

# PLANNING APPLICATION FOR THE EXPANSION OF A MATERIALS RECOVERY FACILITY AT CAPPOGUE AND DUNSINK, BALLYCOOLIN ROAD, DUBLIN 11.

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## Response to Request for Further Information

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**Prepared for:**

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**Date:** November 2023

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## Response to Request for Further Information

### REVISION CONTROL TABLE, CLIENT, KEYWORDS AND ABSTRACT

User is responsible for Checking the Revision Status of This Document

| Rev. No. | Description of Changes | Prepared by: | Checked by: | Approved by: | Date:      |
|----------|------------------------|--------------|-------------|--------------|------------|
| 0        | Final Issue            | DM/MG        | BG          | BG           | 23/11/2023 |

**Client:** Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling

**Keywords:** Planning Application, RFI, Request for Further Information, Materials Recovery Facility

**Abstract:** This report contains the response to a Request for Further Information (RFI) in connection with planning case number ABP-315257-22 for development at Cappogue and Dunsink, Dublin 11.





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## 1. INTRODUCTION

### 1.1 Background and Purpose

This report contains the response to a Request for Further Information (RFI) in connection with planning case number ABP-315257-22 for development at Cappogue and Dunsink, Dublin 11.

The Applicant is Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling (herein referred to as 'the Applicant'). Fehily Timoney (FT) were appointed by the Applicant to prepare the planning application on its behalf. The planning application was submitted to An Bord Pleanála (ABP) on 02/12/2022. ABP issued a RFI relating to this planning application on 06/07/2023. FT have been appointed to prepare a response to ABP's RFI on behalf of the Applicant. The response to the RFI is set out within in this report.

A copy of the RFI is provided in Appendix 1. A response to this request is provided in Section 2.

On 06/07/2023 ABP issued a separate correspondence which requires the Applicant to notify the National Transport Authority (NTA) of the application. A copy of the correspondence is provided in Appendix 2. A response to this request is provided in Section 3.

### 1.2 Overview of Information Provided

A summary of the information provided in response to each RFI item is provided below:

- RFI Item No. 1 (i): Detail on consultation with TII's Structures Section.
- RFI Item No. 1 (ii) (i): Detail on the Applicant's hours of operations.
- RFI Item No. 1 (ii) (ii): Clarification of the transportation assessment, amendment to site layout drawings to accommodate access changes, car parking and bicycle parking.
- RFI Item No. 1 (ii) (iii): Detail on avoiding the culverting of the section of the watercourse which traverses the eastern boundary and confirmation of site ownership.
- RFI Item No. 1 (ii) (iv): Details of landscape screening along the boundary with residential units.
- RFI Item No. 2: Detail on updated odour modelling of MRF Building 1 where the fast action roller doors are opened.
- RFI Item No. 3: Detail on updated baseline noise monitoring, clarification of information included in the EIAR, and updated planning drawings showing adjusted skip storage area.
- RFI Item 4: Detailing on traffic infrastructure in proximity to the site taking account of the Fingal Development Plan 2023-2029, Sheet No. 17 Connectivity and Movement.
- RFI Item 5: Updated planning drawings which increase the distance of the vehicle wash structure from Barn Lodge Grove and show existing manhole and services infrastructure.
- RFI Item 6: Provision of an addendum EIAR.

Updated planning drawings have also been provided in this submission under separate cover.

Two hard copies and one electronic copy of this information have been provided to ABP. The number of copies to be submitted was confirmed with ABP via email on 12/10/2023.



Please see overleaf for the response to the RFI. This response provides the wording of each item contained in ABP's RFI in **Blue** text, followed by a considered response. Within the considered response:

- All text relating to additional clarifying information is denoted through the use of regular font (Calibri, font size 11)
- All text that refers or relates to information provided in the planning application and EIAR already submitted on 02/12/2022 is denoted through the use of **Bold** text.
- All quotations from the planning application and EIAR already submitted are denoted through the use of *Italic* text.



## 2. RESPONSE TO REQUEST FOR FURTHER INFORMATION

### 2.1 RFI Item Number 1 (i) (i) M50 Culvert

The TII, in its submission, dated 20th January 2023, require a specific review of the potential impact on the M50 culvert and that appropriate mitigation should be undertaken in consultation with TII's Structures Section. The response should be supported by revised drawings and documentation for both construction and operation phases of the proposed development.

On 08/08/2023 FT requested consultation in relation to this RFI Item with TII's Structures Section via email.

On 10/08/2023 TII Land Use Planning responded via email, requesting that a formal letter be submitted for the attention of TII Land Use Planning which includes the following:

- Details of the relevant further information request from ABP related to TII's submission;
- Material (appropriate plans and details) which outlines the Applicants proposed further information response to the item related to TII's submission; and
- Material (appropriate plans and details) which demonstrates that the proposed development will have no impact on TII assets and also supports the assertion that the requirements of the TII Standard 'Technical Acceptance of Road Structures on Motorways and Other National Roads' does not apply to the proposed development.

TII stated the above material is required to assist in evaluating the impact of the proposed development on the capacity, safety or efficiency of the M50.

On 20/09/2023 FT issued the formal letter via email to TII Land Use Planning in response to the requested items. The letter is in Appendix 3.

On 06/10/2023 TII Land Use Planning issued a letter response via email and is included in Appendix 3. TII requested clarification in regard to the structural condition of the M50 culvert, the potential impact of the concrete lining and the potential impact of any exceedance flow on the culvert.

On 31/10/2023 FT issued a formal letter via email to TII Land Use Planning to clarify these items and is included in Appendix 3.

On 10/11/2023 TII Land Use Planning issued a letter response via email and is included in Appendix 3. TII confirmed that the technical details and clarifications provided address the outstanding matters raised in TII's earlier Technical Review and are acceptable.

### 2.2 RFI Item Number 1 (i) (ii) EIAR Scoping

Noting that the TII's scoping correspondence was not referenced in the EIAR, acknowledge and address issues contained therein.

The Applicant acknowledges TII's scoping correspondence dated 20/04/2022.



A summary of the key issues raised and a note on how and where that those issues are addressed in either the EIAR, this RFI response or EIAR Addendum (Appendix 4 of this RFI response) is provided in Table 2-1. Table 2-1 is also included in the EIAR Addendum (Appendix 4 of this RFI response), forming part of Table 6-2.

**Table 2-1: Stakeholder Consultation Responses**

| Consultee | Date of Response | Summary of Comments Provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | How and where comments are addressed in EIAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TII       | 20/04/2022       | <p>The site adjoins the M50. The proposed development shall not impact the national road reservation, nor associated infrastructure, including national road drainage systems.</p> <p>The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network.</p> <p>The developer should assess visual impacts, including lighting impact from glint and glare from the M50 as the development site adjoins the motorway.</p> <p>The developer should have regard to any Environmental Impact Statement or Report and all conditions and/or modifications imposed by ABP regarding road schemes in the area. The developer should in particular have regard to any potential cumulative impacts.</p> <p>The developer, in preparing the EIAR, should have regard to TII Publications (formally DMRB and the Manual of Contract Documents for Road Works).</p> <p>The developer, in preparing the EIAR, should have regard to TII's Environmental Assessment and Construction Guidelines, including the Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority, 2006).</p> | <p>The Applicant has confirmed with TII that the proposed development will not impact the national road reservation, nor associated infrastructure, including national road drainage systems. Refer to Section 2.1 of this RFI response report and Chapter 4 of the EIAR and EIAR Addendum.</p> <p>No works will traverse the national road network. The EIAR and this RFI Response Report demonstrate the proposed development can proceed without a significant effect on the capacity, safety and operational efficiency of that network.</p> <p>The proposed landscaping plan identified in Appendix 15.2 in Volume 3 of the EIAR will screen the proposed development site from any visual impacts, including lighting impact from glint and glare from the M50.</p> <p>Projects and existing development that have the potential to have a cumulative impact in-combination with the proposed development have been identified and are listed in Appendix 1.2, Projects considering during Cumulative Assessment, in Volume 3 of the EIAR.</p> <p>The EIAR was prepared with regard to all relevant TII publications.</p> <p>Chapter 11 Air Quality and Climate of Volume 2 of the EIAR was prepared with regard to Guidelines on the Treatment of Air Quality During the Planning and Construction of National Road Schemes (TII, 2011).</p> |



| Consultee | Date of Response | Summary of Comments Provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | How and where comments are addressed in EIAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                  | <p>The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev. National Roads Authority, 2004).</p> <p>A Traffic and Transport Assessment be carried out in accordance with relevant guidelines.</p> <p>The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.</p> <p>The Applicant should clearly identify haul routes proposed and assess the network to be traversed.</p> | <p>Chapter 12 Noise and Vibration of Volume of the EIAR was prepared with regard to the Environmental Noise Regulations 2006 and Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev. National Roads Authority, 2004).</p> <p>A robust Traffic and Transportation assessment was completed as Chapter 13 of Volume 2 of the EIAR.</p> <p>A Road Safety Audit is not required.</p> <p>All proposed haul routes are identified in Figure 1 of Appendix 13-4 of Volume 3 of the EIAR.</p> |

## 2.3 RFI Item Number 1 (ii) (i) Hours of Operation

FCC have requested that the hours of operation are maintained as permitted (i.e. 07.00-19.00 Monday to Friday and 08.00-16.00 Saturdays, closed at other times). Your views in this regard are invited.

The Applicant strongly requests that hours of operation for waste acceptance, handling and consignment at the proposed development are extended from those currently permitted (07:00-19:00 Monday to Friday and 08:00-16:00 Saturdays, closed at other times) to 00:00 to 00:00 Monday to Sunday inclusive. The proposed hours of operation are critical towards the commercial feasibility of the proposed development.

Multiple customers require waste collection outside of those times currently permitted and include:

- Nighttime collections for City Centre
- Early Hospital compactor collections
- Early morning Dublin Airport collections
- Early morning collections from construction sites
- 24 - 7 County Council deliveries and collections
- Collections from 24-hour commercial production facilities mainly food and drink, and tech facilities
- Collections from festivals, concerts, exhibitions etc.
- Emergency collections (Fire, clocking emergency collections)
- Deliveries to Waste to Energy (Wte) and cement kilns will require 24-hour access. Solid recovered fuel (SRF) will be provided from the proposed development site as an alternative fuel for Wte and cement kilns operations. These operations accept fuel on a 24-hour basis.



If hours are curtailed to those currently permitted the proposed development will be unable to receive or deliver waste collected from many of these locations.

The proposed operating hours will ultimately be controlled by the Industrial Emissions (IE) licence for the facility. **The IE licence will be issued and enforced by the EPA.**

## 2.4 RFI Item Number 1 (ii) (ii) Junction Capacity

Clarify if the Transport Assessment was carried out utilising two-way trips. In the event that hours of operation remain as permitted (as opposed to 24/7 as sought by the applicant) you are requested to assess the impact of operations on the local road network including junctions.

### 2.4.1 Two-Way Trips

Section 13.6.5 of Chapter 13 'Traffic and Transportation' (page 20 of 57) in Volume 2 of the EIAR submitted with the planning application, sets out in detail the traffic generation characteristics of the existing permitted development. Based upon a detailed review of weighbridge records spanning 3 no. years various traffic statistics are presented and include average traffic generation rates together with both seasonal fluctuations and typical daily and hourly traffic patterns.

Section 13.7 'Potential Effects' of Chapter 13 (page 26 of 57) considers Potential Effects and includes for both the Construction Phase and Operational Phase of the proposed development. Table 13-18 'Daily Traffic Generation' of Chapter 13 (page 32 of 57) summarises the forecast total HGV traffic generation of the proposed development and shows that the forecast daily HGV traffic generation arising from the operational phase of the proposed development is 140-203 HGV importing materials and 54 Articulated HGV exporting processed materials. The EIAR notes that this is the total traffic generation of the proposed development site.

| HGV Traffic Generation of Proposed Development   |
|--------------------------------------------------|
| Lower Value 194 No. Trips (two-way flow 388 No.) |
| Upper Value 257 No. Trips (two-way flow 514 No.) |

In determining the impact of the development, the baseline considers the current permitted operation at the site, so the effect of the development is based upon the total forecast traffic of Table 13-18 of Chapter 13 (page 32 of 57) less the existing traffic generation of the permitted development recorded in the traffic survey. The baseline scenario is derived from classified traffic turning counts at the exiting development and on the receiving road network. The surveyed traffic flow to/from the existing development is summarised in Table 13-4 'Surveyed Daily Traffic Flows 2021' of Chapter 13 (page 14 of 57) which shows 25 cars and 189 HGV generated by the existing permitted development.

| HGV Traffic Generation of Existing Development |
|------------------------------------------------|
| Surveyed Value 189 No. two-way flow            |





The forecast traffic generation of the site is set out in network flow format in Appendix 13-3 in Volume 3 of the EIAR submitted with the planning application. The same data is also summarised in tabular format in Table 13-19 of Chapter 13 (page 33 of 57) in Volume 2 of the EIAR submitted with the planning application. Table 13-19 shows that the proposed development has the potential to give rise to a total daily increase in two-way traffic on the Ballycoolin Road of 28 cars and 179 HGV to the east of the Premier Business Park traffic signal junction and 38 cars and 140 HGV to the west. Forecast total increase in traffic to/from the development site is 66 cars and 319 HGV over the current baseline site traffic generation as surveyed.

| Forecast Increase HGV Traffic (Over Existing Development) |
|-----------------------------------------------------------|
|-----------------------------------------------------------|

|                                  |
|----------------------------------|
| Upper Value 319 No. two-way flow |
|----------------------------------|

Since the assessment includes for the existing and forecast traffic it follows that the total flow of traffic at the development site is the Table 13-4 surveyed flow of 25 cars and 189 HGV combined with the Table 13-19 forecast increase of 66 cars and 319 HGV. The total two-way daily traffic generation of the development is therefore 91 cars and 508 HGV.

| Transport Assessment HGV Traffic Generation |
|---------------------------------------------|
|---------------------------------------------|

|                      |
|----------------------|
| 508 No. two-way flow |
|----------------------|

This value of 508 daily HGV trips correlates with the forecast upper value daily traffic generation data provided in Table 13-18 where the upper value two-way total traffic flow is 5,141 HGV.

The traffic flows used in the assessment of traffic effects upon junction capacity consider a value which is representative of the upper value forecast potential traffic generation of the site.

In direct response to the request for further information we can clarify that the assessments in Chapter 13 'Traffic and Transportation' consider "two-way trips" and include for all movements of light and heavy traffic to and from the proposed development.

#### 2.4.2 Impact of Operations

As set out in Chapter 13 'Traffic and Transportation' in Volume 2 of the EIAR submitted with the planning application the figures used in the assessment of network capacity are representative of the 'upper value' forecast daily traffic generation and can therefore be considered robust. In addition, as set out in the paragraph following Table 13-18 at (page 32 of 57):

*It is the upper figure of HGV traffic generation that is applied in the evaluation of daily and peak hour traffic effects and in the detailed capacity modelling assessments of the receiving road network operation both with and without the proposed development. These above forecast traffic generation figures are considered robust in that the daily figures assume a 5.5 day working week when the facility is proposed to be open 7 days. The peak hour figures are based upon the development receiving, processing and exporting 100% of materials between 07:00-19:00hrs where the facility is proposed to be open 24hrs accordingly the peak hour forecast traffic flows can be considered to compound the already robust figures and so can reasonably be considered very conservative.*



It follows that the traffic assessments in Chapter 13 considers a worst-case scenario in which the hours of operation remain as permitted (as opposed to 24/7) and so already assess the impact of such operations on the local road network including junctions.

## 2.5 RFI Item Number 1 (ii) (ii) Access

The applicant is intending to retain the existing access point and provide a new access which is located to the south of the existing and suggests that the internal layouts should be reconsidered to provide segregation of staff/visitor traffic, pedestrian and cyclists from HGV movements and parking. Additional mitigation measures should be provided to ensure that car parking and HGV turning manoeuvres are separated with adequate pedestrian routes and crossing points. The applicant should amend the layout so that the proposed new vehicular entrance is restricted to serve HGVs only and the existing entrance serve cars, pedestrians and cyclists. Revised detailed plans should also include how the new access and crossover of the existing footpath and cycle track would occur. Clarify if these crossover works are outside land in your ownership and submit revised site boundary plans as necessary and any associated permissions.

### 2.5.1 Amended Internal Layout

The location and detail of Entrance 1 and Entrance 2 has not been altered, however some amendments to the internal layout have been made to ensure segregation of vehicles, pedestrians and cyclists at the proposed development. Refer to Planning Drawing P21-150-0200-0001 Rev B. These changes are not material. Further detail on Entrance 2 is provided in Section 2.5.2.

The Applicant is committed to providing a safe work area as outlined in Volume 2, Chapter 4 of the EIAR, Section 4.3.5 Proposed Site Infrastructure - Traffic Management System:

*Pedestrian walkways and crossings will be provided on-site to ensure all pedestrians can traverse the site and travel between parking areas and buildings safely.*

Pedestrian routes will be clearly marked across the site. No pedestrian movement will occur within a turning area. All staff and visitors will be informed of the requirements of the site's Health and Safety Plan.

#### 2.5.1.1 Administration Building

The Administration Building has been moved 2m west to facilitate a parking space adjacent to the eastern boundary. This parking space will have the capacity to accommodate disabled parking requirements. This adjustment is not a material change to the proposed development.

#### 2.5.1.2 Operation of Entrance 1

The Applicant is agreeable to ensuring all visitor cars will use Entrance 1 only and will use the 6 No. parking spaces immediately east of MRF 1 and 1 No. parking space east of the Administration Building. The 7 No. parking spaces will have capacity to accommodate disabled or EV parking requirements. Safety bollards to the south of the Administration Building and 1 No. parking space east of the Administration building will segregate traffic from entering Entrance 2 through the site.

All pedestrian and cyclist traffic will use Entrance 1.

Visitors will be prohibited from using Entrance 2. This will be controlled by the weighbridge operator.



Administrative staff who will be based in the Admin Building and senior management will only use Entrance 1 and park in spaces immediately east of MRF 1 and east of the Administration Building. There is sufficient space to accommodate this requirement.

### 2.5.1.3 Operation of Entrance 2

Operational staff will use Entrance 2 and park at the 21 no. car parking spaces which will be provided in the southeastern corner of the site and 7 No. parking spaces immediately south of MRF 3. The 7 No. parking spaces immediately south of MRF 3 will have capacity to accommodate disabled or EV parking requirements. *Cars using this entrance will access and egress the facility via lanes separate to the lanes used by HGV's/RCV's accessing the site. All access and egress lanes will be controlled by barriers. All traffic will be funnelled into the appropriate lane through the use of signage, road markings and bollards.* Entry via Entrance 2 will be controlled by the weighbridge operator.

The use of separate lanes for cars and HGV's/RCV's at these types of facilities is standard and is currently in use at a number of approved and operational facilities. For example, at the Dublin Waste to Energy facility all site traffic enters the site at the one location and is controlled by security and separate car access and HGV's/RCV's (Figure 2-1).

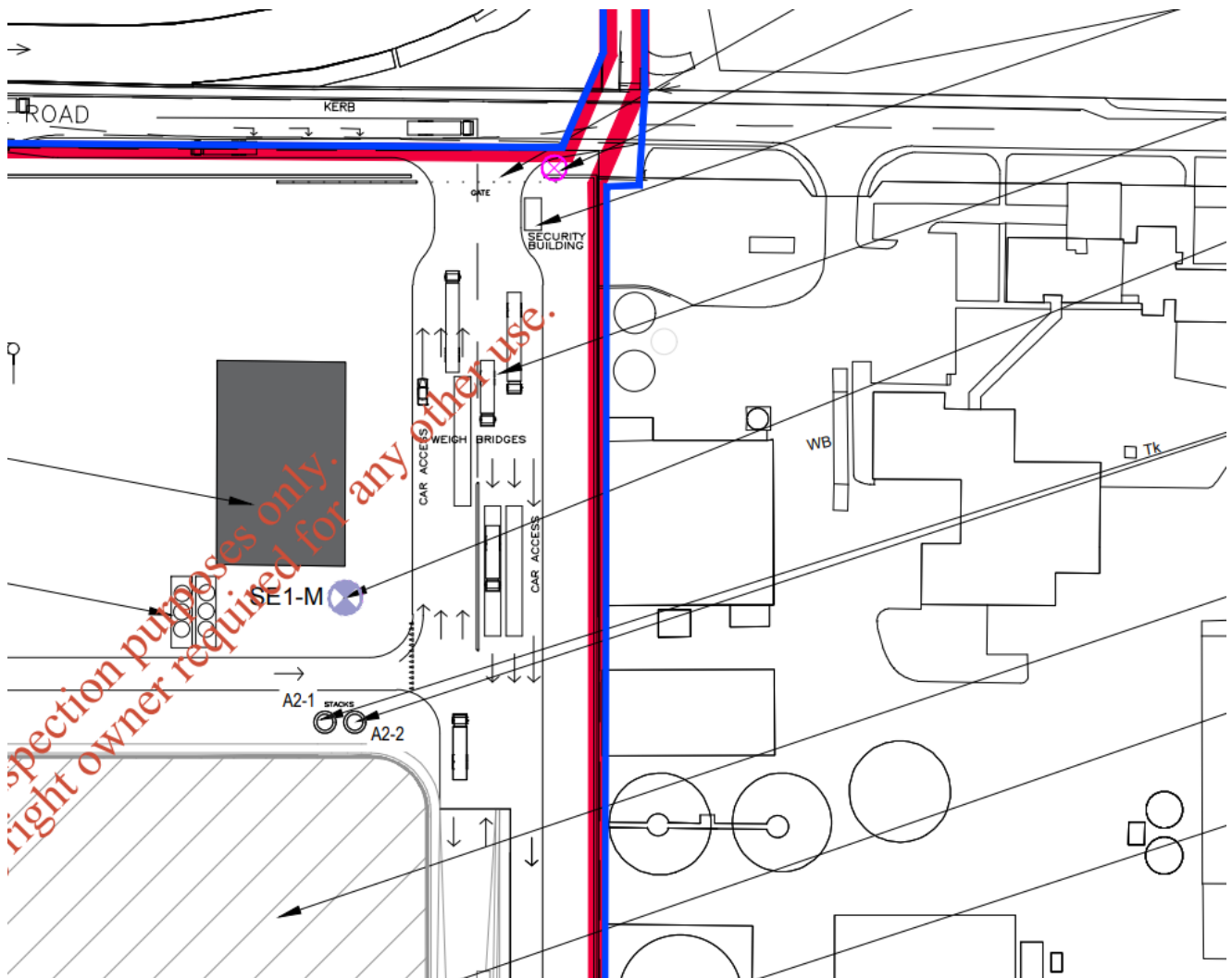


Figure 2-1: Dublin Waste to Energy Site Entrance (Screengrab from [https://epawebapp.epa.ie/licences/lic\\_eDMS/090151b2806fa642.pdf](https://epawebapp.epa.ie/licences/lic_eDMS/090151b2806fa642.pdf))



## 2.5.2 New Access and Crossover with Pathway and Cycleway

Revised detailed plans should also include how the new access and crossover of the existing footpath and cycle track would occur. Clarify if these crossover works are outside land in your ownership and submit revised site boundary plans as necessary and any associated permissions.

Chapter 4 of the EIAR, Section 4.3.5 Proposed Site Infrastructure - Site Road, Parking, and Skip Storage states:

*Cyclists arriving on-site will use Entrance 1 to access this location.*

In consultation and in agreement with Fingal County Council, the Applicant has revised the red line boundary to extend the red line boundary within the original planning drawings at Entrance 2. The red line boundary now extends to the middle of the road at Entrance 2. Refer to Planning Drawings P21-150-0200-0001 Rev B and P21-150-0305-0003 Rev A.

The revised red line boundary will increase the overall site area by 0.02 ha, from 3.38 ha to 3.40 ha.

Works within the additional area of the revised red line boundary will be undertaken under licence from Fingal County Council or form part of a purchase agreement with Fingal County Council. Fingal County Council have provided a Letter of Consent to the Applicant which grants consent to make this planning application with the revised red line boundary. Refer to Appendix 5.

Entrance 2 will cross over the existing footpath and cycle track. The cycle track will require minor realignment to accommodate the new kerb line for the entrance. The beginning of the cycle track will be moved approximately 4m north. The existing sign will be relocated as part of the cycle track realignment.

The existing footpath will remain largely unaltered. No realignment will occur, however drop kerbs will be emplaced at either side of the new entrance. New signage will be installed to inform incoming and outgoing traffic of pedestrian traffic.

These revisions are not material, they are required to accommodate the new entrance as originally proposed.

## 2.6 RFI Item Number 1 (ii) (ii) Excessive Parking Provision

37 no. car parking spaces are proposed while it is estimated that 24 no. staff will be employed. Justify the parking requirement having regard to section 14.17.7 'Car Parking' of the Development Plan. Provision should also be made for covered bicycle parking. Any revised site layout plan should have regard to the foregoing.

### 2.6.1 Parking

Section 4.3.5 in Chapter 4 of the EIAR states:

The following parking facilities will be provided on-site:

- 7 no. car parking spaces will be provided adjacent to the existing site entrance (Entrance 1) immediately east of MRF 1.
- 21 no. car parking spaces which will be provided in the south eastern corner of the site.
- 8 no. car parking spaces will be provided immediately to the south of MRF 3. 4 no. of these spaces will be provided with EV charging facilities. 4 no. of these spaces will be sized to allow for disability parking.



- *8 no. RCV parking spaces will be provided immediately to the south of MRF 3. These spaces will be dedicated EV charging spaces.*

This a total of 44 No. parking spaces. This is also identified in Planning Drawing P21-150-0200-0001 in Volume 4 of the EIAR.

As shown on Planning Drawing P21-150-0200-0001 Rev B the amended internal layout has reduced the number of parking spaces from 44. No to 42 No.

Section 4.4.3 in Chapter 4 of the EIAR states *it is anticipated that the following staff will be employed during facility operations:*

- *1 No. facility manager;*
- *2 No. site foreman;*
- *3 No. weighbridge operators;*
- *4 No. admin / office staff;*
- *6 No. loading shovel drivers;*
- *8 No. general operatives.*

This is a total of 24 No. staff. However, it does not include HGV/RCV drivers who will need to leave their own vehicles at the site in order to collect a HGV/RCV. It is anticipated that 10 No. to 12 No. HGV/RCV drivers will operate from the site on a daily basis.

Maintenance vehicles will be on site on an ad hoc basis and will require parking.

It is also reasonable that additional spaces will be required for visitors to the site. The Applicant proposes it will facilitate tours of the proposed development and will need to accommodate parking requirements. Therefore, the Applicant considers 42 No. at the proposed development is justified.

Table 14.19 in Section 14.17.7 'Car Parking' of the Fingal County Council County Development Plan 2023 - 2029 outlines the car parking standards in relation to areas within a town centre or serviced by particular types of public transport.



**Table 14.19: Car Parking Standards**

| Land Use Category              | Zone 1: Developments within 800m of a high-quality bus service, or 1600m of an existing or planned Luas/DART/Metro Rail station or in lands zoned Major Town Centre*** |     | Zone 2: All other areas  |     |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------|-----|
| Employment                     |                                                                                                                                                                        |     |                          |     |
| Offices – General              | 1 per 80 m <sup>2</sup>                                                                                                                                                | Max | 1 per 40 m <sup>2</sup>  | Max |
| Offices – Science & Technology | 1 per 100 m <sup>2</sup>                                                                                                                                               | Max | 1 per 50 m <sup>2</sup>  | Max |
| Offices – Call centre          | 1 per 80 m <sup>2</sup>                                                                                                                                                | Max | 1 per 40 m <sup>2</sup>  | Max |
| Industry – General             | 1 per 100 m <sup>2</sup>                                                                                                                                               | Max | 1 per 50 m <sup>2</sup>  | Max |
| Industry – Bio-medical         | 1 per 100 m <sup>2</sup>                                                                                                                                               | Max | 1 per 50 m <sup>2</sup>  | Max |
| Industry – Data Centres        | 1 per 200 m <sup>2</sup>                                                                                                                                               | Max | 1 per 100 m <sup>2</sup> | Max |
| Warehouse and distribution     | 1 per 200 m <sup>2</sup>                                                                                                                                               | Max | 1 per 100 m <sup>2</sup> | Max |

The proposed development is not within 800m of high-quality bus services but is within 1,660m of a planned Luas/Metro Rail station. As outlined in more detail in Section 2.15 of this report in response to Item Number 4 of the RFI, it is likely the LUAS Green Line extension to Tyrrelstown would be in the future development plan period 2041-2047. Given that Metro Rail corridor is not identified in the GDA Transport Strategy it would seem reasonable to presume that planning for a light rail scheme along this corridor would not commence before 2042 and so delivery of the project could be expected to be some years later, perhaps post 2050.

However, to demonstrate the worst-case scenario the maximum car parking spaces for the proposed development will be considered under Zone 1. The worst-case Land Use Category of 'Warehouse and distribution' is also selected as it is the most conservative option. Therefore, it is a requirement that there is a maximum of 1 No. parking space per 200m<sup>2</sup>.

Section 4.3.5 in Chapter 4 of the EIAR outlines the three main building sizes:

- **MRF 1 2,659m<sup>2</sup>,**
- **MRF 2 1,735m<sup>2</sup>,**
- **MRF 3 4,320m<sup>2</sup>**
- Total: 8,714m<sup>2</sup>

$8,714\text{m}^2 / 200\text{m}^2 = 43.6$  maximum spaces for the proposed development.

This calculation does not include other buildings including the Administration building and workshop. Therefore, the 42 No. parking spaces proposed is within the requirements of Table 14.19 in Section 14.17.7 'Car Parking' of the Fingal County Council County Development Plan 2023 - 2029.



## 2.6.2 Bicycle Parking

The Applicant confirms provision will be made for covered bicycle parking. **24 No. bicycle racks will be provided.** The location of the bicycle parking has been amended from its original location adjacent to the eastern façade of the Administration building to facilitate the movement of the Administration Building and new parking location. The bicycle parking will be located to the south of MRF 1, between MRF1 and the Administration building. Refer to Planning Drawing P21-150-0200-0001 Rev B.

## 2.7 RFI Item Number 1 (iii) Watercourse Culvert

While culverting the section of the watercourse which traverses the site is considered acceptable, it is preferable to retain an open watercourse along the eastern boundary. Clarify if this section of the watercourse is located within the applicant's ownership.

The Applicant will retain an open watercourse along the eastern boundary of the proposed development site as opposed to the original proposal to culvert this section of the watercourse. Refer to Planning Drawings P21-150-0200-0001 Rev B, P21-150-0700-0003 Rev B and P21-150-0700-0003 Rev B. This adjustment is not a material change to the proposed development.

The section of the watercourse to remain open is within the red line boundary and will form part of the purchase agreement with FCC. Refer to Section 2.5.2 of this report for more information on the purchase agreement.

## 2.8 RFI Item Number 1 (iv) Landscape and Boundary Treatment

The use of palisade fencing along a boundary with residential units is not considered acceptable. An alternative proposal is required to screen and protect the amenities of adjoining residents.

