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Resource and Waste Management Plan (RWMP)

PRESENTED TO

Reside (Castlepark) Ltd.
Section 32B LRD Application, Castlelands, Mallow, Co. Cork

DATE

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Environmental Consultancy Services

DOCUMENT CONTROL SHEET

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1 INTRODUCTION

Enviroguide Consulting (hereafter referred to as Enviroguide) was retained by Reside (Castlepark) Ltd. (hereafter referred to as the Client) to prepare this Resource and Waste Management Plan (RWMP) for the construction works of the Large-Scale Residential Development at Castlelands, Mallow, Co. Cork (hereafter referred to as the Site). A planning application for Phase 1 of this LRD has been submitted separately.

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 construction and demolition (C&D) waste arising from the construction works of the LRD at the Site is undertaken in accordance with all statutory requirements and current industry standards.

This RWMP will ensure minimum waste is generated and maximum recycling, re-use, and recovery of waste with diversion from landfill, wherever possible. It will provide guidance on the appropriate collection and transport of waste from the Site to prevent issues associated with litter or more serious environmental pollution (e.g., contamination of soil and/or water).

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

It is important to note that this RWMP relates to the construction phase.

As detailed in this document, the exact materials and quantities 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 appointment of the Main Construction Contractor;
- On appointment of the Resource Waste Manager;
- In the event of the appointment or a change of Waste Contractor;
- Following Cork County Council inspections or comments;
- In the case that any major design changes are made;
- In the case that there are any changes in waste management practices/ legislation.

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

As detailed in Section 6, 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.

All documentation required by this RWMP such as Waste Collection Permits, Certificates of Registration (CORs), Waste Facility Permits, Certificates of Registration and Waste Licences, in addition to waste transfer documents and landfill gate receipts will be compiled in the annex of documents to accompany this RWMP. A register of documents is provided in Section 1.3.

1.3 Register of Documents

A live register of documents will be maintained both digitally and in hard copy on site as part of this waste management plan. The content of this register is outlined below. It will be the responsibility of the Resource Waste Manager to ensure that the register of documents is updated as appropriate. The Resource Waste Managers contact details can be found in Section 5.2 and will be submitted to Cork County Council (CCC) prior to the commencement of construction works on-site.

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

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

2 CONSTRUCTION AND DEMOLITION WASTE POLICY AND LEGISLATION IN IRELAND

A register of the current list of Construction and Demolition (C&D) waste policy, legislation and regulations are provided in Appendix A and discussed below.

2.1 National 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.

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

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

- Predicted C&D wastes and procedures to prevent, minimise, recycle and reuse wastes;
- Waste disposal/recycling of C&D wastes at the site;
- Provision of training for Resource 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., waste recycling companies).

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

- Civil Engineering projects producing in excess of 500m^3 of waste, excluding waste materials used for development works on the site.

In 2012, the then Department of the Environment, Community and Local Government (DoECLG) (previously DoEHLG), published '*A Resource Opportunity – Waste Management Policy in Ireland*' which supported the prioritisation of the waste hierarchy and identified specific producer responsibilities for construction and demolition projects (over certain thresholds) as a key area for exploration. 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. Similar to the Best Practice Guidelines (DoEHLG, 2006), Design Out Waste Guidelines recommends that a Waste Management Plan should address the following aspects of the Proposed Development:

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

In 2021, following a process of public consultation, the Environmental Protection Agency (EPA) produced 'Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects', which supersedes the DoEHLG Best Practice Guidelines 2006. The EPA's Best Practice Guidelines (2021) set out a practical and informed common approach to preparing C&D Resource and Waste Management Plans (RWMP) prior to construction and during construction. The Best Practice Guidelines recommend that an RWMP shall be submitted for all C&D projects to inform the planning consent process, and that the level of detail presented in the RWMP should be reflective of the scale and complexity of the project. The guidelines provide thresholds for classifying C&D projects into two different tiers with regards to resource and waste management. These thresholds are based on the principle of proportionality to ensure larger projects with larger potential resource footprints are required to more actively manage resources compared to smaller scale projects.

