PROPOSED MIXED USE LARGE-SCALE RESIDENTIAL DEVELOPMENT AT WHITE HEATHER INDUSTRIAL ESTATE, SOUTH CIRCULAR ROAD, DUBLIN 8

Resource and Waste Management Plan

Green Urban Logistics 3 White Heather Propco Limited

Rev.: 1
Date: 27/11/2025

Project name:	Proposed Mixed Use Large-Scale Residential Development at White Heather Industrial Estate, South Circular Road, Dublin 8
Report title:	Resource and Waste Management Plan
Customer:	Green Urban Logistics 3 White Heather Propco Limited, 32 Molesworth Street, Dublin 2
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Table of Contents

List of Tables

List of Figures

1 INTRODUCTION

DNV was commissioned by Green Urban Logistics 3 White Heather Propco Ltd (hereafter referred to as the Client) to prepare this Resource and Waste Management Plan (RWMP) for the construction works of the Proposed Large-Scale Residential Development (LRD) (hereafter referred to as the 'Proposed Development') located at White Heather Industrial Estate, South Circular Road, Dublin 8 (hereafter referred to as the 'site').

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 Development at the site is undertaken in accordance with all statutory requirements and current industry standards.

This RWMP will ensure that waste prevention is prioritised and where unavoidable minimum quantities of waste is generated. Recycling, re-use and recovery of waste with diversion from landfill is maximised wherever possible. It 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), prepared by DNV (2025), which has been developed to define the approach to environmental management during implementation and roll-out of the construction phase of the project. Note that the CEMP has been submitted under a separate cover.

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

As detailed in this document, the exact materials and quantities of construction waste that will be generated from the proposed works will be audited throughout the project roll-out phase to prevent waste arising in the first place, and to re-use, recycle or recover waste materials where possible.

1.2 'Live Document'

This RWMP is considered a 'live' document and as such will be reviewed on a regular basis and at the following milestones:

- On appointment of the Main Construction Contractor;
- On appointment of the Waste Contractor;
- In the event of a change of Contractor;
- Following Dublin City Council (DCC) inspections or comments;
- In the case that any major design changes are made; and
- In the case that there are any changes in waste management legislation/practices/ standards.

This document forms the basis of the RWMP, which the main contractor will be required to update and implement prior to the 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 and will be made available to the Environmental Protection Agency (EPA) and DCC upon request. 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 DCC 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. Approved Waste Collection Permits

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) 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' (the "Waste Action Plan for a Circular Economy") was published in September 2020 (& updated in January 2021) by the Department of Communications, Climate Action and Environment (DCCAE).

The '*Climate Action Plan 2025*' highlights the need to develop better waste prevention strategies and reduce both contamination and the amount of non-recyclable materials. It also highlights the success of widespread segregation of waste, capturing recyclables and biodegradable waste as well as regional waste planning.

The 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 for a Circular Economy also sets out a number of actions in relation to Construction & Demolition ("C&D") 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 C&D 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 the 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 Trans-Frontier 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 C&D Waste Management Plan under the following criterion:

- Civil Engineering projects producing in excess of 500m^3 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 (2021)* ("Best Practice Guidelines"), which supersedes the DoEHLG Best Practice Guidelines 2006. The EPA's Best Practice Guidelines set out a practical and informed common approach to preparing a RWMP prior to construction and during construction.

The Best Practice Guidelines recommend that a 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 the Waste Action Plan for a Circular Economy published in September 2020 by the Department of Communications, Climate Action and Environment (DCCAE) (updated in January 2021). The Best Practice Guidelines are currently the most up to date and in force guidelines.

2.2.1 Other Relevant Guidelines

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* (the "National Waste Management Plan") 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 National Waste Management

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'.

The Waste Action Plan for a Circular Economy 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, stemming from the Waste Action Plan for a Circular Economy.

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 2008/98/EC as amended by the Waste Framework (Directive (EU) 2018/851 of the European Parliament) (the "Waste Framework Directive, as amended") and under Regulation 27 in the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011). Similarly, the National Waste Management Plan recognises that significant progress is anticipated from the end-of-waste process under Article 28 of the Waste Framework Directive, as amended (Regulation 28 of the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011). Both of these routes will contribute to meeting the national targets set out in the National Waste Management 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 (List of Waste (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 8.3 million tonnes of waste in 2022, which represents a decrease of 9% from the 9 million 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 Waste Classes (EPA, 2024. 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

C&D Waste Material	Recycled (t)	Energy Recovery(t)	Recovered/ Backfilled (t)	Disposal (t)	Total
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 Dublin City Council and is governed by the National Waste Management Plan for a Circular Economy 2024-2030.

The National Waste Management Plan 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, as amended.

The overall goal of the National Waste Management 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 National Waste Management 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 2-1.