As outlined in Section 4.2 Existing Development - Site Security in Chapter 4 of Volume 2 of the EIAR:

*The existing facility is fully enclosed by fencing and comprises fencing atop a concrete wall on the western boundary measuring 4.6 m high, a palisade fence and low wall (3 m high) on the northern boundary, southern and eastern boundaries (2.4 m high).*

As outlined in Section 4.3.5 Proposed Site Infrastructure - Perimeter Fencing and Gate Access in Chapter 4 of Volume 2 of the EIAR, *new palisade fencing (2.4 m in height) will be provided along the western boundary of the site immediately adjacent to MRF 3.*

The existing site is already bounded by palisade fencing, including along the boundary to adjoining residents to the west. The lands to the south of the existing facility are also bounded by palisade fencing to the west along Barn Lodge Grove, to the south and partially along the eastern boundary. This will remain in place as part of the existing and the proposed development. **The proposed development will replace the existing palisade fencing at the site.**

The EPA will require adequate security measures along the site boundary as part of the Industrial Emissions licence, this will typically include the provision of palisade fencing.

The residential area to the southwest of the proposed development site is already screened by a concrete wall. Gable ends connected to this wall do not have windows, therefore this area is screened from the site.

Approximately 30m of new palisade fencing connecting the southwest corner of the existing site to the existing palisade fencing in the expansion area will be visible from the adjoining residents to the west.





The landscaping plan in Appendix 15.2 in Volume 3 of the EIAR will ensure screening will be increased above the current situation along the site boundary at adjoining residents.

## **2.9 RFI Item Number 2 Air and Climate**

With respect to odour impacts, the odour modelling accounts for the impact of the stack along and no account has been taken of odour leakage which will inevitably emit from the proposed 6 no. entry/exit points in the MRF building no. 1, which, notwithstanding the building is proposed to be fitted with fast action roller doors, will remain open for periods of time. Provide a breakdown, based on the volume of traffic using MRF building 1, of the length of time the doors will remain open and calculate odour leakage based on this. Projected odour and air quality modelling shall be updated to have regard to this.

On behalf of the Applicant, AWN Consulting have prepared a response to RFI Item Number 2 and is in Appendix 6.

Updated modelling confirmed that emissions of odour from the facility will remain in compliance with the odour threshold value of 1.5 OUE/m<sup>3</sup> and no nuisance is predicted at nearby sensitive receptors because of the facility.

The impact of the proposed development in relation to odour emissions remains as previously assessed, which is, long-term and not significant.

## **2.10 RFI Item Number 3 (i) Noise and Vibration**

It is noted that the noise modelling is based on several assumptions and embedded design mitigation measures which are required to be implemented to meet the noise limits, for example, the modelling assumes that all plant will operate simultaneously within the building with roller doors closed. You are therefore required to analyse and show workings of breakout noise with all roller doors open i.e. worst case scenario. You are also required to include reference to the length of time doors are expected to remain open of a 24 hr period, having regard to volume of traffic and nature of works/operation procedures.

Provide details of the daytime background noise levels at the respective 4 noise monitoring locations (i.e. in the absence of any activity from the permitted facility).

### **Background Noise Levels**

In response to the RFI, additional daytime background noise monitoring was undertaken by FT on 10/08/2023. Monitoring was undertaken at the same 4 noise monitoring locations as outlined in the EIAR, following the procedure described in Section 12.5 of the EIAR.

Monitoring was undertaken during a period when all Applicant activities/operations were ceased on the site and represents the residual sound.





Results from the baseline survey are shown in Tables 2-2 to 2-5:

**Table 2-2: Baseline Survey Results – Monitoring Location N1**

| Receiver | Monitoring Location N1                       |                           |                    |                   |                                                                                                                                                                                                                                |
|----------|----------------------------------------------|---------------------------|--------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period   | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                                                                                                                                                                       |
|          |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                                                                                                                                                                |
| Daytime  | 10/08/2023 10:24                             | 56                        | 72                 | 53                | Noise from traffic east and south of measurement position, distant M50 noise. Dog barking at the start of first measurement. Impact noise and vehicle movements in Rosemount Business Park to north briefly audible. Birdsong. |
|          | 10/08/2023 10:39                             | 56                        | 62                 | 54                |                                                                                                                                                                                                                                |
|          | 10/08/2023 10:54                             | 56                        | 61                 | 54                |                                                                                                                                                                                                                                |
|          | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 54                |                                                                                                                                                                                                                                |

**Table 2-3: Baseline Survey Results – Monitoring Location N2A**

| Receiver | Monitoring Location N2A                      |                           |                    |                   |                                                                                |
|----------|----------------------------------------------|---------------------------|--------------------|-------------------|--------------------------------------------------------------------------------|
| Period   | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                       |
|          |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                |
| Daytime  | 10/08/2023 09:31                             | 63                        | 68                 | 61                | M50 traffic noise dominant, occasional horn beeps, livestock (horses) audible. |
|          | 10/08/2023 09:46                             | 63                        | 67                 | 62                |                                                                                |
|          | 10/08/2023 10:01                             | 63                        | 68                 | 62                |                                                                                |
|          | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 62                |                                                                                |

**Table 2-4: Baseline Survey Results – Monitoring Location N2B**

| Receiver | Monitoring Location N2B                      |                           |                    |                   |                                                                                |
|----------|----------------------------------------------|---------------------------|--------------------|-------------------|--------------------------------------------------------------------------------|
| Period   | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                       |
|          |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                |
| Daytime  | 10/08/2023 09:30                             | 64                        | 68                 | 63                | M50 traffic noise dominant, occasional horn beeps, livestock (horses) audible. |
|          | 10/08/2023 09:45                             | 64                        | 77                 | 63                |                                                                                |
|          | 10/08/2023 10:00                             | 64                        | 72                 | 63                |                                                                                |
|          | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 63                |                                                                                |



**Table 2-5: Baseline Survey Results – Monitoring Location N4**

| Receiver | Monitoring Location N4                       |                           |                    |                   |                                                                                                                                                               |
|----------|----------------------------------------------|---------------------------|--------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period   | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                                                                                                      |
|          |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                                                                                               |
| Daytime  | 10/08/2023 10:26                             | 69                        | 96                 | 56                | Dog barking during first measurement. M50 noise audible. Birdsong. Local traffic & HGV movements on cul-de-sac, impact noise from private yard on cul-de-sac. |
|          | 10/08/2023 10:41                             | 60                        | 79                 | 57                |                                                                                                                                                               |
|          | 10/08/202310:56                              | 60                        | 79                 | 57                |                                                                                                                                                               |
|          | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 57                |                                                                                                                                                               |

During the survey period, the local sound climate was dominated by road traffic noise, predominately traffic movements on the M50 and surrounding local road network. This baseline noise monitoring undertaken to respond to the RFI request is consistent with the baseline noise survey previously undertaken for the preparation of the EIAR, with differences of only 0-2 dB L<sub>AF90</sub> noted, and is considered representative of the local baseline noise environment. The results of this baseline noise monitoring does not change the outcome of the EIAR. A comparison of the daytime baseline L<sub>AF90</sub> levels are displayed in Table 2-6:

**Table 2-6: Comparison of Baseline Survey Results**

| Location | EIAR Baseline Noise Survey<br>October 2021           | RFI Additional Baseline Noise<br>Survey August 2023  |
|----------|------------------------------------------------------|------------------------------------------------------|
|          | Average Daytime Noise Levels<br>L <sub>AF90</sub> dB | Average Daytime Noise Levels<br>L <sub>AF90</sub> dB |
| N1       | 54                                                   | 54                                                   |
| N2A      | 61                                                   | 62                                                   |
| N2B      | 65                                                   | 63                                                   |
| N4       | 55                                                   | 57                                                   |

### Noise Modelling

The noise model in the EIAR assumed that all plant will operate simultaneously within the buildings with roller doors closed. As part of the RFI, the Applicant has been requested to consider breakout noise with all roller doors open. This is not considered representative of the potential noise emissions from the site. In practice, the roller doors will be closed for most of the time. Keeping roller doors closed is standard practice for odour and noise management from waste facilities and is a standard requirement of Industrial Emissions Licences.

Consequently, noise modelling has been carried out for two scenarios, in response to the RFI:

- Roller doors open 100% of the time.
- Likely length of time roller doors will be open to allow vehicle ingress and egress.



This noise modelling also takes account of following amendments:

#### Amended Site Layout

The site layout has been amended to allow safer vehicle access and egress, and to further reduce noise emissions from site. The amended site layout is shown in Planning Drawing P21-150-0200-0001 Rev B and described in Section 2.16. The main changes that affect noise emissions from the amended site layout are:

- The maintenance building has been moved approximately 21m to the east to allow safe access and egress of vehicles, this also increases the separation distance from sensitive receptors.
- The truck wash has been moved to the east of the maintenance building to allow safer access and egress of vehicles. The maintenance building will provide noise screening for the truck wash for the residential properties west of the site.
- The layout of the skip storage area has been amended. Roller skips will be stored in the space along the west of the site and the drop skips to the east of site, closest to the M50. This change has been implemented to further reduce noise emissions from skip activities.

#### Operational Hours

- The Maintenance Building will only operate during daytime hours (07:00hrs to 19:00hrs). The noise model presented in the EIAR assumed the maintenance building will operate for 24hrs/day.
- Skip movements in the skip storage area will only occur between 08:00hrs to 20:00hrs. The noise model presented in the EIAR assumed skip movements would occur 24hrs/day.

Noise predictions have been carried out according to International Standard ISO 9613-2: 1996 *Acoustics - Attenuation of sound during propagation outdoors – Part 2: General Method of calculation* using *Softnoise Predictor-LimA* computational noise modelling software.

Section 12.6.3 of the EIAR summarised the detailed prediction methodology and operational assumptions for the proposed development. This includes operational assumptions for plant, sound power data, building dimensions and building envelope sound insulation performance, including roller shutter doors. The building dimensions have been provided on building elevation drawings accompanying the original planning submission. The sound insulation properties of building elements modelled is provided in Table 12-19 of the EIAR.

The noise source details, and sound power levels displayed in Table 12-17 and Table 12-18 of the EIAR have been used in this model, along with the revised operational hours and site layout, as described above. The amended site layout is displayed in drawing Planning Drawing P21-150-0200-0001 Rev B.

#### **Scenario 1: Roller doors open 100% of the time.**

Predicted operational noise levels for this scenario, i.e. roller doors open for 100% of the time were calculated at the 21 no. residential receptor locations and assessed against operational noise criteria described in Section 12.4.2 of the EIAR. As previously noted, there are several commercial buildings in the vicinity of the development, and these have not been considered as Noise Sensitive Locations (NSLs). All dwellings within the study area are bungalows/cottages and receptor heights of 1.5 m were assumed. Operational noise levels at the closest residential receptors with roller doors open 100% of the time are displayed in Table 2-7:



**Table 2-7: Predicted Operational Noise Levels - Roller Doors Open 100%**

| Receptor ID | Predicted Noise Levels (L <sub>Aeq,30min</sub> ) |               |         |               |            |                  |
|-------------|--------------------------------------------------|---------------|---------|---------------|------------|------------------|
|             | Daytime                                          | Daytime Limit | Evening | Evening Limit | Night-time | Night-time Limit |
| R1          | 57                                               | 55            | 46      | 50            | 42         | 45               |
| R2          | 57                                               | 55            | 46      | 50            | 42         | 45               |
| R3          | 58                                               | 55            | 46      | 50            | 42         | 45               |
| R4          | 58                                               | 55            | 46      | 50            | 42         | 45               |
| R5          | 62                                               | 55            | 49      | 50            | 43         | 45               |
| R6          | 62                                               | 55            | 50      | 50            | 45         | 45               |
| R7          | 60                                               | 55            | 47      | 50            | 42         | 45               |
| R8          | 58                                               | 55            | 47      | 50            | 43         | 45               |
| R9          | 56                                               | 55            | 45      | 50            | 41         | 45               |
| R10         | 56                                               | 55            | 46      | 50            | 42         | 45               |
| R11         | 55                                               | 55            | 45      | 50            | 41         | 45               |
| R12         | 54                                               | 55            | 44      | 50            | 41         | 45               |
| R13         | 54                                               | 55            | 44      | 50            | 40         | 45               |
| R14         | 53                                               | 55            | 44      | 50            | 41         | 45               |
| R15         | 47                                               | 55            | 37      | 50            | 34         | 45               |
| R16         | 46                                               | 55            | 36      | 50            | 34         | 45               |
| R17         | 47                                               | 55            | 36      | 50            | 34         | 45               |
| R18         | 45                                               | 55            | 36      | 50            | 33         | 45               |
| R19         | 45                                               | 55            | 36      | 50            | 33         | 45               |
| R20         | 44                                               | 55            | 35      | 50            | 32         | 45               |
| R21         | 41                                               | 55            | 34      | 50            | 30         | 45               |

The results with doors open 100% of the time show that the daytime limit is exceeded at 10 of the 21 no. receptors, by up to 7dB. The properties where the exceedance occurs includes six properties southwest of the site and four properties west of the site. The evening and night-time limits are met at all receptors.

As previously outlined, this operational scenario will never occur during the operation of the proposed development. Keeping roller doors closed is standard practice for odour and noise management from waste facilities and is a standard requirement of Industrial Emissions Licences.

#### Scenario 2: Likely length of time roller doors will be open to allow vehicle ingress and egress

The length of time the fast action roller doors are expected to be open over a 24 hr period, having regard to volume of traffic and nature of the operations has been estimated using information provided by the Applicant. This information was obtained from the operation of a similar facility.



Fast action roller shutter doors are open for:

- 1 minute and 12 seconds to allow an artic lorry to reverse into a building;
- 50 seconds to allow an artic lorry driving out of building;
- 45 seconds to allow a Rear End Loader (REL) reverse into building;
- 46 seconds to allow a REL driving out of building.

To provide a conservative worst-case assessment, it has been assumed that ingress and egress of all vehicles to/from buildings will take **2 minutes and 2 seconds** (or 122 seconds) per vehicle (i.e. ingress and egress times of all vehicles has been assumed as artic lorry's).

The estimated number of two-way vehicle movements into and out of buildings (ingress & egress) over a typical 24hr working day is shown in Table 2-8:

**Table 2-8: Daily Vehicle Ingress and Egress**

| Period                      | Vehicle Ingress and Egress (No.) |      |      |             |
|-----------------------------|----------------------------------|------|------|-------------|
|                             | MRF1                             | MRF2 | MRF3 | Maintenance |
| Daytime<br>(07:00 to 19:00) | 117                              | 3    | 6    | 25          |
| Evening<br>(19:00 to 23:00) | 1                                | 1    | 0    | N/A         |
| Night<br>(23:00 to 07:00)   | 26                               | 1    | 2    | N/A         |

Based on the number of vehicle movements and roller shutter opening/closing times above, the calculated amount of time that roller doors will remain open during a typical working day are displayed in Table 2-9, rounded up to the nearest minute:

**Table 2-9: Estimated Roller Door Opening Times**

| Period               | Vehicle Movements | Time Roller Doors Open<br>(hh:mm) |
|----------------------|-------------------|-----------------------------------|
| Day (07:00 to 19:00) | MRF1 (C&D): 117   | (117x122s=14,274s)<br>03:58       |
|                      | MRF2 (Storage): 3 | (3x122s=366s)<br>00:07            |
|                      | MRF3 (MSW) :6     | (6x122s=732s)<br>00:13            |
|                      | Maintenance: 25   | (25x122s=3,050s)<br>00:51         |



| Period                   | Vehicle Movements | Time Roller Doors Open (hh:mm) |
|--------------------------|-------------------|--------------------------------|
| Evening (19:00 to 23:00) | MRF1 (C&D): 1     | (1x122s=122s)<br>00:03         |
|                          | MRF2 (Storage): 1 | (1x122s=122s)<br>00:03         |
|                          | MRF3 (MSW): 0     | 00:00                          |
| Night (23:00 to 07:00)   | MRF1 (C&D): 26    | (26x122s=3,172s)<br>00:53      |
|                          | MRF2 (Storage): 1 | (1x122s=122s)<br>00:03         |
|                          | MRF3 (MSW):2      | (2x122s=244s)<br>00:05         |

An operational noise model has been prepared for this scenario, using the likely length of time roller doors will be open to allow vehicle ingress and egress. Operational noise levels at the 21 closest receptors is outlined in Table 2-10:

**Table 2-10: Predicted Operational Noise Levels - Likely length of time roller doors will be open to allow vehicle ingress and egress**

| Receptor ID | Predicted Noise Levels ( $L_{Aeq,30min}$ ) |               |         |               |            |                  |
|-------------|--------------------------------------------|---------------|---------|---------------|------------|------------------|
|             | Daytime                                    | Daytime Limit | Evening | Evening Limit | Night-time | Night-time Limit |
| R1          | 51                                         | 55            | 45      | 50            | 41         | 45               |
| R2          | 51                                         | 55            | 46      | 50            | 42         | 45               |
| R3          | 51                                         | 55            | 46      | 50            | 42         | 45               |
| R4          | 51                                         | 55            | 46      | 50            | 41         | 45               |
| R5          | 54                                         | 55            | 48      | 50            | 44         | 45               |
| R6          | 55                                         | 55            | 50      | 50            | 45         | 45               |
| R7          | 52                                         | 55            | 47      | 50            | 42         | 45               |
| R8          | 52                                         | 55            | 47      | 50            | 43         | 45               |
| R9          | 50                                         | 55            | 45      | 50            | 41         | 45               |
| R10         | 51                                         | 55            | 46      | 50            | 42         | 45               |
| R11         | 50                                         | 55            | 45      | 50            | 41         | 45               |
| R12         | 49                                         | 55            | 44      | 50            | 40         | 45               |
| R13         | 48                                         | 55            | 43      | 50            | 40         | 45               |
| R14         | 48                                         | 55            | 43      | 50            | 39         | 45               |
| R15         | 42                                         | 55            | 36      | 50            | 34         | 45               |



| Receptor ID | Predicted Noise Levels (L <sub>Aeq,30min</sub> ) |               |         |               |            |                  |
|-------------|--------------------------------------------------|---------------|---------|---------------|------------|------------------|
|             | Daytime                                          | Daytime Limit | Evening | Evening Limit | Night-time | Night-time Limit |
| R16         | 41                                               | 55            | 36      | 50            | 34         | 45               |
| R17         | 41                                               | 55            | 36      | 50            | 33         | 45               |
| R18         | 40                                               | 55            | 35      | 50            | 33         | 45               |
| R19         | 40                                               | 55            | 35      | 50            | 33         | 45               |
| R20         | 40                                               | 55            | 35      | 50            | 32         | 45               |
| R21         | 39                                               | 55            | 34      | 50            | 30         | 45               |

The revised noise modelling results using the likely length of time roller doors will be open to allow vehicle ingress and egress predicted that the noise limits will be **met at all Noise Sensitive Locations for Daytime, Evening and Night-time periods.**

In the EIAR noise modelling, the maintenance building was the dominant noise source during evening and night-time. As the maintenance building will not be operating during evening or night-time, noise emissions from this activity are prevented during the most sensitive periods.

## 2.11 RFI Item Number 3 (ii) Noise and Vibration

Table 12-14 of the EIAR is titled Extract from Existing Waste Facility Environmental Noise Monitoring Reports 2020-2022. Provide a summary of monitoring times/days and clarify if this represents the ambient sound (i.e. residual sound and specific sound from existing operations at the site).

The monitoring results provided in Table 12-14 of the EIAR were taken during typical site operations and represent the ambient sound. The individual monitoring reports were submitted by the Applicant to Fingal County Council, in accordance with the requirements of the existing Waste Facility Permit.

A summary of the times and days of monitoring is presented below:

| Year | Monitoring Date & Times |
|------|-------------------------|
| 2020 | 01/10/2020 14:00-16:04  |
| 2021 | 15/10/2021 09:54-11:16  |
| 2022 | 15/08/2022 15:02-16:27  |



## 2.12 RFI Item Number 3 (iii) Noise and Vibration

Table 12-18 indicates the sound power levels of noise sources across the octave band frequency. It is not clear, however, how these levels are translated to the calculations set out in Table 12-20, Predicted Operational Noise Levels. You are requested to provide additional data/an explanation indicating, based on the sound power levels, as to how the figures in Table 12-20 are derived.

A computational noise model was developed for the site using *Softnoise Predictor* noise modelling software, using the ISO 9613 prediction methodology, as detailed in Section 12.6.3 of the EIAR. The noise source sound power levels in Table 12-18 of the EIAR were input into the noise model. Internal and external noise sources in the model were detailed in Table 12-17 of the EIAR, including the number of sources, hours of operation, location and source of data. The building dimensions used in the model have been provided on building elevation drawings accompanying the original planning submission. The assumed sound insulation performance of building elements used in the model has also been provided in Table 12-19. Table 12-20 of the EIAR summarizes the calculated free-field specific noise levels at the 21 closest noise sensitive locations, which are the output of the noise model with doors closed.

This process has been repeated in the response to item 3 (i) of the RFI for the following scenarios:

- Doors open 100% of the time, and;
- Likely length of time roller doors will be open to allow vehicle ingress and egress.

## 2.13 RFI Item Number 3 (iv) Noise and Vibration

Clarify if noise associated with the loading and depositing of skips in the skip storage area adjacent to the residential site boundary is included in the noise assessment and what noise if any, this would generate. Indicate if skips would be stacked in the storage area. Having regard to the proximity of residential properties in the vicinity of the skip storage area a greater separation distance is justified.

The Applicant has confirmed that skips will only be moved during the hours 8:00hrs to 20:00hrs. Therefore, there will be skip movements for one hour of the evening period and no skip movements during night time hours. This is a change to the assumptions in the original EIAR and has been captured in the updated noise modelling undertaken as part of this RFI.

Noise modelling has been carried out in accordance with the best practice guidance contained in BS5228 "*Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*". Skip Wagon waste delivery to the site and idling of HGVs has been included in the model using BS5228 reference data, as detailed in Table 12-17 of the EIAR. This is considered best practice and representative of the potential noise emissions from proposed operations in the storage area.

Small skips such as mini, midi and standard skips will be stacked in the storage area up to a maximum height of 10 skips during daytime. Stacking of skips is a common waste management practice.

As previously outlined, the separation distance of drop skips from the closest NSLs has been increased. Roller skips will be stored in the space along the west, closest to the residential properties and the drop skips to the east closest to the M50, as outlined on the accompanying amended site layout drawing Planning Drawing P21-150-0200-0001 Rev B. Roller skips are significantly quieter than drop skips.





## 2.14 RFI Item Number 3 (v) Noise and Vibration

Clarify whether the noise modelling accounts for reversing vehicles. The noise modelling should have regard to noise emanating from reversing vehicles.

Noise modelling has been carried out in accordance with the guidance contained in British Standard BS5228 "Code of practice for noise and vibration control on construction and open sites – Part 1: Noise". BS5228 is widely accepted as best practice acoustic guidance for construction and open sites in the UK and Ireland.

Noise emissions from vehicle movements and vehicles idling has been included using the reference data provided in the standard. The standard does not provide source data specifically for reversing beacons of machinery and draws attention to regulatory requirements contained in Health & Safety legislation in respect of reversing warning systems, which require adequate audible warning systems and a duty on operators to operate a safe working system.

The standard also notes the below:

*"The use of conventional audible reversing alarms has caused problems on some sites and alternatives are available. Audible reversing warning systems on mobile plant and vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites. When reversing, mobile plant and vehicles should travel in a direction away from NSPs whenever possible. Where practicable, alternative reversing warning systems should be employed to reduce the impact of noise outside sites."*

Noise modelling accounts for the source noise data detailed in Table 12-17 of the EIAR and amendments outlined in the response to item 3(i). Source data includes BS5228 reference noise data and does not specifically include reversing beacons. As far as reasonably practicable, the noise from reversing alarms will be controlled or limited. It is proposed to use flat spectrum 'white noise' alarms on vehicles where possible. The site layout has been designed to minimise the need for reversing and Banksmen will be utilised to avoid so far as reasonably practicable the use of reversing alarms. The noise modelling has been undertaken in accordance with best practice guidance and is considered representative of proposed operations. No additional noise impacts from reversing vehicles are considered likely.

## 2.15 RFI Item Number 4 Development Plan Objectives RE Roads/Transport

The Fingal Development Plan 2023-2029, Sheet no. 17 "Connectivity and Movement", indicates a proposed Luas extension running along the western boundary of the site, along Barn Lodge Gove, and onto which it is proposed to retain a vehicular entrance. In addition, Sheet no 17. also indicates a light rail corridor to the north along Ballycoolin Road, across which traffic to and from the site would cross to gain access to the site. Having regard to the foregoing, you are invited to update the Transport Assessment to take account of the connectivity and movement objectives as indicated on sheet 17 of the development plan.



Fingal Development Plan 2023-2029 came into effect on 05/04/2023. Section 6.5.7 'Public Transport' states the following with respect to bus, and light rail projects:

"Fingal is set to benefit from major rail and bus projects such as MetroLink, BusConnects and DART+ and LUAS Expansion under the National Development Plan 2021–2030. These projects are identified as key growth enablers for Fingal in the NPF and will significantly increase capacity and allow more services to operate across the region, facilitating Fingal's vision for compact growth and sustainable mobility, serving key destinations and facilitating opportunities along the route for high-density residential development, mixed-use and employment generating activities. These projects combined with enhanced walking and cycling facilities have the potential over the coming years to have a transformative impact on travel by shifting the dominance of car-based transport towards public transport."

#### 2.15.1 LUAS Green Line Extension

The indicated LUAS extension is identified in Fingal Development Plan 2023- 2029, Sheet 17 as a '*Specific Objective*' and is a '*Proposed Luas Extension*'. LUAS extensions are not detailed in the written plan save for reference to Section 48 and 49 contributions.

The Greater Dublin Area Transport Strategy 2022-2042 identifies an alignment which is similar or may be the same in Figure 12.10 '*Post-2042 Combined Rail Network*' which includes a LUAS Green Line extension to Tyrrelstown, located to the north-west of the Dublin Enterprise Zone. GDA Transport Strategy Measure LRT6 – '*Post 2042 Luas Lines*' sets out that the National Transport Authority (NTA) plans to undertake detailed appraisal, planning and design work for the LUAS Green Line extension to Tyrrelstown with a view to it being delivered sometime after 2042.

In terms of timescale the delivery of the current development plan specific objective with respect to the indicative line of the LUAS Green Line extension running along the western boundary of the site will not be realised within the period of the current development plan nor the next or the one after. Based upon the objectives of the Greater Dublin Area Transport Strategy 2022-2042 it appears reasonable to estimate that the earliest timescale for the delivery for the LUAS Green Line extension to Tyrrelstown would be in the future development plan period 2041-2047.

The proposed development includes the retention of an access on the western boundary of the site. This access is intended for emergency access / access to services. It is currently proposed that the access and its intended function and utility to the safe and efficient operation of the development will be enjoyed by the developer at least for the 20+ years or so it will take the LUAS Green Line extension to be delivered. The Applicant has no objection to a condition of planning requiring the existing access to be closed and respectfully suggests that if such a condition were considered appropriate that the closure of the access would be specifically contingent on the LUAS Green Line extension works going ahead.

#### 2.15.2 Light Rail Corridor

Fingal Development Plan 2023-2029, Sheet 17 indicates as a '*Specific Objective*' a light rail corridor to the north of the site which is shown to generally follow the alignment of the Ballycoolin Road. We can find no reference to the light rail corridor in the written plan.



The light rail corridor alignment appears to reflect the '*Emerging Preferred Route*' (2009) of the Metro-West project which generally followed the alignment of the Ballycoolin Road in the vicinity of the development site and which included for a future proposed stop at Cappogue close to the development site. It is our understanding that the Minister for Transport suspended the planning process for the Metro-West development. The Metro-West plan, first announced in 2005, is understood to have been cancelled in 2011 due to a lack of funding and in 2016 it was excluded from the Transport Strategy for the Greater Dublin Area 2016-2035. Metro-West is not included in the Greater Dublin Area Transport Strategy 2022-2042.

It is not clear from Fingal Development Plan 2023-2029 what specific light rail objective is identified along the corridor of the Ballycoolin Road. Given that this corridor is not identified in the GDA Transport Strategy it would seem reasonable to presume that planning for a light rail scheme along this corridor would not commence before 2042 and so delivery of the project could be expected to be some years later, perhaps post 2050.

Were a light rail corridor along the Ballycoolin Road to be realised sometime in the future it would no doubt have a direct effect on the operation of every access and junction along the Ballycoolin Road including the access to the significant zoned lands of the Dublin Enterprise Zone both north and south of the Ballycoolin Road. The Ballycoolin Road, Cappagh Road and road network serving the Dublin Enterprise Zone are specifically designed to accommodate traffic with the characteristics of the existing and proposed development. The design of any future light rail scheme along the Ballycoolin Road would be required to consider and accommodate traffic crossing the rail line including traffic arising at Premier Business Park, Cappogue Industrial Park, Stadium Business Park, Rosemount Business Park etc. all of which generate heavy commercial traffic. It is reasonable that in considering the objective of a light rail corridor that the Fingal Development Plan 2023-2029 would have considered the compatibility of such an objective in the context of the zoning objectives of the plan.

An at-grade light rail service along the Ballycoolin Road would likely have an effect upon the operation of the signal-controlled crossroad junction serving Premier Business Park and Stadium Business Park opposite. At-grade light rail infrastructure would require a comprehensive reconfiguration of the existing junction so much so that a potential layout can only be imagined.

The proposition put forward in the Request for Further Information is that site traffic would have to cross the rail corridor to access the greater road network. It is accepted that development traffic would cross the corridor, but it is not known whether the light rail service will be, at-grade, or grade separated either underground or elevated, so it is feasible that site traffic might not interact with rail traffic at the Premier Business Park junction at all.

Given the absence of detail for the rail corridor it is not possible to provide a meaningful assessment of the interaction of development traffic with the rail infrastructure. Were it assumed that the rail corridor would be at-grade and were the Premier Business Park junction to continue to be signal-controlled and to include the same number of traffic lanes, then it would be reasonable to expect that development traffic would experience increased geometric delay since the junction would need to be enlarged to accommodate the extra movement of rail traffic. Some additional intermittent delay would also arise directly from the light rail service passing through or using the junction. Such delay would be proportional to the frequency of rail service, length of the trains/trams, etc.

**Chapter 13 'Traffic and Transportation' in Volume 2 of the EIAR submitted with the planning application and the transport assessments therein have been carried out in accordance with relevant local government policy and in accordance with national guidelines and standards of best practice. In completing the transport assessment reference has been made to Transport Infrastructure Ireland (TII) (May 2014) 'Traffic and Transport Assessment Guidelines'.**



The guidelines advise the following with respect to 'Traffic Forecasting':

- *"The assessment should incorporate an analysis of the road network traffic flows for the base year, opening year and forecast scenarios. The required modelling scenarios are summarised as follows:*
- *Base Year.*
- *Opening Year (With / Without Development).*
- *Opening Year + 5 Year Forecast (With / Without Development).*
- *Opening Year + 15 Year Forecast (With / Without Development)."*

Opening Year is assumed for the purposes of the EIAR transport assessment to be 2025 whilst the Design Year is 2040.

As set out earlier given that this rail corridor is not identified in the GDA Transport Strategy 2022-2042, planning of the rail project cannot be expected to commence before 2042 and delivery of the project in that case would likely be post 2050. To put these timescales in context with respect to transport assessment and traffic modelling, the Transport Infrastructure Ireland (TII) forecast growth rates published in TII-PE-PAG-02017 'Unit 5.3 – Travel Demand Projections' only covers the period 2016-2050.

