i. Increase in traffic volumes along the eastern end of Old Lucan Road

4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
    a. Need for the two way cycle track
    b. Cyclists will stay on the R148
    c. Alternative cycle routes
    d. One way into two way cycle paths on Kennelsfort Road
6. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Junction
    b. Pedestrian crossings on The Oval junction
7. Air pollution and noise pollution during Operation
8. Construction
    a. Temporary construction compound
        i. Biodiversity (bats, badgers)
        ii. Trees removal
9. Other common issues
    a. Impact on the Woodfarm and Red Cow Cottages
    b. Impact on future community events

3.58.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.59 59 – Brian O'Shea

3.59.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval

ii. Impact of right turn bus lane into Old Lucan Road

c. Scheme geometry

i. HGV Movements and kerb radii

d. Traffic volumes

i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts

3. Loss of parking/ Parking provision

a. Old Lucan Road between Kennelsfort road and The Oval

4. Proposed cycle track

a. Need for the two way cycle track

5. Other common issues

a. Environmental cost/impacts of the scheme and its costs return period

b. Proposed materials and cycleway/footway cross section

3.59.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.60 60 – Siobhan Garcia (Palmerstown Community Council CLG)

3.60.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Old Lucan Road [new bus stop]
   b. Oval Junction [2242, 7239]
   c. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slip
      ii. Banning of left turn from Kennelsfort Road Lower
      iii. Need for grade separation
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval
      ii. Removal of left turn slip entering The Oval from the R148
      iii. Impact of right turn bus lane into Old Lucan Road
   c. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
   a. Need for the two way cycle track

   b. Alternative cycle routes
6. Pedestrian facilities
   a. Pedestrian crossings at Kennelsfort Junction
   b. Pedestrian crossings on The Oval junction
7. Air pollution and noise pollution during Operation
8. Construction
   a. Temporary Construction Compound
      i. Biodiversity (bats, badgers)
      ii. Drainage Infrastructure
      iii. Traffic and amenity Impact of compound
   b. Reference to The Oval for a compound
9. Other common issues
   a. Change to 'amenity'/ 'feel' of the heritage part of the village
   b. Impact on the Woodford and Red Cow Cottages (Heritage)

3.60.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.61 61 – John O'Goran (Palmerstown Meitheal Tidy Towns)

3.61.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
   a. Oval Junction [2242, 7239]
   b. Palmerstown Drive [2201]
3. Traffic impact
   a. Kennelsfort Road junction
      i. Removal of left turn slips
   b. The Oval junction
      i. Removal of left turn slip exiting the Oval
      ii. Removal of left turn slip entering The Oval from the R148
4. Proposed cycle track
   a. One way into two way cycle paths on Kennelsfort Road
5. Other common issues
   a. Change to 'amenity'/ 'feel' of the heritage part of the village

3.61.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.62 62 – Christina Pieri, Sandra Adams, Monica Gore Laffan, Natasha Lester and Colette Roche

3.62.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148

3.62.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.63 63 – James Redmond

3.63.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
    c. Traffic volumes
        i. Outbound lane destination change
3. Proposed cycle track
    a. Cyclists will stay on the R148

3.63.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.64 64 – Alan McQuaid (Residents Association PPN 01558)

3.64.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]

3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slip
        ii. Banning of left turn from Kennelsfort Road Lower
        iii. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Scheme geometry
        i. HGV movements and kerb radii
        ii. 90° bend on the Old Lucan Road and Access to Shaws Tree Services
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
    a. Need for the two way cycle track
    b. Cyclists will stay on the R148
6. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction
    b. Pedestrian crossings on The Oval junction
7. Air pollution and noise pollution during Operation
8. Construction
    a. Temporary Construction Compound
        i. Biodiversity (bats, badgers)
        ii. Tree removal
        iii. Drainage Infrastructure
    b. Air pollution and noise pollution during construction
9. Other common issues
    a. Change to 'amenity'/ 'feel' of the heritage part of the village
    b. Impact on the Woodfarm and Red Cow Cottages
    c. Impact on future community events
10. Parking space for GoCar

    It was noted in the submission that no allocation of a designated car parking space was made in the scheme for a GoCar currently sited within the Village.

3.64.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 9 of this submission have been provided in Section 2.1.3 of this report.