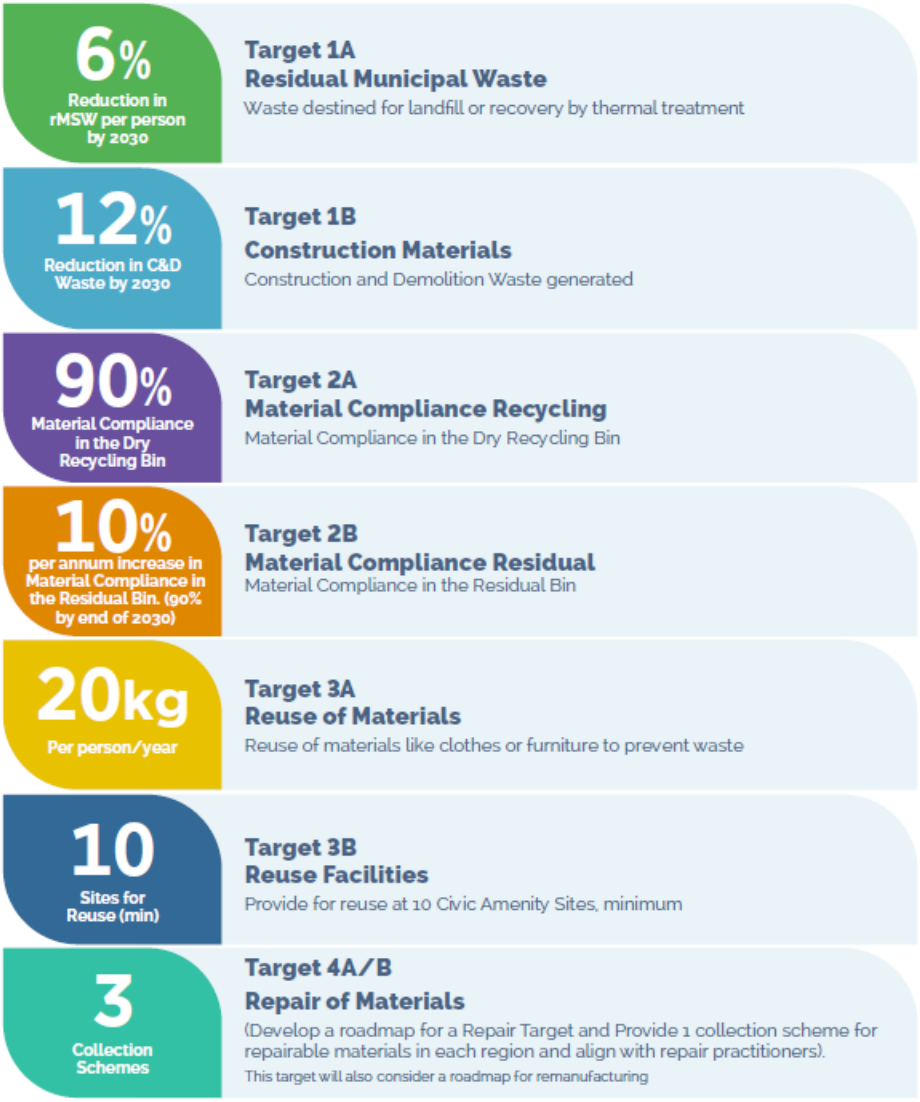

Figure 2-1. National Targets for Waste Prevention and Reduction 2024-2030.

The National Waste Management 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 National Waste Management 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 National Waste Management 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 C&D 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 C&D waste (excluding natural soils and stones and hazardous wastes)

The National Waste Management 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 the following associated regulations:

- European Communities (Waste Directive) Regulations 2011
- Waste Management (Facility Permit & Registration) (Amendment) Regulations 2015 (S.I. No. 198/2015)
- Waste Management (Licensing) Regulations 2004 and Waste Management (Licensing) (Amendment) Regulations 2010
- Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820/2007), as amended

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.

The effect of Section 34 of the Waste Management Act is that waste (whether hazardous or not) should only be given to a haulier or collector who has the correct permit under the Waste Management (Collection Permit) Regulations 2008 (the "Waste Collection Permit Regulations") as outlined in detail below.

If the waste involved is hazardous, the contractor must ensure that they comply with the Waste Management (Hazardous Waste) Regulations 1998 (as amended very frequently) and the European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations 2011, unless it is exempted from compliance with those Regulations under art.35 of the Waste Collection Permit Regulations. Hazardous waste can only be given to a collector or haulier with a collection permit under the Waste Collection Permit Regulations and the collector or haulier must bring the waste to a licensed hazardous waste management facility and ensure that it is shipped within Ireland in accordance with the stringent requirements of the European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations 2011 and/or exported from Ireland in accordance with the Waste Management (Shipments of Waste) Regulations 2007 (as amended) and Council Regulation (EC) No.1013/2006 on shipments of wastes, as amended (the "TFS Regulations").

2.6 Regulatory Requirements

2.6.1 European Communities (Waste Directive) Regulations 2011

The European Communities (Waste Directive) Regulations 2011 transpose the Waste Framework 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 2.3 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 of 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 1996, as amended.

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 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 LoW entry.

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

3 DESCRIPTION OF THE PROJECT

3.1 Site Location

The site of the Proposed Development is located along the South Circular Road approximately 560m northwest of the National Stadium, with the South Circular Road bounding the northeast border of the site, and the Grand Canal abutting the south of the site. Residential units and Our Lady of Dolours Church lie to the north and east of the site.

The location of the Proposed Development is presented in Figure 3-1.

3.2 Site Description

The Proposed Development site comprises the existing White Heather Industrial Estate in Dublin 8 and covers an area of 1.08 ha. The site is immediately bound by The Priestfield Cottages road to the east, South Circular Road to the northeast, existing residential units and a church to the north, St James Terrace residential units to the west and The Grand Canal to the south.

