

13.4.2 OPERATIONAL PHASE

13.4.2.1 Operational Traffic Impact

The Proposed Development will generate a number of trips by vehicles. These trips may have an impact on the surrounding road network and could contribute to increased congestion. The operational trips generated here are for all three development proposals.

Traffic count data was obtained for the purposes of the planning application. The data surveyed is expected to reflect the peak traffic conditions on the local road network. An estimation of the traffic generation and distribution of the Proposed Development has been set out below. This will be compared to the background traffic counts in order to ascertain the impact the Proposed Development will have on the local road network.

13.4.2.2 Trip Generation – Operational Traffic

Below is the information for the operational phase provided by the developer which was used to estimate the operational traffic to/from the development.

- o **Average and maximum number of staff:** 1-2 people increasing to 50 during outage (only every few years).
- o **Average and maximum number of daily HGV deliveries:** average of 1 per week.

Again, based on the provision of public transport in the area and the access routes to the closest bus stops, it has been assumed that staff trips to/from the site will be made by car.

To carry out a conservative appraisal of the proposed roundabout and the surrounding road network during the operational stage, for the purpose of this assessment, it has been assumed that the proposed development will generate the following trips during the busiest operational day (during an outage with an HGV delivery):

- a) attract 25 inbound car trips in the AM peak hour and generate 25 outbound car trips in the PM peak hour, conservatively assuming that every 2 staff will share a car to travel to/from the site and these will occur during the morning and evening peak hours.
- b) attract/generate 1 inbound and 1 outbound HGV trip in the AM peak hour. No HGV delivery trip was assumed in the PM peak hour for the operational phase.

The same unit conversion exercise carried out for the HGV construction traffic has been undertaken for the HGV operational traffic. The HGV trips as summarised above were expanded by a 2.3 factor. The operational traffic in the figure below includes cars and HGVs and accounts for this expansion

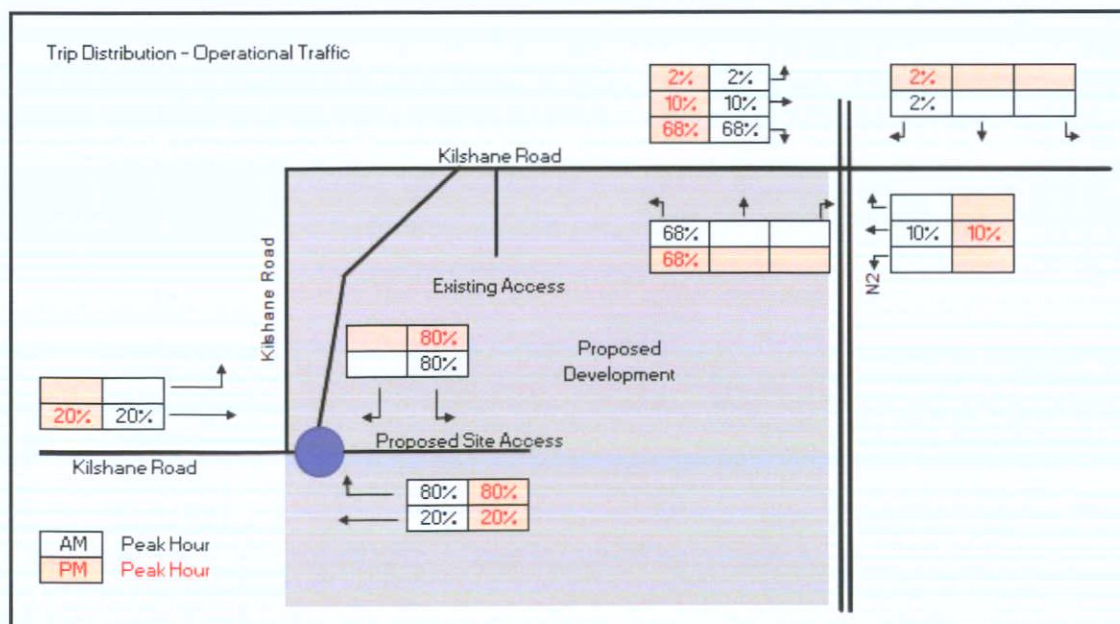


Figure 13.9 Operational Traffic – Trip Distribution

13.4.2.3 Trip assignment – Operational Traffic

During the operational phase, the proposed roundabout and the realignment of the Kilshane Road will be in place. The access road to the proposed development will form the eastern approach of the roundabout whilst the Kilshane Road will form the northern and western approaches.

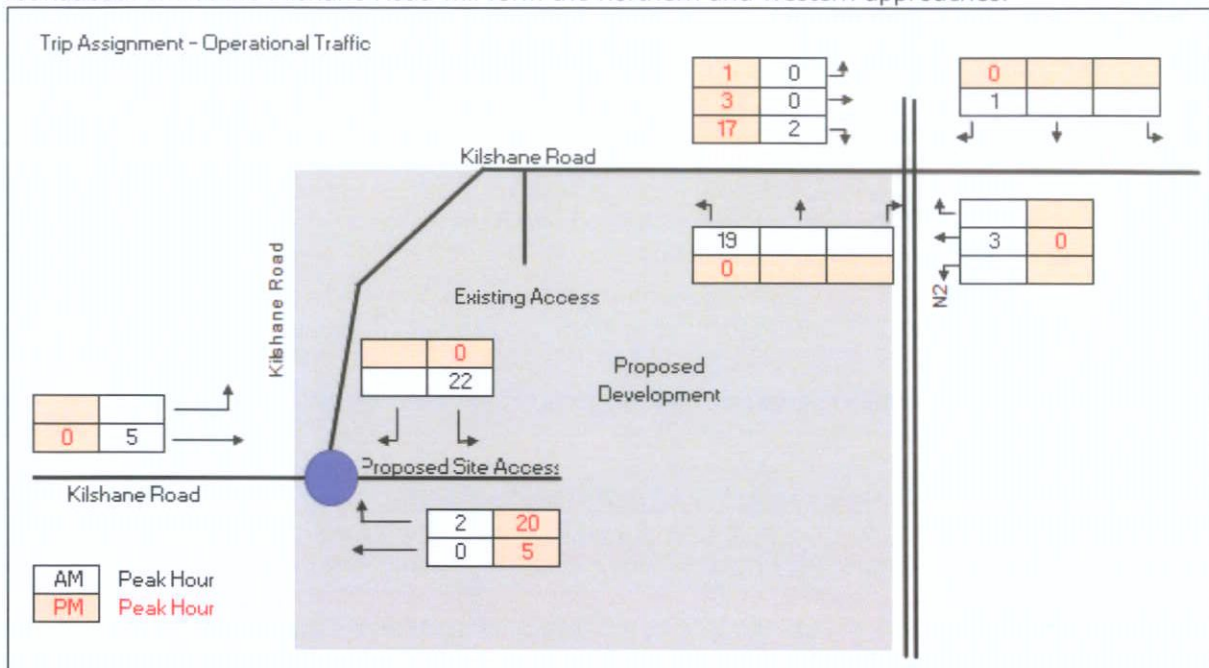


Figure 13.10 Operational Traffic – Trip Assignment

It is estimated that the development proposals will be operational by 2025. Therefore, in accordance with the Traffic and Transport Assessment Guidelines (TII / NRA) published in May 2014, the +15-year scenario for junction assessment is 2040.

The background traffic growth rates used to factor up the 2022 flows are in accordance with the 'Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates' within the TII Publications – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (May 2019).

This is:

- **1.210** (Central Growth) growth factor from 2022 to 2040.

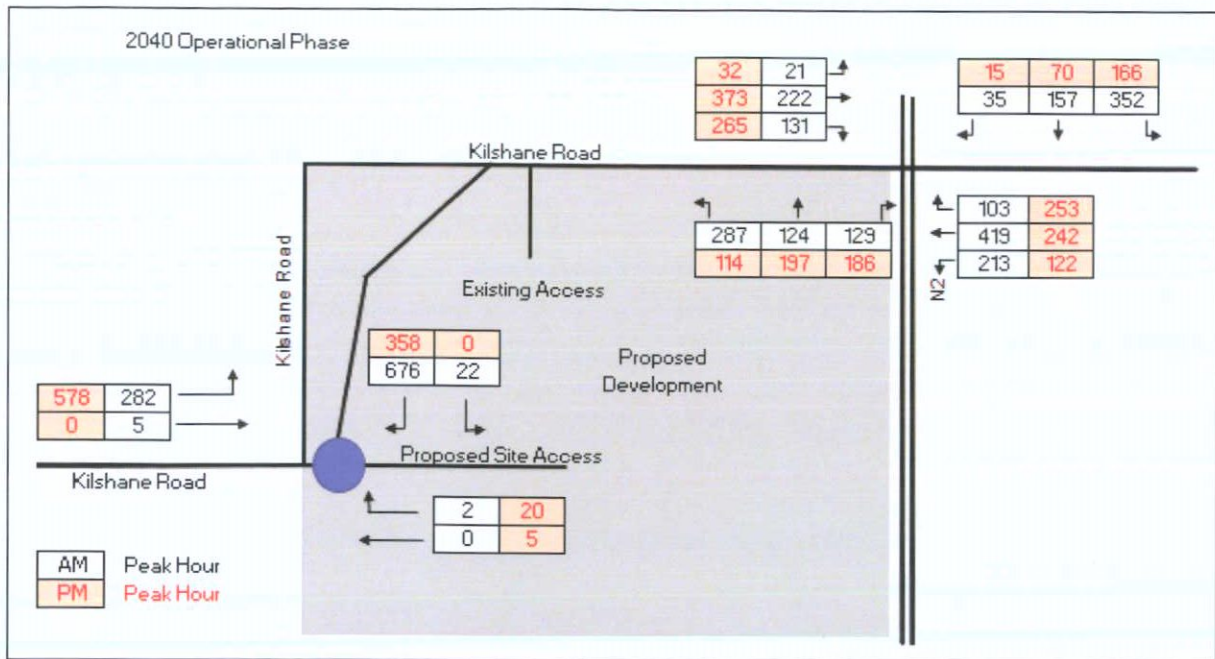


Figure 13.11 Traffic Forecast 2040 (Operational Phase)

13.4.2.4 Outline – Operational Traffic

In order to have a more robust assessment of the local road network and junctions. Additional junction analysis was completed for both junctions with the inclusion of the Outline Development. The Outline is expected to have at least 500+ employees with a car being the primary method of transport to the site. A conservative 450 trips inbound during the AM peak hour and 450 trips outbound in the PM peak hour is estimated by the Outline. This is based on the number of car parking spaces provided.

