

EIA VOLUME 3 - TECHNICAL APPENDICES



Enva Healthcare Risk Waste Facility
Development at 402 Grants Drive,
Greenogue Business Park, Rathcoole,
Co. Dublin, D24 AP04

April 2024

rpsgroup.com

enva

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A TETRA TECH COMPANY

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Appendix 4.1

Hazardous Wastes Authorised by the Enva Facility IED Licence

APPENDIX 4

EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
01 04 09	Pottery Waste	2080	2	Treatment D9
01 04 13	Stone Cutting Wash	83010	100	Treatment D9
01 05 05	Drilling Waste	1469660	2000	Treatment D9
05 01 05	Oil Spill Waste	105480	100	Treatment D9
06 01 01	Acidic Waste	94960	100	Treatment D9
06 01 02	Hydrogen Fluouride Wash	4440	10	Treatment D9
06 01 06	Acidic Waste	38140	100	Treatment D9
06 01 99	Acidic Waste	210	50	Treatment D9
06 02 04	Potassium Hydroxide Wash	6260	50	Treatment D9
06 05 05	Alkali Waste	8360	50	Treatment D9
06 02 99	Alkali Waste	43000	100	Treatment D9
07 01 99	WEEE Waste	1000	5	Treatment D9
08 01 12	Contaminated Water	1100	5	Treatment D9
08 03 08	Ink washings	8920	10	Treatment D9
08 03 12	Ink washings	14060	10	Treatment D9
10 01 23	Boiler wash	52280	100	Treatment D9
10 02 11	Cooling Water	4385160	3000	Treatment D9
11 01 01	Detergent washings	25960	50	Treatment D9
11 01 05	Pickling Acid	9980	20	Treatment D9
11 01 08	Metal Sludge	6280	10	Treatment D9
11 01 09	Alkali Sludge	94120	100	Treatment D9
11 01 11	Acidic Waste	35960	100	Treatment D9
11 01 13	Degreaser	1860	5	Treatment D9
11 01 99	Phosphating Sludge	8000	10	Treatment D9
11 03 01	Zinc Sludge	8520	10	Treatment D9

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
01 04 09	Pottery Waste	2080	2	Treatment D9
01 04 13	Stone Cutting Wash	83010	100	Treatment D9
01 05 05	Drilling Waste	1469660	2000	Treatment D9
05 01 05	Oil Spill Waste	105480	100	Treatment D9
06 01 01	Acidic Waste	94960	100	Treatment D9
06 01 02	Hydrogen Fluouride Wash	4440	10	Treatment D9
06 01 06	Acidic Waste	38140	100	Treatment D9
06 01 99	Acidic Waste	210	50	Treatment D9
06 02 04	Potassium Hydroxide Wash	6260	50	Treatment D9
06 05 05	Alkali Waste	8360	50	Treatment D9
06 02 99	Alkali Waste	43000	100	Treatment D9
07 01 99	WEEE Waste	1000	5	Treatment D9
08 01 12	Contaminated Water	1100	5	Treatment D9
08 03 08	Ink washings	8920	10	Treatment D9
08 03 12	Ink washings	14060	10	Treatment D9
10 01 23	Boiler wash	52280	100	Treatment D9
10 02 11	Cooling Water	4385160	3000	Treatment D9
11 01 01	Detergent washings	25960	50	Treatment D9
11 01 05	Pickling Acid	9980	20	Treatment D9
11 01 08	Metal Sludge	6280	10	Treatment D9
11 01 09	Alkali Sludge	94120	100	Treatment D9
11 01 11	Acidic Waste	35960	100	Treatment D9
11 01 13	Degreaser	1860	5	Treatment D9
11 01 99	Phosphating Sludge	8000	10	Treatment D9
11 03 01	Zinc Sludge	8520	10	Treatment D9

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
12 01 09	Coolant	1644960	2000	Treatment D9
12 03 02	Steam Degreaser	13460	20	Treatment D9
13 01 11	Hydrauli oil	440	50	Treatment D9
13 01 13	Hydrauli oil	1480	50	Treatment D9
13 02 05	Waste Oil	14170	100	Treatment D9
13 02 06	Waste Oil	65115	200	Treatment D9
13 02 08	Waste Oil	1990405	3000	Treatment D9
13 03 07	Waste Oil	36020	100	Treatment D9
13 03 10	Waste Oil	160	10	Treatment D9
13 04 03	Bilge Oil	278690	1000	Treatment D9
13 05 01	Gully waste	4420	10	Treatment D9
13 05 03	Interceptor waste	9142770	12000	Treatment D9
13 05 07	Interceptor waste	1127110	5000	Treatment D9
13 07 01	Fuel Waste	278470	500	Treatment D9
13 07 02	Fuel Waste	25500	100	Treatment D9
13 07 03	Fuel Waste	69220	500	Treatment D9
13 08 02	Fuel Waste	12200	100	Treatment D9
13 08 99	Oil Spill Waste/other Oil waste	414360	1000	Treatment D9
14 06 03	Aqueous Washings	7550	10	Treatment D9
16 05 06	Glycol Washings	3200	5	Treatment D9
16 05 08	Coolant	1060	5	Treatment D9
16 06 06	Neutralized Waste	12300	20	Treatment D9
16 07 08	Tank Cleaning Waste	1765945	2000	Treatment D9
16 07 09	Tank Cleaning Waste	219720	500	Treatment D9
16 07 99	Bund Area Waste	431870	500	Treatment D9
16 10 01	Aqueous Washings	1292610	1500	Treatment D9
16 10 02	Aqueous Washings	39340	100	Treatment D9
16 10 07	Oily Water	1800	5	Treatment D9
17 05 05	Dredging Spoil	1780	10	Treatment D9
19 02 11	Sludge	300	10	Treatment D9
19 02 99	Tank Cleaning Waste	9640	20	Treatment D9
19 07 03	Leachate Washings	3170440	5000	Treatment D9
19 09 02	Sludge	42260	50	Treatment D9
19 09 04	Carbon Sludge	2100	5	Treatment D9
19 12 12	Leachate Washings	135120	200	Treatment D9

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
20 01 26	Waste Oil	6560	100	Treatment D9
20 01 27	Paint Washings	55230	50	Treatment D9
20 03 03	Drain Clearing	12600	20	Treatment D9
20 03 99	Drain Clearing	102340	150	Treatment D9
01 01 01	T Mine Screening	74420	100	Storage D15 & R13
01 05 05	T Drilling Muds	125380	1000	Storage D15 & R13
02 02 99	T Food Waste	5480	10	Storage D15 & R13
02 03 04	T Aqueous Waste	1060	5	Storage D15 & R13
02 06 01	T Obsolete Confectionery	4360	5	Storage D15 & R13
02 06 99	T Confectionery waste	20	5	Storage D15 & R13
02 07 99	T Lab waste	20	5	Storage D15 & R13
03 02 01	T Wood Preservative	2200	5	Storage D15 & R13
03 02 04	T Waterbased mixture of Tanlaith E/Tanatone 1% solution & creosote	4840	5	Storage D15 & R13
03 03 05	T Deinking sludge	340	5	Storage D15 & R13
03 08 14	T Filter cake	2460	5	Storage D15 & R13
04 02 14	T Chlorinated Solvent Residues	1640	5	Storage D15 & R13
04 02 16	T Dyes & Pigments	25	5	Storage D15 & R13
05 01 08	T Tar	8600	10	Storage D15 & R13
06 01 01	T Sulphuric acid and Nitrous acid	16560	20	Storage D15 & R13
06 01 02	T Hydrochloric Acid	620	5	Storage D15 & R13
06 01 03	T Hydrochloric Acid	280	5	Storage D15 & R13
06 01 04	T Phosphoric Acid	28760	50	Storage D15 & R13
06 01 05	T Nitric Acid	1970	5	Storage D15 & R13
06 01 06	T Other acids	23705	30	Storage D15 & R13
06 01 99	T Acidic Solution	95100	150	Storage D15 & R13
06 02 03	T Corrosive liquid	1220	5	Storage D15 & R13
06 02 04	T Sodium Hydroxide	12020	20	Storage D15 & R13
06 02 99	T Non regulated material - Permethrin - Imidazole - Monoethanolamine	2900	5	Storage D15 & R13
06 03 14	T Sodium Persulphate	30	5	Storage D15 & R13
06 04 04	T Mercury	470	5	Storage D15 & R13

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
07 01 04	T Aqueous Waste	1240	5	Storage D15 & R13
07 01 99	T WEEE MFSU Organic Chemicals	2730	5	Storage D15 & R13
07 02 04	T Solvents	130	5	Storage D15 & R13
07 02 10	T Flammable Solid (solidified acetone gel & absorbents)	12970	20	Storage D15 & R13
07 05 01/ 15 02 02	T Flammable Liquid(adhesives)	15120	20	Storage D15 & R13
07 05 05	T Organic Solvents	165780	200	Storage D15 & R13
07 05 13	T Sludges containing acetone, ethanol)	11640	20	Storage D15 & R13
07 06 99	T Redundant Cosmetics	1500	5	Storage D15 & R13
07 07 01	T Floor washings	620	5	Storage D15 & R13
08 01 11	T Paint related waste	438190	500	Storage D15 & R13
08 01 12	T Varnish	54840	100	Storage D15 & R13
08 01 13	T Paint Related Material	11040	20	Storage D15 & R13
08 01 17	T Solvents	550	5	Storage D15 & R13
08 02 01	T Aluminium Oxide	6180	5	Storage D15 & R13
08 03 12	T Ink Waste	211780	250	Storage D15 & R13
08 03 13	T Ink waste	16640	20	Storage D15 & R13
08 03 17	T Toner cartridges	3500	5	Storage D15 & R13
08 03 99	T Imaging Oil	1060	5	Storage D15 & R13
08 04 09	T Adhesives	216870	250	Storage D15 & R13
08 04 10	T Waste Adhesives	44260	50	Storage D15 & R13
08 04 13	T Aqueous sludge	2800	5	Storage D15 & R13
09 01 01/ 09 01 04	T Water based developer & activator solutions/fixed solutions	50350	100	Storage D15 & R13
09 01 02	T Plate Cleaner	80	5	Storage D15 & R13
10 11 11	T Phosphor Powder	380	5	Storage D15 & R13
11 01 05	T Hydrochloric acid solution	5550	5	Storage D15 & R13
11 01 06	T Chromic Acid	400	5	Storage D15 & R13
11 01 09	T Filtercake	286830	300	Storage D15 & R13
11 01 10	T Filter cake	5380	5	Storage D15 & R13
11 01 11	T Copper Sulphate Solution	15120	20	Storage D15 & R13

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
11 01 12	T No haz Aqueous gun cleaner	4605	5	Storage D15 & R13
11 01 13	T Degreaser	1780	5	Storage D15 & R13
11 01 14	T Bio Act Cleaner	900	5	Storage D15 & R13
11 03 01	T Plating Solution	8550	5	Storage D15 & R13
11 05 99	T Bag Filter Dust	11740	20	Storage D15 & R13
12 01 04	T Metal dust	2100	5	Storage D15 & R13
12 01 09	T Coolant	96340	100	Storage D15 & R13
12 01 17	T Blasting Grit	7800	5	Storage D15 & R13
12 01 99	T Filtercake	2800	5	Storage D15 & R13
13 02 06	T Heavy fuel oil	8000	5	Storage D15 & R13
13 02 08	T Waste Oil	24655	25	Storage D15 & R13
13 05 03	T Interceptor waste	2850	5	Storage D15 & R13
13 07 01	T Petroleum Distillates	1420	5	Storage D15 & R13
13 08 99	T Oily waste/Booms	4120	5	Storage D15 & R13
14 06 01	T Aerosols	5090	5	Storage D15 & R13
14 06 02	T Solvent	72900	100	Storage D15 & R13
14 06 03	T Solvent	265160	300	Storage D15 & R13
14 06 06	T Aerosols	1840	5	Storage D15 & R13
15 01 02	T Plastic Packaging	440	5	Storage D15 & R13
15 01 04	T Paint related waste	50	5	Storage D15 & R13
15 01 05	T Composite Packaging	5000	5	Storage D15 & R13
15 01 10	T Cont Packaging	72780	100	Storage D15 & R13
15 01 11	T Aerosols	30	5	Storage D15 & R13
15 02 02	T Oil Absorbents/Filters	356895	500	Storage D15 & R13
15 02 03	T Absorbents	15190	20	Storage D15 & R13
16 01 07	T Oil filters	620	5	Storage D15 & R13
16 01 13	T Brake Fluid	50	5	Storage D15 & R13
16 01 14	T Antifreeze	21380	20	Storage D15 & R13
16 01 15	T Anti-freeze	850	5	Storage D15 & R13
16 01 20	T Glass	200	5	Storage D15 & R13
16 01 21	T Mirror cells	400	5	Storage D15 & R13
16 02 06	T WEEE	150	5	Storage D15 & R13
16 02 09	T PCB waste	150	5	Storage D15 & R13
16 02 14	T WEEE	350	5	Storage D15 & R13
16 02 16	T WEEE	2060	5	Storage D15 & R13

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
16 03 03	T Off spec inorganic waste	32625	50	Storage D15 & R13
16 03 04	T Off Spec Products	33950	50	Storage D15 & R13
16 03 05	T Off spec organic waste	1715	5	Storage D15 & R13
16 05 04	T Aerosols	2465	5	Storage D15 & R13
16 05 05	T Aerosols	85	5	Storage D15 & R13
16 05 06	T Spent Lab Chemicals	44185	100	Storage D15 & R13
16 05 07	T Discarded Inorganic Chemicals	31553	50	Storage D15 & R13
16 05 08	T Organic Chemicals	980	5	Storage D15 & R13
16 05 09	T Discarded Chemicals	17430	20	Storage D15 & R13
16 06 01	T Batteries	3280	5	Storage D15 & R13
16 06 04	T Batteries	40	5	Storage D15 & R13
16 07 08	T Tank Cleaning waste	9100	10	Storage D15 & R13
16 07 09	T Tank Cleaning waste	18340	20	Storage D15 & R13
16 09 03	T Peroxides	7040	10	Storage D15 & R13
16 10 01	T Aqueous Waste	136480	200	Storage D15 & R13
17 02 04	T Treated cooling Tower Timber	495910	500	Storage D15 & R13
17 03 01	T Cont Soil	524100	500	Storage D15 & R13
17 03 02	T Bitumen Emulsion	1810	5	Storage D15 & R13
17 05 03	T Contaminated Soil	34451035	50000	Storage D15 & R13
17 05 04	T Soil and stones	532600	1000	Storage D15 & R13
17 06 01	T Asbestos	887185	1000	Storage D15 & R13
17 06 05	T Asbestos	2513220	3000	Storage D15 & R13
18 01 01	T Sharpes	705	5	Storage D15 & R13
18 01 06	T Pharmaceutical Waste	22145	30	Storage D15 & R13
18 01 09	T Dental Waste	12220	15	Storage D15 & R13
18 02 02	T Clinical Waste	360	5	Storage D15 & R13
18 02 05	T Veterinary Waste	30000	50	Storage D15 & R13
18 02 06	T Waste from human or animal healthcare research other than those mentioned in 18 02 05	1880	5	Storage D15 & R13
18 02 07	T Medicinal waste	100	5	Storage D15 & R13
18 02 08	T Veterinary Waste	7630	5	Storage D15 & R13
19 02 05	T Filter Cake	35990	50	Storage D15 & R13

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EWC Code	Waste Description	Weight (Kg)	Proposed TPA/ Tonnes	Disposal / Recovery Code
19 09 04	T Waste Activated Carbon	21142	25	Storage D15 & R13
19 09 05	T Ion Exchange resin	3030	5	Storage D15 & R13
20 01 02	T Glass	40	5	Storage D15 & R13
20 01 08	T Cooking Oil	240	5	Storage D15 & R13
20 01 19	T Pesticides	10610	20	Storage D15 & R13
20 01 21	T Flourescent tubes	350	5	Storage D15 & R13
20 01 23	T Aerosols	6610	5	Storage D15 & R13
20 01 25	T Food Grease	1910	5	Storage D15 & R13
20 01 25	T Waste Oil	220	5	Storage D15 & R13
20 01 26	T Lubricating grease	5930	5	Storage D15 & R13
20 01 27	T Paint cans	197935	250	Storage D15 & R13
20 01 29/ 11 02 02	T Detergent/Corrosive Liquid/resin	3665	5	Storage D15 & R13
20 01 31	T Waste Medicines	185	5	Storage D15 & R13
20 01 32	T Spent medicines	275	5	Storage D15 & R13
20 01 33	T Lead Acid batteries	220	5	Storage D15 & R13
20 01 34	T Batteries	990	5	Storage D15 & R13
20 01 35	T WEEE	200	5	Storage D15 & R13
20 01 36	T Compensator	2400	5	Storage D15 & R13
15 01 10	Waste Drums/Contaminated Packaging	98600	150	R2
15 01 10	Waste Drums/Contaminated Packaging	18280	30	R2
15 01 10	Waste Drums/Contaminated Packaging	425640	500	R4
15 01 10	Waste Drums/Contaminated Packaging	813460	1000	R4

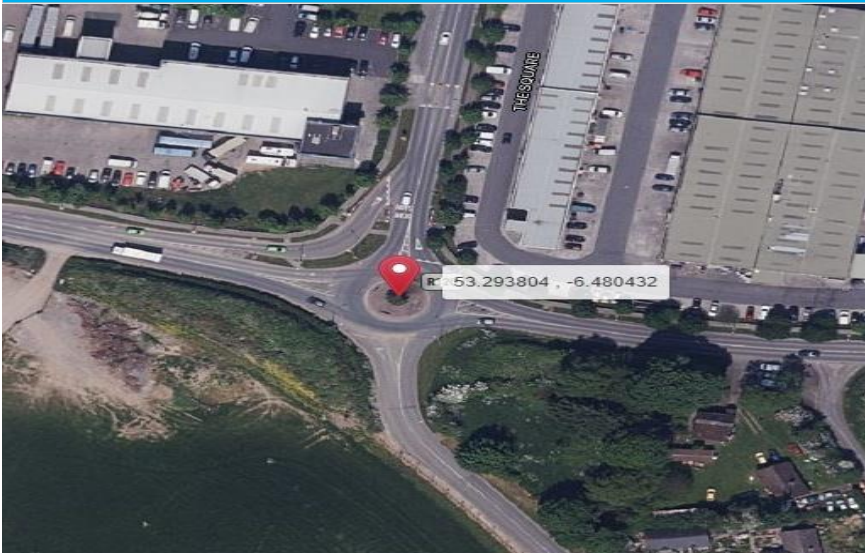
Appendix 7.1

Traffic Survey Data

APPENDIX 7

7.1.1 Site plan

Sites Overview



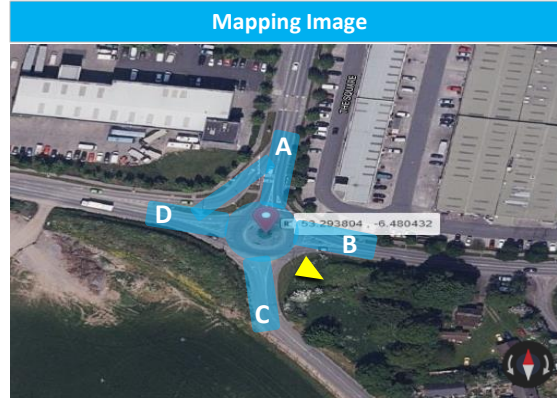
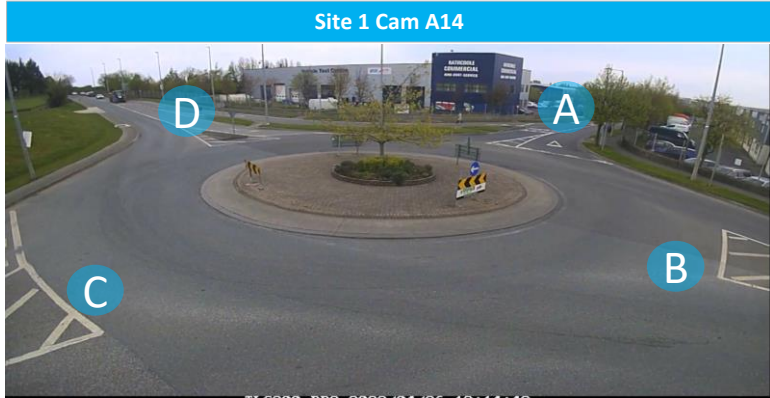
Survey Name :	ITS J-604 Greenogue
Survey Type:	1 Site
Date:	26.04.2022 & 27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC
Grid Reference:	O 01361 28108
X:	301361
Y:	228108
Latitude:	53.2938
Longitude:	-6.480432
Address (near):	Newcastle Roundabout, Newcastle ED, Newcastle, South Dublin, Dublin 22, Leinster, Ireland

APPENDIX 7

7.1.2 Mapping

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022 & 27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



Date:	26.04.2022 & 27.04.2022
Time Period:	00:00 - 23:59
Junction Type:	4 Arm
Reporting Interval:	15min
Classification scheme:	Car, LGV, OGV1, OGV2, PSV, M/C, P/C
Queues Required:	No
Pedestrian required:	No

APPENDIX 7

7.1.3 Traffic Survey Data 26/04/23

Irish Traffic Surveys LTD

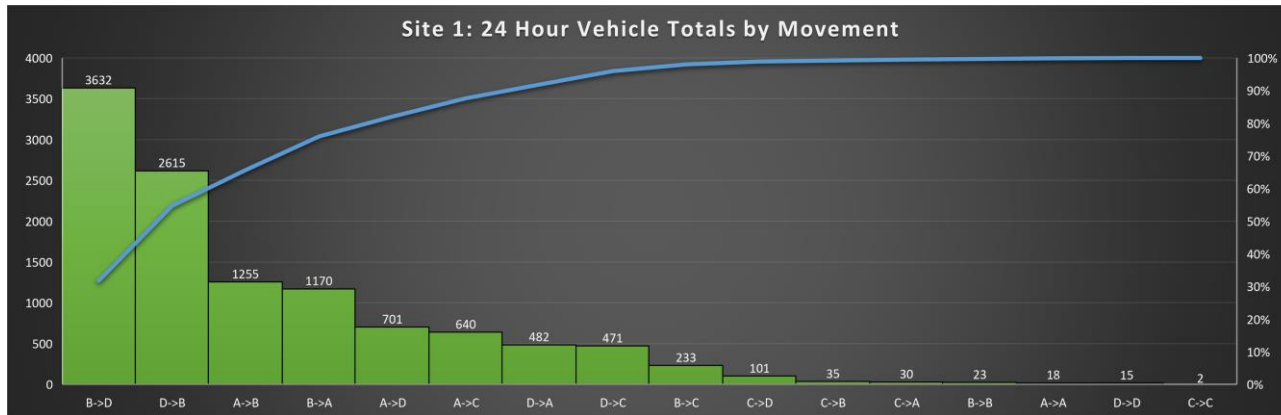
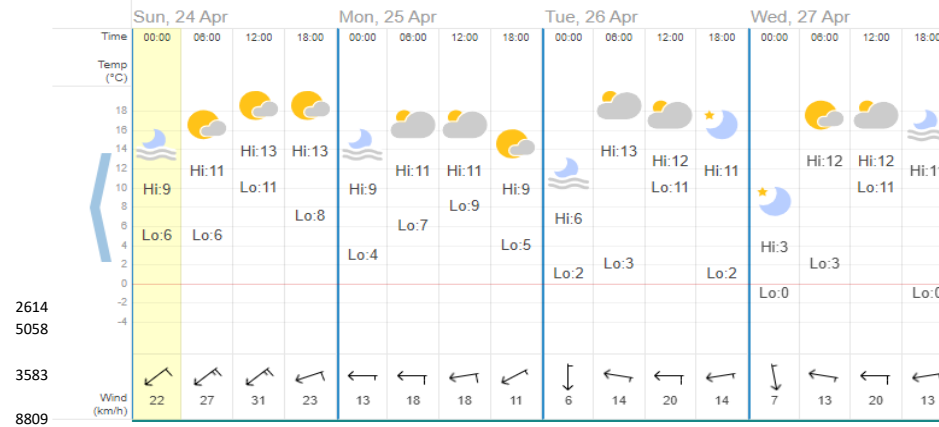
Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



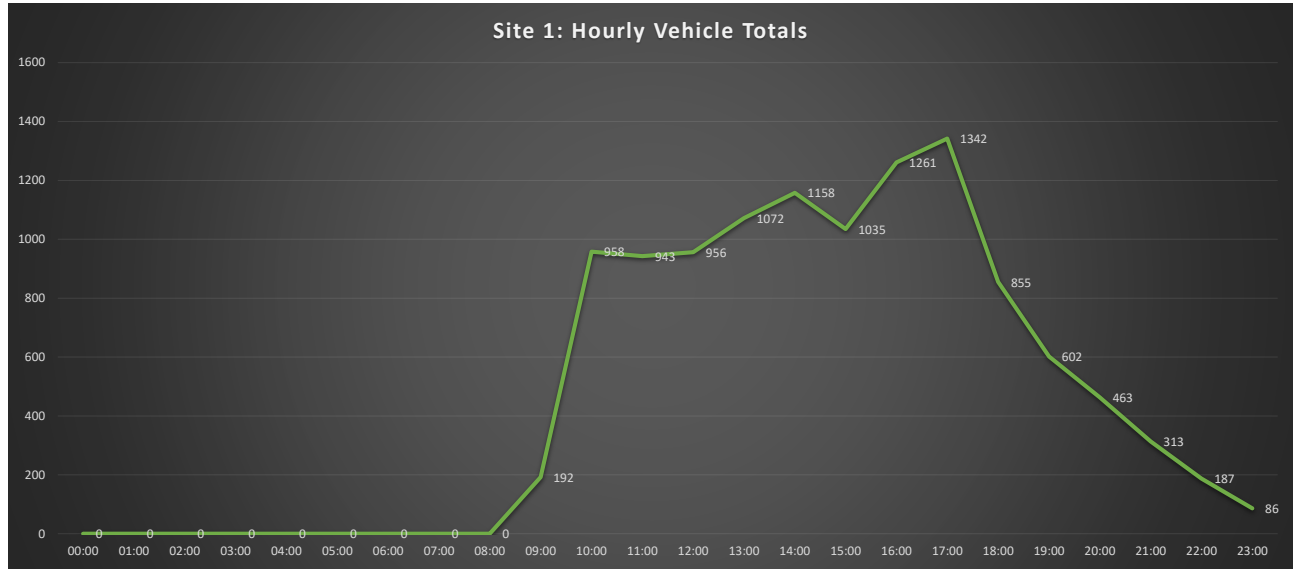
Site 1				
24hr Matrix	A	B	C	D
A	18	1255	640	701
B	1170	23	233	3632
C	30	35	2	101
D	482	2615	471	15
Totals	A	B	C	D
Entries	2614	5058	168	3583
Exits	1700	3928	1346	4449

Site 1		
Movement	24hr Total	% Total
A->A	18	0.2%
A->B	1255	11.0%
A->C	640	5.6%
A->D	701	6.1%
B->A	1170	10.2%
B->B	23	0.2%
B->C	233	2.0%
B->D	3632	31.8%
C->A	30	0.3%
C->B	35	0.3%
C->C	2	0.0%
C->D	101	0.9%
D->A	482	4.2%
D->B	2615	22.9%
D->C	471	4.1%
D->D	15	0.1%
Total	11423	100.0%

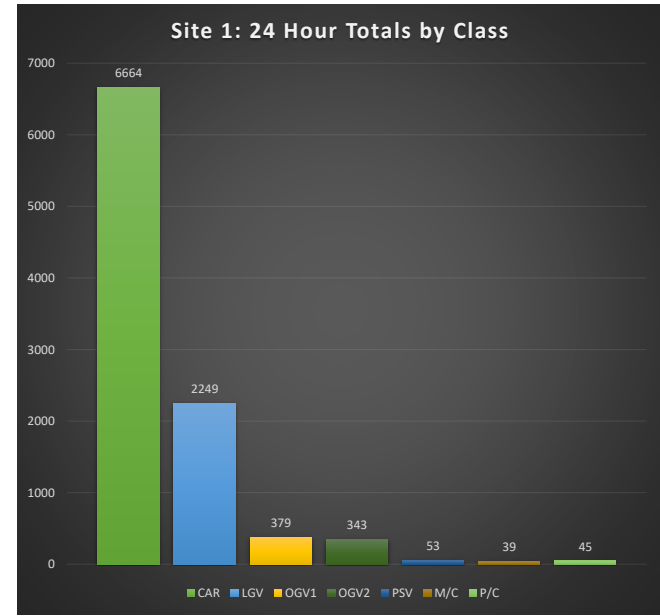
April 2022 Weather in Rathcoole — Graph



Site 1		
TIME	Period total	% of 24hr Total
00:00	0	0%
01:00	0	0%
02:00	0	0%
03:00	0	0%
04:00	0	0%
05:00	0	0%
06:00	0	0%
07:00	0	0%
08:00	0	0%
09:00	192	2%
10:00	958	8%
11:00	943	8%
12:00	956	8%
13:00	1072	9%
14:00	1158	10%
15:00	1035	9%
16:00	1261	11%
17:00	1342	12%
18:00	855	7%
19:00	602	5%
20:00	463	4%
21:00	313	3%
22:00	187	2%
23:00	86	1%
Total	11423	100%



Site 1								
TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	% of 24hr Total
00:00	0	0	0	0	0	0	0	0%
01:00	0	0	0	0	0	0	0	0%
02:00	0	0	0	0	0	0	0	0%
03:00	0	0	0	0	0	0	0	0%
04:00	0	0	0	0	0	0	0	0%
05:00	0	0	0	0	0	0	0	0%
06:00	0	0	0	0	0	0	0	0%
07:00	0	0	0	0	0	0	0	0%
08:00	0	0	0	0	0	0	0	0%
09:00	99	74	10	9	0	0	0	2%
10:00	555	302	39	47	6	3	6	8%
11:00	556	256	59	54	3	9	6	8%
12:00	598	253	43	50	6	4	2	8%
13:00	733	222	50	54	8	2	3	9%
14:00	764	267	61	51	9	0	6	10%
15:00	707	250	47	23	4	0	4	9%
16:00	918	256	38	24	10	9	6	11%
17:00	1039	249	22	16	3	9	4	12%
18:00	695	120	10	15	4	3	8	7%
19:00	497	72	4	11	2	6	10	5%
20:00	389	44	7	13	3	1	6	4%
21:00	273	22	8	7	1	1	1	3%
22:00	156	17	5	4	0	3	2	2%
23:00	75	7	0	1	1	0	2	1%
Total	6664	2249	379	343	53	39	45	
% Total	58.34%	19.69%	3.32%	3.00%	0.46%	0.34%	0.39%	



APPENDIX 7

7.1.4 Traffic Survey Data 27/04/23

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



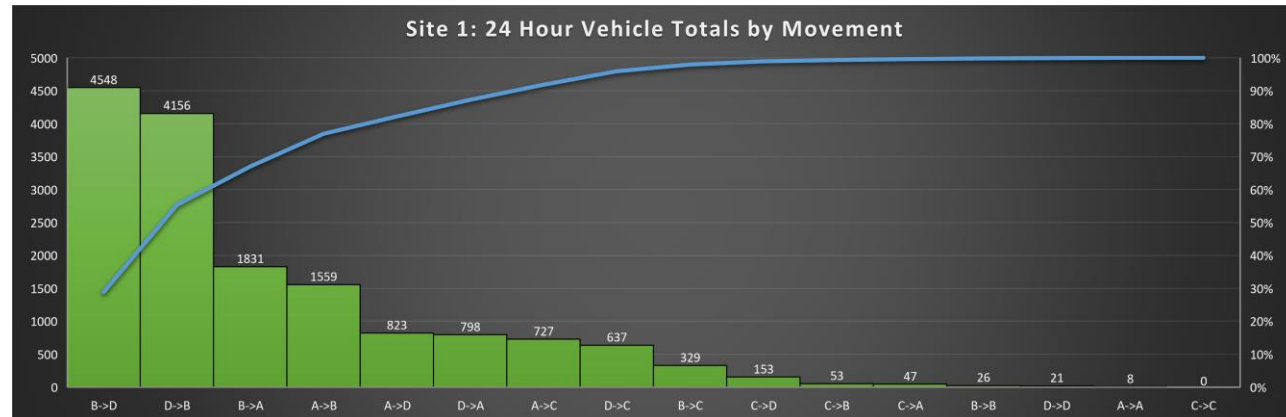
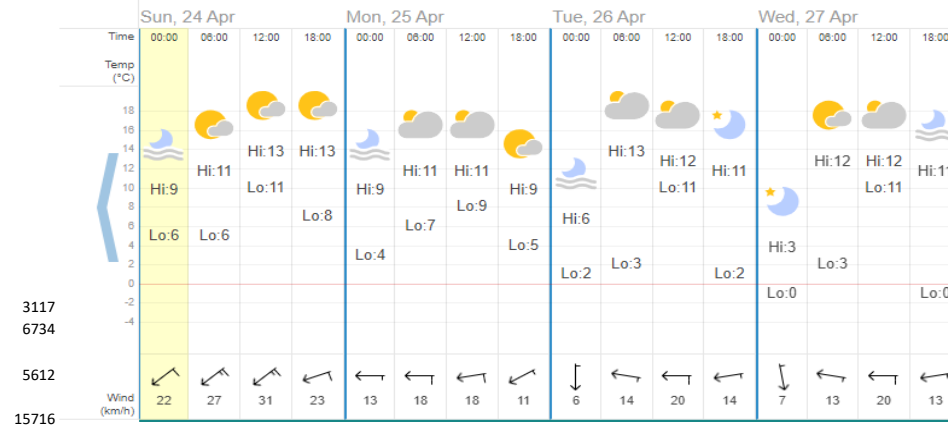
Irish Traffic Surveys



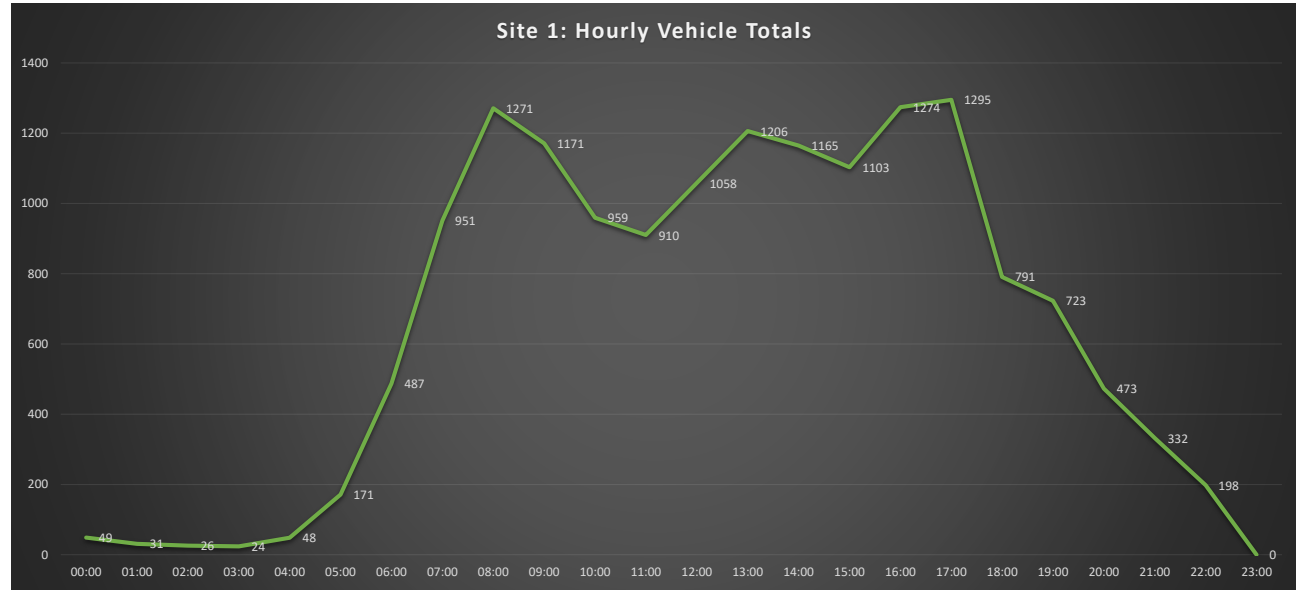
Site 1				
12hr Matrix	A	B	C	D
A	8	1559	727	823
B	1831	26	329	4548
C	47	53	0	153
D	798	4156	637	21
Totals	A	B	C	D
Entries	3117	6734	253	5612
Exits	2684	5794	1693	5545