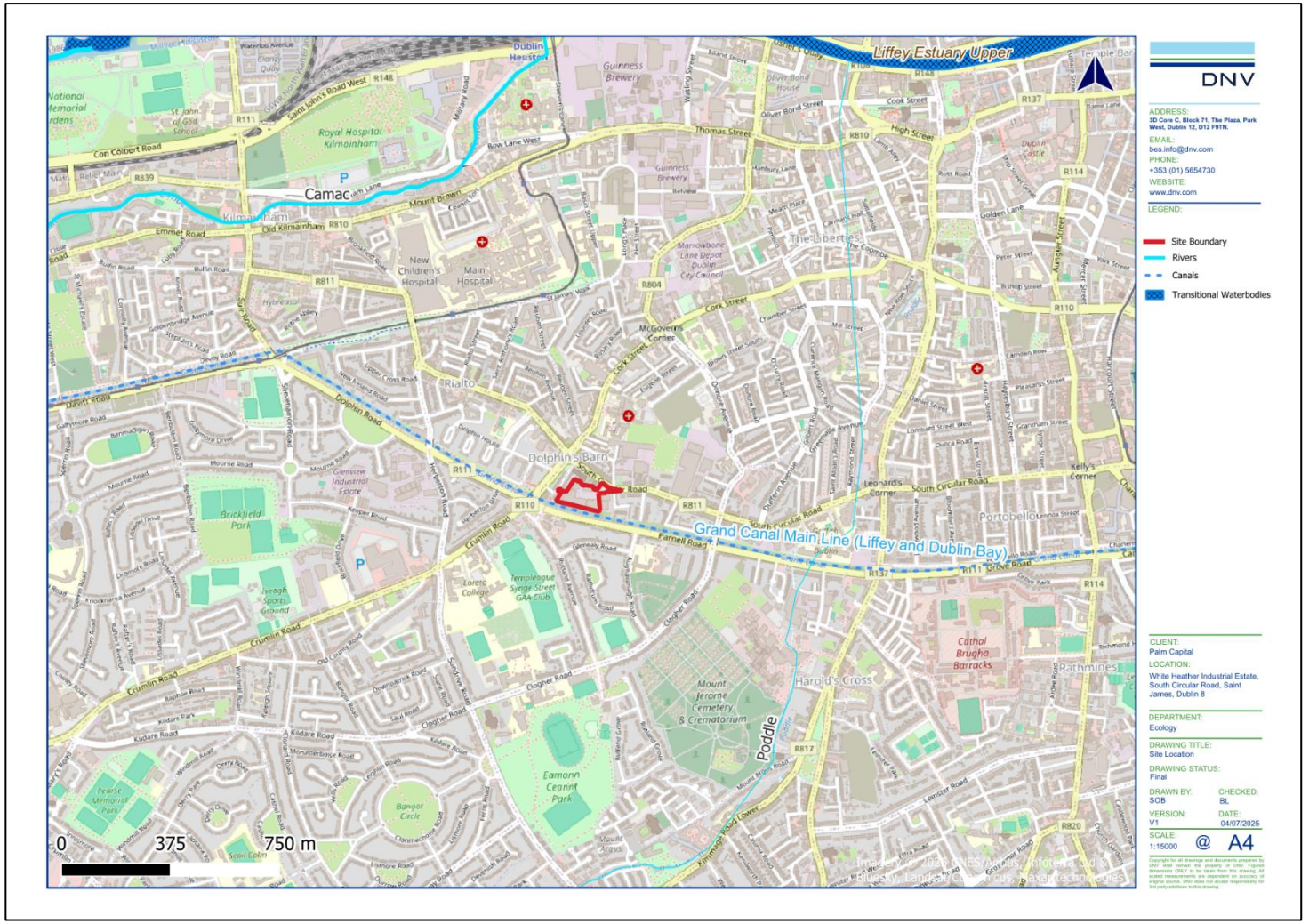

Figure 3-1: Site Location.

3.3 Proposed Development Description

The proposed mixed-use Large-Scale Residential Development (LRD) will comprise the demolition of all existing commercial and warehouse buildings and structures on the site, and the construction of 250 no. residential units within six blocks (Blocks 01, 02(A/B), 03(A/B), 04(A/B), and two duplex blocks) ranging in height up to seven storeys. The development will include 12 no. studio apartments, 148 no. one-bedroom apartments, 74 no. two-bedroom apartments, 8 no. one-bedroom duplex units, and 8 no. two-bedroom duplex units.

All residential units will include private balconies or terraces, oriented north, south, east, or west.

The proposal also includes the conversion of the existing residential dwelling at 307/307A South Circular Road to a crèche with an associated external play area. A new kiosk/café and adjoining open space will be provided adjacent to 307/307A South Circular Road, along with car and bicycle parking. The development will provide public open spaces between Blocks 03 and 04, as well as to the north and south of the apartment blocks, the latter overlooking the Grand Canal, together with communal open spaces throughout the scheme. Vehicular, pedestrian, and cyclist access will be provided from the northeast of the site via South Circular Road, with additional pedestrian and cyclist access from the west via St James's Terrace.

The proposal also includes landscaping, public and communal open spaces, and all associated site development works required to facilitate the project. These works include boundary treatments, plant and waste management areas, and other service provisions, including ESB infrastructure.

The proposed site layout is shown in Figure 3-2, and the existing site layout and demolition plan is shown in Figure 3-3.