10. Parking space for GoCar

The provision of a designated parking space for a GoCar is outside the remit of the Proposed Scheme.

3.65 65 – Pamela Blake (Residents of Red Cow Farm Palmerstown)

3.65.1 Submission – Palmerstown

The submission raised the following issues:

1. Bus Stop locations
    a. The Oval [2242, 7239]
2. Traffic impacts
    a. The Oval junction
        i. Removal of left turn slip exiting the Oval
3. Air pollution and noise pollution during Operation

3.65.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.66 66 – Dr Dan Ring

3.66.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
        ii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Outbound lane destination change
3. Loss of parking/ parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
4. Proposed cycle track
    a. Need for the two way cycle track
    b. Alternative cycle routes
5. Pedestrian facilities
    a. Pedestrian crossings at Kennelsfort Road junction
6. Construction

a. Temporary construction compound
    i. Biodiversity (bats, badgers)
    ii. Trees removal

7. Removal of U-turn at Oval junction

   The submission notes that the removal of the U-turn will force the cars that need to change direction into the village to make the turn.

3.66.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 6 of this submission have been provided in Section 2.1.3 of this report.

A detailed response in relation to point 7 of this submission has been provided in Section 2.4.4.3 of this report.

3.67 67 – Shane King (Riversdale Riverview Old Lucan Road Residents' Group)

3.67.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip entering The Oval from the R148
        ii. Impact of right turn bus lane into Old Lucan Road
    c. Scheme geometry
        i. HGV movements and kerb radii
    d. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
    b. Old Lucan Road between Kennelsfort road and The Oval
5. Proposed cycle track
    a. Need for the two way cycle track
6. Air pollution and noise pollution during Operation
7. Other common issues
    a. Change to 'amenity'/ 'feel' of the heritage part of the village
    b. Impact on the Woodfarm and Red Cow Cottages
    c. Request for traffic modelling data
8. Suggested alternative to loss of parking spaces in the village

The submission suggested that the rear garden of no. 2 Red Cow Cottages could be acquired by the NTA an turned in to off street parking to facilitate some lost car parking spaces for Red Cow Cottage residents and visitors.

Another suggestion included in the submission proposed that Randalswood Holdings Ltd owner of the Vincent Byrne Site be requested by the Bord to grant perpetual licence to SDCC for designated residents and public car park spaces at a nominal cost.

9. Provision of cycle stand and water station on Old Lucan Road

The submission suggests that with the encouragement of cyclist to cycle through Palmerstown Village the provision of cycle stand and water station at an appropriate location would be useful.

3.67.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 7 of this submission have been provided in Section 2.1.3 of this report.

8. Suggested alternative to loss of parking spaces in the village

In respect of this section of Old Lucan Road, section 2.1.3.4.b of this report addresses the impact on parking and notes that Section 6.4.6.1.3.4 of EIAR Chapter 6 Traffic and Transport states concludes that the overall impact on parking on the Old Lucan Road *"is considered to be Slight."*

9. Provision of cycle parking and water stations on Old Lucan Road

As noted in Section 4.6.3 of Chapter 6 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-ACM-UBR_ZZ-0006_XX_00-DR-LL-9001) in Volume 3 of this EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

As shown on the Landscaping General Arrangement drawings additional cycle parking is proposed at the junction of Old Lucan Rod and Kennelsfort Road Lower. The provision of water station facilities does not form part of the Proposed Scheme.

3.68 68 – Martin Duggan & Joseph Scally (St Philomena's Parish)

3.68.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
3. Proposed cycle track
    a. Need for the two-way cycle track
4. Other common issues
    a. Change to 'amenity'/ 'feel' of the heritage part of the village
    b. Impact on the Woodfarm and Red Cow Cottages

3.68.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.69 69 – Imelda Scally

3.69.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Oval Junction [2242, 7239]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148
4. Loss of parking/ Parking provision
    a. Old Lucan Road between M50 and Kennelsfort Road
5. Proposed cycle track
    a. Need for the two-way cycle track
6. Pedestrian facilities
    a. Pedestrian crossings on The Oval

3.69.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.70 70 – Craig Scott, Joanne Butler, Amie Butler and Dawn Woods