Site 1		
Movement	24hr Total	% Total
A->A	8	0.1%
A->B	1559	9.9%
A->C	727	4.6%
A->D	823	5.2%
B->A	1831	11.7%
B->B	26	0.2%
B->C	329	2.1%
B->D	4548	28.9%
C->A	47	0.3%
C->B	53	0.3%
C->C	0	0.0%
C->D	153	1.0%
D->A	798	5.1%
D->B	4156	26.4%
D->C	637	4.1%
D->D	21	0.1%
Total	15716	100.0%

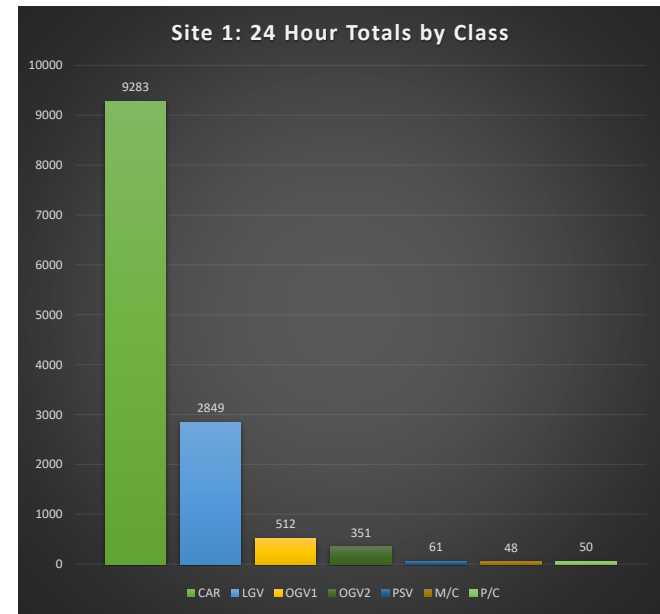
April 2022 Weather in Rathcoole — Graph



Site 1		
TIME	Period total	% of 24hr Total
00:00	49	0%
01:00	31	0%
02:00	26	0%
03:00	24	0%
04:00	48	0%
05:00	171	1%
06:00	487	3%
07:00	951	6%
08:00	1271	8%
09:00	1171	7%
10:00	959	6%
11:00	910	6%
12:00	1058	7%
13:00	1206	8%
14:00	1165	7%
15:00	1103	7%
16:00	1274	8%
17:00	1295	8%
18:00	791	5%
19:00	723	5%
20:00	473	3%
21:00	332	2%
22:00	198	1%
23:00	0	0%
Total	15716	100%



Site 1								
TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	% of 24hr Total
00:00	42	3	1	1	2	0	0	0%
01:00	23	6	0	2	0	0	0	0%
02:00	18	6	0	2	0	0	0	0%
03:00	16	5	0	2	0	1	0	0%
04:00	31	9	4	1	0	1	2	0%
05:00	125	27	10	5	2	0	2	1%
06:00	309	111	33	24	4	3	3	3%
07:00	661	209	36	25	11	3	6	6%
08:00	913	281	41	24	6	4	2	8%
09:00	747	334	42	41	4	3	0	7%
10:00	596	255	58	38	3	5	4	6%
11:00	569	248	47	35	2	2	7	6%
12:00	715	247	56	30	5	5	0	7%
13:00	852	269	42	35	4	1	3	8%
14:00	814	236	65	36	6	3	5	7%
15:00	767	227	60	35	5	6	3	7%
16:00	954	234	39	20	7	8	12	8%
17:00	1039	206	18	18	5	6	3	8%
18:00	656	103	8	14	3	2	5	5%
19:00	621	70	9	11	2	3	7	5%
20:00	391	59	7	13	2	0	1	3%
21:00	290	29	3	7	2	0	1	2%
22:00	173	18	1	5	0	1	0	1%
23:00	0	0	0	0	0	0	0	0%
Total	9283	2849	512	351	61	48	50	
% Total	59.07%	18.13%	3.26%	2.23%	0.39%	0.31%	0.32%	



APPENDIX 7

7.1.5 Traffic Survey Data 01/06/23

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	01.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



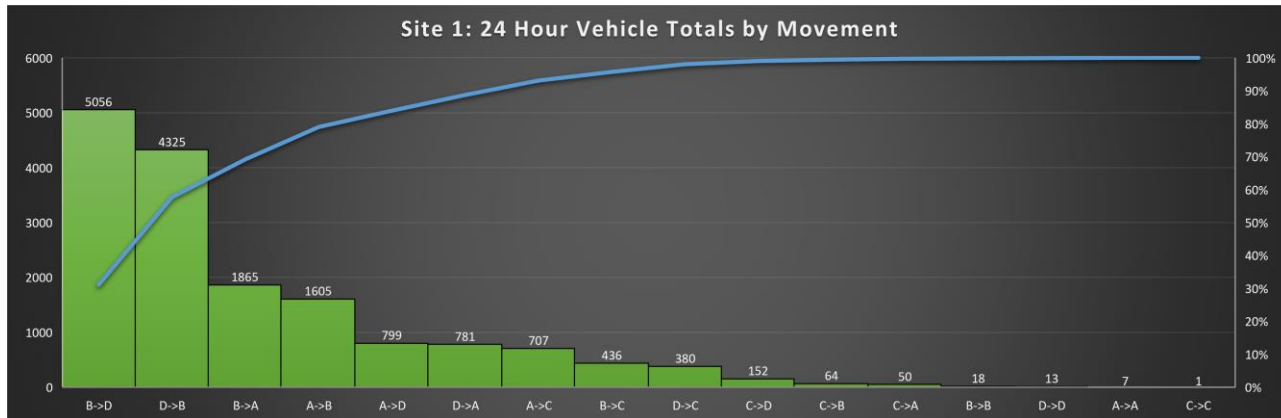
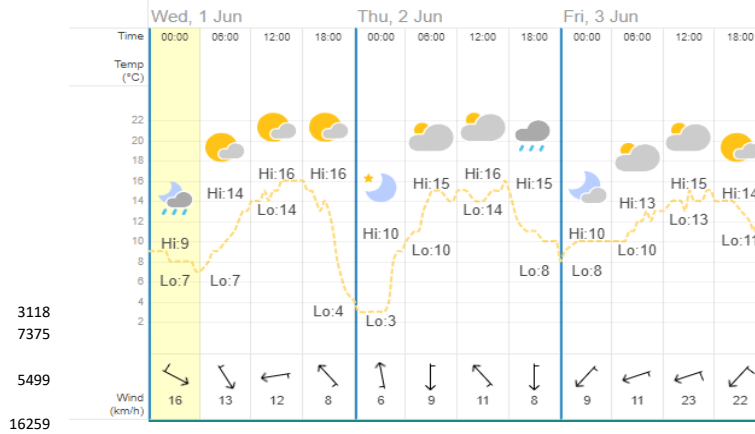
Irish Traffic Surveys



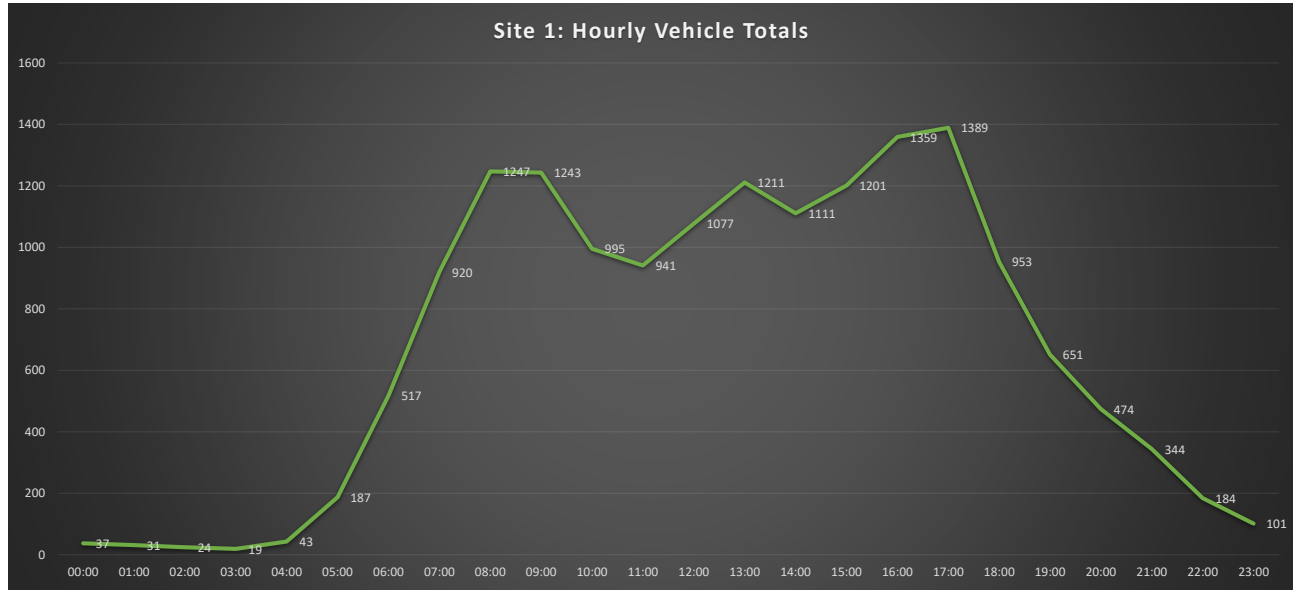
Site 1				
24hr Matrix	A	B	C	D
A	7	1605	707	799
B	1865	18	436	5056
C	50	64	1	152
D	781	4325	380	13
Totals	A	B	C	D
Entries	3118	7375	267	5499
Exits	2703	6012	1524	6020

Site 1		
Movement	24hr Total	% Total
A->A	7	0.0%
A->B	1605	9.9%
A->C	707	4.3%
A->D	799	4.9%
B->A	1865	11.5%
B->B	18	0.1%
B->C	436	2.7%
B->D	5056	31.1%
C->A	50	0.3%
C->B	64	0.4%
C->C	1	0.0%
C->D	152	0.9%
D->A	781	4.8%
D->B	4325	26.6%
D->C	380	2.3%
D->D	13	0.1%
Total	16259	100.0%

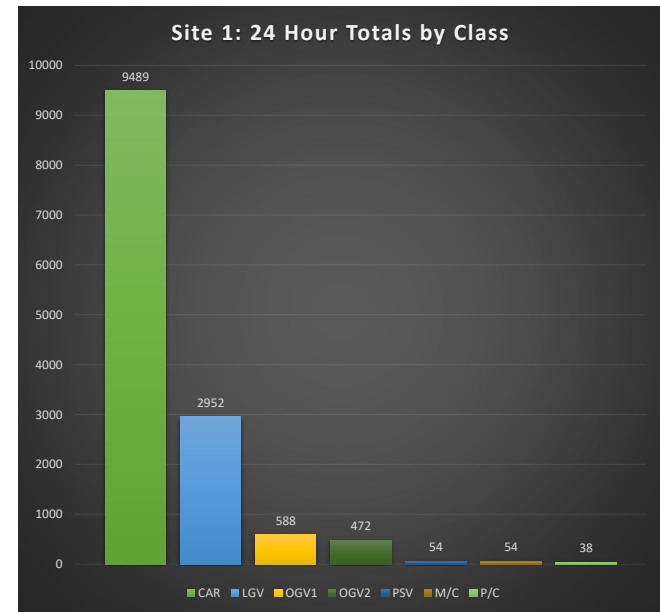
June 2022 Weather in Rathcoole — Graph



Site 1		
TIME	Period total	% of 24hr Total
00:00	37	0%
01:00	31	0%
02:00	24	0%
03:00	19	0%
04:00	43	0%
05:00	187	1%
06:00	517	3%
07:00	920	6%
08:00	1247	8%
09:00	1243	8%
10:00	995	6%
11:00	941	6%
12:00	1077	7%
13:00	1211	7%
14:00	1111	7%
15:00	1201	7%
16:00	1359	8%
17:00	1389	9%
18:00	953	6%
19:00	651	4%
20:00	474	3%
21:00	344	2%
22:00	184	1%
23:00	101	1%
Total	16259	100%



Site 1								
TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	% of 24hr Total
00:00	28	6	1	1	0	0	1	0%
01:00	23	6	0	2	0	0	0	0%
02:00	16	5	0	3	0	0	0	0%
03:00	9	6	1	2	0	1	0	0%
04:00	27	8	2	5	0	0	1	0%
05:00	136	26	16	5	1	1	2	1%
06:00	327	126	29	25	4	3	3	3%
07:00	634	201	27	39	11	7	1	6%
08:00	886	274	43	31	5	5	3	8%
09:00	814	316	61	43	3	3	3	8%
10:00	607	256	69	58	3	2	0	6%
11:00	594	242	51	40	4	5	5	6%
12:00	700	261	61	43	2	4	6	7%
13:00	862	230	55	52	5	4	3	7%
14:00	756	221	73	51	4	4	2	7%
15:00	791	287	54	55	5	4	5	7%
16:00	990	280	47	27	6	8	1	8%
17:00	1103	229	24	19	4	4	6	9%
18:00	752	155	23	14	2	4	3	6%
19:00	547	74	8	11	6	4	1	4%
20:00	381	66	3	8	2	3	11	3%
21:00	286	42	4	9	1	1	1	2%
22:00	161	11	0	5	0	4	3	1%
23:00	83	12	2	1	0	2	1	1%
Total	9489	2952	588	472	54	54	38	
% Total	58.36%	18.16%	3.62%	2.90%	0.33%	0.33%	0.23%	



APPENDIX 7

7.1.6 Traffic Survey Data 02/06/23

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	02.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



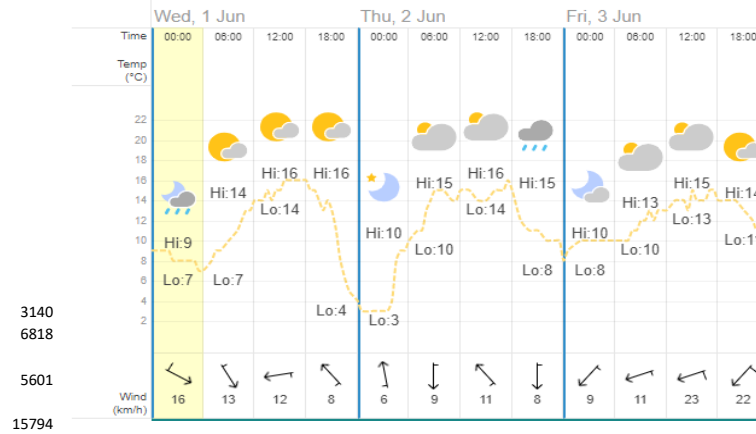
Irish Traffic Surveys



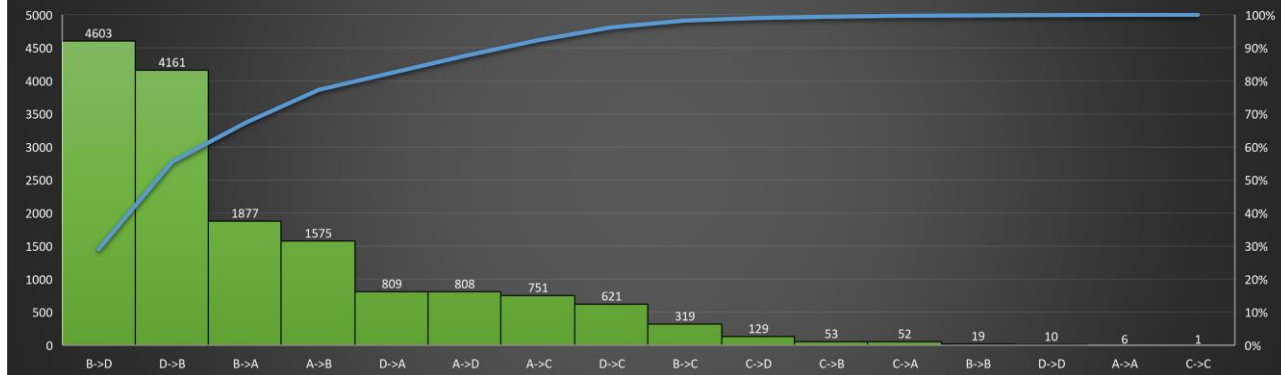
Site 1				
24hr Matrix	A	B	C	D
A	6	1575	751	808
B	1877	19	319	4603
C	52	53	1	129
D	809	4161	621	10
Totals	A	B	C	D
Entries	3140	6818	235	5601
Exits	2744	5808	1692	5550

Site 1		
Movement	24hr Total	% Total
A->A	6	0.0%
A->B	1575	10.0%
A->C	751	4.8%
A->D	808	5.1%
B->A	1877	11.9%
B->B	19	0.1%
B->C	319	2.0%
B->D	4603	29.1%
C->A	52	0.3%
C->B	53	0.3%
C->C	1	0.0%
C->D	129	0.8%
D->A	809	5.1%
D->B	4161	26.3%
D->C	621	3.9%
D->D	10	0.1%
Total	15794	100.0%

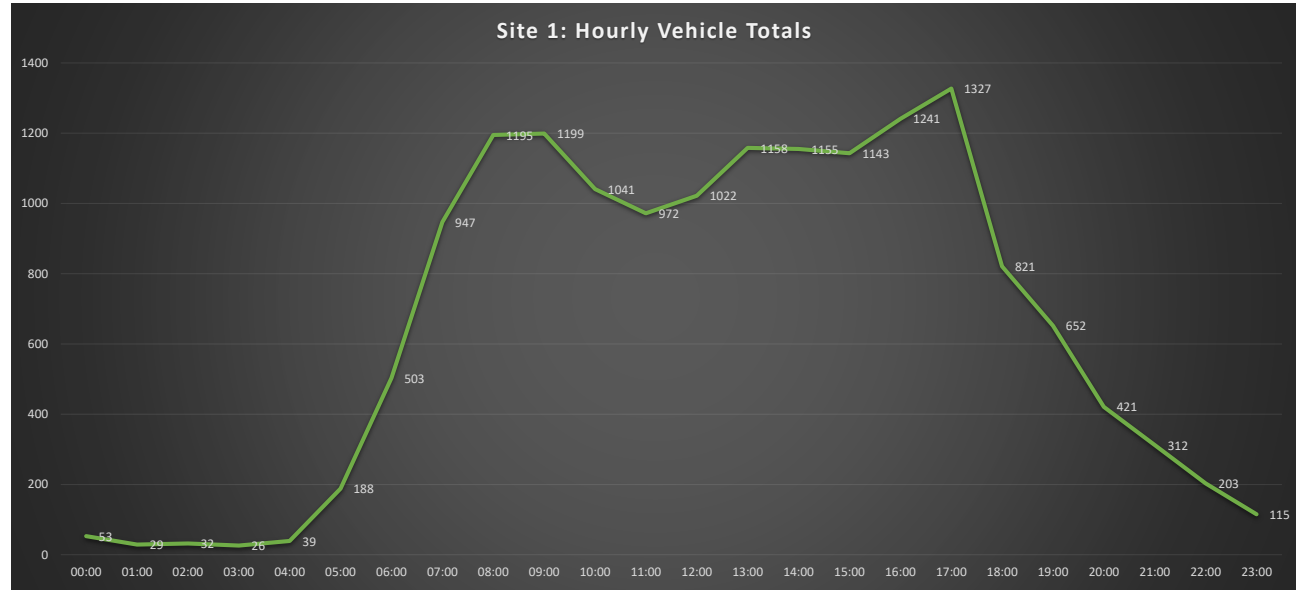
June 2022 Weather in Rathcoole — Graph



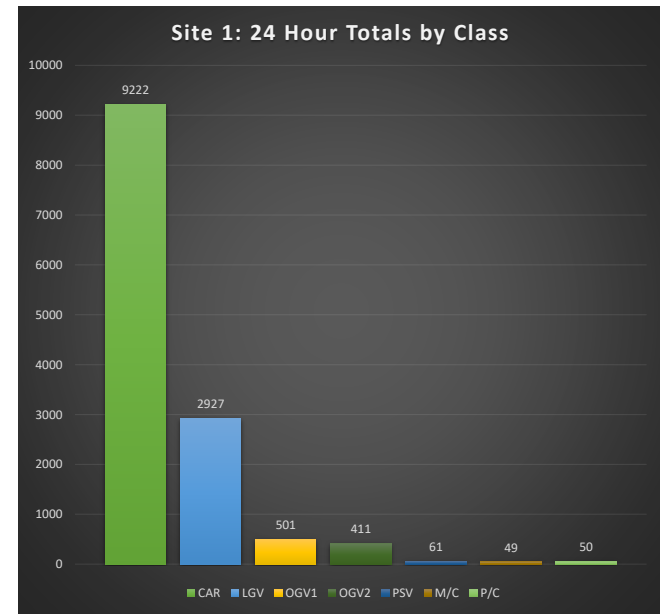
Site 1: 24 Hour Vehicle Totals by Movement



Site 1		
TIME	Period total	% of 24hr Total
00:00	53	0%
01:00	29	0%
02:00	32	0%
03:00	26	0%
04:00	39	0%
05:00	188	1%
06:00	503	3%
07:00	947	6%
08:00	1195	8%
09:00	1199	8%
10:00	1041	7%
11:00	972	6%
12:00	1022	6%
13:00	1158	7%
14:00	1155	7%
15:00	1143	7%
16:00	1241	8%
17:00	1327	8%
18:00	821	5%
19:00	652	4%
20:00	421	3%
21:00	312	2%
22:00	203	1%
23:00	115	1%
Total	15794	100%



Site 1								
TIME	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	% of 24hr Total
00:00	41	5	1	5	0	1	0	0%
01:00	23	3	0	3	0	0	0	0%
02:00	26	3	1	2	0	0	0	0%
03:00	8	11	1	5	0	1	0	0%
04:00	22	10	5	1	0	0	1	0%
05:00	128	31	21	5	1	0	2	1%
06:00	311	132	27	20	4	0	9	3%
07:00	625	230	29	39	16	4	4	6%
08:00	895	220	38	29	6	2	5	8%
09:00	792	299	56	42	2	5	3	8%
10:00	611	339	51	33	3	1	3	7%
11:00	615	232	67	46	3	5	4	6%
12:00	681	251	49	30	2	3	6	6%
13:00	782	274	50	41	4	4	3	7%
14:00	796	259	51	32	6	3	8	7%
15:00	821	218	47	43	5	6	3	7%
16:00	864	285	39	40	6	4	3	8%
17:00	1066	208	18	24	3	5	3	8%
18:00	674	112	6	12	5	7	5	5%
19:00	533	82	6	19	7	4	1	4%
20:00	362	42	3	9	2	1	2	3%
21:00	272	24	6	8	1	1	0	2%
22:00	173	15	5	3	3	2	2	1%
23:00	102	6	2	0	3	1	1	1%
Total	9222	2927	501	411	61	49	50	
% Total	58.39%	18.53%	3.17%	2.60%	0.39%	0.31%	0.32%	

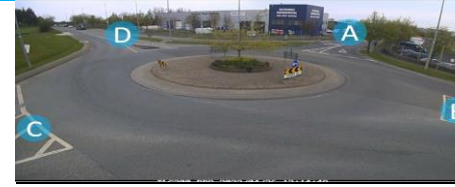


APPENDIX 7

7.1.7 Traffic Survey Data 26/04/23

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								A => B								A => C								A => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
H/TOT	0	0	0	0	0	0	0	0	4	3	0	2	0	0	0	9	0	2	0	0	0	0	0	2	2	2	0	0	0	0	0	4
23:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	3	0	0	0	0	0	1	4	
24 HR TOT	14	3	0	1	0	0	18	603	443	93	104	5	5	2	1255	463	151	16	4	0	4	2	640	475	193	16	6	1	6	4	701	

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								B => B								B => C								B => D								
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
H/TOT	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	4	0	0	2	0	0	0	6	77	4	2	0	0	1	1	85	
23:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	13	0	0	0	0	0	0	13	
23:15	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	6	0	0	0	0	0	0	6	
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10	
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	3	0	0	0	0	0	10	
H/TOT	3	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	35	4	0	0	0	0	0	39	
24 HR TOT	500	449	102	102	12	4	1	1170	15	5	2	1	0	0	0	0	23	167	32	15	18	0	0	1	233	2926	522	62	63	20	15	24	3632

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								C => B								C => C								C => D									
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	5
23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	17	5	6	0	0	0	2	30	18	8	6	3	0	0	0	35	1	1	0	0	0	0	0	2	83	10	2	2	0	1	3	101		

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	26.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	D => A								D => B								D => C								D => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
H/TOT	3	0	0	0	0	0	0	3	56	3	3	0	0	2	0	64	5	0	0	0	0	0	0	5	1	0	0	0	0	0	0	1
23:00	0	0	0	0	0	0	0	0	9	1	0	0	0	0	0	10	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	1	1	6	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
23:45	0	0	0	0	0	0	0	0	8	0	0	1	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	1	1	29	1	0	1	0	0	0	31	1	0	0	0	0	0	0	1	0	1	0	0	1	0	0	2
24 HR TOT	308	137	17	9	2	3	6	482	2055	391	57	64	19	11	18	2615	396	60	9	2	0	1	3	471	13	1	0	0	1	0	0	15

APPENDIX 7

7.1.8 Traffic Survey Data 27/04/23

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 27.04.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								A => B								A => C								A => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
H/TOT	0	0	0	0	0	0	0	0	13	21	10	6	4	0	0	54	1	3	0	0	0	0	0	4	5	5	1	0	1	13		
08:00	0	0	0	0	0	0	0	0	7	6	4	1	1	0	0	19	2	2	1	0	0	0	0	5	4	1	1	0	0	6		
08:15	0	0	0	0	0	0	0	0	3	7	3	3	0	0	0	16	3	1	0	0	0	0	0	4	0	5	1	0	0	6		
08:30	0	0	0	0	0	0	0	0	6	7	2	1	0	0	0	16	2	1	0	0	0	0	0	3	5	2	0	1	0	8		
08:45	0	0	0	0	0	0	0	0	4	16	4	4	0	0	0	28	1	0	1	0	0	0	0	2	2	4	1	0	0	7		
H/TOT	0	0	0	0	0	0	0	0	20	36	13	9	1	0	0	79	8	4	2	0	0	0	0	14	11	12	3	1	0	27		
09:00	0	0	0	0	0	0	0	0	9	16	3	2	0	0	0	30	5	3	1	0	0	0	0	9	9	3	2	0	0	14		
09:15	0	0	0	0	0	0	0	0	10	29	3	0	0	0	0	42	2	16	0	0	0	0	0	18	4	3	0	0	0	7		
09:30	0	0	0	0	0	0	0	0	6	14	1	5	0	0	0	26	0	2	0	1	0	0	0	3	6	7	2	1	0	16		
09:45	0	0	0	0	0	0	0	0	10	31	3	6	1	0	0	51	5	12	0	0	0	0	0	17	3	8	1	0	0	12		
H/TOT	0	0	0	0	0	0	0	0	35	90	10	13	1	0	0	149	12	33	1	1	0	0	0	47	22	21	5	1	0	49		
10:00	0	1	0	0	0	0	0	1	11	16	6	3	0	0	0	36	3	1	0	0	0	0	0	4	8	3	1	0	0	12		
10:15	1	0	0	0	0	0	0	1	13	19	3	5	0	0	0	40	0	10	0	0	0	0	0	10	10	3	0	0	0	13		
10:30	0	0	0	0	0	0	0	0	10	14	5	4	1	0	0	34	4	4	0	0	0	0	0	8	11	2	1	0	0	14		
10:45	0	0	0	0	0	0	0	0	11	9	3	0	0	0	0	23	2	3	0	0	0	0	0	5	5	4	3	2	0	14		
H/TOT	1	1	0	0	0	0	0	2	45	58	17	12	1	0	0	133	9	18	0	0	0	0	0	27	34	12	5	2	0	53		
11:00	0	0	0	0	0	0	0	0	16	13	5	6	0	0	0	40	5	2	0	0	0	0	0	7	8	4	3	0	0	15		
11:15	0	0	0	0	0	0	0	0	11	19	2	3	0	0	0	35	2	3	1	0	0	0	0	6	7	6	0	0	0	13		
11:30	0	0	0	0	0	0	0	0	14	11	6	6	0	0	0	37	4	0	0	0	0	0	1	5	12	3	0	0	0	15		
11:45	0	0	0	0	0	0	0	0	14	17	2	0	0	0	0	33	3	1	0	0	0	0	0	4	6	5	1	1	0	13		
H/TOT	0	0	0	0	0	0	0	0	55	60	15	15	0	0	0	145	14	6	1	0	0	0	1	22	33	18	4	1	0	56		
12:00	0	1	0	0	0	0	0	1	17	13	8	3	1	1	0	43	7	2	0	0	0	0	0	9	7	5	0	0	0	12		
12:15	0	0	0	0	0	0	0	0	17	6	2	2	0	0	0	27	3	1	1	0	0	0	0	5	8	6	0	0	0	14		
12:30	0	0	0	0	0	0	0	0	14	15	5	2	0	0	0	36	4	0	2	0	0	0	0	6	13	0	1	0	0	14		
12:45	0	0	0	0	0	0	0	0	9	8	7	4	0	0	0	28	10	3	0	0	0	0	0	13	17	5	0	0	1	23		
H/TOT	0	1	0	0	0	0	0	1	57	42	22	11	1	1	0	134	24	6	3	0	0	0	0	33	45	16	1	0	1	63		
13:00	1	0	0	0	0	0	0	1	23	12	2	0	0	0	0	37	11	3	1	0	0	0	0	15	20	8	1	1	0	30		
13:15	0	0	0	0	0	0	0	0	11	16	0	3	0	0	0	30	5	1	0	0	0	0	0	6	9	7	0	0	0	16		
13:30	0	0	0	0	0	0	0	0	16	11	4	2	0	0	0	33	7	1	1	0	0	0	0	9	24	11	1	0	0	36		
13:45	0	0	0	0	0	0	0	0	18	8	2	3	0	0	0	31	13	2	1	0	0	0	0	16	14	1	0	0	0	16		
H/TOT	1	0	0	0	0	0	0	1	68	47	8	8	0	0	0	131	36	7	3	0	0	0	0	46	67	27	2	1	0	98		
14:00	0	0	0	0	0	0	0	0	9	9	3	4	1	0	0	26	8	1	1	0	0	0	0	10	11	3	0	0	0	14		
14:15	0	0	0	0	0	0	0	0	17	7	1	2	0	0	0	27	5	2	0	1	0	0	0	8	14	7	0	1	0	22		
14:30	0	0	0	0	0	0	0	0	22	20	8	2	0	0	0	52	9	3	2	0	0	0	0	14	15	8	0	0	0	23		
14:45	0	0	0	0	0	0	0	0	23	9	4	1	0	0	0	37	6	2	1	0	0	0	0	9	8	4	0	0	0	12		
H/TOT	0	0	0	0	0	0	0	0	71	45	16	9	1	0	0	142	28	8	4	1	0	0	0	41	48	22	0	1	0	71		
15:00	0	0	0	0	0	0	0	0	19	14	4	2	0	1	0	40	8	3	1	0	0	0	0	12	12	3	0	1	0	16		
15:15	1	0	0	0	0	0	0	1	18	12	0	3	0	0	0	33	10	2	0	0	0	0	0	12	8	2	1	0	0	11		
15:30	0	0	0	0	0	0	0	0	19	10	5	5	0	0	1	40	13	3	0	0	0	0	0	16	10	10	2	0	1	23		

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								A => B								A => C								A => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	6	2	0	0	0	0	0	8	712	548	150	129	13	3	4	1559	519	179	20	4	0	4	1	727	544	221	32	14	2	6	4	823

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								B => B								B => C								B => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	949	610	134	121	12	2	3	1831	20	5	0	1	0	0	0	0	246	47	9	27	0	0	0	0	3672	667	96	44	25	22	22	4548

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 27.04.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								TOT	C => B								TOT	C => C								TOT	C => D								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
H/TOT	3	2	0	0	0	0	0	5	1	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5	1	0	0	0	0	1	7				
08:00	1	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2				
08:15	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	4				
08:30	1	1	0	0	0	0	0	2	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	8	1	1	0	0	0	10				
08:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	0	1	0	0	10				
H/TOT	3	1	1	0	0	0	0	5	3	0	1	1	0	0	5	0	0	0	0	0	0	0	0	0	20	3	2	1	0	0	0	26				
09:00	0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3					
09:15	1	1	0	0	0	0	0	2	2	1	1	0	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2					
09:30	1	0	0	0	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2					
09:45	1	1	0	0	0	0	0	2	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2					
H/TOT	3	3	0	0	0	0	0	6	7	1	1	0	0	0	9	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9					
10:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4					
10:15	1	1	0	0	0	0	0	2	1	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2					
10:30	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1					
H/TOT	3	1	0	0	0	0	0	4	1	1	0	1	0	0	3	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	7					
11:00	1	0	0	0	0	0	0	1	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1					
11:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1					
11:30	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
11:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1					
H/TOT	2	0	0	0	0	0	0	2	4	3	0	0	0	0	7	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3					
12:00	0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1					
12:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4					
12:30	1	1	0	0	0	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2					
12:45	1	1	1	0	0	0	0	3	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3					
H/TOT	2	3	1	0	0	0	0	6	4	3	0	0	0	0	7	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10					
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4					
13:15	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	0	0	0	0	0	0	0	0	8	2	1	0	0	0	0	11					
13:30	3	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3					
13:45	1	1	0	0	0	0	0	2	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	4	2	0	0	0	0	0	6	3	2	0	0	0	0	5	0	0	0	0	0	0	0	0	15	2	1	0	0	0	0	18					
14:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5					
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2					
14:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2					
14:45	1	0	0	0	0	0	0	1	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3					
H/TOT	2	0	0	0	0	0	0	2	1	1	0	1	0	0	3	0	0	0	0	0	0	0	0	9	3	0	0	0	0	0	12					
15:00	1	0	1	0	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2					
15:30	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1					