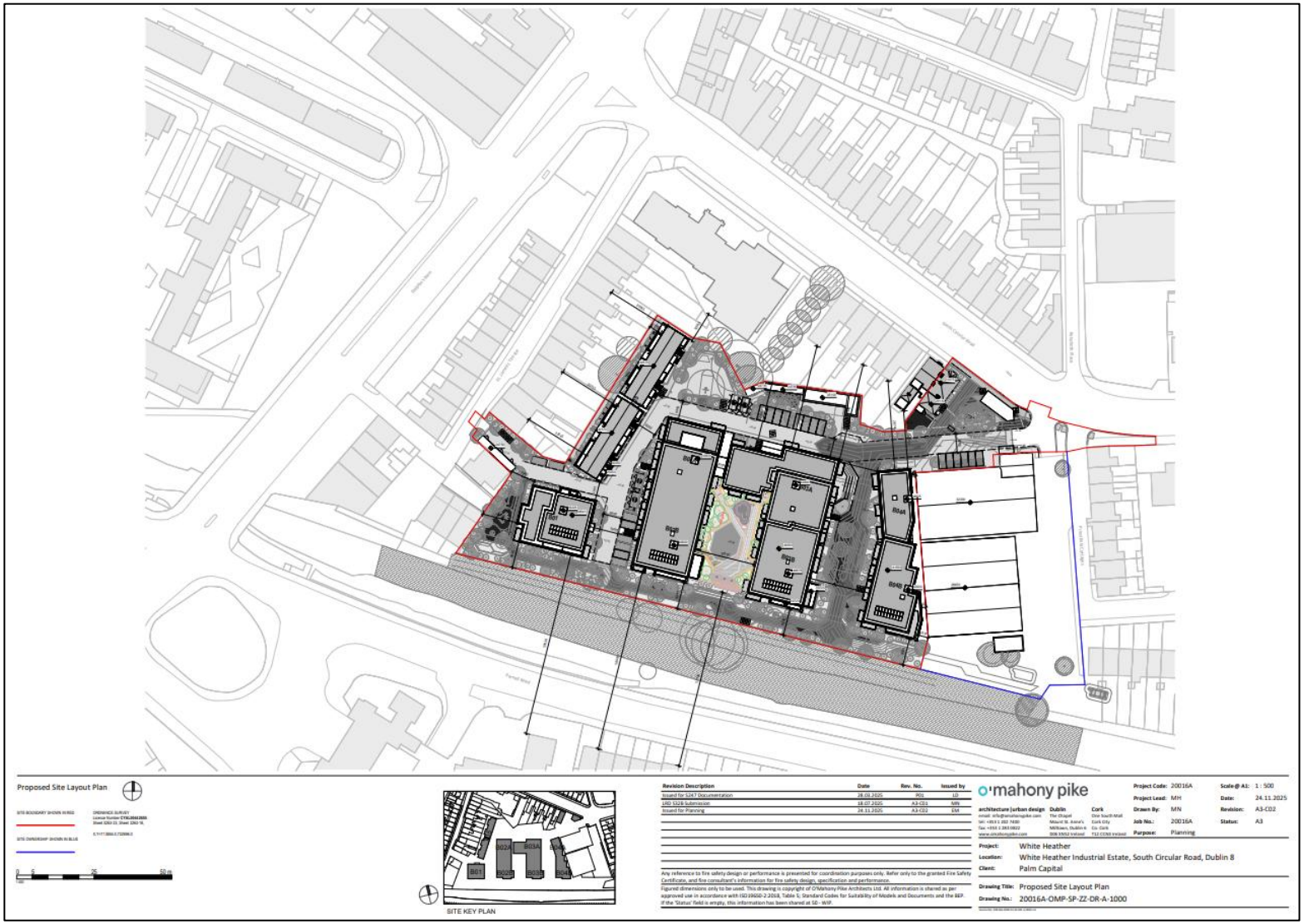

Figure 3-2. Proposed Site Layout (O'Mahony Pike, 2025)