The timescale for the light rail corridor is not set at all but it is reasonably expected to be significantly beyond the traffic modelling horizon of the EIAR transport assessments.

In the absence of meaningful detail regarding the rail corridor infrastructure and given the relative timescales it is respectfully suggested that an update to the EIAR transport assessments is not warranted.

National policies and initiatives aim to change travel behaviour and there is an investment program structured to provide a transportation system that supports such change. The delivery of an extension of the LUAS Green Line and perhaps a light rail network along the Ballycoolin Road would bring significant transport benefits to the Dublin Enterprise Zone and would inherently benefit the transportation environment of the existing and proposed development by expanding the public transport offer available to employees and visitors to the Dublin Enterprise Zone. The physical infrastructure for light rail would conversely increase delay to road traffic and reduced network capacity.

## 2.16 RFI Item Number 5 (i) Other

Submit a revised site layout plan which increases the separation distance of the proposed vehicle wash structure from Barn Lodge Grove, to allow for adequate landscaping and buffer.

Planning Drawing P21-150-0200-0001 Rev B has been updated to increase the separation distance of the proposed vehicle wash structure from Barn Lodge Grove by approximately 52m.

Updated planning drawings are included under separate cover to this submission.

The vehicle wash is now located to the east of the workshop, so it is further screened from Barn Lodge Grove. The workshop and bunded fuel tank have been relocated approximately 21m further east from Barn Lodge Grove, and the location of the fire pump has been adjusted to facilitate the movement of vehicles at the workshop, fuel tank and vehicle wash structure.

This adjustment is not a material change to the proposed development.



## 2.17 RFI Item Number 5 (ii) Other

There is an existing manhole and services infrastructure at the location of the proposed workshop which is not indicated on existing or proposed infrastructure drawings. Please clarify and update drawings as necessary.

Planning Drawing P21-150-0700-0002 Rev B has been updated to include 3 No. existing manholes and storm sewer at the location of the proposed workshop. Photographs of the manholes are also included on the drawing. The proposed development will not impact these locations.

Updated planning drawings are included under separate cover to this submission.

## 2.18 RFI Item Number 6 EIAR

Having regard to the concerns raised above, you shall amend and update the EIAR, by way of an addendum, as necessary.

An updated EIAR, by way of an addendum, is provided in Appendix 4. Appendices in support of the EIAR and Appropriate Assessment Screening Report submitted as part of the planning application for the proposed development are also included in the addendum for completeness.

No significant information that materially alters the intended design of the proposed development, proposed construction phase works or proposed waste management activities on-site during the operational phase of the proposed development has been provided. The information provided does not alter the proposed development in a manner that changes the nature, character or magnitude of potential environmental impacts associated with the proposed development.

The following chapters, appendices and reports of the EIAR/made in support of the planning application for the proposed development have been updated as part of the addendum:

- Chapter 1 - Introduction
- Chapter 4 - Existing and Proposed Development
- Chapter 6 - Scoping and Consultation
- Chapter 9 - Soils, Geology and Hydrogeology
- Chapter 10 - Hydrology and Surface Water Quality
- Chapter 11 - Air Quality
- Chapter 12 - Noise and Vibration
- Chapter 16 - Inter-relationships and Interactions
- Chapter 17 - Schedule of Commitments
- Appropriate Assessment Screening Report
- Volume 3 of the EIAR - Appendices - Appendix 4.2 Construction Environmental Management Plan





### 3. NOTIFICATION OF APPLICATION TO NTA

Please be advised that the Board hereby requires you to notify the National Transport Authority (NTA) of this application for the following reasons:

1. The Fingal Development Plan 2023-2029, sheet no. 17 "Connectivity and Movement", indicates a proposed Luas extension running along the western boundary of the site along Barn Lodge Gove, on which it is proposed to retain a vehicular entrance.
2. Sheet no 17. also indicates a light rail corridor to the north along Ballycoolin Road, across which traffic to and from the site would cross to gain access to the site.

You are required to provide 4 weeks from the date of notification for the NTA to make any submission/observations to the Board in relation to the application.

FT can confirm the NTA were notified of the application via email on 14/07/2023. A copy of the notification is provided in Appendix 2.

As requested by ABP, a period of four weeks from the date of notification was given to the NTA to allow submissions/observations to be made. The deadline date was 11/08/2023.

On 07/09/2023, ABP confirmed no submission was received from the NTA in relation to this planning application.



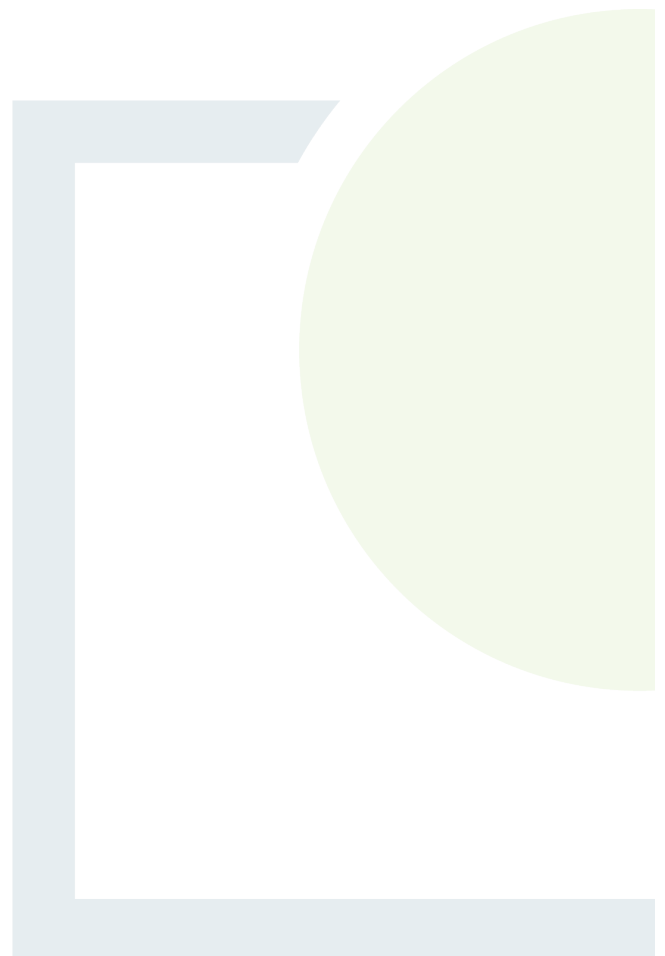




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## APPENDIX 1

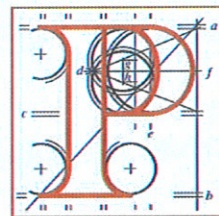
Request for Further  
Information





**Our Case Number:** ABP-315257-22

**Your Reference:** Padraig Thornton Waste Disposal Ltd.



An  
Bord  
Pleanála

Fehily Timoney and Company  
c/o Richard Deeney  
J5 Plaza  
North Park Business Park  
North Road  
Dublin 11  
D11 PXT0

**FEHILY TIMONEY & Co.**

Distribution

BG / RD

12 JUL 2023

Job No:

P 21-150

Correspondence No:

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Comment:

**Date:** 06 July 2023

**Re:** Proposed expansion of Materials Recovery Facility to process up to 300,000 tonnes per annum at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address that fall across both the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

Dear Sir / Madam,

I have been asked by An Bord Pleanála to refer further to the above mentioned proposed development which is before the Board for consideration.

Please be advised that the Board, in accordance with section 37(F)(1) of the Planning and Development Act, 2000, as amended, hereby requires you to **furnish the following further information** in relation to the effects on the environment of the proposed development:

**1. Submissions Received**

All submissions received by An Bord Pleanála in relation to this case have been previously forwarded to yourselves. You are invited to make a detailed response to each of submissions, including those from third parties. The response above shall have particular regard to the following matters:

**(i) TII**

- (i) M50 culvert: The TII, in its submission, dated 20<sup>th</sup> January 2023, require a specific review of the potential impact on the M50 culvert and that appropriate mitigation should be undertaken in consultation with TII's Structures Section. The response should be supported by revised drawings and documentation for both construction and operation phases of the proposed development.
- (ii) EIAR Scoping: Noting that the TII's scoping correspondence was not referenced in the EIAR, acknowledge and address issues contained therein.

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## (ii) Fingal County Council

- (i) Hours of operation: FCC have requested that the hours of operation are maintained as permitted (i.e. 07.00-19.00 Monday to Friday and 08.00-16.00 Saturdays, closed at other times). Your views in this regard are invited.
- (ii) Access and transportation:
  - Junction capacity: Clarify if the Transport Assessment was carried out utilising two-way trips. In the event that hours of operation remain as permitted (as opposed to 24/7 as sought by the applicant) you are requested to assess the impact of operations on the local road network including junctions.
  - Access: the applicant is intending to retain the existing access point and provide a new access which is located to the south of the existing and suggests that the internal layouts should be reconsidered to provide segregation of staff/visitor traffic, pedestrian and cyclists from HGV movements and parking. Additional mitigation measures should be provided to ensure that car parking and HGV turning manoeuvres are separated with adequate pedestrian routes and crossing points. The applicant should amend the layout so that the proposed new vehicular entrance is restricted to serve HGVs only and the existing entrance serve cars, pedestrians and cyclists. Revised detailed plans should also include how the new access and crossover of the existing footpath and cycle track would occur. Clarify if these crossover works are outside land in your ownership and submit revised site boundary plans as necessary and any associated permissions.
  - Excessive parking provision: 37 no. car parking spaces are proposed while it is estimated that 24 no. staff will be employed. Justify the parking requirement having regard to section 14.17.7 'Car Parking' of the Development Plan. Provision should also be made for covered bicycle parking. Any revised site layout plan should have regard to the foregoing.
- (iii) Watercourse culvert: while culverting the section of watercourse which traverses the site is considered acceptable, it is preferable to retain an open watercourse along the eastern boundary. Clarify if this section of the watercourse is located within the applicant's ownership.
- (iv) Landscape and boundary treatment: The use of palisade fencing along a boundary with residential units is not considered acceptable. An alternative proposal is required to screen and protect the amenities of adjoining residents.

## 2. Air and Climate

With respect to odour impacts, the odour modelling accounts for the impact of the stack alone and no account has been taken of odour leakage which will inevitably emit from the proposed 6 no. entry/exit points in the MRF building no. 1, which, notwithstanding the building is proposed to be fitted with fast action roller doors, will remain open for periods of time. Provide a breakdown, based on the volume of traffic using MRF building 1, of the length of time the doors will remain open and calculate odour leakage based on this. Projected odour and air quality modelling shall be updated to have regard to this.

## 3. Noise and Vibration

It is noted that the noise modelling is based on several assumptions and embedded design mitigation measures which are required to be implemented to meet the noise limits, for example, the modelling assumes that all plant will operate simultaneously within the buildings with roller doors closed. You are therefore required to analyse and show workings of breakout noise with all roller doors open i.e. worst case scenario. You are also required to include reference to the length of time doors are expected to remain open over a 24 hr period, having regard to volume of traffic and nature of works/operation procedures.

- (i) Provide details of the daytime background noise levels at the respective 4 noise monitoring locations (i.e. in the absence of any activity from the permitted facility).



- (ii) Table 12-14 of the EIAR is titled Extract from Existing Waste Facility Environmental Noise Monitoring Reports 2020 – 2022. Provide a summary of monitoring times/days and clarify if this represents the ambient sound (i.e residual sound and specific sound from existing operations at the site).
- (iii) Table 12-18 indicates the sound power levels of noise sources across the octave band frequency. It is not clear, however, how these levels are translated to the calculations set out in Table 12-20, Predicted Operational Noise Levels. You are requested to provide additional data/an explanation indicating, based on the sound power levels, as to how the figures in Table 12-20 are derived.
- (iv) Clarify if noise associated with the loading and depositing of skips in the skip storage area adjacent to the residential site boundary is included in the noise assessment and what noise, if any, this would generate. Indicate if skips would be stacked in the storage area. Having regard to the proximity of residential properties in the vicinity of the skip storage area a greater separation distance is justified.
- (v) Clarify whether the noise modelling accounts for reversing vehicles. The noise modelling should have regard to noise emanating from reversing vehicles.

#### **4. Development Plan Objectives re roads/transport**

The Fingal Development Plan 2023-2029, Sheet no. 17 Connectivity and Movement, indicates a proposed Luas extension running along the western boundary of the site, along Barn Lodge Gove and onto which it is proposed to retain a vehicular entrance. In addition, Sheet no. 17 indicates a light rail corridor to the north along Ballycoolin Road, across which traffic to and from the site would cross to gain access to the site. Having regard to the foregoing, you are invited to update the Transport Assessment to take account of the connectivity and movement objectives as indicated on sheet 17 of the development plan.

#### **5. Other**

- (i) Submit a revised site layout plan which increases the separation distance of the proposed vehicle wash structure from Barn Lodge Grove, to allow for adequate landscaping and buffer.
- (ii) There is an existing manhole and services infrastructure at the location of the proposed workshop which is not indicated on existing or proposed infrastructure drawings. Please clarify and update drawings as necessary.

#### **6. EIAR**

Having regard to the concerns raised above, you shall amend and update the EIAR, by way of an addendum, as necessary.

The further information referred to above should be received by the Board within 8 weeks from the date of this notice (i.e. no later than 5.30 p.m. on Thursday 31<sup>st</sup> August 2021)

In this regard, please submit 3 hard copies and one electronic copy of the above information.

Please note that following its examination of any information lodged in response to this request for additional information, the Board will then decide whether or not to invoke its powers under section 37(F)(2) of the Planning and Development Act, 2000, as amended, requiring you to publish notice of the furnishing of any additional information and to allow for inspection or purchase of same and the making of further written submissions in relation to same to the Board.

If you have any queries in relation to the matter, please contact the undersigned officer of the Board.

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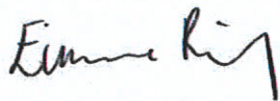
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D01 V902

64 Marlborough Street  
Dublin 1  
D01 V902



Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,



---

Eimear Reilly  
Executive Officer  
Direct Line: 01-8737184

PA11

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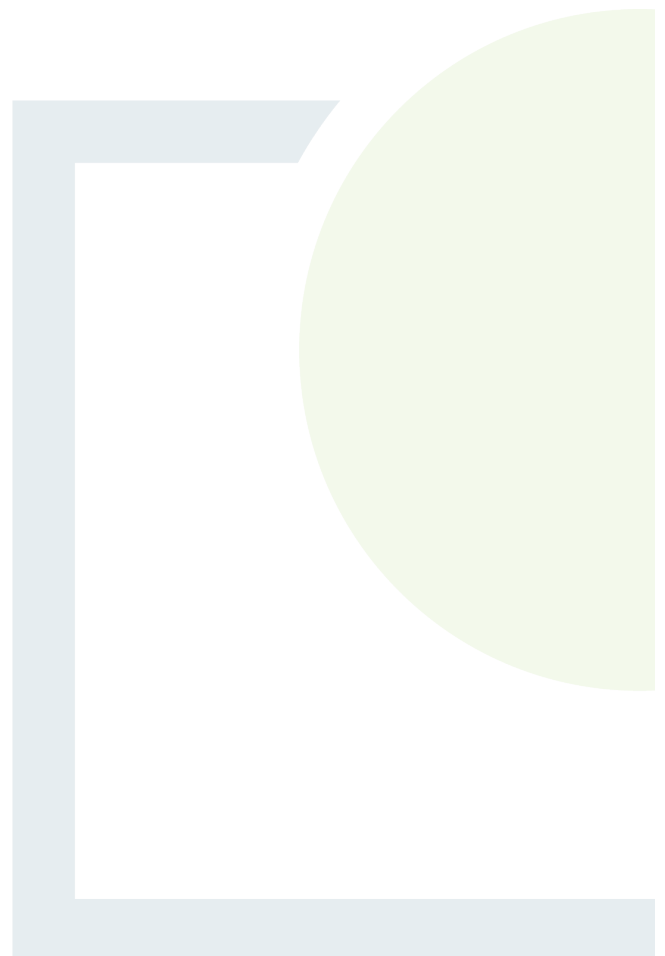
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## APPENDIX 2

Request for Consultation  
with NTA

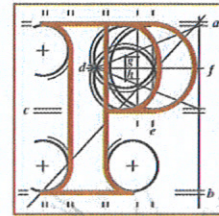






**Our Case Number:** ABP-315257-22

**Your Reference:** Padraig Thornton Waste Disposal Ltd.



**An  
Bord  
Pleanála**

Fehily Timoney and Company  
c/o Richard Deeney  
J5 Plaza  
North Park Business Park  
North Road  
Dublin 11  
D11 PXT0

**Date:** 6<sup>th</sup> July, 2023

**Re:** Proposed expansion of Materials Recovery Facility to process up to 300,000 tonnes per annum at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address that fall across both the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

Dear Sir / Madam,

I have been asked by An Bord Pleanála to refer further to the above-mentioned proposed development which is before the Board for consideration.

Please be advised that the Board hereby requires you to notify the National Transport Authority (NTA) of this application for the following reasons:

1. The Fingal Development Plan 2023-2029, sheet no. 17 "Connectivity and Movement", indicates a proposed Luas extension running along the western boundary of the site along Barn Lodge Gove, onto which it is proposed to retain a vehicular entrance.
2. Sheet no. 17 also indicates a light rail corridor to the north along Ballycoolin Road, across which traffic to and from the site would cross to gain access to the site.

You are required to provide **4 weeks from the date of notification** for the NTA to make any submission / observations to the Board in relation to the application.

If you have any queries in relation to the matter, please contact the undersigned officer of the Board.

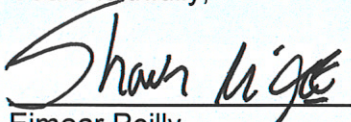
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Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,



Eimear Reilly  
Executive Officer  
Direct Line: 01-8737184

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National Transport Authority  
Dún Scéine  
Harcourt Lane  
Dublin 2  
D02 WT20

By Email to [planning@nationaltransport.ie](mailto:planning@nationaltransport.ie)

14 July 2023

**Re: Notice of Direct Planning Application to An Bord Pleanála in Respect of a Strategic Infrastructure Development**

Dear Sir/Madam,

In accordance with Section 37E of the Planning and Development Act 2000, as amended, Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling gives notice of its submission for an application for permission to An Bord Pleanála for the following proposed development at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address that fall across both the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

The Proposed Development

Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling has applied for planning permission to expand an existing Materials Recovery Facility (MRF). The existing MRF is situated at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11. The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

The proposed expanded facility will accept and process up to 300,000 tonnes per annum (tpa) of waste material, to include:

- 100,000 tpa of residual municipal solid waste (rMSW).
- 50,000 tpa food waste.
- 100,000 tpa construction and demolition (C&D) Waste.
- 50,000 tpa mixed dry recyclable (MDR) waste.

The proposed development will consist of the following:

- Demolition of one annex of the existing building on-site (226 m<sup>2</sup>, 9.46 m in height) and the removal of an existing weighbridge.
- Clearance of lands to the south of the existing waste facility.
- Culverting of an existing surface water drain traversing the site.
- Development of a new second entrance ca. 35 m south of the existing site entrance to accommodate vehicles accessing and egressing the proposed facility.
- Upgrade and expansion of the existing building on-site, to be referred to MRF 1 (2,659 m<sup>2</sup>, to a maximum height of 12.48 m).
- Development of a new building on-site, to be referred to as MRF 2 (1,735 m<sup>2</sup>, to a maximum height of 13.65 m).
- Development of a new building on-site, to be referred to as MRF 3 (4,320 m<sup>2</sup>, to a maximum height of 13.85 m).
- Development of ancillary infrastructure including:
  - advertising signage (8 m x 2 m) on the southern and western façades of the MRF 3 building and on the southern façade of the southern façade of the MRF 1 building,
  - internal site roads, parking and skip storage,
  - an administration building (272 m<sup>2</sup>, to a maximum height of 6.96 m),
  - 2 no. at-grade weighbridges and a weighbridge office (18.5 m<sup>2</sup>, 3.3 m in height),
  - an electrical sub-station (23 m<sup>2</sup>, 2.98 m in height),
  - a vehicle workshop (519 m<sup>2</sup>, to a maximum height of 8.44 m),
  - a vehicle refuelling facility adjoining the vehicle workshop, with an internal 45 m<sup>3</sup> bunded diesel storage tank,
  - a vehicle wash (176 m<sup>2</sup>, 5.24 m in height),
  - perimeter fencing (2.4 m in height), gate access and perimeter landscaping (ca. 6 - 8 m in height),
  - site services,
  - surface water management infrastructure, including an overground rainwater harvesting tank (with a floor area of 86.6 m<sup>2</sup> and a capacity of 470 m<sup>3</sup>),
  - fire pumps and a fire-fighting and control system,
  - a traffic management system,
  - an odour abatement system, with a 20 m high stack.

#### The Planning Application for the Proposed Development

A copy of the Strategic Infrastructure planning application and the accompanying Environmental Impact Assessment Report (EIAR) for the proposed development is enclosed for your information. This documentation may also be viewed/downloaded from the following website:

- [www.thorntons-cappogue.com](http://www.thorntons-cappogue.com)

Planning Application Procedures

The Board may in respect of an application for permission may decide to: (a) (i) grant the permission, or (ii) make such modifications to the proposed development as it specifies in its decision and grant permission in respect of the proposed development as so modified, or (iii) grant permission in respect of part of the proposed development (with or without specified modifications of it of the foregoing kind), and any of the above decisions may be subject to or without conditions, or (b) refuse to grant the permission.

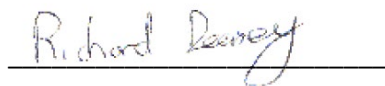
Submissions or observations may be made only to An Bord Pleanála (“the Board”) 64 Marlborough Street, Dublin 1 in writing or online on the Board’s website [www.pleanala.ie](http://www.pleanala.ie) relating to: (i) the implications of the proposed development for proper planning and sustainable development of the area concerned; (ii) the likely effects on the environment of the proposed development, if carried out, and (iii) the likely effects or adverse effects on the integrity of a European site, if carried out.

Any submissions/observations must be received by the Board not later than 5.30pm. on 11th of August 2023.

Concluding Remarks

If you should require any further information please do not hesitate to contact the undersigned.

Yours sincerely,



Richard Deeney

for and on behalf of **Fehily Timoney and Company**



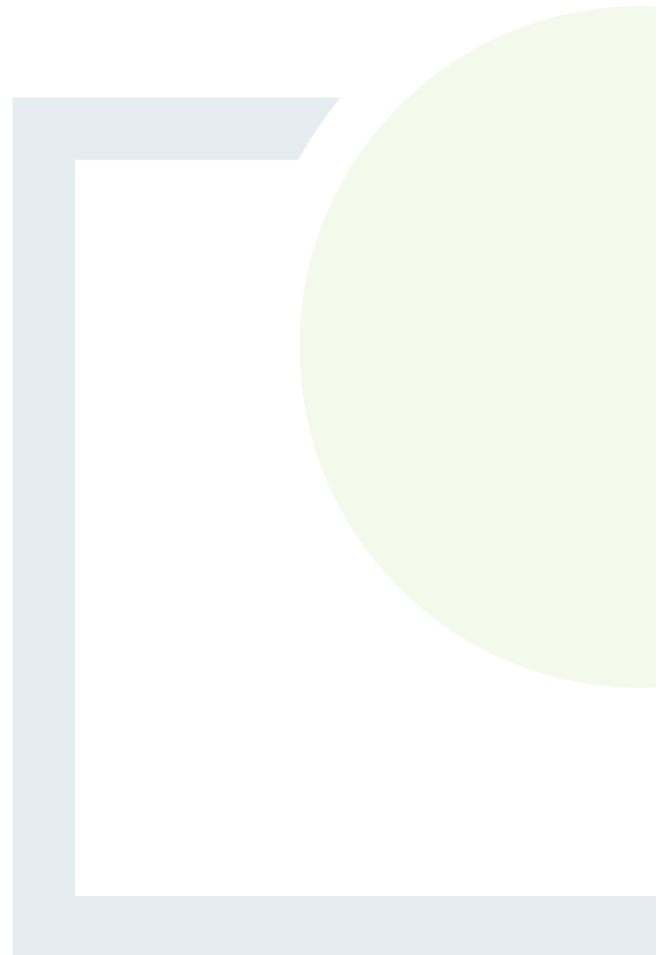




CONSULTANTS IN ENGINEERING,  
ENVIRONMENTAL SCIENCE  
& PLANNING

## APPENDIX 3

Consultation with TII





Land Use Planning  
Transport Infrastructure Ireland  
Parkgate Business Centre  
Parkgate Place  
Parkgate Street  
Dublin 8  
Ireland  
D08 DK10

Our Ref: P21-150/Ltr/DPM/AMW

20 September 2023

**Re: TII22-121152 Materials Recovery Facility at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address by Padraig Thornton Waste Disposal Ltd.**

Dear Sir/Madam,

This letter forms part of the resolution to Item 1 (i) of a Request for Further Information (RFI) in connection with planning case number ABP-315257-22 for development at Cappogue and Dunsink, Dublin 11, where engagement with Transport Infrastructure Ireland (TII) is required.

The Applicant is Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling (herein referred to as 'the Applicant'). Fehily Timoney and Company (FT) were appointed by the Applicant to prepare the subject planning application on its behalf. The subject planning application was submitted to An Bord Pleanála (ABP) on 02/12/2022. ABP issued a RFI relating to this planning application on 06/07/2023. FT have been asked to prepare a response to ABP's RFI. A copy of the RFI is enclosed.

Item 1 (i) TII (i) M50 Culvert of the RFI is as outlined below:

*The TII in its submission, dated 20th January 2023, require a specific review of the potential impact on the M50 Culvert and that appropriate mitigation should be undertaken in consultation with TII's Structure Section. The response should be supported by revised drawings and documentation for both construction and operation phases of the proposed development.*

During initial communications via email with the TII Land Use Planning Department between 08/08/2023 and 10/08/2023, it was requested that a formal letter be submitted which includes the following:

- Details of the relevant further information request from An Bord Pleanála related to TII's submission.
- Material (appropriate plans and details) which outlines the applicants proposed further information response to the item related to TII's submission.

- Material (appropriate plans and details) which demonstrates that the proposed development will have no impact on TII assets and also supports the assertion that the requirements of the TII Standard 'Technical Acceptance of Road Structures on Motorways and Other National Roads' does not apply to the proposed development.

This material is required to assist TII in evaluating the impact of the proposed development on the capacity, safety or efficiency of the M50.

### **Format of Response**

This response is presented under the following headings:

- Existing Surface Water Environment
- Drainage Overview
- Proposed Development
- Proposed Protection Works to M50 Culvert
- Proposed Design Flow Rates

### **Existing Surface Water Environment**

The proposed development consists of the existing facility within the northern portion of the site and a grassland / scrubland area within the southern portion of the site.

The existing drainage system at the existing facility was designed in compliance with Sustainable Drainage Systems (SuDS). The entire site, with the exception of the entrance gate, is surrounded by a concrete block kerb which contains storm water run-off from the existing facility site.

Rainwater falling on the concrete hardstand is conveyed via a drainage network including gulleys to two underground soak pits along the southern boundary of the existing facility site. The soak pit system was designed according to BRE Digest 365 specifications and methodology. A storm water emergency overflow system is in place to allow excess surface water to overflow to the public stormwater mains line which runs along the access road leading into Cappogue Industrial Park. The flow rate of this overflow is controlled by a hydro-brake system which prevents the interceptor's capacity of 5L/s from being exceeded.

Lands to the south of the existing facility which are within the confines of the proposed development site consist of grassland / scrubland areas. These lands were used historically for agricultural purposes but are now in a state of disuse. A dense area of scrubland and a surface water drainage ditch traverse these lands in a northwest to southeast direction. This ditch exits the site via an existing surface water outfall to the southeast of the site. This outfall is culverted beneath the M50.

A Site Location Plan showing the existing features present on these lands is enclosed (Drawing Reference: P21-150-0700-0002 RevB Existing Services).

## Drainage Overview

Several sub-catchment areas currently discharge runoff through the proposed development site into the existing M50 culvert. These are outlined Table 1.

**Table 1:** *Sub-catchment Areas Discharging Runoff into M50 Culvert*

| Description                       | Sub-catchment Plan Areas m <sup>2</sup> | Impermeability % | Catchment within Planning Boundary                       |
|-----------------------------------|-----------------------------------------|------------------|----------------------------------------------------------|
| Proposed roof                     | 10,667                                  | 100              | Yes                                                      |
| Proposed pavement                 | 7,600                                   | 100              | Yes                                                      |
| Proposed stone surface            | 15,685                                  | 25               | Yes                                                      |
| Existing Barnlodge Road           | 3,960                                   | 100              | No but discharges flow through proposed development site |
| Existing Barnlodge Housing estate | 4,253                                   | 50               | No but discharges flow through proposed development site |
| Existing site access public road  | 3,060                                   | 100              | No but discharges flow through proposed development site |

Greenfield areas outside the proposed red line planning application boundary to the north of the site were not considered. These northern areas have no observed direct surface water drainage connection to the M50 culvert.

Surface water runoff flows from the adjacent public road paved areas and the adjacent Barnlodge housing estate, albeit outside of the planning application boundary are included in this assessment because there are piped discharge connections into the site which ultimately discharge into the M50 culvert.

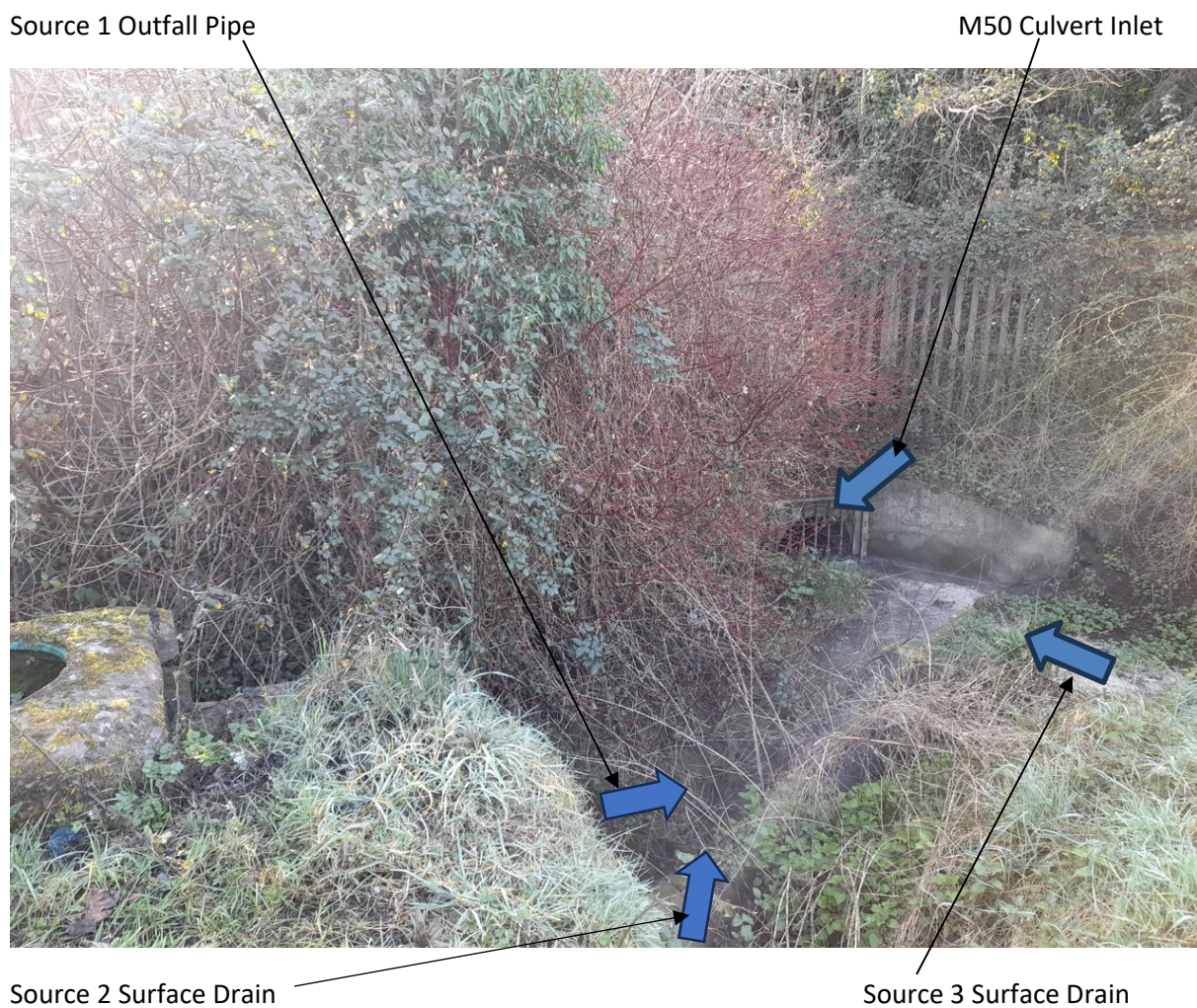
Existing runoff discharges into the M50 culvert arise from the following:

- Source 1 runoff from:
  - Roofed and existing paved areas on the northern part of the proposed development, and
  - Road drainage from the site access public road.
- Source 2 surface water runoff from:
  - Greenfield areas within the site, and
  - Road drainage from the Barnlodge Grove Road.