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	27.04.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								C => B								C => C								C => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	30	13	3	0	0	0	1	47	31	17	2	3	0	0	0	53	0	0	0	0	0	0	0	0	119	22	5	3	0	0	4	153

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 27.04.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	D => A								D => B								D => C								D => D								
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	546	201	29	12	1	3	6	798	3375	577	85	64	20	15	20	4156	535	82	15	2	0	2	1	637	18	1	0	0	2	0	0	21	

APPENDIX 7

7.1.9 Traffic Survey Data 01/06/23

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	01.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								A => B								A => C								A => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	0	0	0	0	0	0	0	0	4	2	0	1	0	1	0	8	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
24 HR TOT	1	2	2	2	0	0	0	7	750	573	150	115	9	7	1	1605	492	190	11	8	0	3	3	707	551	196	31	11	2	5	3	799

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	01.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								B => B								B => C								B => D															
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT								
23:30	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	0	0	0	0	0	0	0	0	9
H/TOT	3	3	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	40	4	1	0	0	0	45								
24 HR TOT	961	608	157	124	8	5	2	1865	11	4	1	1	1	0	0	18	311	58	35	32	0	0	0	436	3995	760	114	112	24	28	23	5056								

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	01.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								C => B								C => C								C => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	32	6	4	1	0	0	7	50	36	13	9	6	0	0	0	64	0	0	1	0	0	0	0	1	118	17	7	3	0	0	7	152

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	01.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	D => A								D => B								D => C								D => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	1	1	8	1	0	0	0	0	0	9	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	1	1	29	3	1	0	0	1	0	34	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
24 HR TOT	511	221	33	6	4	2	4	781	3428	624	94	126	19	22	12	4325	308	65	5	2	0	0	0	380	8	3	0	0	1	1	0	13

APPENDIX 7

7.1.10 Traffic Survey Data 02/06/23

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A									A => B						A => C						A => D									
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C
00:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	2	1	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	2	2	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
H/TOT	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	6	0	0	0	0	0	0	0	0	1	0	0	0	1		
04:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
05:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15	0	0	0	0	0	0	0	0	0	3	8	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:45	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	2		
H/TOT	0	0	0	0	0	0	0	0	0	4	14	1	0	0	0	19	0	0	0	0	0	0	0	1	0	0	1	0	2		
06:00	0	0	0	0	0	0	0	0	3	1	3	2	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
06:15	0	0	0	0	0	0	0	0	1	1	1	2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:30	0	0	0	0	0	0	0	0	2	3	2	2	1	0	0	10	0	0	0	1	0	0	0	1	0	1	0	0	0	1	
06:45	0	0	0	0	0	0	0	0	2	4	4	0	0	0	0	10	1	0	0	0	0	0	0	1	1	1	2	0	0	4	
H/TOT	0	0	0	0	0	0	0	0	8	9	10	6	1	0	0	34	1	0	0	1	0	0	2	1	2	2	1	0	0	6	
07:00	0	0	0	0	0	0	0	0	3	4	3	1	0	0	0	11	2	0	0	1	0	0	0	3	1	2	0	1	0	4	
07:15	0	0	0	0	0	0	0	0	5	6	0	1	5	0	0	17	1	0	0	0	0	0	0	1	0	4	0	0	0	4	
07:30	0	0	0	0	0	0	0	0	1	2	3	0	1	0	0	7	0	0	0	0	0	0	0	0	1	3	0	0	0	4	
07:45	1	0	0	0	0	0	0	1	3	5	3	3	0	0	0	14	0	0	0	0	0	0	0	0	3	4	0	0	0	7	

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								TOT	A => B								TOT	A => C								TOT	A => D								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
H/TOT	1	0	0	0	0	0	0	1	12	17	9	5	6	0	0	49	3	0	0	1	0	0	0	0	4	5	13	0	1	0	0	0	19			
08:00	0	0	0	0	0	0	0	0	5	13	2	2	0	0	0	22	5	1	0	0	0	0	0	0	6	3	2	0	1	0	0	0	6			
08:15	0	0	0	0	0	0	0	0	10	7	0	2	0	0	0	19	2	1	0	0	0	0	0	0	3	1	2	0	0	0	0	0	3			
08:30	0	0	0	0	0	0	0	0	5	7	3	1	0	0	0	16	2	2	0	0	0	0	0	0	4	3	0	0	1	0	0	0	4			
08:45	0	0	0	0	0	0	0	0	9	8	2	1	0	0	0	20	3	1	0	0	0	0	0	0	4	3	0	1	0	0	0	0	4			
H/TOT	0	0	0	0	0	0	0	0	29	35	7	6	0	0	0	77	12	5	0	0	0	0	0	17	10	4	1	2	0	0	0	17				
09:00	0	0	0	0	0	0	0	0	4	14	5	4	0	0	0	27	1	3	0	0	0	0	0	0	4	8	2	0	0	0	0	0	10			
09:15	0	0	0	0	0	0	0	0	7	13	4	0	0	0	0	24	1	2	1	0	0	0	0	0	4	4	4	2	0	0	0	0	10			
09:30	0	0	0	0	0	0	0	0	10	29	4	4	0	0	0	47	3	12	1	0	0	0	0	0	16	5	7	1	0	0	0	0	13			
09:45	0	0	0	0	0	0	0	0	13	18	3	7	0	0	0	41	4	11	0	0	0	0	0	0	15	5	6	0	0	0	0	0	11			
H/TOT	0	0	0	0	0	0	0	0	34	74	16	15	0	0	0	139	9	28	2	0	0	0	0	39	22	19	3	0	0	0	0	44				
10:00	0	0	0	0	0	0	0	0	13	17	0	1	0	0	0	31	5	5	0	0	0	0	0	0	10	7	6	0	0	0	0	0	13			
10:15	0	0	0	0	0	0	0	0	14	27	2	2	0	0	0	45	1	19	1	0	0	0	0	0	21	8	8	0	1	0	0	0	17			
10:30	0	0	0	0	0	0	0	0	15	20	3	1	0	0	0	39	0	6	0	1	0	0	0	0	7	7	2	1	0	0	0	0	10			
10:45	0	0	0	0	0	0	0	0	10	11	3	0	0	0	0	24	4	4	1	0	0	0	0	0	9	11	4	0	0	0	0	0	15			
H/TOT	0	0	0	0	0	0	0	0	52	75	8	4	0	0	0	139	10	34	2	1	0	0	0	47	33	20	1	1	0	0	0	55				
11:00	0	0	0	0	0	0	0	0	21	16	10	3	0	0	0	50	4	0	2	0	0	0	0	0	4	9	6	2	1	0	0	0	18			
11:15	0	0	0	0	0	0	0	0	13	9	4	3	0	0	0	29	1	1	0	0	0	0	1	0	3	3	2	0	1	0	0	0	6			
11:30	0	0	0	0	0	0	0	0	12	19	2	2	0	0	0	35	3	3	1	0	0	0	0	0	7	9	3	0	0	0	1	0	13			
11:45	0	0	0	0	0	0	0	0	16	15	4	4	1	1	0	41	5	2	0	0	0	0	0	0	7	7	1	0	1	0	0	0	9			
H/TOT	0	0	0	0	0	0	0	0	62	59	20	12	1	1	0	155	13	6	1	0	0	0	1	21	28	12	2	3	0	1	0	46				
12:00	0	0	0	0	0	0	0	0	11	8	4	0	0	0	0	23	4	2	0	0	0	0	0	0	6	10	3	1	0	0	0	0	14			
12:15	0	0	0	0	0	0	0	0	14	11	2	2	0	0	0	29	3	5	0	0	0	0	0	0	8	8	6	1	0	0	0	0	15			
12:30	0	0	0	0	0	0	0	0	19	16	1	2	0	0	0	38	4	1	0	0	0	0	0	0	5	12	3	2	0	0	0	0	17			
12:45	0	0	0	0	0	0	0	0	20	12	3	2	0	0	0	37	3	3	0	0	0	0	0	0	6	15	4	0	0	0	0	0	19			
H/TOT	0	0	0	0	0	0	0	0	64	47	10	6	0	0	0	127	14	11	0	0	0	0	0	25	45	16	4	0	0	0	0	65				
13:00	0	0	0	0	0	0	0	0	22	16	8	3	0	0	0	49	13	2	0	0	0	0	0	0	15	14	8	1	0	0	0	0	23			
13:15	0	0	0	0	0	0	0	0	13	14	2	1	0	0	0	30	8	3	2	0	0	0	0	0	13	12	3	0	1	0	0	0	16			
13:30	0	0	0	0	0	0	0	0	19	11	4	2	0	0	0	36	2	2	0	0	0	0	0	0	4	12	6	0	0	0	0	0	18			
13:45	0	0	0	0	0	0	0	0	17	12	2	3	0	0	0	34	4	5	0	0	0	0	0	0	9	11	6	0	0	0	0	0	17			
H/TOT	0	0	0	0	0	0	0	0	71	53	16	9	0	0	0	149	27	12	2	0	0	0	0	41	49	23	1	1	0	0	0	74				
14:00	0	0	0	0	0	0	0	0	23	10	4	4	0	1	0	42	2	1	0	0	0	0	0	0	3	6	9	0	1	0	0	0	16			
14:15	0	0	0	0	0	0	0	0	16	8	7	6	0	0	0	37	12	4	1	0	0	0	0	0	17	9	4	0	1	1	0	0	15			
14:30	0	0	0	0	0	0	0	0	20	8	2	1	0	0	0	31	15	7	0	0	0	0	0	0	22	13	3	0	0	0	0	0	16			
14:45	1	0	0	0	0	0	0	1	11	13	3	1	0	0	0	28	8	3	0	0	0	0	0	0	11	13	4	1	0	0	0	3	21			
H/TOT	1	0	0	0	0	0	0	1	70	39	16	12	0	1	0	138	37	15	1	0	0	0	0	53	41	20	1	2	1	0	3	68				
15:00	1	0	0	0	0	0	0	1	27	11	4	2	0	0	0	44	10	3	0	1	0	0	1	0	15	11	2	1	1	0	0	0	15			
15:15	0	0	0	0	0	0	0	0	14	11	2	0	0	0	0	27	13	4	0	0	0	0	0	0	17	13	5	0	1	0	0	0	19			
15:30	0	0	0	0	0	0	0	0	17	14	2	3	0	0	0	36	12	4	1	0	0	0	0	0	17	14	5	0	0	0	0	0	19			

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	02.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	A => A								A => B								A => C								A => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	7	0	0	0	0	1	0	8	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2
24 HR TOT	5	1	0	0	0	0	0	6	729	561	148	120	12	5	0	1575	518	207	12	9	0	2	3	751	539	219	25	15	3	3	4	808

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								TOT	B => B								TOT	B => C								TOT	B => D								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
00:00	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	7	0	0	0	0	0	0	7			
00:15	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	1	0	0	0	0	0	6				
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	2	1	1	0	0	0	8				
00:45	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	8	0	0	0	0	0	0	8				
H/TOT	2	1	0	2	0	0	0	5	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5	24	3	1	1	0	0	0	29				
01:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2				
01:15	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4				
01:30	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1				
01:45	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	0	0	0	7			
H/TOT	5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	1	0	0	0	14					
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0	5				
02:15	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4				
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2				
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1				
H/TOT	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	11	0	1	0	0	0	0	12					
03:00	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1				
03:15	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1			
03:30	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:45	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1				
H/TOT	2	4	0	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3					
04:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	1				
04:15	1	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2				
04:45	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2				
H/TOT	7	4	0	0	0	0	0	11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3	0	2	0	0	0	0	5					
05:00	8	5	1	0	0	0	0	14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	1	1	0	0	0	0	4				
05:15	6	1	1	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3				
05:30	8	3	0	2	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	5				
05:45	18	3	1	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	8	0	0	0	0	0	0	8				
H/TOT	40	12	3	2	0	0	0	57	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	17	2	1	0	0	0	0	20					
06:00	12	2	1	1	0	0	0	16	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	12	2	2	0	1	0	0	17				
06:15	14	9	1	1	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	5	1	0	0	0	1	22					
06:30	8	5	0	2	0	0	0	15	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	22	9	1	0	1	0	1	34				
06:45	19	9	1	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	27	16	2	1	0	0	1	47				
H/TOT	53	25	3	4	0	0	0	85	0	0	0	0	0	0	0	0	3	3	0	0	0	0	6	76	32	6	1	2	0	3	120					
07:00	28	9	2	0	0	1	0	40	1	0	0	0	0	0	0	0	1	2	0	0	0	0	2	33	11	1	3	1	0	1	50					
07:15	21	9	2	2	0	0	0	34	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	31	12	2	5	1	1	0	52				
07:30	25	12	1	3	0	0	0	41	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4	42	12	1	3	0	0	0	58				
07:45	34	11	1	0	0	0	0	46	0	0	0	0	0	0	0	0	0	7	1	0	0	0	0	8	36	14	0	3	2	0	1	56				

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								TOT	B => B								TOT	B => C								TOT	B => D								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
H/TOT	108	41	6	5	0	1	0	161	1	0	0	0	0	0	0	1	16	3	0	0	0	0	0	0	0	19	142	49	4	14	4	1	2	216		
08:00	36	16	2	2	0	0	0	56	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	8	41	7	1	2	1	0	0	52		
08:15	30	14	1	1	0	0	0	46	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4	34	4	1	1	0	0	0	40			
08:30	34	11	3	0	0	0	0	48	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	33	7	1	2	2	0	1	46			
08:45	36	18	6	2	0	0	0	62	2	0	0	0	0	0	0	0	2	3	1	0	1	0	0	0	5	40	8	3	1	0	0	0	52			
H/TOT	136	59	12	5	0	0	0	212	2	0	0	0	0	0	0	2	11	4	1	3	0	0	0	0	19	148	26	6	6	3	0	1	190			
09:00	32	15	6	5	0	1	0	59	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	4	60	9	4	1	1	1	0	76			
09:15	31	20	4	5	0	0	0	60	2	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	3	46	10	1	0	0	1	0	58			
09:30	27	9	5	3	0	0	1	45	2	0	0	0	0	0	0	2	2	4	0	2	0	0	0	0	8	36	13	2	0	0	0	0	51			
09:45	29	16	3	1	0	1	0	50	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	51	8	3	2	0	0	0	64			
H/TOT	119	60	18	14	0	2	1	214	4	0	0	0	0	0	0	4	12	4	0	2	0	0	0	0	18	193	40	10	3	1	2	0	249			
10:00	18	19	3	3	0	0	0	43	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	4	56	16	1	1	2	0	0	76			
10:15	8	19	7	2	0	0	0	36	0	0	0	0	0	0	0	0	5	0	1	1	0	0	0	0	7	34	12	2	3	0	0	1	52			
10:30	12	21	3	1	0	0	0	37	0	0	0	0	0	0	0	0	4	1	1	1	0	0	0	0	7	43	15	2	1	0	0	1	62			
10:45	12	10	5	5	0	0	0	32	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3	41	12	3	1	0	0	1	58			
H/TOT	50	69	18	11	0	0	0	148	0	0	0	0	0	0	0	0	13	3	2	3	0	0	0	0	21	174	55	8	6	2	0	3	248			
11:00	18	14	2	1	0	0	0	35	0	0	0	0	0	0	0	4	4	1	0	0	0	0	0	5	46	9	3	1	1	0	0	60				
11:15	5	8	6	3	0	0	0	22	0	0	0	1	0	0	0	1	2	3	0	0	0	0	0	5	42	10	4	4	0	0	2	62				
11:30	11	11	4	3	0	0	0	29	0	0	0	0	0	0	0	4	1	2	2	0	0	0	0	9	49	9	1	2	0	1	0	62				
11:45	13	11	3	2	0	0	0	29	0	0	0	0	0	0	0	4	1	0	1	0	0	0	0	6	46	5	1	1	0	0	0	53				
H/TOT	47	44	15	9	0	0	0	115	0	0	0	1	0	0	0	1	14	6	2	3	0	0	0	0	25	183	33	9	8	1	1	2	237			
12:00	16	21	1	3	0	0	1	42	0	0	0	0	0	0	0	8	1	0	2	0	0	0	0	11	65	10	1	2	1	0	1	80				
12:15	15	9	7	2	0	0	0	33	3	0	0	0	0	0	3	1	1	1	0	0	0	0	3	55	12	5	0	0	0	0	72					
12:30	21	22	4	1	0	0	0	48	0	0	0	0	0	0	0	3	2	0	2	0	2	0	0	9	51	12	2	0	0	0	0	65				
12:45	11	13	5	4	0	0	1	34	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	4	51	14	1	1	0	0	2	69				
H/TOT	63	65	17	10	0	0	2	157	3	0	0	0	0	0	3	15	5	1	4	0	2	0	0	27	222	48	9	3	1	0	3	286				
13:00	18	13	5	1	0	0	0	37	1	0	0	0	0	0	1	2	0	0	0	0	0	0	2	63	13	2	0	1	2	0	81					
13:15	16	14	1	3	0	0	0	34	0	0	0	0	0	0	0	2	3	0	1	0	0	0	0	6	61	10	3	1	0	0	0	75				
13:30	13	12	2	6	0	0	0	33	1	0	0	0	0	0	1	1	1	0	1	0	0	0	3	66	11	0	2	0	0	0	79					
13:45	20	12	5	3	0	0	0	40	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	5	68	17	2	2	0	0	0	89				
H/TOT	67	51	13	13	0	0	0	144	2	0	0	0	0	0	2	6	6	1	3	0	0	0	0	16	258	51	7	5	1	2	0	324				
14:00	19	13	1	4	0	0	0	37	3	0	0	0	0	0	3	5	3	0	0	0	0	0	8	77	9	3	0	1	0	2	92					
14:15	16	16	6	0	0	0	0	38	0	0	0	0	0	0	0	7	0	1	0	0	0	0	0	8	67	10	1	3	0	0	1	82				
14:30	15	14	1	1	0	0	0	31	0	0	0	0	0	0	0	5	1	2	0	0	0	0	0	8	58	17	4	1	0	0	0	80				
14:45	11	17	4	2	0	0	0	34	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	76	10	1	1	1	2	0	91				
H/TOT	61	60	12	7	0	0	0	140	3	0	0	0	0	0	3	20	4	3	0	0	0	0	0	27	278	46	9	5	2	2	3	345				
15:00	19	13	6	4	0	0	0	42	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	7	76	8	1	1	1	0	0	87				
15:15	15	7	3	3	0	0	0	28	0	0	0	0	0	0	0	2	2	1	0	2	0	0	0	5	77	12	3	1	0	0	0	93				
15:30	9	10	5	4	0	0	0	28	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	67	11	0	1	0	0	2	81				

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								TOT	B => B								TOT	B => C								TOT	B => D								TOT
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT		CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
15:45	20	11	6	2	1	0	0	40	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	3	81	7	1	0	1	0	0	90			
H/TOT	63	41	20	13	1	0	0	138	0	0	0	0	0	0	0	0	10	3	1	3	0	0	0	17	301	38	5	3	2	0	2	351				
16:00	16	9	3	5	0	0	0	33	0	0	0	0	0	0	0	0	5	2	0	1	0	0	0	8	69	22	4	1	1	0	1	98				
16:15	8	11	2	2	0	0	0	23	1	0	0	0	0	0	0	1	2	5	0	1	0	0	0	8	80	11	1	1	0	0	0	93				
16:30	9	14	1	1	1	0	0	26	0	0	0	0	0	0	0	6	0	0	1	0	0	0	7	70	13	1	2	0	0	0	86					
16:45	8	6	2	3	1	0	0	20	0	0	0	0	0	0	0	10	2	1	0	0	0	0	13	72	16	3	3	0	0	1	95					
H/TOT	41	40	8	11	2	0	0	102	1	0	0	0	0	0	1	23	9	1	3	0	0	0	36	291	62	9	7	1	0	2	372					
17:00	1	2	1	1	0	0	0	5	0	0	0	0	0	0	0	6	3	1	0	0	0	0	10	74	18	0	1	0	1	2	96					
17:15	3	3	2	2	1	0	0	11	0	0	0	0	0	0	0	9	0	0	1	0	0	0	10	101	23	1	4	1	0	0	130					
17:30	7	3	0	0	0	0	0	10	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	105	12	3	3	0	2	1	126					
17:45	4	2	1	0	0	0	0	7	0	0	0	0	0	0	0	9	0	1	0	0	0	0	10	95	17	1	1	0	1	0	115					
H/TOT	15	10	4	3	1	0	0	33	0	0	0	0	0	0	0	30	3	2	1	0	0	0	36	375	70	5	9	1	4	3	467					
18:00	5	11	0	1	0	0	0	17	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	84	8	0	0	1	1	1	95					
18:15	2	7	1	0	0	0	0	10	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	83	7	0	0	1	1	0	92					
18:30	1	6	0	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	69	4	0	1	0	0	0	74					
18:45	7	3	1	1	0	0	0	12	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	66	10	0	0	1	2	0	79					
H/TOT	15	27	2	2	0	0	0	46	0	0	0	0	0	0	0	8	0	1	0	0	0	0	9	302	29	0	1	3	4	1	340					
19:00	3	3	0	5	1	0	0	12	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	73	9	0	0	0	1	1	84					
19:15	7	4	1	2	0	1	0	15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	61	10	0	0	1	0	0	72					
19:30	8	3	0	2	0	0	0	13	0	0	0	0	0	0	0	2	2	1	0	0	0	0	5	58	10	0	0	0	1	0	69					
19:45	1	2	0	2	0	0	0	5	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	58	7	0	1	0	0	0	66					
H/TOT	19	12	1	11	1	1	0	45	0	0	0	0	0	0	0	5	4	1	1	0	0	0	11	250	36	0	1	1	2	1	291					
20:00	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	51	4	0	0	0	0	1	56					
20:15	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	1	0	0	0	0	5	52	10	0	0	1	0	0	63					
20:30	4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	47	1	0	0	0	0	0	48					
20:45	2	1	0	2	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	47	4	1	0	0	0	1	53					
H/TOT	9	5	0	2	0	0	0	16	0	0	0	0	0	0	0	10	0	1	0	0	0	0	11	197	19	1	0	1	0	2	220					
21:00	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	3	0	0	0	0	0	41					
21:15	4	2	0	2	0	0	0	8	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	29	4	1	0	0	0	0	34					
21:30	3	1	1	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	1	0	0	0	1	0	40					
21:45	3	2	1	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	2	0	0	1	0	0	25					
H/TOT	10	6	2	3	0	0	0	21	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	127	10	1	0	1	1	0	140					
22:00	3	1	0	0	0	0	0	4	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	26	1	0	0	0	1	1	29					
22:15	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	7	0	1	0	0	0	0	8					
22:30	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	14	0	0	0	0	0	1	15					
22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	15	3	0	0	0	0	0	18					
H/TOT	4	2	1	0	0	0	0	7	1	1	0	0	0	0	2	3	0	0	0	0	0	0	3	62	4	1	0	0	1	2	70					
23:00	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	12	1	0	0	0	0	0	13					
23:15	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	18	0	1	0	1	0	0	20					

Irish Traffic Surveys LTD

Survey Name :	ITS J-604 Greenogue
Site:	1 Site
Date:	02.06.2022
Time:	00:00 - 23:59
Location:	Greenogue business Park, Newcastle Co. Dublin
Classification:	Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	B => A								B => B								B => C								B => D								
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	
23:30	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	11	1	1	0	0	0	0	13
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	
H/TOT	3	0	0	0	2	0	0	5	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6	49	2	2	0	1	0	0	54	
24 HR TOT	939	639	155	130	7	4	3	1877	17	1	0	1	0	0	0	19	215	57	18	27	0	2	0	319	3698	655	97	75	28	20	30	4603	

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A									C => B									C => C									C => D								
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT				
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:30	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:45	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	1	1	0	0	0	0	2	4	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
07:30	1	0	0	0	0	0	1	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3					
07:45	1	1	0	0	0	0	1	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1					

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								C => B								C => C								C => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
H/TOT	2	1	0	0	0	0	2	5	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
08:00	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
08:30	0	1	0	1	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	9
H/TOT	1	1	0	1	0	0	0	3	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	15	2	0	1	0	0	0	18
09:00	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
09:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
09:30	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	3	1	0	0	0	0	0	4	1	3	0	1	0	0	0	5	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8
10:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	3
10:30	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
H/TOT	3	1	0	0	0	0	0	4	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	2	0	0	0	7
11:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
11:15	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:45	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
H/TOT	2	0	1	0	0	0	0	3	3	3	1	0	0	0	0	7	0	0	0	0	0	0	0	0	1	2	1	0	0	0	1	5
12:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0	4
12:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
H/TOT	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2	0	1	0	0	0	5
13:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	4	0	0	0	0	0	0	0	0	4	1	0	1	0	0	0	6
13:15	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
13:30	1	2	0	0	0	0	0	3	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	1	1	0	0	0	0	5
13:45	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4
H/TOT	2	3	0	0	0	0	0	5	1	4	1	0	0	2	0	8	0	0	0	0	0	0	0	0	12	3	1	1	0	0	0	17
14:00	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1	4
14:15	1	2	0	0	0	0	0	3	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
14:30	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
14:45	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
H/TOT	5	2	0	0	0	0	0	7	4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	11	1	0	0	0	0	2	14
15:00	0	1	0	1	0	0	0	2	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
15:15	2	0	0	0	0	0	0	2	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	3
15:30	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	C => A								C => B								C => C								C => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24 HR TOT	31	14	1	2	0	0	4	52	22	24	2	3	0	2	0	53	1	0	0	0	0	0	0	1	104	14	2	6	0	0	3	129

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	D => A									D => B									D => C									D => D								
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT				
00:00	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
00:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	9	0	0	0	0	1	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
02:00	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
02:45	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	0	0	0	0	0	0	12	3	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
03:00	0	1	0	0	0	0	0	1	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:30	0	0	1	0	0	0	0	1	2	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	1	1	0	0	0	0	2	4	1	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
04:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:15	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:30	0	0	1	0	0	0	0	1	2	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
04:45	0	0	0	0	0	0	0	0	7	0	0	1	0	0	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	0	0	1	0	0	0	0	1	11	2	1	1	0	0	1	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
05:00	1	0	0	0	0	0	0	1	8	0	0	1	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:15	1	1	0	0	0	0	0	1	3	10	2	1	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:30	5	2	0	0	0	0	0	7	16	6	0	1	0	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
05:45	4	1	0	0	0	0	0	5	24	1	1	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	11	4	0	0	0	0	1	16	58	9	2	2	0	0	1	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
06:00	5	2	0	0	0	0	0	7	27	6	1	1	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:15	4	1	0	0	0	0	0	5	37	14	1	2	0	0	0	54	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:30	2	1	0	0	0	0	0	3	38	17	3	1	1	0	2	62	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
06:45	7	5	0	0	0	0	2	14	35	13	1	1	0	0	0	50	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0					
H/TOT	18	9	0	0	0	0	2	29	137	50	6	5	1	0	2	201	13	1	0	0	0	0	0	0	0	0	0	0	0	0						
07:00	10	7	1	0	0	1	0	19	56	19	3	2	2	0	0	82	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0					
07:15	5	4	0	0	0	0	0	9	61	15	1	0	3	1	0	81	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0					
07:30	9	9	0	3	0	0	0	21	70	26	3	2	1	0	0	102	6	0	0	1	0	0	0	7	0	0	0	0	0	0	0					
07:45	23	8	0	0	0	0	0	31	71	15	1	4	0	0	0	91	14	1	1	0	0	0	0	16	0	0	0	1	0	0	1					

Irish Traffic Surveys LTD

Survey Name : ITS J-604 Greenogue
 Site: 1 Site
 Date: 02.06.2022
 Time: 00:00 - 23:59
 Location: [Greenogue business Park, Newcastle Co. Dublin](#)
 Classification: Car, LGV, OGV1, OGV2, PSV, MC, PC



TIME	D => A								D => B								D => C								D => D							
	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT	CAR	LGV	OGV1	OGV2	PSV	M/C	P/C	TOT
23:30	0	0	0	0	0	0	1	1	6	2	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	1	1	31	4	0	0	0	0	0	35	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
24 HR TOT	536	222	27	14	4	2	4	809	3323	608	85	81	27	20	17	4161	537	69	7	7	1	0	0	621	9	0	0	1	0	0	0	10

Appendix 9.1

Noise Sensitive Locations (NSLs)

APPENDIX 9

Apx Table 9.1: Noise Sensitive Locations (NSLs)

Location ID	Description	ITM Coordinates	
		Easting	Northing
NSL1	Residential	701142	728951
NSL2	Residential	701053	728899
NSL3	Residential	701176	728577
NSL4	Residential	701372	728091
NSL5	Residential	701445	728089
NSL6	Residential	701488	728076
NSL7	Residential	701692	728089

Appendix 9.2

Photographs of Noise Monitoring Locations

APPENDIX 9

Apx Plate 9-1: Noise Monitoring Location – NML1



Apx Plate 9-2: Noise Monitoring Location – NML2



Apx Plate 9-3: Noise Monitoring Location – N1



APPENDIX 9

Apx Plate 9-4: Noise Monitoring Location – N2



Apx Plate 9-5: Noise Monitoring Location – N3



Apx Plate 9-6: Noise Monitoring Location – N4



APPENDIX 9

Apx Plate 9-7: Noise Monitoring Location – S1



Apx Plate 9-8: Noise Monitoring Location – S2







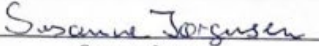
Apx Plate 9-9: Noise Monitoring Location – S3



Appendix 9.3

Equipment Calibration Certificates

APPENDIX 9

 HOTTINGER BRÜEL & KJÆR The Calibration Laboratory Teknikerbyen 28, DK-2830 Virum, Denmark				 DANAK CAL Reg No. 307 Member of EA MLA	
CERTIFICATE OF CALIBRATION			No: CDK2302913		Page 1 of 12
CALIBRATION OF					
Sound Level Meter:	Brüel & Kjær Type 2250	No: 2690265	Id: -		
Microphone:	Brüel & Kjær Type 4189	No: 2748694			
Pre-Amplifier:	Brüel & Kjær Type ZC-0032	No: 15279			
Calibrator:	Brüel & Kjær Type 4231	No: 2389038			
Software version:	BZ7224 Version 4.7.5	Pattern Approval:	PTBDE-16-M-PTB-0038 Rev 2 / DE-16-M-PTB-0039 Rev 2		
Instruction manual:	BE1712-22				
CUSTOMER					
RPS Group Ltd. Knockstown Summerhill A83CD30 Co. Meath Ireland					
CALIBRATION CONDITIONS					
Preconditioning:	4 hours at 23°C ± 3°C				
Environment conditions:	See actual values in <i>Environmental conditions</i> sections.				
SPECIFICATIONS					
The Sound Level Meter Brüel & Kjær Type 2250 has been calibrated in accordance with the requirements as specified in IEC 61672-1:2013 class 1. Procedures from IEC 61672-3:2013 were used to perform the periodic tests. The accreditation assures the traceability to the international units system SI.					
PROCEDURE					
The measurements have been performed with the assistance of Brüel & Kjær Sound Level Meter Calibration System 3630 with application software type 7763 (version 8.6 - DB: 8.60) by using procedure B&K proc 2250, 4189 (IEC 61672:2013).					
RESULTS					
Calibration Mode: Calibration as received. The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95 %. The uncertainty evaluation has been carried out in accordance with EA-4/02 from elements originating from the standards, calibration method, effect of environmental conditions and any short time contribution from the device(s) under calibration. The results are only applicable for the specific device(s) listed above.					
Date of calibration: 2023-04-20			Date of issue: 2023-04-20		
 Sylvia Wu Andersen Calibration Technician			 Susanne Jørgensen Approved Signatory		
Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.					

APPENDIX 9

 HOTTINGER BRÜEL & KJÆR The Calibration Laboratory Teknikerbyen 28, DK-2830 Virum, Denmark		 DANAK CAL Reg.No. 307 Member of EA MLA	
CERTIFICATE OF CALIBRATION		No: CDK2302877	Page 1 of 6
CALIBRATION OF			
Calibrator:	Brüel & Kjær Type 4231	No: 2389038 Id: -	
Acoustical Adaptor:	Brüel & Kjær Type UC-0210 (1/2" Adaptor)		
Pattern Approval:	None		
CUSTOMER			
RPS Group Ltd. Knockstown Summerhill A83CD30 Co. Meath Ireland			
CALIBRATION CONDITIONS			
Preconditioning:	4 hours at 23°C ± 3°C		
Environment conditions:	See actual values in <i>Environmental conditions</i> section.		
SPECIFICATIONS			
The Calibrator Brüel & Kjær Type 4231 has been calibrated in accordance with the requirements as specified in IEC 60942:2017 Annex B - Microphone method. The accreditation assures the traceability to the international units system SI.			
PROCEDURE			
The measurements have been performed with the assistance of Brüel & Kjær Calibrator Calibration System 3630 with application software type 7763 (version 8.6 - DB: 8.60) by using procedure P_4231_4180_M01.			
RESULTS			
Calibration Mode: Calibration as received.			
The reported expanded uncertainty is based on the standard uncertainty multiplied by a coverage factor $k = 2$ providing a level of confidence of approximately 95 %. The uncertainty evaluation has been carried out in accordance with EA-4/02 from elements originating from the standards, calibration method, effect of environmental conditions and any short time contribution from the device(s) under calibration. The results are only applicable for the specific device(s) listed above.			
Date of calibration: 2023-04-19		Date of issue: 2023-04-19	
 Morten Høngård Hansen Calibration Technician	 Susanne Jørgensen Approved Signatory		
Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced after written permission.			