3.70.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
    a. Old Lucan Road [new bus stop]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval

ii. Removal of left turn slip entering The Oval from the R148
iii. Impact of right turn bus lane into Old Lucan Road

c. Traffic volumes
i. Outbound lane destination change

4. Loss of parking/ Parking provision
a. Old Lucan Road between M50 and Kennelsfort Road
b. Old Lucan Road between Kennelsfort Road and The Oval
5. Proposed cycle track
a. Need for cycle bridge over R148
6. Pedestrian facilities
a. Pedestrian crossings at Kennelsfort Road junction
7. Air pollution and noise pollution during Operation
8. Construction
a. Reference to The Oval for a compound
9. Other common issues
a. Impact on the Woodfarm and Red Cow Cottages
b. Proposed material and cycleway/ footway cross section

3.70.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.71 71 – Nessa Skeehan

3.71.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus Stop locations
a. Old Lucan Road [new bus stop]
b. Palmerstown Drive [2201]
3. Traffic impact
a. Kennelsfort Road junction
i. Removal of left turn slips
ii. Banning of left turn from Kennelsfort Road Lower
b. The Oval junction
i. Removal of left turn slip exiting the Oval
ii. Removal of left turn slip entering The Oval from the R148
iii. Impact of right turn bus lane into Old Lucan Road
c. Traffic volumes
i. Increase in traffic volumes on eastern end of Old Lucan Road
ii. Outbound lane destination change
4. Proposed cycle track

a. Deficient existing M50 pedestrian/cycle bridge width

5. Pedestrian facilities
   a. Pedestrian crossing at The Oval
6. Other common issues
   a. Change to 'amenity'/ 'feel' of the heritage part of the village
   b. Impact on the Woodfarm and Red Cow Cottages
   c. Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod
7. New pedestrian lights at the Coach House not included in the scheme

   The submission asserts that the new pedestrian lights just installed at the Coach House are not included in the scheme and instead new set of traffic lights is proposed nearer the village at an additional cost.
8. Alternative bus route through R112 proposed

3.71.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 7 and point 9 of this submission have been provided in Section 2.1.3 of this report.

8. New pedestrian lights at the Coach House not included in the scheme

Sheet 14 of the 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, shows that the recently installed signalised pedestrian crossing of Old Lucan Road near the Coach House are to be retained as part of the Proposed Scheme.

3.72 72 – South Dublin County Council

3.72.1 Submission – Palmerstown, General and Lucan

Issus raised in this submission are summarised in section 2.3.4 of this report.

3.72.2 Response to submission

Detailed responses to issues raised by this submission are included in section 2.3.4 of this report.

3.73 73 – Tom Sweetman

3.73.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Traffic impact
   a. Kennelsfort Road junction
      i. Banning of left turn from Kennelsfort Road Lower
   b. Traffic volumes
      i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
      ii. Outbound lane destination change
3. Construction
   a. Air pollution and noise pollution during construction
4. Access to businesses during construction phase

   Submission 73 noted that it is not clear from the planning application how it proposed to protect businesses on Kennelsfort Road Lower from the footway and cycle track works during

construction, requesting that it should be a condition of planning that the works are separated from the storefronts by hoarding to act as a barrier to dirt & noise, and that agreements are made with the local businesses and residents on access arrangements and regular cleaning.

5. Preservation of historical lamp posts during construction/ Overhead cables

   Submission 73 welcomes the straightening of the KRL footpath but highlights that the lighting columns on Kennelsfort Road Lower have county crests & heritage tops and need to be protected during the works. The submission also suggests the Proposed Scheme is an ideal opportunity to remove obsolete overhead cables.

6. 60 km/h speed limit sign

   There is an existing 60 km/h speed limit sign exiting the village. The submission suggest that this sign should be removed as is presents an illusion that the speed limit of 60 km/h refers to the northern side of R148.

3.73.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by points 1 to 3 of this submission have been provided in Section 2.1.3 of this report.