The Best Practice Guidelines also reflect the current waste legislation and policy including '*A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020-2025*' published in September 2020 by the Department of Communications, Climate Action, and

Environment (DCCAE) (updated in January 2021). '*A Waste Action Plan for a Circular Economy'* focuses on the prevention of waste disposal by maximising the value of material resources and reducing waste generation and also sets out a number of actions in relation to C&D including updating 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.

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.

These 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 and maximum levels of waste recycling are achieved.

2.2 Irish Waste Management Targets

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

The "Circular Economy Action Plan: For a cleaner and more competitive Europe" announced the launch of a new "Strategy for a Sustainable Built Environment", which will revise these material recovery targets that were previously set EU legislation for construction and demolition waste. These targets are envisioned to be incorporated into the Irish "National Waste Management Plan for A Circular Economy" which is currently in draft, stemming from the Waste Action Plan for a Circular Economy 2021-2025. Once these new targets are released, they will be complied with.

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

The EPA (EPA, 2023. Circular Economy and Waste Statistics Highlights Report 2021) notes that C&D produces the largest volume of waste in the state amounting to 9.0m tonnes of waste in 2021, which represents an increase of 10% from the 8.2m tonnes generated in 2020. It also notes that the overall composition of C&D waste changed little between 2020 and 2021. At 85% soil and stone waste remained dominant, followed by waste concrete, brick, tile and gypsum (7%) and mixed C&D waste (4%). The proportion of segregated (wood, paper, glass, plastic and metal) C&D waste collected remained small at just under 4.0% in 2021 increasing from 3.1% in 2020. 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 93% of all C&D waste material in 2021 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 Material Classes (EPA, 2023. Circular Economy and Waste Statistics Highlights Report 2021)

C&D Waste Material	Recycled (t)	Energy Recovery(t)	Recovered/ Backfilled (t)	Disposal (t)	Total
Metal	272,734	0	0	0	**272,734**
Segregated Wood, Glass and Plastic	50,348	13,918	743	407	**65,417**
Concrete, brick, tile and gypsum	262,685	1,244	299,725	16,568	**580,223**
Waste bituminous mixtures	41,150	1,505	33,449	8,527	**84,631**
Mixed Construction and Demolition waste	398	73	88,747	34,356	**123,573**
Waste soils, stones and Dredging spoil	0	34	7,251,952	450,267	**7,702,253**
Waste treatment residues	51,892	9,326	39,122	114,580	**214,917**
Total (T)	679,208	26,098	7,713,738	624,705	**9,043,749**
% of total treated	7.5%	0.3%	85.3%	6.9%	**100%**

2.3 National & Regional Policy

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

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

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

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

- Achieve a 2% reduction per annum is proposed for total construction and demolition waste to achieve a cumulative 12% reduction by 2030 (Baseline is 9 Million tonnes)

- Achieve 70% of C&D waste sent for reuse, recycling and other recovery of construction and demolition waste (excluding natural soils and stones and hazardous wastes)

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

The Cork Council Development Plan 2022-2028 sets out a number of policies, objectives, and actions for the Cork County area in line with the objectives of the regional waste management plan. Waste objectives and actions with a particular relevance to the proposed development are:

BE 15-14 *Waste Prevention and Management*

- Support the policy measures and actions outlined in
    a) 'A Waste Action Plan for a Circular Economy Ireland's National Waste Policy 2020-2025', and
    b) Southern Region Waste Management Plan 2015 – 2021, or any successor plans
- Support circular and climate resilient economy principles and associated strategic infrastructure, prioritising prevention, reuse, recycling and recovery, and to sustainably manage all types of waste by ensuring the provision of adequate waste recovery, recycling and disposal facilities for the county

BE 15-17 *Waste Prevention and Management*

- Planning applications for infilling of marginal land through soil importation will be supported where it can be demonstrated that the developments accord with proper planning and sustainable development, ensuring that they are compatible with the protection of environmental resources including water quality, EU sites, biodiversity, archaeological and landscape resources.
- Support will be provided for locating suitable sites within the county for the safe disposal of construction and demolition waste in conjunction with the Southern Waste Region.
- Construction and Environmental Management Plans (CEMPs)/ Construction and Demolition Management Plans shall be prepared for larger scale projects as set out in paragraph 15.12.23 and this requirement shall be assessed on a case-by-case basis as part of the development management process.
- Support the implementation of the recommendations and policies of the National Hazardous Waste Management Plan 2008-2012.

