

Appendix 15.2 - Resource Waste Management Plan



Resource Waste Management Plan

PRESENTED TO

**Castlethorn Construction Luttrellstown
Limited**

Kellystown Residential Development

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May 2025

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1 INTRODUCTION

DNV was retained by Castlethorn Construction Luttrellstown Limited (hereafter referred to as the Client) to prepare this Resource and Waste Management Plan (RWMP) for the construction works of the Proposed Kellystown Large Residential Development located on lands Kellystown, Clonsilla, Dublin 15.

The Proposed Development for which permission will be sought will be subject of two planning applications, one providing a total of 302no. units (in a mix of houses, apartments and duplexes) (i.e., St Mochtas Site Plot 2) and the other providing 99 no. units (i.e., Luttrellstown Gate Phase 2 Plot 1).

1.1 Scope and Purpose of this RWMP

The purpose of this RWMP is to provide the information necessary to ensure that the management of resources, materials and ultimately construction and demolition (C&D) waste arising from the construction works of the Proposed at the Site is undertaken in accordance with all statutory requirements and current industry standards.

This RWMP will ensure minimum waste is generated and maximum recycling, re-use and recovery of waste with diversion from landfill, wherever possible.

The RWMP will provide guidance on the appropriate waste collection and transportation from the Site to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil and/or water).

This RWMP forms part of the Construction and Environmental Management Plan (CEMP) which has been developed to define the approach to environmental management during implementation and roll-out of the construction phase of the project.

It is important to note that this RWMP relates to the demolition and construction element of the construction stage.

1.2 'Live document'

This RWMP is considered a 'live' document and as such will be reviewed:

- On appointment of the Main Construction Contractor;
- On appointment of the Waste Contractor;
- In the event of a change of Contractor;
- Following Fingal County Council inspections or comments;
- In the case that any major design changes are made;
- In the case that there are any changes in waste management practices/ legislation.

This document forms the basis of the RWMP, which the main contractor will be required to update and implement prior to commencement of works on Site.

All compliance documentation required by this RWMP such as Waste Collection Permits, Certificates of Registration (CORs), Waste Facility Permits and Waste Licences, in addition to

waste transfer documents and landfill gate receipts will be compiled in the annex of documents to accompany this RWMP. A register of documents is provided in Section 1.3.

1.3 Register of Documents

A live register of documents will be maintained both digitally and in hard copy on site as part of this waste management plan. The content of this register is outlined below. It will be the responsibility of the Site Construction Waste Manager to ensure that the register of documents is updated as appropriate. The Site Construction Waste Managers contact details will be submitted to Fingal County Council prior to the commencement of construction works on-site.

The following documents will be maintained in the live register of documents:

- A. Register of Legislation, Policy and Regulations
- B. Register of Authorised Waste Facilities
- C. Approved Receiving Waste Facility Permits/ Licences and Acceptance Letters
- D. Register of Authorised National Waste Collection Permits
- E. Approved Waste Collection Permits
- F. Waste Management Log Sheet – (Digital Log to be Maintained On-Site)
- G. Schedule of Audits
- H. Chain of Custody / Waste Dispatch Dockets
- I. Landfill Gate Receipts
- J. Waste Classification Report(s)
- K. Site Contact Detail

2 RELEVANT NATIONAL POLICY, LEGISLATION AND GUIDANCE IN IRELAND

A register of the current list of relevant legislation regulations and policy pertaining to the circular economy, resources and waste management are provided in Appendix A and discussed below.

2.1 National Waste Policy

The Irish Government's policy document of 1998, '*Waste Management: Changing our Ways*', represented Ireland's first steps towards identifying objectives for the prevention, minimisation, reuse, recycling, recovery, and disposal of waste, including C&D waste.

The Irish Construction Industry responded to the '*Waste Management: Changing Our Ways*' report by setting up a waste sector task force and released a report entitled '*Recycling of Construction and Demolition Waste*'. The report dealt with the development and implementation of a voluntary construction industry programme to meet the Government's objectives for the recovery of C&D waste.

In 2012, the then Department of the Environment, Community and Local Government (DoECLG) (previously DoEHLG), published '*A Resource Opportunity – Waste Management Policy in Ireland*' which supported the prioritisation of the waste hierarchy and identified specific producer responsibilities for construction and demolition projects (over certain thresholds) as a key area for exploration.

'*A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020-2025*' was published in September 2020 (& updated in January 2021) by the Department of Communications, Climate Action and Environment (DCCAE).

'*A Waste Action Plan for a Circular Economy*' focuses on the waste prevention by maximising the value of material resources and reducing waste generation. The Waste Action Plan also sets out a number of actions in relation to Construction & Demolition including updating the C&D waste management plan guidelines, putting in place incentives to encourage the use of recycled materials, further develop methods to encourage segregation of waste materials on-site and improve consistency across the waste sector.

2.2 Best Practice Guidance

The National Construction and Demolition Waste Council (NCDWC) was launched in June 2002 and subsequently produced the '*Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects*' in July 2006 in conjunction with the then Department of the Environment, Heritage and Local Government (DoEHLG). The guidelines outlined the issues that needed to be addressed at the pre-planning stage of a development all the way through to its completion. The Best Practice Guidelines also identified development thresholds above which a C&D Waste Management Plan must be prepared. The Best Practice Guidelines noted that arrangements need to be established in a manner which ensures that there is a contractual obligation on the Contractor(s) to prepare a Waste Management Plan in accordance with the above considerations at a minimum.

The above Best Practice Guidelines have been followed in the preparation of this document which includes the following elements:

- Procedures to prevent, minimise, recycle and reuse resources
- Waste recovery/recycling/disposal of C&D wastes at the site;
- Predicted C&D wastes;
- Provision of training for Construction Waste Manager and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plan; and
- Details of consultation with relevant bodies (i.e., Local Authorities, the National Waste collection permit office (NWCPO), the National Transfrontier Shipments Office (NTFSO), haulage companies, recycling and waste collection companies, materials recovery facilities, soil recovery facilities, and waste management companies)

Section 3 of the Best Practice Guidelines identifies thresholds above which there is a requirement for the preparation of a C&D Waste Management Plan for developments. This development requires a CDWMP under the following criterion:

- Civil Engineering projects producing in excess of 500m³ of waste, excluding waste materials used for development works on the site.

In 2015, the EPA's '*Design Out Waste*' report noted that the preparation of a Waste Management Plan within the early design and feasibility phases provides a framework to carry out design reviews, and should be used as an implementation, benchmarking, monitoring and reporting tool throughout the overall construction process.

Design Out Waste Guidelines recommends that a Waste Management Plan should address the following aspects of the Proposed Development:

- Project description;
- Waste forecasting: Analysis of the waste arising / materials surpluses;
- Specific waste management objectives for the project;
- Proposed strategies and associated costs: Methods proposed for prevention, reuse and recycling of wastes;
- Materials logistics;
- Individual responsibilities;
- Monitoring procedures: Auditing and record keeping; and
- Proposals for education of workforce and plan dissemination programme.

In 2021, following a process of public consultation, the Environmental Protection Agency (EPA) produced '*Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects*', which supersedes the DoEHLG Best Practice Guidelines 2006. The EPA's Best Practice Guidelines (2021) set out a practical

and informed common approach to preparing Resource and Waste Management Plans (RWMP) prior to construction and during construction.

The Best Practice Guidelines recommend that an RWMP shall be submitted for all C&D projects to inform the planning consent process, and that the level of detail presented in the RWMP should be reflective of the scale and complexity of the project. The guidelines provide thresholds for classifying C&D projects into two different tiers with regards to resource and waste management. These thresholds are based on the principle of proportionality to ensure larger projects with larger potential resource footprints are required to more actively manage resources compared to smaller scale projects.

The Best Practice Guidelines also reflect the current waste legislation and policy including ‘*A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020-2025*’ published in September 2020 by the Department of Communications, Climate Action and Environment (DCCAE) (updated in January 2021).

2.2.1 Other relevant guidance

Other guidelines followed in the preparation of this report include ‘*Construction and Demolition Waste Management – a handbook for Contractors and Site Managers*’ published by FÁS and the Construction Industry Federation in 2002.

The above mentioned policy and guidance documents are considered to define best practice for C&D projects in Ireland and describe how C&D projects are to be undertaken such that environmental impacts and risks are minimised, natural resources are protected and conserved and the maximum levels of materials recovery, reuse and waste recycling are achieved.

2.3 Irish Materials Recovery and Waste Management Targets

The ‘National Waste Management Plan for a Circular Economy 2024-2030’ was published in February 2024 and covers the period 2024-2030. It is the first National Waste Management Plan for a Circular Economy and sets a framework for the prevention and management of waste in Ireland. The plan seeks to ‘influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation.

“*A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025*” sets a “target of preparing for reuse, recycling and other material recovery (incl. beneficial backfilling operations using waste as a substitute) of 70% by weight of C&D non-hazardous waste (excluding natural soils & stone).

The “*Circular Economy Action Plan: For a cleaner and more competitive Europe*” (EC, March 2020) announced the launch of a new “*Strategy for a Sustainable Built Environment*”, which revised material recovery targets for construction and demolition waste that were previously set through EU legislation. These targets are incorporated into the Irish “*National Waste Management Plan for A Circular Economy 2024-2030*”, stemming from the Waste Action Plan for a Circular Economy 2021-2025.

To further support the appropriate reuse and recovery of resources at construction sites, the plan offers further support towards the designation of greenfield soil and stone as ‘*by-product*’ and not *waste* under Article 27 of the Waste Framework Directive (Regulation 27 in National

Legislation). Similarly, the plan recognises that significant progress is anticipated from the end-of-waste process under Article 28 of the Waste Framework Directive (Regulation 28). Both of these routes will contribute to meeting the National Targets set out in the Plan 2024-2030.

By 2021, Ireland exceeded the 70% target, achieving an 85% C&D waste recovery rate (EPA, 2023. Circular Economy and Waste Statistics Highlights Report 2021), representing an increase from 78% in 2020 (EPA, 2022. National Waste Statistics Summary Report for 2020). It should be noted, however, that soil and stone C&D wastes (LoW 17 05 03* and 17 05 04) are excluded from the calculation of the Waste Framework Directive targets.

The EPA (EPA, 2024. Circular Economy and Waste Statistics Highlights Report 2022) notes that C&D produces the largest volume of waste in the state amounting to 8.3m tonnes of waste in 2022, which represents a decrease of 9% from the 9m tonnes generated in 2021. It also notes that the overall composition of C&D waste changed little between 2021 and 2022. At 82% soil and stone waste remained dominant, followed by waste concrete, brick, tile and gypsum (7%) and mixed C&D waste (7%). The proportion of segregated (wood, paper, glass, plastic and metal) C&D waste collected remained small at just under 4.0% in 2022 no change since 2021. Final treatment (recycling, re-use as backfilling, re-use as a fuel, disposal) varied greatly between the various material streams generated during C&D operations as noted in Table 2-1. However, approximately 94% of all C&D waste material in 2022 was either recovered, re-used or recycled with the most dominant recovery operation being re-use as backfilling (i.e., land reclamation, improvements, or infill works).