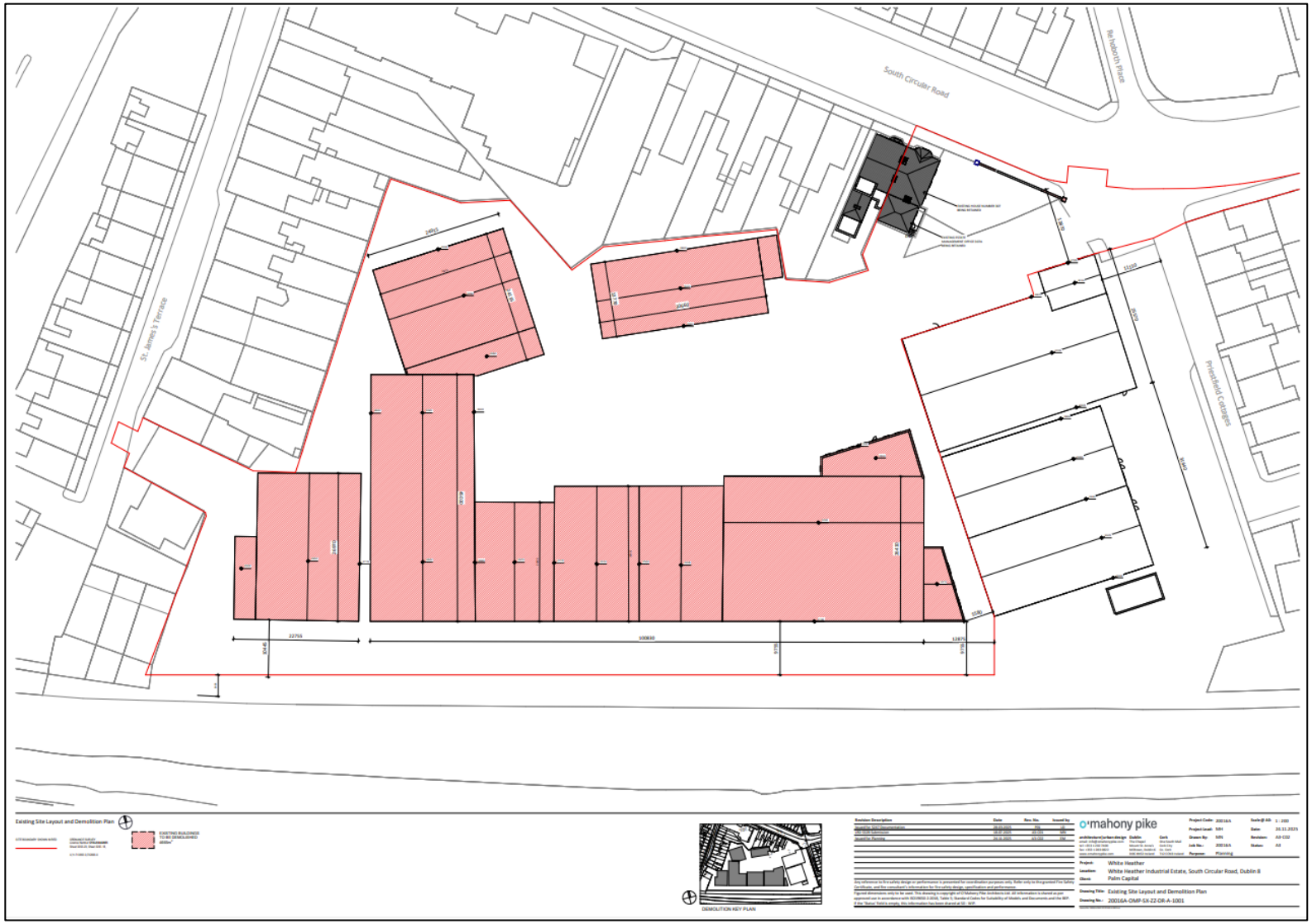

Figure 3-3: Existing Site Layout and Demolition Plan (O'Mahony Pike, 2025)

4 CONSTRUCTION SCHEDULE AND WORKS MANAGEMENT PLAN

4.1 Programme

It is anticipated that the construction phase of the Proposed Development will take approximately 24 months to complete. The programme duration and proposed sequence of construction will be further developed by the Main Contractor (once appointed) in advance of construction works commencing onsite.

4.2 Working Hours

Normal site working hours will apply to the construction phase of the Proposed Development, namely:

- Monday to Friday: 07:00am to 18:00pm;
- Saturday: 08:00am to 14:00pm; and
- No works are permitted on Sundays or Bank Holidays.

However, should there be a need to work on Sundays, Bank Holidays or outside the specified normal working hours, a written submission, with compelling reasons for the proposed deviation, seeking authorisation will be made by the Main Contractor to DCC. The Main Contractor must give the times and dates of the proposed work, and the mitigation measures that are to be used to minimise noise/disturbance.

Any such approval from DCC may be subject to conditions pertaining to the particular circumstances being set by DCC. It is noted that any breaches of permitted working hours or permitted extended working hours or developers or subcontractors not carrying out their requirements under this protocol may lead to enforcement action and may also result in the withdrawal of any extension of hours of works for a period that will be at the discretion of DCC.

4.3 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.

Site access to the Proposed Development will be from northeast of the site via South Circular Road and will include a vehicular access for construction traffic and a pedestrian access for construction personnel. No public personnel, be it pedestrian or vehicular, will be permitted to enter the site.

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

Appropriate signage will 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.

4.4 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 will 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 will be contained within the boundary of the site. The compound area will be secured from the construction site by means of surrounding Heras fencing. Warning signs will illustrate the required Personal Protective Equipment (PPE), and risks associated when entering the construction site of the Proposed Development.

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.

The exact location, layout and size of the compound(s) will be at the discretion of the Main Contractor (once appointed) with the agreement of DCC. The Main Contractor (once appointed) will prepare a detailed site security and compound plan including hoarding, signage, signing in / out procedures etc.

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 Resources & Waste Management - Key Responsibilities.

Responsible Party	Responsibility
The Developer	Allocating the correct resources in order to ensure the successful implementation of the RWMP.
	Assist in the management review of the RWMP for suitability and effectiveness.
Project Manager	To report to the Construction Director on the on-going performance and development of the RWMP.
Project Environmental Consultants	To discharge their responsibilities as per the RWMP.
	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 RWMP.
	Read, understand, and implement the RWMP.
	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.
	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.
Main Contractor	Ensuring that the requirements of the RWMP are reviewed and waste management system elements (including procedures, method statements and work instructions) are implemented and adhered to with respect to waste management requirements.
	Reviewing the waste management responsibilities of all sub-contractors in scoping their work and during their contract tenure.
	Ensuring that advice, guidance, and instruction on all RWMP matters is provided to all managers, employees, construction contractors and visitors on site.
Construction Director	Reporting to the Construction Director on the waste management performance of Line Management, Supervisory Staff, Employees and Contractors.
	Advising site management on waste management matters.
	Be aware of any potential waste management risks relating to the Contractors and bring these to the notice of the appropriate management.
Site Foreman	Ensure materials/waste register is completed.
	Maintenance of all waste management related documentation.
	Training of all site staff in the requirements of the RWMP including waste management controls.