2.4 Legislative Requirements

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

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

2.5 Regulatory Requirements

2.5.1 European Communities (Waste Directive) Regulations 2011

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

2.5.2 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.

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

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

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

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

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

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

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

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

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

The EPA document 'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous' (EPA, 2018) consolidates the legislation and allows the generators of waste to classify the waste as hazardous or non-hazardous and in the process to assign the correct List of Waste entry.

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

3 DESCRIPTION OF THE PROJECT

3.1 Site Location

The Proposed Development is situated in the townland of Castlelands within the town of Mallow, Co. Cork. The subject site is situated to the southeast of Mallow town centre and approximately 25km northwest of Cork City Centre. The total site area comprises 18.2 hectares. The Proposed Development location is presented in Figure 3-1.

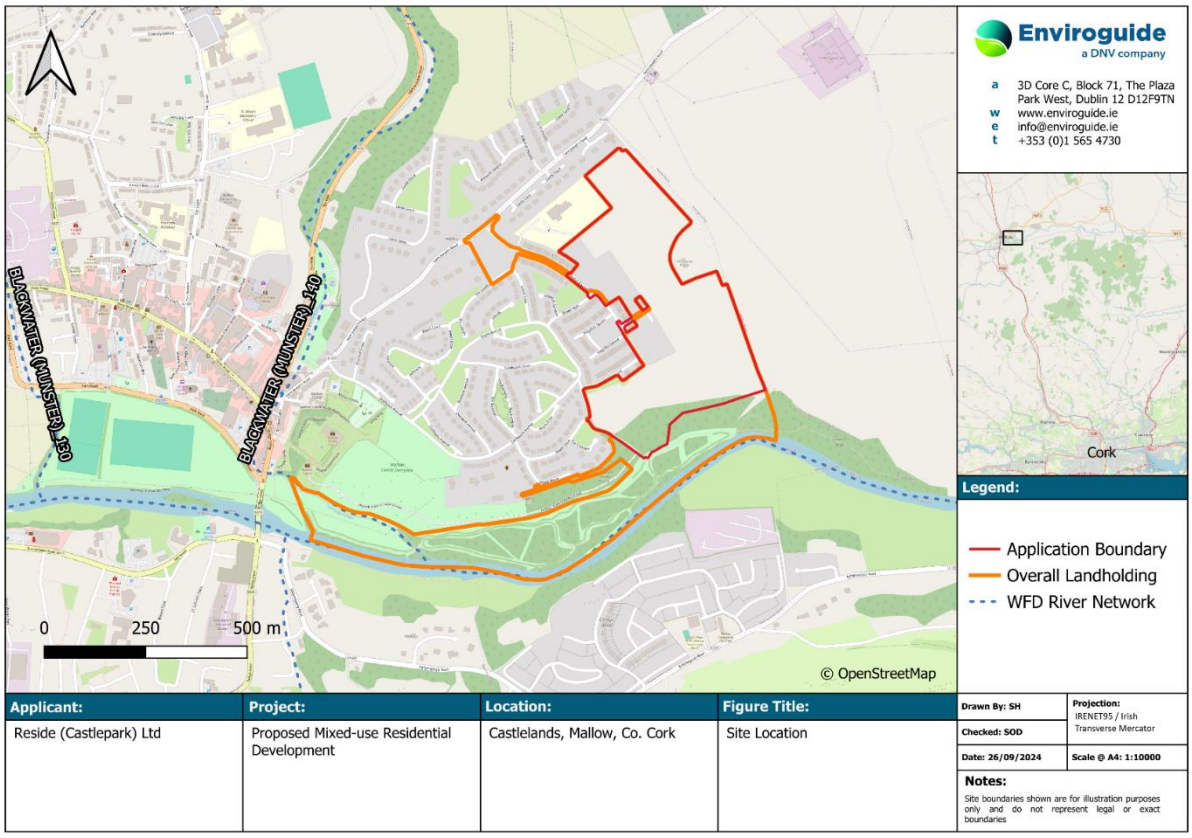

Figure 3-1: Site Location

3.2 Site Description and Surrounding Land Use

The application site is located in the eastern portion of the overall development lands and comprises the attendant grounds to the existing Castlepark House which are characterised by stone walls, sod and stone ditches, and extensive mature trees.

The national road N20 runs ca.1km to the west of the Site, connecting the cities of Cork and Limerick, with St. Joseph's (L1220) local road present to the north. The Site is bound by agricultural fields to the northeast, east, residential lands to the north and west, and a school to the north. The Site connects a public park which runs adjacent to the Blackwater River to the south. To the west of the Site, there is an existing housing estate which provides an access point into the scheme via Kingsfort Avenue. St. Joseph's local road will provide a second access point to the scheme further north.

The Site is predominantly composed of agricultural grassland, dry meadows, and grassy verges.

3.3 Proposed Development Description

The Proposed Large Scale Residential Development comprises the construction of 469 no. residential units, a creche, an interpretive centre/café and all associated site development works at Castlepark, Castlelands (townland), St Joseph's Road, Mallow, Co. Cork. The Proposed Development also includes the demolition and removal of a small portion of the existing former lodge.

The Proposed Site layout is presented in Figure 3-2:

Figure 3-2: Proposed Site Layout