Table 2-1 Final Treatment for C&D Wastes Classes (EPA, '24. National Waste Statistics Summary Report 2022)

C&D Waste Material	Recycled (t)	Energy Recovery(t)	Recovered/ Backfilled (t)	Disposal (t)	Total
Metal	314,020	0	11	4	304,574
Segregated Wood, Glass and Plastic	30,828	14,879	477	7,947	54,101
Concrete, brick, tile and gypsum*	348,105	4,789	254,913	10,564	618,372
Waste bituminous mixtures	53,352	0	45,747	0	99,099
Mixed Construction and Demolition waste	31,238	35,635	26,578	46,951	140,402
Waste soils, stones and Dredging spoil	5,494	0	6,280,304	453,466	6,739,263
Waste treatment residues	43,367	91,628	75,870	101,137	312,003
Total (T)	816,943	146,931	6,683,870	620,070	8,267,813
% of total treated	9.9%	1.8%	80.8%	7.5%	100%

*Note: No gypsum was backfilled or landfilled

2.4 Regional Policy

The proposed development is located in Fingal County Council and is governed by the National Waste Management Plan for a Circular Economy 2024-2030.

The National Waste Management Plan for a Circular Economy 2024 -2030 sets out the framework for the prevention and management of waste across Ireland. This document is a statutory document underpinned by national and EU waste legislation, and reflects the targets set out for C&D waste in the Waste Framework Directive (WFD).

The overall goal of the plan is to achieve zero % waste growth per person over the lifetime of the plan with an emphasis on non-household wastes including waste from commercial activities and the C&D sectors. The Plan responds to the Waste Action Plan for a Circular Economy requirement to include targets for reuse, repair, resource consumption and a reduction in contamination.

Eight national Targets have been developed as shown in Figure 1 below:



Figure 2-1 National Targets for Waste Prevention and Reduction 2024-2030

The Plan also recognises that there is a national capacity deficit for non-hazardous construction and demolition waste (including brownfield soil and stone). While these materials can be managed in landfill, this route is a poor use of landfill space. Dedicated materials recovery facilities are required to address the short to medium term capacity issues nationally.

The strategic vision of the Plan is to rethink the approach to managing waste, and to move towards a 'circular economy' approach where resources are reused or recycled as much as possible and the overall generation of waste is minimised.

In order to achieve this vision, the Plan has set out a number of specific and measurable performance targets in relation to C&D waste:

- Achieve a 2% reduction per annum is proposed for total construction and demolition waste to achieve a cumulative 12% reduction by 2030 (Baseline is 9 million tonnes)
- Achieve 70% of C&D waste sent for reuse, recycling and other recovery of construction and demolition waste (excluding natural soils and stones and hazardous wastes)

The Plan aims to “prioritise waste prevention and circularity in the construction and demolition sector to reduce the resources that need to be captured as waste”.

2.5 Legislative Requirements

The primary piece of legislation governing waste management in Ireland is the Waste Management Act 1996, (as amended) and all associated regulations. Waste management is also regulated by the Environmental Protection Act 1992, (as amended), Litter Pollution Act 1997, (as amended) and the Planning and Development Act 2000, (as amended).

Under the Waste Management Act, 1996, (as amended), the waste producer is responsible for waste from the time it is generated until it is legally sent for recycling, recovery, or disposal (including its method of disposal). This includes transportation by an authorised waste contractor.

2.6 Regulatory Requirements

2.6.1 European Communities (Waste Directive) Regulations 2011

These regulations transpose European Directive 2008/98/EC amending and superseding a number of provisions of the Waste Management Act 1996 (as amended), and associated regulations. Provisions include extended producer responsibility, the implementation of the Waste Management Hierarchy, and measures to promote the preparation of materials for re-use, recycling, and other material recovery (including beneficial backfilling operations using waste as a substitute). The European Communities (Waste Directive) Regulations 2011 also transpose EU waste management targets as set out in Section 1.3 as statutory benchmarks to achieved by Ireland.

2.6.2 Waste Management (Facility Permit & Registration) (Amendment) Regulations 2015 (S.I. No. 198/2015)

Waste receiving facilities must be appropriately permitted or licensed and must be listed in the appendix of the Waste Collection Permit as an authorised destination. Operators of such

facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or Waste Management Facility Permit granted by the relevant Local Authority under the Waste Management (Facility Permit & Registration) Regulations 2007 as amended or a licence granted by the EPA under the Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) and S.I. No. 137/2013 - Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013.

The COR/permit/licence held will specify the type and quantity of waste that the facility is authorised to accept, store, process, recycle, recover and/or dispose of.

2.6.3 Waste Management (Licensing) Regulations 2004 and Waste Management (Licensing) (Amendment) Regulations 2010

These regulations relate to the process for obtaining a waste licence from the EPA for the operation of certain waste recovery or disposal facilities under Part V of the Waste Management Act.

2.6.4 Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820/2007), as amended

The Waste Management (Collection Permit) Regulations 2007, as amended (S.I. No. 820 of 2007) regulate the transport of waste in Ireland and provide that in order to transport waste, a waste carrier must hold a valid waste collection permit. Waste contractors engaged by construction contractors must be legally compliant with respect to waste transportation, recycling, recovery, and disposal. This includes the requirement that a contractor handle, transport, and recycle/recover/dispose of waste in a manner that does not give rise to environmental pollution or the risk of environmental pollution.

A valid waste collection permit to transport the specific waste types generated by the project must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO).

2.6.5 Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous

Correct classification of waste is the foundation for ensuring that the collection, transportation, storage and treatment of waste is carried out in a manner that provides protection for the environment and human health and in compliance with legal requirements.

In 1994, the European Waste Catalogue was published by the European Commission. In 2002, the EPA published a document titled the European Waste Catalogue and Hazardous Waste List. This document has been replaced by the EPA 'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous' which became valid from the 1st July 2018.

The waste classification system applies across the EU and is the basis for all national and international waste reporting obligations such as those associated with waste collection permits, certificates of registration, waste facility permits, EPA Waste and Industrial Emissions licences and the EPA National Waste Database.

The EPA document 'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous' (EPA, 2018) consolidates the legislation and allows the generators of

waste to classify the waste as hazardous or non-hazardous and in the process to assign the correct List of Waste entry.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code (previously referred to as European Waste Code or EWC).

3 DESCRIPTION OF THE PROJECT

3.1 Site Location and Description

The Proposed Development for which permission will be sought will be subject of two planning applications, one providing a total of 302no. units (in a mix of houses, apartments and duplexes) (i.e., St Mochtas Site Plot 2) and the other providing 99 no. units (i.e., Luttrellstown Gate Phase 2 Plot 1)

Luttrellstown Gate site Plot 1

The application site is currently a greenfield site. It is located in the Kellystown LAP, north of the new Kellystown Link Road under construction, west of the Porterstown Road and north of Luttrellstown Road. The site location for Plot 1 is shown in Figure 3-1.



Figure 3-1 Luttrellstown Gate Plot 1 Site Location

St Mochtas Site Plot 2

The application site is in currently in use as football pitches for St. Mochta's Football Club, however, an application from the applicant has recently been lodged comprising of the relocation of St. Mochta's Football Club grounds within the new emergent residential neighbourhood of Kellystown, Dublin 15, in accordance with Key Objective DA 1.1 for the Eastern Development Area of the Kellystown Local Area Plan. The application site measures c. 4.38ha and is generally bounded by Diswellstown Road/ Dr. Troy Bridge to the east, the Royal Canal and the Dublin-Maynooth Railway Line to the north, development consented under An Bord Pleanála Reg. Ref. ABP-312318-21 as amended by Reg. Ref. LRD0034-S3 to

the south and residential zoned lands within the Eastern Development Area (DA1) of the Kellystown Local Area Plan.

The Site location for Plot 2 is shown in Figure 3-2.



Figure 3-2 St Mochtas Site Plot 2 Site Location

3.2 Surrounding Land Use

There are no national or international designated ecological sites at or adjacent to the site. The nearest waterbody is the Liffey Estuary Lower transition waterbody which is located approximately 11km southeast of the site. The surrounding area is a mixture of agricultural and residential land.

3.3 Proposed Development Description

Luttrellstown Gate Phase 2 (Plot 1)

Castlethorn Developments Luttrellstown Limited intends to apply for Permission for a development at a site (c. 3.72ha) at lands in the Townland of Kellystown.

The proposed development comprises 99no. residential units in a mix of houses and duplex units consisting of 71no. 2 storey houses (66no. 3-bedroom and 5no. 4-bedroom), 16no. 3 storey houses (16no. 4-bedroom), 4no. 1-bedroom duplex units and 8no. 2-bedroom duplex units and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including public open space; public lighting; surface car parking spaces; bicycle parking spaces/stores for mid-terrace units; bin stores.

The proposed development includes a minor amendment to development permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3, with minor adjustment proposed to the permitted surface water attenuation pond. Vehicular access to the proposed development is provided by the road network permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3.

St Mochtas LRD (Plot 2)

Castlethorn Developments Luttrellstown Limited intends to apply for Permission for a development at a site (c. 4.38ha) at lands in the Townland of Porterstown.

The proposed development comprises 302no. residential units in a mix of houses, duplex and apartment units consisting of 62no. 2 storey, 3-bedroom houses and 35no. 3 storey, 4-bedroom houses; 205no. Duplex / Apartment Units (98no. 1-bed, 88no. 2-bed and 19no. 3-bed) across 4no. blocks comprising: Block D ranging in height from 5-7 storeys accommodating 57no. apartment units; Block E ranging in height from 5-7 storeys accommodating 77no. apartment units; Block F ranging in height from 4-5 storeys accommodating 39no. apartment and duplex units; Duplex Blocks G1, G2, G3 & G4 3 storeys in height accommodating 32no. apartment units; and all associated and ancillary site development and infrastructural works, hard and soft landscaping and boundary treatment works, including public open space; public lighting; surface car parking spaces; bicycle parking spaces/stores for mid-terrace units; bin stores. Vehicular access to the proposed development is provided by the road network permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3.

The Demolition Phase of the Proposed Development will include the demolition and removal of the existing vacant house and agriculture buildings (including very poor-quality sheds or shipping containers). The total volume of the buildings to be demolished are 863m³.