Responsible Party	Responsibility
	Ensuring commitment, operational efficiency and accountability during the C&D phases of the project in line with the RWMP.
	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 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.
Environmental Officer	Conducting waste audits, maintaining a record system, and establishing targets for waste management at the site during the construction phase of the Proposed Development.
	Responding to any concerns or complaints raised by the public in relation to the construction phase of the Proposed Development.
	To liaise with the Construction Environmental Site Manager on community concerns relating to waste management.
	Ensure the Construction Environmental Site Manager is informed of any complaints relating to waste management.
	Keep the public informed of project progress and any construction activities that may cause inconvenience to the local community.
	If required, the Main Contractor will engage with a Project Environmental Consultant(s) to provide specialist environmental inputs and act in the roles of Environmental Clerk of Works (including Contaminated Land Consultant) as required. The key responsibilities of the Project Environmental Consultant are summarised as follows
	Updating of the RWMP and advising the Main Contractor in the updating of the RWMP, waste management controls and supporting procedures.
	Advising the Site management on waste management matters as appropriate.
	Provision of specialist input and supervision where necessary, of construction activities in relation to waste management.
Construction Waste Manager	Completing any waste classification of excavated soil waste materials to enable off-site disposal in compliance with all relevant waste management legislation.
	To co-operate fully with the CMT and the Environmental Officer in the implementation and development of the RWMP 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.
	Adhere fully to the requirements of the site environmental rules.
Project Communications Officer	Comply with the RWMP and CEMP where relevant
	Allocating the correct resources in order to ensure the successful implementation of the RWMP.
	Assist in the management review of the RWMP for suitability and effectiveness.
	To report to the Construction Director on the on-going performance and development of the RWMP.
Site Personnel	To discharge his/her responsibilities as per the RWMP.

Responsible Party	Responsibility
	To support and augment the CMT through the provision of adequate resources and facilities for the duration of the implementation of the RWMP.
	Read, understand, and implement the RWMP.
	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.
Sub-contractors	Ensure that environmental matters are considered at all times.

*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 included in the live register of documents. These contact details will be kept up to date by the Main Contractor.

5.3 Resource Waste Management Plan Awareness and 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 Non-Hazardous Wastes

6.1.1 Non-Hazardous C&D Waste

The demolition phase of the Proposed Development will involve the removal of all existing commercial/warehouse buildings and structures on site.

These materials are classified as non-hazardous construction and demolition (C&D) waste. Where feasible, materials will be segregated on-site to facilitate reuse and recycling in accordance with the Waste Management Act 1996 (as amended) and the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (2006), and relevant EPA and DCC protocols.

All waste will be handled by authorised waste contractors and transported to licensed waste facilities. A detailed record of waste types, quantities, and destinations will be maintained as part of the project's waste tracking protocol.

A programme of ground clearance and levelling will also be undertaken across the site. This will include the removal of scrap materials, containers, debris, minor vegetation, and excavation works. Some diversion of existing services may also be required.

During this phase, additional non-hazardous waste may be generated, including:

- Surplus building materials such as timber off-cuts, broken concrete blocks, cladding, plastics, metals, and tiles;
- Excess concrete from pours; and
- Packaging waste, including plastic wrap and cardboard from material deliveries.

These waste streams will be managed in line with the overall waste strategy for the site, with segregation and recycling prioritised wherever feasible. All materials will be handled by licensed waste contractors and tracked as part of the site's waste management protocol.

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. Soil stockpiles will be covered to prevent run-off from the stockpiled material.

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

The Environmental Due Diligence Site Assessment prepared by Flannery Nagel Environmental Limited (2025) recommended that, '*Without delay all loose fragments of asbestos containing materials (ACMs) deposited in the rear yards of Buildings #7, 8 and external to the SW perimeter should be appropriately removed by licensed contractor. The remaining ACMs to be managed in-situ, until full removal of the ACM takes place as part of the site redevelopment'*. The waste classification of ACMs will be based on an assessment by an appropriately qualified asbestos specialist. An

asbestos survey has been recommended by Flannery Nagel Environmental Limited prior to any site clearance or demolition taking place.

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 Proposed Development.

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. Any waste that will be temporarily stored / stockpiled will be stored on impermeable surface high-grade polythene sheeting, hardstand areas or skips to prevent cross-contamination of the soil below or cross contamination with soil. 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 the 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 contactor 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 Large-Scale Residential Development site are shown in Table 6-1. The LoW code (as effected from 1 June 2015) for each waste stream is also shown.

Table 6-1. Typical Waste Types Generated and LoW Code.

Waste Material	LoW Code
Concrete	17 01 01
Bricks	17 01 02

Waste Material	LoW Code
Tiles and Ceramics	17 01 03
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

**Individual waste type may contain hazardous materials*

6.4 Main C&D Waste Quantities

Table 6-2 shows the breakdown of C&D waste types produced on a typical site based on date from the EPA National Waste Statistics (EPA, 2024). The waste categories in Table 6-2 will be segregated into general waste and dry recycling categories.

Table 6-2. Quantities of C&D Materials collected in Ireland in 2022 (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. 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 of the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011).