4 CONSTRUCTION SCHEDULE AND PLAN

4.1 Programme

This RWMP relates to the construction and demolition phase of the Residential Development at the Site. The duration of the construction phase will be approximately 96 months. Note that the programme will be updated in the register of live documents appended to the CEMP as agreed with Reside (Castlepark) Ltd., as the works advance, or if there is a change in the scope for the construction phase of the development.

It is intended the initial works will include the provision of a temporary construction access roadway, safe and secure site compound and the erection of temporary boundary fencing, diversion of existing water main, and installation of new foul main to the south and new storm connection to the north and the delivery of other necessary services to facilitate the sequential delivery of proposed dwellings. The construction of Dwellings will begin in the west and continuing east together with all necessary infrastructural works including completion of landscaping works SUDS, tree screening, site boundaries etc.

4.2 Traffic

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

An Outline Construction Traffic Management Plan (OCTMP) has been prepared for the Proposed Development (Punch Consulting Engineers, September 2024). The proposed development is located within lands at St Joseph's Road which is used by local traffic, pedestrians and cyclists accessing existing housing estates, as well as some through traffic from the N72 to Mallow Town Centre and by those wishing to access Mallow GAA Sports Complex from the Town Centre.

The Main Contractor will be responsible for site access/works activity and depending on construction sequencing must ensure the continued safe operation of the existing housing estate roads in the vicinity. It is proposed that construction vehicles will access the site from the N72 at Oliver's Cross and enter via a temporary access location away from the existing residential and school access, utilising the existing access to Castlepark House and utilising agricultural lands to access the site. This will also reduce traffic utilising the town centre. Site access is shown in Figure 4-1 below.

The site will be adequately hoarded and gated to ensure security and safe working. Within the site, enough space will be set aside for material deliveries and craneage points for installation of large building components.

The Main Contractor will ensure that the delivery of materials is coordinated to minimise impacts to adjacent properties. The Main Contractor will ensure that all materials are adequately stored and secured in their site compound.

The Main Contractor will ensure the roads adjacent to the site are kept clean and free of debris.

Road sweeping will be conducted as required to reduce the amount of deleterious material being deposited on roads adjacent to the site road. Wetting down facilities will be provided as required, to ensure that dust nuisance will not be an issue. Wheel washing facilities will be provided for vehicles prior to leaving site.