It is estimated by the Main Contractor that the Construction Phase of the Proposed Development will involve the excavation of 5000m³ of soil for the construction of building foundations, drainage and other infrastructure to depths up to approximately 2m meters below ground level (mbGL) across both plots. It is anticipated that all surplus soil arising from groundworks will require off-site removal for reuse or recovery in accordance with appropriate statutory consents and approvals.

The Construction Phase of the Proposed Development will also require the importation of aggregate fill materials (e.g., granular material beneath road pavement, under floor slabs and for drainage and utility bedding / surrounds etc.).

The Proposed Development Site layout for Plot 1 and Plot 2 are presented in Figure 3-3.



Figure 3-3 Proposed Development Site Layout (Left: Luttrellstown Gate Phase 2 Plot 1, Right: St Mochtas LRD Plot 2) (O'Mahony Pike, 2024)

4 CONSTRUCTION SCHEDULE AND PLAN

4.1 Programme

This RWMP relates to the construction phase the Residential Development at the Site.

Luttrellstown Gate Phase 2 (Plot 1)

It is anticipated that construction of proposed development will commence in Q2 2026 and be completed by the end of 2027. The programme duration and proposed sequence of construction will be finalized by the Main Contractor (once appointed) in advance of construction works commencing onsite and will be agreed with the Client. The project programme, which may be amended over the course of the project, will be included in the live CEMP.

St Mochtas LRD (Plot 2)

It is anticipated that the construction of the proposed development will commence in Q3 2026 and be completed by Q2 2029. The programme duration and proposed sequence of construction will be finalized by the Main Contractor (once appointed) in advance of construction works commencing onsite and will be agreed with the Client. The project programme, which may be amended over the course of the project, will be included in the live CEMP. The proposed construction phase for St Mochtas LRD Plot 2 is shown in Figure 4-1 below.



Figure 4-1 Proposed Construction Phasing for St Mochtas LRD Plot 2 (O'Mahony Pike, Design Statement, 2025)

Note that the programme will be updated in the register of live documents appended to the CEMP and agreed with the assigned contractor as the works advance, or if there is a change in the scope for the construction phase of the development.

4.2 Traffic

One of the main construction traffic generating activities will be associated with the removal of surplus material and wastes arising from the enabling works.

Vehicular access for both Plot 1 and Plot 2 is proposed off the western extension of Kellystown Link Road via the internal road of the under construction Kellystown Development permitted under Reg. Ref. ABP-312318-21, as amended by Reg. Ref. LRD0034-S3. No public

personnel, be it pedestrian or vehicular, will be permitted to enter the site. See Figure 4-2 and Figure 4-3 for site access.

The Contractor shall provide site security at the entrance to the site and thereby control the movement of traffic to and from the site. The contractor shall be responsible to maintain and keep the entrance area clean and tidy and free from construction debris.

Appropriate signage shall be positioned at approach roads to the site area to inform the public of the site activities.

All trucks exiting the site will pass through a wheel wash to prevent any soil or debris leaving the site. Where required, all trucks will be covered in accordance with the details outlined in the CEMP (DNV, 2025).

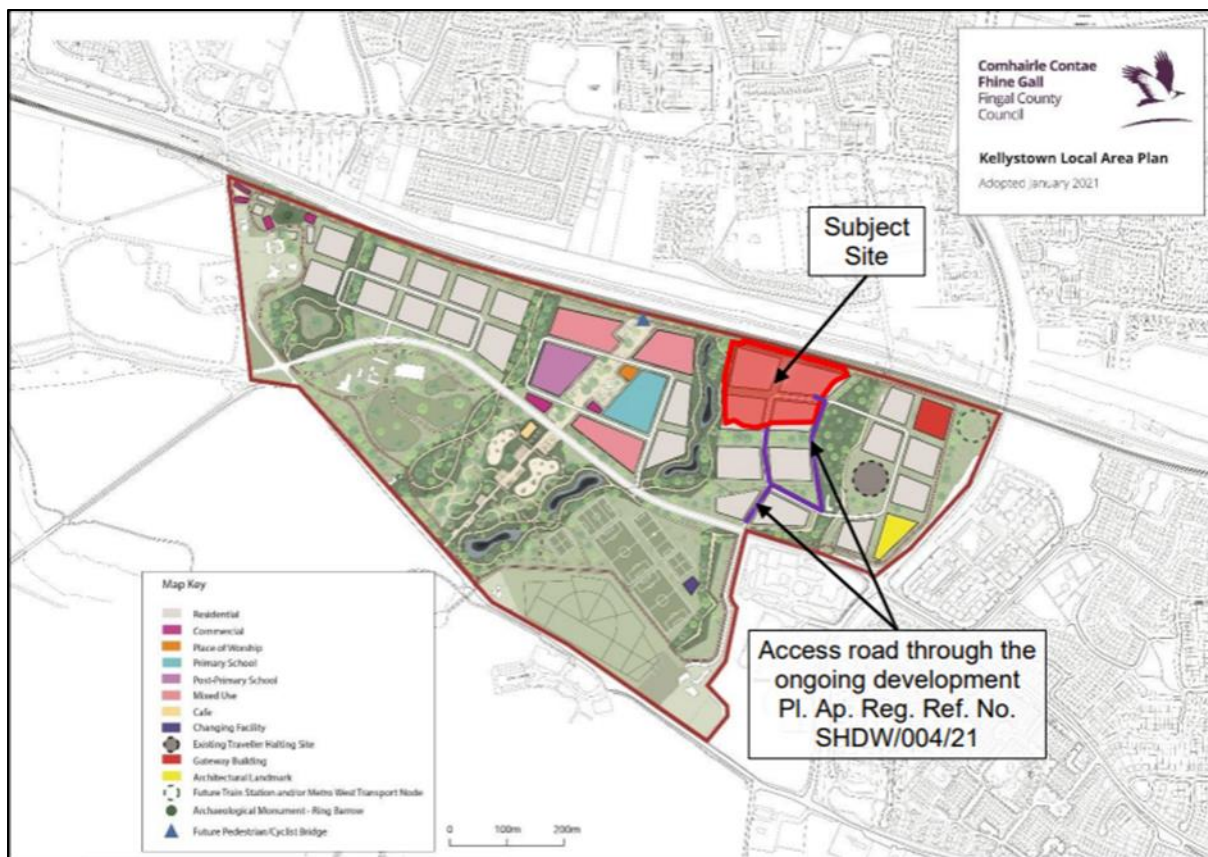


Figure 4-2 Site Access Luttrellstown Gate Phase 2 Plot 1 (Waterman Moylan, Traffic and Transport Assessment, 2025)

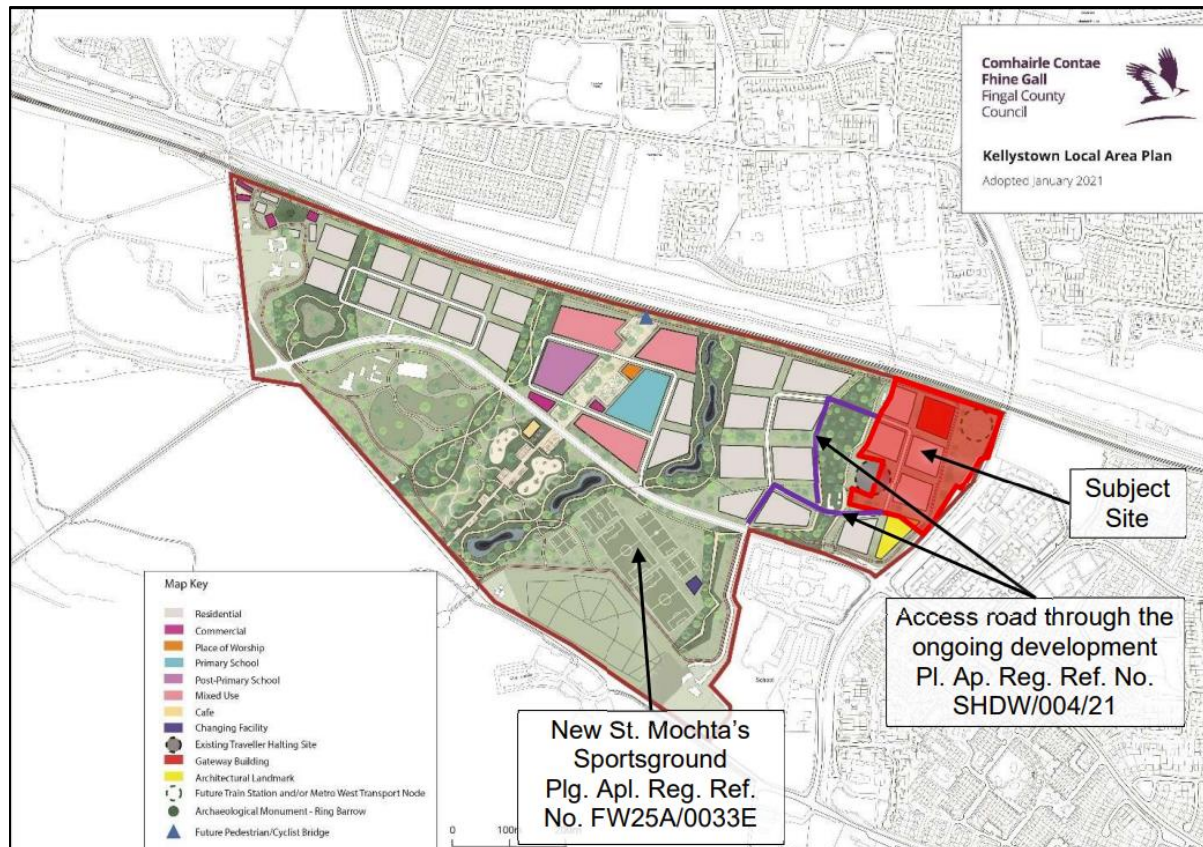


Figure 4-3 Site Access St Mochtas LRD Plot 2 (Waterman Moylan, Traffic and Transport Assessment, 2025)

4.3 Construction Compound and Waste Management

All construction support related activities will be contained within the site. This will include office facilities, welfare facilities such as toilets and canteen. Foul drainage discharge from the construction compound will be tankered off site to a licensed facility until a connection to the public foul drainage network has been established. The construction compound's potable water supply shall be protected from contamination by any construction activities or materials.

Designated areas will be maintained for materials handling, waste segregation and temporary storage of soils (e.g. of skips or stockpiled material until a viable load is available or if pending waste classification).

Materials handling and plant storage including waste shall be contained within the boundary of the proposed development site. The compound area will be secured from the construction site by means of surrounding Heras fencing. Warning signs will illustrate the required PPE and risks associated when entering the construction Proposed Development.

The exact location, layout and size of the compounds will be at the discretion of the contractor with the agreement of FCC. The Contractor shall prepare a detailed site security and compound plan including hoarding, signage, signing in / out procedures etc.