- Source 3 surface water runoff from:
  - Greenfield areas with the site, and
  - The adjacent Barnlodge residential estate on the western boundary.

Figure 1 shows the locations of respective surface water runoff sources immediately upstream of the M50 culvert. Existing services upstream of the M50 culvert are shown in Drawing P21-150-0700-0002 RevB Existing Services which is enclosed.



**Figure 1:** Existing Runoff Sources into the M50 Culvert

### Proposed Development

The proposed development restructures the existing surface water drainage system and this has potential to cause erosion at the interfaces between lined and unlined open drainage channels.

Item 1 of An Bord Pleanála's RFI ((i) (iii) Watercourse culvert) states:

*... it is preferable to retain an open watercourse along the eastern boundary....*

To ensure that changes to the drainage system outfalls do not cause erosion, and to facilitate maintenance of the M50 Inlet trash rack, lined protection works are proposed immediately upstream of the inlet to the M50 culvert. These works are described below.

### **Proposed Protection Works Upstream of M50 Culvert**

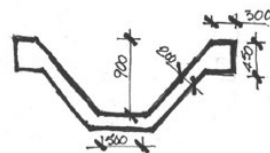
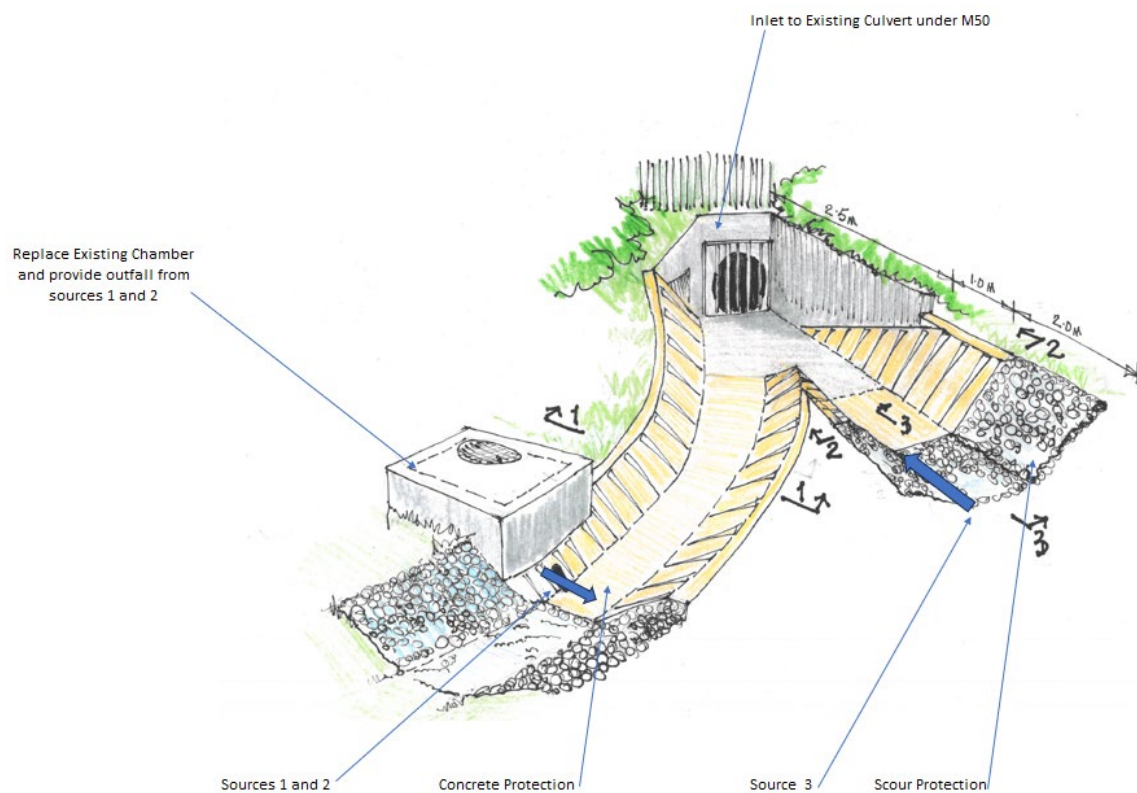
The proposed protection works upstream of the M50 culvert are shown in Drawing P21-150-0700-0003 RevB Proposed Services – Surface and Foul Water Drainage which is enclosed. Surface water outfalls from the proposed drainage system discharge into the existing M50 culvert.

The proposed outfall will accommodate:

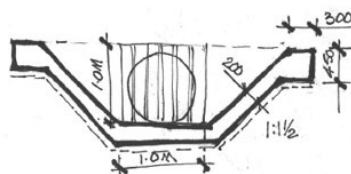
- Source 1 runoff from:
  - Existing and proposed roofed and paved areas surrounding modified buildings MRF 1 and 2 and new building MRF 3.
  - The public site entrance access road.
- Source 2 surface water runoff from:
  - Workshop roof and adjacent paved areas.
  - Unpaved hardcore/stone areas within the site.
  - Greenfield areas with the site.
  - Road drainage from the Barn Lodge Grove Road.
- Source 3 surface water runoff from:
  - Greenfield areas with the site.
  - Unpaved hardcore/stone areas within the site.
  - Runoff from the adjacent Barnlodge estate on the eastern boundary.

Figure 2 illustrates the proposed arrangement immediately upstream of the existing M50 culvert.

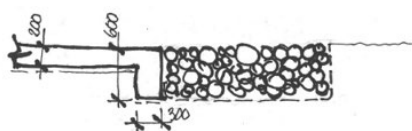
No modifications to the M50 culvert itself are proposed or required.



Section 1-1



Section 2-2



Section 3-3

**Figure 2: Proposed Outfall Modifications Upstream of M50 Culvert**

The existing M50 culvert headwall and trash rack are located within the planning application boundary. Whilst the proposed discharge rates will not exceed current greenfield flow rates it is proposed to implement measures to:

- Protect the inlet works during construction.
- Facilitate future access as required to unblock the trash rack.
- Provide scour protection at the interfaces between lined and unlined channel sections. See Figure 2 and Drawing P21-150-0700-0011 RevB Proposed M50 Culvert Inlet Details details 1 and 2 in the enclosed.

To protect the structure during construction no demolition works will be carried out on the existing structure. Excavation immediately upstream of the structure will be carried out to remove silt and poor formation materials if present. Concrete protection works will abut to the existing protection works. During construction measures will be taken to prevent suspended solids from soils and/or concrete arisings entering the culvert. Protective measures are outlined in Section 3.3.1 of the Construction Environment Management Plan, which forms Appendix 4.2 of Volume 3 of the EIAR submitted as part of this application. These works will be carried out in accordance with the requirements of Inland Fisheries Ireland's Guidelines on the Protection of Fisheries during Construction in and Adjacent to Waters.

To facilitate future access to maintain the trash rack it is proposed to put a concrete transition that will support safe access and egress to the trash rack.

To protect the structure during operation it is proposed to:

- Rehabilitate /replace the existing chamber and redirect flows from this outfall into a concrete lined channel to reduce the risk of localized scour.
- Provide concrete lined protection works immediately upstream of the M50 Culvert inlet to protect unlined surface drainage channels against scour caused by localised turbulence.
- Provide launching aprons for scour protection up to 1.0 m depth between earthen channels and concrete lined transition using D50 100 mm.

### **Proposed Design Flow Rates**

The proposed development increases impermeable surface areas. The proposed drainage design does not increase flow rates beyond the "greenfield" runoff flow rate for the proposed development catchment. To ensure that the "greenfield" runoff flow rate discharging into the M50 culvert is not exceeded, below ground storage is proposed to attenuate increased runoff volumes and flow rates from the proposed development.

The proposed drainage design flow rates were developed using guidance from *Greater Dublin Strategic Drainage Study Volume 2 dated March 2005*.

The QBar (mean annual runoff) "greenfield" surface water runoff flow rate from the site was calculated for respective areas. A growth factor of 1.96 was used to calculate the 1:100-year design flow rate, summary details of which are presented in Table 2.



**Table 2:** *Calculated Qbar Proposed Flow Rates for Respective Sub-catchments and Proposed Attenuation Storage*

| Description                                      | 1:100 QBar Flow Rate<br>l/s | Proposed Attenuation<br>storage m <sup>3</sup> | Existing Attenuation<br>Storage m <sup>3</sup>                                        |
|--------------------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------------------------------------------------------|
| Existing and proposed<br>roof areas (grey water) | 8.72                        | 408                                            | 50 (estimated)<br>supplemented with<br>percolation area<br>below existing<br>pavement |
| Pavement                                         | 6.35                        | 288                                            |                                                                                       |
| Unpaved                                          | 3.17                        | 150                                            |                                                                                       |
| Existing Barnlodge Road                          | 3.37                        |                                                | 207 (estimated)                                                                       |
| Existing Barnlodge<br>housing estate             | 6.9                         | 0                                              | 0 (worst case<br>assumed)                                                             |
| Existing Public Road<br>Entrance to site         | 3.09                        |                                                | 160 (estimated)                                                                       |
| Totals                                           | 31.6 l/s                    | 846 m <sup>3</sup>                             | 417 m <sup>3</sup>                                                                    |

The estimated 1:100 year “greenfield” design flow runoff rate, i.e. including existing and proposed attenuation, is 31.6 /l/s. This includes estimated runoff flow rates runoff from: the Barnlodge Road, Barnlodge housing estate and site entrance public road access. The combined attenuation storage will comprise proposed 846 m<sup>3</sup> and existing 417 m<sup>3</sup>.

The existing M50 culvert diameter is approximately 600 mm. The flow rate capacity of the culvert, depending on downstream channel conditions, may vary between 194 l/s and 614 l/s (assuming hydraulic grade lines of 1:100 and 1:1000 respectively and a manning n coefficient of 0.013<sup>1</sup>. The culvert therefore has adequate capacity.

### Concluding Remarks

As demonstrated in this letter, the restricting of the existing surface water drainage system as a result of the proposed development will have the potential to cause erosion at the interfaces between lined and unlined open drainage channels. To ensure that changes to the drainage system outfalls do not cause erosion, and to facilitate maintenance of the M50 Inlet trash rack, lined protection works are proposed immediately upstream of the inlet to the M50 culvert. No works will be undertaken on the M50 culvert.

The proposed development will increase impermeable surface areas upstream of the M50 culvert; however the proposed drainage design will not increase flow rates beyond the “greenfield” runoff flow rate for the proposed development catchment.

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<sup>1</sup> Calculation carried out using Causeway Flow Software



The proposed development will have no impact on TII assets and supports the assertion that the requirements of the TII Standard 'Technical Acceptance of Road Structures on Motorways and Other National Roads' does not apply to the proposed development.

We note that the response to An Bord Pleanála has been extended to 12/10/2023, with time required to finalise and print response documents which can taken a number of days.

Should you have any comments which will require a further response, we would be obliged if you facilitate an online meeting (via Teams or similar) during the week of 25/09/2023 to enable a prompt resolution.

If you should require any further information please do not hesitate to contact the undersigned.

Yours sincerely,

Declan Morrissey

for and on behalf of **Fehily Timoney and Company**

Encl.

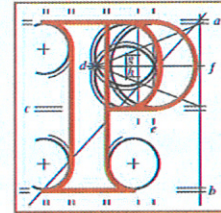
Request for Further Information requested by An Bord Pleanála, dated 12 July 2023  
Drawing P21-150-0700-0002 RevB Existing Services  
Drawing P21-150-0700-0003 RevB Proposed Services – Surface and Foul Water Drainage  
Drawing P21-150-0700-0011 RevB Proposed M50 Culvert Inlet Details





**Our Case Number:** ABP-315257-22

**Your Reference:** Padraig Thornton Waste Disposal Ltd.



An  
Bord  
Pleanála

Fehily Timoney and Company  
c/o Richard Deeney  
J5 Plaza  
North Park Business Park  
North Road  
Dublin 11  
D11 PXT0

**FEHILY TIMONEY & Co.**

Distribution

BG / RD

12 JUL 2023

Job No:

P 21-150

Correspondence No:

1

Comment:

**Date:** 06 July 2023

**Re:** Proposed expansion of Materials Recovery Facility to process up to 300,000 tonnes per annum at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address that fall across both the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

Dear Sir / Madam,

I have been asked by An Bord Pleanála to refer further to the above mentioned proposed development which is before the Board for consideration.

Please be advised that the Board, in accordance with section 37(F)(1) of the Planning and Development Act, 2000, as amended, hereby requires you to **furnish the following further information** in relation to the effects on the environment of the proposed development:

**1. Submissions Received**

All submissions received by An Bord Pleanála in relation to this case have been previously forwarded to yourselves. You are invited to make a detailed response to each of submissions, including those from third parties. The response above shall have particular regard to the following matters:

**(i) TII**

- (i) M50 culvert: The TII, in its submission, dated 20<sup>th</sup> January 2023, require a specific review of the potential impact on the M50 culvert and that appropriate mitigation should be undertaken in consultation with TII's Structures Section. The response should be supported by revised drawings and documentation for both construction and operation phases of the proposed development.
- (ii) EIAR Scoping: Noting that the TII's scoping correspondence was not referenced in the EIAR, acknowledge and address issues contained therein.

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D01 V902

64 Marlborough Street  
Dublin 1  
D01 V902



## **(ii) Fingal County Council**

- (i) Hours of operation: FCC have requested that the hours of operation are maintained as permitted (i.e. 07.00-19.00 Monday to Friday and 08.00-16.00 Saturdays, closed at other times). Your views in this regard are invited.
- (ii) Access and transportation:
  - Junction capacity: Clarify if the Transport Assessment was carried out utilising two-way trips. In the event that hours of operation remain as permitted (as opposed to 24/7 as sought by the applicant) you are requested to assess the impact of operations on the local road network including junctions.
  - Access: the applicant is intending to retain the existing access point and provide a new access which is located to the south of the existing and suggests that the internal layouts should be reconsidered to provide segregation of staff/visitor traffic, pedestrian and cyclists from HGV movements and parking. Additional mitigation measures should be provided to ensure that car parking and HGV turning manoeuvres are separated with adequate pedestrian routes and crossing points. The applicant should amend the layout so that the proposed new vehicular entrance is restricted to serve HGVs only and the existing entrance serve cars, pedestrians and cyclists. Revised detailed plans should also include how the new access and crossover of the existing footpath and cycle track would occur. Clarify if these crossover works are outside land in your ownership and submit revised site boundary plans as necessary and any associated permissions.
  - Excessive parking provision: 37 no. car parking spaces are proposed while it is estimated that 24 no. staff will be employed. Justify the parking requirement having regard to section 14.17.7 'Car Parking' of the Development Plan. Provision should also be made for covered bicycle parking. Any revised site layout plan should have regard to the foregoing.
- (iii) Watercourse culvert: while culverting the section of watercourse which traverses the site is considered acceptable, it is preferable to retain an open watercourse along the eastern boundary. Clarify if this section of the watercourse is located within the applicant's ownership.
- (iv) Landscape and boundary treatment: The use of palisade fencing along a boundary with residential units is not considered acceptable. An alternative proposal is required to screen and protect the amenities of adjoining residents.

## **2. Air and Climate**

With respect to odour impacts, the odour modelling accounts for the impact of the stack alone and no account has been taken of odour leakage which will inevitably emit from the proposed 6 no. entry/exit points in the MRF building no. 1, which, notwithstanding the building is proposed to be fitted with fast action roller doors, will remain open for periods of time. Provide a breakdown, based on the volume of traffic using MRF building 1, of the length of time the doors will remain open and calculate odour leakage based on this. Projected odour and air quality modelling shall be updated to have regard to this.

## **3. Noise and Vibration**

It is noted that the noise modelling is based on several assumptions and embedded design mitigation measures which are required to be implemented to meet the noise limits, for example, the modelling assumes that all plant will operate simultaneously within the buildings with roller doors closed. You are therefore required to analyse and show workings of breakout noise with all roller doors open i.e. worst case scenario. You are also required to include reference to the length of time doors are expected to remain open over a 24 hr period, having regard to volume of traffic and nature of works/operation procedures.

- (i) Provide details of the daytime background noise levels at the respective 4 noise monitoring locations (i.e. in the absence of any activity from the permitted facility).



- (ii) Table 12-14 of the EIAR is titled Extract from Existing Waste Facility Environmental Noise Monitoring Reports 2020 – 2022. Provide a summary of monitoring times/days and clarify if this represents the ambient sound (i.e residual sound and specific sound from existing operations at the site).
- (iii) Table 12-18 indicates the sound power levels of noise sources across the octave band frequency. It is not clear, however, how these levels are translated to the calculations set out in Table 12-20, Predicted Operational Noise Levels. You are requested to provide additional data/an explanation indicating, based on the sound power levels, as to how the figures in Table 12-20 are derived.
- (iv) Clarify if noise associated with the loading and depositing of skips in the skip storage area adjacent to the residential site boundary is included in the noise assessment and what noise, if any, this would generate. Indicate if skips would be stacked in the storage area. Having regard to the proximity of residential properties in the vicinity of the skip storage area a greater separation distance is justified.
- (v) Clarify whether the noise modelling accounts for reversing vehicles. The noise modelling should have regard to noise emanating from reversing vehicles.

#### **4. Development Plan Objectives re roads/transport**

The Fingal Development Plan 2023-2029, Sheet no. 17 Connectivity and Movement, indicates a proposed Luas extension running along the western boundary of the site, along Barn Lodge Gove and onto which it is proposed to retain a vehicular entrance. In addition, Sheet no. 17 indicates a light rail corridor to the north along Ballycoolin Road, across which traffic to and from the site would cross to gain access to the site. Having regard to the foregoing, you are invited to update the Transport Assessment to take account of the connectivity and movement objectives as indicated on sheet 17 of the development plan.

#### **5. Other**

- (i) Submit a revised site layout plan which increases the separation distance of the proposed vehicle wash structure from Barn Lodge Grove, to allow for adequate landscaping and buffer.
- (ii) There is an existing manhole and services infrastructure at the location of the proposed workshop which is not indicated on existing or proposed infrastructure drawings. Please clarify and update drawings as necessary.

#### **6. EIAR**

Having regard to the concerns raised above, you shall amend and update the EIAR, by way of an addendum, as necessary.

The further information referred to above should be received by the Board within 8 weeks from the date of this notice (i.e. no later than 5.30 p.m. on Thursday 31<sup>st</sup> August 2021)

In this regard, please submit 3 hard copies and one electronic copy of the above information.

Please note that following its examination of any information lodged in response to this request for additional information, the Board will then decide whether or not to invoke its powers under section 37(F)(2) of the Planning and Development Act, 2000, as amended, requiring you to publish notice of the furnishing of any additional information and to allow for inspection or purchase of same and the making of further written submissions in relation to same to the Board.

If you have any queries in relation to the matter, please contact the undersigned officer of the Board.

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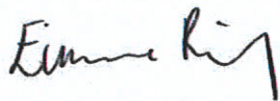
64 Sráid Maoilbhríde  
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D01 V902

64 Marlborough Street  
Dublin 1  
D01 V902



Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,



---

Eimear Reilly  
Executive Officer  
Direct Line: 01-8737184

PA11

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**Facs**  
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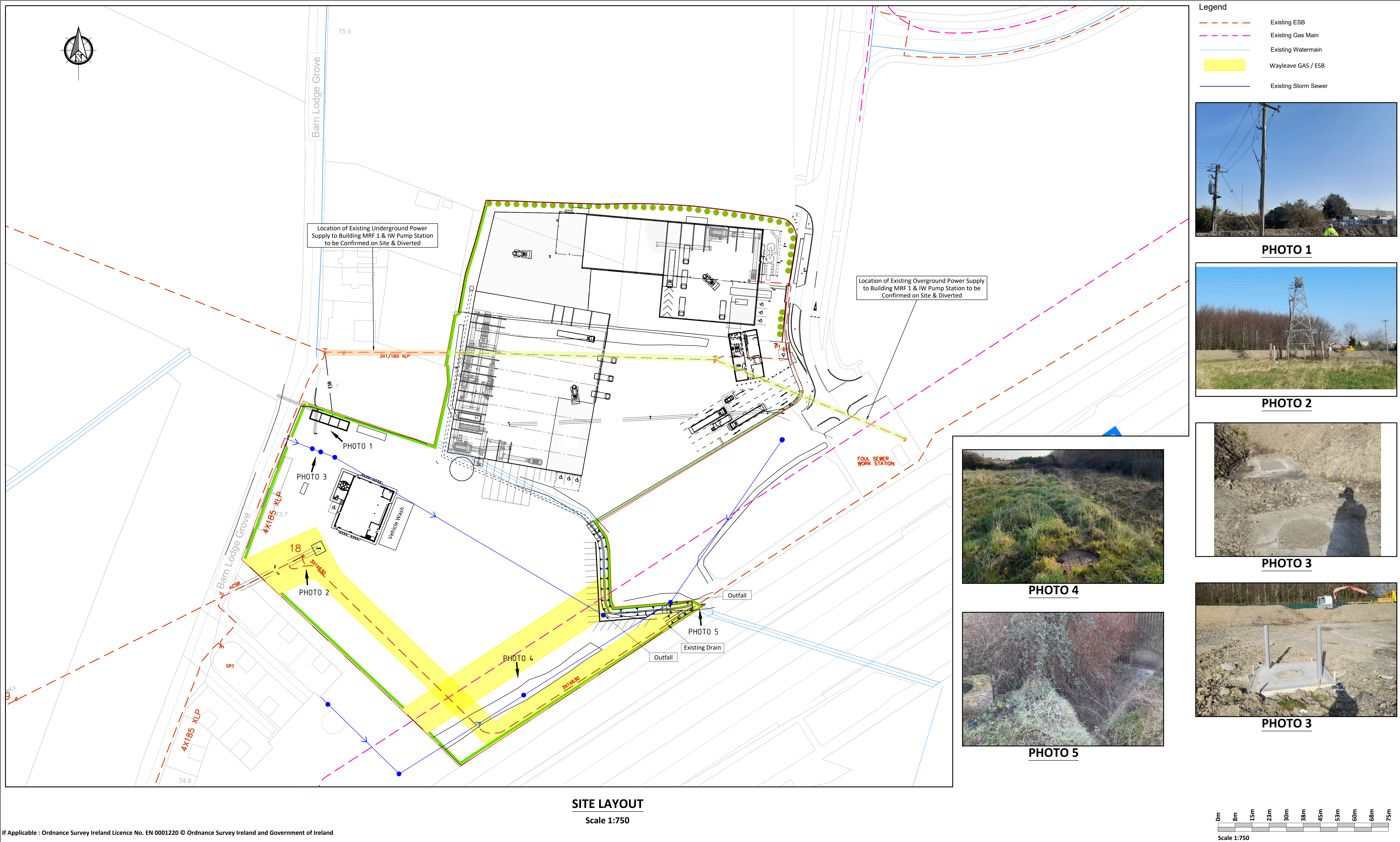
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64 Sráid Maoilbhríde  
Baile Átha Cliath 1  
D01 V902

64 Marlborough Street  
Dublin 1  
D01 V902





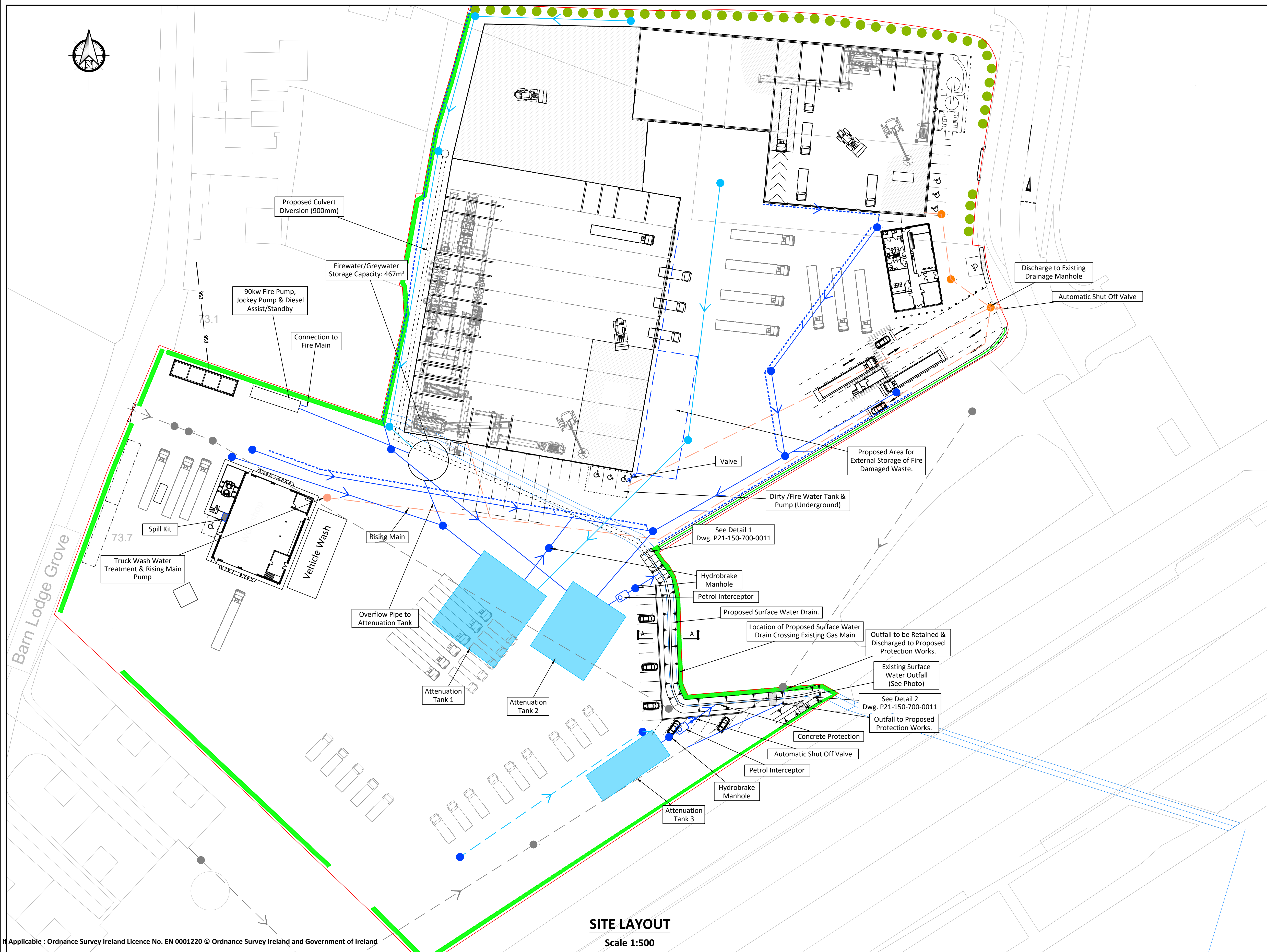
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| B    | ISSUE FOR PLANNING | CC     | 11.09.23 |
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|      |                    |        |          |
|      |                    |        |          |

| PROJECT                                                                 | CLIENT                         |                  |                                     |
|-------------------------------------------------------------------------|--------------------------------|------------------|-------------------------------------|
| SID APPLICATION, EIAR & IE LICENCE<br>APPLICATION FOR THORNTONS CAPPAGH | THORNTONS RECYCLING            |                  |                                     |
| SHEET                                                                   | EXISTING SERVICES SHEET 2 OF 2 | Date<br>31.05.22 | Project number<br>P21-150           |
|                                                                         |                                | Drawn by<br>CS   | Drawing Number<br>P21-150-0700-0002 |
|                                                                         |                                | Checked by<br>FC | Rev<br>B                            |

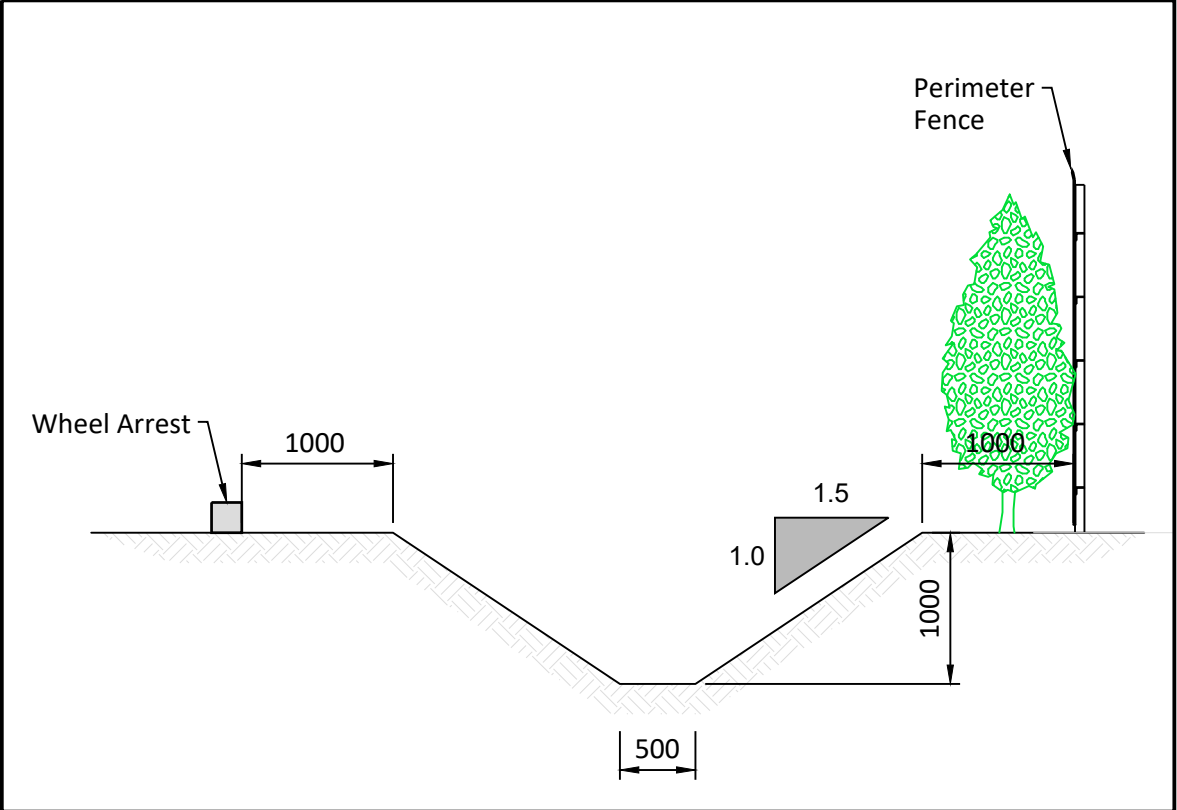








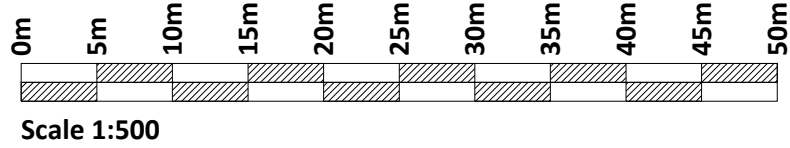
- Legend
- Proposed Foul Sewer
  - Proposed Surface Water Sewer
  - Proposed Surface Water Aco Channel
  - Proposed Filter Drain
  - Proposed Roof Runoff Drainage
  - Existing Storm Water Sewer