The outline will use the same Trip Distribution as the proposed site as shown in above. The figure below shows the trip assignment for the overall Outline and 2040 operational forecast with the Outline included.

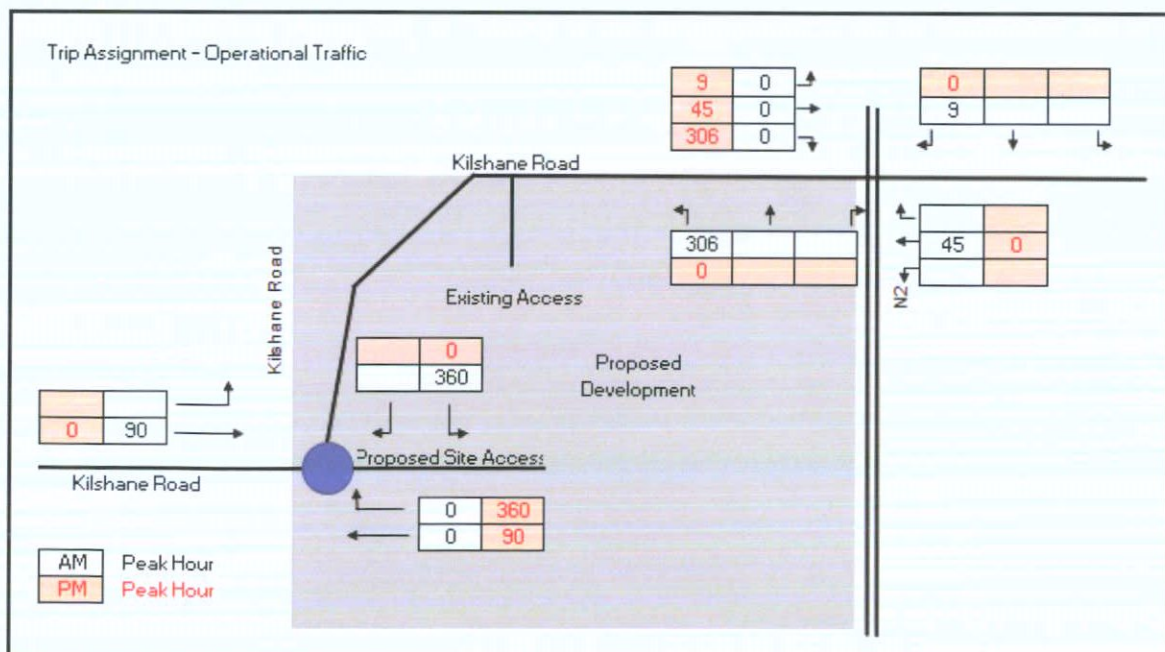


Figure 13.12 Trip Assignment – Outline Site

13.4.2.5 Do-Nothing Scenario

Should the Proposed Developments not take place, the access roads and infrastructure will remain in their current state and there will be no change. Background traffic would be expected to grow over time.

13.4.3 JUNCTION ASSESSMENT

There are various modelling software packages available to assess every type of junction. Waterman Moylan uses ARCADY, TRANSYT and PICADY to analyse roundabouts, signalised and priority junctions, respectively.

ARCADY is a software for modelling roundabouts. This programme utilises roundabouts geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the roundabout.

TRANSYT (Traffic Network Study Tool) software is a widely accepted software for modelling signalised controlled junctions. This programme utilises the phases and traffic flows input by the user and optimises phase timings over a cycle time. The outputs of a TRANSYT assessment include a Degree of Saturation percentage (DOS%) figure and queue length for each link on the road network.

PICADY is software for modelling priority-controlled junctions. This programme utilises junction's geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the junction.

Typically, a junction is said to be working satisfactory when the DOS/RFC of each link does not exceed 85%/0.85. Acceptable DOS/RFC values are considered to be in the range of 85%/0.85 to 100%/1.0 with higher values indicating restrained movements.

The performance of the junctions has been analysed for the critical AM and PM peak hours (08:00 to 09:00 and 17:00 to 18:00) for the following junctions:

- Junction 1 – Existing Site Entrance (Priority T-Junction)
- Junction 2 – Proposed Entrance (Priority Roundabout)
- Junction 3 – Existing Kilshane Cross Junction (Signalised Crossroads)

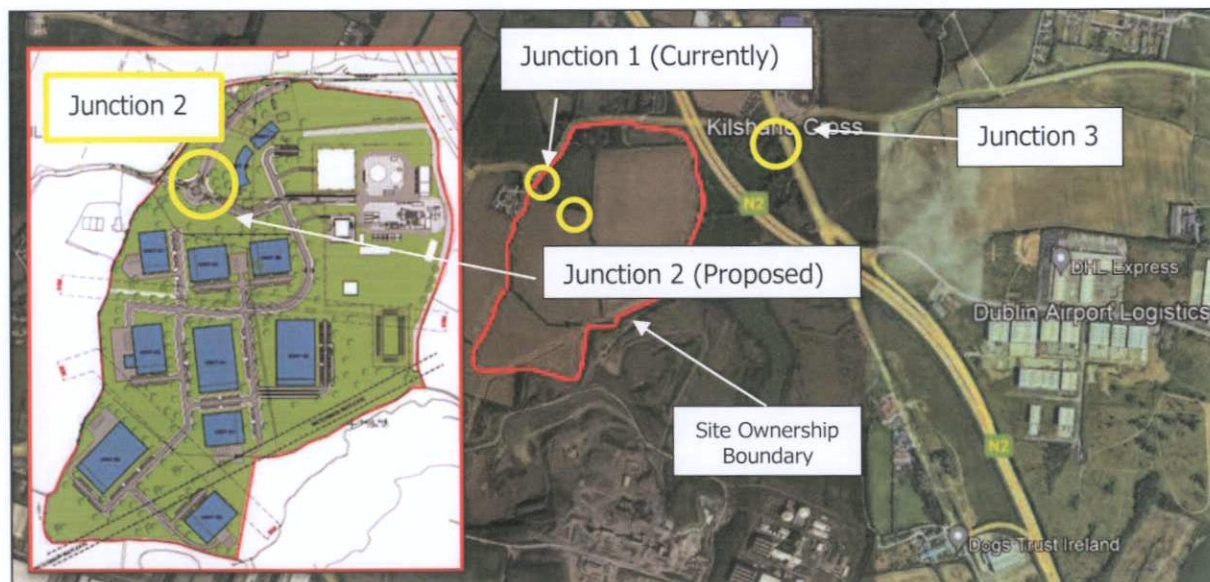


Figure 13.13 Location of Junctions Assessed

13.4.3.1 Construction Impact – Assessment Scenarios

The following scenarios were analysed as part of the junction impact assessment:

Junction 1 (Existing Site Entrance):

- 2024 (Construction Stage): 2022 flows factored up + proposed development's construction traffic + committed development (Reg. Ref. FW20A/0126).

Junction 3 (Kilshane Cross Junction):

- 2024 (Construction Stage): 2022 flows factored up + proposed development's construction traffic.

13.4.3.2 Construction Impact – Junction Assessment Results

Junction 1 (Existing Site Entrance):

Junction 1 has been assessed using the programme PICADY. The analysis results are summarised in the table below. Full PICADY output report is provided in Appendix 13.2. The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Kilshane Road (N).
- Arm B: Existing Site Access Road (S).
- Arm C: Kilshane Road (W).

Table 13.4 Junction 1 – PICADY Analysis Results (Construction Phase)

Stream	AM (08:00 to 09:00)		PM (17:00 to 18:00)	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2024 Construction Phase				
Stream B-C	0.0	0.00	0.1	0.05
Stream B-A	0.0	0.00	0.5	0.29
Stream C-AB	0.2	0.08	0.0	0.01

From the PICADY analysis results as summarised above, Junction 1 would operate well within capacity for the future assessment Scenario 1 (2024 + proposed development's construction traffic) during both peak hours, with the highest RFC at 0.08 and as corresponding queue of 0.2 vehicle recorded in the AM and with the highest RFC at 0.29 and a corresponding queue of 0.5 vehicle recorded in the PM.

Junction 3 (Kilshane Cross Junction):

Kilshane Cross Junction is an existing junction to the west of the proposed development. The junction's current configuration is a signalised crossroads junction. As part of the committed development (Reg. Ref. FW20A/0126) the eastern arm of the junction will be upgraded to include a left-turning lane and cycle lanes either side, this is explained in Section 13.7 below. For the purposes of this traffic assessment, it is assumed that the left-turning upgrade will be completed by 2024. The layout of the junction configuration is laid out as followed:

- Arm A: L3120 Kilshane Road (E)
- Arm B: R135 (S)
- Arm C: L3120 Kilshane Road (W)
- Arm B: R135 (N)

Table 13.5 Junction 3 – TRANSYT Analysis Results (Construction Phase)

Arm	Direction	AM Peak Hour		PM Peak Hour	
		DOS%	Queue (Veh)	DOS%	Queue (Veh)
Construction Stage 2024					
A	L	39	5.54	21	2.94
	S/R	99	25.62	87	17.31
B	S/L	66	10.93	87	11.71
	R	65	4.33	78	6.87
C	S/R/L	106	41.44	96	30.54
D	R	72	10.60	65	5.34
	S	32	3.93	28	1.97
	L	29	1.16	12	0.45

The construction stage the AM Peak hour is over capacity with the highest DOS of 106% and a corresponding queue of 41.44 vehicles. While this is over capacity the construction phase of the proposed development is temporary and there will be acceptable for the construction period.

13.4.3.3 Operational Impact – Assessment Scenarios

The following scenarios were analysed as part of the junction impact assessment:

Junction 2 (Proposed Roundabout Entrance):

- 2040 (Operational Phase): realignment of Kilshane Road and proposed roundabout in place + 2022 flows factored up + proposed development's operational traffic.
- 2040 (Outline): realignment of Kilshane Road and proposed roundabout in place + 2022 flows factored up + proposed development's operational traffic + Outline Developments operational traffic

Junction 3 (Kilshane Cross Junction):

- 2022 (DO NOTHING): Baseline 2022 flows
- 2040 (DO NOTHING): 2022 flows factored up 2040 (Operational Phase): realignment of Kilshane Road and proposed roundabout in place + 2022 flows factored up + proposed development's operational traffic.
- 2040 (Outline): realignment of Kilshane Road and proposed roundabout in place + 2022 flows factored up + proposed development's operational traffic.