Appendix 9.4

One-Third Octave Band Analysis

APPENDIX 9

Apx Table 9.2: One-Third Octave Band Analysis – NML1

Period*	Round	NML1 - Sound Pressure Level at Frequency (dB(Z))																																			
		6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz	20 kHz
D	1	46	49	51	54	58	60	64	62	60	57	71	58	48	47	44	48	52	47	43	44	41	41	40	39	39	39	39	39	38	37	33	29	19	14	11	10
D	2	53	51	52	56	59	58	60	62	60	61	54	49	52	47	42	39	40	39	43	40	38	38	37	35	35	35	37	41	37	34	30	26	19	15	12	10
D	3	54	53	52	53	54	55	59	60	61	64	53	48	50	44	41	40	37	36	35	37	37	37	36	34	32	31	30	32	31	28	26	23	15	13	11	10
E	1	45	44	46	49	49	54	57	56	56	51	56	56	43	49	49	46	43	39	41	41	43	42	39	38	34	32	30	28	29	23	19	16	13	10	9	9
N	1	41	40	41	44	47	45	49	53	50	46	56	56	42	47	48	45	44	40	41	41	44	42	37	39	33	30	28	26	26	22	18	14	12	9	8	9
N	2	39	39	42	44	46	53	60	54	54	46	54	55	42	48	49	46	41	40	40	41	41	41	37	38	33	30	28	26	26	22	19	16	13	11	9	9

*D = Day, E = Evening, N = Night

Apx Table 9.3: One-Third Octave Band Analysis – NML2

Period*	Round	NML2 - Sound Pressure Level at Frequency (dB(Z))																																			
		6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz	20 kHz
D	1	48	51	56	57	59	57	60	60	61	62	61	59	56	55	56	54	51	49	48	48	48	49	50	49	49	45	42	40	38	36	35	32	25	22	17	12
D	2	64	62	61	61	60	58	58	59	60	62	63	57	54	53	52	51	50	48	47	47	47	48	48	47	46	44	39	36	34	29	27	23	19	15	12	10
D	3	58	56	55	56	57	57	57	58	59	61	60	58	55	53	51	51	49	47	46	48	46	47	47	47	47	46	42	38	35	33	28	25	19	15	13	12
E	1	60	59	57	55	55	51	51	52	53	55	53	50	49	48	48	46	46	44	43	42	42	43	44	41	39	36	31	28	25	22	20	17	15	12	10	9
N	1	45	44	46	50	52	53	48	48	49	52	49	49	48	43	44	45	41	39	38	37	38	40	41	37	35	33	29	26	23	20	18	15	13	11	9	9
N	2	37	38	39	44	47	45	44	44	49	49	49	47	48	43	44	44	39	37	36	35	36	39	39	36	33	31	28	25	22	19	17	15	12	10	9	10

*D = Day, E = Evening, N = Night

APPENDIX 9

Apx Table 9.4: One-Third Octave Band Analysis – Plastic Granulator at 5 m

Plastic Granulator - Sound Pressure Level at Frequency (dB(A))																																			
6.3 Hz	8 Hz	10 Hz	12.5 Hz	16 Hz	20 Hz	25 Hz	31.5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz	12.5 kHz	16 kHz	20 kHz
6	14	26	38	37	48	53	56	59	64	71	73	72	72	76	77	76	76	77	79	81	83	87	85	83	83	84	82	79	75	67	60	6	14	26	38

Apx Table 9.5: One-Third Octave Band Analysis – Air Blast Cooler Assumed Spectrum

Air Blast Cooler - Sound Pressure Level at Frequency (dB(A))								
31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
13	81	90	97	100	99	97	92	85

Appendix 10.1

Aermod Modelling

TECHNICAL NOTE



Project **ENVA Greenogue Air Modelling**

Subject **Air Modelling for EIAR**

Author **Dr. Jovanna Arndt**

Date **27/04/2023**

Ref. **JA/227501.0384AT01**

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1.0 INTRODUCTION

AWN Consulting have conducted an air dispersion modelling study of the proposed ENVA facility in the Greenogue Industrial Estate, Co. Dublin.

This report describes the outcome of this study. The study consists of the following components:

- Review of emissions data and other relevant information needed for the modelling study;
- Review of background ambient air quality in the vicinity of the facility;
- Air dispersion modelling of VOCs and odour released from the site;
- Identification of predicted concentrations of released substances beyond the site boundary;
- Presentation of predicted ground level concentrations of released VOCs and odours;
- Evaluation of the environmental significance of these predicted concentrations, including consideration of whether these concentrations are likely to exceed relevant ambient air quality standards and guidelines, and whether ambient odour concentrations at the nearest dwelling-house comply with 1.5 OUE/m³ as a 98th percentile of the hourly average concentrations.

APPENDIX 10

Information supporting the conclusions has been detailed in the following sections. The assessment methodology and study inputs are presented in Section 2 - Section 5. The dispersion modelling results are presented in Section 6 and the assessment summaries are presented in Section 7.

APPENDIX 10

2.0 ASSESSMENT CRITERIA

2.1 Air Quality Standards

In order to reduce the risk to health from poor air quality, national and European statutory bodies have set limit values in ambient air for a range of air pollutants. The Industrial Emission Directive (2010/75/EU) outlines appropriate mass emission limits of volatile organic compounds from a range of industries. However, no statutory air quality standards for the individual organic compounds exist in Irish legislation. In the absence of statutory standards, it is common practice to reference other suitable authorities such as the World Health Organisation (WHO) or derive an ambient air quality guideline from occupational exposure limits (OEL).

In line with the approach outlined in AG4⁽¹⁾, where no EU air quality standard exists, relevant statutory standards from other EU countries such as the UK, Germany or Denmark should be used. The most stringent European guideline / limit value from the sources outlined below should be referenced when determining compliance in the absence of an applicable EU ambient air quality standard. The relevant statutory guidance can be obtained from the following sources:

- Environmental Assessment Level (EAL) based on the Health & Safety Authority publication 2021 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001)⁽²⁾. The EAL should be derived using the approach outlined in Appendix D of UK Environment Agency "IPPC H1 - IPPC Environmental Assessment for BAT"⁽³⁾. The guidance outlines the approach for deriving both short-term and long-term EALs. In relation to the long-term (annual) EAL, this can be derived by applying a factor of 100 to the 8-hour Occupational Exposure Level (OEL). The factor of 100 allows for both the greater period of exposure and the greater sensitivity of the general population. For short-term (1-hour) exposure, the EAL is derived by applying a factor of 10 to the short term exposure limit (STEL). In this case, only the sensitivity of the general population need be taken into account as there is no need for additional safety factors in terms of the period of exposure. Where STELs are not listed then a value of 3 times the 8-hour time weighted average occupational exposure limit may be used⁽³⁾.
- EALs outlined in the UK Environment Agency guidance IPPC H1.⁽³⁾

Apx Table 10.1: identifies the appropriate short-term and long-term EALs, derived from the most stringent sources above, for the specific compounds which are likely to be used on-site.

Apx Table 10.6: VOC Guideline Values Derived From OEL For Key Compounds Expected from Hazardous Medical Waste Treatment Onsite.

Pollutant	Regulation	Limit Type	1-Hour EAL (ug/m ³)	Annual Mean EAL (ug/m ³)
Acetone	IPPC H1 EAL	Guideline Value	362,000	18,100
Butyl acetate	IPPC H1 EAL	Guideline Value	96,600	7,240
Ethanol	IPPC H1 EAL	Guideline Value	576,000	19,200
Ethyl Acetate	IPPC H1 EAL	Guideline Value	420,000	14,600

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Pollutant	Regulation	Limit Type	1-Hour EAL (ug/m ³)	Annual Mean EAL (ug/m ³)
Heptane	2021 Code of Practice	Guideline Value	6,255	208,500
Isobutanol (2-Methylpropan-1-ol)	IPPC H1 EAL	Guideline Value	23,100	1,540
Isobutyl acetate	IPPC H1 EAL	Guideline Value	90,300	7,240
Isopropanol	IPPC H1 EAL	Guideline Value	125,000	9,990
Isopropyl Acetate	IPPC H1 EAL	Guideline Value	84,900	-
Methanol	IPPC H1 EAL	Guideline Value	33,300	2,660
Methyl acetate	IPPC H1 EAL	Guideline Value	77,000	6,160
Methyl ethyl ketone	2021 Code of Practice	Guideline Value	9,000	60,000
Tetrahydrofuran (THF)	IPPC H1 EAL	Guideline Value	59,900	3,000
Toluene	IPPC H1 EAL	Guideline Value	8,000	1,910
Xylene	IPPC H1 EAL	Guideline Value	66,200	4,410
1,2-dichloroethane	IPPC H1 EAL	Guideline Value	165,000	8,230

Note 1 No annual OEL is available for isopropyl acetate

2.2 Odour

2.2.1 Characteristics of Odour

Odours are sensations resulting from the reception of a stimulus by the olfactory sensory system, which consists of two separate subsystems: the olfactory epithelium and the trigeminal nerve. The olfactory epithelium, located in the nose, is capable of detecting and discriminating between many thousands of different odours and can detect some of them in concentrations lower than those detectable by currently available analytical instruments⁽⁴⁾. The function of the trigeminal nerve is to trigger a reflex action that produces a painful sensation. It can initiate protective reflexes such as sneezing to interrupt inhalation. The olfactory system is extremely complex and peoples' responses to odours can be variable. This variability is the result of differences in the ability to detect odour; subjective acceptance or rejection of an odour due to past experience; circumstances under which the odour is detected and the age, health and attitudes of the human receptor.

2.2.2 Odour Intensity and Threshold

Odour intensity is a measure of the strength of the odour sensation and is related to the odour concentration. The odour threshold refers to the minimum concentration of an odorant that produces an olfactory response or sensation. This threshold is normally determined by an odour panel consisting of a specified number of people, and the numerical result is typically expressed as occurring when 50%

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of the panel correctly detect the odour. This odour threshold is given a value of one odour unit and is expressed as $1 \text{ OU}_E/\text{m}^3$. The odour threshold is not a precisely determined value but depends on the sensitivity of the odour panellists and the method of presenting the odour stimulus to the panellists. An odour detection threshold relates to the minimum odorant concentration required to perceive the existence of the stimulus, whereas an odour recognition threshold relates to the minimum odorant concentration required to recognise the character of the stimulus. Typically, the recognition threshold exceeds the detection threshold by a factor of 2 to $10^{(4)(5)}$.

2.2.3 Odour Character

The character of an odour distinguishes it from another odour of equal intensity. Odours are characterised on the basis of odour descriptor terms (e.g. putrid, fishy, fruity etc.). Odour character is evaluated by comparison with other odours, either directly or through the use of descriptor words.

2.2.4 Hedonic Tone

The hedonic tone of an odour relates to its pleasantness or unpleasantness. When an odour is evaluated in the laboratory for its hedonic tone in the neutral context of an olfactometric presentation, the panellist is exposed to a stimulus of controlled intensity and duration. The degree of pleasantness or unpleasantness is determined by each panellist's experience and emotional associations. The responses among panellists may vary depending on odour character; an odour pleasant to many may be declared highly unpleasant by some.

2.2.5 Adaptation

Adaptation, or Olfactory Fatigue, is a phenomenon that occurs when people with a normal sense of smell experience a decrease in perceived intensity of an odour if the stimulus is received continually. Adaptation to a specific odorant typically does not interfere with the ability of a person to detect other odours. Another phenomenon known as habituation or occupational anosmia occurs when a worker in an industrial situation experiences a long-term exposure and develops a higher threshold tolerance to the odour.

2.2.6 Odour Guidelines

The exposure of the population to a particular odour consists of two factors; the concentration and the length of time that the population may perceive the odour. By definition, $1 \text{ OU}_E/\text{m}^3$ is the detection threshold of 50% of a qualified panel of observers working in an odour-free laboratory using odour-free air as the zero reference.

Currently there is no general statutory odour standard in Ireland relating to industrial installations. The EPA⁽⁶⁾⁽⁷⁾ has issued guidance specific to intensive agriculture which has outlined the following standards:

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- Target value for new pig-production units of 1.5 OUE/m³ as a 98thile of one hour averaging periods,
- Limit value for new pig-production units of 3.0 OUE/m³ as a 98thile of one hour averaging periods,
- Limit value for existing pig-production units of 6.0 OUE/m³ as a 98thile of one hour averaging periods.

Guidance from the UK⁽⁸⁾, and adapted for Irish EPA use, recommends that odour standards should vary from 1.5 – 6.0 OUE/m³ as a 98thile of one hour averaging periods at the worst-case sensitive receptor based on the offensiveness of the odour and with adjustments for local factors such as population density. A summary of the indicative criterion is given below in **Apx Table 10.2** (taken from EPA Guidance document AG9⁽⁶⁾):

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Apx Table 10.7: Indicative Odour Standards Based On Offensiveness Of Odour And Adapted for Irish EPA(2)

Industrial Sectors	Relative Offensiveness of Odour	Indicative Criterion ^{Note 1}
<ul style="list-style-type: none"> • Processes involving decaying animal or fish remains. • Processes involving septic effluent or sludge • Waste sites including landfills, waste transfer stations and non-green waste composting facilities. 	Most Offensive	1.5 OUE/m ³ as a 98 th ile of hourly averages at the worst-case sensitive receptor
<ul style="list-style-type: none"> • Intensive Livestock Rearing • Fat Frying / Meat Cooking (Food Processing) • Animal Feed • Sugar Beet Processing • Well aerated green waste composting <p>Most odours from regulated processes fall into this category i.e. any industrial sector which does not obviously fall within the “most offensive” or “less offensive” categories.</p>	Moderately Offensive	3.0 OUE/m ³ as a 98 th ile of hourly averages at the worst-case sensitive receptor
<ul style="list-style-type: none"> • Brewery / Grain / Oats Production • Coffee Roasting • Bakery • Confectionery 	Less Offensive	6.0 OUE/m ³ as a 98 th ile of hourly averages at the worst-case sensitive receptor

Note 1 Professional judgement should be applied in the determination of where the worst-case sensitive receptor is located.

Given that the emissions from the Proposed Development are a combination of solvent based operations and hazardous medical waste, a highly offensive odour criterion of 1.5 OUE/m³ as a 98thile of hourly averages is conservative. The odour detection threshold criteria

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associated with the solvents used onsite is outlined in **Apx Table 10.3**. In order to compare to the odour criteria, a value of 1.5 times the odour detection threshold, which by definition is $1.0 \text{ OU}_E/\text{m}^3$, should be used.

Apx Table 10.8: Odour Detection Thresholds & Nuisance Criteria For Key Compounds Expected from Hazardous Medical Waste Treatment Onsite.

Pollutant	Source	Odour Detection Threshold ($\mu\text{g}/\text{m}^3$) Equivalent To $1 \text{ OU}_E/\text{m}^3$	Odour Concentration ($\mu\text{g}/\text{m}^3$) Equivalent To $1.5 \text{ OU}_E/\text{m}^3$
Acetone	IPPC H4 Threshold ⁽¹²⁾	13,900	20,850
Butyl acetate	Haz-Map ⁽¹¹⁾	285	428
Ethanol	IPPC H4 Threshold ⁽¹²⁾	280	420
Ethyl Acetate	IPPC H4 Threshold ⁽¹²⁾	2,410	3,615
Heptane	Haz-Map ⁽¹¹⁾	163,943	245,914
Isobutanol (2-Methylpropan-1-ol)	Haz-Map ⁽¹¹⁾	2,001	3,001
Isobutyl acetate	Haz-Map ⁽¹¹⁾	1,710	2,565
Isopropanol	Haz-Map ⁽¹¹⁾	2,458	3,687
Isopropyl Acetate	Haz-Map ⁽¹¹⁾	4,176	6,264
Methanol	AEA Technology ⁽¹³⁾	4,000	6,000
Methyl acetate	Haz-Map ⁽¹¹⁾	515	773
Methyl ethyl ketone	USEPA Hazard Summary ⁽¹⁰⁾	15,930	23,895
Tetrahydrofuran (THF)	Haz-Map ⁽¹¹⁾	265	398
Toluene	IPPC H4 Threshold ⁽¹²⁾	644	966
Xylene	IPPC H4 Threshold ⁽¹²⁾	78	117
1,2-dichloroethane	USEPA Hazard Summary ⁽¹⁰⁾	16,392	24,588

Note 1 Taken from AEA Technology Report "Odour Measurement and Control – An Update" (1994)⁽¹³⁾. Where a range in values is given the lowest value is used.

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3.0 MODELLING METHODOLOGY

Emissions from the facility have been modelled using the AERMOD dispersion model (Version 22112) which has been developed by the U.S. Environmental Protection Agency (USEPA)⁽¹⁴⁾ and following guidance issued by the EPA⁽¹⁾. The model is a steady-state Gaussian plume model used to assess pollutant concentrations associated with industrial sources and has replaced ISCST3⁽¹⁵⁾ as the regulatory model by the USEPA for modelling emissions from industrial sources in both flat and rolling terrain⁽¹⁶⁾⁻⁽¹⁸⁾. The model has more advanced algorithms and gives better agreement with monitoring data in extensive validation studies⁽¹⁹⁾⁻⁽²³⁾. An overview of the AERMOD dispersion model is outlined in Appendix I.

The air dispersion modelling input data consisted of information on the physical environment (including building dimensions and terrain features), design details from all emission points on-site and five years of appropriate hourly meteorological data. Using this input data the model predicted ambient ground level concentrations beyond the site boundary for each hour of the modelled meteorological years. The model post-processed the data to identify the location and maximum of the worst-case ground level concentration. This worst-case concentration was then added to the background concentration to give the worst-case predicted environmental concentration (PEC). The PEC was then compared with the relevant ambient air quality standard to assess the significance of the releases from the site.

Throughout this study a worst-case approach was taken. This will most likely lead to an over-estimation of the levels that will arise in practice. The worst-case assumptions are outlined below:

- Maximum predicted concentrations were reported in this study, even if no residential receptors were near the location of this maximum;
- Worst-case background concentrations were used to assess the baseline levels of substances released from the site;
- The effects of building downwash, due to on-site and any nearby off-site buildings, has been included in the model; and
- Worst-case operations for VOC and odour emissions assumes all emission points were running continuously for a full year.

3.1 Air Dispersion Modelling Methodology

The United States Environmental Protection Agency (USEPA) approved AERMOD dispersion model has been used to predict the ground level concentrations (GLC) of compounds emitted from the principal emission sources on-site.

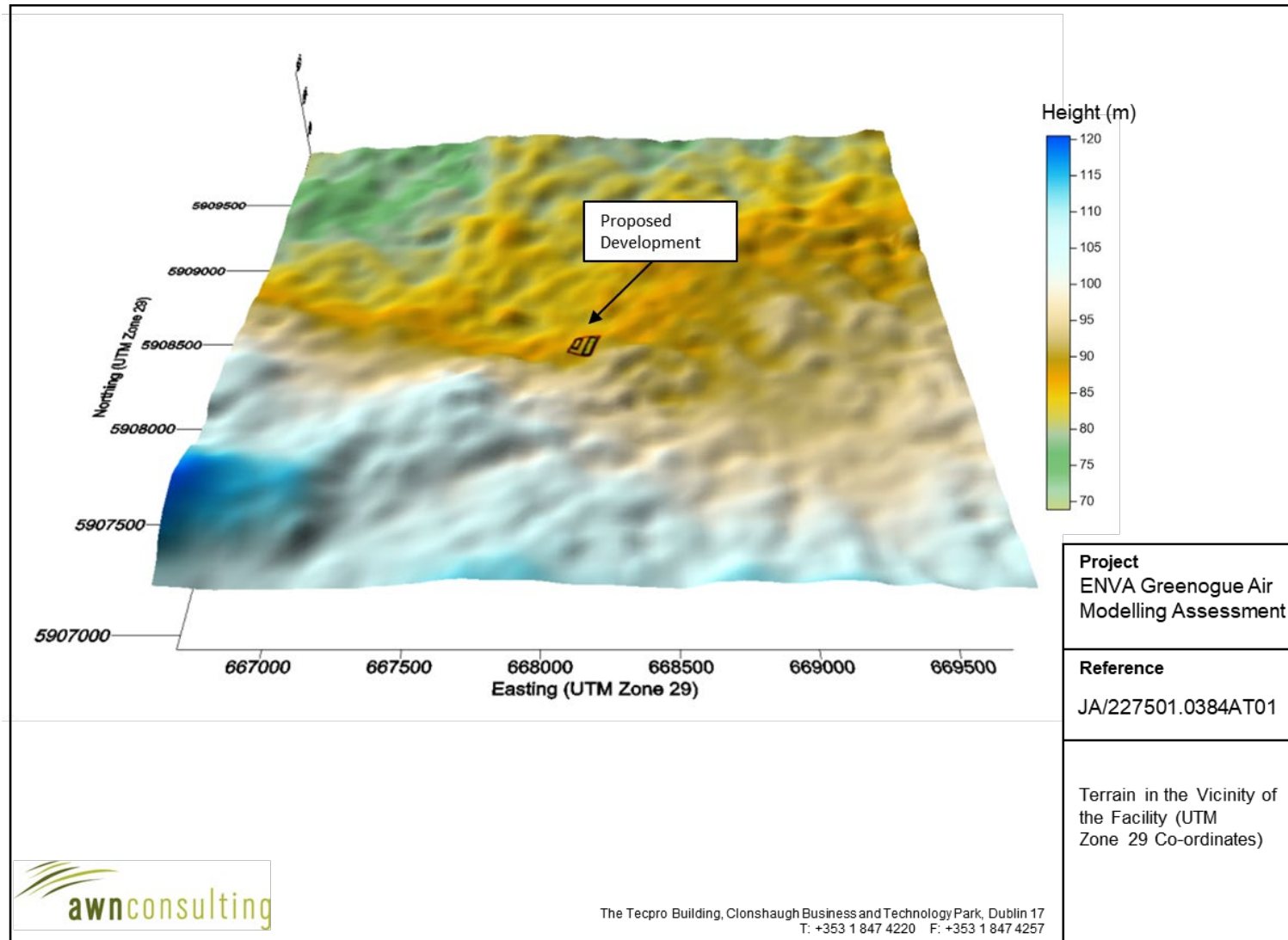
The modelling incorporated the following features:

- Three receptor grids were created at which concentrations would be modelled. Receptors were mapped with sufficient resolution to ensure all localised “hot-spots” were identified without adding unduly to processing time. The receptor grids were based on Cartesian grids with the site at the centre. An outer grid extended to 8000 m² with the site at the centre and with concentrations calculated at 200 m intervals. A middle grid extended to 3000 m from the site with concentrations calculated at 100 m intervals. A smaller denser grid extended to 1000 m from the site with concentrations calculated at 100 m intervals. Boundary receptor locations were also placed along the boundary of the site, at 25 m intervals, giving a total of 2,843 calculation points

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for the model. All receptors have been modelled at 1.5 m to represent breathing height.

- All on-site buildings and significant process structures were mapped into the computer to create a three dimensional visualisation of the site and its emission points. Buildings and process structures can influence the passage of airflow over the emission stacks and draw plumes down towards the ground (termed building downwash). The stacks themselves can influence airflow in the same way as buildings by causing low pressure regions behind them (termed stack tip downwash). Both building and stack tip downwash were incorporated into the modelling.
- Detailed terrain has been mapped into the model using SRTM data with 90 m resolution. The site is located in gentle terrain. All terrain features have been mapped in detail into the model using the terrain pre-processor AERMAP⁽¹⁸⁾ as shown in **Apx Figure 10-1**.
- Hourly-sequenced meteorological information has been used in the model. Meteorological data over a five year period (Casement Aerodrome, 2018 – 2022) was used in the model (see **Apx Figure 10-2**).
- The source and emission data, including stack dimensions, gas volumes and emission temperatures have been incorporated into the model.



Apx Figure 10-1: Terrain in the Vicinity of the Proposed Development, Greenogue Business Park, Co. Dublin

3.2 Terrain

The AERMOD air dispersion model has a terrain pre-processor AERMAP⁽²⁴⁾ which was used to map the physical environment in detail over the receptor grid. The digital terrain input data used in the AERMAP pre-processor was obtained from SRTM. This data was run to obtain for each receptor point the terrain height and the terrain height scale. The terrain height scale is used in AERMOD to calculate the critical dividing streamline height, H_{crit} , for each receptor. The terrain height scale is derived from the Digital Elevation Model (DEM) files in AERMAP by computing the relief height of the DEM point relative to the height of the receptor and determining the slope. If the slope is less than 10%, the program goes to the next DEM point. If the slope is 10% or greater, the controlling hill height is updated if it is higher than the stored hill height.

In areas of complex terrain, AERMOD models the impact of terrain using the concept of the dividing streamline (H_c). As outlined in the AERMOD model formulation⁽¹⁴⁾ a plume embedded in the flow below H_c tends to remain horizontal; it might go around the hill or impact on it. A plume above H_c will ride over the hill. Associated with this is a tendency for the plume to be depressed toward the terrain surface, for the flow to speed up, and for vertical turbulent intensities to increase.

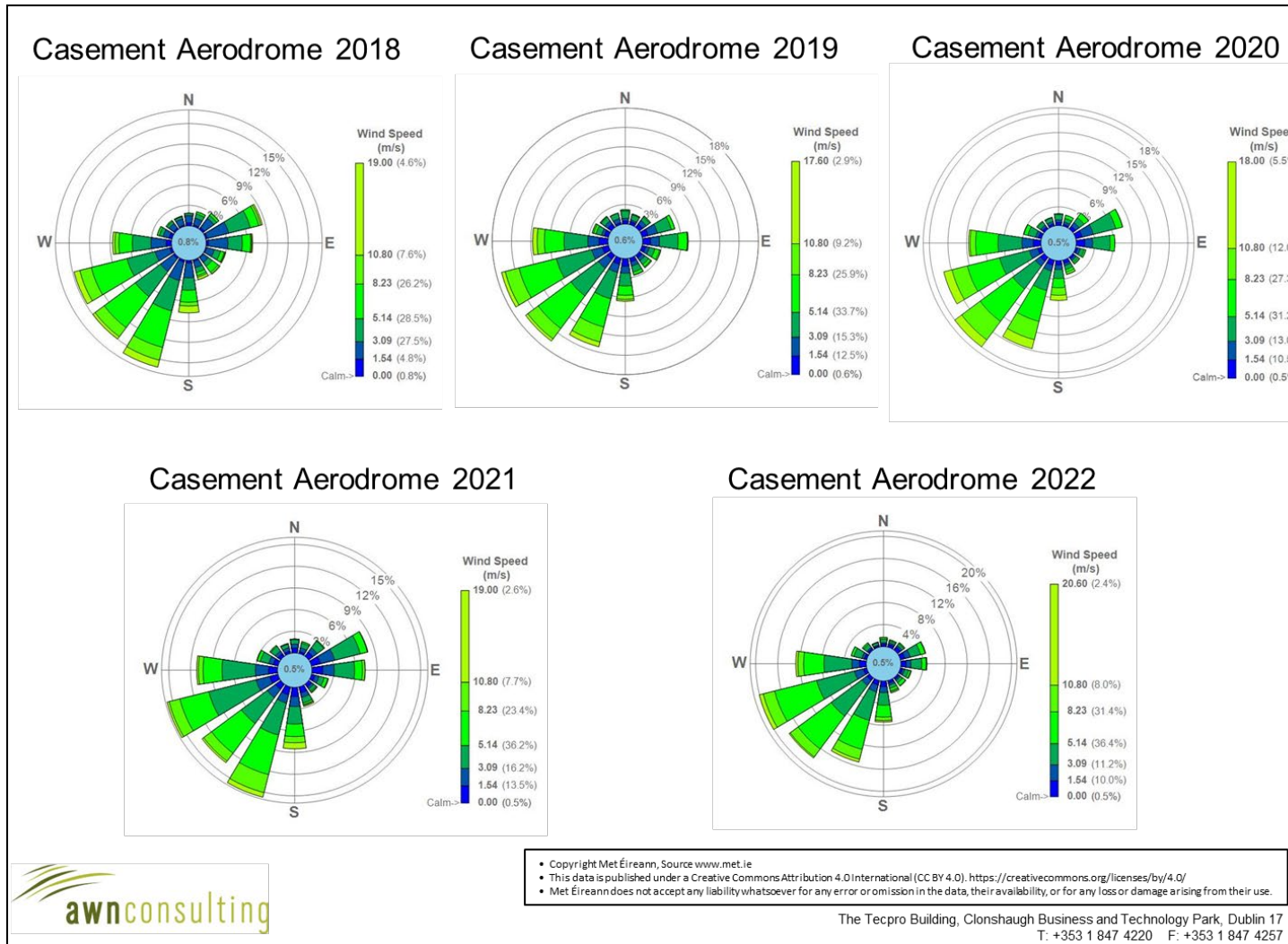
AERMOD model formulation states that the model “captures the effect of flow above and below the dividing streamline by weighting the plume concentration associated with two possible extreme states of the boundary layer (horizontal plume and terrain-following). The relative weighting of the two states depends on: 1) the degree of atmospheric stability; 2) the wind speed; and 3) the plume height relative to terrain. In stable conditions, the horizontal plume “dominates” and is given greater weight while in neutral and unstable conditions, the plume traveling over the terrain is more heavily weighted”⁽¹⁴⁾.

The terrain in the region of the facility is complex in the sense that the maximum terrain in the modelling domain peaks at 120 m which is above the stack top of all emission points onsite. However, in general, as shown in **Apx Figure 10-1**, the region of the site has gently sloping terrain particularly in the immediate vicinity of the facility.

3.3 Meteorological Data

The selection of the appropriate meteorological data has followed the guidance issued by the USEPA⁽¹⁶⁾. A primary requirement is that the data used should have a data capture of greater than 90% for all parameters. Casement Aerodrome meteorological station, which is located approximately 1 km south of the site, collects data in the correct format and has a data collection of greater than 90%. Long-term hourly observations at Casement Aerodrome meteorological station provide an indication of the prevailing wind conditions for the region (see **Apx Figure 10-2** and Appendix II)⁽²⁵⁾. Results indicate that the prevailing wind direction is from south to north-westerly in direction over the period 2018 - 2022. The mean wind speed is approximately 5.5 m/s over the period 1981-2010. Calm conditions account for only a small fraction of the time in any one year peaking at 70 hours in 2018 (0.8% of the time).

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Apx Figure 10-2: Casement Aerodrome Windrose 2018 - 2022

3.4 Geophysical Considerations

AERMOD simulates the dispersion process using planetary boundary layer (PBL) scaling theory⁽¹⁴⁾. PBL depth and the dispersion of pollutants within this layer are influenced by specific surface characteristics such as surface roughness, albedo and the availability of surface moisture. Surface roughness is a measure of the aerodynamic roughness of the surface and is related to the height of the roughness element. Albedo is a measure of the reflectivity of the surface whilst the Bowen ratio is a measure of the availability of surface moisture.

AERMOD incorporates a meteorological pre-processor AERMET⁽²⁶⁾ to enable the calculation of the appropriate parameters. The AERMET meteorological preprocessor requires the input of surface characteristics, including surface roughness (z_0), Bowen Ratio and albedo by sector and season, as well as hourly observations of wind speed, wind direction, cloud cover, and temperature. The values of albedo, Bowen Ratio and surface roughness depend on land-use type (e.g., urban, cultivated land etc) and vary with seasons and wind direction. The assessment of appropriate land-use type was carried out to a distance of 10km from the meteorological station for Bowen Ratio and albedo and to a distance of 1km for surface roughness in line with USEPA recommendations⁽²⁶⁾⁽²⁷⁾ as outlined in Appendix II.

In relation to AERMOD, detailed guidance for calculating the relevant surface parameters has been published⁽²¹⁾. The most pertinent features are:

- The surface characteristics should be those of the meteorological site (Casement Aerodrome) rather than the installation;
- Surface roughness should use a default 1km radius upwind of the meteorological tower and should be based on an inverse-distance weighted geometric mean. If land use varies around the site, the land use should be subdivided by sectors with a minimum sector size of 30°;
- Bowen ratio and albedo should be based on a 10km grid. The Bowen ratio should be based on an un-weighted geometric mean. The albedo should be based on a simple un-weighted arithmetic mean.

AERMOD has an associated pre-processor, AERSURFACE⁽²⁷⁾, which has representative values for these parameters depending on land use type. The AERSURFACE pre-processor currently only accepts NLCD92 land use data which covers the USA. Thus, manual input of surface parameters is necessary when modelling in Ireland. Ordnance survey discovery maps (1:50,000) and digital maps such as those provided by the EPA, National Parks and Wildlife Service (NPWS) and Google Earth® are useful in determining the relevant land use in the region of the meteorological station. The Alaska Department of Environmental Conservation has issued a guidance note for the manual calculation of geometric mean for surface roughness and Bowen ratio for use in AERMET⁽²⁸⁾. This approach has been applied to the current site with full details provided in Appendix II.

3.5 Building Downwash

When modelling emissions from an industrial installation, stacks which are relatively short can be subjected to additional turbulence due to the presence of nearby buildings. Buildings are

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considered nearby if they are within five times the lesser of the building height or maximum projected building width (but not greater than 800m).

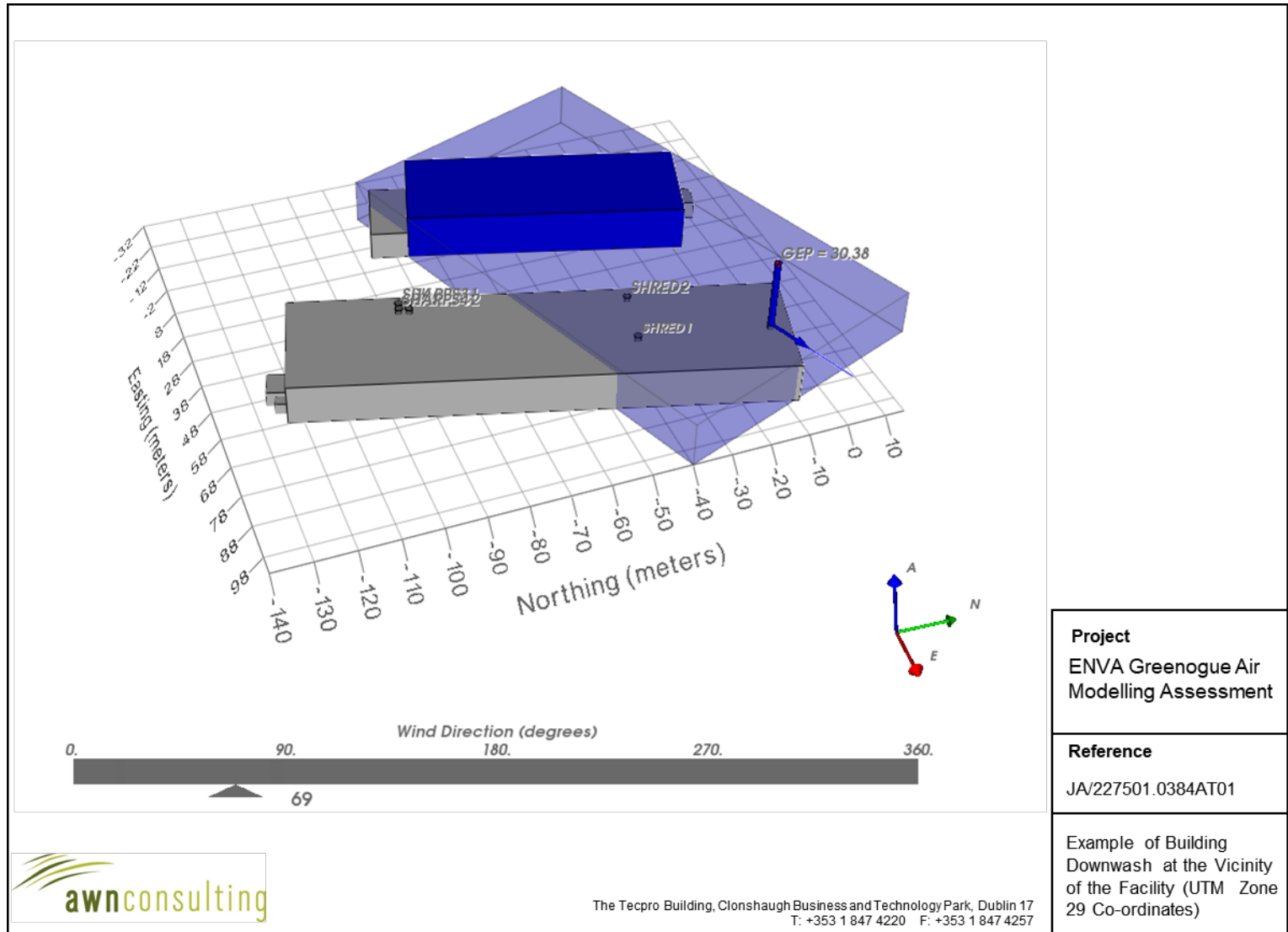
The USEPA has defined the “Good Engineering Practice” (GEP) stack height as the building height plus 1.5 times the lesser of the building height or maximum projected building width. It is generally considered unlikely that building downwash will occur when stacks are at or greater than GEP⁽²⁹⁾.