SECTION A-A  
Scale 1:50



EXISTING SURFACE WATER OUTFALL



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| B    | ISSUE FOR PLANNING | CC     | 11.09.23 |
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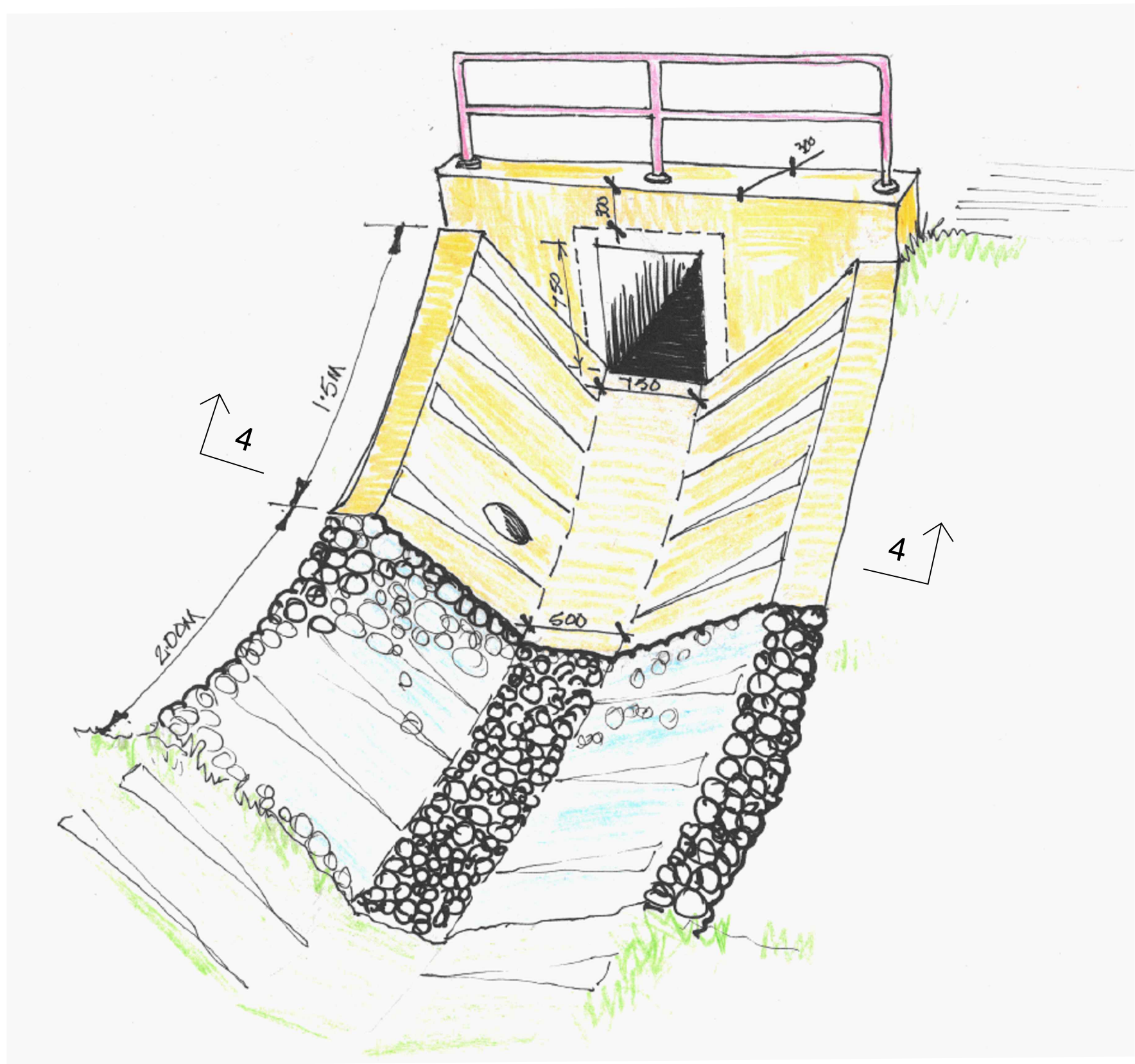
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| SID APPLICATION, EIAR & IE LICENCE<br>APPLICATION FOR THORNTONS CAPPAGH |  | THORNTONS RECYCLING |                   |               |
| SHEET                                                                   |  | Date                | Project number    | Scale (@ A1-) |
| PROPOSED SERVICES - SURFACE & FOUL<br>WATER DRAINAGE                    |  | 31.05.22            | P21-150           | 1:500         |
|                                                                         |  | Drawn by            | Drawing Number    | Rev           |
|                                                                         |  | CS                  | P21-150-0700-0003 | B             |
|                                                                         |  | Checked by          | FC                |               |

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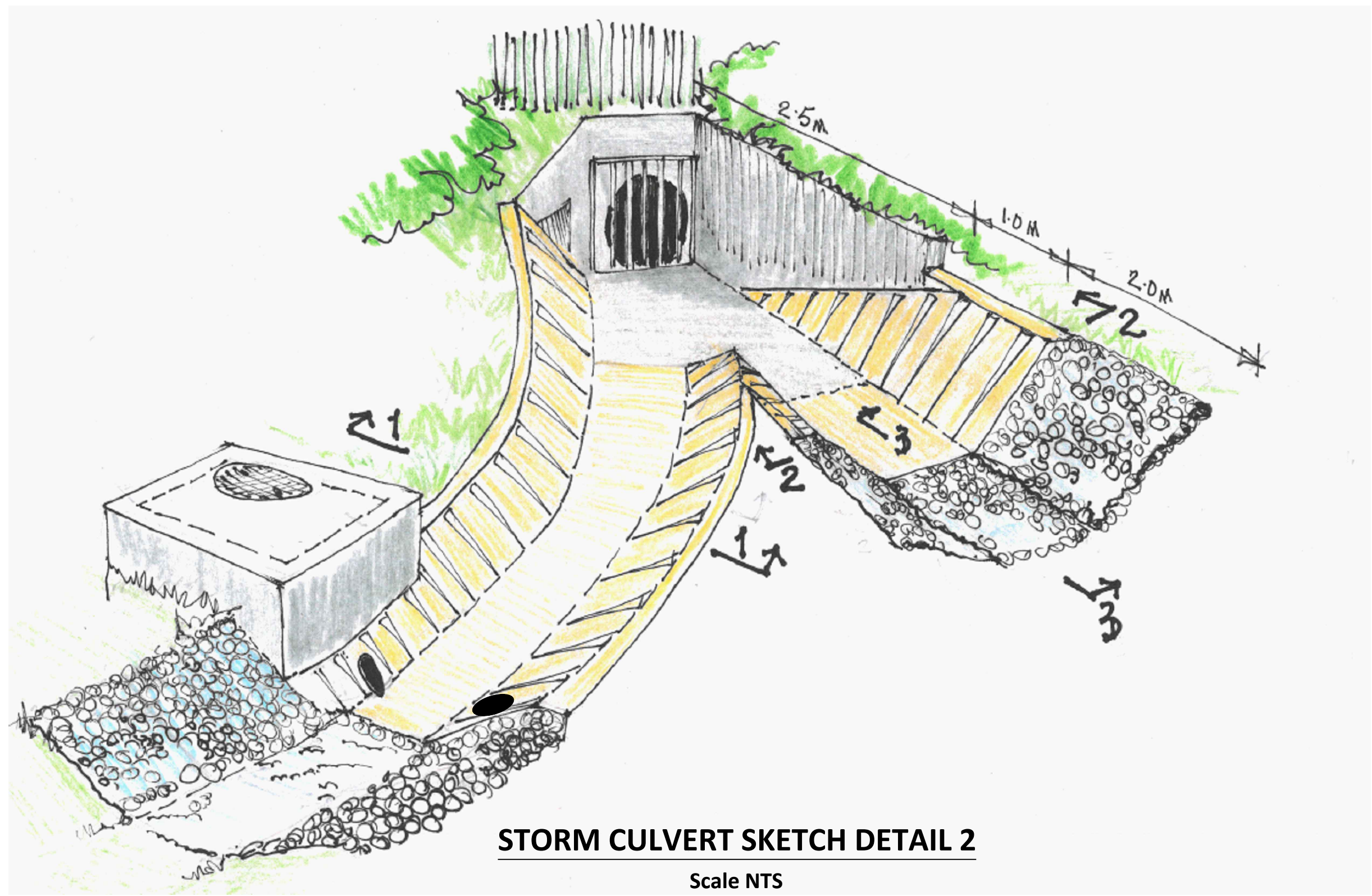






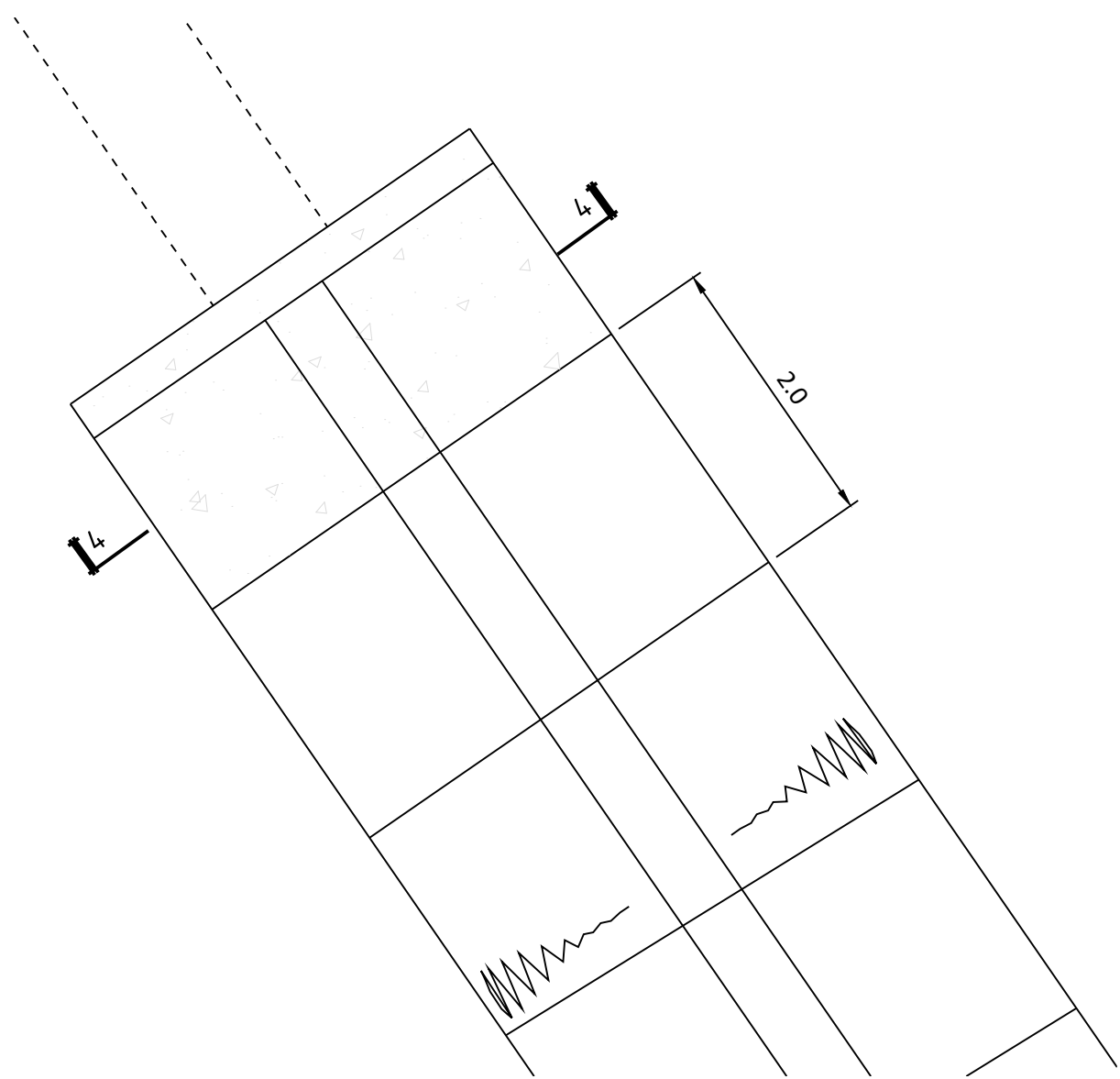
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Scale NTS



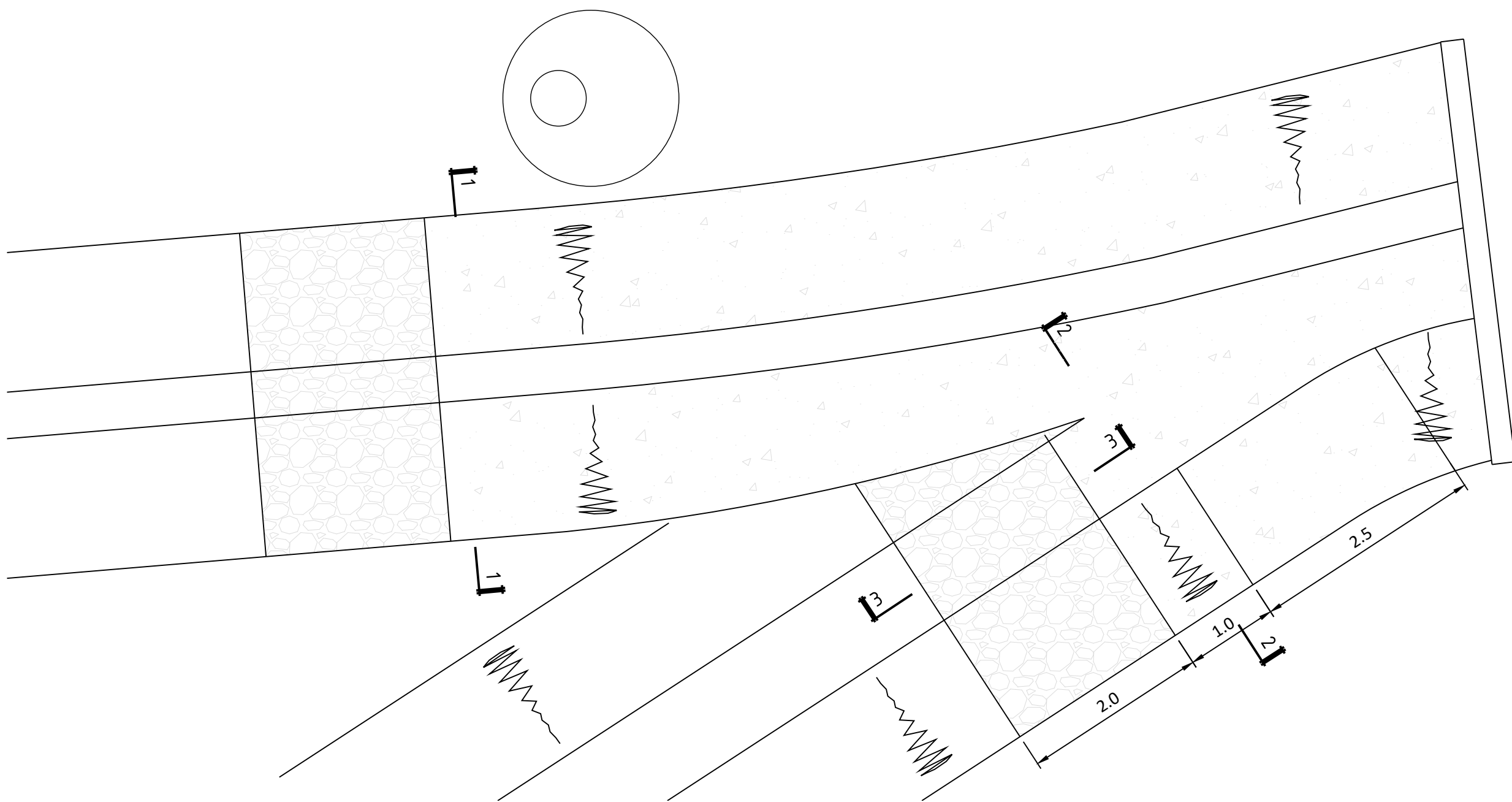
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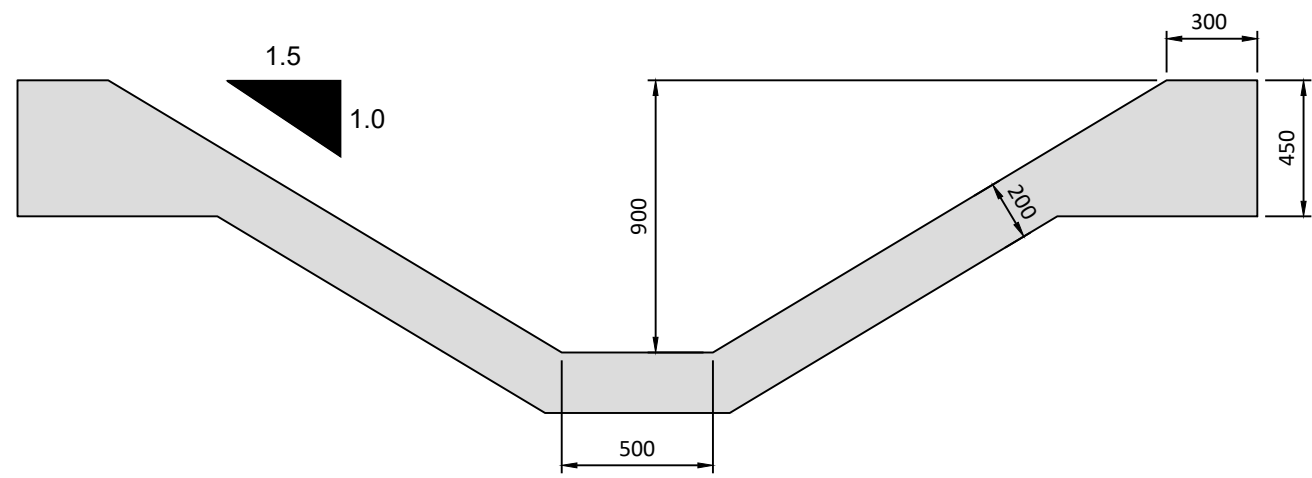
STORM CULVERT - DETAIL 1

Scale 1:50



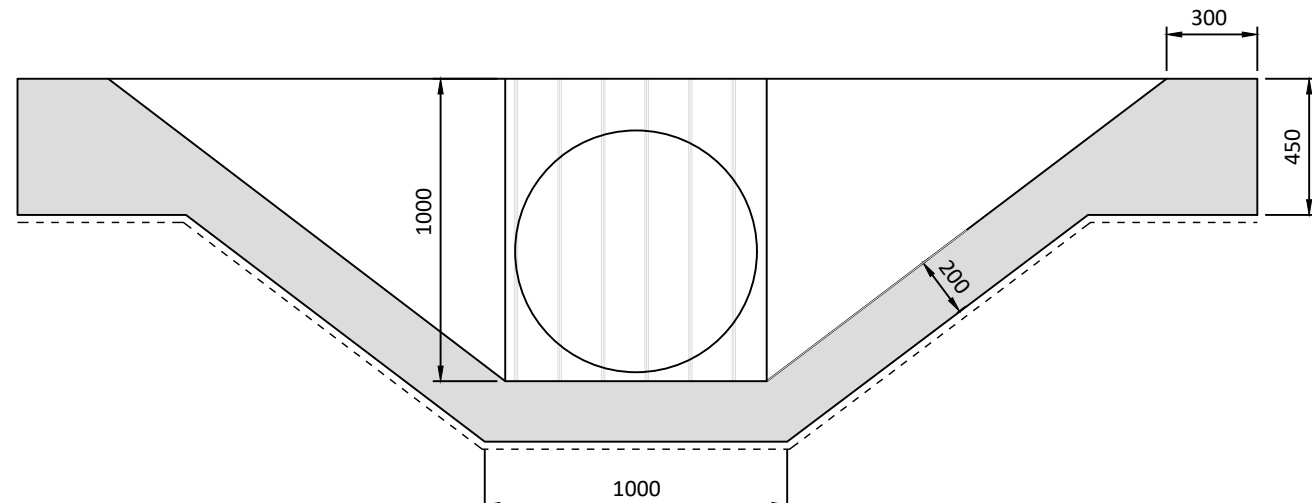
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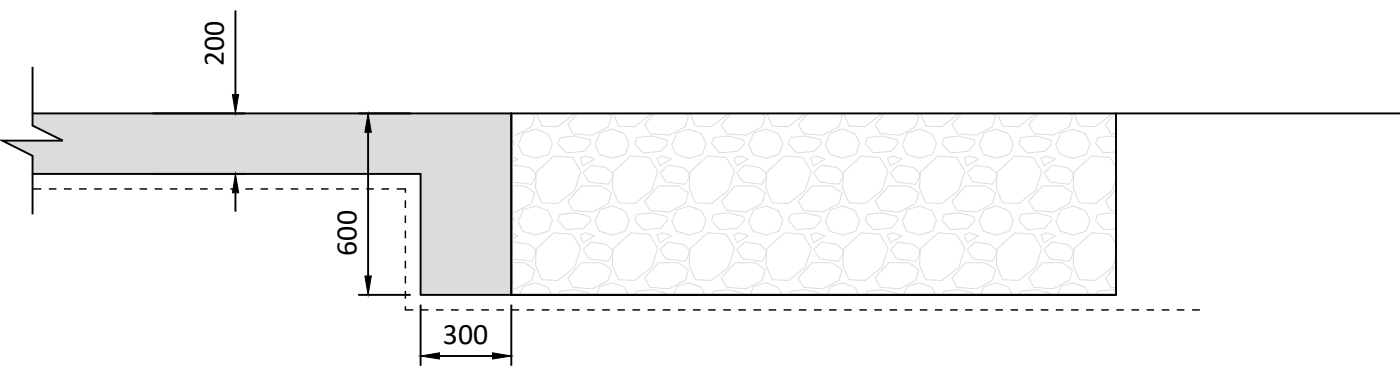
SECTION 1-1

Scale 1:25



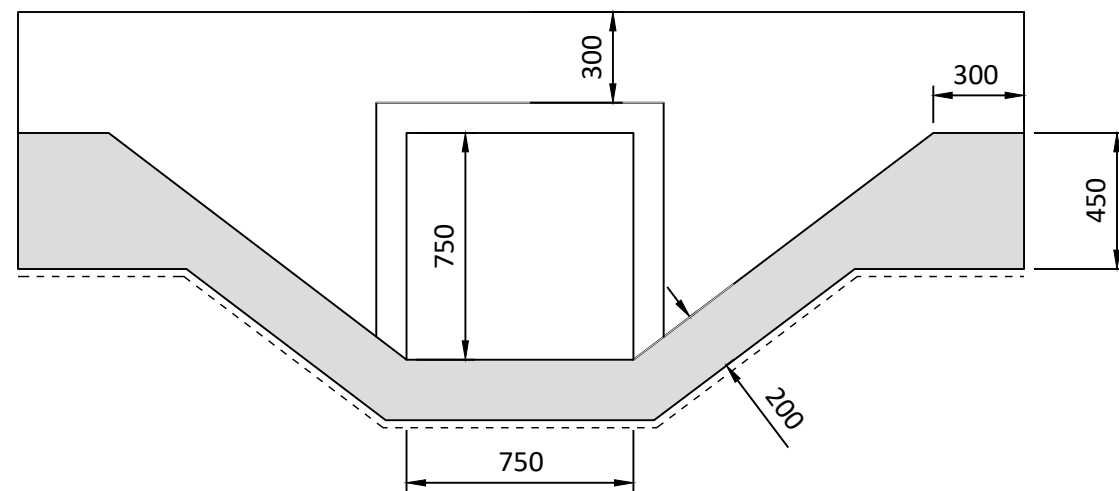
SECTION 2-2

Scale 1:25



SECTION 3-3

Scale 1:25



SECTION 4-4

Scale 1:25



EXISTING STORM OUTLET

Scale NTS

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| PROJECT                                                                 | CLIENT                                |                                                                                              |                                |
|-------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------|
| SID APPLICATION, EIAR & IE LICENCE<br>APPLICATION FOR THORNTONS CAPPAGH | THORNTONS RECYCLING                   |                                                                                              |                                |
| SHEET                                                                   | PROPOSED M50 CULVERT<br>INLET DETAILS | Date 13.09.23<br>Project number P21-150<br>Drawing Number P21-150-0700-0011<br>Checked by CC | Scale (@ A1-) 1:31513<br>Rev A |

O:\ACAD\2021\P21-150\P21-150-0700-0011





Mr. Declan Morrissey  
Fehily Timoney and Company  
Core House  
Pouladuff Road  
Cork

By email: [declan.morrissey@ftco.ie](mailto:declan.morrissey@ftco.ie)

**Dáta | Date**

06/10/2023

**Ár dTag | Our Ref.**

TII23-121152

**Bhur dTag | Your Ref.**

P21-150/Ltr/DPM/AMW

**RE: Response to submission made to TII 23<sup>rd</sup> September 2023 re. information in respect of development proposed under An Bord Pleanála ref. ABP- 315257-22**

Dear Mr. Morrissey,

TII has undertaken Technical Review of your submission entitled *"Re. TII22-121152 Materials Recovery Facility at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address by Padraig Thornton Waste Disposal Ltd."*, your ref. P21-150/Ltr/DPM/AMW, dated 20.09.2023 received by email on the same date.

On the basis that the catchment/flow estimations provided in Tables 1 and 2 are correct, TII notes that the proposal includes attenuation to ensure that the flow rates from the proposed development will not exceed the 'greenfield' runoff rate for the catchment.

TII confirms that *Technical Acceptance of Road Structures on Motorways and Other National Roads* (TII Publication DN-STR-03001, April 2019) is not applicable as the M50 culvert falls below the diameter threshold for assessment in accordance with this publication.

Notwithstanding, the culvert was designed and operates as part of the motorway and is therefore part of the national road network. Your submission confirms that *"the existing M50 culvert headwall and trash rack are located within the planning application boundary"* (pg. 7) and whilst no works are proposed to the culvert itself there are *"proposed protection works upstream of M50 culvert"* (pg.5).

TII are not satisfied that all potential impacts on the culvert and its performance as part of motorway have been identified and mitigated if necessary.

Having regard to the above, TII recommends that the following clarifications are supplied by return, or form an update to the submission in the formal response to the information request by An Bord Pleanála under ref. ABP- 315257-22 for the proposed development:-

- There is no modification to the M50 culvert proposed and this is based on consideration that adequate hydraulic capacity of the culvert has been assessed and confirmed by the applicant. TII note that the submission has not commented on the structural condition of the culvert and therefore assumes that the design capacity is being provided in the current scenario. Clarification of this matter is required.



- The submission does not appear to consider the potential impact of concrete lining and change in surface type on the inlet velocity at the approach channel and headwater depth at the culvert inlet. Confirmation that these have been checked is required to confirm there will be no detrimental impact on the performance of the culvert.
- The submission does not appear to consider the potential impact of any exceedance flow on the culvert not discussed. Confirmation that these have been evaluated and any level of flood risk is within tolerable limit of upstream property and roadway.

Please acknowledge receipt of this communication.

Yours faithfully,



on behalf of  
Land Use Planning Unit

cc Bernie Guinan <[bernie.guinan@FTCO.IE](mailto:bernie.guinan@FTCO.IE)>; Chris Cronin <[chris.cronin@ftco.ie](mailto:chris.cronin@ftco.ie)>; Landuse Planning <[LandUsePlanning@tii.ie](mailto:LandUsePlanning@tii.ie)>

*\*Note: In accordance with the provisions of section 13 of the Roads Act 2015, Transport Infrastructure Ireland (TII) is the operational name of the National Roads Authority with effect from 1 August 2015.*

*All planning application referral documentation, including applications, submission acknowledgments, further information notifications and decisions should be notified electronically to TII at [landuseplanning@tii.ie](mailto:landuseplanning@tii.ie). TII would appreciate your Authority's assistance on this matter.*



Land Use Planning  
Transport Infrastructure Ireland  
Parkgate Business Park  
Parkgate Place  
Parkgate Street  
Dublin 8 D08 DK10

Our Ref: P21-150/Ltr/DM/MG

31 October 2023

**Re: TII22-121152 Materials Recovery Facility at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address by Padraig Thornton Waste Disposal Ltd.**

Dear Sir/Madam,

This letter forms part of the resolution to Item 1 (i) of a Request for Further Information (RFI) in connection with planning case number ABP-315257-22 for development at Cappogue and Dunsink, Dublin 11, where engagement with Transport Infrastructure Ireland (TII) is required and specifically addresses issues raised in letter TII Reference TII-121152TII dated 6/10/23 (enclosed).

**TII Clarification Bullet Point Request “1”**

*There is no modification to the M50 culvert proposed and this is based on consideration that adequate hydraulic capacity of the culvert has been assessed and confirmed by the applicant. TII note that the submission has not commented on the structural condition of the culvert and therefore assumes that the design capacity is being provided in the current scenario. Clarification of this matter is required.*

Fehily Timoney and Co confirms:

1. There is no modification to the culvert proposed.
2. The surface water runoff flow rate proposed will not exceed greenfield flow rates or that which is currently passing through the culvert (current scenario).
3. Hydraulic assessments confirm that the culvert capacity exceeds the greenfield runoff flow rate.
4. No structural assessment of the culvert was carried out.

**TII Clarification Bullet Point Request “2”**

The submission does not appear to consider the potential impact of concrete lining and change in surface type on the inlet velocity at the approach channel and headwater depth at the culvert inlet. Confirmation that these have been checked is required to confirm there will be no detrimental impact on the performance of the culvert.