The dedicated waste storage areas within the Waste Segregation points will house all bins and skips for the storage of segregated construction waste generated. All containers will be

marked with clear signage which will identify which waste types are to be placed into each container.

5 RESOURCES & WASTE MANAGEMENT TEAM

5.1 Roles and Responsibilities

All parties involved in the Project will have responsibility for resources and waste management. Responsibility will vary at different stages of the project lifecycle. Key responsibilities are set out in Table 5-1.

Table 5-1 Construction Stage Waste Management - Key Responsibilities

Responsible Party	Responsibility
The Developer	Appointment of competent Main Contractor
	Responsibility of waste management from 'cradle to grave', including documentation of same
Project Manager	Will oversee the planning, scheduling and organisation on the project
Project Environmental Consultants	Updating of this CEMP and advising the Main Contractor in the updating of the CEMP, environmental control plans, supporting procedures.
	Advising the site management on environmental matters as appropriate.
	Carrying out environmental surveys (data logging (noise, water, dust, etc.)) as required.
	Generating reports when required to show environmental data trends and incidents.
	Advising on the production of written method statements and site environmental rules and on the arrangements to bring these to the attention of the workforce as required; and
	Investigating incidents of significant, potential, or actual environmental damage, ensure corrective actions are carried out and recommend means to prevent recurrence.
Main Contractor	Construction & Demolition Waste Management Plan implementation
	Appoint competent and authorised waste management contractor(s)
	Appoint trained, competent Construction Waste Manager.
Construction Director	Overall responsibility for the implementation of the CEMP;
	Allocating the correct resources in order to ensure the successful implementation of the CEMP; and
	Assist in the management review of the CEMP for suitability and effectiveness.
Site Foreman	To report to the Construction Director on the on-going performance and development of the CEMP;
	To discharge his/her responsibilities as per the CEMP; and
	To support and augment the Construction Management Team (CMT) through the provision of adequate resources and facilities for the duration of the implementation of the CEMP.
	Read, understand, and implement the CEMP.
	Have knowledge of the requirements of the relevant law in environmental matters and take whatever action is necessary to achieve compliance. Where necessary seek the advice of the contracted Environmental Officer.
	Ensure that environmental matters are considered at all times.
Environmental Officer	Be aware of any potential environmental risks relating to the site, plant, or materials to be used on the premises and bring these to the notice of the appropriate management; and
	Ensuring that the requirements of the CEMP are reviewed and environmental system elements (including procedures, method statements and work instructions) are implemented and adhered to with respect to environmental requirements;
	Reviewing the Environmental responsibilities of all sub-contractors in scoping their work and during their contract tenure;
	Ensuring that advice, guidance, and instruction on all CEMP matters is provided to all managers, employees, construction contractors and visitors on site;

	Reporting to the Construction Director on the environmental performance of Line Management, Supervisory Staff, Employees and Contractors;
	Advising site management on environmental matters;
	Be aware of any potential environmental risks relating to the Contractors and bring these to the notice of the appropriate management;
	Ensure materials/waste register is completed; and
	Maintenance of all environmental related documentation.
	Training of all site staff in the requirements of the CEMP including environmental controls, waste management and the approved process for communications/complaints handling.
Construction Waste Manager	Ensuring commitment, operational efficiency and accountability during the C&D phases of the project in line with the Construction and Demolition Waste Management Plan.
	Selecting a waste team if required, i.e., members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site.
	Overseeing, recording and providing feedback to the client on everyday waste management at the site.
	Delegating responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.
	Conducting waste audits, maintaining a record system, and establishing targets for waste management at the site during the C&D phase of the proposed Project.
Project Communications Officer	Responding to any concerns or complaints raised by the public in relation to the Construction Phase of the project.
	To liaise with the Environmental Officer on community concerns relating to the environment.
	Ensure the Environmental Officer is informed of any complaints relating to the environment; and
	Keep the public informed of project progress and any construction activities that may cause inconvenience to the local community.
Site Personnel	To co-operate fully with the CMT and the Environmental Officer in the implementation and development of the CEMP at the site.
	To conduct all their activities in a manner consistent with regulatory and best environmental practice.
	To participate fully in the environmental training programme and provide management with any necessary feedback to ensure effective environmental management at the site; and
	Adhere fully to the requirements of the site environmental rules.
Sub-contractors	Comply with CDWMP and CEMP where relevant

It should be noted that one person may be appointed to multiple roles.

5.2 Site Contact Details

The contact details for the appointed Main Contractor, Project Manager, Site Foreman, the Environmental Officer and the Construction Waste Manager will be displayed on the site hoarding and are included in the live register of documents. These contact details will be kept up to date by the main contractor.

5.3 Resources & Waste Management Plan Awareness & Training

All training records will be documented and maintained and will be made available to the Appointed Contractor and all relevant regulatory authorities upon request. All site personnel

and sub-contractors will be instructed about the objectives of these plans and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation and selective material reuse techniques apply, each member of staff will be given instructions on how to comply with the RWMP and the best practice guidelines.

5.3.1 Construction Waste Manager

The Construction Waste Manager will keep up to date with waste legislation, codes of practice and other literature.

The Construction Waste Manager will be trained in how to perform an audit and how to establish targets for waste management onsite. The Construction Waste Manager will also be trained in the best methods for segregation and storage of recyclable materials, have information on the materials that can be reused on-site and be knowledgeable in how to implement this RWMP.

The Construction Waste Manager will also assist with the waste management training requirements, and subsequent training for all levels of the appointed Contractor's employees on the project.

5.3.2 Site Personnel Training

A basic awareness briefing will be held for all site crew to outline the RWMP and to detail the segregation of waste materials at source. This may be incorporated with other site training needs such as general site induction, health and safety awareness, asbestos awareness training and manual handling.

This basic briefing will describe the materials to be segregated, the storage methods and the location of the Waste Storage Areas (WSAs). A sub-section on hazardous wastes will be incorporated into the briefing and the particular dangers of each hazardous waste will be explained.

The subcontractors will be instructed to comply with this RWMP and will be audited by the Construction Waste Manager and the Appointed Contractor's Environmental Personnel to ensure that this is the case.

All training records will be documented and maintained in the Project Health, Safety, Environment and Quality Management System (HSEQMS) records which will be made available to the Appointed Contractor and all relevant regulatory authorities upon request.

6 WASTE TYPES

6.1 Details of Potential Non-Hazardous Wastes

6.1.1 Non-Hazardous C&D Waste

The Permitted Development includes the demolition and removal of vacant house and agricultural buildings at St Mochtas LRD (Plot 2).

The existing building area footprint to be demolished is approximately 256.7 m². The BRE Waste Benchmark Data as of June 2012 provides guidance on the demolition waste estimates based on the gross internal floor area as shown in Table 6-1 below.

Table 6-1 BRE Waste Benchmark Data

Project Type	Number of projects data relates to	Average Tonnes/ 100 m ²	Number of projects data relates to	Average Tonnes/ £ 100 K
Residential	256	16.8	260	12.3
Public Buildings	23	22.4	24	11.2
Leisure	21	21.6	20	10.5
Industrial Buildings	23	12.6	24	5.7
Healthcare	22	12	22	9.9
Education	60	23.3	60	11.8
Commercial Other	4	7	2	3.6
Commercial Offices	14	23.8	11	6.3
Commercial Retail	48	27.5	47	11.6
Total projects	471		470	

Therefore, a residential building of area 256.7m² is anticipated to generate 16.8T/100m² of floor area which would result in a waste quantum of circa 43 T.

It is estimated that C & D waste generated (approximately) per m² of building will be as follows:

- 168 kg/m² demolished (Based on Table 6-1 estimations)

A programme of ground clearance and levelling will be undertaken across the site as required. This will include the removal of all scrap materials, containers and debris, minor vegetation / shrubs and tree clearance, and excavation. In addition, some diversion of services will be undertaken where required.

During this clearance phase of the Proposed Development, it is anticipated that there will be some surplus of building materials, such as timber off-cuts, broken concrete blocks, cladding, plastics, metals, and tiles generated. There may also be excess concrete during construction which will need to be disposed of. Plastic and cardboard waste from packaging and supply of materials will also be generated.

6.1.2 Inert and Non-Hazardous Soil and Stone

Soil will be excavated to facilitate the construction of foundations, the installation of site services and general landscaping. Where possible, excavated topsoil will be reused on site for landscaping. It is anticipated that any additional soil will be removed from the site for reuse, recovery and/or disposal as there are limited suitable onsite re-use options. Records of topsoil and soil storage, movements and transfer from site will be kept by the Construction Waste Manager.

Surplus inert / non-hazardous soil and stone for offsite reuse, recovery/ disposal will not be removed from the site until properly classified, assigned a correct LoW code (if required) and all appropriate tracking and recovery/disposal documentation is in place.

All surplus materials will be removed offsite in accordance with waste management legislation.

6.1.3 Other Non-Hazardous Wastes

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

6.2 Hazardous Wastes

6.2.1 Asbestos

It is anticipated that there will be no asbestos containing materials (ACMs) generated during the Construction Phase of the Proposed Development.

If ACMs are identified on site at a later stage, the client will be notified, and a suitable management plan will be implemented for the safe removal and disposal.

Waste containing asbestos cannot be reused or recovered in any way and this material will require offsite removal and appropriate hazardous waste disposal to control the risks posed from asbestos fibres.

6.2.2 Hazardous Soil and Stone

Taking account of the design requirements for excavation it is anticipated that there will be no hazardous soil and stone waste requiring offsite disposal generated during the enabling works for the Project.

If at any stage, previously unidentified contaminated soil and stone is discovered on-site, the Main Contractor will immediately notify the Client or their representative so that the following procedures can be implemented:

- Immediate notification to the Client and facilitate any required inspection or visual assessment by the Client or their representative.

- The Environmental Consultant will attend site and complete an environmental site assessment. The scope of any required additional assessment will be agreed in advance with the Main Contractor and the Client.

On completion of the contaminated land assessment, if soil is identified as hazardous it will require offsite removal. The contaminated soil will be managed in accordance with the procedures outlined in this RWMP. Where additional soil sampling and classification for waste classification is required, the sampling, testing specification and classification will be undertaken by the appointed Environmental Consultant in accordance with the waste classification procedures outlined in Section 7.2.

6.2.3 Fuel and Oils

Fuels and oils are classed as hazardous materials. The storage of small quantities of fuel will be required to allow for refuelling of machinery in the site compound and on an impermeable area with appropriate containment in place. All fuels and oils required to be stored at the site will be sealed, bunded and clearly marked. All tank, container and drum storage areas will be rendered impervious to the materials stored therein. Bunds and storage areas will be designed having regard to Enterprise Ireland BPGCS005, Oil Storage Guidelines. All tank and drum storage areas will, as a minimum, be bunded to a volume not less than 110% of the capacity of the largest tank or drum within the bunded area. Provided that these requirements are adhered to, and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site. Any used spill kits will be stored in sealed containers awaiting removal by a hazardous waste contractor.