When stacks are less than this height, building downwash will tend to occur. As the wind approaches a building it is forced upwards and around the building leading to the formation of turbulent eddies. In the lee of the building these eddies will lead to downward mixing (reduced plume centreline and reduced plume rise) and the creation of a cavity zone (near wake) where re-circulation of the air can occur. Plumes released from short stacks may be entrained in this airflow leading to higher ground level concentrations than in the absence of the building.

The Plume Rise Model Enhancements (PRIME)⁽²¹⁾⁽²²⁾ plume rise and building downwash algorithms, which calculates the impact of buildings on plume rise and dispersion, have been incorporated into AERMOD. The building input processor BPIP-PRIME produces the parameters which are required in order to run PRIME. The model takes into account the position of each stack relative to each relevant building and the projected shape of each building for 36 wind directions (at 10° intervals). The model determines the change in plume centreline location with downwind distance based on the slope of the mean streamlines and coupled to a numerical plume rise model⁽²¹⁾.

Given that most stacks onsite are less than 2.5 times the lesser of the building height or maximum projected building width, building downwash will need to be taken into account and the PRIME algorithm run prior to modelling with AERMOD. Shown in **Apx Figure 10-3** is an example of the dominant building (in blue) which is influencing the building downwash for the augur emission point. The dominant building may change as the wind direction changes for each of the 36 wind directions. The dominant building for each relevant stack will vary as a function of wind direction and relative building heights.

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Apx Figure 10-3: Example of Building Downwash at the Proposed Development, Greenogue Business Estate.

3.6 Review of AG9 To Control Odour

EPA publication “AG9 – *Odour Emissions Guidance Note*” (2019)⁽⁶⁾ outlines a range of mitigation options which should be explored, on a case-by-case basis to ensure odour emissions are prevented, minimised and controlled. These include:

- Mitigation measures for the storage and handling of odorous materials located outdoors include constructing 3-sided enclosures and relocating activities indoors.
- Good housekeeping of all outdoor areas should be implemented particularly during periods of unfavourable meteorological conditions (for example, decomposition of organic material will accelerate during warmer periods).
- All spills, overflows and leaks should be cleaned up promptly with all operators aware and trained in the relevant SOP for this procedure.
- A local fume hood collection system with flexible hoses may be useful for capturing and extracting fugitive odours from sources with odour potential. Localised containment will reduce the volume of air to be extracted and, if necessary, treated.
- For the transfer or delivery of odorous liquids, vapour recovery or a closed-loop system should be used.
- Extraction of air through a negative pressure system to a point source will reduce fugitive emissions associated with passive sources such as general ventilation exhausts, louvers, windows or doors.
- A building integrity test is recommended for any building where odorous material is stored. Ideally, the building should have a negative pressure system installed with the extracted air ducted to a vertically pointed stack (and possibly with an abatement system prior to release where the need arises). Self-closing doors and trigger alarms on roller doors should also be installed.
- The facility should have a high level of cleanliness with outdoor surfaces washed down regularly with any remaining stagnant water removed. Cleaning of waste and storage bins, trucks carrying odorous materials and holding vessels should be undertaken regularly with an increased frequency in summer months.
- A closed-door policy should be strictly enforced where there is the potential for odorous releases through open doors.
- Keeping the temperature as low as possible will reduce evaporation and thus odorous material should be kept out of direct sunlight and refrigerated if possible.
- Increasing the humidity and reducing airflow over the surface of the odorous liquid will reduce the rate of evaporation (the rate of evaporation is directly proportional to the speed of air flow over the liquid surface).
- Reducing the exposed surface area of liquid storage tanks by using floating covers will reduce the rate of evaporation and subsequent release to atmosphere.

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- Activities such as agitation, shredding and mixing (turbulence) in liquids and solids will increase the odour emission rate significantly. These activities should be undertaken with appropriate mitigation measures in place.
- Adjustment to pH can increase the solubility of certain odorous compounds in water. For example, acidic conditions will suppress the evaporation of ammonia and similar alkaline compounds. Likewise, increasing alkalinity will help suppress H₂S release to atmosphere.
- Stack design to ensure that extracted air is dispersed adequately is important. The exhausted air should have sufficient stack exit velocity and an appropriate stack diameter to avoid stack-tip downwash (typically greater than 10 - 15 m/s required). The stack height should be sufficient to avoid significant building downwash and be directed in a vertical direction without rain caps on top of the stacks.
- Fugitive emissions such as valves, pump seals, flanges and leaks should be investigated using appropriate methods (for example photoionisation detection (PID)) and followed up with a corrective action programme.

4.0 BACKGROUND CONCENTRATIONS

Air quality monitoring programs have been undertaken in recent years by the EPA and Local Authorities. The most recent annual report on air quality “*Air Quality in Ireland 2021*”⁽³⁰⁾, details the range and scope of monitoring undertaken throughout Ireland. As part of the implementation of the Framework Directive on Air Quality (1996/62/EC), four air quality zones have been defined in Ireland for air quality management and assessment purposes⁽³⁰⁾. Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 23 towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland but also includes all towns with a population of less than 15,000 is defined as Zone D. In terms of air monitoring, Greenogue Business Park is categorised as Zone A⁽³⁰⁾.

VOCs constitute a complex mixture of individual organic compounds. In terms of ambient air quality, benzene constitutes the most significant VOC with background levels often a significant fraction of measured levels. However, in regards to other individual compounds, background levels in non-urban settings are usually small fractions of the individual Environmental Assessment Levels (EALs). As no significant background source of volatile organic compounds (excluding benzene) was evident in the region of the facility, no background concentration was included in any of the individual modelling runs.

5.0 PROCESS EMISSIONS

As part of the proposed development, seven new emission points to atmosphere will become operational. 1 no. emission point combined from two augers, 2 no. waste shredder emission points and 4 no. sharps (bin areas, washing, disinfection and drying) emission points will be installed.

The information used in the dispersion model for the proposed emission points which release VOCs is shown in **Apx Table 10.3** and **Apx Table 10.4**.

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VOCs are assumed to be released from all emission points and have been modelled at a potential IE licence emission limit value of 30 mg/m³. This is the maximum VOC emission concentration expected. The VOC emissions consist of a combination of several chemical compounds, the carbon fractions for which are listed in **Apx Table 10.4**. These were then applied to the modelled ambient VOC concentrations in turn for each emitted VOC. It is assumed that where more than one compound is being emitted from any emission point, as a worst-case assumption, the Total VOC (as C) consists of only one compound (in turn) with each compound compared to the 1-hour Environment Assessment Level and annual Environment Assessment Level.

For the odour modelling, the carbon fractions in were applied to the VOC emission concentration in **Apx Table 10.5**, to produce a carbon adjusted emission concentration for each compound. This concentration was then divided by the odour detection emission threshold (which by definition is 1.0 OUE/m³) to produce an OUE/m³ emission concentration for each compound.

In order to compare to the odour criteria, a value of 1.5 times the odour detection threshold, which, should be used.

Apx Table 10.9: Emission Point Parameters Used In The Air Dispersion Modelling

Stack Parameters	Auger	Waste Shredder 1	Waste Shredder 2	Sharps (bin)	Sharps (washing)	Sharps (disinfection)	Sharps (drying)
Irish Grid (IG) Stack Location	E301632 N228545	E301639 N228509	E301624 N228513	E301608 N228462	E301610 N228461	E301607 N228460	E301609 N228459
Stack Diameter (m)	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Surface area (m ²)	0.071	0.071	0.071	0.071	0.071	0.071	0.071
Stack height (m)	12	12	12	12	12	12	12
Temp (°C)	96	96	96	96	96	96	96
Temp (K)	369.15	369.15	369.15	369.15	369.15	369.15	369.15
Velocity (m/s)	13.75	13.75	13.75	13.75	13.75	13.75	13.75
Volume Flow (Nm ³ /hr)	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Total VOC Emission Concentration (mg/Nm ³)	30	30	30	30	30	30	30
Total VOC Emission rate (g/s)	0.022	0.026	0.026	0.025	0.025	0.025	0.025

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Apx Table 10.10: Emissions Details for VOC Used In The Air Dispersion Modelling

Compound	Carbon Weight	Molecular Weight	Carbon Fraction	Odour Detection Threshold (mg/Nm ³)	Odour Emission concentration (OU _E /Nm ³)	Odour Emission Rate OU _E /s
Acetone	36.03	58.08	0.620	13,900	3.5	3.0
Butyl acetate	72.06	116.16	0.620	285	169.7	146.1
Ethanol	24.02	46.07	0.521	280	205.5	177.0
Ethyl Acetate	48.04	88.11	0.545	2,410	22.8	19.7
Heptane	84.07	100.21	0.839	163,943	0.2	0.2
Isobutanol	48.04	74.12	0.648	2,001	23.1	19.9
Isobutyl acetate	72.06	116.16	0.620	1,710	28.3	24.3
Isopropanol	36.03	60.10	0.600	2,458	20.4	17.5
Isopropyl Acetate	60.05	102.10	0.588	4,176	12.2	10.5
Methanol	12.01	32.04	0.375	4,000	20.0	17.2
Methyl acetate	36.03	74.08	0.486	515	119.8	103.1
Methyl ethyl ketone	48.04	72.11	0.666	15,930	2.8	2.4
Tetra-hydrofuran (THF)	48.04	72.11	0.666	265	169.7	146.1
Toluene	84.07	92.14	0.912	644	51.1	44.0
Xylene	96.08	106.16	0.905	78	425.0	365.9
1,2-dichloro-ethane	24.02	98.96	0.243	16,392	7.5	6.5

6.0 RESULTS & DISCUSSION

6.1 VOCs

Ambient Ground Level Concentrations (GLCs) of VOCs have been predicted below in **Apx Table 10.6** and **Apx Table 10.7**.

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The results indicate that the ambient ground level concentrations are below the relevant air quality guidelines for individual VOCs, even when it is assumed that each emission point is emitting solely the VOC of concern at the maximum permissible emission concentration for the full year. Emissions from the proposed VOC emission points lead to ambient individual VOC concentrations which are no more than 4% of the maximum 1-hour limit value at the worst-case receptor (see **Apx Table 10.6**) and no more than 1% of the annual mean limit value at the worst-case off-site location (**Apx Table 10.7**).

Apx Table 10.11: Dispersion Model Results – VOCs During Proposed Operation – Maximum 1-Hour Scenario

Pollutant	1-Hour EAL (µg/Nm ³)	2017 (µg/Nm ³)	2018 (µg/Nm ³)	2019 (µg/Nm ³)	2020 (µg/Nm ³)	2021 (µg/Nm ³)	Max PEC / EAL
Acetone	362,000	240.1	287.9	305.0	305.0	317.3	0.1%
Butyl acetate	96,600	240.1	287.9	305.0	305.0	317.3	0.3%
Ethanol	576,000	285.6	342.6	362.9	362.9	377.5	0.1%
Ethyl Acetate	420,000	273.1	327.6	347.0	347.0	361.0	0.1%
Heptane	6,255	177.5	212.9	225.5	225.5	234.6	4%
Isobutanol	23,100	229.8	275.6	291.9	291.9	303.7	1%
Isobutyl acetate	90,300	240.1	287.9	305.0	305.0	317.3	0.4%
Isopropanol	125,000	248.4	297.9	315.6	315.6	328.3	0.3%
Isopropyl Acetate	84,900	253.2	303.7	321.7	321.7	334.7	0.4%
Methanol	33,300	397.3	476.5	504.7	504.7	525.1	2%
Methyl acetate	77,000	306.2	367.2	389.0	389.0	404.7	0.5%
Methyl ethyl ketone	9,000	223.5	268.1	284.0	284.0	295.5	3%
Tetrahydrofuran (THF)	59,900	223.5	268.1	284.0	284.0	295.5	0.5%
Toluene	8,000	163.2	195.7	207.4	207.4	215.7	3%
Xylene	66,200	164.5	197.3	209.1	209.0	217.5	0.3%
1,2-dichloroethane	165,000	613.5	735.8	779.5	779.5	811.0	0.5%

Note 1 Background levels of all VOCs are likely to be well below 1 µg/m³ in the vicinity of the facility.

Note 2 As a worst-case all VOCs released assumed to consist of each individual VOC in turn for the annual mean scenario.

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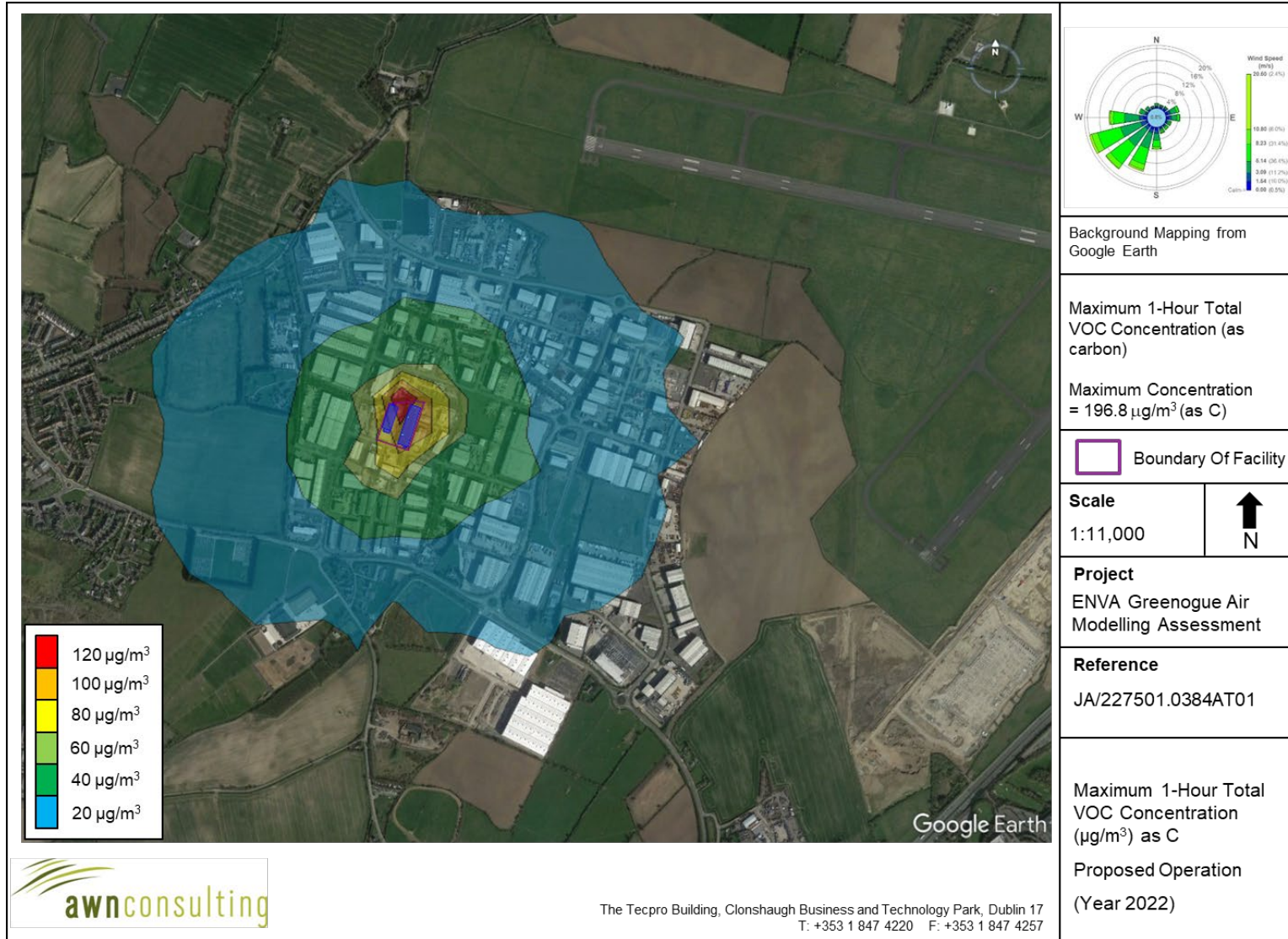
Apx Table 10.12: Dispersion Model Results – VOCs During Proposed Operation – Annual Mean Scenario

Pollutant	Annual EAL (µg/Nm ³)	2017 (µg/Nm ³)	2018 (µg/Nm ³)	2019 (µg/Nm ³)	2020 (µg/Nm ³)	2021 (µg/Nm ³)	Max PEC / EAL
Acetone	18,100	20.0	21.0	19.9	19.9	21.3	0.1%
Butyl acetate	7,240	20.0	21.0	19.9	19.9	21.3	0.3%
Ethanol	19,200	23.8	25.0	23.7	23.7	25.4	0.1%
Ethyl Acetate	14,600	22.8	23.9	22.7	22.7	24.2	0.2%
Heptane	208,500	14.8	15.5	14.7	14.7	15.8	0.01%
Isobutanol	1,540	19.2	20.1	19.1	19.1	20.4	1%
Isobutyl acetate	7,240	20.0	21.0	19.9	19.9	21.3	0.3%
Isopropanol	9,990	20.7	21.7	20.6	20.6	22.1	0.2%
Isopropyl Acetate	-	21.1	22.1	21.0	21.0	22.5	-
Methanol	2,660	33.2	34.7	33.0	33.0	35.3	1%
Methyl acetate	6,160	25.6	26.8	25.4	25.4	27.2	0.4%
Methyl ethyl ketone	60,000	18.7	19.5	18.6	18.6	19.8	0.03%
Tetrahydrofuran (THF)	3,000	18.7	19.5	18.6	18.6	19.8	0.7%
Toluene	1,910	13.6	14.3	13.6	13.6	14.5	0.8%
Xylene	4,410	13.7	14.4	13.7	13.7	14.6	0.3%
1,2-dichloroethane	8,230	51.2	53.7	51.0	51.0	54.5	0.7%

Note 1 Background levels of all VOCs are likely to be well below 1 µg/m³ in the vicinity of the facility.

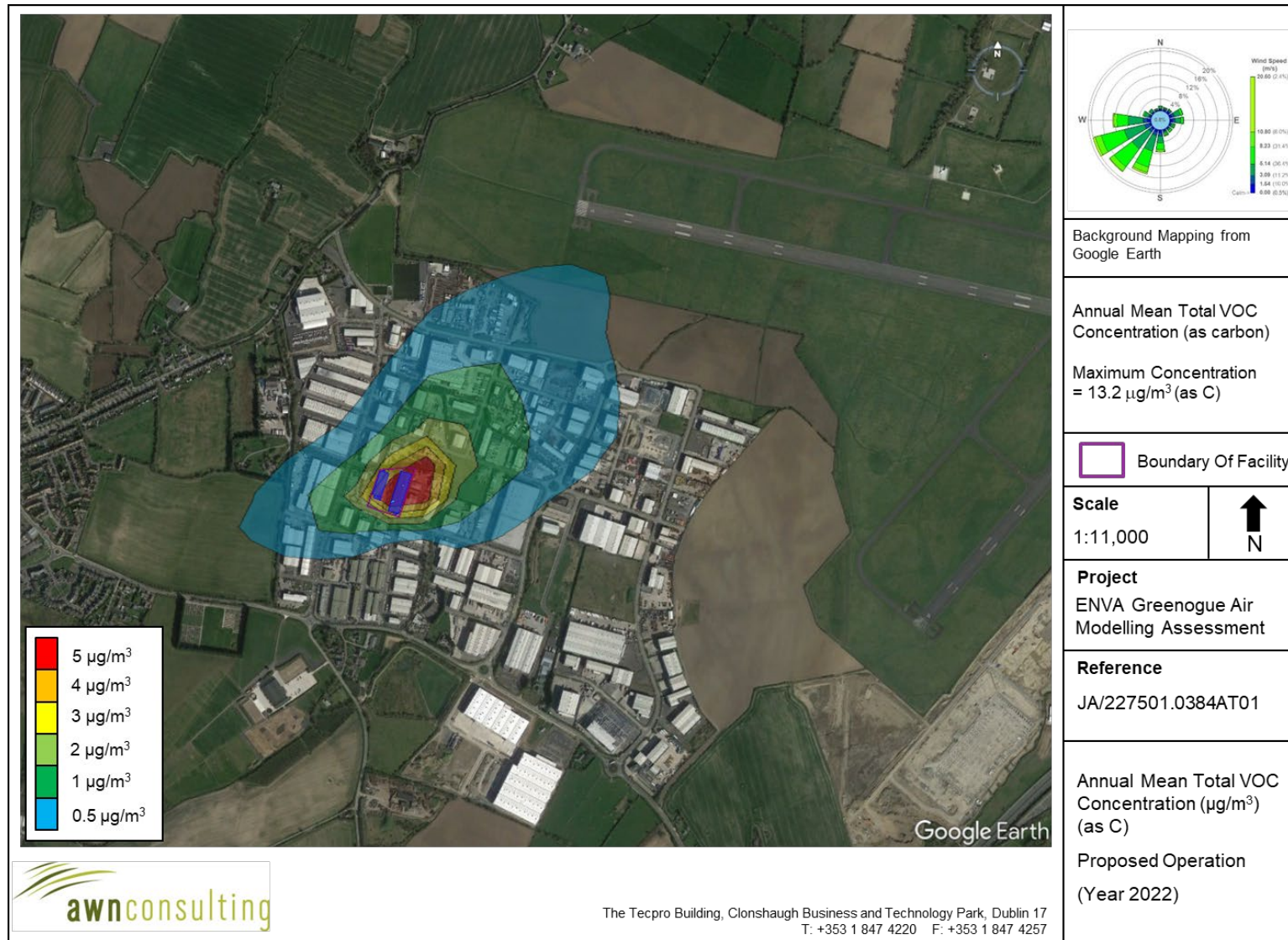
Note 2 As a worst-case all VOCs released assumed to consist of each individual VOC in turn for the annual mean scenario.

The geographical variations in ground level VOC concentrations beyond the facility boundary for the worst-case years modelled are illustrated as concentration contours in **Apx Figure 10-4** and **Apx Figure 10-5**.



Apx Figure 10-4: Maximum 1-Hour Total VOC Concentrations (µg/m³, as Carbon) (Excluding Background Concentrations)

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Apx Figure 10-5: Maximum Annual Mean Total VOC Concentrations (µg/m³, as Carbon) (Excluding Background Concentrations)

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6.2 Odour

The odour modelling results during proposed operation are detailed in **Apx Table 10.8**. The results indicate that the predicted ground level concentrations are below the odour nuisance thresholds for each individual VOC. Emissions from the facility lead to an predicted odour concentration which is 6.6% of the odour guideline value at the worst-case sensitive receptor for the worst-case year modelled.

The geographical variations in ground level odour concentrations beyond the facility boundary for the worst-case year modelled are illustrated as concentration contours in **Apx Figure 10-6**.

Apx Table 10.13: Dispersion Model Results – Odour Nuisance Assessment At Nearest Receptors

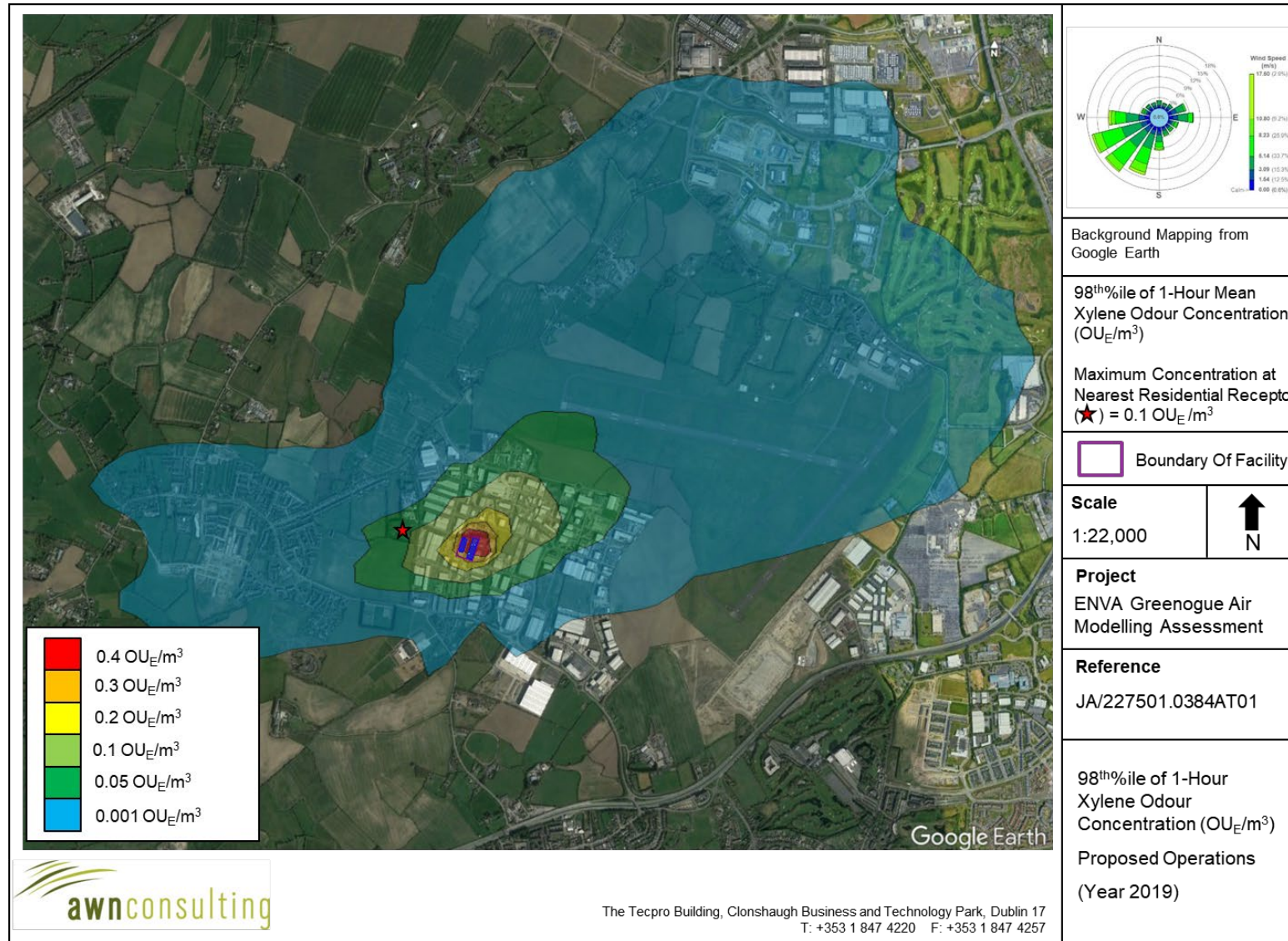
Pollutant	Averaging Period	2018 (OU _E /Nm ³)	2019 (OU _E /Nm ³)	2020 (OU _E /Nm ³)	2021 (OU _E /Nm ³)	2022 (OU _E /Nm ³)	Odour Guidance (OU _E /m ³)	Max PEC / EAL
Acetone	Maximum 1-Hour (as a 98 th ile)	0.0007	0.0008	0.0007	0.0008	0.0008	1.5	0.1%
Butyl acetate		0.03	0.04	0.04	0.04	0.04		2.6%
Ethanol		0.04	0.05	0.04	0.04	0.05		3.2%
Ethyl Acetate		0.004	0.005	0.005	0.005	0.005		0.4%
Heptane		0.00004	0.00005	0.00005	0.00005	0.00005		0.003%
Isobutanol		0.005	0.005	0.005	0.005	0.005		0.4%
Isobutyl acetate		0.006	0.007	0.006	0.006	0.006		0.4%
Iso-propanol		0.004	0.005	0.004	0.004	0.005		0.3%
Isopropyl Acetate		0.002	0.003	0.003	0.003	0.003		0.2%
Methanol		0.004	0.005	0.004	0.004	0.004		0.3%
Methyl acetate		0.02	0.03	0.03	0.03	0.03		1.9%
Methyl ethyl ketone		0.0006	0.0007	0.0006	0.0006	0.0006		0.04%
Tetra-hydrofuran (THF)		0.03	0.04	0.04	0.04	0.04		2.6%
Toluene		0.01	0.01	0.01	0.01	0.01		0.8%
Xylene		0.08	0.10	0.09	0.09	0.10		6.6%

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1,2-dichloroethane		0.002	0.002	0.002	0.002	0.002		0.1%
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Note 1 Odour nuisance criteria is based on 1.5 OUE/m³ (as a 98thile) which is equivalent to 1.5 times the odour detection threshold (as a 98thile).

Note 2 As a worst-case all VOCs released assumed to consist of each individual VOC in turn for the 98thile odour nuisance scenario.



Apx Figure 10-6: 98thile of 1-Hour Mean Xylene Odour Concentrations (OUE/m³) (Excluding Background Concentrations)

7.0 SUMMARY

7.1 VOC Assessment

THE RESULTS INDICATE THAT THE AMBIENT GROUND LEVEL CONCENTRATIONS ARE BELOW THE RELEVANT AIR QUALITY GUIDELINES FOR INDIVIDUAL VOCs EVEN WHEN IT IS ASSUMED THAT EACH EMISSION POINT IS EMITTING SOLELY THE VOC OF CONCERN AT A MAXIMUM EMISSION CONCENTRATION FOR THE FULL YEAR. UNDER PROPOSED OPERATION, EMISSIONS FROM THE PROPOSED VOC EMISSION POINTS ONSITE LEAD TO AMBIENT INDIVIDUAL VOC CONCENTRATIONS WHICH ARE NO MORE THAN 4% OF THE MAXIMUM 1-HOUR LIMIT VALUE AT THE WORST-CASE RECEPTOR AND NO MORE THAN 1% OF THE ANNUAL MEAN LIMIT VALUE AT THE WORST-CASE OFF-SITE LOCATION.

7.2 Odour Assessment

IN RELATION TO ODOUR, ALL AMBIENT CONCENTRATIONS ARE BELOW THE ODOUR NUISANCE THRESHOLDS FOR EACH INDIVIDUAL VOC UNDER PROPOSED OPERATING CONDITIONS. EMISSIONS FROM THE FACILITY LEAD TO AN PREDICTED ODOUR CONCENTRATION WHICH IS AT MOST 6.6% OF THE ODOUR GUIDELINE VALUE AT THE WORST-CASE SENSITIVE RECEPTOR FOR THE WORST-CASE YEAR MODELLED.

IN SUMMARY, ALL EMISSIONS FROM THE FACILITY UNDER PROPOSED OPERATION OF THE FACILITY WILL BE IN COMPLIANCE WITH THE AMBIENT AIR QUALITY STANDARDS, AND WILL NOT LEAD TO A SUBSTANTIVE RISK OF ODOUR NUISANCE.

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8.0 REFERENCES

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APPENDIX I

Description of the AERMOD Model

The AERMOD dispersion model has been developed in part by the U.S. Environmental Protection Agency (USEPA)⁽¹⁴⁾⁻⁽¹⁹⁾. The model is a steady-state Gaussian model used to assess pollutant concentrations associated with industrial sources. The model is an enhancement on the Industrial Source Complex-Short Term 3 (ISCST3) model which has been widely used for emissions from industrial sources.

Improvements over the ISCST3 model include the treatment of the vertical distribution of concentration within the plume. ISCST3 assumes a Gaussian distribution in both the horizontal and vertical direction under all weather conditions. AERMOD with PRIME, however, treats the vertical distribution as non-Gaussian under convective (unstable) conditions while maintaining a Gaussian distribution in both the horizontal and vertical direction during stable conditions. This treatment reflects the fact that the plume is skewed upwards under convective conditions due to the greater intensity of turbulence above the plume than below. The result is a more accurate portrayal of actual conditions using the AERMOD model. AERMOD also enhances the turbulence of night-time urban boundary layers thus simulating the influence of the urban heat island.

In contrast to ISCST3, AERMOD is widely applicable in all types of terrain. Differentiation of the simple versus complex terrain is unnecessary with AERMOD. In complex terrain, AERMOD employs the dividing-streamline concept in a simplified simulation of the effects of plume-terrain interactions. In the dividing-streamline concept, flow below this height remains horizontal, and flow above this height tends to rise up and over terrain. Extensive validation studies have found that AERMOD (precursor to AERMOD with PRIME) performs better than ISCST3 for many applications and as well or better than CTDMPPLUS for several complex terrain data sets⁽²⁰⁾.

Due to the proximity to surrounding buildings, the PRIME (Plume Rise Model Enhancements) building downwash algorithm has been incorporated into the model to determine the influence (wake effects) of these buildings on dispersion in each direction considered. The PRIME algorithm takes into account the position of the stack relative to the building in calculating building downwash. In the absence of the building, the plume from the stack will rise due to momentum and/or buoyancy forces. Wind streamlines act on the plume leads to the bending over of the plume as it disperses. However, due to the presence of the building, wind streamlines are disrupted leading to a lowering of the plume centreline.

When there are multiple buildings, the building tier leading to the largest cavity height is used to determine building downwash. The cavity height calculation is an empirical formula based on building height, the length scale (which is a factor of building height & width) and the cavity length (which is based on building width, length and height). As the direction of the wind will lead to the identification of differing dominant tiers, calculations are carried out in intervals of 10 degrees.

In PRIME, the nature of the wind streamline disruption as it passes over the dominant building tier is a function of the exact dimensions of the building and the angle at which the wind approaches the building. Once the streamline encounters the zone of influence of the building, two forces act on the plume. Firstly, the disruption caused by the building leads to increased turbulence and enhances horizontal and vertical dispersion. Secondly, the streamline descends in the lee of the building due to the reduced pressure and drags the plume (or part of) nearer to the ground, leading to higher ground level concentrations. The model calculates the descent of the plume as a function of the building shape and, using a numerical plume rise model, calculates the change in the plume centreline location with distance downwind.

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The immediate zone in the lee of the building is termed the cavity or near wake and is characterised by high intensity turbulence and an area of uniform low pressure. Plume mass captured by the cavity region is re-emitted to the far wake as a ground-level volume source. The volume source is located at the base of the lee wall of the building, but is only evaluated near the end of the near wake and beyond. In this region, the disruption caused by the building downwash gradually fades with distance to ambient values downwind of the building.

AERMOD has made substantial improvements in the area of plume growth rates in comparison to ISCST3⁽¹⁵⁾⁻⁽¹⁷⁾. ISCST3 approximates turbulence using six Pasquill-Gifford-Turner Stability Classes and bases the resulting dispersion curves upon surface release experiments. This treatment, however, cannot explicitly account for turbulence in the formulation. AERMOD is based on the more realistic modern planetary boundary layer (PBL) theory which allows turbulence to vary with height. This use of turbulence-based plume growth with height leads to a substantial advancement over the ISCST3 treatment.

Improvements have also been made in relation to mixing height⁽¹⁾⁽¹⁴⁾⁽¹⁵⁾⁽³¹⁾⁽³²⁾. The treatment of mixing height by ISCST3 is based on a single morning upper air sounding each day. AERMOD, however, calculates mixing height on an hourly basis based on the morning upper air sounding and the surface energy balance, accounting for the solar radiation, cloud cover, reflectivity of the ground and the latent heat due to evaporation from the ground cover. This more advanced formulation provides a more realistic sequence of the diurnal mixing height changes.