13.4.3.4 Operational Impact – Junction Assessment Results

Junction 2 is the new roundabout which is proposed to provide the access to the subject development when fully constructed and operational. The proposed roundabout has been modelled for the operational phase - for the future assessment year of 2040 with and without the Outline. Junction 2 has been modelled based on its proposed layout and the ARCADY analysis results is summarised in Table 13.6 below. Full ARCADY output report is provided in Appendix 13.2. The arms of the proposed roundabout were labelled as follows within the ARCADY model:

- Arm 1: Proposed Site Access Road (E).
- Arm 2: Kilshane Road (W).
- Arm 3: Kilshane Road (N).

Table 13.6 Junction 2 – ARCADY Analysis Results (Operational Phase)

Arm	AM (08:00 to 09:00)		PM (17:00 to 18:00)	
	Queue (PCU)	RFC	Queue (PCU)	RFC
2040 (Operational Phase)				
Arm 1	0.0	0.00	0.0	0.03
Arm 2	0.06	0.26	1.3	0.53
Arm 3	1.4	0.54	0.5	0.28
2040 (Outline)				
Arm 1	0.0	0.00	1.1	0.54
Arm 2	0.8	0.34	2.1	0.64
Arm 3	6.4	0.84	0.5	0.27

From the ARCADY analysis results as summarised above, the proposed Junction 2 would operate within capacity for the future assessment Scenario 2 (2040 + proposed development's operational traffic) during both peak hours, with the highest RFC at 0.84 and as corresponding queue of 6.4 vehicles recorded in the AM and with the highest RFC at 0.64 and a corresponding queue of 2.1 vehicle recorded in the PM.

Junction 3 (Kilshane Cross Junction):

Kilshane Cross Junction is an existing junction to the west of the proposed development. The junction's current configuration is a signalised crossroads junction. As part of the committed development (Reg. Ref. FW20A/0126) the eastern arm of the junction will be upgraded to include a left-turning lane and cycle lanes either side, this is explained in Section 13.7 below. For the purposes of this traffic assessment, it is assumed that the left-turning upgrade will be completed by 2024. The layout of the junction configuration is laid out as followed:

- Arm A: L3120 Kilshane Road (E)
- Arm B: R135 (S)
- Arm C: L3120 Kilshane Road (W)
- Arm B: R135 (N)

Table 13.7 Junction 3 – TRANSYT Analysis Results (Operational Phase)

Arm	Direction	AM Peak Hour		PM Peak Hour	
		DOS%	Queue (Veh)	DOS%	Queue (Veh)
Do Nothing 2022					
A	L	38	5.51	20	2.83
	S/R	91	19.38	80	14.94
B	S/L	92	16.27	86	11.38
	R	30	3.52	51	5.38
C	S/R/L	83	13.10	80	19.34
D	R	81	11.97	71	5.57
	S	37	4.40	30	2.02
	L	8	0.87	6	0.39
Do Nothing 2040					
A	L	38	6.03	24	3.43
	S/R	90	21.31	96	23.67
B	S/L	77	14.06	94	15.58
	R	72	5.37	84	8.47
C	S/R/L	94	18.01	95	28.84
D	R	78	12.38	74	6.46
	S	35	4.55	32	2.29
	L	31	1.24	14	0.52
Operational Stage 2040					
A	L	38	6.03	24	3.43
	S/R	92	22.40	99	27.55
B	S/L	80	15.20	98	17.82
	R	72	5.37	90	9.47

Arm	Direction	AM Peak Hour		PM Peak Hour	
		DOS%	Queue (Veh)	DOS%	Queue (Veh)
C	S/R/L	96	19.11	96	31.29
D	R	79	12.81	75	6.59
	S	35	4.55	32	2.29
	L	32	1.28	14	0.52
2040 Outline					
A	L	47	6.71	24	3.39
	S/R	124	73.38	132	102.21
B	S/L	115	71.87	102	21.00
	R	62	4.90	96	11.34
C	S/R/L	96	19.11	149	196.04
D	R	67	11.32	75	6.59

As can be seen in the Table above, Kilshane Cross Junction will remain under capacity for the Baseline 2022 scenario for the AM and PM Peak hour periods. During the construction stage the AM Peak hour is over capacity with the highest DOS of 92% and a corresponding queue of 16.27 vehicles and the PM Peak hour is over capacity with the highest DOS of 86% and a corresponding queue of 11.38 vehicles. While this is over capacity the construction phase of the proposed development is temporary and will be acceptable for the construction period.

During the 2040 Operational Stage, the AM peak hour has a DOS% of 96% and a corresponding queue of 19.11 and the PM peak hour has a DOS% of 99% and a corresponding queue of 27.55. While both the AM and PM peak hours near over capacity for Kilshane Cross Junction, this has been modelled on the worst-case scenario. The worst-case scenario (a power outage) will only occur every few years. Therefore, the over-capacity of the junction is acceptable given that Kilshane Cross Junction is at high capacity without the inclusion of operational traffic.

The inclusion of the Outline causes Kilshane Cross Junction to go significantly over capacity in the AM and PM peak hour period. An upgrade may be required for Kilshane Cross Junction, this would be designed under the potential future application for the Outline. Not the existing subject application.

13.5 MITIGATION AND MONITORING MEASURES

13.5.1 INTRODUCTION

This section of the report discusses mitigation measures to reduce the impact of the Proposed Developments on the surrounding area during the construction and operational phases.

13.5.2 CONSTRUCTION PHASE

It is proposed that a Construction Environmental Management Plan (PCEMP) will be prepared by the appointed contractor in order to reduce or prevent any potential impacts of the construction phase of the Proposed Developments on the safety and amenity of other users of the public road. A Preliminary PCEMP for the Kilshane Development has been prepared as a guide to the appointed contractor and is included under a separate cover for the planning application. The contractor will prepare the final PCEMP and will consider the following aspects:

- Dust and dirt control measures.
- Noise assessment and control measures
- Routes to be used by vehicles
- Working hours of the site
- Details of construction traffic forecasts
- Time when vehicle movements and deliveries will be made to the site
- Facilities for loading and unloading

- Facilities for parking cars and other vehicles

In addition to the above, a detailed Construction Traffic Management Plan (CTMP) will be prepared by the main contractor. A Preliminary CTMP for the Kilshane Development has been prepared which will guide the Contractor and this is submitted as a stand-alone document. This document will outline proposals in relation to construction traffic and associated construction activities that impact the surrounding roads network. The document will be prepared in coordination and agreed with the local authority.

Care will be taken to ensure temporary car parking is provided within the site for contractor's vehicles. It is likely that construction will have an imperceptible impact on pedestrian and cycle infrastructure.

Through the implementation of the PCEMP and CTMP, it is anticipated that the effect of traffic during the construction phase will have a slight effect on the surrounding road network for short-term period.

To reduce the volume of construction traffic movements during the construction phase, the excavated material will be entirely used for landscaping and regrading. There will be no excavations going off-site. The subject is 13.56 ha in area and with the proposed development comprising of a small portion of this, there is plenty of space for the excavated material to be temporarily held.

The construction compound and temporary facilities will be decommissioned, and any affected areas will be reinstated. Reinstatement will begin as construction work is entering into its final phase and the facility is placed into operation. As craft levels are decreased the facilities which support those craft will be downsized or removed entirely. Rock material used for hard standing at the construction craft parking area will be removed from site. Construction craft facilities such as the craft break trailer, construction safety trailer, and craft badging trailer will be removed from the site as construction activities subside. The areas where these trailers were placed will be graded and improved in accordance with project landscaping plan. The next facilities to be removed will be the construction contractor's staff trailer and construction warehouse. These facilities will be removed as the permanent onsite facilities are brought into service and are available for technical staff and material storage. The areas occupied by the construction staff trailer and warehouse will be graded and landscaped upon their removal. Large areas of the site will receive rock hard standing to provide a stable and mud storage and staging area during construction. The hard standing staging areas will be removed at the end of the construction activities and the areas will be incorporated into the project landscaping plan. The end objective of the project reinstatement plan is to remove temporary facilities and equipment from the project to allow normal operation of the facility.

If both the Kilshane proposal and upgrades to the junction between Kilshane Road and Bay Lane receive approval coordination between both construction contractors and Fingal County Council has been agreed. Detailed project programme will be required by both parties to minimise long term impacts of each project by not delaying either project.

13.5.3 OPERATIONAL PHASE

A key barrier to modal shift towards sustainable modes of travel is often a lack of information about potential alternatives to the car. As such, it is proposed that employees will be made aware of potential alternatives including information on walking, cycle routes and public transport.

Staff will be encouraged to avail of these facilities for travel to and from work. Provision of this information will be made during the commissioning process as permanent staff are introduced to the site and the plant starts to become operational and will be included in the new worker's pack upon the sale of each unit, as this represents the best opportunity to make residents aware and to secure travel behaviour change. Daily operational traffic will be only 1 or 2 staff per day and will have an insignificant impact on the road network.

A Travel Plan has been included in this application under separate cover. This Plan sets out method to reduce the dependence on private car journeys and encourage staff within the development to avail of sustainable forms of transport such as walking, cycling and public transport.

13.6 RESIDUAL IMPACTS

13.6.1 INTRODUCTION

The residual impacts outlined below show the impact of the proposed development with the above mitigation measures in place.

13.6.2 CONSTRUCTION PHASE

Provided the above mitigation measures and management procedures outlined in the Construction Management Plan and the Construction Traffic Management Plan are incorporated during the Construction Phase, the residual impact upon the local receiving environment is predicted to be short-term in the nature and slight in terms of effect.

13.6.2.1 Worst-case' Scenario

The 'worst-case' scenario for the construction phase is for the mitigation measures to fail and cause significant and long term effects to the area. These impacts would include long traffic delays and possible detours along Kilshane Road. The 'worst-case' scenario would also affect the construction timeline and increase the construction programme.

13.6.3 OPERATIONAL PHASE

Provided the above mitigation measures and procedures outlined in the Travel Plan provided under a separate cover are incorporated into the operational phase of the proposed development, the residual impact upon the local receiving environment is predicted have permanent effects but not significant in terms of effect.

13.6.3.1 Worst-case' Scenario

The 'worst-case' scenario for the operational phase is for slight, permanent effects to the local road network. These would include long delays at nearby junctions due to the impact of the proposed development operational traffic should mitigation measures fail.