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 estimate 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 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 requirement for an invasive species survey will be assessed in advance of construction works commencing on-site.

The Environmental Due Diligence Site Assessment prepared by Flannery Nagel Environmental Limited (2025) states that,

'Evidence of Japanese knotweed was identified during the site visit, particularly along the southwest perimeter, near the vacant Building #8, and in the yard to the rear of Building #7.

A Knotweed eradication programme should be carried out by a qualified contractor, to stop the spread of the invasive species.'

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 steams across the site.

7.1.3 Environmental Consultant

Where necessary and if required, the appointed Environmental Consultant 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 materials generated throughout the demolition phase of the Proposed Development including structural concrete, brick, metal and timber / timber composite will be based on visual observations by the Construction Waste Manager or appointed delegate (i.e., Environmental Officer).

Concrete will be segregated for removal off-site to an authorised permitted/licensed waste facility for recovery, recycling.

7.2.2 Asbestos and ACMs

Known presence of asbestos containing materials (ACMs) within the building fabric and roof materials of buildings 5-10. The Environmental Due Diligence Site Assessment prepared by Flannery Nagel Environmental Limited (2025) recommended that, '*Without delay all loose fragments of asbestos containing materials (ACMs) deposited in the rear yards of Buildings #7, 8 and external to the SW perimeter should be appropriately removed by licensed contractor. The remaining ACMs to be managed in-situ, until full removal of the ACM takes place as part of the site redevelopment'.* The waste classification of ACMs will be based on an assessment by an appropriately qualified asbestos specialist. An asbestos survey has been recommended by Flannery Nagel Environmental Limited (2025) prior to any site clearance or demolition taking place.

All findings and recommendations of the asbestos survey will be observed and adhered to 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 offsite re-use of soil including under an Article 27 By-product Notification where applicable will be prioritised.

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

Although a Preliminary Waste Soil Classification report has been carried out by OCSC Multidisciplinary Consulting Engineers in September 2025, 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; DCC, 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

Parameter	Analysis Type
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.

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 (NI EA, WM3 2021). It is noted that while both the UK EA, WM3 2021 and the NI EA, 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	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). 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.
Category B1	Results found to be non-hazardous using the HazWasteOnline^{tm} application[2]. 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).
Category B2	Results found to be non-hazardous using the HazWasteOnline^{tm} application[2]. 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 time the limit set in 2003/22/EC for example the IMS Hollywood (W0129 02/C) and Walshestown Restoration (W0254-01).
Category C (Non- Hazardous)	Results found to be non-hazardous using the HazWasteOnline^{tm} 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).

Waste Category	Classification Criteria
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^{tm} 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^{tm} application.[2]

NOTES

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^{tm} application.

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, shown in Figure 8-1), prevention of waste and re-use will be prioritised over disposal. The Waste Framework Directive, as amended and the Waste Directive Regulations expressly provide that uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated are not wastes (art.26(c) of the Waste Directive Regulations). 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; and
- 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 (from the Waste Framework Directive)

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's 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, 2024).

Table 8-1. Predicted Recovery Targets (EPA, 2024).

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 surplus material meets the four conditions of Article 27 by-product prior to notifying the EPA or moving material off-site. The European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011) state that "a substance or object, resulting from a production process, the primary aim of which is not the production of that item, may be regarded as not being waste but as being a by-product only if the following conditions are met:

(a) further use of the substance or object is certain;
(b) the substance or object can be used directly without any further processing other than normal industrial practice;
(c) the substance or object is produced as an integral part of a production process; and
(d) further use is lawful in that the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts."

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 C&D Waste Management

As detailed in Section 6, C&D waste will be generated during the ground clearance and levelling works. ACMs, if identified, 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

The Environmental Due Diligence Site Assessment prepared by Flannery Nagel Environmental Limited (2025) recommended that, '*Without delay all loose fragments of asbestos containing materials (ACMs) deposited in the rear yards of Buildings #7, 8 and external to the SW perimeter should be appropriately removed by licensed contractor. The remaining ACMs to be managed in-situ, until full removal of the ACM takes place as part of the site redevelopment'.* The waste classification of ACMs will be based on an assessment by an appropriately qualified asbestos specialist. An asbestos survey has been recommended by Flannery Nagel Environmental Limited prior to any site clearance or demolition taking place.

Asbestos and ACMs will be removed by the specialist contractor into laminated, double walled and sealed 1 tonne bags. Asbestos and ACMs will be temporarily 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. If any concrete blocks or bricks containing hazardous substances are detected, removal off-site will be organised by an appointed specialist hazardous waste contactor.

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. Non-recyclable waste is expected to be minimal and 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 the recyclable waste will be removed and placed into the appropriate receptacle. The process will be reviewed and corrected going forward to eliminate a reoccurrence of such errors.

8.3.10 Hazardous Wastes

On-site 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 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. Typical mitigation measures would include the following:

- Hazardous substances will be stored in designated areas and will be sealed, bunded and clearly marked;
- 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;
- Any waste that will be temporarily stored / stockpiled should be stored on impermeable surface high-grade polythene sheeting, hardstand areas or skips to prevent cross-contamination of the soil below or cross contamination with soil; and
- Maximise waste segregation to minimise potential cross contamination.

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.

The Environmental Due Diligence Site Assessment prepared by Flannery Nagel Environmental Limited (2025) states that,

'Evidence of Japanese knotweed was identified during the site visit, particularly along the southwest perimeter, near the vacant Building #8, and in the yard to the rear of Building #7.