AERMOD also has the capability of modelling both unstable (convective) conditions and stable (inversion) conditions. The stability of the atmosphere is defined by the sign of the sensible heat flux. Where the sensible heat flux is positive, the atmosphere is unstable whereas when the sensible heat flux is negative the atmosphere is defined as stable. The sensible heat flux is dependent on the net radiation and the available surface moisture (Bowen Ratio). Under stable (inversion) conditions, AERMOD has specific algorithms to account for plume rise under stable conditions, mechanical mixing heights under stable conditions and vertical and lateral dispersion in the stable boundary layer.

AERMOD also contains improved algorithms for dealing with low wind speed (near calm) conditions. As a result, AERMOD can produce model estimates for conditions when the wind speed may be less than 1 m/s, but still greater than the instrument threshold.

APPENDIX II

Meteorological Data - AERMET

AERMOD incorporates a meteorological pre-processor AERMET (version 16216)⁽²⁶⁾. AERMET allows AERMOD to account for changes in the plume behaviour with height. AERMET calculates hourly boundary layer parameters for use by AERMOD, including friction velocity, Monin-Obukhov length, convective velocity scale, convective (CBL) and stable boundary layer (SBL) height and surface heat flux. AERMOD uses this information to calculate concentrations in a manner that accounts for changes in dispersion rate with height, allows for a non-Gaussian plume in convective conditions, and accounts for a dispersion rate that is a continuous function of meteorology.

The AERMET meteorological preprocessor requires the input of surface characteristics, including surface roughness (z_0), Bowen Ratio and albedo by sector and season, as well as hourly observations of wind speed, wind direction, cloud cover, and temperature. A morning sounding from a representative upper air station, latitude, longitude, time zone, and wind speed threshold are also required.

Two files are produced by AERMET for input to the AERMOD dispersion model. The surface file contains observed and calculated surface variables, one record per hour. The profile file contains the observations made at each level of a meteorological tower, if available, or the one-level observations taken from other representative data, one record level per hour.

From the surface characteristics (i.e. surface roughness, albedo and amount of moisture available (Bowen Ratio)) AERMET calculates several boundary layer parameters that are important in the evolution of the boundary layer, which, in turn, influences the dispersion of pollutants. These parameters include the surface friction velocity, which is a measure of the vertical transport of horizontal momentum; the sensible heat flux, which is the vertical transport of heat to/from the surface; the Monin-Obukhov length which is a stability parameter relating the surface friction velocity to the sensible heat flux; the daytime mixed layer height; the nocturnal surface layer height and the convective velocity scale which combines the daytime mixed layer height and the sensible heat flux. These parameters all depend on the underlying surface.

The values of albedo, Bowen Ratio and surface roughness depend on land-use type (e.g., urban, cultivated land etc) and vary with seasons and wind direction. The assessment of appropriate land-use types was carried out in line with USEPA recommendations⁽¹⁶⁾ and using the detailed methodology outlined by the Alaska Department of Environmental Conservation⁽²⁸⁾. AERMET has also been updated to allow for an adjustment of the surface friction velocity (u^*) for low wind speed stable conditions based on the work of Qian and Venkatram. Previously, the model had a tendency to over-predict concentrations produced by near-ground sources in stable conditions.

Surface roughness

Surface roughness length is the height above the ground at which the wind speed goes to zero. Surface roughness length is defined by the individual elements on the landscape such as trees and buildings. In order to determine surface roughness length, the USEPA recommends that a representative length be defined for each sector, based on geometric mean of the inverse distance area-weighted land use within the sector, by using the eight land use categories outlined by the USEPA. The area-weighted surface roughness length derived from the land use classification within a radius of 1 km from Casement Aerodrome is shown in **Apx Table 10.4**.

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Apx Table 10.14: Surface Roughness based on an inverse distance area-weighted average of the land use within a 1 km radius of Casement Aerodrome.

Sector	Area Weighted Land Use Classification	Spring	Summer	Autumn	Winter ^{Note 1}
0-360	100% Grassland	0.050	0.100	0.010	0.010

Note 1 Winter defined as periods when surfaces covered permanently by snow whereas autumn is defined as periods when freezing conditions are common, deciduous trees are leafless and no snow is present⁽³³⁾. Thus for the current location autumn more accurately defines "winter" conditions at the proposed facility.

Albedo

Noon-time Albedo is the fraction of the incoming solar radiation that is reflected from the ground when the sun is directly overhead. Albedo is used in calculating the hourly net heat balance at the surface for calculating hourly values of Monin-Obuklov length. The area-weighted arithmetic mean albedo derived from the land use classification over a 10 km x 10 km area centred on Casement Aerodrome is shown in **Apx Table 10.4**.

Apx Table 10.15: Albedo based on an area-weighted arithmetic mean of the land use over a 10 km x 10 km area centred on Casement Aerodrome.

Area Weighted Land Use Classification	Spring	Summer	Autumn	Winter ^{Note 1}
0.5% Water, 30% Urban, 0.5% Coniferous Forest 38% Grassland, 19% Cultivated Land	0.155	0.180	0.187	0.187

Note 1 For the current location autumn more accurately defines "winter" conditions at the proposed facility.

Bowen Ratio

The Bowen ratio is a measure of the amount of moisture at the surface of the earth. The presence of moisture affects the heat balance resulting from evaporative cooling which, in turn, affects the Monin-Obukhov length which is used in the formulation of the boundary layer. The area-weighted geometric mean Bowen ratio derived from the land use classification over a 10 km x 10 km area centred on Casement Aerodrome is shown in **Apx Table 10.4**.

Apx Table 10.16: Bowen Ratio based on an area-weighted geometric mean of the land use over a 10 km x 10 km area centred on Casement Aerodrome.

Area Weighted Land Use Classification	Spring	Summer	Autumn	Winter ^{Note 1}
0.5% Water, 30% Urban, 0.5% Coniferous Forest 38% Grassland, 19% Cultivated Land	0.549	1.06	1.202	1.202

Note 1 For the current location autumn more accurately defines "winter" conditions at the proposed facility.

Appendix 13.1

Glossary of Impact Assessment and Assessment Methodology

APPENDIX 13

A.13.1 Glossary of Impacts

A.13.1.1 Types of Impacts

Potential impacts on the receiving cultural heritage environment can be described as direct physical impacts, indirect physical impacts, and impacts on setting (i.e., the surroundings in which an archaeological / cultural heritage asset can be experienced; Historic England 2017).

Direct physical impacts are those development activities that directly cause damage to the fabric of an archaeological / cultural heritage asset. Typically, these activities are related to construction works, e.g., they could include excavation of foundations, earthmoving / site preparation creation of access roads, cycle paths, and the excavation of service trenches.

Indirect physical impacts are those processes, triggered by development activity, that lead to the degradation of archaeological / cultural heritage assets.

Impacts on the setting of archaeological / cultural heritage assets describe how the presence of a development changes the surroundings of an asset in such a way that it affects (positively or negatively) the heritage significance of that asset. Visual impacts are most commonly encountered. Such impacts may be encountered at all stages in the life cycle of a development, but they are only likely to be considered significant during the prolonged operational life of the development.

A.13.1.2 Quality of Impacts

Impacts on the cultural heritage environment are assessed in terms of their quality, i.e., positive, negative, neutral:

- Negative Impact: A change that will detract from or permanently remove an archaeological monument / cultural heritage asset from the landscape.
- Neutral Impact: A change that does not affect cultural heritage; and
- Positive Impact: A change that improves or enhances the setting of an archaeological / cultural heritage asset.

A.13.1.3 Duration of Impacts

The duration of an impact can be as follows:

- Temporary Impact: Impact lasting for one year or less.
- Short-term Impacts: Impact lasting one to seven years.
- Medium-term Impact: Impact lasting seven to fifteen years.
- Long-term Impact: Impact lasting fifteen to sixty years; and
- Permanent Impact: Impact lasting over sixty years.

A.13.2 Assessment of Impacts

A.13.2.1 Introduction

This assessment methodology has regard to the EPA assessment criteria (EPA, 2022) and to the National Roads Authority (NRA) *Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes* (NRA, 2005), *Guidelines for the Assessment of Architectural Heritage Impact of National Road Schemes* (NRA, 2006); (hereafter referred to as the NRA Guidelines), and Cultural Heritage Impact Assessment for TII Projects – Overarching Technical Document (Working draft).

Cultural heritage sites are a non-renewable resource, and such assets are generally considered to be location sensitive. In this context, any change to their environment, such as construction activity and ground disturbance works, could adversely affect these sites.

APPENDIX 13

A.13.2.2 Significance / Sensitivity Criteria

In accordance with EPA Guidelines (EPA, 2022), the context, character, significance and sensitivity of each archaeological / cultural heritage asset requires evaluation, and the significance of the impact is then determined by considering the significance / sensitivity of the asset and the predicted magnitude of the impact.

In accordance with the NRA Guidelines (NRA, 2005), the significance criteria used to evaluate an archaeological site, monument or complex take into account the character and integrity of the asset and any available data regarding it. This can be ascertained by looking at the following criteria cited in the NRA Guidelines (NRA, 2005): the existing status (level of protection), condition or preservation, documentation or historical significance, group value, rarity, visibility in the landscape, fragility or vulnerability, and amenity value (**Apx Table 13.1**). While these criteria contribute to the significance of a feature they should not be treated as definitive. These criteria are indicators which contribute to a wider judgement based on the individual circumstances of these archaeological/cultural heritage assets. The assessment was also cognisant of the draft TII guidelines for Cultural Heritage Impact Assessment of TII Projects.

The Record of Protected Structures (RPS) does not assign a grading, but those structures that are not included in the RPS may be considered to be of architectural heritage significance, though on a lower level.

The National Inventory of Architectural Heritage (NIAH) assigns a rating to all buildings included in its survey, determining each structure to be of international, national, regional or local significance. In this study any structure that is rated as of national or international significance is considered to be of a high evaluation rating. The NIAH conveys no statutory protection to buildings and other structures and hence buildings included in the NIAH do not have the same legal standing as protected structures unless they are also included in the RPS. Any structure rated as of regional significance in the NIAH is assigned a medium level of significance for this reason.

It sometimes happens that a structure is identified in the survey that is included in neither the RPS or the NIAH and yet is considered to be of such significance that it could be worthy of inclusion as a protected structure or within the NIAH. In such cases the structure is accorded a low rating in the survey.

Finally, there are some structures that have attained a significance on account of their age, but which would not be considered to be of such significance that they would warrant inclusion in the RPS. In the event of any significant impact arising from the Proposed Development, such as demolition, these structures would be worthy of being recorded for posterity.

Apx Table 13.17: Explanation of Cultural Heritage Asset Assessment Criteria

Criteria	Explanation
Existing Status	The level of protection associated with a cultural heritage asset is an important consideration.
Condition / Preservation / Integrity	The survival of a cultural heritage asset's archaeological potential both above and below ground is an important consideration and should be assessed in relation to its present condition and surviving features. Well-preserved sites should be highlighted, this assessment can only be based on a field inspection.
Documentation / Data	The significance of a cultural heritage asset may be enhanced by the existence of records of previous investigations or contemporary documentation supported by written evidence or historic maps. Sites with a definite historical association or an example of a notable event or person should be highlighted.
Group Value / Character	The value of a single cultural heritage asset may be greatly enhanced by its association with related contemporary monuments or with monuments from different periods indicating an extended time presence in any specific area. In some cases, it may be preferable to protect the complete group, including associated and adjacent land, rather than to protect isolated monuments within that group.
Rarity / Character	The rarity of some cultural heritage asset types can be a central factor affecting response strategies for development, whatever the condition of the individual feature. It is important to recognise sites that have a limited distribution.
Visibility in the landscape/ Character / Integrity	Cultural heritage assets that are highly visible in the landscape have a heightened physical presence. The inter-visibility between monuments may also be explored in this category.
Fragility / Vulnerability / Integrity	It is important to assess the level of threat to a cultural heritage asset from erosion, natural degradation, agricultural activity, land clearance, neglect, careless treatment or development.

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Criteria	Explanation
Amenity Value / Character	Regard should be taken of the existing and potential amenity value of a cultural heritage asset.

An evaluation of the significance / sensitivity of cultural heritage assets is based on their designation and on the extent to which these assets contribute to the cultural heritage environment, though their individual or group qualities, either directly or potentially. **Apx Table 13.2** presents the scale of significance / sensitivity together with criteria. It has been compiled by Courtney Deery Heritage Consultancy Ltd, based on standard authorities and guidelines as listed in **Chapter 13: Cultural Heritage** of the Environmental Impact Assessment Report (EIAR). Undesignated cultural heritage sites can be assigned a low, medium or high sensitivity value, taking into consideration the criteria cited in **Apx Table 13.1** (e.g. condition, character, integrity or preservation, data, group value, rarity, visibility in the landscape, fragility or vulnerability, and amenity value).

Apx Table 13.18: Significance / Sensitivity Criteria

Sensitivity / Significance	Criteria
Very High	Sites of international significance: World Heritage Sites and sites on the UNESCO World Heritage Tentative List. NIAH sites (assessed by the NIAH to be of international importance).
High	National Monuments. Recorded Monuments (RMP sites & SMR sites scheduled for inclusion in the next revision of the RMP), where these are considered to be of national importance. Protected Structures (assessed by the NIAH to be of national importance). Undesignated cultural heritage sites.
Medium	Recorded Monuments (RMP sites & SMR sites scheduled for inclusion in the next revision of the RMP), not considered to be of national importance. Protected Structures / NIAH sites (assessed by the NIAH to be of regional importance), Newly identified archaeological sites, confirmed through archaeological investigation, to be added to the SMR. Undesignated cultural heritage sites.
Low	Sites listed in the Meath Industrial Heritage Survey (MIHS) and National Inventory of Architectural Heritage (NIAH) Building Survey for which there are no upstanding remains. NIAH sites (assessed by the NIAH to be of local importance). Undisturbed greenfield areas and riverine environs, which have an inherent archaeological potential. Undesignated cultural heritage sites.
Negligible	Assets with very little or no surviving cultural heritage interest.

National Monument

The National Monuments Act (1930, Section 2) defines a 'National Monument' as

'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic or archaeological interest attaching thereto'.

The National Monuments legislation legally protects access to, and the visual amenity associated with National Monuments and requires consent from the Minister for invasive works in their vicinity.

The defences / town walls of medieval Dublin are a National Monument in accordance with national policy on town defences (Department of Environment, Heritage and Local Government 2008).

Recorded Monuments

The primary source of information for archaeology is the Record of Monuments and Places (RMP) maintained by the Department of Housing, Local Government and Heritage (DHLGH). The RMP documents known upstanding archaeological monuments, their original location (in cases of destroyed monuments) and the position of possible sites in rural areas identified as cropmarks on vertical aerial photographs dating to before 1700 AD (with some later ones also being included). It is based on a comprehensive range of published and publicly available documentary and cartographic sources.

APPENDIX 13

Designated Architectural Heritage Assets

Protected Structures

A protected structure is a structure that is considered to be of 'special interest', which is broadly defined by the Planning and Development Act, 2000 as structures of architectural, historical, archaeological, artistic, cultural, scientific, social or technical point interest. The 2000 Act requires each planning authority to compile and maintain a Record of Protected Structures (RPS). The RPS is a mechanism for the statutory protection of the architectural heritage and is listed in every County Development Plan and Town Development Plan.

By definition, a protected structure includes the land lying within its curtilage and other structures within that curtilage and their interiors. The notion of curtilage is not defined by legislation, but according to *Architectural Heritage Protection Guidelines for Planning Authorities* (DHLGH, 2011) it is that parcel of land immediately associated with the structure, and which is (or was) in use for the purpose of the structure.

The attendant grounds of a structure are the lands outside the curtilage of the structure, but which are associated with the structure and are intrinsic to its function, setting and/or appreciation.

Architectural Conservation Areas

Architectural Conservation Areas (ACA) are places, groups of structures or townscapes that are of special architectural, historical, archaeological, artistic, cultural scientific, social or technical interest/value or contribute to the appreciation of Protected Structures. ACAs and candidate ACAs are listed in every County Development Plan and Town Development Plan.

National Inventory of Architectural Heritage (NIAH)

The National Inventory of Architectural Heritage (NIAH) places a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. The NIAH's role is to identify record and evaluate the post-1700 architectural heritage of Ireland. It aims to promote the appreciation of, and contributes to the protection of, the built heritage by systematically recording a representative sample of that built heritage on a nationwide basis. The surveys provide the basis for the recommendations of the Minister to the planning authorities for the inclusion of particular structures in the Record of Protected Structures (RPS).

Non-Designated Sites

Newly identified archaeological sites that have been confirmed through archaeological investigation (monitoring, testing, excavation, geophysical survey) are considered to be of medium importance. Such sites are undesignated as they have yet to be added to the SMR.

Potential or undesignated archaeological sites identified through aerial photography, historic mapping, stray finds are considered to be of low sensitivity, as they have yet to be ground-trothed through archaeological investigation. Similarly, undisturbed greenfield areas and riverine environs, which have an inherent but as yet unproven archaeological potential are considered to be of low sensitivity.

The NIAH Historic Garden and Designed Landscape Survey

Historic landscapes, gardens and demesnes are usually, but not always, associated with Protected Structures and therefore do not always have statutory protection. The NIAH designed landscapes and historic gardens survey is a preliminary non-statutory survey, based on a paper study using historic map sources and aerial photography, some of the sites that have been identified on it have long since been subsumed into a farming landscape particularly when the principal house has been demolished.

A.13.2.3 Magnitude of Impact

When assessing the impact magnitude, the following criteria need to be considered:

- Extent – size, scale and spatial distributions of the impact.
- Duration – period of time over which the impact will occur.
- Frequency – how often the impact will occur; and
- Context – how will the extent, duration and frequency contrast with the accepted baseline conditions (see **Apx Table 13.1**)

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Apx Table 13.19: Magnitude of Impact

Effect Magnitude	Description
High	These effects arise where an archaeological / cultural heritage asset is completely and irreversibly destroyed by a proposed development. A change such that the value of the asset is totally altered or destroyed, leading to a complete loss of character, integrity and data about the site.
Medium	An effect which, by its magnitude, duration or intensity alters an important / significant aspect of the environment. An effect like this would be where an archaeological / cultural heritage asset would be effected upon leading to a significant loss of character, integrity and data about the site. Or an effect which by its magnitude results in the partial loss of a historic structure (including fabric loss or alteration) or grounds including the part removal of buildings or features or part removal of demesne land (e.g., severance, visual intrusion or degradation of setting and amenity). A permanent positive effect that enhances or restores the character and / or setting of a cultural heritage site or upstanding archaeological heritage site in a clearly noticeable manner.
Low	A low effect arises where a change to the site is proposed which though noticeable is not such that the archaeological / cultural heritage character / integrity of the site is significantly compromised, and where there is no significant loss of data about the site. A positive effect that results in partial enhancement of the character and / or setting of a cultural heritage site or upstanding archaeological heritage site in the medium to long-term.
Negligible	An effect which causes very minor changes in the character of the environment and does not directly affect an archaeological / cultural heritage asset or affect the appreciation or significance of the asset. There would be very minor changes to the character and integrity of the asset and no loss of data about the site.

A.13.2.4 Significance of Effect

The EPA *Revised Guidelines on the Information to be Contained in Environmental Impact Statements* (EIS) (EPA, 2017) contained two additional levels of significance of effect: Very Significant and Not Significant (Apx Table 13.4). These levels have been retained in the current EPA Guidelines (2022).

Apx Table 13.20: Significance of Impacts (EPA 2015)

Significance of Effect	Description
Very Significant	An impact which by its character, magnitude, duration or intensity significantly alters the majority of a sensitive aspect of the environment, for example a monument.
Not Significant	An impact which causes noticeable changes in the character of the environment but without noticeable consequences.

The likely significance of impacts is determined by considering the baseline rating or sensitivity value of the asset upon which the impact has an impact and the magnitude of the impact (see **Chapter 1: Introduction**). The impact significance is defined as Imperceptible, Not Significant, Slight, Moderate, Significant, Very Significant, or Profound (Apx Table 13.5).

Apx Table 13.21: Defining Significance of Impacts

Effect Significance	Criteria
Imperceptible	An effect capable of measurement but without noticeable consequences
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes minor changes in the character of the environment and does not affect an archaeological / cultural heritage asset in a moderate or significant manner.
Moderate	A moderate effect arises where a change to the site is proposed which though noticeable, does not lead to a significant loss of character, integrity and data about the archaeological / cultural heritage asset.

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Effect Significance	Criteria
Significant	An effect which, by its magnitude, duration or intensity, alters an important aspect of the environment. An effect like this would be where part or all of a site would be permanently effected upon, leading to a significant loss of character, integrity and data about the archaeological / cultural heritage asset.
Very Significant	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound	Applies where mitigation would be unlikely to remove adverse effects. Reserved for adverse, negative effects only. These effects arise where an archaeological / cultural heritage asset is completely and irreversibly destroyed by a proposed development.

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A.13.2.5 References

DHLGH, 2011. *Architectural Heritage Protection Guidelines for Planning Authorities*, s.l.: s.n.

EPA, 2017. *Guidelines on the Information to be Contained in Environmental Impact Statements* , s.l.: s.n.

EPA, 2022. *Guidelines of the Information to be Contained in Environmental Impact Assessment Reports* , s.l.: s.n.

NRA, 2005. *Guidelines for the Assessment of Archaeological Heritage Impact of National Road Schemes*, s.l.: s.n.

NRA, 2006. *Guidelines for the Assessment of Architectural Heritage Impact of National Road Schemes* , s.l.: s.n.

Appendix 14.1

Biodiversity - Supporting Information

APPENDIX 14

7.2 Desk Study Results

Protected and rare species returned from the National Biodiversity Data Centre (NBDC) desk study (NBDC, 2023) search within 5 km of the Proposed Development from the preceding 10 years are detailed in **Apx Table 14.1**. Invasive alien species returned from the NBDC desk study search within 5 km of the Proposed Development from the preceding 10 years are detailed in **Apx Table 14.2**.

Apx Table 14.22: Protected and Rare Species Returned from the NBDC Desk Study Search within 5 km of the Proposed Development from the Preceding 10 Years

Species Name	Legislative Protection*	Red List Status (excluding least concern)	Record Count	Date of Last Record	Habitat Preferences (Birds ¹ ; All Remaining ²)
Birds					
Barn swallow (<i>Hirundo rustica</i>)	-	Amber Listed	8	16/09/2017	Common summer visitor throughout Ireland from mid-March to late-September. Swallows spend the winter in southern Africa, migrating across the Mediterranean Sea and the Sahara Desert in spring and autumn.
Black-headed gull (<i>Larus ridibundus</i>)	✓ _d	Amber Listed	6	13/01/2017	Resident along all Irish coasts, wintering inland also. Breeding nests on the ground in wetland areas, (i.e. bogs, marshes, man-made lakes). Widespread across agricultural fields, and urban areas).
Common coot (<i>Fulica atra</i>)	✓ _d	Amber Listed	9	09/02/2017	Resident at ponds and lakes throughout Ireland. Wintering in lakes, coastal estuaries and river systems.
Common starling (<i>Sturnus vulgaris</i>)	-	Amber Listed	14	16/09/2017	Widespread garden bird, Irish resident. Foraging in grassland in parks, gardens and farmland, and trees. Also found in urban environments as well as woodland and farmland.
Common swift (<i>Apus apus</i>)	-	Red Listed	4	27/10/202.907 018 0.122 g0.004 Tc -0.004 Tw 4.25d-2.6 (/TT3	

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Species Name	Legislative Protection*	Red List Status (excluding least concern)	Record Count	Date of Last Record	Habitat Preferences (Birds ¹ ; All Remaining ²)
House martin (<i>Delichon urbicum</i>)	-	Amber Listed	4	14/07/2017	Common summer visitor throughout Ireland from mid-March to late-September. Winters in tropical Africa.
Little egret (<i>Egretta garzetta</i>)	✓ _a	-	2	22/02/2017	Resident along coasts and rivers throughout Ireland. A variety of wetland habitats are used including shallow lakes, riverbanks, lagoons, coastal estuaries and rocky shoreline.
Little grebe (<i>Tachybaptus ruficollis</i>)	✓ _d	-	3	20/09/2016	Resident on vegetated ponds and lakes throughout Ireland. Wintering habitat extends to include ephemeral wetlands and are often encountered on sheltered coasts, estuaries and coastal lakes and lagoons.
Mallard (<i>Anas platyrhynchos</i>)	✓ _d	Amber Listed	19	09/02/2017	Resident across all wetland habitats in Ireland.
Northern wheatear (<i>Oenanthe oenanthe</i>)	-	Amber Listed	2	18/04/2019	Widespread summer visitor to uplands and scrubland throughout Ireland, from mid-March to early-October. Common passage migrant to all coasts in spring and autumn. Winters in southern Africa. Has one of the longest migration routes of any songbird. Birds breeding in north-eastern Canada fly almost non-stop across the northern Atlantic to Iberia and North Africa.
Sand martin (<i>Riparia riparia</i>)	-	Amber Listed	2	07/05/2016	Widespread summer visitor throughout Ireland. Breed in burrows dug into river banks or quarries.
Tufted duck (<i>Aythya fuligula</i>)	✓ _d	Amber Listed	4	09/06/2016	Resident & winter visitor. Preference for large open lakes in lowland areas for breeding, where nests are built in waterside vegetation. Also seen on town lakes, canals and slow-moving rivers.
Terrestrial Mammals					
Daubenton's bat (<i>Myotis daubentonii</i>)	✓ _{c, e}	-	36	26/08/2014	Calm, slow-moving water is chosen by Daubenton's bat as it makes it easier for it to locate insects on the surface. Sometimes forages in woodland, away from water. Habitats include but are not necessarily limited to; Semi-natural woodland, highly modified non-native woodland, Building and artificial surfaces, Lakes and Ponds, Watercourses.
Eurasian badger (<i>Meles meles</i>)	✓ _e	-	9	14/05/2018	Varied habitats including grassland, woodland and Bog often near hedgerows or treelines and streams.

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Species Name	Legislative Protection*	Red List Status (excluding least concern)	Record Count	Date of Last Record	Habitat Preferences (Birds ¹ ; All Remaining ²)
Irish hare (<i>Lepus timidus</i> subsp. <i>hibernicus</i>)	✓ _e	-	8	01/09/2017	Varied habitat preferences including bog, moor, heath, marsh, and pastoral farmland.
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	✓ _{c, e}	-	13	19/08/2013	Forages along linear landscape features such as hedgerows and tree lines as well as within woodland. Notable preference for riparian habitats and has adapted to modern dwellings. The species is loyal to its roost site and returns year after year.
West European hedgehog (<i>Erinaceus europaeus</i>)	✓ _e	-	6	03/12/2022	Irish resident in all lowland habitats where there is sufficient food to eat and ground cover for nesting, and commonest where grassland abuts mixed woodland and scrub. It appears to avoid coniferous woodland, blanket bog and other wet areas.
Amphibians					
Common frog (<i>Rana temporaria</i>)	✓ _e	-	22	12/07/2020	Native to Ireland. Uses a broad habitat range including lakes and ponds, grassland and marsh, wet heath, peatlands, woodland and scrub, dune slacks, machair, and riparian habitats.
Invertebrates					
Wood white (<i>Leptidea sp.</i>)	-	Near Threatened	15	07/06/2019	This species is found in woodland rides and margins and hedgerows. In Ireland, more open habitats are used, often far from woodland, including rough grassland with scrub, road verges, hedges, and disused railway lines.
Gooden's nomad bee (<i>Nomada goodeniana</i>)	-	Endangered	1	13/05/2020	Found in a range of habitat types including scrub, woodland edges, coastal grassland, soft-rock cliffs and farmland verges.
Large red tailed bumble bee (<i>Bombus lapidarius</i>)	-	Near Threatened	7	22/05/2021	It can be found in gardens, farmland, woodland edges, hedgerows and heathland: anywhere there are flowers to feed on. It is a social bee, nesting in old burrows, or under stones.
Moss carder-bee (<i>Bombus (Thoracomus) muscorum</i>)	-	Near Threatened	1	04/05/2018	Found in a range of flower-rich habitats, including parks and gardens.
Freshwater white-clawed crayfish (<i>Austropotamobius pallipes</i>)	✓ _{b, e}	-	6	18/08/2013	Found in rivers, streams and lakes in Ireland particularly in those with a calcareous influence. Necessity for refuges whether this be vegetation, boulders or man-made features. Hard substrates were found to be preferable to muddy substrates.

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Species Name	Legislative Protection*	Red List Status (excluding least concern)	Record Count	Date of Last Record	Habitat Preferences (Birds ¹ ; All Remaining ²)
Flora					
Common gromwell (<i>Lithospermum officinale</i>)	n/a	Near Threatened	6	18/07/2020	Grows on limey soils in grassland, hedgerows and the edges of woods, and on rocky ground, scree and quarries.
* Legislative Protection: a = Annex I Birds Directive, b = Annex II Habitats Directive, c = Annex IV Habitats Directive, d = Special Conservation Interest bird species (within Special Protection Area (SPA)), e = Wildlife Act (excluding birds); f = third schedule of the European Communities (Birds and Natural Habitats Regulations) 2011-2015.					

Apx Table 14.23: Invasive Alien Species Returned from the NBDC Desk Study Search within 5 km of the Proposed Development from the Preceding 10 Years

Species Name	Relevant Legislation*	Record Count	Date of Last Record
Invasive alien plants			
Fringed water-lily (<i>Nymphaoides peltata</i>)	✓	2	15/06/2016
Giant hogweed (<i>Heracleum mantegazzianum</i>)	✓	3	22/06/2021
Indian balsam (<i>Impatiens glandulifera</i>)	✓	1	24/08/2021
Japanese knotweed (<i>Fallopia japonica</i>)	✓	1	11/09/2019
Nuttall's waterweed (<i>Elodea nuttallii</i>)	✓	2	18/07/2020
Three-cornered garlic (<i>Allium triquetrum</i>)	✓	2	07/05/2022
Invasive alien animals			
Brown rat (<i>Rattus norvegicus</i>)	✓	1	09/10/2015
Eastern grey squirrel (<i>Sciurus carolinensis</i>)	✓	4	11/10/2016
* Third schedule of the European Communities (Birds and Natural Habitats Regulations) 2011-2015, as amended			

7.3 Valuation of Important Ecological Features (IEFs)

Apx Table 14.3 outlines the geographic scales used to inform the valuation of IEFs (which is adapted from the National Roads Authority Guidelines (NRA, 2009) and is used to inform the sensitivity of the ecological receptors.

Apx Table 14.24: Geographic Scales Used to Inform the Valuation of the IEFs in the Biodiversity Study Area (Adapted NRA, 2009)

Ecological Valuation
International importance:
<ul style="list-style-type: none"> 'European Site', including Special Areas of Conservation (SAC) and candidate SACs, Sites of Community Importance, SPAs or proposed SPAs (pSPAs); Site that fulfils the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended);

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Ecological Valuation

- Features essential to maintaining the coherence of the Natura 2000 Network³;
- Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive;
- Resident or regularly occurring populations (assessed to be important at the national level)⁴ of the following:
 - Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or
 - Species of animal and plants listed in Annex II and/or IV of the Habitats Directive.
- Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971);
- World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972);
- Biosphere Reserve (UNESCO Man & The Biosphere Programme);
- Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979);
- Sites hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979);
- Biogenetic Reserve under the Council of Europe;
- European Diploma Site under the Council of Europe; and
- Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations 1988 (S.I. No. 293 of 1988)⁵.

National importance:

- Site designated or proposed as a Natural Heritage Area (NHA)/proposed NHA;
- Statutory Nature Reserve;
- Refuge for Fauna and Flora protected under the Wildlife Acts 1976-2012;
- Undesignated site fulfilling the criteria for designation as an NHA; a Statutory Nature Reserve; a Refuge for Fauna and Flora protected under the Wildlife Acts 1976-2012; and/or a National Park;
- Resident or regularly occurring populations (assessed to be important at the national level)⁶ of the following:
 - Species protected under the Wildlife Acts; and/or
 - Species listed on the relevant Red Data list.
- Site containing 'viable areas'⁷ of the habitat types listed in Annex I of the Habitats Directive.

County importance:

- Area of Special Amenity⁸;
- Area subject to a Tree Preservation Order;
- Area of High Amenity, or equivalent, designated under the County Development Plan (CDP);
- Resident or regularly occurring populations (assessed to be important at the county level)⁹ of the following:
 - species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
 - species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
 - species protected under the Wildlife Acts; and/or
 - species listed on the relevant Red Data list.
- Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or national importance;
- County important populations of species or viable areas of semi-natural habitats or natural heritage features identified in the National or Local Biodiversity Action Plan (BAP)¹⁰, if this has been prepared;
- Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county; and

³ See Articles 3 and 10 of the Habitats Directive

⁴ It is suggested that, in general, 1 % of the national population of such species qualifies as an internationally important population. However, a smaller population may qualify as internationally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.

⁵ Note that such waters are designated based on these waters' capabilities of supporting salmon (*Salmo salar*), trout (*Salmo trutta*), char (*Salvelinus*) and whitefish (*Coregonus*).

⁶ It is suggested that, in general, 1 % of the national population of such species qualifies as a nationally important population. However, a smaller population may qualify as nationally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.

⁷ A 'viable area' is defined as an area of a habitat that, given the particular characteristics of that habitat, was of a sufficient size and shape, such that its integrity (in terms of species composition, and ecological processes and function) would be maintained in the face of stochastic change (for example, as a result of climatic variation).

⁸ It should be noted that whilst areas such as Areas of Special Amenity, areas subject to a Tree Preservation Order and Areas of High Amenity are often designated on the basis of their ecological value, they may also be designated for other reasons, such as their amenity or recreational value. Therefore, it should not be automatically assumed that such sites are of County importance from an ecological perspective.

⁹ It is suggested that, in general, 1 % of the County population of such species qualifies as a County important population. However, a smaller population may qualify as County important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.

¹⁰ BAP: Biodiversity Action Plan

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Ecological Valuation

- Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.

Local importance (higher value):

- Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared;
- Resident or regularly occurring populations (assessed to be important at the local level)¹¹ of the following:
 - species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive;
 - species of animal and plants listed in Annex II and/or IV of the Habitats Directive;
 - species protected under the Wildlife Acts; and/or
 - species listed on the relevant Red Data list.
- Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality; and
- Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.

Local importance (lower value):

- Sites containing small areas of semi-natural habitats that are of limited local importance for wildlife; and
- Sites or features containing non-native species that are of some importance in maintaining habitat links.

¹¹ It is suggested that, in general, 1 % of the local population of such species qualifies as a locally important population. However, a smaller population may qualify as locally important where the population forms a critical part of a wider population or the species is at a critical phase of its life cycle.

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7.4 References

NBDC (2023) National Biodiversity Data Centre. Available online at: <https://maps.biodiversityireland.ie/Map>, [Assessed March 2023].

NRA (2009) Guidelines for Assessment of Ecological Impacts of National Roads Schemes, Revision 2. National Roads Authority.