13.7 CUMULATIVE IMPACT

This section assesses any indirect and cumulative impacts of the proposed development with relevant developments or projects in the vicinity of the site.

Table 13.8 Cumulative Impacts

REG REF CLIENT DEVELOPMENT DESCRIPTION	
	FW22A/0108 IPUT PLC The development amends a permitted warehouse development (as granted under FCC Reg. Ref. FW20A/0126), specifically lands relating to Unit No. 2. The proposed amendments will principally consist of the following modifications to permitted Warehouse Unit No. 2: The change of use of ancillary office space at first floor level (c. 264 sq m) to storage space; the addition of an internal loading platform; revised ground floor layout including the addition of an assembly room, alteration of the office layout and replacement of the marshalling office with truckers toilet (no change to permitted gross floor area at ground floor level); revised Photovoltaic Panels

<p>DECISION CUMULATIVE IMPACT ASSESSMENT</p>	<p>(PV) arrangement (reduced from 392 to 138 No. and reduced area from c. 638 sqm to c. 247 sqm); provision of 3 No. elevational signs (each measuring 5 metres x 2 metres) on the north, south and west elevations; revised parking layout including the reduction of the total number of car parking spaces from 81 No. to 80 No.; modifications to HGV yard layout including the addition of 18 No. van parking spaces in the permitted yard area; addition of a traffic island to the HGV entrance to the west; modifications to boundary treatments including addition of a gate and fencing to the fire tender access to the east; addition of a security barrier to the staff/visitor car parking entrance/exit to the west; extension of permitted cycle path and provision of a bike shelter; addition of a WEEE store; provision of a canopy over a proposed bailer and compactor zone; reorientation of the heat pump enclosure; elevational changes including reduction of precast concrete wall cladding to loading docks and the addition and repositioning of fire escape doors; and all associated development works above and below ground. Retention permission is sought for the modification of the roof design of permitted Unit No. 2 including a minor increase to parapet height from 17.02 metres to 17.07 metres.</p> <p>Granted</p> <p>The inclusion of the left turn lane along Kilshane Road will bring a positive effect to the road network and has been taken into account for the junction modelling.</p> <p>No other cumulative impacts are anticipated with this development</p>
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<p>REG REF CLIENT DEVELOPMENT DESCRIPTION</p>	<p>FW21A/0151</p> <p>Huntstown Power Company Limited</p> <ul style="list-style-type: none"> • Demolition of 2 no. existing residential dwellings and ancillary structures to the east of the site (c.344qm total floor area); • Construction of 2 no. data hall buildings (Buildings A and B) comprising data hall rooms, mechanical and electrical galleries, ancillary offices including meeting rooms, workshop spaces, staff areas including break rooms, toilets, shower/changing facilities, storage areas, lobbies, outdoor staff areas, loading bays and docks, associated plant throughout, photovoltaic panels and screened plant areas at roof levels, circulation areas and stair and lift cores throughout; • External plant and 58 no. emergency generators located within a generator yard to the east and west of Buildings A and B at ground level. The area is enclosed by a c.6.5m high louvred screen wall; • The proposed data halls (Buildings A and B) are arranged over 3 storeys with a gross floor area of C.37,647sqm each; • The overall height of the data hall buildings is c28m to roof parapet level and c32m including roof plant, roof vents and flues. The total height of Buildings A and B does not exceed 112m OD (above sea level); • The proposed development includes the provision of a temporary substation (c.32sqm), water treatment building (c. 369sqm and c.7.7m high), 7 no. water storage tanks (2,800m³ in total and c.6.4m high each), 2 no. sprinkler tanks (c.670m³ each and c.7.9m high each) with 2 no. pump houses each (c.40sqm and c. 6m high each); • The total gross floor area of the data halls and ancillary structures is c.75,775sqm;
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**DECISION
CUMULATIVE IMPACT
ASSESSMENT**

- All associated site development works, services provision, drainage upgrade works, 2 no. attenuation basins, landscaping and berming (c.6m high), boundary treatment works and security fencing up to c.2.4m high, new vehicular entrance from the North Road, secondary access to the south west of the site from the existing private road, all internal access roads, security gates, pedestrian/cyclist routes, lighting, 2 no. bin stores, 2 no. bicycle stores serving 48 no. bicycle spaces, 208 no. parking spaces including 10 no. accessible spaces, 20 no. electric vehicle charging spaces and 8 no. motorcycle spaces;
- Existing electricity overhead lines traversing the site will be undergrounded under concurrent application Ref. FW21A/0144;
- A proposed 220kv substation located to the south west of this site will be subject of a separate Strategic Infrastructure Development application to An Bord Pleanála under section 182A of the Planning and Development Act 2000 (as amended);
- An Environmental Impact Assessment Report (EIR) is submitted with this application.

AI received 11/02/2022

AI deemed significant **

revised public notices 24/2/2022

Granted

The Planning Authority (FCC) granted permission for the application subject to 30 no. condition(s). The conditions relate to working hours, noise control, construction height limits, drainage and waste management. Therefore, there are no cumulative impacts anticipated with this development

**REG REF
CLIENT
DEVELOPMENT
DESCRIPTION**

FW21A/0250

Kilshane Energy Ltd

Planning permission is being sought for a development that will consist of the following;

- 1)The construction of a Gas Turbine Power Generation Station with an output of up to 293 Megawatts. The proposed station will consist of 1 no. Gas Turbine, 1 no. 28m high Exhaust Stack, 1 no. 2 storey Admin Building (c. 680 m²), 1 no. single storey Workshop (c. 661 m²), 1 no. single storey Plant Room Building (c. 608 m²), 1 no. single storey Dew Point Heater Boiler Building (c. 52 m²), 1 no. single storey Electrical Module for Fuel Gas Area Building (c. 45 m²), 1 no. single storey Packaged Electronic Electrical Control Compartment building (PEECC) (c. 150 m²), 1 no. single storey EORoom Building (c. 227 m²), 1 no. single storey Fuel Gas Block Building (152 m²), 1 no. single storey Continuous Emission Monitoring System (CEMS) Building (c. 9 m²), 1 no. single storey Fuel Oil Treatment & Forwarding Building (c.59 m²), an Above Ground Installation (AG()) area consisting of 1 no. single storey Instrument Building (c. 28.5 m²), 1 no. single storey Regulator Building (47 m²), 1 no. single store Boiler Building (c. 28 m²), and 1 no. single storey Analyser Kiosk (6 m²), 2 no. 20 m high diesel storage tanks and recessed bund area, 1 no. 17 m high Raw and Fire Fighting Water Tank, miscellaneous plant and equipment.
- 2)2. The realignment of a a portion (263 m) of the Kilshane Road within the subject site boundary, including the provision of new footpaths and off road cycle ways, together with the construction of a new roundabout linking the proposed realignment of Kilshane Road back to the existing road network to the north west of the

**DECISIONS
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ASSESSMENT**

subject site and to the proposed internal road network to serve the proposed development.

3)The construction of Entrance Gates, 1 no. single storey security office (40 m² GFA) and a private internal road network providing for vehicular, cyclist and pedestrian access to serve the development.

4)Total provision of 20 no. Car Parking Spaces including 2 no. disabled parking spaces and 4 no. Electrical Charging Points.

5)Provision of lighting columns to serve the development and the installation of Closed-Circuit Television System (CCTV) for surveillance and security purposes.

6)Provision of 20 no. Sheltered Bicycle Parking Spaces.

7)Provision of hard and soft landscaping works, tree planting and boundary treatments.

8)Construction of a Wastewater Treatment Plant and Percolation Area together with a Surface Water Attenuation Area to serve the development.

9)All associated site works necessary to facilitate the development.

REFUSE PERMISSION

There are no cumulative impacts anticipated with this development

**REG REF
CLIENT
DEVELOPMENT
DESCRIPTION**

FW21A/0230

Kilshane Energy Ltd.

1.The construction of a Gas Turbine Power Generation Station with an output of up to 293 Megawatts. The proposed station will consist of 1 no. Gas Turbine, 1 no. 28m. high Exhaust Stack, 1 no. 2 storey admin building (c. 680m²), 1 no. single storey workshop (c. 661m²), 1 no. single storey plant room building (c. 608m²), 1 no single storey Dew Point Heater Boiler building (c. 52m²), 1 no. single storey electrical module for fuel gas area building (c. 45m²), 1 no. single storey Packaged Electronic Electrical Control Compartment Building (PEECC) (c. 150m²), 1 no. single storey E-Room building (c. 227m²), 1 no. single storey Fuel Gas Block building (152m²), 1 no. single storey Continuous Emission Monitoring System (CEMS) building (c. 9m²), 1 no. single storey Fuel Oil Treatment & Forwarding Building (c. 59m²), an above ground installation (AGI) area consisting of 1 no. single storey Instrument Building (c. 28.5m²), 1 no. single storey Regulator building (47m²), 1 no. single storey Boiler Building (c. 28m²), and 1 no. single storey Analyser Kiosk (6m²), 2 no. 20m high Diesel Storage Tanks and Recessed Bund Area, 1 no. 17m high Raw and fire Fighting Water Tank, miscellaneous plant and equipment.

2. The realignment of a portion (263m) of the Kilshane Road within the subject site boundary, including the provision of new footpaths and off-road cycle ways, together with the construction of a new roundabout linking the proposed realignment of Kilshane Road back to the existing road network to the north west of the subject site and to the proposed internal road network to serve the proposed development.

3. The construction of entrance gates, 1 no. single storey security office (40m² GFA) and a private internal road network providing for vehicular, cyclist and pedestrian access to serve the development.

4. Total provision of 20 no. car parking spaces including 2 no. disabled parking spaces and 4 no. electrical charging points.

5. Provision of lighting columns to serve the development and the installation of closed-circuit television system (CCTV) for surveillance and security purposes.