A Knotweed eradication programme should be carried out by a qualified contractor, to stop the spread of the invasive species.'

An 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.

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 the 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.

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 managed in accordance with the measures outlined in the CEMP.

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. Reminders will be issued to site personnel should it prove necessary.

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 on-site.

8.5 Storage of Waste and Stockpile Management

Designated waste storage areas will be provided on-site 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. Spot checks will be carried out by the Environmental Officer.

It is noted that adequate storage space will be provided in a dedicated waste storage area on the Proposed Development 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, secure and located away from any sensitive receptors. 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 on-site. The temporary stockpiling of materials onsite will be undertaken in consultation with the Client and where required, the Environmental Regulation Unit of DCC 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 and will be made available to the EPA and DCC upon request. The register will show 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 (bunded 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 Off-Site 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 as amended, S.I. No. 820/2007 - Waste Management (Collection Permit) Regulations 22007 as amended and S.I. No. 821/2007 - Waste Management (Facility Permit and Registration) Regulations 2007 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 DCC 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 TFS notification document will be obtained from the 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 will be transferred from site under chain of custody or waste dispatch dockets that 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).

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.

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 DCC once appointed by the Contractor in advance of construction works commencing on-site.

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 a will be retained for off-site management of waste.

9.4 Waste Collection and Transport

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

Details of the nominated carriers/hauliers proposed for each specified waste type will be provided to DCC once appointed by the Contractor in advance of construction works commencing on-site.

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 will be sought from the waste haulier and the waste destination in the event that it is not present for audit and inspection.

Any audits undertaken by the Client, DCC or EPA 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 DCC. 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 the 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), 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 & 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

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 Proposed Development Site (refer to Section 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, DCC, 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 (DCC) 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.

13 REFERENCES

Department of Environment and Local Government (DoELG), 1998. Waste Management- Changing our Ways, A Policy Statement.

Department of Environment, Communities and Local Government (DoECLG), 2012. A Resource Opportunity- Waste Management Policy in Ireland.

Department of Environment, Heritage and Local Government (DoEHLG), 2006. Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects.

Department of the Environment, Climate and Communications (DoECC), 2020. A Waste Action Plan for a Circular Economy- Ireland's National Waste Policy 2020-2025.

DNV, Construction Environmental Management Plan, 2025.

Dublin City Council. (2018). *Dublin City Council (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-laws 2018 (as amended)*. Dublin City Council.

Dublin City Council. (2022). *Dublin City Development Plan 2022–2028: Chapter 15 – Development Standards, Section 15.18 Environmental Management*. Dublin City Council.

Environmental Protection Act 1992 (S.I. No. 7 of 1992) as amended by the Protection of the Environment Act 2003, as amended.

Environmental Protection Agency (EPA), 2018. List of Waste & Determining if Waste is Hazardous or Non-Hazardous, Waste Classification.

EPA, 2021. Best Practice Guidelines for the preparation of resource & waste management plans for construction & demolition projects.

EPA, 2024. National Waste Statistics Summary Report for 2022.

European Communities (Transfrontier Shipment of Waste) Regulations 1994 (S.I. No. 121 of 1994)

European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended 2011 (S.I. No. 323 of 2011) and 2016 (S.I 315 of 2016).

European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014).

European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended 2014 (S.I. No. 349 of 2014) and 2015 (S.I. No. 347 of 2015).

FÁS and the Construction Industry Federation (CIF), 2002. Construction and Demolition Waste Management- a handbook for Contractors and Site Managers.

Litter Pollution Act 1997 (S.I. No. 12 of 1997).

National Waste Management Plan for a Circular Economy 2024-2030.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Waste Management Act 1996 (No. 10 of 1996) as amended 2001 (No. 36 of 2001), 2003 (No 27 of 2003) and 2011 (No. 20 of 2011).

Waste Management (Collection Permit) Regulations (S.I No. 820 of 2007) as amended 2008 (S.I No 87 of 2008), 2015 (S.I. No. 197 of 2015) and 2016 (S.I. No. 24 and 346 of 2016).

Waste Management (Facility Permit and Registration) Regulations 2007,(S.I No. 821 of 2007) as amended 2008 (S.I No. 86 of 2008) as amended 2014 (S.I No. 320 and No. 546 of 2014) and as amended 2015 (S.I. No. 198 of 2015).

Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended 2010 (S.I. No. 350 of 2010).

Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended 2015 (S.I No 542 of 2015).

Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997).

Waste Management (Landfill Levy) (Amendment) Regulations 2019 (S.I. No. 182 of 2019).

Waste Management (Food Waste) Regulations 2009 (S.I. 508 of 2009), as amended 2015 (S.I. 190 of 2015) and European Union (Household Food Waste and Bio-waste) Regulation 2015 (S.I. No. 191 of 2015).

Waste Management (Hazardous Waste) Regulations, 1998 (S.I. No. 163 of 1998) as amended 2000 (S.I. No. 73 of 2000).

Waste Management (Shipments of Waste) Regulations, 2007 (S.I. No. 419 of 2007) as amended by European Communities (shipments of Hazardous Waste exclusively within Ireland) Regulations 2011 (S.I No. 324 of 2011).

Waste Management (Movement of Hazardous Waste) Regulations, 1998 (S.I. No. 147 of 1998).

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