Fehily Timoney and Co confirms:

5. The proposed concrete culvert conveying surface water runoff towards the M50 culvert may give rise to increased flow velocities which may cause localised eddies. The proposed concrete lining is design to prevent structural damage occurring at the M50 headwall as a result of eddies causing erosion. Whilst the rip rap stone protection immediately upstream of the culvert will have a friction factor higher than a well maintained vegetative channel, the concrete friction factor upstream of the culvert will be lower than a well maintained vegetative channel. The changes in friction factor and the consequent impacts on velocity and eddies will be negligible and will not negatively impact the flow rate capacity or the structural integrity of the M50 culvert structure.

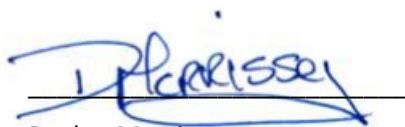
**TII Clarification Bullet Point Request "3"**

*The submission does not appear to consider the potential impact of any exceedance flow on the culvert not discussed. Confirmation that these have been checked is required to confirm there will be no detrimental impact on the performance of the culvert.*

Fehily Timoney and Co confirms:

6. The culvert capacity exceeds 1:100 year flood runoff flow rate. Should runoff exceed culvert capacity or if the trash racks become blocked, Thornton low lying lands north of the M50 will provide additional attenuation. The land north of and adjacent to the M50 is flat. Water logged conditions in low lying lands will have no detrimental impact on the M50 infrastructure. A Provisional Flood Risk Assessment (PFRA) report and associated mapping prepared by the OPW, shows that there are no areas of the development site which are subject to fluvial flooding. The proposed development will not increase the risk of damage to any infrastructure (M50, property or roads) in the area. The proposed development will reduce further the risk of vegetation blocking trash racks and the proposed lining works immediately upstream of the M50 culvert inlet will provide increase protection to the M50 culvert against erosion and will also facilitate easier maintenance in the event that the trash rack needs to be cleared of debris. In summary the flood risk has been evaluated and the impacts on the development lands, M50 culvert and M50 roadway are considered to be negligible.

Yours sincerely,



Declan Morrissey

for and on behalf of **Fehily Timoney and Company**

Encl.

Mr. Declan Morrissey  
Fehily Timoney and Company  
Core House  
Pouladuff Road  
Cork

By email: [declan.morrissey@ftco.ie](mailto:declan.morrissey@ftco.ie)

Dáta | Date  
10/11/2023

Ár dTag | Our Ref.  
TII23-121152

Bhur dTag | Your Ref.  
P21-150/Ltr/DM/MG

RE: Response to submission made to TII 23<sup>rd</sup> September 2023 re. information in respect of development proposed under An Bord Pleanála ref. ABP- 315257-22

Dear Mr. Morrissey,

TII has undertaken Technical Review of your submission entitled “*TII22-121152 Materials Recovery Facility at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, and lands to the south of this address by Padraig Thornton Waste Disposal Ltd.*”, your ref. P21-150/Ltr/DM/MG dated 31.10.2023 received by email on the same date.

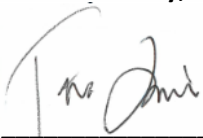
Your communication is in response to an earlier Technical Review by TII under TII ref. TII23-121152 in repose to a submission in relation to the above matter made in September 2023 (your ref. P21-150/Ltr/DPM/AMW, dated 20.09.2023).

It is noted that no structural nor conditional assessment has been carried out on the M50 culvert. However, it is acknowledged that the development does not include any physical modification of the M50 culvert.

TII therefore confirms that the technical details and clarifications provided address the outstanding matters raised in TII’s earlier Technical Review and are acceptable.

Please acknowledge receipt of this communication.

Yours faithfully,



Head of Land Use Planning

cc Bernie Guinan <[bernie.guinan@FTCO.IE](mailto:bernie.guinan@FTCO.IE)>; Chris Cronin <[chris.cronin@ftco.ie](mailto:chris.cronin@ftco.ie)>; Landuse Planning <[LandUsePlanning@tii.ie](mailto:LandUsePlanning@tii.ie)>

*\*Note: In accordance with the provisions of section 13 of the Roads Act 2015, Transport Infrastructure Ireland (TII) is the operational name of the National Roads Authority with effect from 1 August 2015.*

*All planning application referral documentation, including applications, submission acknowledgments, further information notifications and decisions should be notified electronically to TII at [landuseplanning@tii.ie](mailto:landuseplanning@tii.ie). TII would appreciate your Authority’s assistance on this matter.*



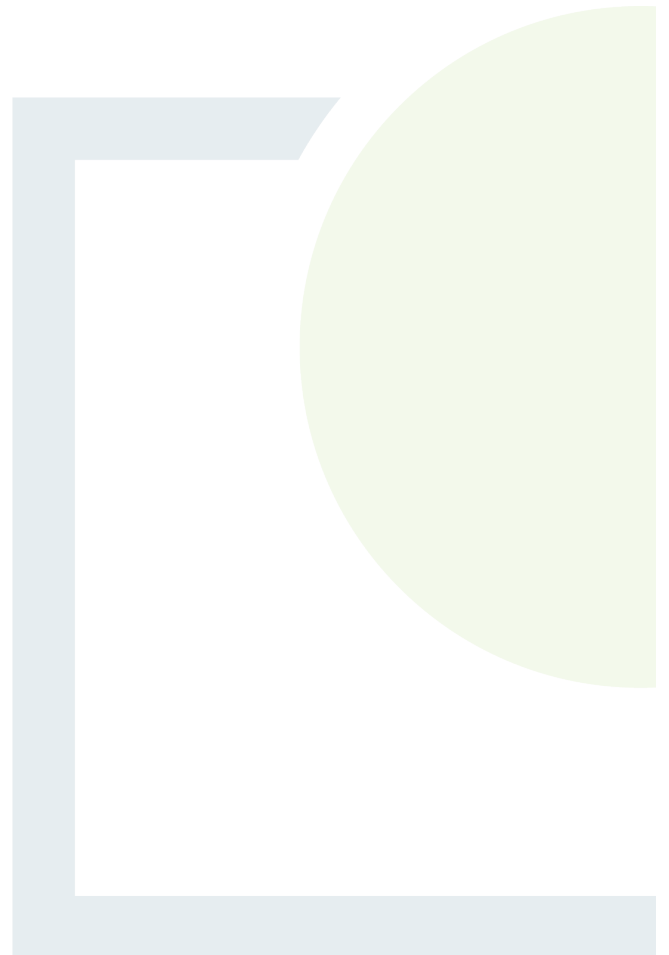




CONSULTANTS IN ENGINEERING,  
ENVIRONMENTAL SCIENCE  
& PLANNING

## APPENDIX 4

EIA Addendum







# PLANNING APPLICATION FOR THE EXPANSION OF A MATERIALS RECOVERY FACILITY AT CAPPOGUE AND DUNSINK, BALLYCOOLIN ROAD, DUBLIN 11.

---

## Addendum Environmental Impact Assessment Report

---

**Prepared for:**

Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling



**Date:** November 2023

Unit 6, Bagenalstown Industrial Park, Royal Oak Road,  
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## 1. INTRODUCTION

### 1.1 Background and Purpose

This report comprises of an addendum to the Environmental Impact Assessment Report (EIAR) prepared for planning permission application (planning case number ABP-315257-22) submitted to An Bord Pleanála (ABP) for development at Cappogue and Dunsink, Dublin 11.

The Applicant is Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling (herein referred to as 'the Applicant'). Fehily Timoney and Company (FT) were appointed by the Applicant to prepare the subject planning application on its behalf. The subject planning application was submitted to ABP on 02/12/2022. ABP issued a RFI relating to this planning application on 06/07/2023. A copy of the RFI is provided in Appendix 1.

FT have been asked to prepare a response to ABP's RFI. RFI Item Number 6 stated the following:

*Having regard to the concerns raised above, you shall amend and update the EIAR, by way of an addendum, as necessary.*

To address RFI Item Number 6, this addendum EIAR is included as Appendix 4 to the Response to Request for Further Information report.

### 1.2 Format of Addendum EIAR

This EIAR Addendum has been produced to reflect any additional information to that already presented in the EIAR, to redact or to supersede any information presented.

Within the EIAR Addendum:

- The relevant part of the EIAR subject to the addendum is quoted. All quotations from the original EIAR submitted as part of the planning application are denoted through the use of *Italic* text.
- All text relating to additional information is denoted through the use of **Bold** text.

### 1.3 Sections of Original EIAR Not Added

The following chapters of the original EIAR submitted as part of the planning application are not added:

- Chapter 2 - Need for the Proposed Development
- Chapter 3 - Alternatives
- Chapter 5 - Planning and Policy Context
- Chapter 7 - Population and Human Health
- Chapter 8 - Biodiversity
- Chapter 13 - Traffic and Transportation
- Chapter 14 - Cultural Heritage
- Chapter 15 - Landscape and Visual Impact Assessment



## 1.4 Planning Drawings

Updated planning drawings have been provided in this submission under separate cover.





## 2. VOLUME 1 NON-TECHNICAL SUMMARY

### 2.1 Section 1 - Introduction

#### 2.1.1 Section 1.1 - Introduction

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

#### 2.1.2 Section 1.3 - The Site

The following:

*The proposed development site is 3.38 ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (2.63 ha in size).*

has been replaced with:

The proposed development site is **3.40** ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (**2.65** ha in size).

### 2.2 Section 4.2 - Proposed Development

#### 2.2.1 Section 4.2.1 - Overview of the Proposed Development

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.



## 2.3 Section 6 - Scoping and Consultation

### 2.3.1 Section 6.1 - Stakeholder consultation

The following:

*In total, 5 no. substantive scoping responses were received (not including summary acknowledgements). Copies of those responses are included in Appendix 6.2 of Volume 3 of this EIAR.*

has been replaced with:

In total, **6** no. substantive scoping responses were received (not including summary acknowledgements). Copies of those responses are included in Appendix 6.2 of Volume 3 of this EIAR.

## 2.4 Section 10 - Hydrology and Surface Water Quality

### 2.4.1 Section 10.3 - Proposed Drainage for the Development

The following paragraph has been updated to include the text in **bold**:

*The open surface water drainage ditch traversing the site will need to be culverted as part of the proposed development. **It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.** The proposed culvert will be designed to appropriate design standards and constructed under Section 50 licence from the Office of Public Works.*

## 2.5 Section 11 - Air and Climate

### 2.5.1 Section 11.3 - Potential Impacts - Odour Dispersion Modelling

The following to be inserted at the end of the section:

**A revised modelling assessment was conducted to account for the odour leakage associated with the opening and closing of the roller shutter doors on building MRF1.**

**Details of the 98<sup>th</sup>ile of 1-hour mean odour concentrations at the worst-case off-site location are given in Table 11-9a over an historical five-year period ranging from 2018 to 2022 based on the USEPA approved AERMOD model (version 22112). The worst case scenario for the 98<sup>th</sup>ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentrations is 66% of the guideline value of 1.5 OUE/m<sup>3</sup> at the worst-case receptor. Based on the results detailed below, no nearby receptors are predicted to experience odour nuisance issues as a result of the proposed development. Results are within the acceptable range for odour emissions.**

## 2.6 Section 12 - Noise and Vibration

### 2.6.1 Section 12.4.2 - Operational Phase Mitigation Measures

The following sentence has been updated to include the text in **bold**:

- *Use of fastening acting roller shutter doors to prevent noise breakout **and limit the vehicles ingress/egress to buildings as outlined in the Addendum EIAR.***



### 3. VOLUME 2 MAIN BODY OF THE EIAR

#### 3.1 Chapter 1 - Introduction

##### 3.1.1 Section 1.1 - Introduction

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

##### 3.1.2 Section 1.3 - The Site

The following:

*The proposed development site is 3.38 ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (2.63 ha in size).*

has been replaced with:

The proposed development site is **3.40** ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (**2.65** ha in size).

##### 3.1.3 Section 1.4 - Site Ownership

The following:

*The development site (3.38 ha) encompasses the Applicant's existing waste facility site (0.75 ha) situated at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, together with scrublands/grasslands (2.65 ha) to the south of this facility falling across the townlands of Cappogue and Dunsink, Dublin 11.*

has been replaced with:

The development site (**3.40** ha) encompasses the Applicant's existing waste facility site (0.75 ha) situated at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11, together with scrublands/grasslands (2.65 ha) to the south of this facility falling across the townlands of Cappogue and Dunsink, Dublin 11.



### 3.1.4 Section 1.5 - The Proposed Development

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

## 3.2 Chapter 4 - Existing and Proposed Development

### 3.2.1 Section 4.3.1 - Proposed Development - Overview

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

### 3.2.2 Section 4.3.3 - Culverting of Existing Surface Water Drain

The following paragraph has been updated to include the text in **bold**:

*An existing open surface water drainage ditch traverses the development site in a north west to south east direction. This drain collects surface water generated at the existing site and discharges it into a culvert to the south east of the site which travels below the M50 southward. As part of the proposed development, it is proposed to culvert the open surface water drainage ditch currently traversing the site. This underground drain will consist of a reinforced concrete culvert. **It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.** Detail on this proposal is shown in the drawing P21-150-0700 series in Volume 4 of this EIAR.*





### 3.2.3 Section 4.3.5 Proposed Site Infrastructure - Proposed Site Access

The following paragraphs have been updated to include the text in **bold**:

*The existing site entrance (Entrance 1) will be retained. This entrance will be used by staff (administrative staff and senior management) and visitors for parking their personal vehicles. There will be 6 No. parking spaces immediately east of MRF 1 and 1 No. parking space east of the Admin building. The 7 No. parking spaces will have capacity to accommodate disabled or EV parking requirements. There is sufficient space to accommodate this requirement. Safety bollards to the south of the Admin building and 1 No. parking space east of the Admin building will segregate traffic from entering Entrance 2 through the site.*

**All pedestrian and cyclist traffic will use Entrance 1. Visitors will be prohibited from using Entrance 2. This will be controlled by the weighbridge operator.**

*A new entrance (Entrance 2) will be developed ca. 35 m south of the existing site entrance. This entrance will be used by cars of operational staff only, heavy goods vehicles (HGV) and refuse collection vehicles (RCV) accessing and egressing the facility. HGV and RCV's vehicles entering the facility will enter / exit the site via 2 no. at-grade weighbridges. Cars using this entrance will access and egress the facility via lanes separate to the lanes used by HGV's/RCV's accessing the site. All access and egress lanes will be controlled by barriers. All traffic will be funnelled into the appropriate lane through the use of signage, road markings and bollards. Visitors will be prohibited from using Entrance 2. This will be controlled by the weighbridge operator.*

**The construction of the entrance will require minor realignment of the existing cycle track to accommodate the new kerb line for the entrance. The existing sign will be relocated as part of the cycle track realignment.**

**The existing footpath will remain largely unaltered. No realignment will occur, however drop kerbs will be emplaced at either side of the new entrance. New signage will be installed to inform incoming and outgoing traffic of pedestrian traffic.**

**Existing service manhole covers to be upgraded to a heavy duty D400 rated manhole cover and adjusted to accommodate the entrance levels. The lighting standard will be relocated from its existing position. An immature ash tree will be removed. Detail on this proposal is shown in the drawing P21-150-0305-0003 Rev A included under separate cover to this response.**

**A grated channel and manhole will be constructed across the new entrance. The grated channel will connect to a new collector drain connecting to the new chamber adjacent to the weighbridge.**

**Detail on this proposal is shown in the drawing P21-150-0700 series is included under separate cover to this response.**

### 3.2.4 Section 4.3.5 Proposed Site Infrastructure - Site Road, Parking, and Skip Storage

The following:

- *7 no. car parking spaces will be provided adjacent to the existing site entrance (Entrance 1) immediately east of MRF 1.*
- *21 no. car parking spaces which will be provided in the south eastern corner of the site.*
- *8 no. car parking spaces will be provided immediately to the south of MRF 3. 4 5 no. of these spaces will be provided with EV charging facilities. 4 3 no. of these spaces will be sized to allow for disability parking.*
- *8 no. RCV parking spaces will be provided immediately to the south of MRF 3. These spaces will be dedicated EV charging spaces.*



has been replaced with:

- **6 no. car parking spaces will be provided adjacent to the existing site entrance (Entrance 1) immediately east of MRF 1. 4 no. of these spaces will be provided with EV charging facilities and 3 no. will be sized to allow for disability parking.**
- **1 no. parking space east of the Admin building to be sized to allow for disability parking.**
- 21 no. car parking spaces which will be provided in the south eastern corner of the site.
- 7 no. car parking spaces will be provided immediately to the south of MRF 3. 4 5 no. of these spaces will be provided with EV charging facilities. 4 3 no. of these spaces will be sized to allow for disability parking.
- **1 no. car parking space west of the workshop and south of the fuel tank to be sized to allow for disability parking.**

The following:

*Adequate cycle parking provisions will be provided on-site. 24 bicycle racks will be provided adjacent to the eastern façade of the Administration building. Cyclists arriving on-site will use Entrance 1 to access this location. These bicycle racks will cater to all staff members working at the site. A granular paved formation will be provided at the southern end of the site. A dedicated truck parking area and dedicated skip storage areas will be situated at this area.*

has been replaced with:

Adequate cycle parking provisions will be provided on-site. 24 bicycle racks will be provided adjacent to the **southern** façade of **MRF 1**. Cyclists arriving on-site will use Entrance 1 to access this location. These bicycle racks will cater to all staff members working at the site. A granular paved formation will be provided at the southern end of the site. A dedicated truck parking area and dedicated skip storage areas will be situated at this area.

### 3.2.5 Section 4.3.5 Proposed Site Infrastructure - Vehicle Refuelling Facility

The following:

*One 45,000 litre diesel tank will be installed in a “lean to” on the south eastern facade of the workshop which will be used for re-fuelling of on-site plant and vehicles.*

has been replaced with:

One 45,000 litre diesel tank will be installed in a “lean to” on the **north western** facade of the workshop which will be used for re-fuelling of on-site plant and vehicles.

### 3.2.6 Section 4.3.5 Proposed Site Infrastructure - Vehicle Wash

The following:

*A vehicle wash building will be provided to facilitate cleaning of all vehicles. The building will be located adjacent to the workshop to the west .*



has been replaced with:

A vehicle wash building will be provided to facilitate cleaning of all vehicles. The building will be located adjacent to the workshop to the **east**.

### 3.2.7 Section 4.3.5 Proposed Site Infrastructure - Traffic Management System

The following is removed:

*Cars will be able to access the site via Entrance 1 or Entrance 2. When accessing or egressing the site via Entrance 2, cars will use separate, dedicated access and exit lanes. Dedicated roadways will be provided on-site to ensure cars can safely access all areas of the site they need to access.*

and replaced with:

**All visitor cars will use Entrance 1 only and will use the 6 No. parking spaces immediately east of MRF 1 and 1 No. parking space east of the Administration Building. Safety bollards to the south of the MRF 3 and 1 No. parking space east of the Administration Building will segregate traffic from entering Entrance 2 through the site.**

**Administrative staff who will be based in the Administration Building and senior management will also use Entrance 1 and park in spaces immediately east of MRF 1 and east of the Administration Building. There is sufficient space to accommodate this requirement.**

**Operational staff will use Entrance 2 and park at the 21 no. car parking spaces which will be provided in the southeastern corner of the site and 7 No. parking spaces immediately south of MRF 3. The 7 No. parking spaces immediately south of MRF 3 will have capacity to accommodate disabled or EV parking requirements.**

### 3.2.8 Section 4.5.2 Construction Elements - Advance Works

The following has been updated to include the text in **bold**:

- *The open surface water drainage ditch traversing the site will need to be culverted. **It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.***

### 3.2.9 Section 4.5.2 Construction Elements - Culverting of the Existing Open Surface Water Drainage Ditch

The following section has been updated to include the text in **bold**:

**The open surface water drainage ditch traversing the site will need to be culverted. It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.**

*The culverting of the existing open surface water drainage ditch will involve the following:*

- *Damming of the existing drainage ditch at the point that it enters the development site.*
- *Pumping of water from this point to the point the drainage ditch **exits** the development site.*
- *Excavation of culvert trench using a tracked excavator.*
- *Laying of pre-cast culvert pipe using telehoists or cranes and connecting the culvert traversing the site with the drainage ditch at the point that the channel enters the site and **exits** the site.*



- *Backfilling of excavated material to fill excavated areas.*
- *Un-damming of the drainage ditch at the point it enters the development to allow the free flow of water through the laid culvert traversing the site and into the drainage ditch at the opposite end of the site.*

Where the drainage ditch is to remain open, upstream of the M50 culvert the following will be completed to protect the M50 culvert headwall and trash rack when the ditch is dammed:

- No demolition works will be carried out on the existing M50 structure.
- Excavation will be carried out immediately upstream of the M50 structure to remove silt and poor formation materials if present.
- Concrete protection works will abut to the existing protection works.
- To facilitate future access to maintain the trash rack it is proposed to put a concrete transition that will support safe access and egress to the trash rack. To protect the structure during operation it is proposed to:
  - Rehabilitate /replace the existing chamber and redirect flows from this outfall into a concrete lined channel to reduce the risk of localized scour.
  - Provide concrete lined protection works immediately upstream of the M50 culvert inlet to protect unlined surface drainage channels against scour caused by localised turbulence.
  - Provide launching aprons for scour protection up to 1.0 m depth between earthen channels and concrete lined transition using D50 100 mm.

Detail on this proposal is shown in the drawing P21-150-0700-0011 Rev A is included under separate cover to this response.

*These works will be carried out in accordance with the requirements of Inland Fisheries Ireland's Guidelines on the Protection of Fisheries during Construction in and Adjacent to Waters.*

### 3.3 Chapter 6 - Scoping and Consultation

#### 3.3.1 Section 6.2.2 Stakeholder Consultation

The following:

*In total, 5 no. substantive scoping responses were received (not including summary acknowledgements).*

has been replaced with:

In total, 6 no. substantive scoping responses were received (not including summary acknowledgements).





Table 6.2 of the original EIAR should be read in conjunction with below on TII consultation:

**Table 6-2: Stakeholder Consultation Responses**

| Consultee | Date of Response | Summary of Comments Provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | How and where comments are addressed in EIAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TII       | 20/04/2022       | <p>The site adjoins the M50. The proposed development shall not impact the national road reservation, nor associated infrastructure, including national road drainage systems.</p> <p>The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network in proximity to the national road network in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network.</p> <p>The developer should assess visual impacts, including lighting impact from glint and glare from the M50 as the development site adjoins the motorway.</p> <p>The developer should have regard to any Environmental Impact Statement or Report and all conditions and/or modifications imposed by ABP regarding road schemes in the area. The developer should in particular have regard to any potential cumulative impacts.</p> <p>The developer, in preparing the EIAR, should have regard to TII Publications (formally DMRB and the Manual of Contract Documents for Road Works).</p> <p>The developer, in preparing the EIAR, should have regard to TII's Environmental Assessment and Construction Guidelines, including the Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority, 2006).</p> | <p>The Applicant has confirmed with TII that the proposed development will not impact the national road reservation, nor associated infrastructure, including national road drainage systems. Refer to Section 2.1 of the RFI response report and Chapter 4 of the EIAR and EIAR Addendum.</p> <p>A robust Traffic and Transportation assessment was completed as Chapter 13 of Volume 2 of the EIAR to demonstrate the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of the national road network.</p> <p>An assessment of how the proposed development may potentially effect visual impacts has been carried out in Chapter 15 LVIA, of Volume 2 of the EIAR.</p> <p>Projects and existing development that have the potential to have a cumulative impact in-combination with the proposed development have been identified and are listed in Appendix 1.2, Projects considering during Cumulative Assessment, in Volume 3 of the EIAR.</p> <p>The EIAR was prepared with regard to all relevant TII publications.</p> <p>Chapter 11 Air Quality and Climate of Volume 2 of the EIAR was prepared with regard to Guidelines on the Treatment of Air Quality During the Planning and Construction of National Road Schemes (TII, 2011).</p> |



| Consultee | Date of Response | Summary of Comments Provided                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | How and where comments are addressed in EIAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                  | <p>The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev. National Roads Authority, 2004).</p> <p>A Traffic and Transport Assessment be carried out in accordance with relevant guidelines.</p> <p>The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.</p> <p>The Applicant should clearly identify haul routes proposed and assess the network to be traversed.</p> | <p>Chapter 12 Noise and Vibration of Volume of the EIAR was prepared with regard to the Environmental Noise Regulations 2006 and Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev. National Roads Authority, 2004).</p> <p>A robust Traffic and Transportation assessment was completed as Chapter 13 of Volume 2 of the EIAR.</p> <p>A Road Safety Audit is not required.</p> <p>All proposed haul routes are identified in Figure 1 of Appendix 13-4 of Volume 3 of the EIAR.</p> |



### 3.4 Chapter 9 - Soils, Geology and Hydrogeology

#### 3.4.1 Section 9.4.2.1 Advance Works

The following has been updated to include the text in **bold**:

- *Culverting of the existing open surface water drainage ditch. It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.*

### 3.5 Chapter 10 - Hydrology and Surface Water Quality

#### 3.5.1 Section 10.5.2.1 Advance Works

The following has been updated to include the text in **bold**:

- *Culverting of the existing open surface water drainage ditch. It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.*

#### 3.5.2 Section 10.6.2.2 Measures to Protect the Surface Waters during Culverting Works

The following section has been updated to include the text in **bold**:

Section heading to be updated to *Section 10.6.2.2 Measures to Protect the Surface Waters during Culverting and Protection Works*.

*The culverting of the existing open surface water drainage ditch and protection works to the retained open part of the drainage ditch will be carried out during advance works stage of the construction phase. The following mitigation measures will be adopted during the proposed culverting and protection works:*

- *The surface water drainage ditch will need to be temporarily dammed during culverting and protection works (E.g. Using pea gravel bags and geosynthetic textile). This will be done progressively in sections. This will allow culverting and protection construction works to be isolated from flowing water. A water pumping system will be used to allow for the transport of water downstream during culverting and protection works.*
- *These works will only be carried out during a period of dry weather conditions to prevent the run-off of sediment from working areas to the drainage ditch.*
- *Culverting and protection works will be carried out in a careful and precautionary manner, and in accordance with a defined method statement. The working areas will be kept as tidy as possible for the duration of the works. All excavated / excess material will be immediately removed from the working area on an ongoing basis as works progress.*
- *All personnel carrying out culverting and protection related works will be obliged to read and fully understand the method statement for the proposed works. A toolbox talk regarding the method statement, the carrying out of the works generally, and the need to protect the quality of water passing through the drainage ditch will be carried out immediately prior to the commencement of works.*
- *Temporary cut off trenches will be used to divert surface water run-off away from working areas in and around the drainage ditch during culverting and protection works.*



- *Regular inspections of working areas will be undertaken to assess and confirm the implementation of the agreed control measures.*
- *Any machines working in or around the drainage ditch must be protected against leakage or spillage of fuels, oils, greases, and hydraulic fuels (e.g. using drip trays).*
- *The culvert piping itself will be pre-cast thereby substantially reducing the potential for cement based materials becoming entrained in surface water run-off.*





## 3.6 Chapter 11 - Air Quality

### 3.6.1 Section 11.2.2.4.1 Characteristics of Odour

The text in **bold** is included in this section:

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 (Water Environment Federation, 1995). 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.

### 3.6.2 New Section: Section 11.2.2.4.6 Odour Leakage from MRF1

Item 2 of the RFI has specifically requested that potential odour leakage from the roller shutter doors in MRF1 be investigated and included in the odour modelling assessment. There are a total of 6 no. fast-acting roller shutter doors proposed for MRF1. There is the potential for odour leakage to occur when trucks are entering and exiting the building and the doors are opened.

Research on single-sided natural ventilation has been undertaken over the last 30 years. Early research by Warren et al (1985) found that, when wind is the main driver of airflow through the opening (i.e. temperature difference between the inside and outside air can be neglected), the mean wind speed needs to be considered together with the effect of turbulence in the wind and the fluctuations in pressure in the opening.

Warren derived the following expression based on both wind tunnel and full-scale experiments:

- $$Q = 0.025 \times A \times UR$$

where:

Q = Odour emission rate (m<sup>3</sup>/sec)

A = area of inlet (m<sup>2</sup>)

UR = Reference wind speed at 10m (m/s)

The formula above indicates that the key parameters influencing the release of odour from the MRF1 building will be the area of the opening (roller shutter door) and the average reference wind speed, which for Dublin Airport is approximately 5.3 m/s on an annual basis. The formula also indicates that the release of odour from the MRF1 building will be significantly reduced when the building doors are closed. Given that the process building is not heated, temperature differences should not be significant and thus the formula above should be a reasonable approximation of the proposed MRF1 building.

The duration the doors will be open for in any one day has been estimated based on the number of trucks entering and exiting the building and the time required for the doors to fully open and close. It has been estimated that each of the 6 no. doors will be open for a total of 1,368 seconds per day, c.23 minutes total per door in a 24 hour period (1.6% of the day). This is based on 27 no. articulated HGVs entering and exiting the building and 54 no. RELs entering and exiting the building.



No site specific odour concentrations or emission rates are available for the odour leakage from the doors. Therefore, published data from similar environments has been used. An estimate of the likely magnitude of odour emissions from the facility can be derived from the publication “Emission Fluctuations & Site Controls At Waste Transfer Stations” by Dr. Phil Longhurst which was presented at the International Conference on Odour Management & Treatment, Cranfield University, UK (2002) . A summary of the results is given in Table 11-4a and are based on a MSW waste transfer facility. The proposed MRF1 will have an odour abatement system in place with the air within the building extracted under negative pressure, therefore odour concentrations within the building are not predicted to be significantly high. The geometric mean of the results for the August survey period gives a reasonable worst-case estimate of the likely magnitude of emissions from the facility. The odour concentration of 1,257 OUE/m<sup>3</sup> has been used as an estimate when accounting for the odour concentration within the MRF1 building.

Therefore, using the above equation, an odour concentration of 1,257 OUE/m<sup>3</sup> and assuming the doors are open for 1.6% of the day an odour emission rate of 110.7 OUE/sec has been estimated per door for MRF1 (see Table 11-4b).

**Table 11-4a: Odour Emission Rates From A MSW Waste Transfer Station**

| Survey                          | Samples                            | Odour Emission Concentration (OUE/m <sup>3</sup> ) |
|---------------------------------|------------------------------------|----------------------------------------------------|
| September Survey                | 1 – waste tipping                  | 123                                                |
|                                 | 2 – waste tipping                  | 132                                                |
|                                 | 3 – bulk vehicle loading / tipping | 57                                                 |
|                                 | 4 – bulk vehicle loading / tipping | 1695                                               |
|                                 | 5 – bulk vehicle loading / tipping | 969                                                |
|                                 | 6 – bulk vehicle loading / tipping | 1409                                               |
|                                 | Geometric Mean                     | 359                                                |
| August Survey (11 months later) | 1 – Bulk vehicle loading           | 588                                                |
|                                 | 2 – Bulk vehicle loading           | 889                                                |
|                                 | 3 – Bulk vehicle loading           | 1291                                               |
|                                 | 4 – Bulk vehicle loading           | 2138                                               |
|                                 | 5 – Bulk vehicle loading           | 944                                                |
|                                 | 6 – Bulk vehicle loading           | 970                                                |
|                                 | 7 – Bulk vehicle loading           | 1680                                               |
|                                 | 8 – Bulk vehicle loading           | 2439                                               |
|                                 | 9 – Bulk vehicle loading           | 1447                                               |
|                                 | Geometric Mean                     | 1257                                               |



**Table 11-4b: Odour Emission Rate for MRF1 Roller Doors**

| Emission Source<br>Reference Area Of<br>Opening (m <sup>2</sup> ) % Of<br>Operational Day | Emission Source<br>Reference Area Of<br>Opening (m <sup>2</sup> ) % Of<br>Operational Day | Emission Source<br>Reference Area Of<br>Opening (m <sup>2</sup> ) % Of<br>Operational Day | Odour Emission Rate                    |                          |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------|--------------------------|
|                                                                                           |                                                                                           |                                                                                           | Concentration<br>(OUE/m <sup>3</sup> ) | Mass Emission<br>(OUE/s) |
| MRF1 Door Open                                                                            | 42                                                                                        | 1.6 (per door)                                                                            | 1,257                                  | 110.7 Note 1             |

Note 1 Based on area of open door and an average wind speed of 5.3 m/s

### 3.6.3 New Section: Section 11.4.3.1.1 Revised Odour Modelling Assessment

A revised modelling assessment was conducted to account for the odour leakage associated with the opening and closing of the roller shutter doors on building MRF1.