6. Provision of 20 no. sheltered bicycle parking spaces.

<p>DECISION CUMULATIVE IMPACT ASSESSMENT</p>	<p>7. Provision of hard and soft landscaping works, tree planting and boundary treatments. 8. Construction of a Wastewater Treatment Plant and Percolation Area together with a Surface Water Attenuation Area to serve the development. 9. All associated site works necessary to facilitate the development. INVALID PLANNING APPLICATION There are no cumulative impacts anticipated with this development</p>
<p>REG REF CLIENT DEVELOPMENT DESCRIPTION</p>	<p>F21A/0144 TLI Group Ltd. The development will consist of the installation of electrical infrastructure between Finglas substation and Huntstown Power Station to facilitate the retirement of existing Electricity Supply Board overhead powerlines and facilitate site clearance for the future development of a data centre and substation (subject to separate planning applications). This will include (i) the installation of approximately three underground cable circuits of 1.2km length (110kV) and one circuit 1.2km length (38kV) and associated underground ducting, joint bays and infrastructure between the existing ESB Finglas substation and an agreed location within Huntstown Power Station (ii) installation of one c.28m double circuit 110 kV cable end tower and one c.17 single circuit 110kV angle mast (iii) removal of 10Nr. existing 110kV timber polesets, 9 Nr. existing 38kV timber polesets, 3 Nr. 38kV lattice steel tower & associated overhead line electrical infrastructure; all associated and ancillary site development, landscaping and construction works, all within the townlands of Johnstown, Huntstown, Coldwinters & Baleskin at Blanchardstown & Finglas, County Dublin. An Environmental Impact Assessment report (EIAR) has been prepared and will be submitted to the Planning Authority with the planning application.</p>
<p>DECISIONS CUMULATIVE IMPACT ASSESSMENT</p>	<p>Granted The Planning Authority (FCC) granted permission for the application subject to 7 no. condition(s). The conditions relate to working hours, noise control, drainage and waste management. Therefore, there are no cumulative impacts anticipated with this development</p>
<p>REG REF CLIENT DEVELOPMENT DESCRIPTION</p>	<p>FW20A/0063 Rathdrinagh Land Limited (RLL) The construction of a single storey 5,000 m² research and development building, which will specialise in developing pilot scale circular economy solutions for a range of discarded resources; including associated office and welfare facilities. The development includes fencing and boundary treatment, signage, internal access roadways and a site entrance. Permission is also sought for all associated site works and services.</p>
<p>DECISION CUMULATIVE IMPACT ASSESSMENT</p>	<p>AI deemed significant 01/04/21 Revised notices received 19/04/21 Refused Permission There are no cumulative impacts anticipated with this development</p>

REG REF CLIENT DEVELOPMENT DESCRIPTION	<p>FW19A/0015 Viridian Renewables ROI Limited The development will consist of a Battery Energy Storage System (BESS) which will include up to 9 no. containerised battery storage modules (up to 14m length, 2.44m wide and 2.9m high) and ancillary equipment including up to: 9 no transformers (2.5m wide and 2.9m high), 7 no. power conditioning unit blocks (8m length and 1.5m wide), 1 no. power conditioning unit block (5m length by 5m wide), 9 no. switchgear units (1.5m length, 1.5m wide and 1.6m high), a sub-station container (4.5m length, 3.0m wide and 3.0m high) and all other associated site development works as required to facilitate the development. The BESS will be contained within a 0.0507 hectare site located entirely within the boundary of the existing Huntstown Power Station which is regulated by the Environmental Protection Agency through Industrial Emission Licenses P0483-04 AND P777-02.</p>
DECISION CUMULATIVE IMPACT ASSESSMENT	<p>Granted permission The Planning Authority (FCC) granted permission for the application subject to 7 no. condition(s). The conditions relate to working hours, noise control, drainage and waste management. Therefore, there are no cumulative impacts anticipated with this development</p>
REG REF CLIENT DEVELOPMENT DESCRIPTION	<p>FW18A/0082 Viridian Renewables ROI Limited The development is a wastewater treatment plant comprising a 3m high bunded area enclosing self-bunded chemical tank 1 (c.100m³ & 8.49m high), ammonia stripping plant (up to 12.15m high & c. 98 m²), solid separation building (c. 62.66m² & 5.55m high), digestate storage tank (c. 2,000m³ & 9.94m high), digestate treatment tank (c. 1,267m³ & 9.94m high), flotation unit building (c. 51m² & 9.94m high), vacuum degassing tower (18m high), roof mounted blowers (2m high), 4no. mixing tanks (rectangular tanks: c. 8m³ & 2m high, cylindrical tanks: c. 3.5m³ & 2m high), conveyor 1 (7.7m long), conveyor 2 (9m long), & a pipe bridge (c. 8m high & 17.3m long); & a yard containing 2no. skips (c. 2.5m high), big bag system (c. 2.25 m² & 2.5m high), 3no. self-bunded chemical tanks to the south (c. 6m³ & 2m high), an underground pump station, Motor Control Centre (MCC) room (2.46m high & 19.5 m²), self-bunded chemical tank 2 (6.97m high & c. 30m³), self-bunded chemical tank 3 (5.34m high & c. 20m³), self-bunded chemical tank 4 (c. 25m³ and 6.84m high), auxillary building (190 m² & 8m high), a spare skip and including all stairwells, pathways and ancillary development.</p>
DECISION CUMULATIVE IMPACT ASSESSMENT	<p>The wastewater treatment plant permitted under planning ref. FW13A/0089 will be substituted for the proposed wastewater treatment plant. The boundary will be landscaped in accordance with planning ref. FW13A/0089. Planning ref. FW13A/0089 is the subject of an Industrial Emissions Licence issued by the EPA (ref. P0993-01). Granted permission The Planning Authority (FCC) granted permission for the application subject to 4 no. condition(s). The conditions relate to working hours, noise control, drainage and waste management. Therefore, there are no cumulative impacts anticipated with this development</p>
REG REF CLIENT	<p>FW17A/0012 Roadstone Ltd</p>

DEVELOPMENT DESCRIPTION

The development will comprise an increase in the permitted intake rate of construction and demolition (C&D) waste at the facility from a maximum of 24,950 tonnes per annum at present to 95,000 tonnes per annum in future years.

The application provides for continuation and intensification of waste recovery activity at the established C&D waste recovery facility (Planning Ref. F02A/0602) on a 1.9 hectare site within the Central Quarry, in the immediate near-term (up to 2-3 years).

It also provides for relocation of C&D waste recovery activities to a new waste recovery facility on a 5.2 hectare site in north-eastern corner of the Huntstown Quarry Complex and construction of a hardstanding area, waste processing shed, surface water processing shed, surface water management infrastructure and internal access roads at the new recovery facility.

The proposed development requires a review of the existing waste licence (Ref.W0277-01) by the Environmental Protection Agency.

An Environmental Impact Statement (EIS) will be submitted to the planning authority in connection with the application.

Granted permission

DECISION CUMULATIVE IMPACT ASSESSMENT

The Planning Authority (FCC) granted permission for the application subject to 13 no. condition(s). The conditions relate to working hours, noise control, drainage and waste management. Therefore, there are no cumulative impacts anticipated with this development

REG REF CLIENT DEVELOPMENT DESCRIPTION

FW13A/0012

Stream BioEnergy Limited

Planning permission for the construction of a Renewable Bioenergy Plant to generate up to 3.8MW of electricity from 90,000 tonnes of non-hazardous biodegradable waste per annum utilising Anaerobic Digestion (AD) technology on a 2.38 hectares site within Roadstone Wood's Huntstown Quarry, Huntstown, North Road, Finglas, Dublin 11. The proposed plant will comprise the following elements:

(i) 13.9m high main building (4958.5 sq. m. floor area) incorporating feedstock reception and processing areas, digestate treatment areas, storage areas, workshop and including a 3 storey administration and welfare area (1744.8 sq. m. floor area);

(ii) Digestion Tank Farm (4m high bund) enclosing 4 no. digester tanks (up to 25.4m max. height, c.5000m³), 2 no. digestate treatment tanks (up to 25.4m max. height, c.5000m³), 2 no. digester feed buffer tanks (up to 17.6m max. height, 1800m³), and 2 no. pre-pasteurisation tanks (up to 12.8m max. height, 700m³) [total 10 no. tanks], to include stairwell towers and gantries;

(iii) Wastewater Treatment Plant Tank Farm (4m high bund) enclosing 3 no. SBR Aeration tanks (up to 16.0m max. height, c.2200m³), sludge tank (up to 10.8m max. height, c.75m³), process water tank (up to 22.9m max. height, 2000m³) and process liquor tank (up to 22.6m. max. height, 2400m³) [total 6 no. tanks], to include stairwell towers and gantries;

(iv) 2 no. enclosed Combined Heat and Power 2MW engines (3.6m high: 65.8 sq. metres floor area each), 28m high stack, 13.7m high gas holder (1800m³), 8.2m high biogas flare stack, 2 no. 12m high gas scrubbers, gas treatment equipment enclosed in 1.8m high container (30.6 sq. m floor area) and 2.5m high container (78.8 sq. m floor area), 3 no. banded electrical transformers (4.8m high) and 3.0m high sub-station (51.9 sq. m. floor area);

- (v) Various plant and vessels including 2 no. pasteurisation units (5.85m high) each containing heat exchanger and 3 no. c.24m³ tanks, 2.5m high ferric chloride storage tank (c.15m³), 5m high caustic storage tank (c.35m³), storm water tank (up to 21m max. height, c.2000m³), 4 no. liquid waste tanks (up to 10.5m max. height, c.90m³), enclosed pump equipment (2m high, 10 sq. m floor area), boiler, and enclosed air blower unit (3m high, 36 sq. m floor area);
- (vi) Odour Control System (15.7m high: 313.8 sq. m. floor area) and 25m high stack;
- (vii) Approx. 100mm diameter 1000m long rising main with connection into existing mains sewer at North Road, and package pumping station (2m high: 29.7 sq. m. floor area)
- (viii) 2 no. weighbridges, office (17.2 sq. m. floor area), bunded vehicle refuelling area with diesel storage tank (c.5000 litres), 2 no. wheel washes and vehicle wash, inner and outer 2.4m high mesh panel perimeter fencing with 7m wide entrance gate and 5.5m wide exit gate, 5 no. directional signs (total area of 8.8 sq. m), pipebridge and walkway, lighting, landscaping, 22 no. car parking spaces and bicycle rack, internal circulation roads, concrete foundation slabs and all site works, facilities and services.

Access is at an existing permitted vehicular access at North Road and vehicles will avail of existing quarry circulation roads.

This application is accompanied by an Environmental Impact Statement (EIS) and a Natura Impact Statement (NIS). This application relates to a development that will require an Industrial Emissions Directive licence from the Environmental Protection Agency. The Planning Application, EIS and NIS may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority during its public opening hours (9.30 - 16.30 Monday – Friday) at Fingal County Council, Grove Road, Blanchardstown, Fingal, Dublin 15. A submission or observation in relation to the Application may be made in writing to the Planning Authority on payment of a fee of €20, within the period of 5 weeks, beginning on the date of receipt by Fingal County Council of the Application, and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions, or may refuse to grant permission.