Appendix 20.1

Cumulative Impact Assessment Stage 1

APPENDIX 20

Apx Table 20.25: List of Projects Screened into CIA Stage 1

Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
Intersects Development										
PR 1	SD22A/0326	Block 402, Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin	Industrial	ENVA Ireland Ltd	Yes - application is for the Enva Site subject of this application.	GRANT PERMISSION	28/09/2022	08/11/2022	Installation of 410 Solar PV Panels mounted on the roof of 1 existing industrial	0.00
Less than 1km from the Development										
PR 2	SD20A/0349	Unit J5-J8, Greenogue Business Park, Grants Road, Rathcoole, Dublin 24	Energy	Heavey Bowden Label Print Limited	No	GRANT PERMISSION	24/02/2021	06/04/2021	Erection of 228 photovoltaic solar panels with an area of 398 m ² (with average size of 1.3 m ² per panel) on the existing roof slope and all associated alterations to existing elevations, site, drainage and ancillary works.	254.53
PR 3	SD22A/0310	Unit 518B, Grants Crescent, Jordanstown, Greenogue Business Park, Rathcoole, Dublin 24	Waste	Padraig Thornton Waste Disposal Ltd.	No	GRANT PERMISSION	19/09/2022	03/11/2022	A new waste handling building (561 m ² and 12 m high); Use of an existing building (159 m ² and 7.5m high) granted retention under SD22A/0100 for waste handling; elevational treatment including signage to the northern facade of the existing building granted retention under SD22A/0100; continued use of the existing building (427 m ² and 8.2m high) granted permission under SD06A/1097 and all ancillary site works. The development will comprise an activity requiring a review of the existing waste facility permit (WFP-DS-11-0002-06). The Proposed Development includes an increase in the total maximum annual waste intake to 20,000 tonnes. An EIAR has been submitted with this application.	347.36
PR 4	SD21A/0111	Block 509, Grants Avenue, Greenogue Business Park, Rathcoole, Co. Dublin	Industrial	Crean & McHugh Holdings Unlimited Company	No	GRANT PERMISSION	21/09/2021	02/11/2021	Construction of a double height (8.5m high) industrial warehouse building for plant machinery maintenance and storage purposes; associated ancillary two storey office and staff welfare accommodation (c.501 m ² Total GFA); 9	360.39

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
									car parking spaces, 3 bicycle parking spaces and all associated site ancillary development works and drainage connections.	
PR 5	SD20A/0158	Rathcreedan, Rathcoole, Co. Dublin	Agricultural	Lucy McCarthy	No	GRANT PERMISSION	27/08/2020	05/10/2020	Hay shed building (2,100 m ² , 9.85 m high); ancillary yard (approximately 1,584 m ²) for equestrian/agricultural related vehicle parking and marshalling with access and egress formed from within the existing equestrian farmyard; landscaping, fencing, associated earthworks and surface water disposal to an on-site soakaway.	437.83
PR 6	SD19A/0264	Aerodrome Business Park, Site Q2, Jordanstown Road, Collegeland, Rathcoole, Co. Dublin	Industrial	Thornton O'Connor Town Planning	No	GRANT PERMISSION	10/10/2019	18/11/2019	Warehouse with ancillary three storey office and staff facilities and associated development. The warehouse will have a parapet height of 17 m with a gross floor area of 14,649 m ² including a warehouse area (13,494 m ²), ancillary office areas (1099 m ²) and staff facilities (56 m ²); provision of a new vehicular access/egress onto the Jordanstown Road; internal roadways; pedestrian access; 152 ancillary car parking spaces; bicycle parking; HGV yard including 26 HGV parking stands and 18 loading docks; hard and soft landscaping including green walls; lighting; photo-voltaic panels; ESB substation and switch room; plant; boundary treatments and associated development works above and below ground.	639.57
PR 7	SD21A/0305	Tay Lane, Greenogue, Rathcoole, Co. Dublin	Waste	Electrical Waste Management Ltd.	No	GRANT PERMISSION	16/05/2022	30/06/2022	Alterations to existing granted planning, Ref. SD19A/0065, for a proposed Waste Metal Transfer Facility including Waste Electric & Electronic Equipment (WEEE). The subject alterations for which planning permission is sought for are as follows: (1) Reconfiguration of the	667.30

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									<p>floor plan areas as follows: (A) Provision of 535 m² additional floor area due to introduction of areas as follows - (A.1) Extended display area at ground floor of ancillary office, addition of 46 m² floor area, (A.2) Extended open plan office at first floor of ancillary office, addition of 20 m² floor area, (A.3) Single storey ancillary storage facility to the front north-east elevation totalling 166 m² with overall height 7 m, (A.4) Mezzanine area to the south eastern side of Light Industrial Unit, totalling 303 m². Alterations listed above result in total building area Increase from 4391 m² to 4926 m² as shown at the revised table of gross Internal floor areas & uses. (B) Change of use of 64 m² of light industrial unit floor area to staff facilities due to the introduction of: (B.1) Enclosed stairs from Light Industrial Unit to ancillary office/staff facilities (overall 31 m²), (B.2) single storey cleaners store and storage at ground floor to the north-eastern corner of light industrial unit (overall 33 m²). (C) Change of use of 100 m² of workshop charging area & staff facilities to workshop area & single storey office/staff facilities. (D) Introduction of full height dividing wall at light industrial unit. 2. Elevations alterations as per list above plus additional alterations as follows: (a) Provision of full height cladding (ground floor to roof) to light industrial unit and ancillary Workshop. (b) Introduction of 11 m wide x 6 m high open to light industrial unit side (north-western) elevation, (c) Rearrangement of all fire exit & level access doors to light industrial unit & ancillary workshop</p>	

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
PR 8	SD19A/0171	Greenogue Business Park, Site 601 & 605,	Industrial	Exeter Ireland No Property IV Ltd.		GRANT PERMISSION	22/07/2019	02/09/2019	including omission and addition of the same, (d) Introduction of integrated modular louvre system to light industrial unit rear (south-western) & side (north-western) elevation, (e) Introduction of canopies to the ancillary office main entrance and above 11 m wide open & dock levellers to light industrial unit side (north-western) elevation. (3) Site plan alterations as follows: (a) Rearrangement of car parking spaces due to provision of office extended display area to the front (north-eastern) elevation, (b) Provision of new finish floor level to office/staff facilities and Workshop and associated site levels adjustments, (c) Provision of a new boundary fence type (paladin fence) throughout the development, (d) Provision of additional weighbridge - overall 2 proposed and rearrangement of brush wash and steam wash between workshop and site's north-western boundary, (e) Provision of building protection bollards to workshop side elevations (south-east and north-west), (f) Associated drainage adjustments due to the inclusion of the alterations above plus reduction of surface water and foul sewer outfall route as per as built access road and services which serve built developments to the east of the site. All other details such as landscaping, lighting, external surface finishes, EIAR, Flood Risk Assessment etc. will remain as per the granted application ref. SD19A/0065.	703.75
									2 warehouses with ancillary three storey office and staff facilities and associated development. Unit 601 will have a	

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision	Grant Date	Description of Development	Distance from Proposed Development (m)
		Jordanstown Road & Jordanstown Ave, Rathcoole, Co. Dublin							maximum height of 16.1 m with a gross floor area of 4,922 m ² including a warehouse area (4,224 m ²); ancillary office areas (322 m ²) and staff facilities (376 m ²). Unit 605 will have a maximum height of 15.7 m with a gross floor area of 8,036 m ² including a warehouse area (7,032 m ²); ancillary office areas (568 m ²) and staff facilities (437 m ²); provision of new vehicular accesses/egresses to the sites with HGV access and egress to both units proposed via Jordanstown Avenue and car access and egress to both units proposed via Jordanstown Road; internal roadways; pedestrian access; 105 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; hard and soft landscaping; boundary treatments; associated site development works above and below ground.	
PR 9	SD19A/0407	College Lane, Greenogue, Rathcoole, Co. Dublin	Industrial & Waste	Jordanstown Properties Limited	No	GRANT PERMISSION	17/04/2020	30/06/2020	Provision of a warehouse unit with ancillary three storey office and staff facilities and associated development; the building will have a maximum height of 23.7 m with a gross floor area of 13,959 m ² including a warehouse area (12,369 m ²); staff facilities (548 m ²) and ancillary office area (1,042 m ²); provision of one new vehicular access/egress point at the northern corner of the subject site and one HGV access/egress point at the southern corner of the subject site which connects onto the internal access road for two adjacent permitted warehouses (Reg. Ref. SD18A/0265) and permitted waste metal facility (Reg. Ref. SD19A/0065) which links to the Greenogue Roundabout on	727.60

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PR 10	SD21A/0200	College Lane, Greenogue, Rathcoole, Co. Dublin	Commercial	Jordanstown Properties Limited	No	GRANT PERMISSION	02/12/2021	21/01/2022	the R120; 119 ancillary car parking spaces; bicycle parking; HGV yard with 12 loading bays; level access goods doors; dock levellers; hard and soft landscaping; ESB substation (9 m ²); boundary treatments and associated site development works above and below ground. Amendments principally comprising of an overall increase in the commercial floor area by 15,479 m ² from the permitted 13,959 m ² to 29,438 m ² ; the permitted Development has 3 internal ancillary office floor levels, and the proposed alterations provide 2 mezzanine levels in the warehouse area (i.e a total of 5 internal floor levels); the permitted maximum height of the development at 23.7 m will remain unchanged; the additional 15,479 m ² development proposed will comprise an increase in the warehouse floor area from 12,369 m ² to 13,353 m ² , staff facilities from 548 m ² to 2,582 m ² and ancillary office area from 1,042 m ² to 2,437 m ² ; in addition to the provision of a 2 storey mezzanine warehouse area (9,703 m ²), integrated plant room (434 m ²) and plant area on 2 floors (929 m ²); construction of a 2 storey car-parking area (4,057 m ² and 7.8 m height) to accommodate an increase from the previously permitted 119 ancillary car parking spaces to 190 car parking spaces; 13 designated van parking spaces (no dedicated van spaces previously proposed); 72 permitted cycle parking spaces; reconfiguration of the HGV yard and an increase in the number of HGV dock levellers from 12 to	727.83

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									14 and the provision of 16 van loading level entry doors; the provision of an additional egress on the eastern boundary to facilitate vans exiting the site; sprinkler tank and associated underground pumps; repositioned ESB substation (15 m ² and 3 m height); bin storage (42 m ² and 2.9 m height); amended lighting layout; signage; modifications to hard and soft landscaping and boundary treatments; and associated site development works above and below ground.	
PR 11	SD18A/0265	College Lane, Greenogue, Rathcoole, Co. Dublin	Industrial	Jordanstown Properties Ltd.	No	GRANT PERMISSION	04/04/2019	13/05/2019	Provision of 2 warehouses with ancillary three storey office and staff facilities and associated development. Building A will have a maximum height of 18.3 m with a gross floor area of 15,286 m ² including a warehouse area (14,267 m ²), ancillary office area (413 m ²) and staff facilities (606 m ²). Building B will have a maximum height of 17.4 m with a gross floor area of 26,384 m ² including a warehouse area (23,421 m ²), ancillary office areas (1,870 m ²) and staff facilities (1,093 m ²). The development will also include the provision of a new vehicular access to the site via the Greenogue Roundabout; internal roadways; pedestrian access; 422 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; hard and soft landscaping; 2 ESB substations (18 m ²); lighting; boundary treatments; and associated site development works above and below ground.	761.4
PR 12	SD19A/0263	Aerodrome Business Park, Lands at Site	Industrial	IPUT plc	No	GRANT PERMISSION	10/10/2019	18/11/2019	Warehouse with ancillary three storey office and staff facilities and associated development. The warehouse will have	854.58

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
		G, Jordanstown Road & Jordanstown Way, College Land, Rathcoole, Co. Dublin							a parapet height of 17 m with a gross floor area of 11,012 m ² including a warehouse area (10,079 m ²), ancillary office areas (877 m ²) and staff facilities (56 m ²); provision of a new vehicular access/egress onto the Jordanstown Road, and the relocation of the entrance/exit on Jordanstown Way slightly to the west for HGV access; internal roadways; pedestrian access; 108 ancillary car parking spaces; bicycle parking; HGV yard including 13 HGV parking stands and 14 loading docks; hard and soft landscaping including green walls; lighting; photo-voltaic panels; ESB substation and switch room; plant; boundary treatments and associated development works above and below ground.	
PR 13	SD20A/0192	Ballynakelly, Newcastle, Co. I Dublin	Residential	Cairn Homes Properties Limited	No	GRANT PERMISSION	06/11/2020	14/12/2020	11 residential units consisting of (i) 4 three bed duplex apartments above 4 two bed duplex apartments in a three storey building; (ii) 3 two storey terrace houses (1 three bedroom and 2 four bedroom); communal open space; surface parking; bin and bicycle storage and all ancillary site development works at a site bordered by the R120 to the north, Newcastle Boulevard to the west, Ballynakelly Green to the south and Ballynakelly View to the east.	905.98
1-2km from the Proposed Development										
PR 14	SD20A/0258	College Lane, Greenogue, Rathcoole, Co. Dublin	Industrial	Nocsy 2 Ltd.	No	GRANT PERMISSION	01/04/2021	10/05/2021	Demolition of the existing dwelling (252 m ²) and associated domestic garage (49 m ²) and shed (12 m ²) located towards the north-west of the site and the construction of 3 warehouses with ancillary office and staff facilities and associated development as follows: Unit 1 will have a maximum height of 15.75	1002.29

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									m with a gross floor area of 5,619 m ² including a warehouse area (5,041 m ²), ancillary office areas (182 m ²) and staff facilities (396 m ²); Unit 2 will have a maximum height of 16.35 m with a gross floor area of 6,724 m ² including a warehouse area (6,135 m ²), ancillary office areas (275 m ²) and staff facilities (314 m ²); and Unit 3 will have a maximum height of 18.9 m with a gross floor area of 10,095 m ² including a warehouse area (9,335 m ²), ancillary office areas (399 m ²) and staff facilities (361 m ²); the development will also include the provision of a new vehicular access to the site from the Aerodrome Roundabout in lieu of the extinguishment of existing multiple access points from the R120 Newcastle to Rathcoole Road; internal roundabout; pedestrian access; 187 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substations; sprinkler tanks; pump houses and all associated site development works above and below ground.	
PR 15	SD22A/0301	Newcastle Service Station, Main Street, Ballynakelly, Newcastle, Co Dublin, D22 E7N6	Waste	BIGbin Waste No Tech Ltd		GRANT PERMISSION	05/09/2022	17/10/2022	The development will consist of a pay to use portable waste compactor for the acceptance of residual and food waste and a pay to use compactor for mixed dry recyclables. This activity requires the developers to process a waste collection permit/certificate of registration.	1007.96

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PR 16	SD21A/0140	Block R, Jordanstown Road, Aerodrome Buisness Park, Rathcoole, Co. Dublin	Industrial	Exeter Ireland No Property IV C Ltd.	No	GRANT PERMISSION	30/11/2021	21/01/2022	Construction of 1 warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 16 m with a gross floor area of 22,966 m ² including a warehouse area (21,113 m ²), ancillary office areas (1,163 m ²) and staff facilities (690 m ²); the provision of a new vehicular access to the site from Jordanstown Road including 2 additional access gates from this new road to the existing Site E to the north; pedestrian access; 210 ancillary car parking spaces; bicycle parking; HGV yards; level access goods doors; dock levellers; access gates; hard and soft landscaping; lighting; boundary treatments; ESB substation; plant; extinguishment of the existing vehicular access (farm gate) in lieu of a proposed pedestrian access gate at the southern portion of the site from the R120; and all associated development works above and below ground; all on a site of 5.67 on lands that are bounded to the west by Blocks A - D Jordanstown Road, to the south and east by greenfield lands and to the north by greenfield lands and Block E. The site abuts the R120 Newcastle Village to Rathcoole Road to the south.	1037.00
PR 17	SD22A/0312	Main Street Upper, Newcastle, Co Dublin	Commercial	Lidl Ireland GmbH	No	GRANT PERMISSION	05/04/2023	15/05/2023	Construction of a single storey Discount Foodstore Supermarket with ancillary off-licence use (with mono-pitch roof and overall building height of c. 6.74 m) measuring c. 2,207 m ² gross floor space with a net retail sales area of c. 1,410 m ² ; Construction of a vehicular access point to Main Street Upper and associated works to carriageway and	1687.42

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									including partial removal of boundary wall / facade, modification of existing footpaths / public realm and associated and ancillary works including proposed entrance plaza area; Demolition of part of an existing rear / southern single storey residential extension (and related alterations to remaining structure) of Kelly Estates building; The original Kelly Estates building (a protected structure - Eircode: D22 Y9H7) will not be modified; Demolition of detached single storey accommodation/ residential structure and ancillary wall/ fence demolitions to rear of existing Kelly Estates building; Demolition of existing single storey (stable) building along Main Street and construction of single storey retail /cafe unit on an extended footprint measuring c. 118 m ² and associated alterations to existing Main Street boundary facade; Renovation and change of use of existing (vacant) two storey vernacular townhouse structure to Main Street, and single storey extension to rear, for retail/ commercial use (single level throughout) totalling c. 61 m ² ; Repair and renewal of existing Western and Eastern burgage plot tree and hedgerow site boundaries; Provision of associated car parking, cycle parking (and staff cycle parking shelter), pedestrian access routes and (ramp and stair) structures (to / through the southern and western site boundaries to facilitate connections to potential future development), free standing and building mounted signage, free standing trolley bay cover /enclosure, refrigeration and air conditioning plant and equipment, roof	

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PR 18	SD20A/0215	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Industrial	MLEU Dublin No 2 Limited		GRANT PERMISSION	15/10/2020	23/11/2020	<p>mounted solar panels, public lighting, hard and soft landscaping, boundary treatments and divisions, retaining wall structures, drainage infrastructure and connections to services/ utilities, electricity Substation and all other associated and ancillary development and works above and below ground level including within the curtilage of a protected structure.</p> <p>The construction a logistics/warehouse unit (Unit E) southwest of Mountpark Baldonnell Phase 1 and west of the older original Business Park, Unit E will comprise of a GIA 60,747 m² (including 2,020 m² of ancillary office space and 4,802 m² of other ancillary areas); Provide for 340 car parking spaces, 22 motorcycle parking spaces and 160 bicycle spaces to serves the Proposed Development; Flood mitigation works to store and attenuate flood flows from the River Camac; Formations of plateaux on the site with surplus excavated material to allow for future development of Unit F; Access to the site will be from the existing Phase 1 development (referenced above) located on Clonlara Road; amendments to the yard and entrance arrangement for permitted Unit D are proposed (SD19A/0048); All ancillary landscaping, internal roads, associated infrastructure and buildings and site development works to support the development which is primarily greenfield and located between Casement Aerodrome and the N7 national route. The proposal will form part of the second phase of development to that permitted under</p>	1746.31

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PR 19	SD21A/0230	Townlands of Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Industrial	MLEU Dublin No 3 Limited		GRANT PERMISSION	19/10/2021	29/11/2021	SD19A/0370 and Phase 1 under SD15A/0309 (ABP Ref. PL06S.246392), as amended by permissions SD17A/0362, SD18A/0266 and SD19A/0048. An EIAR will be submitted to the Planning Authority with the planning application.	1747.32
									Construction 2 logistics/warehouse units (Unit F and Unit G amounting to 15,168 m ² GIA in total) south west of Mountpark Baldonnell Phase 1 and west of the older original Business Park; Unit F will comprise a GIA 6,463 m ² (including 568 m ² of ancillary office space), 65 car parking spaces and 20 bicycle spaces; Unit G will comprise a GIA 8,705 m ² (including 608 m ² of ancillary office space) 87 car parking spaces and 28 bicycle spaces; flood mitigation measures as permitted under SD20A/0215 and SD20A/0319 will service the development and are under construction; access to the site will be from the existing Phase 1 development (referenced below) located on Clonlara Road; totem wayfinding signage; all ancillary landscaping, PV panels; internal roads, associated infrastructure and buildings and site development works to support the development at the townlands of Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22; the site is primarily greenfield and located between Casement Aerodrome and the N7 national route; the proposal will form part of the second phase of development to that permitted under SD20A/0215, SD19A/0370 and Phase 1 under SD15A/0309 (ABP Ref.	

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									PL06S.246392), as amended by permissions SD17A/0362, SD18A/0266 SD19A/0048 and SD20A/0319; an EIAR will be submitted to the Planning Authority with the planning application.	
PR 20	SD20B/0404	The Old School House, Johnstown Road, Rathcoole, Co. Dublin, D24 FN76	Residential	Noel & Claire Walsh	No	GRANT PERMISSION	14/09/2021	26/10/2021	Modifications to rear of an existing two-storey, detached house (Protected Structure Ref. 323) which adjoins the Scout Ireland Hall also a Protected Structure Ref.324; re-instatement of fire-damaged internal linings as per Conservation Report; insert a rear window to ground floor of the existing house; demolish single storey extensions and separate outhouse (22 m ²); construct new slated two-storey & single storey flat roofed extension (70 m ²) to rear to contain a kitchen/dining, 2 bathrooms, stairs and 1 bedroom; modify existing entrance piers and reconstruction of missing pier to 2 m height with timber gate and ancillary site works.	1763.67
PR 21	SD18A/0363	Main Street, Newcastle, Co. Dublin	Residential	Pavement Homes Ltd.	No	GRANT PERMISSION	15/05/2019		(1) Construction of 22 three bedroom dwelling houses; (2) construction of access road and footpaths; (3) provision of car parking facilities to serve the development; (4) construction of a foul sewer network to serve the development which shall connect into adjoining foul sewer network; (5) construction of a surface water sewer network to serve the development including the provision of the necessary attenuation elements and the connection of the surface water network to the adjoining surface water network; (6) provision of a waterman to serve the development and connection to adjoining water main; (7) demolition of the garden sheds; (8) provision of all	1789.59

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									necessary utility services; (9) all ancillary site works.	
PR 22	SD22A/0026	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Waste	MLEU Dublin No 2 Limited	No	GRANT PERMISSION	25/03/2022	05/05/2022	Canopy waste compactor/baler on south western elevation and all associated site works on a site under construction and located between Casement Aerodrome and the N7 national route. The proposal amends a previously permitted development under SDCC Reg. Ref. SD20A/0215.	1806.59
PR 23	SD22A/0323	Main Street, Rathcoole, Co. Dublin	Residential	Ciaran Reilly	No	REQUEST ADDITIONAL INFORMATION	03/10/2022		Demolition of a shed & workshop at rear of the Protected Structure to facilitate the provision of 18 car parking spaces; Construction of 12 dwellings comprising of 8 two storey with attic level accommodation, 4 bedroom semi-detached dwellings (c. 146 m ² each and 4 two storey with attic level accommodation, 3 bedroom semi-detached dwellings (c. 126 m ² each) with vehicular access at main street; A pedestrian access to Forest Hills at the southern end of the site and ancillary site development works all within the curtilage of a Protected Structure.	1845.57
2-3km from the Proposed Development										
PR 24	SHD3ABP-312501-22	Mill Road, Saggart, County Dublin	Residential	Tetrarch Residential Limited	No	GRANT PERMISSION	02/08/2022		Demolition of existing single storey dwelling and the construction of 274 units on a 4.62 ha (net) site (density 60 units per hectare). It will comprise of 51 houses, 38 duplex units and 185 apartments. The height of the Proposed Development will range from two storey houses and three storey duplexes to 5 storey and part 8 storey apartment blocks. The proposed residential mix will comprise of: 17 2-bed houses, 27 3-bed houses and 7 4-bed houses, 2 1-bed duplex, 17 2-bed duplex and 19 3-bed	2069.25

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									duplex units, 62 1-bed apartments, 119 2-bed apartments and 4 3-bed apartments. A 4-classroom crèche of c. 276 m ² and 2 substations are also included in the Proposed Development. 276 car parking spaces and 634 bicycle spaces are provided. A planted woodland berm will be developed along the northern boundary with the N7 to provide a sound barrier and amenity open space. There are a number of green spaces located in the centre of the site and on the south east and west of the site with natural play and SUDS elements as well as a large open communal space for the two apartment blocks to the south. Vehicle, pedestrian and cycle access to the site will be from the Mill Road. A new road will be constructed running east west at the southern boundary of the site. The residential element of the site will have two access points off the proposed new road. This new route will extend eastwards to provide cycling and pedestrian connections through neighbouring Citywest lands and to the Saggart LUAS light rail terminus. Secondary access is proposed at the north west of the site from an existing access road connecting to Mill Road. This access is designed as services and emergency only and will be controlled by collapsible bollards.	
PR25	SD20A/0058	Within the townland of Milltown, located to the north of Peamount	Energy	Data & PowerNo Hub Services Ltd.		GRANT PERMISSION	09/11/2020	17/12/2020	Demolition of the existing single storey house of 'Little Acre' and its associated garage and other buildings; demolition of the single storey stable building on the overall site; construction of a gas powered Power Plant with all its	2564.37

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		Road (R120), Newcastle, Co. Dublin							associated elements; the part single and part two storey property of Bulmer and an agricultural building to the east of the overall site will not be demolished; The Power Plant compound of 14,475 m ² will contain 2 Power Units each with 1 25 m height stack (2 overall), transformers, air intakes and electrical modules; the Power Plant compound will also contain a two storey administration and workshop building (427 m ²) and LV switchgear building (140 m ²) (567 m ² in total) plus an AGI connection, gas compressor, water tank, water treatment, firewater tank and pumps, fuel skids, fuel tank and 1 emergency diesel generator; the proposal also includes a battery energy storage system compound of 3,300 m ² containing 15 battery containers and 15 inverters that will be linked to the Power Plant; the development will be accessed from a new vehicular entrance from Peamount Road that will provide access to the Power Plant at the rear of the site; all ancillary site development works, including attenuation pond and dry swales to connect to existing infrastructural services and network as well as fencing, signage, services road entrance gate and 8 car parking spaces; the development will be enclosed with landscaping to all frontages; an EPA-Industrial Emissions Directive (IED) licence will be applied for to facilitate the operation of the Proposed Development for a period of 10 years on a site of 8.2 hectares on lands that contain the 2 residential properties of 'Little Acre' and 'Bulmer'.	

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Grant Date	Description of Development	Distance from Proposed Development (m)
PR26	SD21A/0217	Profile Park, Nangor Road, Clondalkin, Dublin 22	Waste	Digital Netherlands VIII B. V.	No	GRANT PERMISSION	02/08/2022	10 year permission for development consisting of removal of an existing unused waste water treatment facility on site and the erection of two data centre buildings, gas powered energy generation compound, and all other associated ancillary buildings and works; the two data centre buildings, DUB 15 and DUB 16, will comprise a total floor area of c. 33,577 m ² over two storeys; the first 2 storey data centre building (DUB15), located to the southwest of the site, will comprise 16,865 m ² data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space; a second 2 storey data centre building (DUB16), located to the southeast of the site, will comprise 16,712 m ² data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space; both data centre buildings will reach a height of 20 m; emergency generators and associated emission flues and plant are proposed in compounds adjacent to each data centre building; gas powered energy generation is proposed to the north east corner of the site to provide electricity for the Proposed Development; the application proposes to re-route and widen an existing watercourse constructed following an earlier planning permission; it is proposed to reroute this watercourse along the eastern and southern boundary of the site; landscaping is proposed to the south of the site to screen the buildings; fencing and	2832.50

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PR27	SHD3ABP-300555-18-EP	Fortunestown Lane, Garters Lane and Bianconi Avenue, Saggart, Co. Dublin	Residential	Greenacre Residential	No	GRANT EXTENSION OF DURATION OF PERMISSION	10/11/2022		<p>security gates are proposed around the site; new access roads within the site are proposed along with 71 car parking spaces and 26 cycle spaces, bin stores, site lighting, and all associated works including underground foul and stormwater drainage attenuation and utility cables and all other ancillary works; a Natura Impact Statement will be submitted to the planning authority with the application.</p> <p>A residential development comprising: 526 residential units and all associated site and development works as follows: - 274 3-bed 2 storey terraced units, 185 4-bed 2 and 3 storey terraced and end of terrace units, 67 2-bed apartment/duplex units (37 2-storey, 2 bed terraced duplexes, 18 1-storey 2 bed terraced apartments and 12 1 storey 2 bed end of terrace apartments). The development also provides for a district park (4.58 ha) and a neighbourhood park (0.71 ha) in accordance with the Fortunestown Local Area Plan 2012. Permission is also sought for 789 car parking spaces, bin storage areas, ESB substations and all associated site development and infrastructural works. Vehicular access to serve the Proposed Development will be provided via two new access points off Garter Lane and via a new signalised junction at the southeastern corner of the site to replace the existing roundabout off Fortunestown Lane. Provision is made for a future access to Bianconi Avenue. In addition, an interim local square is proposed within the subject site providing a direct pedestrian link from the Proposed Development to</p>	2858.33

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									the Saggart Luas stop. Two direct pedestrian links are proposed between the subject site and the adjoining school sites permitted under Reg Ref No SD16A/0255 providing a direct link between the school and the proposed district park and a direct link from the west of the school site to the proposed residential development. Lands identified for future development are located along the southern boundary of the current application site adjacent to Fortunestown Lane/Saggart Luas Stop. These areas will be subject of a future planning application (Phase 2) and will include the final design and layout of the local square.	
PR28	SD21A/0162	Brownsbarn, Citywest Campus, Dublin 24.	Industrial	Exeter IrelandNo IV B Limited		GRANT PERMISSION	28/03/2022	12/05/2022	Construction of 2 warehouses with ancillary office and staff facilities and associated development; Unit 1 will have a maximum height of 16.35 m with a gross floor area of 8,156 m ² including a warehouse area (7,397 m ²), ancillary office areas (362 m ²) and staff facilities (397 m ²); Unit 2 will have a maximum height of 15.35 m with a gross floor area of 5,990 m ² including a warehouse area (5,031 m ²), ancillary office areas (536 m ²) and staff facilities (423 m ²); vehicular access/egress routes to the subject site via the existing roundabout and access road; alteration to the existing access arrangements to the subject lands to facilitate safe traffic flow to/from the proposed facilities; pedestrian access; 109 car parking spaces; bicycle parking; HGV Parking; HGV yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting;	2918.09

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PR29	SHD3ABP-305563-19	Fortunestown Lane, Saggart, I Co Dublin	Residential	Greenacre Residential DAC	No	GRANT PERMISSION	03/02/2020		boundary treatments; ESB substation; sprinkler tanks; pump houses; and all associated site development works above and below ground on lands bounded to the south by the N7 Naas Road, to the north and west by the National Distribution Centre and to the east by Brownsbarn Drive and the Royal Garter Stables, a Protected Structure (RPS Ref. 261). 488 apartment units comprising 118 1-bed units, 327 2-bed units and 43 3-bed units arranged in 5 blocks (Blocks A to E) and all associated public open spaces comprising landscaped courtyards and communal amenity spaces and private amenity spaces comprising terraces/balconies. The proposed Blocks A and B and Blocks C, D and E are arranged over separate single levels basements and comprise 5 storey blocks with a 9 storey element in Block B. Non-residential floorspace is proposed in the form of a creche of 431 m ² gross floor area, community space of 186 m ² and 472 m ² of retail/commercial floorspace divided across 3 units at ground floor level within Block B and 708 m ² of retail/commercial floorspace divided across 3 units and 1 café/bar/restaurant of 188 m ² within Block C all fronting onto a proposed landscaped local square located to the north of Saggart Luas stop. Vehicular access to serve the Proposed Development will be provided from a signalised junction at the south-eastern corner of the site replacing the existing roundabout off Fortunestown Lane and west of Cuil Duin and an east/west	2969.48

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									distributor road all as permitted under the neighbouring development (ABP Ref. 300555-18). Permission is also sought for 418 car parking spaces including 405 basement level spaces and 13 surface level spaces and a total of 706 cycle parking spaces including 620 basement level spaces and 86 surface level spaces, bin storage areas, ESB substations, public lighting, boundary treatments, surface water drainage infrastructure including modifications to the previously permitted flood conveyancing channel (ABP Ref: 300555-18) and all associated site development and infrastructure works.	
PR30	SD20A/0124	Profile Park, Ballybane, Clondalkin, Dublin 22	Industrial	Moffash Ltd.	No	GRANT PERMISSION	10/11/2020	17/12/2020	(1) Demolition of existing single storey dwelling (c.108.5 m ²); (2) construction of a Distribution Warehouse Building comprising warehousing and ancillary areas at ground floor and support offices, staff areas and plant across two floors; (3) the development will be accessed from the existing Profile Park estate road; (4) provision of car parking, cycle parking, security gatehouse, landscaping and boundary treatments (including security fencing and gates); (5) all associated site development and services works (including diversion/culverting/reprofiling of existing stream on site); (6) total gross floor area of the development c.17,006 m ² .	2989.26
3-4 km from Proposed Development										
PR31	SD22A/0051	Saggart, Slade, Waste Dublin 24,	Waste	Coffey Construction Ltd.	No	GRANT PERMISSION	01/06/2022	13/07/2022	Land recontouring/infilling works on c 16,000 m ² of a folio size of c 2.4 ha (allowing buffers); the volume of material to be placed on the site is c 35,000 m ² with an average fill level of c 3.5 m above existing - the material is clean,	3136.11

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									inert soil and stone from the Saggart Water Reservoir construction site located directly adjacent to the north of the proposed infill site; a small section of hedgerow (6 m wide) will be required to be removed between Saggart Water Reservoir construction site and the proposed infill site to allow access for lorries and infill equipment onto the proposed infill site.	
PR32	SD16A/0302/EP	Waterside Business & Technology Park, Citywest Business Campus, Naas Road, Dublin 24	Commercial	DI Waterside Co-Ownership	No	GRANT EXTENSION OF DURATION OF PERMISSION	22/06/2021		Construction of three 3 storey office buildings, with a total floor area of approximately 16,732 m ² . The Proposed Development also provides for plant rooms at roof level, all associated site development works, landscaping, café (57 m ²), bicycle parking, car parking at surface level, basement level & a two level podium car park in the north-east corner of the site incorporating shower & changing facilities (152 m ²), ESB substations & service plant, and bin storage, all on a site area of 3.74ha. The effect of the Proposed Development will be a modification to part of an extant permission under Reg.Ref. SD06A/0737 & SD06A/0737/EP. The Proposed Development also provides for 2 vehicular access points off Kingswood Road (Old Naas Road) and 2 vehicular access points of Kingswood Avenue.	3453.11
PR33	SD20A/0147	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Medical	Takeda Ireland Ltd.	No	GRANT PERMISSION	08/10/2020	16/11/2020	Construction of P3 Phase II expansion of the existing P3 biopharma production facility which includes the construction of a approximately 2,155 m ² , two storey biopharma production facility to a maximum height of approximately 14.9 m to be located to the south of the existing P3 building; single storey administration extension of	3527.39