6.2.4 Other Hazardous Substances

Any paints, glues, adhesives, and other known hazardous substances will be stored in designated areas and will be sealed, bunded and clearly marked. They will generally be present in small volumes only, ordered as needed and therefore, associated waste volumes generated will be kept to a minimum.

It is not envisaged that there will be any other hazardous waste generated throughout the construction works however if generated, on-site storage of any hazardous wastes produced (i.e., waste fuels/chemicals) will be kept to a minimum, with compliant removal off-site organised on a regular basis.

It is noted that storage of all hazardous wastes on-site will be undertaken to minimise exposure to on-site personnel and to also minimise potential for environmental impacts. A specialist hazardous waste contractor will be used to remove any hazardous waste arising.

6.3 Main C&D Waste Categories

The main non-hazardous and hazardous waste streams that could be generated by construction activities at a typical site are shown in Table 6-2. The List of Waste (LoW) code (as effected from 1 June 2015) for each waste stream is also shown.

Table 6-2 Typical Waste Types Generated and LoW Code

Waste Material	LoW Code
Concrete	17 01 01
Bricks	17 01 02
Tiles and Ceramics	17 01 03

Waste Material	LoW Code
Mixture of concrete, bricks, tiles, and ceramics	17 01 07
Wood, Glass and Plastic	17 02 01, 17 02 02 & 17 02 03
Metals (including their alloys)	17 04 01, 17 04 02, 17 04 03, 17 04 04, 17 04 05, 17 04 06 and 17 04 07
Non-Hazardous Soil and Stone	17 05 04
Hazardous Soil and Stone	17 05 03*
Gypsum-based construction material	17 08 02
Bituminous mixtures	17 03 02
Paper and cardboard	20 01 01
Non-Hazardous Mixed C&D Wastes	17 09 04
Electrical and electronic components	20 01 35* & 20 01 36
Batteries and accumulators	20 01 33* & 20 01 34
Liquid fuels	13 07 01*, 13 07 02* & 13 07 03*
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13*, 20 01 19*, 20 01 27*, 20-01 28, 20 01 29* & 20 01 30
Insulation materials	17 06 04

6.4 Main C&D Waste Quantities

Table 6-3 shows the breakdown of C&D waste types produced on a typical site based on data from the EPA National Waste Statistics (EPA, September 2024, National Waste Statistics Summary Report for 2022). The waste categories in Table 6-3 will be segregated into general waste and dry recycling categories.

Table 6-3 Quantities of C&D Materials collected in Ireland in 2022 (Source: EPA, September 2024)

Waste Types	%
Soil, stones & dredging spoil	82
Segregated concrete, brick, tile, and gypsum	7
Mixed C&D waste	7
Metals	3
Segregated wood, glass, and plastic	>1
Bituminous Mixtures	1
Total	100

There will also be a surplus of soil and bedrock arising from groundworks which will require offsite removal for reuse or recovery in accordance with appropriate statutory consents and approvals. It is estimated that 5000m³ of soil will be excavated during the pre-construction works. Where possible, surplus soil that is verified to be clean inert soil will be removed from the Site under an Article 27 By-product notification.

The RWMP will be updated with predicted and actual C&D waste / surplus soil and bedrock quantities determined as part of the design for planning and as information becomes available in advance of construction works commencing on-site.

Until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process. The RWMP is to be updated with actual quantities as information becomes available during the works. These waste quantities will be recorded along with the List of Waste (LoW) code for each waste stream. The waste management objective will be to prevent waste arising in the first place, and to re-use, recycle or recover waste materials where possible.

A policy of 'as needed' ordering and strict purchasing procedures will also prevent waste arisings as far as possible.

6.5 Invasive Species

The Proposed Development has been screened for Appropriate Assessment (AA) by DNV and having regard to the nature and scale of the development, it has been determined that the proposed development would not significantly impact upon a Natura 2000 Site.

The requirement for an invasive species survey will be assessed in advance of construction works commencing on-site. If invasive species are identified at the Proposed Development Site, an Invasive Alien Species (IAS) Management Plan will be developed which will identify mitigation measures to prevent uncontrolled transportation and dispersion of invasive species from the Proposed Development Site. All works will be undertaken in accordance the mitigation measures outlined in the IAS Management Plan.

7 WASTE CLASSIFICATION

7.1 Roles and Responsibilities

7.1.1 Construction Waste Manager

The appointed Construction Waste Manager will be responsible for ensuring all waste classification of wastes generated throughout the works to ensure offsite removal for recycling/recovery and disposal in compliance with all relevant waste management legislation.

7.1.2 Environmental Officer

The appointed Environmental Officer will assist with the Construction Waste Manager as required by monitoring the movement and segregation of all waste streams across the Site.

7.1.3 Environmental Consultant

Where necessary and if required, the appointed Environmental Consultant (ECG) will be responsible for completing any additional waste classification of excavated soil waste materials to enable off-site disposal in compliance with all relevant waste management legislation.

7.2 Waste Classification

7.2.1 C&D Waste Materials

The waste classification of inert C&D wastes generated throughout the construction phase of the development including structural concrete, metal, timber, cladding, plastics, cardboard, and tiles will be based on visual observations by the Construction Waste Manager or appointed delegate.

It is noted that there will be no crushing of concrete on-site using a mobile crushing plant. Concrete will be segregated for removal off-site to an authorised permitted/licensed waste facility for recovery, recycling.

7.2.2 Asbestos and Asbestos Containing Materials (ACMs)

The waste classification of ACMs will be based on an assessment by an appropriately qualified asbestos specialist. An asbestos survey will be carried out prior to any site clearance or demolition taking place.

It is anticipated that there will be no asbestos containing materials (ACMs) generated during the Construction Phase of the Proposed Development.

If ACMs are found at any stage during the construction phase, the client will be notified, and a suitable management plan will be implemented for the safe removal and disposal.

7.2.3 Soil and Stone

During the enabling and clearance works, it is considered that there will be inert / non-hazardous soil and stone generated during the ground clearance and levelling works undertaken across the Site, removal of stockpiled materials, debris, vegetation and scrub.

Quantities of soil and stone removed during these works will be recorded and kept on file as required.

The removal of soil and stone offsite for disposal will be undertaken in accordance with all relevant waste management legislation, and the soil sampling plan detailed below.

7.2.3.1 Soil Sampling Plan

The following is the process to be followed in the unlikely event that potentially contaminated soil is uncovered during excavation.

All soil and stone materials will be sampled prior to removal to ensure that the materials are managed and removed off-site in accordance with waste management legislation, the waste classification of sample results will be based on the following method:

- Following excavation, all excavated materials regardless of previous classification will be stockpiled onsite to facilitate the collection of representative samples.
- Stockpiled soils pending waste classification and removal offsite will be segregated for appropriate sampling and testing (refer to Section 8.3.1). The stockpiled soils will be sampled at a frequency of 1 sample per 500 tonnes to ensure that the appropriate sample data is available for accurate waste classification to enable compliant removal of soil offsite in accordance with the with regulatory requirements for the intended destination facility or site and all applicable current legislation and industry guidelines.
- The soil encountered at each stockpile will be visually inspected, by the Site Environmental Consultant for composition and to determine if there is any visual or olfactory evidence of anthropogenic contamination.
- Samples will be collected and placed in appropriate laboratory supplied containers. Each sample container will be labelled with a unique sample reference number and stored in cool, dark conditions for transfer to the laboratory. The samples will be transported to a UKAS accredited laboratory, under standard 'Chain of Custody'.
- The collection of samples, testing specification and classification will be undertaken by the appointed Environmental Consultant in accordance with requirements set out in Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous, (EPA, 2018). All samples will be analysed in accordance with the testing specification for laboratory analysis and assessed in accordance with the proposed methodology for waste classification detailed in Section 7.2.3.2 and Section 7.2.3.3 below respectively.
- Following sample collection, sample details including the stockpile sample location reference number will be recorded and retained in the waste management records (refer to 8.3.1).

If any additional soil sampling and classification is required (e.g., where ground conditions vary from those identified in previous reports, previously unidentified contaminated ground is encountered or to delineate identified contaminant hotspots), the Client will be informed immediately; WCC, the EPA and other relevant authorities will be notified as required and agreed with the Client and a supplementary soil management plan will be designed and

implemented detailing the delineated extents of contaminated soil, the estimated volumes, mitigation measures, destinations for the authorised disposal/treatment and the designated authorised contractors for the movement of the material.

If any additional soil sampling and classification is required (e.g., where ground conditions vary from those identified in previous reports, previously unidentified contaminated ground is encountered or to delineate identified contaminant hotspots), the Client will be informed immediately; WCC, the EPA and other relevant authorities will be notified as required and agreed with the Client and a supplementary soil management plan will be designed and implemented detailing the delineated extents of contaminated soil, the estimated volumes, mitigation measures, destinations for the authorised disposal/treatment and the designated authorised contractors for the movement of the material.

7.2.3.2 Laboratory Analysis for Soil Waste Classification

If required, the analytical suite in Table 7-1 will be used to enable an accurate waste classification for soil material at the site, additional analysis will be carried out, where deemed necessary. All sampling will be carried out at an accredited laboratory.

Table 7-1 Soil Analysis Summary Table

Parameter	Analysis Type
Metals: Antimony, Arsenic, Barium, Cadmium, Total Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Zinc, Boron, Hexavalent Chromium & Chromium III	CEN 10:1 Leachate & Total Pollutant Content (Solid) analysis
Polycyclic Aromatic Hydrocarbons (PAHs): EPA sum of 6 & EPA Sum of 17	Total Pollutant Content (Solid) analysis
TPHCWG (Total Petroleum Hydrocarbon Criteria Working Group) and Mineral Oil (C10-C40)	Total Pollutant Content (Solid) analysis
Benzene, Toluene, Ethylbenzene, m/p-Xylene, o-Xylene (BTEX) and MTBE	Total Pollutant Content (Solid) analysis
Polychlorinated biphenyls (PCBs)	Total Pollutant Content (Solid) analysis
Fibre screen/ asbestos ID	Asbestos Screen Analysis
Asbestos Gravimetric Quantification (if required)	Asbestos Quantification Analysis
pH, Moisture content as % wet weight, Phenols, Total Organic Carbon (TOC), Total Cyanide, Total Sulphate, Sulphide, Elemental Sulphur	Total Pollutant Content (Solid) analysis
Chloride, Fluoride, Sulphate, Phenols, Dissolved Organic Carbon (DOC), Total Dissolved Solids (TDS) and Ammoniacal Nitrogen as N	CEN 10:1 Leachate

7.2.3.3 Soil Waste Classification

Stockpiled soils requiring offsite disposal at the Site will be classified in accordance with the soil sampling plan outlined in Section 7.2.3.1 above.