Granted permission

DECISION

**REG REF
CLIENT
DEVELOPMENT
DESCRIPTION**

FW12A/0022
Roadstone Wood Ltd
Permission / permission for continuation of use of all existing authorised facilities and activities within a planning application area of c.167.5 hectares as followings:

- Extraction, crushing, screening and processing of rock (authorised by Reg. Ref. No. F03A/1430 / PL 06F.206789) from the Northern, Western, Central and Southern Deposits for a period of 35 years.
- Total Extraction area of c.55.9 hectares within a total landholding of c.211 hectares
- Crushing, Screening and Processing Plant
- Block Manufacturing Facility & Block Yard
- Paving Display Centre & Offices
- Machinery Maintenance Building
- Offices, Staff Facilities, Laboratory
- Concrete Batching Plant & Associated Plant

**DECISION
CUMULATIVE IMPACT
ASSESSMENT**

- Asphalt Plant & Associated Plant
 - Stockpile Materials Shed associated with Asphalt Plant, granted under P. Reg. Ref. F06A/0923 (ABP Ref: PL 06F.219655).
 - Weighbridge, Bunded Fuel Storage & Oil Interceptor
 - Security Huts (3 no.), Truck Wash Bays & HGV Load Spray Bars (P. Ref. FW09A/0099 in respect of amendment to Condition 14 of F03A/1430)
 - Bord na Mona Moving Bed Biological Reactor & Percolation Area
 - Stockpiles Storage Areas & Plant Storage Yard
 - Stables (22 no.) & Horse exercise paddock
 - Existing Site Accesses (2 no.) onto the R135 North Road (Revised Entrance P. Ref. F06A/0164 & ABP Ref: PI 06F.217413P) & Kilshane Road.
 - Restoration of any worked out extraction areas, including for 5 years after the cessation of quarrying activities.
 - All other ancillary buildings, plant and facilities for the production of building products, including aggregates, ready-mix concrete, asphalt, tarmacadam and architectural blocks and all ancillary site works.
- This Planning Application will be accompanied by an Environmental Impact Statement (EIS). Permission / permission for continuation of use for development at Huntstown.
- Granted permission
- The Planning Authority (FCC) granted permission for the application subject to 24 no. condition(s). The conditions relate to working hours, noise, dust and vibrations control, drainage, waste management, operating hours. Therefore, there are no cumulative impacts anticipated with this development

<p>REG REF CLIENT DEVELOPMENT DESCRIPTION</p>	<p>F04A/1430 Huntstown Power Company Ltd. Increase the nominal power output of Huntstown Combined Gas Turbine (CCGT) Power Generation Station as granted under Reg. Ref. F98A/1313 (An Bord Pleanála ref. PL06.F110954) and as amended by permission for alterations to Phase 1 (Reg. Ref. F00A/0957; F01A/1046 and to phase 2 (Reg. Ref. F03A/0272). The proposed increase in nominal power output is from an output of up to 600 MW, as described in grant of permission Reg. Ref. F98A/1313, to a nominal power output of 740 MW. This application relates to development for which an integrated Pollution Control License under Part IV of the Environmental Protection Agency Act, 1992 has been obtained (Ref. No. 483). The proposal results from increases in the efficiency of CCGT plant and can be achieved within the terms of integrated pollution control licence No. 483 and the physical dimensions and operational parameters permitted under the relevant permissions outlined above. Phase 1 of the scheme has been constructed and is operational. The application is for an area of 995 hectares.</p> <p>DECISION Grant Permission</p>
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<p>REG REF CLIENT DEVELOPMENT DESCRIPTION</p>	<p>F03A/1430 Roadstone Dublin Limited The contribution of extraction, crushing, screening and processing of rock (authorised by Reg. Ref. F93A/1134), from the northern, central, western and southern deposits for 20 years (c. 57.5 ha total extractive area in a c. 205 ha overall site); the continuance indefinitely of all authorised crushing, screening and processing plant, block manufacturing plant (2,452 sqm) block yard) (17.2 ha), paving display</p>
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DECISION CUMULATIVE IMPACT ASSESSMENT	<p>area (636 sqm), paving centre (180 sqm), machinery maintenance building (1,456 sqm), offices (174 sq.m), staff facilities (48 sqm), laboratory (68 sqm), concrete batching plant, asphalt plant, weightbridge, 2 no. truck wash bays, 4 no. security huts, Bord na Mona moving bed biological reactor and percolation area, stockpiles and all ancillary buildings, plant and facilities for the production of building products including aggregates, ready made concrete, asphalt, tarmacadam and architectural blocks and all ancillary site works; progressive restoration of the worked out extractive areas including for 5 years after the cessation of quarrying; and for the retention of plant storage yard (site area c. 1.86 ha). Existing access will continue at the N2 North Road and Kilshane Road. This application is accompanied by an Environmental Impact Statement. This development is in the townlands of Coldwinters, Kilshane, Hunstown, Johnstown, Grange and Cappogue.</p> <p>Grant Permission</p> <p>The Planning Authority (FCC) granted permission for the application subject to 30 no. condition(s). The conditions relate to working hours, noise, dust and vibrations control, drainage, waste management, operating hours. Therefore, there are no cumulative impacts anticipated with this development</p>
REG REF CLIENT DEVELOPMENT DESCRIPTION	<p>F98A/1313 CRH Estates Ltd. Gas-fired Combined Turbine Electricity generation station with an output of up to 600 MW, to be developed in two phases. The application includes two turbine halls, two heat exchange boilers, four 33.5 metre high stacks, two air cooled condenser units, two storey administration and control building, workshop, stores, electrical switchyard, above-ground installation for gas supply, reserve fuel storage tanks, miscellaneous plant and equipment, site and landscaping works wastewater treatment plant and the demolition of an existing dwelling. The application relates to a development that comprises of or is for the purpose of activity that requires a license under Part 1V of the Environmental Protection Agency Act 1992. An Environmental Impact Statement accompanies this application on lands in the townlands of Johnstown and Huntstown.</p>
DECISION CUMULATIVE IMPACT ASSESSMENT	<p>Grant Permission</p> <p>The Planning Authority (FCC) granted permission for the application subject to 30 no. condition(s). The conditions relate to working hours, noise control, drainage, waste management, operating hours. Therefore, there are no cumulative impacts anticipated with this development</p>
REG REF CLIENT DEVELOPMENT DESCRIPTION DECISION CUMULATIVE IMPACT ASSESSMENT	<p>F95A/0432 M. Mulligan Open new entrance to site</p> <p>Granted Permission</p> <p>The Planning Authority (FCC) granted permission for the application subject to 2 no. condition(s). The conditions relate to working hours, noise control, drainage, waste management, operating hours and</p>

decommissioning of existing entrance. Therefore, there are no cumulative impacts anticipated with this development

<p>REG REF</p> <p>CLIENT</p> <p>DEVELOPMENT DESCRIPTION</p>	<p>F93A/1134</p> <p>Roadstone Dublin Ltd.</p> <p>Permission to retain indefinitely all existing plant buildings & ancillary dev. (including concrete plant macadam plant stone plant and block plant) as previously approved in 1984 (Reg. Ref. WA/2282) & for permission to quarry Northern Western & Central limestone deposit as approved Reg. Ref. WA/2282 and Southern deposit at their 200 hectare Huntstown Quarry.</p>
<p>DECISION</p> <p>CUMULATIVE IMPACT ASSESSMENT</p>	<p>Grant Permission</p> <p>The Planning Authority (FCC) granted permission for the application subject to 30 no. condition(s). The conditions relate to working hours, noise control, drainage, waste management, operating hours. Therefore, there are no cumulative impacts anticipated with this development</p>

The cumulative impact of both the GIS compound and c. 4.7km of 220Kv underground cabling and the AGI Gas Connection was taken into account when assessing the impact of the development on the surrounding road and traffic environment.

13.8 MONITORING & REINSTATEMENT

13.8.1 CONSTRUCTION PHASE

During the Construction Phase the following monitoring is advised. The specific compliance exercises to be undertaken in relation to the range of measures detailed in the final construction management plan will be agreed with the planning authority.

- Construction vehicles routes and parking
- Internal and external road conditions
- Construction activities hours of work

13.8.2 OPERATIONAL PHASE

The Mobility Management Plan for the proposed development will be monitored and updated at regular intervals. This will enable tracking in terms of a reduction in the dependence on private car journeys and a shift towards sustainable transport options such as walking, cycling and the use of public transport such as buses and trains.

The Co-ordinator, in consultation with the Developer, the Occupiers, and the Local Authority or its agents, will agree annual targets, following completion and analysis of the travel survey, for increasing the percentage of non-car modes.

The Co-ordinator will:

- Meet with officers of the Local Authorities or its agents within a period of 6 months following occupation of the building(s) and thereafter every 12 months to assess and review progress of the Plan and agree objectives for the next 12 months, and
- Prepare and submit to senior management of the Developer, the Occupier(s) and the Local Authorities or its agents, an annual Monitoring Report.

13.9 REFERENCES

- Dublin BusConnects Website: [New Dublin Area Bus Network - BusConnects](#)
- Design Manual for Urban Roads and Streets (DMURS), Department of Transport, Tourism and Sport

- Fingal Council Development Plan 2017 – 2023.
- Fingal City Council Draft Development Plan 2023 - 2029
- NRA Guidelines, Traffic and Transportation Assessment Guidelines (2014), National Roads Authority
- Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections, (May 2019), Transport Infrastructure Ireland Publications
- Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts, (2016), Transport Infrastructure Ireland Publications
- Sustainable Urban Housing: Design Standards for New Apartments, (2020), Department of Housing, Planning and Local Government
- Transport for Ireland (TFI): www.transportforireland.ie

14 WASTE MANAGEMENT

14.1 INTRODUCTION/METHODOLOGY

This chapter evaluates the impacts, if any, which the proposed development may have on Material Assets as defined in Directive 2014/52/EU, the EPA Guidelines on the Information to be contained in EIA 2022 and EPA Draft Advice Notes for EIS 2015.

This chapter has also been prepared to address the issues associated with material assets during the construction and operational phases of the proposed development as described in Chapter 2.