The Main Contractor will be required to prepare a detailed construction traffic management plan for the project, taking into account the outline CTMP.

4.3 Construction Compound and Waste Management

All construction support related activities will be contained within the site. This will include office facilities, welfare facilities such as toilets and canteen. Designated areas will be maintained for materials handling, waste segregation and temporary storage of soils (e.g., of skips or stockpiled material until a viable load is available or if pending waste classification).

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

A dedicated, secure waste segregation area will be provided onsite for the duration of the demolition and enabling works. Figure 4-1 provides the location of the construction site access, construction compound, and waste segregation area.

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.

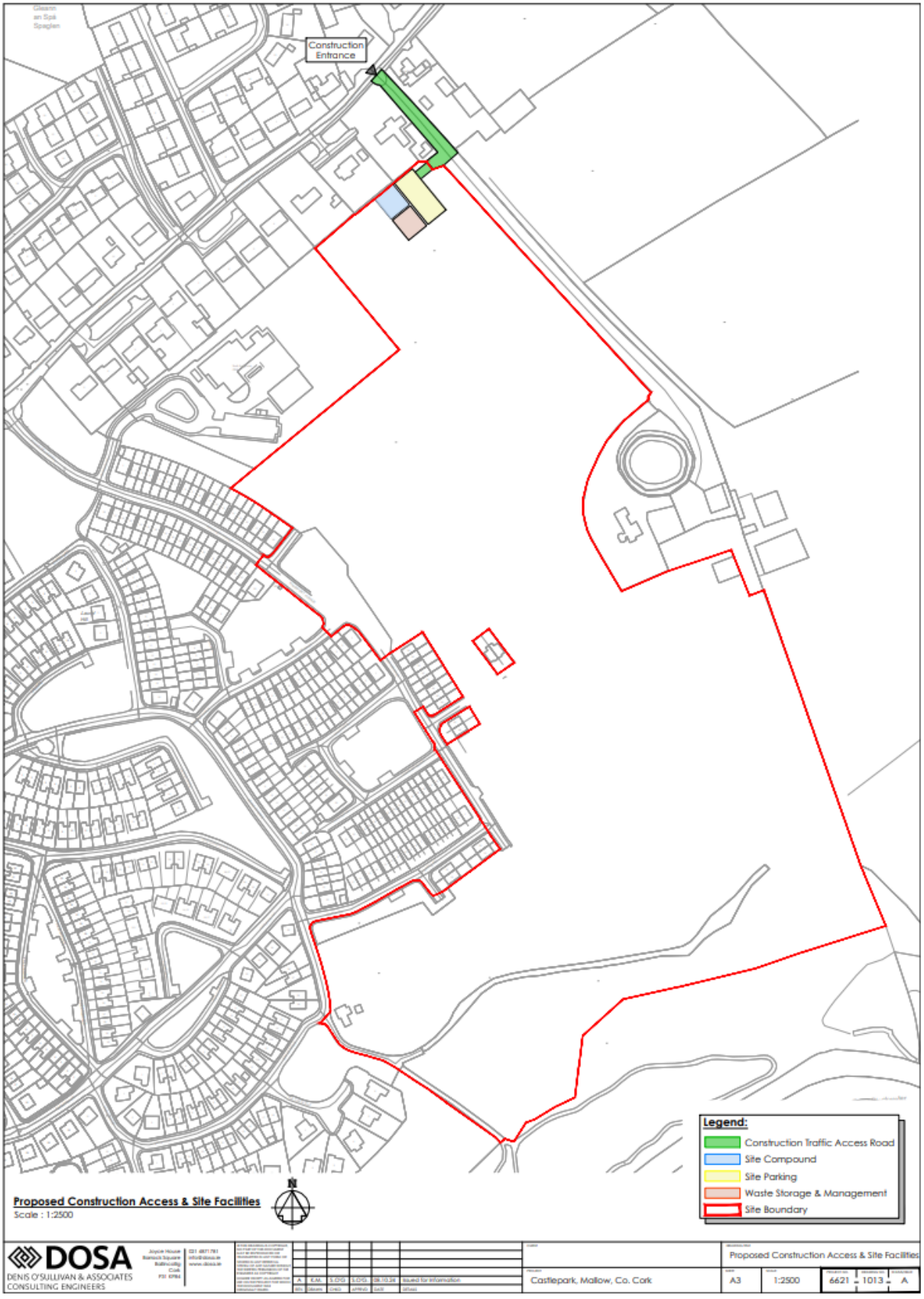

Figure 4-1: Figure Showing Construction Site Access, Construction Compound, and Waste Segregation Area

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

	Ensure materials/waste register is completed; and
	Maintenance of all environmental related documentation.
	Training of all site staff in the requirements of the CEMP including environmental controls, waste management and the approved process for communications/complaints handling.
Construction Waste Manager	Ensuring commitment, operational efficiency and accountability during the C&D phases of the project in line with the Construction and Demolition Waste Management Plan (Enviroguide Consulting, 2022).
	Selecting a waste team if required, i.e., members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site.
	Overseeing, recording and providing feedback to the client on everyday waste management at the site.
	Delegating responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and material salvage.
	Conducting waste audits, maintaining a record system, and establishing targets for waste management at the site during the C&D phase of the permitted Project.
Project Communications Officer	Responding to any concerns or complaints raised by the public in relation to the Construction Phase of the project.
	To liaise with the Environmental Officer on community concerns relating to the environment.
	Ensure the Environmental Officer is informed of any complaints relating to the environment; and
	Keep the public informed of project progress and any construction activities that may cause inconvenience to the local community.
Site Personnel	To co-operate fully with the CMT and the Environmental Officer in the implementation and development of the CEMP at the site.