4. Access to businesses during construction phase

Traffic Management/ Access

In terms of construction access, routing for vehicles and pedestrians, Section 9.5.1.1 Construction Traffic Management Plan Contents (CTMP) of Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of the EIAR states:

The appointed contractor shall be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme. The appointed contractor shall address the following aspects, in addition to any other aspects identified by the appointed contractor during the preparation of the CTMP:

- *Access and egress;*
- *Construction Compounds;*
- *Routing of construction vehicles;*
- *Pedestrian (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users etc.) and cyclist provisions;*
- *Public transport provisions;*
- *Parking and access;*
- *Lighting;*
- *CSMMP;*
- *Traffic management signage;*
- *Timings of material deliveries;*
- *Traffic management speed limits;*
- *Vehicle cleaning;*
- *Road cleaning;*
- *Road condition;*
- *Road closures and diversions;*
- *Enforcement of Construction Traffic Management Plan;*
- *Interface with other projects;*
- *Emergency procedures during construction; and*
- *Communication.*

Further details on issues to be addressed are provided in Section 5.2.3.1 to Section 5.2.3.19.

5.2.3.1 Access and Egress

The appointed contractor shall provide advanced warning signs, in accordance with the Traffic Signs Manual (DTTAS 2019), on approach to the proposed access locations, and entry and exit points throughout the live working area.

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 homes and businesses prior to construction starting in the area.

Dust Management

Regarding dust management section 7.5.1.1 [Construction Dust] of Chapter 5 Construction Air Quality of Volume 2 of the EIAR outlines the dust mitigation measures during the construction phase as follows:

In order to ensure that no significant dust nuisance occurs, a series of mitigation measures that are applicable to the Construction Phase of the Proposed Scheme will be implemented. In summary, the mitigation measures will include:

- *Public roads outside the Proposed Scheme will be regularly inspected for cleanliness and cleaned as necessary;*
- *Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays (or similar dust suppression methods) will be used as required if particularly dusty activities associated with the construction contract are necessary during dry or windy periods;*
- *During movement of dust-generating materials both on and off-site, trucks will be covered with tarpaulin and before entrance onto public roads, trucks will be checked to ensure the tarpaulins are properly in place; and*
- *The appointed contractor will provide a site hoarding of 2.4m height along boundaries where sensitive receptors are located, at a minimum, and at the Construction Compounds, which will assist in minimising the potential for dust impacts off-site.*

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.

Section 7.5.1.2 also outlines the following in relation to construction traffic:

"Construction vehicles, generators etc., may give rise to some NO2 and PM10 / PM2.5 emissions. Table 7.38 summarises the Construction Phase impacts prior and post mitigation. In terms of construction traffic impacts, the Proposed Scheme will have a generally neutral impact on air quality, with some slight adverse impacts. Due to worst-case scenario modelling where in reality the works will be short-term and temporary in nature, the impact on air quality will not be significant. Therefore, no specific Construction Phase mitigation measures for construction traffic are required."

5. Preservation of historical lamp posts during construction/ Overhead cables

Figure 3.73.1 below is an extract from Street Lighting General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR which shows the lighting columns to be replaced/relocated as part of the Proposed Scheme.