Assessment and waste classification of sample results will be based on the following method:

- Assessment of results to determine if the sample is a hazardous or non-hazardous waste in accordance with EPA guidance 'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous' (EPA, 2018) using the <http://www.hazwasteonline.com> application developed by One Touch Data Limited based on Regulation (EC) No. 1272/2008: the classification, labelling and packaging of substances and mixtures (CLP), UK Environment Agency, 2021 Version 1.1 GB (EU Exit Update): Guidance on the Classification and Assessment of Waste (1st Edition v1.1.GB) Technical Guidance WM3 (UK EA, WM3 2021) and the Northern Ireland Environment Agency, 2021. Version 1.1 NI (EU Exit): Guidance on the Classification and Assessment of Waste (1st Edition v1.1.NI) Technical Guidance WM3 (NIEA, WM3 2021). It is noted that while both the UK EA, WM3 2021 and the NIEA, WM3 2021 guidance applies to different regulatory jurisdictions, their approach and methodology is accepted by the EPA.
- Screening the sample analytical results against the waste acceptance criteria (landfill WAC) set out in the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002) and the EPA (2020) 'Guidance on waste acceptance criteria at authorised soil recovery facilities.
- Screening the sample analytical results against the Maximum Concentrations and/or Soil Trigger Levels set out in the Environmental Protection Agency (2020) "Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities" (SRF WAC).
- Assigning a waste category for each sample is based on the above criteria and as summarised in Table 7-2.

Table 7-2 Soil Waste Classification and Waste Acceptance Criteria.

Waste Category	Classification Criteria
Category A	<p>Uncontaminated soil and stone free from anthropogenic contamination (including up to 2% non-natural materials such as rubble, concrete brick) as per the EPA 'Guidance on waste acceptance criteria at authorised soil recovery facilities' (EPA, 2020).</p> <p>Note that individual soil recovery / waste permit/ COR facilities may have specific acceptance criteria that vary from this guidance (EPA, 2020) agreed with EPA or Local Authority.</p>
Category B1	<p>Results found to be non-hazardous using the HazWasteOnlinetm application². Analytical results meet the inert waste acceptance criteria (WAC) limit values set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002).</p>
Category B2	<p>Results found to be non-hazardous using the HazWasteOnlinetm application². Reported concentrations greater than Category B1 but meet the inert waste acceptance criteria for specific facilities that are licensed by the EPA to accept waste with limit values of up to three times the limit set in 2003/22/EC for example the IMS Hollywood (W0129 02/C) and Walshestown Restoration (W0254-01).</p>

Waste Category	Classification Criteria
Category C (Non- Hazardous)	Results found to be non-hazardous using the HazWasteOnline™ application ² . Analytical results greater than Category B1 and B2 criteria but less than non-hazardous waste acceptance criteria, which are based on waste acceptance criteria set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002).
Category C1 (Non- Hazardous) with asbestos fibre content <0.001% w/w	As category C and containing <0.001% w/w asbestos fibres.
Category C2 (Non- Hazardous) with asbestos fibre content <0.01% w/w	As category C and containing <0.01% w/w asbestos fibres.
Category C3 (Non- Hazardous) with asbestos fibre content <0.1% w/w	As category C and containing <0.1% w/w asbestos fibres.
Category D (Hazardous for Export)	Analytical results found to be hazardous using the HazWasteOnline™ application. ²
Category D1 (Hazardous for Export) with asbestos fibre content >0.1% w/w	Hazardous due to presence of fragments of identifiable fragments of asbestos containing material and (if applicable) analytical results found to be hazardous using the HazWasteOnline™ application. ²
NOTES <ol style="list-style-type: none"> 1. It should be noted that while waste soil maybe classified as inert based on the EU Council Decision 2003/33/EC and similarly, waste may be identified as inert and meeting the requirements set out in EPA 'Guidance on waste acceptance criteria at authorised soil recovery facilities' (EPA, 2020). However, waste acceptance criteria may vary at each receiving facility it is recommended that each facility is consulted to ensure that the material is suitable for recovery or disposal at the facility in compliance with permit/licence requirements and all statutory obligations. 2. Consultation may be required with the facility to confirm suitability for disposal. 3. http://www.hazwasteonline.com. Application developed by One Touch Data Limited based on Regulation (EC) No. 1272/2008: the classification, labelling and packaging of substances and mixtures (CLP), the UK EA WM3, 2021 guidance and the NI EA WM3, 2021 guidance. It is noted that while both the NI EA WM3, 2021 and the UK EA WM3, 2021 guidance applies to different regulatory jurisdictions, their approach and methodology is accepted by the EPA. 4. Soils with an asbestos fibre concentration of <0.1% will be classified as non-hazardous if all other analytical results found to be non-hazardous using the HazWasteOnline™ application. 	

7.2.3.4 Soil Waste Classification Assessment Report

On completion of the waste classification assessment, the Environmental Consultant will prepare a comprehensive waste classification assessment report incorporating all support documentation and drawing. All existing and future waste classification report(s) will be included in Appendix J of the waste management file.

Records of all waste classification assessments including updated scale drawings showing the lateral and vertical delineation of waste classification of soil at the site, the estimated volumes, mitigation measures will be incorporated into the waste classification report. The destinations for the authorised disposal/treatment and the designated authorised contractors for the movement of the material will also be detailed.

8 WASTE MANAGEMENT

The management of the main waste streams are detailed in the following sections.

In line with the Waste Hierarchy (from the Waste Framework Directive), prevention of waste and re-use will be prioritised over disposal. The construction phase of the proposed development will align with this policy by implementing the following measures:

- A policy of 'as needed' ordering and strict purchasing procedures will prevent waste arisings as far as possible.
- Any excavated soil will be incorporated into the design of the Proposed development. However, where the offsite removal of surplus soil materials is required, removal under an Article 27 By-product notification will be prioritised.
- Where required for landscaping, imported Article 27 soils will be prioritised.
- All waste streams will be segregated onsite to ensure the correct recovery and recycling.
- As far as possible, site hoarding, facilities and welfare units will be repurposed from previous sites and projects to reduce waste and encourage a circular building environment.
- Materials which have a high percentage of recycled material or that have a low environmental impact will be prioritised where feasible.



Figure 8-1 Waste Hierarchy (Source: Waste Framework Directive¹)

¹ https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive_en
[Accessed 23/07/2024]

8.1 Opportunities for Prevention and Reduction

Opportunities for the prevention and reduction of waste will be considered throughout all stages of the Proposed Development Construction Phase. The Contractor will plan the construction process to eliminate/reduce waste; specifically, careful planning will minimise the volume arising on-site, facilitate the use of reclaimed materials in the works, and influence wastage caused by poor materials handling.

Table 8-1 shows the targets for recovery during the Construction Phase of the Proposed Development based on data from the EPA National Waste Statistics (EPA, September 2024, National Waste Statistics Summary Report for 2022).

Table 8-1 Predicted Recovery Targets

Waste Type	Recycling	Energy Recovery	Backfilling	Disposal
	%	%	%	%
Mixed C&D waste	22%	25%	19%	33%
Segregated wood, glass, and plastic	57%	28%	1%	15%
Bituminous Mixtures	54%	0%	46%	0%
Metals	100%	0%	0%	0%
Concrete, brick, tile, and gypsum	56%	1%	41%	2%
Soil and Stone	0%	0%	93%	7%
Waste treatment residues	14%	29%	24%	32%
Total	9.9%	1.8%	80.8%	7.5%
Note: '**' = Backfilling refers to a recovery operation, carried out at authorised facilities, where suitable waste is used for reclamation purposes in excavated areas or for engineering purposes in landscaping and where the waste is a substitute for non-waste materials. It includes worked out quarries that are in the process of being restored or sites where soil and stone is imported to the site to raise natural ground levels (EPA, 2024)				

The predicted recovery targets will be reviewed and updated by the Appointed Contractor in advance of construction works commencing onsite when the final materials and detailed construction methodologies have been confirmed. The waste management objective will be to prevent waste arising in the first place, and to re-use, recycle or recover waste materials where possible. A policy of 'as needed' ordering and strict purchasing procedures will also prevent waste arisings as far as possible.

8.2 Article 27 By-product

Where appropriate the removal of surplus materials as a by-product during the construction phase of the proposed development will be undertaken under an Article 27 By-product notification to the EPA. All statutory requirements of Article 27 By-product under the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011) must be demonstrated to the satisfaction of the EPA. A separate assessment would be required to verify that the any

surplus material meets the four conditions of Article 27 by-product prior to notifying the EPA or moving material off-site. It should be noted that the EPA advises that material should not be moved off-site until a determination has been made by the EPA regarding the notified material.

8.3 Demolition and Construction Waste Management

As detailed in Section 6, construction and demolition waste will be generated during the ground clearance and levelling works and reinstatement works at the Site. If detected, asbestos containing materials will also be removed by the appointed specialist contractor.

The management of the main waste streams are detailed as follows:

8.3.1 Asbestos and Asbestos Containing Materials

If detected, the management of asbestos at the site and off-site transport will be undertaken by an appointed specialist contractor in accordance with an asbestos management plan for the works.

Asbestos and ACMs will be removed by the specialist contractor into laminated, double walled and sealed 1 tonne bags. Temporary storage of asbestos and ACMs will be stored, where required, in a dedicated, secure, dedicated quarantine skip for non-conforming materials. The Construction Waste Manager or appointed delegate (i.e., Environmental Officer) will ensure that all drivers hold valid ADR training certificates, as required under the Carriage of Dangerous Goods Regulations, 2007. Waste will be transferred offsite by an authorised haulage contractor to an authorised waste transfer station for shipment and disposal in mainland Europe in accordance with Trans-Frontier Shipment (TFS) controls and legislative requirements.

8.3.2 Concrete and Bricks

The majority of concrete blocks and bricks generated as part of the clearance works are expected to be clean, inert material. Concrete and bricks will be segregated for removal offsite to an authorised permitted/ licensed waste facility for recovery and/ or recycling.

8.3.3 Tarmacadam

Where possible it is anticipated that tarmacadam generated during site clearance works will be reused onsite (e.g., capping layer below access roads) subject to assessment of the suitability for use in accordance with engineering and environmental specifications for the Proposed Development. However, where the removal offsite of tarmacadam's is required, it will be segregated pending removal to an authorised permitted/licensed waste facility for recovery and/ or recycling.

8.3.4 Metal

Metals will be segregated into mixed ferrous, aluminium cladding, high grade stainless steel, low grade stainless steel etc., where practical and stored in skips and recycled off site at an authorised recycling facility.