Details of the 98<sup>th</sup>ile of 1-hour mean odour concentrations at the worst-case off-site location are given in Table 11-9a over an historical five-year period ranging from 2018 to 2022 based on the USEPA approved AERMOD model (version 22112). The worst case scenario for the 98<sup>th</sup>ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentrations is 66% of the guideline value of 1.5 OUE/m<sup>3</sup> at the worst-case receptor. Figure 11-3a shows the ambient odour concentration contour pattern (as a 98<sup>th</sup>ile of one-hour concentrations) in the vicinity of the proposed development for the worst-case year of 2021. Based on the results detailed below, no nearby receptors are predicted to experience odour nuisance issues as a result of the proposed development. Results are within the acceptable range for odour emissions.

**Table 11-4b: Predicted Odour Concentration as 98<sup>th</sup>ile At Worst-Case Offsite Receptor**

| Pollutant /<br>Meteorological Year | Averaging<br>Period                               | Predicted<br>Odour<br>Concentration<br>(OUE/m <sup>3</sup> ) | Guideline<br>(OUE/m <sup>3</sup> )<br>Note 1 | Result as<br>% of<br>Guideline |
|------------------------------------|---------------------------------------------------|--------------------------------------------------------------|----------------------------------------------|--------------------------------|
| Ambient Odour / 2018               | Maximum 1-<br>Hour (as a<br>98 <sup>th</sup> ile) | 0.92                                                         | 1.5                                          | 61%                            |
| Ambient Odour / 2019               |                                                   | 0.97                                                         |                                              | 65%                            |
| Ambient Odour / 2020               |                                                   | 0.93                                                         |                                              | 62%                            |
| Ambient Odour / 2021               |                                                   | 1.00                                                         |                                              | 66%                            |
| Ambient Odour / 2022               |                                                   | 0.96                                                         |                                              | 64%                            |



Figure 11-3a: 98<sup>th</sup>%ile of 1-Hour Odour Concentrations (OUE/m<sup>3</sup>)

### 3.6.4 Section 11.6 Residual Impacts

The following:

*Odour modelling based on the USEPA approved AERMOD model has found that the worst-case scenario for the 98<sup>th</sup>%ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentration is at most 63% of the guideline value of 1.5 OUE/m<sup>3</sup> at the worst-case receptor.*

has been replaced with:

Odour modelling based on the USEPA approved AERMOD model has found that the worst-case scenario for the 98<sup>th</sup>%ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentration is at most 66% of the guideline value of 1.5 OUE/m<sup>3</sup> at the worst-case receptor **when an odour leakage associated with the opening and closing of the roller shutter doors on building MRF1 is considered.**





## 3.7 Chapter 12 - Noise and Vibration

### 3.7.1 Section 12.2.1 - Summary of the Proposed Development

The following:

*In summary, the proposed development consists of construction and operation of an expanded waste facility at a development site (3.38 hectares in size) encompassing the existing facility as well as lands directly south of the existing facility, falling across the townlands of Cappogue and Dunsink.*

has been replaced with:

In summary, the proposed development consists of construction and operation of an expanded waste facility at a development site (**3.40** hectares in size) encompassing the existing facility as well as lands directly south of the existing facility, falling across the townlands of Cappogue and Dunsink.

### 3.7.2 Section 12.3.2 - Study Area

The following:

*The proposed development is located in the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Co. Dublin and is on a (3.38 ha site. The development site is situated approximately 2 km north-west of Finglas village and 2 km east of Blanchardstown village. The site is located immediately north the M50, approximately midway between Junctions 5 and 6. Dunsink Landfill and agricultural lands are situated further south of the site on the opposite side of the M50. A number of residential dwellings are located to the west and south-west of the site, with agricultural lands situated further west of the site. The Ballycoolin Road is situated ca. 180 metres north of the site. A number of residential dwellings are situated along this road ca. 200 m north west of the site.*

has been replaced with:

The proposed development is located in the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Co. Dublin and is on a **3.40** ha site. The development site is situated approximately 2 km north-west of Finglas village and 2 km east of Blanchardstown village. The site is located immediately north the M50, approximately midway between Junctions 5 and 6. Dunsink Landfill and agricultural lands are situated further south of the site on the opposite side of the M50. A number of residential dwellings are located to the west and south-west of the site, with agricultural lands situated further west of the site. The Ballycoolin Road is situated ca. 180 metres north of the site. A number of residential dwellings are situated along this road ca. 200 m north west of the site.

### 3.7.3 Section 12.5.1 Baseline Noise Survey

The following sections and tables (Table 12-10 to Table 12-13):

*An attended noise survey was undertaken during the daytime on the 8th October 2021 and during the evening and night-time periods on the 11th – 12th October 2021, at four noise monitoring locations. Results are displayed in Tables 12-10 to 12-13. The data from these noise surveys has been used to represent the ‘Do-Nothing’ effect. The data from these noise surveys in conjunction with noise predictions has been used to determine the noise impact at noise sensitive locations.*



**Table 12-10: Baseline Survey Results – Monitoring Location N1**

| Receiver   | Monitoring Location N1                       |                           |                    |                   |                                                                                                                                                                                                                           |
|------------|----------------------------------------------|---------------------------|--------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period     | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                                                                                                                                                                  |
|            |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                                                                                                                                                           |
| Daytime    | 08/10/2021 10:45                             | 57                        | 66                 | 55                | Noise from traffic south of measurement position, distant M50 noise, aircraft. Loader noise, reverse hazards and glass impacts from Rosemount Business Park to north. Reverse hazards occasionally audible from the site. |
|            | 08/10/2021 12:18                             | 59                        | 68                 | 57                |                                                                                                                                                                                                                           |
|            | 08/10/2021 13:39                             | 54                        | 66                 | 50                |                                                                                                                                                                                                                           |
|            | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 54                |                                                                                                                                                                                                                           |
| Evening    | 11/10/2021 21:28                             | 53                        | 65                 | 49                | Mainly M50, car in cul de sac, distant M1 / Cappagh road noise (east), (wall screens M50), aircraft, firework.                                                                                                            |
| Night-time | 11/10/2021 23:25                             | 48                        | 57                 | 45                | Mainly road traffic noise, M50 screened by wall, traffic to north and distant traffic.                                                                                                                                    |
|            | 12/10/2021 00:38                             | 46                        | 55                 | 43                |                                                                                                                                                                                                                           |
|            | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 44                |                                                                                                                                                                                                                           |

**Table 12-11: Baseline Survey Results – Monitoring Location N2A (daytime only)**

| Receiver | Monitoring Location N2A                      |                           |                    |                   |                                                                                                                                                                                       |
|----------|----------------------------------------------|---------------------------|--------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period   | Date & Start Time                            | Measured Noise Levels, dB |                    |                   | Comments                                                                                                                                                                              |
|          |                                              | L <sub>Aeq</sub>          | L <sub>AFmax</sub> | L <sub>AF90</sub> |                                                                                                                                                                                       |
| Daytime* | 08/10/2021 11:16                             | 62                        | 78                 | 60                | Mainly noise from the site, loaders inside and outside building, handtool, skip truck lifting skip, unloading metal from lorry, skip truck and chains, alarms, distant M50, aircraft. |
|          | 08/10/2021 12:41                             | 67                        | 90                 | 63                |                                                                                                                                                                                       |
|          | 08/10/2021 14:03                             | 62                        | 71                 | 60                |                                                                                                                                                                                       |
|          | Arithmetic Average of L <sub>AF90</sub> (dB) |                           |                    | 61                |                                                                                                                                                                                       |

\*Location inaccessible during evening and night time periods



**Table 12-12: Baseline Survey Results – Monitoring Location N2B**

| Receiver   | Monitoring Location N2B                                   |                           |                                 |                                |                                                                                                                                                      |
|------------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period     | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                                                                                             |
|            |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                                                                                      |
| Daytime    | 08/10/2021 11:35                                          | 66                        | 73                              | 65                             | On site trucks and loaders, skip truck, forklift, loading activities inside shed, loader impacts, reverse hazards, metal being loaded into container |
|            | 08/10/2021 12:58                                          | 67                        | 76                              | 65                             |                                                                                                                                                      |
|            | 08/10/2021 14:21                                          | 66                        | 75                              | 64                             |                                                                                                                                                      |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 64                             |                                                                                                                                                      |
| Evening    | 11/10/2021 22:45                                          | 59                        | 65                              | 55                             | Hum/fan noise towards south-east, motorway and aircraft audible.                                                                                     |
| Night-time | 11/10/2021 23:00                                          | 57                        | 66                              | 53                             | M50 dominant, car horn, horse, occasional lorries passing on road to north.                                                                          |
|            | 12/10/2021 00:13                                          | 57                        | 64                              | 54                             |                                                                                                                                                      |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 54                             |                                                                                                                                                      |

**Table 12-13: Baseline Survey Results – Monitoring Location N4**

| Receiver   | Monitoring Location N4                                    |                           |                                 |                                |                                                                                                                                                                                                                                     |
|------------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period     | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                                                                                                                                                                            |
|            |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                                                                                                                                                                     |
| Daytime    | 08/10/2021 11:57                                          | 72                        | 94                              | 57                             | M50 traffic dominant. Site noise generally not audible, reversing hazards from site barely audible, aircraft, distant reversing hazards, dog barking. Car and truck idling at Coolbrook Cottages industrial area during second run. |
|            | 08/10/2021 13:20                                          | 63                        | 92                              | 54                             |                                                                                                                                                                                                                                     |
|            | 08/10/2021 14:44                                          | 57                        | 73                              | 55                             |                                                                                                                                                                                                                                     |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 55                             |                                                                                                                                                                                                                                     |
| Evening    | 11/10/2021 22:17                                          | 50                        | 57                              | 48                             | M50 noise dominant and noise from road to north.                                                                                                                                                                                    |
| Night-time | 11/10/2021 23:48                                          | 49                        | 59                              | 47                             | Mainly M50 road traffic noise, Low level fan noise to north, aircraft, helicopter                                                                                                                                                   |
|            | 12/10/2021 00:57                                          | 50                        | 74                              | 44                             |                                                                                                                                                                                                                                     |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 46                             |                                                                                                                                                                                                                                     |



## Meteorological Conditions

The weather conditions during the daytime noise survey on the 8th October 2021 was overcast. Temperatures ranged from 12 – 19 °C **18 – 20 °C**. The average wind speed ranged from 0.5 – 1.1 m/s, gusting up to 3.1m/s. The wind was from a west/north westerly direction during the daytime.

have been replaced with:

An attended noise survey was undertaken during the daytime on the **10<sup>th</sup> August 2023** and during the evening and night-time periods on the 11th – 12th October 2021, at four noise monitoring locations. Results are displayed in Tables 12-10 to 12-13. The data from these noise surveys has been used to represent the ‘Do-Nothing’ effect. The data from these noise surveys in conjunction with noise predictions has been used to determine the noise impact at noise sensitive locations.

**Table 12-10: Baseline Survey Results - Monitoring Location N1**

| Receiver   | Monitoring Location N1                                    |                           |                                 |                                |                                                                                                                                                                                                                                |
|------------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period     | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                                                                                                                                                                       |
|            |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                                                                                                                                                                |
| Daytime    | 10/08/2023 10:24                                          | 56                        | 72                              | 53                             | Noise from traffic east and south of measurement position, distant M50 noise. Dog barking at the start of first measurement. Impact noise and vehicle movements in Rosemount Business Park to north briefly audible. Birdsong. |
|            | 10/08/2023 10:39                                          | 56                        | 62                              | 54                             |                                                                                                                                                                                                                                |
|            | 10/08/2023 10:54                                          | 56                        | 61                              | 54                             |                                                                                                                                                                                                                                |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 54                             |                                                                                                                                                                                                                                |
| Evening    | 11/10/2021 21:28                                          | 53                        | 65                              | 49                             | Mainly M50, car in cul de sac, distant M1 / Cappagh road noise (east), (wall screens M50), aircraft, firework.                                                                                                                 |
| Night-time | 11/10/2021 23:25                                          | 48                        | 57                              | 45                             | Mainly road traffic noise, M50 screened by wall, traffic to north and distant traffic.                                                                                                                                         |
|            | 12/10/2021 00:38                                          | 46                        | 55                              | 43                             |                                                                                                                                                                                                                                |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 54                             |                                                                                                                                                                                                                                |

**Table 12-11 Baseline Survey Results – Monitoring Location N2A (daytime only)**

| Receiver | Monitoring Location N2A                                   |                           |                                 |                                |                                                                                |
|----------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------------------------------------------------------|
| Period   | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                       |
|          |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                |
| Daytime* | 10/08/2023 09:31                                          | 63                        | 68                              | 61                             | M50 traffic noise dominant, occasional horn beeps, livestock (horses) audible. |
|          | 10/08/2023 09:46                                          | 63                        | 67                              | 62                             |                                                                                |
|          | 10/08/2023 10:01                                          | 63                        | 68                              | 62                             |                                                                                |
|          | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 62                             |                                                                                |

\*Location inaccessible during evening and night time periods





**Table 12-12: Baseline Survey Results – Monitoring Location N2B**

| Receiver   | Monitoring Location N2B                                   |                           |                                 |                                |                                                                                |
|------------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|--------------------------------------------------------------------------------|
| Period     | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                       |
|            |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                |
| Daytime    | 10/08/2023 09:30                                          | 64                        | 68                              | 63                             | M50 traffic noise dominant, occasional horn beeps, livestock (horses) audible. |
|            | 10/08/2023 09:45                                          | 64                        | 77                              | 63                             |                                                                                |
|            | 10/08/2023 10:00                                          | 64                        | 72                              | 63                             |                                                                                |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 63                             |                                                                                |
| Evening    | 11/10/2021 22:45                                          | 59                        | 65                              | 55                             | Hum/fan noise towards south-east, motorway and aircraft audible.               |
| Night-time | 11/10/2021 23:00                                          | 57                        | 66                              | 53                             | M50 dominant, car horn, horse, occasional lorries passing on road to north.    |
|            | 12/10/2021 00:13                                          | 57                        | 64                              | 54                             |                                                                                |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 54                             |                                                                                |

**Table 12-13: Baseline Survey Results – Monitoring Location N4**

| Receiver   | Monitoring Location N4                                    |                           |                                 |                                |                                                                                                                                                               |
|------------|-----------------------------------------------------------|---------------------------|---------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period     | Date & Start Time                                         | Measured Noise Levels, dB |                                 |                                | Comments                                                                                                                                                      |
|            |                                                           | L <sub>Aeq</sub>          | L <sub>A</sub> F <sub>max</sub> | L <sub>A</sub> F <sub>90</sub> |                                                                                                                                                               |
| Daytime    | 10/08/2023 10:26                                          | 69                        | 96                              | 56                             | Dog barking during first measurement. M50 noise audible. Birdsong. Local traffic & HGV movements on cul-de-sac, impact noise from private yard on cul-de-sac. |
|            | 10/08/2023 10:41                                          | 60                        | 79                              | 57                             |                                                                                                                                                               |
|            | 10/08/2023 10:56                                          | 60                        | 79                              | 57                             |                                                                                                                                                               |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 57                             |                                                                                                                                                               |
| Evening    | 11/10/2021 22:17                                          | 50                        | 57                              | 48                             | M50 noise dominant and noise from road to north.                                                                                                              |
| Night-time | 11/10/2021 23:48                                          | 49                        | 59                              | 47                             | Mainly M50 road traffic noise, Low level fan noise to north, aircraft, helicopter                                                                             |
|            | 12/10/2021 00:57                                          | 50                        | 74                              | 44                             |                                                                                                                                                               |
|            | Arithmetic Average of L <sub>A</sub> F <sub>90</sub> (dB) |                           |                                 | 46                             |                                                                                                                                                               |

#### Meteorological Conditions

The weather conditions during the daytime noise survey on the 10<sup>th</sup> August 2023 were clear and dry. Temperatures ranged from 18 – 20 °C. The average wind speed ranged from 1.5 – 2.8 m/s, gusting up to 3.9m/s. The wind was from a south easterly direction during the daytime.



### 3.7.4 Section 12.6.3 Potential Impacts during Operational Phase

The following has been updated to include the text in **bold**:

*The main activities during the operation of the proposed development are waste acceptance, processing, storage and onward transfer. A detailed description of these activities is provided in Chapter 4 - Existing and Proposed Development, of Volume 2 of this EIAR and this Addendum. This assessment considered the facility operating at its maximum capacity.*

*The proposed facility will have the following hours of operation:*

- *Hours of operation of the facility for waste acceptance, handling and consignment from the facility - 00:00 to 00:00 Monday to Sunday inclusive*
- *Hours of operation of the facility for waste processing – 07:00 – 23:00 Monday to Sunday inclusive.*
- **The Maintenance Building will only operate during daytime hours (07:00hrs to 19:00hrs)**
- **Skip movements in the skip storage area will only occur between 08:00hrs to 20:00hrs**

The following:

*Activities in the yard include vehicles idling at the reception/weighbridge area, vehicles entering/leaving buildings MRF1, MRF 2 and MRF3. The modelling assumes that all plant will operate simultaneously within the buildings with doors closed. It has been assumed that all stationary plant will operate 100% of the time for daytime and for 25% (one hour) evening, with no fixed plant operating during night-time. Mobile plant will operate 50% of the time for day and evening and 20% of the time at night, with waste vehicles tipping fill assumed to occur for 15% of the time during day and evening, and 5% of the time at night. The truck wash is expected to operate for brief periods during daytime hours only. It has been assumed that the truck wash will operate for 5% of the time during the daytime period only. It has been assumed that the vehicle workshop will be operational for 50% of the time during day and evening, and 20% at night and that activities will occur in storage building MRF2 10% of the time during day, evening and night.*

has been replaced with:

Activities in the yard include vehicles idling at the reception/weighbridge area, vehicles entering/leaving buildings MRF1, MRF 2 and MRF3. The modelling assumes that all plant will operate simultaneously within the buildings with doors closed **for part of the day, evening and night-time periods**. It has been assumed that all stationary plant will operate 100% of the time for daytime and for 25% (one hour) evening, with no fixed plant operating during night-time. Mobile plant will operate 50% of the time for day and evening and 20% of the time at night, with waste vehicles tipping fill assumed to occur for 15% of the time during day and evening, and 5% of the time at night. The truck wash is expected to operate for brief periods during daytime hours only. It has been assumed that the truck wash will operate for 5% of the time during the daytime period only. It has been assumed that the vehicle workshop will be operational for **50% of the time during daytime hours only** and that activities will occur in storage building MRF2 10% of the time during day, evening and night.



The following table:

**Table 3-1: Noise Sources - Details**

| Noise Source                                | Number                                                    | Hours of Operation                               | Location                | Source of Data  |
|---------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|-------------------------|-----------------|
| <b>Waste Imports &amp; Exports</b>          |                                                           |                                                  |                         |                 |
| Waste Vehicle –Travel to and from facility* | 257 maximum<br>193 daytime<br>32 evening<br>32 night-time | 00:00 to 00:00                                   | Throughout site         | BS 5228-1 C8.21 |
| <b>Vehicle Workshop</b>                     |                                                           |                                                  |                         |                 |
| Diesel Generator                            | 1                                                         | 00:00 to 00:00<br>(50% day, evening & 20% night) | Inside Vehicle Workshop | BS 5228-1 C4.84 |
| Angle Grinder                               | 1                                                         | 00:00 to 00:00<br>(50% day, evening & 20% night) | Inside Vehicle Workshop | BS 5228-1 C4.93 |

has been replaced with:

**Table 3-2: Noise Sources - Details**

| Noise Source                                            | Number                                                    | Hours of Operation          | Location                | Source of Data  |
|---------------------------------------------------------|-----------------------------------------------------------|-----------------------------|-------------------------|-----------------|
| <b>Waste Imports &amp; Exports</b>                      |                                                           |                             |                         |                 |
| Waste Vehicle – Skip Wagon Travel to and from facility* | 257 maximum<br>193 daytime<br>32 evening<br>32 night-time | 00:00 to 00:00              | Throughout site         | BS 5228-1 C8.21 |
| <b>Vehicle Workshop</b>                                 |                                                           |                             |                         |                 |
| Diesel Generator                                        | 1                                                         | 00:00 to 00:00<br>(50% day) | Inside Vehicle Workshop | BS 5228-1 C4.84 |
| Angle Grinder                                           | 1                                                         | 00:00 to 00:00<br>(50% day) | Inside Vehicle Workshop | BS 5228-1 C4.93 |



The following:

*A detailed description of the proposed site infrastructure is provided in Chapter 4 Description of Existing and Proposed Development. There is potential for noise breakout from facility buildings through the building façade, roof and fast acting roller shutter doors. Noise breakout from the facility buildings has been included as part of the detailed operational noise model. For the purpose of this assessment, it has been assumed that roller doors will be closed. The sound insulation properties of building elements modelled is outlined in Table 12-19.*

has been replaced with:

*A detailed description of the proposed site infrastructure is provided in Chapter 4 Description of Existing and Proposed Development and this Addendum. There is potential for noise breakout from facility buildings through the building façade, roof and fast acting roller shutter doors. Noise breakout from the facility buildings has been included as part of the detailed operational noise model. For the purpose of this assessment, it has been assumed that roller doors will be **open for part of the day, evening and night-time periods to allow vehicle ingress and egress**, as calculated below. Keeping roller doors closed is standard practice for odour and noise management from waste facilities and is a standard requirement of Industrial Emissions Licences. The sound insulation properties of building elements modelled is outlined in Table 12-19.*

The following in **bold** is new text:

#### **Likely Length of Time Roller Doors will be Open to Allow Vehicle Ingress and Egress**

**The likely length of time roller doors will be open to allow vehicle ingress and egress over a 24 hr period, having regard to volume of traffic and nature of works has been estimated by information provided by the Applicant.**

**This information was obtained from the operation of a similar facility. Fast action roller shutter door are open for:**

- **1 minute and 12 seconds to allow an artic lorry to reverse into a building;**
- **50 seconds to allow an artic lorry driving out of building;**
- **45 seconds to allow a Rear End Loader (REL) reverse into building;**
- **46 seconds to allow a REL driving out of building.**

**To provide a conservative worst-case assessment, it has been assumed that ingress and egress of all vehicles to/from buildings will take 2 minutes and 2 seconds (or 122 seconds) per vehicle (i.e. ingress and egress times of all vehicles has been assumed as artic lorry's).The estimated number of two-way vehicle movements into and out of buildings (ingress & egress) over a typical 24hr working day is shown below in Table 12-18a.**





**Table 12-18a Daily Vehicle Ingress & Egress**

| Period                              | Vehicle Ingress & Egress (No.) |          |          |             |
|-------------------------------------|--------------------------------|----------|----------|-------------|
|                                     | MRF1                           | MRF2     | MRF3     | Maintenance |
| <b>Daytime<br/>(07:00 to 19:00)</b> | <b>117</b>                     | <b>3</b> | <b>6</b> | <b>25</b>   |
| <b>Evening<br/>(19:00 to 23:00)</b> | <b>1</b>                       | <b>1</b> | <b>0</b> | <b>N/A</b>  |
| <b>Night<br/>(23:00 to 07:00)</b>   | <b>26</b>                      | <b>1</b> | <b>2</b> | <b>N/A</b>  |

Based on the number of vehicle movements and roller shutter opening/closing times above, the calculated amount of time that roller doors will remain open to allow vehicle ingress and egress during a typical working day are displayed below, rounded up to the nearest minute.

**Table 12-18b Estimated Roller Door Opening Times**

| Period                          | Vehicle Movements          | Time Roller Doors Open (hh:mm)      |
|---------------------------------|----------------------------|-------------------------------------|
| <b>Day (07:00 to 19:00)</b>     | <b>MRF1 (C&amp;D): 117</b> | <b>(117x122s=14,274s)<br/>03:58</b> |
|                                 | <b>MRF2 (Storage): 3</b>   | <b>(3x122s=366s)<br/>00:07</b>      |
|                                 | <b>MRF3 (MSW) :6</b>       | <b>(6x122s=732s)<br/>00:13</b>      |
|                                 | <b>Maintenance: 25</b>     | <b>(25x122s=3,050s)<br/>00:51</b>   |
| <b>Evening (19:00 to 23:00)</b> | <b>MRF1 (C&amp;D): 1</b>   | <b>(1x122s=122s)<br/>00:03</b>      |
|                                 | <b>MRF2 (Storage): 1</b>   | <b>(1x122s=122s)<br/>00:03</b>      |
|                                 | <b>MRF3 (MSW): 0</b>       | <b>00:00</b>                        |
| <b>Night (23:00 to 07:00)</b>   | <b>MRF1 (C&amp;D): 26</b>  | <b>(26x122s=3,172s)<br/>00:53</b>   |
|                                 | <b>MRF2 (Storage): 1</b>   | <b>(1x122s=122s)<br/>00:03</b>      |
|                                 | <b>MRF3 (MSW): 2</b>       | <b>(2x122s=244s)<br/>00:05</b>      |



The following has been updated to include the text in **bold**:

*Site operations are to occur during daytime, evening and night-time periods, as detailed in Table 12-17. Predicted operational noise levels were calculated at 21 no. receptor locations including the amount of time that roller doors will remain open to allow vehicle ingress and egress during a typical working day and assessed against operational noise criteria described in Section 12.4.2.*

The following table:

**Table 12-20: Predicted Operational Noise Levels**

| Receptor ID | Predicted Noise Levels (LAeq,30min) |               |         |               |            |                  |
|-------------|-------------------------------------|---------------|---------|---------------|------------|------------------|
|             | Daytime                             | Daytime Limit | Evening | Evening Limit | Night-time | Night-time Limit |
| R1          | 49.1                                | 55            | 45.4    | 50            | 40.4       | 45               |
| R2          | 49.5                                | 55            | 45.7    | 50            | 40.6       | 45               |
| R3          | 50                                  | 55            | 46.2    | 50            | 41         | 45               |
| R4          | 49.8                                | 55            | 45.9    | 50            | 40.6       | 45               |
| R5          | 51.5                                | 55            | 47.6    | 50            | 43.6       | 45               |
| R6          | 52                                  | 55            | 47.8    | 50            | 43.8       | 45               |
| R7          | 49.9                                | 55            | 46.2    | 50            | 42.3       | 45               |
| R8          | 49.6                                | 55            | 45.9    | 50            | 42         | 45               |
| R9          | 48.2                                | 55            | 44.7    | 50            | 40.8       | 45               |
| R10         | 48.5                                | 55            | 45      | 50            | 41.1       | 45               |
| R11         | 47.6                                | 55            | 44.1    | 50            | 40.3       | 45               |
| R12         | 47                                  | 55            | 43.5    | 50            | 39.8       | 45               |
| R13         | 46.3                                | 55            | 42.9    | 50            | 39.2       | 45               |
| R14         | 45.7                                | 55            | 42.3    | 50            | 38.6       | 45               |
| R15         | 40.7                                | 55            | 37.1    | 50            | 33.4       | 45               |
| R16         | 40.3                                | 55            | 36.8    | 50            | 33.1       | 45               |
| R17         | 40.2                                | 55            | 36.5    | 50            | 32.8       | 45               |
| R18         | 39                                  | 55            | 35.6    | 50            | 31.8       | 45               |
| R19         | 38.9                                | 55            | 35.5    | 50            | 31.7       | 45               |
| R20         | 38.4                                | 55            | 35      | 50            | 31.3       | 45               |
| R21         | 37.4                                | 55            | 33.8    | 50            | 30.1       | 45               |



has been replaced with:

**Table 12-20: Predicted Operational Noise Levels**

| Receptor ID | Predicted Noise Levels (LAeq,30min) |               |         |               |            |                  |
|-------------|-------------------------------------|---------------|---------|---------------|------------|------------------|
|             | Daytime                             | Daytime Limit | Evening | Evening Limit | Night-time | Night-time Limit |
| R1          | 51                                  | 55            | 45      | 50            | 41         | 45               |
| R2          | 51                                  | 55            | 46      | 50            | 42         | 45               |
| R3          | 51                                  | 55            | 46      | 50            | 42         | 45               |
| R4          | 51                                  | 55            | 46      | 50            | 41         | 45               |
| R5          | 54                                  | 55            | 48      | 50            | 44         | 45               |
| R6          | 55                                  | 55            | 50      | 50            | 45         | 45               |
| R7          | 52                                  | 55            | 47      | 50            | 42         | 45               |
| R8          | 52                                  | 55            | 47      | 50            | 43         | 45               |
| R9          | 50                                  | 55            | 45      | 50            | 41         | 45               |
| R10         | 51                                  | 55            | 46      | 50            | 42         | 45               |
| R11         | 50                                  | 55            | 45      | 50            | 41         | 45               |
| R12         | 49                                  | 55            | 44      | 50            | 40         | 45               |
| R13         | 48                                  | 55            | 43      | 50            | 40         | 45               |
| R14         | 48                                  | 55            | 43      | 50            | 39         | 45               |
| R15         | 42                                  | 55            | 36      | 50            | 34         | 45               |
| R16         | 41                                  | 55            | 36      | 50            | 34         | 45               |
| R17         | 41                                  | 55            | 36      | 50            | 33         | 45               |
| R18         | 40                                  | 55            | 35      | 50            | 33         | 45               |
| R19         | 40                                  | 55            | 35      | 50            | 33         | 45               |
| R20         | 40                                  | 55            | 35      | 50            | 32         | 45               |
| R21         | 39                                  | 55            | 34      | 50            | 30         | 45               |



The following has been updated to include the text in **bold**:

*The predicted noise levels are below the daytime, evening and night-time noise limits defined in the EPA's NG4 guidelines for all properties.*

*The predicted noise levels are also below the ambient noise levels measured at the four noise monitoring locations. This agrees with the measurements undertaken at noise sensitive locations in the vicinity of development with and without the development operating. Therefore, it is likely that traffic noise will mask the noise from the proposed development. However, it is possible that operational noise from the proposed development will be audible at the nearest noise sensitive locations, especially when traffic noise subsides. In terms of the significance of impact, as the existing ambient noise levels are above the predicted noise for the proposed development, the potential impact from operational noise levels is not significant.*

**As the maintenance building will not be operating during evening or night-time, noise emissions from this activity are prevented during the most sensitive periods.**