	To conduct all their activities in a manner consistent with regulatory and best environmental practice.
	To participate fully in the environmental training programme and provide management with any necessary feedback to ensure effective environmental management at the site; and
	Adhere fully to the requirements of the site environmental rules.
Sub-contractors	Comply with RWMP and CEMP where relevant

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

5.2 Site Contact Details

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

5.3 Waste Management Plan Awareness & Training

All training records will be documented and maintained and will be made available to Reside (Castlepark) Ltd. 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 Resource 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 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 Reside (Castlepark) Ltd. Environmental Personnel to ensure that this is the case.

All training records will be documented and maintained in the Project HSEQMS records which will be made available to Reside (Castlepark) Ltd. and all relevant regulatory authorities upon request.

6 WASTE TYPES

6.1 Details of Potential Non-Hazardous Wastes

6.1.1 Non-Hazardous C&D Waste

The Proposed Development includes the demolition and removal of a small portion of the existing Gate Lodge (Interpretive Centre/Café). The waste produced from the demolition works will be limited and it is expected that the following quantities of C&D waste shown in Table 6-1 will be produced during demolition (it is noted that these quantities do not include surplus soil and bedrock arising from groundworks).

Table 6-1: Predicted C&D Quantities

Waste Types	Tonnes
Mixed C&D waste	40
Segregated timber, glass, and plastic	3
Bituminous Mixtures	10
Mixed C & D Metals	5
Segregated concrete, brick, tile, and gypsum	20
Total	**78**

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

6.1.2 Inert and Non-Hazardous Soil and Stone

During the enabling and clearance works, it is anticipated that there will be approximately 4,003m^3 of inert / non-hazardous soil and stone generated during the ground clearance, excavation, and levelling works undertaken across the Site.

Additionally, it is estimated that 10,212 m^3 of topsoil will be stripped and reused on site.

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

Any removal from the site of surplus inert / non-hazardous soil and stone for offsite recovery/ disposal will not be undertaken until the material is properly classified, assigned a correct LoW code and all appropriate tracking and disposal documentation is in place.