8.3.5 Timber Glass and Hard Plastic

Glass, hard plastic (e.g., material cut offs) and timber that is uncontaminated (i.e., free from paints, preservatives, glues etc.) will be segregated into dedicated skips/receptacles and recycled off-site at an authorised recycling facility.

8.3.6 Tiles, Ceramics and Gypsum

Tiles, ceramics and gypsum generated as part of the site clearance and levelling and construction works will be segregated into dedicated skips/receptacles and recycled off-site at an authorised recycling facility. Under no circumstances, will gypsum containing materials (e.g., plasterboard) be stored with mixed waste. The Construction Waste Manager or appointed delegate (i.e., Environmental Officer) will ensure that supply of new plasterboard is carefully monitored to minimise waste.

8.3.7 Waste Electrical and Electronic Equipment (WEEE)

Any WEEE will be stored in dedicated covered cages/receptacles/pallets pending collection for recycling.

8.3.8 Other Recyclables

Where any other recyclable wastes such as cardboard and soft plastic are generated from packaging, these will be segregated at source into dedicated skips and removed off-site.

8.3.9 Non-Recyclable Waste

C&D waste which is not suitable for reuse or recovery, such as polystyrene, some plastics and some contaminated cardboards, will be placed in separate skips or other suitable receptacles. Prior to removal from site, the non-recyclable waste skip/receptacle will be examined by the appointed Construction Waste Manager or delegate to determine if recyclable materials have been placed in there in error. If this is the case, efforts will be made to determine the cause of the waste not being segregated correctly and recyclable waste will be removed and placed into the appropriate receptacle.

8.3.10 Hazardous Wastes

Onsite storage of any hazardous wastes produced will be kept to a minimum, with removal offsite organised on a regular basis. Storage of all hazardous wastes on-site will be undertaken so as to minimise exposure to onsite personnel and the public and to also minimise potential for environmental impacts. Hazardous wastes will be recovered, wherever possible, and failing this, disposed of appropriately. Hazardous wastes produced (i.e., waste fuels/chemicals) will be kept to a minimum, with removal off-site organised on a regular basis by an appointed specialist hazardous waste contactor.

In the unlikely event that hazardous wastes, previously deposited wastes or previously unidentified contaminated soil are discovered on-site, the Main Contractor will immediately notify the Client and other relevant authorities as required, and a hazardous waste/soil management plan will be designed and implemented detailing the estimated volumes, mitigation measures, destinations for the authorised disposal/treatment and the designated

authorised contractors for the movement of the material. This is precautionary as there is no indication of hazardous materials on site.

Potentially hazardous waste soil and stone will be segregated and stored appropriately as outlined in Section 8.3 pending soil sampling, laboratory analysis and waste classification as outlined in Section 7.2.3.

8.3.11 Soil and Stone

The removal of inert / non-hazardous soil and stone generated during groundworks at the site will be transferred offsite for recovery and will be undertaken in accordance with the soil sampling plan detailed in Section 7.2.3.1 All surplus materials will be removed offsite in accordance with waste management legislation.

Stockpiled soil and stone pending sampling, laboratory analysis and waste classification (refer to Section 7.2.3) will be managed in accordance with the procedures outlined in Section 8.4 and Section 8.5 below.

8.3.12 Invasive Species

The requirement for an invasive species survey will be assessed in advance of construction works commencing on-site. If invasive species are identified at the Proposed Development Site, an Invasive Alien Species (IAS) Management Plan will be developed which will identify mitigation measures to prevent uncontrolled transportation and dispersion of invasive species from the Proposed Development Site. All works will be undertaken in accordance the mitigation measures outlined in the IAS Management Plan.

8.4 Segregation of Waste On-Site

Material will be segregated on-site for the appropriate waste stream and off-site recovery/disposal destination. The Construction Waste Manager or appointed delegate will ensure waste streams are adequately identified. The segregation and management of waste storage and stockpiling will be routinely inspected and audited by the Construction Waste Manager and audit findings recorded in the RWMP records.

There will be no crushing of concrete on-site using a mobile crushing plant. Concrete will be segregated for removal off-site to an authorised permitted/licensed waste facility for recovery, recycling.

C&D waste will be segregated on-site into labelled dedicated skips / receptacles. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out an authorised waste recovery facility.

Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc., if required.

Waste materials generated from site office and canteen will be segregated into general waste, biodegradable waste and dry recycling and stored in appropriate refuse bins in a dedicated storage area on-site, where it is practical.

In the event of material being temporarily stockpiled on-site for reuse in the Proposed Development or in the event of material excavated pending waste classification for removal off-site, the material will be temporarily stockpiled in a designated area on-site. Stockpiles of different waste material will be located, maintained, and separated by a sufficient distance to prevent any inadvertent mixing of excavated material. All stockpiles will be clearly identified (e.g., signage) and recorded on a site map. Additional details on the management of stockpiles and procedures to prevent environmental and nuisance issues will be documented in the Construction and Environmental Management Plan (CEMP) which will be updated accordingly by the Appointed Contractor in advance of construction works commencing on-site.

Any heavily contaminated material/soil that may be encountered will need to be segregated in accordance with the measures outlined in the CEMP (DNV, 2025) for appropriate sampling, waste classification and authorised removal off-site.

The Construction Environmental Site Manager will ensure that site personnel involved in the excavation and removal of waste soil materials at the site are informed of and can identify the different waste types and categories of waste soil materials encountered on-site.

The Construction Waste Manager will ensure that site personnel involved in the excavation and removal of waste soil materials at the site are informed of and can identify the different waste types and categories of waste soil materials encountered onsite.

8.5 Storage of Waste and Stockpile Management

Designated waste storage areas will be provided onsite for the duration of the construction works. The dedicated waste storage areas within the Waste Segregation points will house all bins and skips for the storage of segregated construction waste generated. All containers will be marked with clear signage which will identify which waste types are to be placed into each container.

It is noted that adequate storage space will be provided in a dedicated waste storage area on the Site to accommodate the separate collection of dry recyclables and organic food/garden waste. The dedicated waste storage area will not be visible from or on a public street, it will be outdoors and secure. All bins and skips will be collected from the waste compound and will not be placed for collection on the public street.

8.5.1 Soil Stockpiles

Where material is being temporarily stockpiled onsite pending waste classification for removal off-site or for reuse in the Proposed Development, the material will be temporarily stockpiled in a designated, secure and impermeable area onsite. The temporary stockpiling of materials onsite will be undertaken in consultation with the Client and where required the Environmental Regulation Unit of MCC and the EPA, prior to commencing storage, to ensure that any relevant authorisations are obtained and that spoil is managed, at all times, in accordance with all relevant legislation. Surplus soil identified as waste soil will be considered a waste until compliantly removed from the site and received at the final authorised recovery/reuse/disposal facility in accordance with all waste management legislation.

Stockpiles of different waste material will be located, maintained, and separated by a sufficient distance to prevent any inadvertent mixing of excavated material. All stockpiles will be clearly identified (e.g., signage) and recorded on a site map.

When a stockpile has been sampled for classification purposes (Refer to Section 7.2), it will be considered to be complete, and no more soil will be added to that stockpile prior to disposal. An excavation/stockpile register will be maintained on-site showing at least the following information:

- Stockpile number;
- Origin (i.e., location and depth of excavation);
- Approximate volume of stockpile;
- Date of creation;
- Description and Classification of material;
- Date sampled;
- Date removed from site;
- Haulier details including waste collection permit details;
- Disposal/recovery destination including waste facility permit / licence details; and
- Photograph.

Details on the management of stockpiles and procedures to prevent environmental and nuisance issues are set out in the CEMP (DNV, 2025). Stockpiles will be located, arranged and managed so that risk to receiving water, and other receptors, from silt and contaminants is minimised.

8.5.2 Storage of Waste Policy

Waste storage, fuel storage and stockpiling and movement are to be undertaken with a view to protecting the underlying soils and groundwater. Waste will be stored on-site, including non-hazardous soil and stone and inert C&D wastes, in such a manner as to:

- Prevent environmental pollution (bundled and/or covered storage, minimise noise generation and implement dust/odour control measures, as may be required);
- Maximise waste segregation to minimise potential cross contamination of waste streams and facilitate subsequent re-use, recycling, and recovery; and
- Prevent hazards to site workers and the public during construction phase (largely noise, vibration and dust).

9 OFF-SITE REMOVAL OF MATERIALS AND WASTE

9.1 Offsite Removal of Surplus Materials

Removal and recovery/recycling/disposal of all waste materials will be carried out in accordance with the Waste Management Act 1996 and as amended, S.I. No. 820/2007 - Waste Management (Collection Permit) Regulations 2007 and as amended and S.I. No. 821/2007 - Waste Management (Facility Permit and Registration) Regulations 2007 and as amended. This includes the requirement for all waste contractors to have a waste collection permit issued by the NWCPO. The nominated Construction Waste Manager will maintain a copy and a register of all waste collection permits on-site and will review these to ensure they have not expired. All permits must be reviewed prior to removal of any waste from the Site.

9.2 Waste Management Procedure

All surplus materials and waste will be documented prior to leaving the site. Waste will be weighed or logged by the Construction Waste Manager, either by weighing mechanism on the truck or at the receiving facility. Waste records will be maintained on site by the nominated Construction Waste Manager.

Prior to any removal of waste from the site, written confirmation should be obtained from the receiving waste facility, that acceptance of the waste will be in accordance with all waste management legislation and the conditions of the receiving waste facility licence or permit. A copy of the applicable licences and permits should be obtained and retained on-site.

If the waste is being transported to another site, a copy of the Local Authority waste COR/permit or EPA Licence for that site will be provided to the nominated Construction Waste Manager. If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) notification document will be obtained from the National Transfrontier Shipment of Waste Office (NTFSO) (as the relevant authority on behalf of all local authorities in Ireland) and kept on-site along with details of the final destination (COR, permits, licences etc.). A receipt from the final destination of the material will be kept as part of the on-site waste management records. Regular audits of waste paperwork will be undertaken to ensure traceability of all loads off site to the final destination.

To control off-site movements of waste a comprehensive docketing / waste tracking system should be implemented on-site. A daily record (including preparing and reconciling waste transfer note) of excavation at, and dispatch from the site should be maintained on-site.

All material excavated or segregated for off-site disposal should be transferred from site under chain of custody or waste dispatch dockets that should record:

- Date and time of transfer;
- Name of Carrier;
- Vehicle Registration and Name of Driver;
- European Waste Classification Code;

- Waste Classification and origin of material at the site;
- Weighbridge records at the Site; and
- Destination of load (receiving facility).