A site-specific Resource Waste Management Plan (RWMP) has been prepared by AWN Consulting Ltd to deal with waste generation during the excavation and construction phases of the proposed Development and has been included as Appendix 14.1. The RWMP was prepared in accordance with the Environmental Protection Agency's (EPA) document 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021) and 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' document produced by the National Construction and Demolition Waste Council (NCDWC) in conjunction with the Department of the Environment, Heritage and Local Government (DoEHLG)(2006). The Chapter has been prepared in accordance with European Commissions Guidelines, Guidance on the preparation of the Environmental Impact Assessment Report (2017), the EPA Guidelines on the Information to be contained in EIA (2022) and the EU Commission Notice on changes and extensions to projects, 2021.

These documents will ensure the management of wastes arising at the Development Site in accordance with legislative requirements and best practice standards

14.1.1 METHODOLOGY

The assessment of the impacts of the proposed development, arising from the consumption of resources and the generation of waste materials, was carried out taking into account the methodology specified in relevant guidance documents, along with an extensive document review to assist in identifying current and future requirements for waste management; including national and regional waste policy, waste strategies, management plans, legislative requirements and relevant reports.

This Chapter is based on the proposed development, as described in Chapter 2 (Description of the Proposed Development) and considers the following aspects:

- Legislative context;
- Construction phase (including site preparation, demolition, excavation and construction);
- Operational phase; and
- Decommissioning Phase

A desktop study was carried out which included the following:

- Review of applicable policy and legislation which creates the legal framework for resource and waste management in Ireland;
- Description of the typical waste materials that will be generated during the Construction and Operational phases; and
- Identification of mitigation measures to prevent waste generation and promote management of waste in accordance with the waste hierarchy.

Estimates of waste generation during the construction and operational phases of the proposed development have been calculated and are included in section 14.3 of this chapter. The waste types and estimated quantities are based on published data by the EPA in the National Waste Reports and

National Waste Statistics, data recorded from similar previous developments, Irish and US EPA waste generation research as well as other available research sources.

Mitigation measures are proposed to minimise the effect of the proposed development on the environment during the construction and operational phases, to promote efficient waste segregation and to reduce the quantity of waste requiring disposal. This information is presented in Section 14.5

A detailed review of the existing ground conditions on a regional, local and site-specific scale are presented in Chapter 6 of this EJAR (Soils and Geology).

14.1.2 LEGISLATION AND GUIDANCE

Waste management in Ireland is subject to EU, national and regional waste legislation and control, which defines how waste materials must be managed, transported and treated. The overarching EU legislation is the Waste Framework Directive (2008/98/EC) which is transposed into national legislation in Ireland. The cornerstone of Irish waste legislation is the Waste Management Act 1996 (as amended). European and national waste management policy is based on the concept of 'waste hierarchy', which sets out an order of preference for managing waste (prevention > preparing for reuse > recycling > recovery > disposal) (Figure 14.1).



Figure 14.1 Waste Hierarchy (Source: European Commission)

EU and Irish National waste policy also aims to contribute to the circular economy by extracting high-quality resources from waste as much as possible. Circular Economy (CE) is a sustainable alternative to the traditional linear (take-make-dispose) economic model, reducing waste to a minimum by reusing, repairing, refurbishing and recycling existing materials and products. (Figure 14.2).

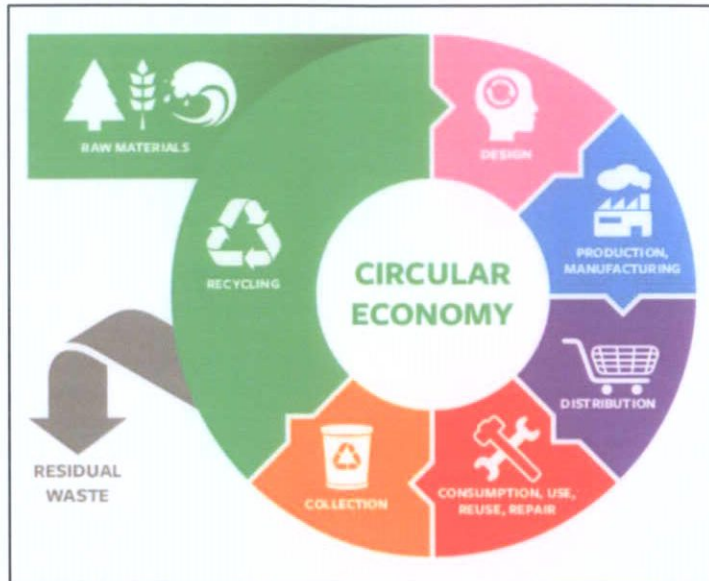


Figure 14.2 Circular Economy (Source: Repak)

The Irish government issues policy documents which outline measures to improve waste management practices in Ireland and help the country to achieve EU targets in respect of recycling and disposal of waste. The most recent policy document, Waste Action Plan for a Circular Economy – Waste Management Policy in Ireland, was published in 2020 and shifts focus away from waste disposal and moves it back up the production chain. The move away from targeting national waste targets is due to the Irish and international waste context changing in the years since the launch of the previous waste management plan, A Resource Opportunity, in 2015.

One of the first actions to be taken from the WAPCE was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, using Less' (2021) to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021.

The Circular Economy and Miscellaneous Provisions Act 2022 was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will to significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste, streamlines the national processes for End-of-Waste and By-Products decisions.

The strategy for the management of waste from the construction phase is in line with the requirements of the EPA's 'Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021). The guidance documents, Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects and Construction and Demolition Waste Management: A Handbook for Contractors and Site Managers (FÁS & Construction Industry Federation, 2002), were also consulted in the preparation of this assessment.

There are currently no Irish guidelines on the assessment of operational waste generation, and guidance is taken from industry guidelines, plans and reports including the Eastern Midlands Region (EMR) Waste Management Plan 2015 – 2021, BS 5906:2005 Waste Management in Buildings – Code of Practice, the Fingal County Council (FCC) (Segregation Storage, Presentation and of Household and Commercial Waste) Bye-Laws (2020), the EPA National Waste Database Reports 1998 – 2018 and the EPA National Waste Statistics Web Resource.

14.1.3 TERMINOLOGY

Note that the terminology used herein is consistent with the definitions set out in Article 3 of the Waste Framework Directive. Key terms are defined as follows:

Waste - Any substance or object which the holder discards or intends or is required to discard.

Prevention - Measures taken before a substance, material or product has become waste, that reduce:

- the quantity of waste, including through the re-use of products or the extension of the life span of products;
- the adverse impacts of the generated waste on the environment and human health; or
- the content of harmful substances in materials and products.

Reuse - Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.

Preparing for Reuse - Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing.

Treatment - Recovery or disposal operations, including preparation prior to recovery or disposal.

Recovery - Any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II of the Waste Framework Directive sets out a non-exhaustive list of recovery operations.

Recycling - Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Disposal - Any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I of the Waste Framework Directive sets out a non-exhaustive list of disposal operations.

14.2 THE PROPOSED DEVELOPMENT

The proposed development site is located on an 13.56 ha site in the townland of Kilshane, and Piperstown, Kilshane Road, Dublin 11. The proposed development comprises the construction of a gas turbine power generator station with an output of up to 293 Megawatts, the application of which includes a turbine, an associated exhaust stack, two air cooled condenser units, administration and control building, workshop, stores, fuel gas area, electrical module for fuel gas area, step-up transformer, transfer compound, one fuel oil tank, one demin water tank and one raw water tank and recessed bund area, miscellaneous plant, and equipment.

The proposed development will also include 26 no. staff car parking spaces, site and landscaping works, and all associated ancillary site development infrastructure such as foul and surface water drainage works and internal roads, footpaths, access routes, and all associated engineering and construction site works necessary to facilitate the development. Additionally, the proposal includes the realignment of a section of the Kilshane road and construction of a new roundabout junction (bounding the site to the east).

A full description of the proposed development can be found in Chapter 4 (Description of the Proposed Development). The characteristics of the proposed development that are relevant in terms of waste management are summarised below.

14.2.1 DEMOLITION PHASE

The demolition stage will involve the demolition of the existing residential and farm buildings, along with hardstanding areas on site, as well as from the further excavation of the building foundations. Further detail on the waste materials likely to be generated during the demolition works are presented in the project-specific RWMP in Appendix 14.1. The RWMP provides an estimate of the main waste types likely to be generated during the C&D phase of the proposed development. The reuse, recycling/recovery and disposal rates have been estimated using the EPA National Waste Reports and these are summarised in Table 14.1.

Table 14.1 Predicted on and off-site reuse, recycle and disposal rates for construction waste

Waste Types	Waste tonnes	Reuse/Recovery		Recycle		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Glass	11.3	0	0.0	85	9.6	15	1.7
Concrete, Bricks, Tiles, Ceramics	64.3	30	19.3	65	41.8	5	3.2
Plasterboard	4.8	30	1.4	60	2.9	10	0.5
Asphalts	1.3	0	0.0	50	0.6	50	0.6
Metals	18.9	5	0.9	80	15.1	15	2.8
Slate	10.1	0	0.0	85	8.6	15	1.5
Timber	15.1	10	1.5	60	9.1	30	4.5
Asbestos	0.3	0	0.0	0	0.0	100	0.3
Total	126.0		23.2		87.7		15.2

14.2.2 CONSTRUCTION PHASE

During the construction phase, waste will be produced from surplus materials such as broken or off-cuts of timber, plasterboard, concrete, tiles, bricks, etc. Waste from packaging (cardboard, plastic, timber) and oversupply of materials may also be generated. The appointed Contractor will be required to ensure that oversupply of materials is kept to a minimum and opportunities for reuse of suitable materials is maximised.

There will be topsoil and subsoil generated from site clearance and excavations required to facilitate the construction of foundations, the installation of services and roads for the development. Excavated material will be reused on site where possible with the remainder made available for re-use off-site. The volume of material to be excavated has been estimated at c. 64,500m³. It is anticipated that all of this material will be reused onsite for infilling and landscaping works where possible. If material is deemed unsuitable and has to be removed offsite it will be removed from site for appropriate offsite reuse, recovery, recycling and / or disposal.