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									approximately 210 m ² to a maximum height of 4 m to the north of the existing P3 building and internal modifications to the existing P3 building in addition to all associated site works including delivery area; courier pick up/drop off area with 5 parking spaces (including 1 accessible parking space and 1 E-car space); extension to existing external utilities yard (approximately 485 m ²) for 3 heat pumps and other ancillary equipment; new internal site circulation road and realignment of existing circulation road; 48 additional car parking spaces (including 3 accessible parking spaces and 5 E-car spaces); 24 covered bicycle stands, hard and soft landscaping and external lighting; there will be temporary site entrance and associated temporary access road located to the south east of the site during the construction phase all on 3.68 Hectare application site located within the Takeda Ireland facility at Grange Castle Business Park; an EIAR is submitted with the application and relates to development comprising of an activity which requires and Industrial Emissions Licence in accordance with the First Schedule of the EPA Act 1992 as amended.	
PR34	SD22A/0150	Lands at Kingswood Truck Wash, Old Naas Road, Kingswood Cross, Dublin 22	Energy	Bradawl Limited	No	GRANT PERMISSION & GRANT RETENTION	18/11/2022	11/01/2023	Relocation of 3 fuel pumps and the reconfiguration of permitted fuel islands from 1 long fuel island and 1 small fuel island to now provide for 3 small fuel islands, demolition/removal of single storey building along southern boundary and 1 new truck wash to south-western boundary of site; Planning permission is sought to remove 1 existing truck wash along the western boundary,	3616.02

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									demolition/removal of existing storage building to the western boundary and alterations to internal road layout to include directional arrows.	
PR35	SD22A/0303	Grange Castle Business Park, Grange Castle, Dublin 22	Resource Managem ent	Takeda Ireland Limited	No	GRANT PERMISSION	07/09/2022	17/10/2022	Construction of a Volatile Organic Compound (VOC) Abatement system comprising of a thermal oxidiser (TO), associated plant equipment and scrubbers positioned on a bunded concrete plinth with a maximum single stack height of 12 m along with two access platforms at 2.5 high and 5.0 m high used for maintenance only; The system is set within a 489 m ² (including a bunded area of 213 m ²) concrete compound enclosed by a 2.4 m high paladin weldmesh black fence to match the existing utilities perimeter fence; 135 m ² single storey utilities workshop will sit adjacent to the Volatile Organic Compound (VOC) abatement system compound with associated hardstanding area and soakpit; 55 m (L) x 3.2 m (W) x 5.6 m (H) pipe rack extension with the addition of a second tier extension 118.6 m (L) X 3.2m (W) 1.2 m (H) to the existing pipe rack is required to service the new VOC abatement system compound; a contractor's compound 3,420 m ² comprising single stacked portacabins, workshops, parking for 30 contractors, materials delivery and set down area; the compound will be enclosed by a 2.4 m tall paladin weldmesh black fence; modifications to the existing internal access road will include the addition of a new access road and footpath around the VOC abatement system compound and utilities workshop; a permanent	3706.02

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									pedestrian crossing including associated signage at the existing access road giving access between the contractor's compound and the VOC abatement system compound; modifications to the existing site lighting, signage, surface water, foul and process wastewater drainage, hard and soft landscaping including a 3 m high planted berm to the north of the contractor's compound; An EIAR will be submitted with the application; this application relates to development which comprises an activity requiring an Industrial Emissions Licence in accordance with the First Schedule of the EPA Act 1992 as amended.	
PR36	SHD3ABP-310570-21	Site at Cooldown Commons & Fortunestown, Citywest, Dublin 24	Residential	Cairn Homes Properties Ltd.	No	GRANT PERMISSION	06/10/2021		Construction of a residential Development comprising 421 units, offices, retail units x3 and residential amenity areas x2, within 9 blocks ranging in height from 1-13 storeys. The proposal will include 289 car parking spaces along with 650 cycle parking spaces. The development will provide public and communal open spaces throughout including a public plaza adjoining Fortunestown Luas stop. Provision of vehicular, pedestrian, and cyclist accesses to the site, including pedestrian bridge to the public park (under construction) to the east. The application includes for all landscaping, ESB substations, plant areas, bin storage, surface water attenuation and all other site development works, and site services required to facilitate the Proposed Development. The Proposed Development seeks to amend SHD permission ABP-302398 -18 (under	3722.41

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									construction to the west), replacing 32 permitted duplex apartments along with associated amendments to internal roads and open spaces. The current proposal also replaces permission SD16A/0078 previously granted on this site.	
PR37	SD22A/0290	Kingswood Road & Kingswood Avenue, Citywest Business Campus, Dublin 24. The lands are generally, bounded to the south-west by Kingsw, Citywest Business Campus, Dublin 24	Industrial	Rockface Development	No	GRANT PERMISSION	12/12/2022	03/02/2023	The development will comprise the provision of a warehouse with ancillary office and staff facilities and associated development. The warehouse will have a maximum height of 18 m with a gross floor area of 11,691 m ² including a warehouse area (10,604 m ²), ancillary staff facilities (499 m ²) and ancillary office area (588 m ²); The development will also include: a vehicular and pedestrian entrance to the site from Kingswood Road to the north-east; a separate HGV entrance from Kingswood Avenue to the south-east; 64 ancillary car parking spaces; bicycle parking; HGV parking and yard; level access goods doors; dock levellers; access gates; hard and soft landscaping; canopy; lighting; boundary treatments; ESB substation; plant; and all associated site development works above and below ground; 2.56 Ha site at Kingswood Road and Kingswood Avenue, Citywest Business Campus, Dublin 24; The lands are generally bounded to the south-east by Kingswood Avenue, to the south-west by an ancillary car park associated with Citywest Business Campus, to the north-west by Kingswood Business Centre and Ardsolus Residential Development and to the north-east by Kingswood Road.	3753.75

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PR38	TA06S.313145	In the townland of Boherboy, Saggart Road, Co. Dublin.	Residential	Kelland Homes Limited and Durkan Estates Ireland Limited	No		18/07/2022		655 no. residential units (257 no. houses, 398 no. apartments), childcare facility and associated site works.	3754.80
PR39	SHD3ABP-305556-19	Citywest Shopping Centre, Fortunestown, Dublin 24	Residential	OBSF(I) Limited	No	GRANT PERMISSION	21/01/2020		Mixed use residential Development (total GFA 26,929 m ²) comprising 6 blocks with balconies/terraces to be provided on all elevations at all levels for each block, to provide 290 apartment units and associated residential amenity facilities, a childcare facility, 4 retail units and 2 café/restaurant units. A total of 153 car parking spaces (including 2 car club spaces) are proposed at surface level and existing basement level of the Citywest Shopping Centre to serve the development to include the reallocation of 37 existing surface level spaces; 67 new surface level spaces and the reallocation of 49 spaces from commercial to residential use at existing basement level of the Citywest Shopping Centre.	3876.57
PR40	SD15A/0127/EP	Citywest, Tallaght, Dublin 24	Residential	Talarive Ltd.	No	GRANT EXTENSION OF DURATION OF PERMISSION	01/07/2020		A residential/mixed use development on a site area of 12.45ha consisting of 400 dwellings comprised of 340 no. 2 storey detached, semi-detached and terraced houses, i.e. 3 no. 2 bed houses, 323 no. 3 bed houses & 14 no. 4 bed houses along with 60 no. 1 and 2 bed apartments in 4 no. 3 & 4/5 storey buildings. The development also provides for a creche (615 m ²), kiosk (56.6 m ²) and retail unit (237 m ²). The Proposed Development includes all associated site development and infrastructural works, car parking, open	3914.69

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									spaces and landscaping, ESB substation and 4 associated kiosks. Access to the development will be via two proposed new vehicular entrances from Citywest Avenue and Fortunestown Lane respectively and will also provide for two new vehicular crossing points over the Luas line. The development also includes for the demolition of an existing dwelling in the southwest corner of the site at the junction of Citywest Road and Fortunestown Lane. The site is bounded to the north by Citywest Avenue, to the west by the N82 Citywest Road, to the south by Fortunestown Lane, to the east by Ard Mor residential estate and is adjacent to the Luas Red Line.	
4-5km from the Proposed Development										
PR41	SHD3ABP-305267-19	Lands at Kilcarbery, Corkagh Demesne, Deansrath, Nangor, Clondalkin, Dublin 22	Residential	Adwood Limited	No	GRANT PERMISSION	05/12/2019		1034 residential units comprising of (578 4135.08 houses: 449 3-bed & 129 4-bed), 456 apartments: 142 1-bed, 224 2-bed, 90 3-bed), 2 childcare facilities (1 temporary, 1 permanent), 1 retail unit, 1 community facility and all associated site works.	
PR42	LRD23A/0001	Lands south of Citywest Avenue and west of Cheeverstown Luas Park and Ride, Brownsbarn, Dublin 24	Residential	Glenveagh Homes Ltd.	No	GRANT PERMISSION	02/03/2023	14/04/2023	The development will consist of: I. 384 residential units with a cumulative gross floor area of 33,190.15 m ² comprising: a) 122. houses, consisting of 28 two-bed units, 83 three-bed units and 11 four-bed units, ranging in height from 2-3 storeys. b) 84 duplex units, consisting of 48 one-bedroom units and 36 three-bedroom units, ranging in height from 2-3 storeys. c) 178 apartments consisting of 43 one bedroom units and 135 two-bedroom units, ranging in height from 5-7 storeys. II. tenant amenity floorspace with a	4238.43

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									gross floor area of 139 m ² . III. 1.49 ha of public open space including a public plaza and 0.15 ha of communal amenity space; IV. the provision of a childcare facility with a gross floor area of 239 m ² and associated play area; V. the provision of 361 car parking spaces, including 10 disabled parking spaces and 16 reserved for visitor parking and 3 reserved for creche staff. VI. the provision of 734 bicycle parking spaces, including 472 residents bicycle parking spaces and 262 visitor cycle spaces. VII. vehicular access is proposed via 3 access points including the existing Kingswood roundabout on Citywest Avenue to the north, The Walk to the west and from the park and ride access road at the eastern end of the site. Dedicated pedestrian/cyclist links are proposed throughout the site. VIII. ESB substation, 3 x ESB kiosks, rooftop solar photovoltaics, landscaping and all ancillary site and development works.	
PR43	SD21A/0150	Cheeverstown, Tallaght, Dublin 24	Industrial	Rohan Project Management Ltd.	No	GRANT PERMISSION	07/10/2021	17/11/2021	Construction of 4 warehouse/industrial units in 3 buildings of c.13,611m ² total gross floor area (including ancillary offices and operational facilities) and up to 15 m in height, with rear service yards; 155 car parking spaces; 72 cycle parking spaces; water services infrastructure and sustainable urban drainage system features, including relocation and resizing of a pump station permitted under SD15A/0391; internal road network accessed via 2 site entrances established in the previous planning applications on the Eastern and Southern sides of the site, via the roundabout at Citywest Avenue and the	4365.69

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									R136 outer ring road; amendments to the proposed tree pits along the green-link permitted under SD15A/0391; public lighting, landscaping, planting and boundary treatments throughout the development; all other necessary site and infrastructural works to facilitate the development.	
PR44	SD22A/0065	Magna Avenue and Magna Drive, Citywest, Dublin 24	Industrial	Rockface Development Limited	No	GRANT PERMISSION	11/07/2022	23/08/2022	Provision of a warehouse unit with ancillary office and staff facilities and associated development. The building will have a maximum height of 15.5 m with a gross floor area of 13,604 m ² including a warehouse area (12,568 m ²), staff facilities (489 m ²) and ancillary office area (538 m ²). The development will also include a vehicular and pedestrian entrance to the site from Magna Avenue, a separate HGV entrance from Magna Drive; 69 ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access good doors; dock levellers; access gates; signage; hard and soft landscaping; lighting boundary treatments; ESB substation; sprinkler tank and pump house; an all associated site development works above and below ground.	4388.32
PR45	SDZ20A/0008	Gollierstown & Adamstown, Lucan, Co. Dublin.	Residential and Commercial	Quintain Development Ireland Limited	No	GRANT PERMISSION	17/09/2020		Construction of Phase One of the Adamstown District Centre; Proposed Development is a mixed use commercial and residential development of c.36,621 m ² (gross floor area) in total (excluding the multi-storey car park) to be constructed in buildings ranging in height from 4-9 storeys. The non-residential element of the development consists of a total of c.9,653 m ² (net sales floor space), as follows: 16 retail	4390.40

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									<p>units comprising c.8,693 m² including 1 supermarket (c.6,880 m² in total) and 2 retail service units (c.290 m²); 5 retail/restaurant/café units comprising a total of c.959 m²; projecting signage and awnings on retail and retail/café/restaurant units. The residential element consists of a total of 278 residential units comprising 16 studio units, 66 one bedroom units, 151 two bedroom units and 45 three bedroom units in a mix of apartments and duplexes; ancillary residents amenity rooms and facilities also provided and all residential units are provided with private open space in the form of balconies or gardens. The proposed block description as follows: Block B (c.14,506 m² gross floor area) 4-7 storeys with setbacks at 4th and 5th floors arranged around an internal courtyard accommodating 6 retail units and 3 retail/restaurant/café units at ground floor level; residents amenity area at first floor and 135 residential units including 15 two bedroom own door duplexes and 120 apartments (1 studio, 46 one bedroom, 50 two bedroom and 23 three bedroom units); private front gardens are provided at ground floor level on the west and south elevations and balconies are provided on all outward facing elevations of the building and on courtyard elevations; car parking is provided at ground floor within the interior of the courtyard along with bicycle parking and ancillary management, waste, plant and service areas; a residents communal open space is provided at first floor level on a</p>	

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									<p>podium above the car parking area; Block E (c.15,235 m² gross floor area) 4-9 storeys with setback at 5th floor arranged around an internal courtyard accommodating 9 retail units and 2 retail/restaurant/café units at ground floor level and 143 residential units including 10 two bedroom own door duplexes and 133 apartments (15 studios, 20 one bedroom, 76 two bedroom and 22 three bedroom units); private front gardens are provided at ground floor level on the west elevation and balconies are provided on all outward facing elevations of the building and on courtyard elevations; car parking is provided at ground floor level within the interior of the courtyard along with bicycle parking and ancillary management , waste, plant and services areas; a residents communal open space is provided at first floor level on a podium above the car parking area;</p> <p>Block F (c.30,647 m² gross floor area including car parking levels) 4 storeys, a supermarket is provided at ground floor level including sales area, retail back of house and service areas as well as internal vehicular goods and delivery area accessed from Station Road and existing onto the proposed back street which runs perpendicular to Station Road and Adamstown Avenue; a multi-storey car park accessed from Station Road by ramp at ground floor level is at first, second and third floor levels; the multi-storey car park includes residential car parking spaces as well as spaces associated with the supermarket unit and other non-residential uses in the</p>	

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									<p>district centre; the third/top floor of the multi-storey car park will not be made available for car parking under this planning application as it is designed to cater for a subsequent phase of development, subject to a future planning application. The development provides a total of c.16,000 m² of public realm including the creation of a new public square, internal streets and landscaping works; alterations to Station Road to include landscaping; reconfiguration of existing on street parking; insertion of raised table at station entrance; taxi set-down spaces and creation of 2 bus bays to the north and south of Station Road; creation of vehicular and pedestrian accesses to the site from Adamstown Avenue, Station Road and Adamstown Park; removal of 2 public/visitor car parking spaces along Adamstown Avenue proximate to Stratton Way to accommodate provision of a bus bay, together with provision of a bus bay on south side of Adamstown Avenue opposite; photovoltaic panels on the roofs of Block B and E; lift overruns and plant at roof levels; 534 car parking spaces to be provided through a mixture of on-street parking; podium parking under Blocks B and E in the proposed multi-storey car park in the upper levels of Block F; the first and second floor levels of the multi-storey car park accommodate 448 car parking spaces in this phase; a total of 702 cycle parking spaces (271 stands/542 spaces within Blocks B and E and 80 stands/160 spaces in the public space) are provided</p>	

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Grant Date	Description of Development	Distance from Proposed Development (m)
								throughout the development to cater for both residential and commercial uses; the 50 bike stands at Adamstown Station are to be maintained. The proposal also includes temporary landscaping and construction of temporary site hoarding and fencing in or around areas for future phases of development immediately adjacent to the development; all ancillary site development and landscape works on lands bounded generally by Adamstown Avenue, Adamstown Boulevard and the Stratton housing development to the north, by Station Road, Adamstown Train Station and the Dublin to Kildare railway line to the south, by Adamstown Park to the east and by currently undeveloped lands to be developed in a subsequent phase of development to the west; the application site incorporates elements of Adamstown Square and Adamstown Station Development areas with the Adamstown Strategic Development Zone and is being made in accordance with the Adamstown Planning Development 2014, as amended, and relates to a Proposed Development within the Adamstown Strategic Development Zone Planning Development Area, as defined by Statutory Instrument No. 272 of 2001.	
PR46	SDZ20A/0017	Townlands of Aderrig, Gollierstown & Finnstown, Adamstown, Lucan, County Dublin	Residential	Quintain Development Ireland Limited	No	GRANT PERMISSION	01/03/2021	235 dwellings (up to a maximum of c.23,858.7 m ² GFA) in a mixture of terraced houses and apartments as follows: 159 houses shall consist of 109 2 storey, 3-bedroom houses; 7 3 storey, 3-bedroom houses and 43 3 storey, 4 bedroom houses; 76 apartment units shall be accommodated in 2 4 storey	4398.01

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
									blocks; to consist of 38 1-bed apartments and 38 2-bed apartments; approximately 0.89ha of public open space in the form of a linear open space located to the west of the residential development proposed; communal open space associated with the apartment buildings of approximately 6.50 m ² ; provision of 322 car parking spaces, including visitor spaces, provided as a mix of on-curtilage and on-street spaces; 2 ESB substations; new north - south avenue located to the west of the proposed linear open space and also part of Airlie Park linking Adamstown Way with the road to the north linking with Shackleton Drive already permitted under Reg. Ref. SDZ18A/0015, including a junction with the proposed east-west avenue immediately south of Airlie Park; new east-west avenue located immediately south of Airlie Park linking Adamstown Boulevard and the north--south avenue also proposed; vehicular access to serve the development is provided from the existing Adamstown Way to the south and the new proposed east-west avenue linking with Adamstown Boulevard from the north; all ancillary and associated site development and landscape works, including works to and new crossings over an existing water feature.	
PR47	SDZ22A/0007	In the townlands of Gollierstown & Aderrig, Adamstown, Lucan, Co. Dublin	Residential	Adamstown Station & Boulevard Ltd.	No	GRANT PERMISSION	03/10/2022		Comprising Phase 1 of the Adamstown Boulevard Development Area and consists of 38,768.21 m ² . of residential development to be constructed in a mix of housing and apartment units, with 423 residential units proposed in total (of which 166 units are subject to the	4475.08

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision	Grant Date	Description of Development	Distance from Proposed Development (m)
									<p>application for outline permission); The housing units for which permission is being sought are on a site of 9.22Ha shall comprise 75 two bedroom units, 113 three bedroom units and 69 four bedroom units, ranging from 2 to 3 storeys in height; Outline permission is sought on a site of 0.54Ha for the apartment block, which shall range from 5 to 9 storeys in height and comprises 11 studio units, 76 one bedroom units and 79 two bedroom units; All residential units are provided with private open space, in the form of private rear gardens or balconies; The Proposed Development includes approximately 0.95 Ha of public open space in the form of a linear open space located on the east of the site stretching between Adamstown Way and Station Road and a pocket park located in the north-west of the site. 488 car parking spaces are proposed in total. 433 of these are allocated to the housing element of the development, and 55 are allocated to the apartments. A total of 52 visitor spaces are provided across the site; A total of 6 disabled spaces and 6 EV spaces are proposed. 40 secure bicycle parking spaces are provided in 4 locations throughout the site. 3 ESB Substations are also provided; Vehicular access to serve the development is provided from the existing Adamstown Avenue and Adamstown Way from the west and north, Station Road to the south and Stream Road, which bisects the Boulevard Development Area. A new bus turning circle, along with bus lay-bys are proposed on the south of the site on</p>	

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
									Station Road; The development includes the provision of ancillary site development works, boundary treatments and landscape works; This development amends aspects at the interface between the Proposed Development and the development at The Crossings currently under construction and permitted under Reg. Ref. SDZ20A/0017 (as amended by SDZ21A/0021) on lands bounded generally to the north by Adamstown Way and the Aderrig Development Area, currently under development subject to planning permissions Reg. Ref. SDZ20A/0017 (as amended by SDZ21A/0021) and Reg. Ref. SDZ21A/0014; to the east by currently undeveloped lands within the Adamstown Station Development Area as well as the railway overpass and its approach road known locally as 'the farmer's bridge'; to the south by the existing railway line and to the west by undeveloped agricultural lands; This application is being made in accordance with the Adamstown Planning Development 2014, as amended, and relates to a Proposed Development within the Adamstown Strategic Development Zone Planning Development Area, as defined by Statutory Instrument No. 272 of 2001.	
PR48	SD21A/0199	Cheeverstown, Tallaght, Dublin 24	Industrial	Rohan Project Management Ltd.	No	GRANT PERMISSION	14/10/2021	24/11/2021	10-year planning permission for Phase 2 development (Unit 4); the construction of 1 industrial/warehousing unit of approximately 14,730 m ² gross floor area (including ancillary offices and operational facilities) and up to approximately 17 m in height, with rear	24543.34

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision Date	Grant Date	Description of Development	Distance from Proposed Development (m)
									service yard; 155 car parking spaces; 72 cycle parking spaces; water services infrastructure and sustainable urban drainage system features; 2 entrances and internal road network, which will connect to Citywest Avenue and the R136 Outer Ring Road via the internal estate road network proposed under Reg. Ref. SD21A/0150; pedestrian/cycle entrance to the south-east at Citywest Avenue; public lighting; landscaping, planting and boundary treatments throughout the development; external sprinkler tank and pumphouse; and all other necessary site and infrastructural works to facilitate the development on a site generally bound to the east by the R136 Outer Ring Road, to the south by Citywest Avenue and to the west and north by undeveloped lands subject to a Phase 1 industrial/warehousing development planning application (Reg. Ref. SD21A/0150) and having been granted planning permission for infrastructural and enabling works under Reg. Refs. SD15A/0391 (extended by SD15A/0391/EP) and SD16A/0400, and with the Phase 1 industrial/warehousing development planning application (Reg. Ref. SD21A/01.50) currently being assessed by South Dublin County Council.	
PR49	SD21A/0012	Buckandhound s, Bedlesshill, Kingswood, Brownsbarn, Cheeverstown & Belgard, Fortunestown,	Resource	Roadstone Limited	No	GRANT PERMISSION	23/03/2021	04/05/2021	Deepening of part (c. 43ha.) of the existing and permitted quarry (An Bord Pleanala refs. 301177 & QD0026) to a quarry floor level of -10 mOD using conventional blasting techniques; use of mobile processing plant; product stockpiles; final restoration Development and all ancillary works within a planning	4649.43

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Project Code	Application Reference	Location	Type	Developer	Spatial overlap with the Proposed Development	Status of Project / Plandate	Decision	Grant Date	Description of Development	Distance from Proposed Development (m)
		Tallaght, Dublin 24							application area of 49.4ha and within the overall landholding of 241.6ha and will be accompanied by an EIAR.	

Apx Table 20.26: List of EPA Licensed Facilities for the CIA Stage 1 Planning Applications

Reg. No	Lead Water Services Authority	Application Date	Authorisation Status	Authorisation Type	Consent Type	Applicant
PR50	P1170-01	Irish water & Inland Fisheries Ireland	17/01/2022	Applied	License	Industrial Emissions Amazon Data Services Ireland Limited
PR51	P1187-01	Irish Water & Inland Fisheries Ireland	16/09/2022	Applied	License	Industrial Emissions Microsoft Ireland Operations Limited
PR52	P1189-01	Irish Water & Inland Fisheries Ireland	25/11/2022	Applied	License	Industrial Emissions Google Ireland Limited
PR53	P1196-01	Irish Water & Inland Fisheries Ireland	22/03/2023	Applied	License	Industrial Emissions Greener Ideas

Apx Table 20.27: List of An Bord Pleanála CIA Stage 1 Planning Applications

Project Code	ABP Case Reference	Name/Address	Planning Authority	Case Type	Applicant Description	Decision	Date Signed	Distance to Proposed Development (m)
PR54	TA06S.305343	Newcastle South and Ballynakelly, Newcastle, Co. Dublin.	South Dublin County Council	Strategic Housing Development - Application	Demolition of 5 no. structures, construction of 406 no. residential units (281 no. houses, 125 no. apartments) creche and associated site works.	Grant Perm. w Conditions	23/12/2019	1330
PR55	TA06S.313814	Newcastle South, Newcastle, Co. Dublin.	South Dublin County Council	Strategic Housing Development - Application	280 no. residential units (128 no. houses, 152 no. apartments), creche	Case is due to be decided by 05/10/2022	05/10/2022	1830

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Project Code	ABP Case Reference	Name/Address	Planning Authority	Case Type	Applicant Description	Decision	Date Signed	Distance to Proposed Development (m)
					and associated site works.			
PR56	TC06S.308982	Mill Road, Saggart, Co. Dublin.	South Dublin County Council	Strategic Housing Development - Consultation	275 no. residential units (58. no houses, 36 no. duplex units, 187 no. apartments), creche and associated site works.	Is reasonable Application basis	06/07/2021	2200
PR57	TC06S.307086	Garters Lane, Saggart, Co. Dublin.	South Dublin County Council	Strategic Housing Development - Consultation	224 no. apartments and associated site works.	Is reasonable Application basis	16/07/2020	2400

Appendix 20.2

Cumulative Impact Assessment Stage 2

APPENDIX 20

Apx Table 20.28: List of CIA Stage 3 Projects

Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
Planning Applications																
PR 1	SD22A/0326	Block 402, Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin	Industrial	ENVA Ireland Ltd	0.00											
PR 2	SD20A/0349	Unit J5-J8, Greenogue Business Park, Grants Road, Rathcoole, Dublin 24	Energy	Heavey Bowden Label Print Limited	254.53				√							
PR 3	SD22A/0310	Unit 518B, Grants Crescent, Jordanstown, Greenogue Business Park, Rathcoole, Dublin 24	Waste	Padraig Thornton Waste Disposal Ltd.	347.36				√							
PR4	SD21A/0111	Block 509, Grants Avenue, Greenogue Business Park, Rathcoole, Co. Dublin	Industrial	Crean & McHugh Holdings Unlimited Company	437.83				√							
PR 5	SD20A/0158	Block 509, Grants Avenue, Greenogue Business Park,	Agricultural	Crean & McHugh Holdings Unlimited Company	360.39				√							

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
		Rathcoole, Co. Dublin														
PR 6	SD19A/0264	Aerodrome Business Park, Site Q2, Jordanstown Road, Collegeland, Rathcoole, Co. Dublin	Industrial	Thornton O'Connor Town Planning	639.57		√									
PR 7	SD21A/0305	Tay Lane, Greenogue, Rathcoole, Co. Dublin	Waste	Electrical Waste Management Ltd.	667.30											
PR 8	SD19A/0171	Greenogue Business Park, Site 601 & 605, Jordanstown Road & Jordanstown Ave, Rathcoole, Co. Dublin	Industrial	Exeter Ireland Property IV Ltd.	703.75		√									
PR 9	SD19A/0407	College Lane, Greenogue, Rathcoole, Co. Dublin	Industrial & Waste	Jordanstown Properties Limited	727.60		√									
PR 10	SD21A/0200	College Lane, Greenogue, Rathcoole, Co. Dublin	Commercial	Jordanstown Properties Limited	727.83		√									
PR 11	SD18A/0265	College Lane, Greenogue,	Industrial	Jordanstown Properties Ltd.	761.41											

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
		Rathcoole, Co. Dublin														
PR 12	SD19A/0263	Aerodrome Business Park, Lands at Site G, Jordanstown Road & Jordanstown Way, College Land, Rathcoole, Co. Dublin	Industrial	IPUT plc	854.58										√	
PR 13	SD20A/0192	Ballynakelly, Newcastle, Co. Dublin	Residential	Cairn Homes Properties Limited	905.98										√	
PR 14	SD20A/0258	College Lane, Greenogue, Rathcoole, Co. Dublin	Industrial	Nocsy 2 Ltd.	1002.29		√						√			
PR 15	SD22A/0301	Newcastle Service Station, Main Street, Ballynakelly, Newcastle, Co Dublin, D22 E7N6	Waste	BIGbin Waste Tech Ltd	1007.96											
PR 16	SD21A/0140	Block R, Jordanstown Road, Aerodrome Buisness Park, Rathcoole, Co. Dublin	Industrial	Exeter Ireland Property IV C Ltd.	1037.00		√						√			

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
PR 17	SD22A/0312	Main Street Upper, Newcastle, Co Dublin	Commercial	Lidl Ireland GmbH	1687.42								√			
PR 18	SD20A/0215	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Industrial	MLEU Dublin 2 Limited	1746.31				√							
PR 19	SD21A/0230	Townlands of Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Industrial	MLEU Dublin 3 Limited	1747.32		√		√							
PR 20	SD20B/0404	The Old School House, Johnstown Road, Rathcoole, Co. Dublin, D24 FN76	Residential	Noel & Claire Walsh	1763.67											
PR 21	SD18A/0363	Main Street, Newcastle, Co. Dublin	Residential	Pavement Homes Ltd.	1789.59								√			

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PR 22	SD22A/0026	Moneenalion Commons Upper, Brownsbarn and Collegeland, Baldonnell Business Park, Dublin 22	Waste	MLEU Dublin 2 Limited	1806.59											
PR 23	SD22A/0323	Main Street, Rathcoole, Co. Dublin	Residential	Ciaran Reilly	1845.57											
PR 24	SHD3ABP-312501-22	Mill Road, Saggart, County Dublin	Residential	Tetrarch Residential Limited	2069.25											
PR 25	SD20A/0058	Within the townland of Milltown, located to the north of Peamount Road (R120), Newcastle, Co. Dublin	Energy	Data & Power Hub Services Ltd.	2564.37											

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PR 26	SD21A/0217	Profile Park, Nangor Road, Clondalkin, Dublin 22	Waste	Digital Netherlands VIII B. V.	2832.50											
PR 27	SHD3ABP-300555-18-EP	Fortunestown Lane, Garters Lane and Bianconi Avenue, Saggart, Co. Dublin	Residential	Greenacre Residential	2858.33											
PR 28	SD21A/0162	Brownsbarn, Citywest Campus, Dublin 24.	Industrial	Exeter Ireland IV B Limited	2918.09											
PR 29	SHD3ABP-305563-19	Fortunestown Lane, Saggart, Co Dublin	Residential	Greenacre Residential DAC	2969.48											

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
PR 30	SD20A/0124	Profile Park, Ballybane, Clondalkin, Dublin 22	Industrial	Moffash Ltd.	2989.26											
PR 31	SD22A/0051	Saggart, Slade, Dublin 24,	Waste	Coffey Construction Ltd.	3136.11											
PR 32	SD16A/0302/EP	Waterside Business & Technology Park, Citywest Business Campus, Naas Road, Dublin 24	Commercial	DI Waterside Co-Ownership	3453.11											
PR 33	SD20A/0147	Grange Castle Business Park, Nangor Road, Clondalkin, Dublin 22	Medical	Takeda Ireland Ltd.	3527.39											

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PR 34	SD22A/0150	Lands at Kingswood Truck Wash, Old Naas Road, Kingswood Cross, Dublin 22	Energy	Bradawl Limited	3616.02												
PR 35	SD22A/0303	Grange Castle Business Park, Grange Castle, Dublin 22	Resource Management	Takeda Ireland Limited	3706.02												
PR 36	SHD3ABP-310570-21	Site at Cooldown Commons & Fortunestown, Citywest, Dublin 24	Residential	Cairn Homes Properties Ltd.	3722.41												√
PR 37	SD22A/0290	Kingswood Road & Kingswood Avenue, Citywest Business Campus, Dublin 24. The lands are generally, bounded to the south-west by Kingsw, Citywest	Industrial	Rockface Development	3753.75												

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		Business Campus, Dublin 24														
PR 38	TA06S.313145	In the townland of Boherboy, Saggart Road, Co. Dublin.	Residential	Kelland Homes Limited and Durkan Estates Ireland Limited	3754.80											√
PR 39	SHD3ABP-305556-19	Citywest Shopping Centre, Fortunestown, Dublin 24	Residential	OBSF(I) Limited	3876.57											
PR 40	SD15A/0127/EP	Citywest, Tallaght, Dublin 24	Residential	Talarive Ltd.	3914.69											

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PR 41	SHD3ABP-305267-19	Lands at Kilcarbery, Corkagh Demesne, Deansrath, Nangor, Clondalkin, Dublin 22	Residential	Adwood Limited	4135.08											
PR 42	LRD23A/0001	Lands south of Citywest Avenue and west of Cheeverstown Luas Park and Ride,	Residential	Glenveagh Homes Ltd.	4238.43											
PR 43	SD21A/0150	Cheeverstown, Tallaght, Dublin 24	Industrial	Rohan Project Management Ltd.	4365.69											
PR 44	SD22A/0065	Magna Avenue and Magna Drive, Citywest, Dublin 24	Industrial	Rockface Development Limited	4388.32											

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PR 45	SDZ20A/0008	Gollierstown & Adamstown, Lucan, Co. Dublin.	Residential and Commercial	Quintain Developments Ireland Limited	4390.40												
PR 46	SDZ20A/0017	Townlands of Aderrig, Gollierstown & Finnstown, Adamstown, Lucan, County Dublin	Residential	Quintain Developments Ireland Limited	4398.01												
PR 47	SDZ22A/0007	In the townlands of Gollierstown & Aderrig, Adamstown, Lucan, Co. Dublin	Residential	Adamstown Station & Boulevard Ltd.	4475.08												
PR 48	SD21A/0199	Cheeverstown, Tallaght, Dublin 24	Industrial	Rohan Project Management Ltd.	4543.34												

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
PR 49	SD21A/0012	Buckandhounds, Bedleshill, Kingswood, Brownsbarn, Cheeverstown & Belgard, Fortunestown, Tallaght, Dublin 24	Resource	Roadstone Limited	4649.43											
EPA Licensed Facilities																
PR 50	P1170-01	Grange Castle South Business Park, Baldonnel Road, Dublin 22, Dublin.	Energy	Amazon Data Services Ireland Limited	N/A											
PR 51	P1187-01	Microsoft Dublin Data Center Campus, Unit 74-76 Grange Castle Business Park, Nangor Road, Clondalkin, Dublin.	Energy	Microsoft Ireland Operations Limited	N/A											
PR 52	P1189-01	Grange Castle Business Park South, Baldonnel Rd, Dublin.	Energy	Google Ireland Limited	N/A											
PR 53	P1196-01	Profile Park, Baldonnell,	Energy	Greener Ideas	N/A											

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Project Code	Application Reference	Location	Type	Developer	Distance from Proposed Development (m)	Traffic & Transport	Population	Noise & Vibrations	Air Quality & Climate	Human Health	Landscape & Visual	Cultural Heritage	Biodiversity	Water	Land Soil, Geology & Hydrogeology	Material Assets
		Dublin 22, Dublin.														
An Bord Pleanála Plans																
PR 54	TA06S.305343	Newcastle South and Ballynakelly, Newcastle, Co. Dublin.	Demolition, Residential & Community	Cairn Homes Properties Limited	1330											
PR 55	TA06S.313814	Newcastle South, Newcastle, Co. Dublin.	Residential & Community	Cairn Homes Properties Limited	1830											
PR 56	TC06S.308982	Mill Road, Saggart, Co. Dublin.	Strategic Housing Development - Consultation	South Dublin County Council	2200											√
PR 57	TC06S.307086	Garters Lane, Saggart, Co. Dublin.	Strategic Housing Development - Consultation	South Dublin County Council	2400											√