All waste will be documented prior to leaving the Site. Waste volumes will be recorded by the Contractor, either by obtaining the weighbridge weight from at the destination facility or by converting cubic meters to tonnes. In all cases the number of loads will be recorded so that these can be cross checked and the weights obtained from the destination facility. These waste records will be provided and maintained on site by the Construction Waste Manager and provided to the Client for auditing. A receipt from the final destination of the material will be kept as part of the on-site waste management records and demonstration of disposal will be provided to the Contractor within 48 hours unless otherwise agreed with the Client.

It is recommended that chain of custody / waste dispatch dockets are issued in triplicate. On dispatch the docket should be signed by the issuing operative and one copy retained on-site, which will be entered into the site electronic records. The remaining two copies should accompany the load and be signed or stamped by the receiving facility.

To ensure complete site records are maintained on-site, a copy of the completed chain of custody / waste dispatch docket should have a copy of the weighbridge docket from the receiving facility attached and retained with the waste management records for the site. The completed chain of custody / waste dispatch docket will be maintained in the waste management file on site and entered into the site electronic records.

A record of all waste removed from the site including its ultimate disposal destination will be maintained on-site available for inspection on-site. Refer to Section 11 for details on waste management records.

All necessary documentation requirements are detailed in section 11 below.

All loads will be checked prior to exiting the site. In addition to logging the trucks of waste materials, all trucks will be visually inspected to ensure the loads are within the permissible haulage limits. All trucks and skips will be covered, and any loose debris removed prior to leaving the site.

Some of the sub-contractors on-site will generate waste in relatively low quantities. The transportation of non-hazardous waste by persons who are not directly involved with the waste business, at weights less than or equal to 2 tonnes, and in vehicles not designed for the carriage of waste, are exempt from the requirement to have a waste collection permit (Ref. Article 30 (1) (b) of the Waste Collection Permit Regulations 2007 as amended). Any sub-contractors engaged that do not generate more than 2 tonnes of waste at any one time can transport this waste off-site in their work vehicles (which are not designed for the carriage of waste). However, they are required to ensure that the receiving facility has the appropriate COR / permit / licence and the waste generated must be ancillary to their own activities.

9.3 Off-Site Destinations for Waste Materials

All waste materials that will be required to be transported off-site for further treatment or disposal will be undertaken in compliance with all Waste Management Legislation and all

waste materials will only be transferred to appropriately permitted or licensed waste management facilities.

Details of the nominated waste facilities proposed for each specified waste type will be provided to Fingal County Council (FCC) once appointed by the Contractor in advance of construction works commencing on-site. The Register of Authorised Waste Facilities, which will be updated and provided to MCC in advance of construction works commencing onsite, is included in Appendix B.

The Construction Waste Manager will be required to maintain a detailed register of the nominated waste facilities (i.e., facility location, waste facility permit / licence number and expiry / renewal date) proposed for each specified waste type and to obtain a copy of all waste facility licences/permits which will be retained within the waste management file.

The expiry dates on all licences and permits will be reviewed routinely by the Construction Waste Manager as part of the waste audits. The Construction Waste Manager will ensure that only facilities with a valid permit or licence will be retained for off-site management of waste.

9.4 Waste Collection and Transport

Only carriers/hauliars with a valid NWCPO issued Waste Collection Permit which authorises the transport of the applicable List of Waste (LoW) Code and delivery to the receiving facility will be appointed to transport the waste from the site.

Details of the nominated carriers/hauliars proposed for each specified waste type will be provided to FCC once appointed by the Contractor in advance of construction works commencing on-site. The Register of Authorised National Waste Collection Permits, which will be updated and provided to FCC in advance of construction works commencing onsite, is included in Appendix D.

The Construction Waste Manager will be required to maintain a detailed register of the waste haulage contractors (i.e., haulage contractor name, address, waste collection permit / skip operator licence number and expiry date) proposed for each specified waste type and to obtain a copy of all the applicable permits / licences which will be retained within the waste management file.

The expiry dates on all permits will be reviewed routinely as part of the waste audits. Only haulage contractors with a valid permit will be retained for off-site removal of waste.

10 WASTE AUDIT AND INSPECTION

The Construction Waste Manager will be responsible for conducting waste inspections at the site during the enabling works to ensure the compliance with waste management procedures as outlined above to ensure that all procedures are strictly adhered to.

Waste skips/receptacles and stockpiles (if required) will be inspected daily by the Construction Waste Manager to ensure materials are segregated on-site for the appropriate waste stream and disposal destination.

The Construction Waste Manager will report their findings to the Site Foreman with regard to waste management on an on-going basis.

Regular audits will be undertaken by the Construction Waste Manager, Environmental Consultant or designate which will include checking the following in relation to waste management onsite:

- Segregation and storage practices;
- Recycling rates;
- Litter prevention practices;
- Documentation for waste removed;
- Documentation for waste received at destination facilities;
- Centrally recorded waste data;
- Waste collection permits for all waste hauliers used; and
- Waste management facility permits/licences for all waste management facilities used.

Daily site inspections will be carried out by the Construction Waste Manager to check for housekeeping, litter, and correct segregation. Where poor segregation practices are observed, littering is apparent or housekeeping falls below standard, a non-conformance will be raised with the Site Foreman or designate for corrective action.

Regular checks will be carried out to ensure that all waste is accounted for, and full load traceability exists. Where gaps are identified in the records available, a root cause analysis will be carried out and a preventive measure put in place to ensure that this does not happen in future. Any missing documentation should be sought from the waste haulier and the waste destination in the event that it is not present for audit and inspection.

Monthly reports regarding the management of the waste during works, will be forwarded electronically to the Client.

The Client will be informed of any non-conformances and the corrective actions implemented.

Any audits undertaken by the Client will be facilitated and all documentation made available in a timely manner upon request.

11 RECORD KEEPING AND REPORTING

11.1 Maintaining Records

Records will be kept for all waste material which leaves the site, either for reuse on another site, recycling, recovery or disposal. A Waste Register (spreadsheet) will be held on site where a record will be kept of each waste consignment taken from the site. This spreadsheet will be maintained and made available for inspection by authorised officers of Fingal County Council. The details recorded for each consignment will, at a minimum, include:

- Date of removal of waste;
- Waste stream;
- Waste EWC code;
- Waste contractor details including NWCPO Permit Number;
- Vehicle registration
- Driver name
- Docket number for waste leaving the site
- Quantity of waste (in tonnes or litres as appropriate);
- Waste treatment (Reuse/Recycling/Disposal) including appropriate disposal/recovery code;
- Transporter of waste (including transporters licence number);
- Final destination of the waste (including docket number or waste licence number); and
- Confirmation that waste was received/accepted by designated facility.

All necessary documentation requirements will be fulfilled prior to transfer of material.

Similar records will be maintained on site and available for inspection detailing all materials exported under any EPA Article 27 notifications.

A copy of the receiving waste facility permits and licences with all appendices will be retained onsite.

A copy of the NWCPO waste collection permit with all appendices will also be retained on-site.

As well as the Waste Management Log Sheet (register) (refer to Appendix F), the appointed Environmental Officer or delegate will record the following:

- Waste removed for reuse off-site;
- Waste removed for recycling;
- Waste removed for disposal; and
- Reclaimed waste materials brought to site for reuse (if required).

All waste will be documented prior to leaving the site. Waste volumes will be recorded by the Main Contractor, either by obtaining the weighbridge weight from at the destination facility or by converting cubic meters to tonnes. In all cases the number of loads will be recorded so that these can be cross checked and the weights obtained from the destination facility. These waste records will be provided and maintained on site by the Construction Waste Manager and provided to the Client for auditing. A receipt from the final destination of the material will be kept as part of the on-site waste management records and demonstration of disposal will

be provided to the Employer Contractor within 48 hours unless otherwise agreed with the Client

For each movement of waste on or off-site, a signed docket will be obtained by the Environmental Officer or delegate from the contractor, detailing the date, vehicle registration, driver name and signature weight and type of the material and the source and destination of the material. This will be carried out for each material type. This system will also be linked with the delivery records. In this way, the percentage of construction waste generated for each material can be determined. The system will allow the comparison of these figures with the targets established for the recovery, reuse and recycling of construction waste and to highlight the successes or failures against these targets. Certificates of recycling/recovery will be obtained from the facility to which the waste has been consigned, in order to confirm receipt and trace the waste to end destination. This documentation will be cross checked with removal dockets to ensure that all waste removed from the site has been accounted for and accepted at end destinations.

11.2 Non-Conformance and Corrective and Preventative Action

Non-conformances may be raised through site inspection or audit, or by any site personnel by reporting a non-conformance to the Construction Waste Manager.

Non-conformances will be recorded and investigated to determine the root cause, and Corrective Action Requests (CARs) will be issued to ensure that prompt action is agreed and committed to, with a view to the effective resolution of any deviations from the RWMP requirements or any environmental issues.

CARs may be raised as a result of:

- An internal or external communication;
 - An internal audit;
 - A regulatory audit or inspection;
 - A suggestion for improvement;
 - A complaint; or
 - An incident or potential incident.
- All corrective action requests will be numbered and logged.

Corrective Action Requests will only be closed out on sign off by the Construction Waste Manager that the required corrective actions have been completed.

11.3 Reporting

All waste management documents demonstration of compliant removal of waste offsite will be provided to the Client within the agreed timeframe with the Client. It is noted that receipt of completed dockets from haulage and waste facility operators can typically take up to 48 hours.

A record of all necessary documentation including waste transfer documents and landfill gate receipts will be stored in the waste management file.

Monthly reports regarding the management of the waste during works, will be forwarded electronically to the Client by the Construction Waste Manager.

On completion of the waste classification assessment of stockpiled soils excavated across the Site (refer to 7.2.3), the Environmental Consultant will prepare a comprehensive waste classification assessment report incorporating all support documentation and drawing.

In the event that hazardous wastes, previously deposited hazardous wastes or previously unidentified contaminated soil are discovered on-site, the Contract Manager will immediately notify the Client, FCC, and other relevant authorities as required, and a hazardous waste/soil management plan will be designed and implemented detailing the estimated volumes, mitigation measures, destinations for the authorised disposal/ treatment and the designated authorised contractors for the movement of the material.

12 CONSULTATION WITH RELEVANT BODIES

12.1 Local Authority

The local authority (Fingal County Council) will be consulted as required with prior agreement with the Client.

12.2 The Client

All information regarding the management of the waste during works, will be made available to the Client upon request.

The Construction Waste Manager or delegate will submit appropriate written reports of findings and recommendations to the Client relating to site waste management. Full Waste Reports will be generated and submitted to the Client, as required.

The Construction Waste Manager will inform the Client on all aspects of waste generation, waste recycling and waste minimisation on site.

In the event of an environmental incident or emergency the Client will be immediately notified by the Project Manager.

In the event of ground contamination being encountered, Client will be immediately notified by the Project Manager; noting that Client or their representative may require to complete a visual assessment.

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