If the material that requires removal from the site is deemed to be a waste, removal and reuse / recycling / recovery / disposal of the material will be carried out in accordance with the Waste Management Act 1996 (as amended), the Waste Management (Collection Permit) Regulations 2007 (as amended) and the Waste Management (Facility Permit & Registration) Regulations 2007 (as amended). The volume of waste requiring recovery / disposal will dictate whether a Certificate of Registration (COR), permit or licence is required for the receiving facility. Alternatively, the material may be classed as by-product under regulation 15 (By-products) (Previously Article 27 of the European Communities (Waste Directive) Regulations 2011) of S.I. No. 323/2020 - European Union (Waste Directive) Regulations 2020. For more information in relation to the envisaged management of by-products and waste, refer to the RWMP (Appendix 14.1).

In order to establish the appropriate reuse, recovery and / or disposal route for the soils and stones to be removed off-site, it will first need to be classified. Waste material will initially need to be classified as hazardous or non-hazardous in accordance with the EPA publication Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous (2019). Environmental soil analysis will be carried out prior to removal of the material on a number of the soil samples in accordance with the requirements for acceptance of waste at landfills (Council Decision 2003/33/EC

Waste Acceptance Criteria). This legislation sets limit values on landfills for acceptance of waste material based on properties of the waste, including potential pollutant concentrations and leachability. It is anticipated that the surplus material will be suitable for acceptance at either inert or non-hazardous soil recovery facilities / landfills in Ireland or, in the unlikely event of hazardous material being encountered, be transported for treatment / recovery or exported abroad for disposal in suitable facilities.

Waste will also be generated from construction phase workers e.g. organic / food waste, dry mixed recyclables (wastepaper, newspaper, plastic bottles, packaging, aluminium cans, tins and Tetra Pak cartons), mixed non-recyclables and, potentially, sewage sludge from temporary welfare facilities provided on-site during the Construction phase. Waste printer / toner cartridges, waste electrical and electronic equipment (WEEE) and waste batteries may also be generated in small volumes from site offices.

Further detail on the waste materials likely to be generated during the excavation and construction works are presented in the project-specific RWMP (Appendix 14.1). The RWMP provides an estimate of the main waste types likely to be generated during the Construction phase of the proposed development. These are summarised in Table 14.2.

Table 14.2 Predicted on and off-site reuse, recycle and disposal rates for construction waste

Waste Types	Waste tonnes	Reuse/Recovery		Recycle		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Mixed C&D	22.0	10	2.2	80	17.6	10	2.2
Timber	18.7	40	7.5	55	10.3	5	0.9
Plasterboard	6.7	30	2.0	60	4.0	10	0.7
Metals	5.3	5	0.3	90	4.8	5	0.3
Concrete	4.0	30	1.2	65	2.6	5	0.2
Other	10.0	20	2.0	60	6.0	20	2.0
Total	66.7		15.2		45.3		6.3

14.2.3 OPERATIONAL PHASE

The new development will give rise to a wide variety of waste streams during the operational phase, i.e. when the project is completed, open and occupied. Operational waste will be generated on a daily basis by the operator

14.2.3.1 Segregation of Waste Materials Onsite

All waste materials will be segregated into appropriate categories and will be stored in appropriate bins or other suitable receptacles in a designated, easily accessible areas of the site. It is envisaged that waste types will be generated by staff employed at the facility and from office administration work.

The total estimated waste generation for the proposed Development for the main waste types, based on the AWN waste generation model (WGM) and data from the already operating buildings onsite, is presented in Table 14.3, below, and is based on the uses and areas as advised by the Project Architects.

Table 14.3 Estimated Waste Generation During Operational Phase Main Waste Types

Waste Type	Waste Volume (m ³ / week)
General Waste - 20 03 01	0.01
Dry Mixed Recyclables - 15 01 06	0.13
Confidential Paper - 20 01 01	0.02
Biodegradable Food Waste- 20 01 08	0.15
Total	0.31

Dedicated waste storage areas (WSA) along with a facility operational waste management system for the sorting, storing and collection of waste is already in place for the existing development. It has been designed to maximise recycling rates and minimise waste across the entire centre.

All waste receptacles stored on site are collected from the service yard or waste storage rooms by the permitted waste contractor and taken to registered, permitted and/or licensed facilities.

14.3 THE RECEIVING ENVIRONMENT

In terms of waste management, the receiving environment is largely defined by Fingal FCC as the local authority responsible for setting and administering waste management activities in the area. This is governed by the requirements set out in the *Eastern Midlands Region Waste Management Plan 2015 – 2021*, which sets out the following targets for waste management in the region:

- A 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 55% of managed municipal waste by 2025; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

The Plan sets out the strategic targets for waste management in the region and sets a specific target for C&D waste of "70% preparing for reuse, recycling and other recovery of construction and demolition waste" (excluding natural soils and stones and hazardous wastes) to be achieved by 2020.

Ireland achieved 84 per cent material recovery of such waste in 2019, and therefore surpassed the 2020 target and is currently surpassing the 2025 target. The National Waste Statistics update published by the EPA in November 2021 identifies that Ireland's current against "Preparing for reuse and recycling of 50% by weight of household derived paper, metal, plastic & glass (includes metal and plastic estimates from household WEEE)" was met for 2020 at 51% however they are currently not in line with the 2025 target (55%).

The Fingal County Development Plan 2017 – 2023 (2017) and the Draft Fingal County Development plan 2023-2029 (2022) set out objectives for the FCC area which reflect those sets out in the regional waste management plan.

In terms of physical waste infrastructure, FCC no longer operates any municipal waste landfill in the area. There are a number of waste permitted and licensed facilities located in the EMR Waste Region for management of waste from the construction industry as well as municipal sources. These include soil recovery facilities, inert C&D waste facilities, municipal waste landfills, material recovery facilities and waste transfer stations.

14.4 PREDICTED IMPACTS

This section details the potential waste effects associated with the proposed development.

14.4.1 CONSTRUCTION PHASE

The proposed Development will generate a range of non-hazardous and hazardous waste materials during site excavation and construction (see Appendix 14.1 for further detail). General housekeeping and packaging will also generate waste materials, as well as typical municipal wastes generated by construction employees, including food waste. Waste materials will be required to be temporarily stored in the construction site compound or adjacent to it, on-site pending collection by a waste contractor. If waste material is not managed and stored correctly, it is likely to lead to litter or pollution issues at the Development Site and in adjacent areas. The indirect effect of litter issues is the presence of vermin in areas affected. In the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative**.

The use of non-permitted waste contractors or unauthorised waste facilities could give rise to inappropriate management of waste, resulting in indirect negative environmental impacts, including pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative**.

Wastes arising will need to be taken to suitably registered / permitted / licenced waste facilities for processing and segregation, reuse, recycling, recovery, and / or disposal, as appropriate. There are numerous licensed waste facilities in the EMR which can accept hazardous and non-hazardous waste materials, and acceptance of waste from the Development Site would be in line with daily activities at these facilities. At present, there is sufficient capacity for the acceptance of the likely C&D waste arisings at facilities in the region. The majority of construction materials are either recyclable or recoverable. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative**.

There is a quantity of excavated material which will need to be excavated to facilitate the proposed Development. A detailed review of the existing ground conditions on a regional, local site-specific scale are presented in Chapter 6. It is anticipated that none of excavated material will need to be removed off-site. If material has to be removed correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative**.

14.4.2 OPERATIONAL PHASE

The potential impacts on the environment of improper, or a lack of, waste management during the operational phase would be a diversion from the priorities of the waste hierarchy which would lead to small volumes of waste being sent unnecessarily to landfill. In the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative**.

The nature of the development means the generation of waste materials during the operational phase is unavoidable. Networks of waste collection, treatment, recovery and disposal infrastructure are in place in the region to manage waste efficiently from this type of development. Waste which is not suitable for recycling is typically sent for energy recovery. There are also facilities in the region for segregation of municipal recyclables which is typically exported for conversion in recycled products (e.g. paper mills and glass recycling).

If waste material is not managed and stored correctly, it is likely to lead to litter or pollution issues at the development site and in adjacent areas. The knock-on effect of litter issues is the presence of vermin in affected areas. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **short-term, significant** and **negative**.

Waste contractors will be required to service the proposed development on a regular basis to remove waste. The use of non-permitted waste contractors or unauthorised facilities could give rise to

inappropriate management of waste and result in negative environmental impacts or pollution. It is essential that all waste materials are dealt with in accordance with regional and national legislation, as outlined previously, and that time and resources are dedicated to ensuring efficient waste management practices. However, in the absence of mitigation, the effect on the local and regional environment is likely to be **long-term, significant** and **negative**.

14.4.3 DO NOTHING SCENARIO

If the proposed development was not to go ahead (i.e. in the Do-Nothing scenario) there would be no demolition, excavation, construction or operational at this site. There would, therefore, be a neutral effect on the environment in terms of waste.

14.5 MITIGATION MEASURES

This section outlines the measures that will be employed in order to reduce the amount of waste produced, manage the wastes generated responsibly and handle the waste in such a manner as to minimise the effects on the environment.

The concept of the 'waste hierarchy' is employed when considering all mitigation measures. The waste hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling / recovery, energy recovery (i.e. incineration) and, least favoured of all, disposal.

14.5.1 CONSTRUCTION PHASE

The following mitigation measures will be implemented during the construction phase of the proposed development:

As previously stated, a project specific RWMP has been prepared in line with the requirements of the requirements of The EPA, *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction & Demolition Projects' (2021)* and is included as Appendix 14.1. The mitigation measures outlined in the RWMP will be implemented in full and form part of mitigation strategy for the site. The mitigation measures presented in this RWMP will ensure effective waste management and minimisation, reuse, recycling, recovery and disposal of waste material generated during the excavation and construction phases of the proposed development.

- Prior to commencement, the appointed Contractor(s) will be required to refine / update the RWMP (Appendix 14.1) in agreement with FCC and in compliance with any planning conditions, or submit an addendum to the RWMP to FCC, detailing specific measures to minimise waste generation and resource consumption, and provide details of the proposed waste contractors and destinations of each waste stream.
- The Contractor will implement the RWMP throughout the duration of the proposed excavation and construction phases.

It has been calculated by the project design team that none of excavated material will need to be removed off-site. If material has to be removed offsite then correct classification and segregation of the excavated material is required to ensure that any potentially contaminated materials are identified and handled in a way that will not impact negatively on workers as well as on water and soil environments, both on and off-site.

In addition, the following mitigation measures will be implemented:

- Building materials will be chosen to 'design out waste';
- On-site segregation of waste materials will be carried out to increase opportunities for off-site reuse, recycling and recovery. The following waste types, at a minimum, will be segregated:
 - Concrete rubble (including ceramics, tiles and bricks);
 - Metals;