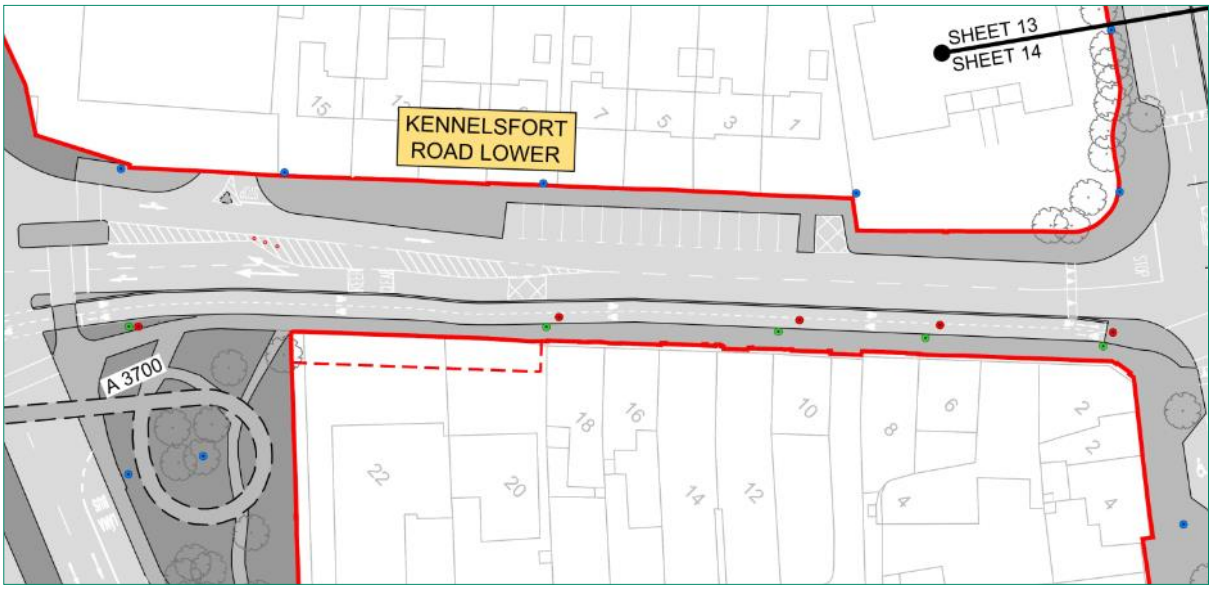


Figure 3.73.1: Extract from Street Lighting Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

Section 4.6.13 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR notes the following:

For existing columns that have specific aesthetic requirements, the intent for the replacement (where applicable) of such columns will include:

- *Replacing the existing heritage columns and brackets with identical replica columns and brackets;*
- *Replacing existing luminaires with approved LED heritage luminaires; and*
- *Ensuring that the electrical installation is compliant with the latest version of the 'National Rules for Electrical Installations, I.S. 10101'.*

The lighting columns to be relocated are powered by underground cables, and there are no communications or electricity poles to be relocated. Works to overhead cables are not required in this area as a result of the Proposed Scheme. The removal of obsolete overhead cables is a matter for the relevant utility provider.

6. 60 km/h speed limit sign

The speed limit on Kennelsfort Road Lower is 30kph and is 60kph on R148 Palmerstown bypass. The speed limit signage proposed, see Figure 3.73.2, is appropriate for the speed limits and in accordance with the Traffic Signs Manual.

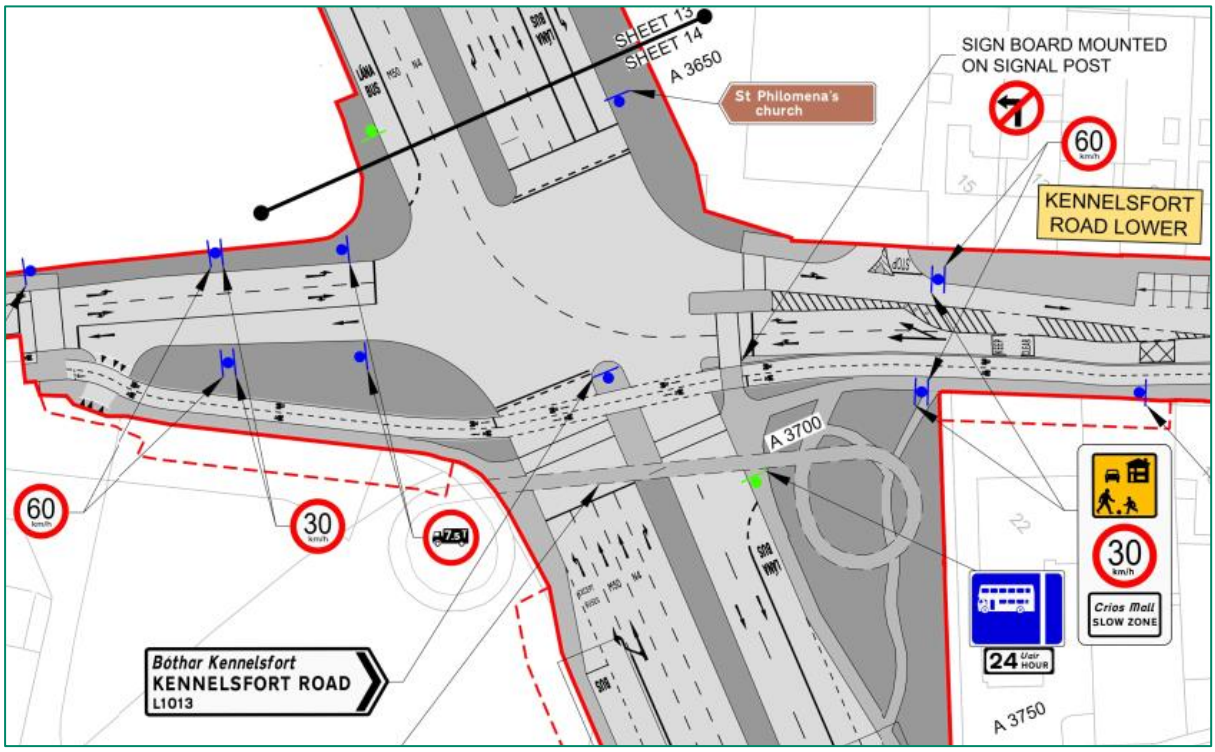


Figure 3.73.2: Extract from Traffic Signs and Road Markings Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