### 3.7.5 Section 12.7.2 Operational Phase Mitigation - Roller Shutter Doors

The following:

*The noise modelling is based on closed roller shutter doors. Fast acting roller shutter doors will be required. To meet the noise criteria there will be operational restrictions, e.g. doors will need to be timed to close as soon as possible after vehicle entry and exit. Noisier plant will not be operated in instances where doors are left open for a significant period of time.*

has been replaced with:

The noise modelling is based on roller shutter doors **open for vehicle ingress and egress only**. Fast acting roller shutter doors will be required. To meet the noise criteria there will be operational restrictions, e.g. doors will need to be timed to close as soon as possible after vehicle entry and exit. **It will also be important limit the vehicles ingress/egress to/from buildings to that outlined in Table 12-18b Estimated Roller Door Opening Times.**





## 3.8 Chapter 16 - Inter-relationships and Interactions

### 3.8.1 Section 16.2 - Evaluation of Impact Inter-relationships and Interactions

The following:

**Table 16-2: Description of Interaction Between Environmental Aspects**

| Interaction                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population and Human Health and Air Quality and Climate | Odour modelling based on the USEPA approved AERMOD model has found that the worst-case scenario for the 98th%ile of 1-hour concentrations occurs in 2021 and is less than the applicable odour guideline/limit value of 1.5 OUE/m <sup>3</sup> at the worst-case receptor (63% of this value). Based on these results, no nearby human receptors are predicted to experience odour nuisance issues because of the proposed development. |

has been replaced with:

**Table 16-2: Description of Interaction Between Environmental Aspects**

| Interaction                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population and Human Health and Air Quality and Climate | Odour modelling based on the USEPA approved AERMOD model has found that the worst-case scenario for the 98th%ile of 1-hour concentrations occurs in 2021 and is less than the applicable odour guideline/limit value of 1.5 OUE/m <sup>3</sup> at the worst-case receptor <b>when an odour leakage associated with the opening and closing of the roller shutter doors on building MRF1 is considered (66% of this value)</b> . Based on these results, no nearby human receptors are predicted to experience odour nuisance issues because of the proposed development. |



## 3.9 Chapter 17 - Schedule of Commitments

### 3.9.1 Section 17.5 - Surface Water and Hydrology

The following has been updated to include the text in **bold**:

| Mitigation No. | EIAR Section Reference | Description of Mitigation Measures/ Commitments                                                                                                                                                                                                                                                                                                                                                                                                                 | Stage        |
|----------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 9              | 10.6.2.2               | The surface water drainage ditch will need to be temporarily dammed during culverting <b>and protection</b> works (e.g., Using pea gravel bags and geosynthetic textile). This will be done progressively in sections. This will allow culverting <b>and protection</b> construction works to be isolated from flowing water. A water pumping system will be used to allow for the transport of water downstream during culverting <b>and protection</b> works. | Construction |
| 11             | 10.6.2.2               | Culverting <b>and protection</b> works will be carried out in a careful and precautionary manner, and in accordance with a defined method statement. The working areas will be kept as tidy as possible for the duration of the works. All excavated / excess material will be immediately removed from the working area on an ongoing basis as works progress.                                                                                                 | Construction |
| 12             | 10.6.2.2               | All personnel carrying out culverting <b>and protection related</b> works will be obliged to read and fully understand the method statement for the proposed works. A toolbox talk regarding the method statement, the carrying out of the works generally, and the need to protect the quality of water passing through the drainage ditch will be carried out immediately prior to the commencement of works.                                                 | Construction |
| 13             | 10.6.2.2               | Temporary cut off trenches will be used to divert surface water run-off away from working areas in and around the drainage ditch during culverting <b>and protection</b> works.                                                                                                                                                                                                                                                                                 | Construction |



### 3.9.2 Section 17.7 - Noise and Vibration

The following has been updated to include the text in **bold**:

| <i>Mitigation No.</i> | <i>EIAR Section Reference</i> | <i>Description of Mitigation Measures/ Commitments</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <i>Stage</i>       |
|-----------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 18                    | 12.7.2                        | <p><i>Roller Shutter Doors</i></p> <p><i>The noise modelling is based on closed roller shutter doors. Fast acting roller shutter doors will be required. To meet the noise criteria there will be operational restrictions, e.g. doors will need to be timed to close as soon as possible after vehicle entry and exit.</i></p> <p><b>It will also be important limit the vehicles ingress/egress to buildings to that outlined in Table 12-18b Estimated Roller Door Opening Times. Noisier plant will not be operated in instances where doors are left open for a significant period of time.</b></p> | <i>Operational</i> |



### 3.10 Appropriate Assessment Screening Report

#### 3.10.1 Section 1 - Introduction

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) encompassing the existing facility as well as lands directly south of the existing facility, falling across the townlands of Cappogue and Dunsink.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) encompassing the existing facility as well as lands directly south of the existing facility, falling across the townlands of Cappogue and Dunsink.

#### 3.10.2 Section 4.1 - Overview

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

#### 3.10.3 Section 4.1.1 - Construction Phase - Culverting of Existing Surface Water Drain

The following has been updated to include the text in **bold**:

*An existing open surface water drainage ditch traverses the development site in a north west to south east direction. This drain collects surface water generated at the existing site and discharges it into a culvert to the south east of the site which travels below the M50 southward. As part of the proposed development, it is proposed to culvert the open surface water drainage ditch currently traversing the site. This underground drain will consist of a reinforced concrete culvert. **It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.***





### 3.11 Volume 3 of the EIAR - Appendices - Appendix 4.2 Construction Environmental Management Plan

#### 3.11.1 Section 1.3 - The Site

The following:

*The proposed development site is 3.38 ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (2.63 ha in size).*

has been replaced with:

The proposed development site is **3.40** ha in size. The development site encompasses the Applicant's existing waste facility site (0.75 ha in size) together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink, Dublin 11 (**2.65** ha in size).

#### 3.11.2 Section 1.4 - Overview of the Proposed Development

The following:

*The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.*

has been replaced with:

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (**3.40** ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

#### 3.11.3 Section 3.3.1 Advance Works

The following has been updated to include the text in **bold**:

- *Culverting of the existing open surface water drainage ditch. **It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.***

#### 3.11.4 Section 3.3.1 Advance Works - Culverting of the Existing Open Surface Water Drainage Ditch

The following section has been updated to include the text in **bold**:

**The open surface water drainage ditch traversing the site will need to be culverted. It is proposed to retain an open watercourse along the eastern boundary of the proposed development site.**

*The culverting of the existing open surface water drainage ditch will involve the following:*

- *Damming of the existing drainage ditch at the point that it enters the development site.*
- *Pumping of water from this point to the point the drainage ditch **exits** the development site.*



- *Excavation of culvert trench using a tracked excavator.*
- *Laying of pre-cast culvert pipe using telehoists or cranes and connecting the culvert traversing the site with the drainage ditch at the point that the channel enters the site and **exits** the site.*
- *Backfilling of excavated material to fill excavated areas.*
- *Un-damming of the drainage ditch at the point it enters the development to allow the free flow of water through the laid culvert traversing the site and into the drainage ditch at the opposite end of the site.*

Where the drainage ditch is to remain open, upstream of the M50 culvert the following will be completed to protect the M50 culvert headwall and trash rack when the ditch is dammed:

- **No demolition works will be carried out on the existing M50 structure.**
- **Excavation will be carried out immediately upstream of the structure to remove silt and poor formation materials if present.**
- **Concrete protection works will abut to the existing protection works.**
- **To facilitate future access to maintain the trash rack it is proposed to put a concrete transition that will support safe access and egress to the trash rack. To protect the structure during operation it is proposed to:**
- **Rehabilitate /replace the existing chamber and redirect flows from this outfall into a concrete lined channel to reduce the risk of localized scour.**
- **Provide concrete lined protection works immediately upstream of the M50 Culvert inlet to protect unlined surface drainage channels against scour caused by localised turbulence.**
- **Provide launching aprons for scour protection up to 1.0 m depth between earthen channels and concrete lined transition using D50 100 mm.**

*These works will be carried out in accordance with the requirements of Inland Fisheries Ireland's Guidelines on the Protection of Fisheries during Construction in and Adjacent to Waters.*

#### 3.11.5 Section 4.4.4.1 Measures to Protect the Surface Waters during Culverting

The following section has been updated to include the text in **bold**:

Section heading to be updated to *Section 4.4.4.1 Measures to Protect the Surface Waters during Culverting and Protection Works.*

*The culverting of the existing open surface water drainage ditch **and protection works to the retained open part of the drainage ditch** will be carried out during advance works stage of the construction phase. The following mitigation measures will be adopted during the proposed culverting **and protection** works:*

- *The surface water drainage ditch will need to be temporarily dammed during culverting **and protection** works (E.g. Using pea gravel bags and geosynthetic textile). This will be done progressively in sections. This will allow culverting **and protection** construction works to be isolated from flowing water. A water pumping system will be used to allow for the transport of water downstream during culverting **and protection** works.*
- *These works will only be carried out during a period of dry weather conditions to prevent the run-off of sediment from working areas to the drainage ditch.*



- *Culverting **and protection** works will be carried out in a careful and precautionary manner, and in accordance with a defined method statement. The working areas will be kept as tidy as possible for the duration of the works. All excavated / excess material will be immediately removed from the working area on an ongoing basis as works progress.*
- *All personnel carrying out culverting **and protection related** works will be obliged to read and fully understand the method statement for the proposed works. A toolbox talk regarding the method statement, the carrying out of the works generally, and the need to protect the quality of water passing through the drainage ditch will be carried out immediately prior to the commencement of works.*
- *Temporary cut off trenches will be used to divert surface water run-off away from working areas in and around the drainage ditch during culverting **and protection** works.*
- *Regular inspections of working areas will be undertaken to assess and confirm the implementation of the agreed control measures.*
- *Any machines working in or around the drainage ditch must be protected against leakage or spillage of fuels, oils, greases, and hydraulic fluids (e.g. using drip trays).*
- *The culvert piping itself will be pre-cast thereby substantially reducing the potential for cement based materials becoming entrained in surface water run-off.*



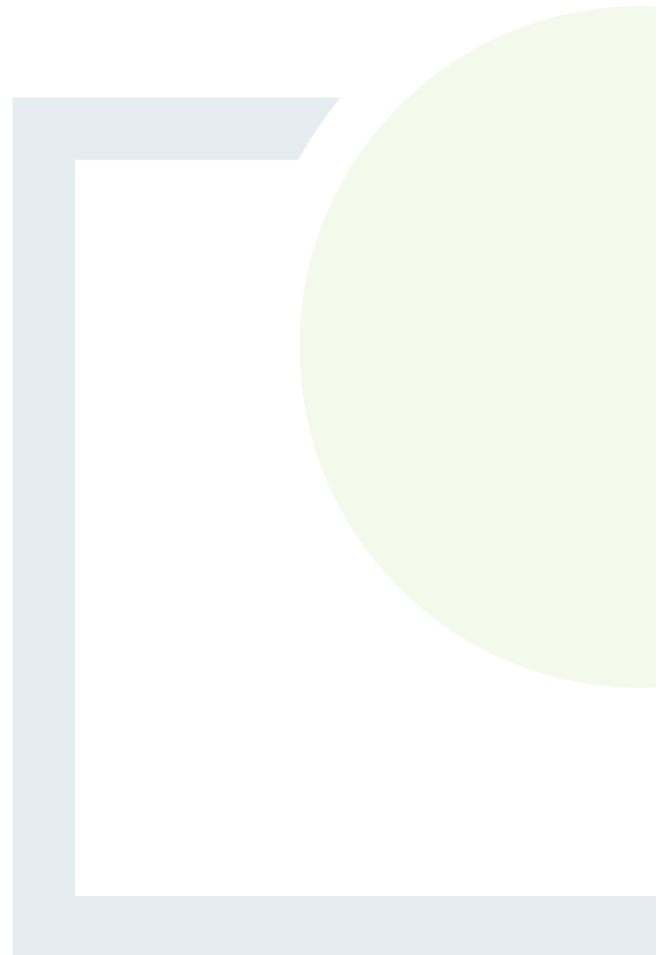




CONSULTANTS IN ENGINEERING,  
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& PLANNING

## APPENDIX 5

Fingal County Council  
Letter of Consent







Mr. Paul Hennessy,  
Thornton Waste Disposal Limited,  
Unit 3B Henry Road,  
Parkwest Business Park  
Dublin 12

21<sup>st</sup> November 2023

**PROPOSED PLANNING APPLICATION FOR THORNTON WASTE DISPOSAL  
LIMITED**

Dear Sir/Madam,

Having reviewed the information provided by Thornton Waste in relation to their Planning Application, it appears the works on the road outside the property boundary could be undertaken under licence once the scope of works is agreed and no further land is required for these purposes.

Notwithstanding this and subject to agreement of details, Fingal County Council would be willing to enter into negotiations with Thornton Waste Disposal Limited in relation to acquisition of additional lands to provide for adjusted facility entrances to address appropriate crossover details for footways and cycleways at the proposed entrances if required,

Yours faithfully

Natalie Dineen  
Administrative officer  
Property Services

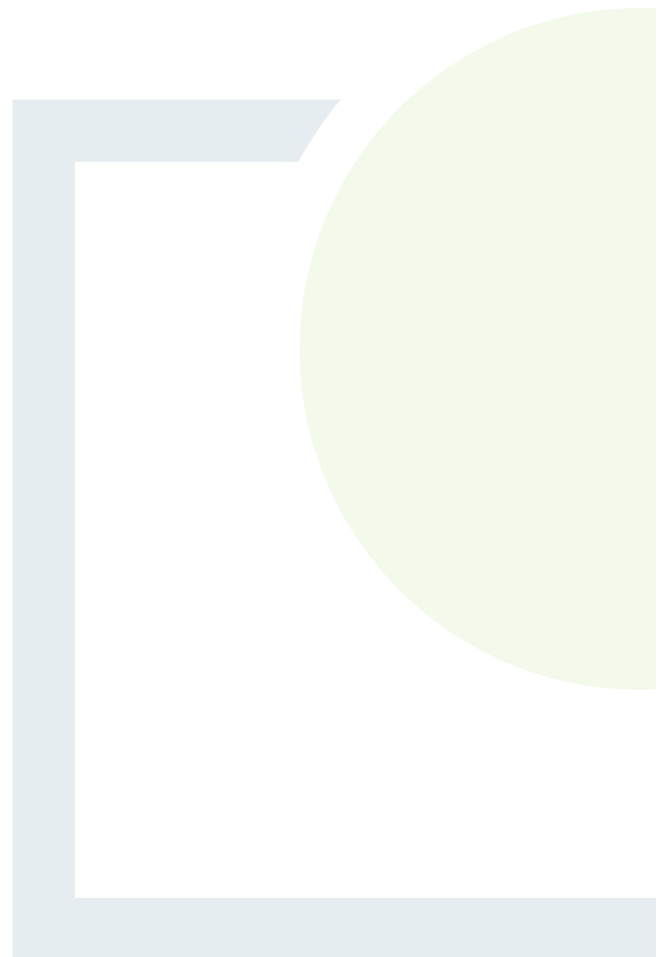




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## APPENDIX 6

Revised Odour Modelling







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## TECHNICAL NOTE

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Project      **Thorntons Cappogue**

Subject      **Revised Odour Modelling**

Author       **Ciara Nolan**

Reviewed By      **Jovanna Arndt**

Date          **23/08/23**

Ref.          **CN/227501.0442AT01**

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### 1.0 INTRODUCTION

A revised odour dispersion modelling assessment of the proposed materials recovery facility development at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11 has been undertaken in response to a request for further information (RFI) from An Bord Pleanála in relation to the planning application for the site (Planning Ref.: ABP-315257-22).

Item 2 of the RFI states:

*“With respect to odour impacts, the odour modelling accounts for the impact of the stack alone and no account has been taken of odour leakage which will inevitably emit from the proposed 6 no. entry/exit points in the MRF building no. 1, which, notwithstanding the building is proposed to be fitted with fast action roller doors, will remain open for periods of time. Provide a breakdown of the volume of traffic using MRF building 1, of the length of time the doors will remain open and calculate odour leakage based on this. Projected odour and air quality modelling shall be updated to have regard to this”.*

Odour dispersion modelling of emissions associated with the proposed odour abatement system stack for MRF building 1 (MRF1) was conducted as part of Chapter 11 Air Quality & Climate of the Environmental Impact Assessment Report (EIAR) prepared for the development. The odour modelling has been updated to account for emissions associated with the opening and closing of the roller doors on MRF1 in order to respond to Item 2 of the RFI. This note contains the outcome of the revised assessment.

## 2.0 ASSESSMENT 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)<sup>(4)</sup> and following guidance issued by the EPA<sup>(2,3)</sup>. The model is a steady-state Gaussian plume model used to assess pollutant concentrations associated with industrial sources and has replaced ISCST3<sup>(4)</sup> as the regulatory model by the USEPA for modelling emissions from industrial sources in both flat and rolling terrain<sup>(5)</sup>. The model has more advanced algorithms and gives better agreement with monitoring data in extensive validation studies<sup>(6,7)</sup>.

The odour dispersion modelling input data consisted of information on the physical environment (including building dimensions and terrain features), design details for all main 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.

### 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<sup>(8)</sup>. 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.

#### ***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% of the panel correctly detect the odour. This odour threshold is given a value of one odour unit and is expressed as 1 OU<sub>E</sub>/m<sup>3</sup>. 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<sup>(8,9)</sup>.

#### ***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.

### ***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.

### ***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 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 OU<sub>E</sub>/m<sup>3</sup> 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<sup>(3)</sup> has issued guidance specific to intensive agriculture which has outlined the following standards:

- Target value for new pig-production units of 1.5 OU<sub>E</sub>/m<sup>3</sup> as a 98<sup>th</sup>ile of one hour averaging periods,
- Limit value for new pig-production units of 3.0 OU<sub>E</sub>/m<sup>3</sup> as a 98<sup>th</sup>ile of one hour averaging periods,
- Limit value for existing pig-production units of 6.0 OU<sub>E</sub>/m<sup>3</sup> as a 98<sup>th</sup>ile of one hour averaging periods.

Guidance from the UK, and adapted for Irish EPA use, recommends that odour standards should vary from 1.5 – 6.0 OU<sub>E</sub>/m<sup>3</sup> as a 98<sup>th</sup>ile 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 Table 1 (taken from EPA Guidance document AG9<sup>(3)</sup>):

| Industrial Sectors                                                                                                                                                                                                                                                                                                                                                                                                           | Relative Offensiveness of Odour | Indicative Criterion <sup>Note 1</sup>                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Processes involving decaying animal or fish remains.</li> <li>Processes involving septic effluent or sludge</li> <li>Waste sites including landfills, waste transfer stations and non-green waste composting facilities.</li> </ul>                                                                                                                                                   | Most Offensive                  | 1.5 OU <sub>E</sub> /m <sup>3</sup> as a 98 <sup>th</sup> ile of hourly averages at the worst-case sensitive receptor |
| <ul style="list-style-type: none"> <li>Intensive Livestock Rearing</li> <li>Fat Frying / Meat Cooking (Food Processing)</li> <li>Animal Feed</li> <li>Sugar Beet Processing</li> <li>Well aerated green waste composting</li> </ul> <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 OU <sub>E</sub> /m <sup>3</sup> as a 98 <sup>th</sup> ile of hourly averages at the worst-case sensitive receptor |
| <ul style="list-style-type: none"> <li>Brewery / Grain / Oats Production</li> <li>Coffee Roasting</li> <li>Bakery</li> <li>Confectionery</li> </ul>                                                                                                                                                                                                                                                                          | Less Offensive                  | 6.0 OU <sub>E</sub> /m <sup>3</sup> as a 98 <sup>th</sup> 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.

**Table 1** Indicative Odour Standards Based On Offensiveness Of Odour And Adapted for Irish EPA<sup>(3)</sup>

Based on the guidance above, an odour threshold of 1.5 OU<sub>E</sub>/m<sup>3</sup> as a 98<sup>th</sup>ile of hourly mean values has been selected for identifying the potential for odour nuisance in relation to the proposed development.

## 2.3 Odour 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:

- A receptor grid was 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 grid was based on Cartesian grids with the site at the centre. The grid measured 2 km x 2 km with the site at the centre and with concentrations calculated at 50 m intervals. Boundary receptor locations were also placed along the boundary of the site, at 25 m intervals. Nearby residential properties were added to the model as discrete receptors. In total there were 1,797 calculation points 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 30m resolution. The site is located in rolling terrain. This takes account of all significant features of the terrain. All terrain features have been mapped in detail into the model using the terrain pre-processor AERMAP<sup>(10)</sup>.
- Hourly-sequenced meteorological information has been used in the model. Meteorological data over a five year period (Dublin Airport 2018 – 2022) was used in the model.
- The source and emission data, including stack dimensions, volume flows and emission temperatures have been incorporated into the model.

## 2.4 Odour Emission Rates

This assessment has been undertaken considering emissions associated with the proposed development at its maximum operational capacity. The proposed, expanded facility will accept and process up to 300,000 tonnes per annum (tpa) of waste material, to include:

- 100,000 tpa of municipal solid waste (rMSW);
- 50,000 tpa food waste;
- 100,000 tpa construction and demolition (C&D) Waste
- 50,000 tpa mixed dry recyclable (MDR) waste.

The existing building on-site (MRF1) will be upgraded and expanded to facilitate the acceptance, processing and storage of rMSW, and the acceptance, bulking and storage of food waste. MRF1 is the only proposed building which will accept rMSW and food waste on-site.

The new proposed building MRF2 will be used for the storage and bulking of MDR waste while the new building MRF3 will be used for the storage and processing of C&D waste. All buildings on site will have rolling shutter doors. There will be little to no odour associated with the MDR and C&D wastes and all processing will occur internally, therefore there are unlikely to be significant odour emissions generated in buildings MRF2 and MRF3 and thus, no odour abatement system is proposed for these buildings.

### Odour Abatement System

MRF1 will be a fully enclosed waste processing building operating under negative air extraction. An odour abatement system will serve this building. This abatement system will utilise annular carbon absorbers with the extracted air discharged through a c. 20m stack.

To determine the appropriate odour emission rates for the proposed development, odour monitoring reports for a similar facility owned and operated by the Applicant were reviewed for the purposes of this assessment. The proposed odour abatement system will be designed to meet the same standard of odour abatement of the odour abatement system at this sister facility. Monitoring reports for the period 2018 – 2021 inclusive were provided and the maximum odour emissions rates recorded therein have been used in this assessment to allow for a conservative approach. The model input parameters are detailed in Table 2 for the proposed odour abatement stack.

| Location<br>(Irish Grid Coordinates) |         | Stack<br>Height<br>(m) | Stack<br>Diameter<br>(m) | Flow Rate<br>(Nm <sup>3</sup> /hr) | Velocity<br>(m/s<br>actual) | Temp<br>(K) | Odour Conc.<br>(Oue/m <sup>3</sup> ) | Odour<br>Emission<br>Rate (Oue/s) |
|--------------------------------------|---------|------------------------|--------------------------|------------------------------------|-----------------------------|-------------|--------------------------------------|-----------------------------------|
| E310439                              | N239606 | 20                     | 1.3                      | 1497.6                             | 18.9                        | 294.6       | 650                                  | 17,296                            |

**Table 2** Odour Abatement Stack, Model Input Details

### Odour Leakage from MRF1

Item 2 of the RFI has specifically requested that potential odour leakage from the roller shutter doors in MRF1 be investigated and included in the odour modelling assessment. There are a total of 6 no. fast-acting roller shutter doors proposed for MRF1. There is the potential for odour leakage to occur when trucks are entering and exiting the building and the doors are opened.

Research on single-sided natural ventilation has been undertaken over the last 30 years. Early research by Warren et al (1985)<sup>(11)</sup> found that, when wind is the main driver of airflow through the opening (i.e. temperature difference between the inside and outside air can be neglected), the mean wind speed needs to be considered together with the effect of turbulence in the wind and the fluctuations in pressure in the opening. Warren derived the following expression based on both wind tunnel and full-scale experiments:

$$Q = 0.025 \times A \times U_R$$

where:

Q = Odour emission rate (m<sup>3</sup>/sec)

A = area of inlet (m<sup>2</sup>)

U<sub>R</sub> = Reference wind speed at 10m (m/s)

The formula above indicates that the key parameters influencing the release of odour from the MRF1 building will be the area of the opening (roller shutter door) and the average reference wind speed, which for Dublin Airport is approximately 5.3 m/s on an annual basis. The formula also indicates that the release of odour from the MRF1 building will be significantly reduced when the building doors are closed. Given that the process building is not heated, temperature differences should not be significant and thus the formula above should be a reasonable approximation of the proposed MRF1 building.

The duration the doors will be open for in any one day has been estimated based on the number of trucks entering and exiting the building and the time required for the doors to fully open and close. It has been estimated that each of the 6 no. doors will be open for a total of 1,368 seconds per day, c.23 minutes total per door in a 24 hour period (1.6% of the day). This is based on 27 no. articulated HGVs entering and exiting the building and 54 no. RELs entering and exiting the building.

No site specific odour concentrations or emission rates are available for the odour leakage from the doors. Therefore, published data from similar environments has been used. An estimate of the likely magnitude of odour emissions from the facility can be derived from the publication “Emission Fluctuations & Site Controls At Waste Transfer Stations” by Dr. Phil Longhurst which was presented at the International Conference on Odour Management & Treatment, Cranfield University, UK (2002)<sup>(12)</sup>. A summary of the results is given in Table 3 and are based on a MSW waste transfer facility. The proposed MRF1 will have an odour abatement system in place with the air within the building extracted under negative pressure, therefore odour concentrations within the building are not predicted to be significantly high. The geometric mean of the results for the August survey period gives a reasonable worst-case estimate of the likely magnitude of emissions from the facility. The odour concentration of 1,257 OU<sub>E</sub>/m<sup>3</sup> has been used as an estimate when accounting for the odour concentration within the MRF1 building.

Therefore, using the above equation, an odour concentration of 1,257 OU<sub>E</sub>/m<sup>3</sup> and assuming the doors are open for 1.6% of the day an odour emission rate of 110.7 OU<sub>E</sub>/sec has been estimated per door for MRF1 (see Table 4).

| Survey                          | Samples                            | Odour Emission Concentration (OU <sub>E</sub> /m <sup>3</sup> ) |
|---------------------------------|------------------------------------|-----------------------------------------------------------------|
| September Survey                | 1 – waste tipping                  | 123                                                             |
|                                 | 2 – waste tipping                  | 132                                                             |
|                                 | 3 – bulk vehicle loading / tipping | 57                                                              |
|                                 | 4 – bulk vehicle loading / tipping | 1695                                                            |
|                                 | 5 – bulk vehicle loading / tipping | 969                                                             |
|                                 | 6 – bulk vehicle loading / tipping | 1409                                                            |
|                                 | Geometric Mean                     | <b>359</b>                                                      |
| August Survey (11 months later) | 1 – Bulk vehicle loading           | 588                                                             |
|                                 | 2 – Bulk vehicle loading           | 889                                                             |
|                                 | 3 – Bulk vehicle loading           | 1291                                                            |
|                                 | 4 – Bulk vehicle loading           | 2138                                                            |
|                                 | 5 – Bulk vehicle loading           | 944                                                             |
|                                 | 6 – Bulk vehicle loading           | 970                                                             |
|                                 | 7 – Bulk vehicle loading           | 1680                                                            |
|                                 | 8 – Bulk vehicle loading           | 2439                                                            |
|                                 | 9 – Bulk vehicle loading           | 1447                                                            |
|                                 | Geometric Mean                     | <b>1257</b>                                                     |

**Table 3** Odour Emission Rates From A MSW Waste Transfer Station<sup>(12)</sup>

| Emission Source Reference | Area Of Opening (m <sup>2</sup> ) | % Of Operational Day | Odour Emission Rate                              |                                    |
|---------------------------|-----------------------------------|----------------------|--------------------------------------------------|------------------------------------|
|                           |                                   |                      | Concentration (OU <sub>E</sub> /m <sup>3</sup> ) | Mass Emission (OU <sub>E</sub> /s) |
| MRF1 Door Open            | 42                                | 1.6 (per door)       | 1,257                                            | 110.7 <sup>Note 1</sup>            |

Note 1 Based on area of open door and an average wind speed of 5.3 m/s

**Table 4** Odour Emission Rate for MRF1 Roller Doors

### 3.0 RESULTS & DISCUSSION

The revised modelling assessment was conducted to account for the odour leakage associated with the opening and closing of the roller shutter doors on building MRF1 in response to Item 2 of the RFI.

Details of the 98<sup>th</sup>ile of 1-hour mean odour concentrations at the worst-case off-site location are given in Table 5 over an historical five-year period ranging from 2018 to 2022 based on the USEPA approved AERMOD model (version 22112). The worst-case scenario for the 98<sup>th</sup>ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentrations is 66% of the guideline value of 1.5 OU<sub>E</sub>/m<sup>3</sup> at the worst-case receptor.

Figure 1 shows the ambient odour concentration contour pattern (as a 98<sup>th</sup>ile of one-hour concentrations) in the vicinity of the proposed development for the worst-case year of 2021. Based on the results detailed below, no nearby receptors are predicted to experience odour nuisance issues as a result of the proposed development. Results are within the acceptable range for odour emissions.

| Model Scenario / Meteorological Year | Averaging Period                           | Predicted Odour Concentration (OU <sub>E</sub> /m <sup>3</sup> ) | Guideline (OU <sub>E</sub> /m <sup>3</sup> )<br>Note 1 | Result as % of Guideline |
|--------------------------------------|--------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|--------------------------|
| Odour / 2018                         | Maximum 1-Hour (as a 98 <sup>th</sup> ile) | 0.92                                                             | 1.5                                                    | 61%                      |
| Odour / 2019                         |                                            | 0.97                                                             |                                                        | 65%                      |
| Odour / 2020                         |                                            | 0.93                                                             |                                                        | 62%                      |
| Odour / 2021                         |                                            | 1.00                                                             |                                                        | 66%                      |
| Odour / 2022                         |                                            | 0.96                                                             |                                                        | 64%                      |

Note 1 Guideline limit value based on EPA AG9 Guidance<sup>(2)</sup>

**Table 5** Predicted Odour Concentration as 98<sup>th</sup>ile At Worst-Case Offsite Receptor



Figure 1 98<sup>th</sup>ile of 1-Hour Odour Concentrations (OU<sub>E</sub>/m<sup>3</sup>)

4.0 SUMMARY

AWN Consulting conducted a revised odour dispersion modelling study to assess the impact to ambient air quality as a result of odour emissions from the proposed MRF1 building on site. The revised modelling assessment was conducted to account for the odour leakage associated with the opening and closing of the roller shutter doors on building MRF1 in response to Item 2 of the RFI.

It was found that emissions of odour from the facility will remain in compliance with the odour threshold value of 1.5 OU<sub>E</sub>/m<sup>3</sup> and no nuisance is predicted at nearby sensitive receptors as a result of the facility. The worst-case scenario for the 98<sup>th</sup>ile of 1-hour concentrations occurs in 2021 where the maximum off-site concentrations is 66% of the guideline value of 1.5 OU<sub>E</sub>/m<sup>3</sup> at the worst-case receptor.

The impact of the proposed development in relation to odour emissions remains as previously assessed, which is, long-term and not significant.



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## References

- (1) USEPA (2022) AERMOD Description of Model Formulation
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