3.74 74 – The Louis Fitzgerald Group (Niamh Fitzgerald)

3.74.1 Submission – Palmerstown

The submission raised the following issues:

1. Loss of parking/ Parking provision
   a. Old Lucan Road between M50 and Kennelsfort Road
   b. Old Lucan Road between Kennelsfort Road and The Oval

3.74.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.75 75 – The Trustees of Hermitage Golf Club

3.75.1 Submission – Hermitage Golf Club

Description of issues raised in this submission is included in section 2.4.2 of this report

3.75.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.2 of this report.

3.76 76 – Torcross Unlimited Company

3.76.1 Submission – Hermitage Medical Clinic

Description of issues raised in this submission is included in section 2.4.3 of this report

3.76.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.77 77 – Sean Treanor

3.77.1 Submission – Palmerstown

The submission raised the following issues:

1. Bus Stops
    a. The Oval [2242, 7239]
2. Air pollution and noise pollution during Operation
3. Other common issues
    a. Traffic Calming of R148 Palmerstown bypass
4. Existing noise and light levels

    The submission asserts that the noise and light levels of the existing R148 Palmerstown Bypass requests a scientific measure of the levels of noise and light by a qualified Health and Safety Authority.

3.77.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.78 78 – James Ward, Geraldine Ward

3.78.1 Submission – Palmerstown

Description of issues raised in this submission is included in section 2.4.4 of this report

3.78.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.79 79 – Kevin & Carmel Wheelan, Eamon & Patricia Whelan and Austin & Natalie O'Farrell

3.79.1 Submission – Palmerstown

The submission raised the following issues:

1. Traffic impact
    a. Kennelsfort Road junction
        i. Need for grade separation
    b. The Oval junction
        i. Removal of left turn slip exiting the Oval
        ii. Removal of left turn slip entering The Oval from the R148

3.79.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.80 80 – Maura & Joe McCarthy, Brenda Reilly

3.80.1 Submission – Palmerstown

The submission raised the following issues:

1. Routing of bus service through the village
2. Bus stop locations
    a. Old Lucan Road [new bus stop]
    b. Palmerstown Drive [2201]
3. Traffic impact
    a. Kennelsfort Road junction
        i. Removal of left turn slips
        ii. Banning of left turn from Kennelsfort Road Lower
    b. The Oval junction
        i. Removal of left turn slip exiting The Oval
        ii. Removal of left turn slip entering The Oval from the R148
        iii. Impact of right turn bus lane into Old Lucan Road
    c. Traffic volumes
        i. Increase in traffic volumes along eastern end of Old Lucan Road and cumulative impacts
        ii. Impact on community
4. Pedestrian facilities
5. Air pollution and noise pollution during Operation
6. Construction
    a. Temporary construction compound LU2
        v. Trees removal
        vi. Biodiversity (bats, badgers)
        vii. Traffic and amenity Impact of compound
    b. Reference to The Oval for a compound

7. Other Common Issues
    a. Change to 'amenity'/ 'feel' of the heritage part of the village
    b. Impact on the Woodfarm Cottages and Red Cow Cottages
    c. Environmental costs/impact of the scheme and its costs return period
    d. Opening Old Lucan Road to traffic from behind Applegreen to Chapelizod
    e. Visual Impact / Loss of privacy

3.80.2 Response to submission

This submission is listed in Table 2.1.1 in Section 2.1.2 of this report as being one of the 70 submissions made in respect of the Palmerstown section of the Proposed Scheme. Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.81 81 – Dublin City Council

3.81.1 Submission – Chapelizod to City Centre

Issus raised in this submission are summarised in section 2.3.5 of this report.

3.81.2 Response to submission

Detailed responses to issues raised by this submission are included in section 2.3.5 of this report.