All surplus materials will be removed offsite in accordance with waste management legislation. A record of the volumes and reuse requirements will be maintained by the Main Contractor

6.1.3 Other Non-Hazardous Wastes

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

6.2 Hazardous Wastes

6.2.1 Asbestos

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

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

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

6.2.2 Hazardous Soil and Stone

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

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

- Immediate notification to the Client and facilitate any required inspection or visual assessment by the Client or their representative.
- The Environmental Consultant will attend site and complete an environmental site assessment. The scope of any required additional assessment will be agreed in advance with the Main Contractor and the Client.

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

6.2.3 Fuel and Oils

Fuels and oils are classed as hazardous materials. The storage of small quantities of fuel will be required to allow for refuelling of machinery in the site compound and on an impermeable area with appropriate containment in place. All fuels and oils required to be stored at the site will be sealed, bunded and clearly marked. All tank, container and drum storage areas will be rendered impervious to the materials stored therein. Bunds and storage areas will be designed

having regard to Enterprise Ireland BPGCS005, Oil Storage Guidelines. All tank and drum storage areas will, as a minimum, be bunded to a volume not less than 110% of the capacity of the largest tank or drum within the bunded area. Provided that these requirements are adhered to, and site crew are trained in the appropriate refuelling techniques, it is not expected that there will be any fuel/oil wastage at the site. Any used spill kits will be stored in sealed containers awaiting removal by a hazardous waste contractor.

6.2.4 Other Hazardous Substances

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

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

It is noted that storage of all hazardous wastes on-site will be undertaken to minimise exposure to on-site personnel and to also minimise potential for environmental impacts. A specialist hazardous waste 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 typical site are shown in Table 6-2. The List of Waste (LoW) code (as effected from 1 June 2015) for each waste stream is also shown.

Table 6-2: Typical Waste Types Generated and LoW Code

Waste Material	LoW Code
Concrete	17 01 01
Bricks	17 01 02
Tiles and Ceramics	17 01 03
Mixture of concrete, bricks, tiles, and ceramics	17 01 07
Wood, Glass and Plastic	17 02 01, 17 02 02 and 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* and 20 01 36
Batteries and accumulators	20 01 33* and 20 01 34
Liquid fuels	13 07 01*, 13 07 02* and 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* and 20 01 30
Insulation materials	17 06 04

6.4 Main C&D Waste Quantities

Table 6-3 shows the breakdown of C&D waste types produced on a typical site based on data from the EPA National Waste Statistics (EPA, August 2023, Construction & Demolition Waste Statistics for Ireland 2021).

Table 6-3 Quantities of C&D Materials collected in Ireland in 2021 (Source: EPA, August 2023)

Waste Types	%
Soil, stones & dredging spoil	85.1
Segregated concrete, brick, tile, and gypsum	6.7
Mixed C&D waste	4.0
Metals	2.8
Segregated wood, glass, and plastic	0.4
Bituminous Mixtures	1.0
Total	**100**

Table 6-4 details the predicted types of construction and demolition waste for the Proposed Development arising from the demolition phase, based on the information available to date:

Table 6-4: Predicted Quantities of C&D Waste Arising from Demolition

Waste Types	Tonnes
Mixed C&D waste	40
Segregated timber, glass, and plastic	3
Bituminous Mixtures	10
Mixed C & D Metals	5
Segregated concrete, brick, tile, and gypsum	20
Total	**78**

The waste categories in Table 6-3 and Table 6-4 will be segregated into general waste and dry recycling.

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.

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

Until final materials and detailed construction methodologies have been confirmed, it is difficult to predict with a high level of accuracy the construction waste that will be generated from the proposed works as the exact materials and quantities may be subject to some degree of change and variation during the construction process. The RWMP is to be updated with actual quantities as information becomes available during the works. 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

A Site Visit was carried out by Enviroguide Consulting in July 2024.

Two Invasive Alien Plant Species (IAPS) were recorded on Site, namely butterfly bush (*Buddleja davidii*), and New Zealand flax (*Phormium tenax*). Butterfly bush was observed growing on areas of hardstanding/artificial surfaces to the west of the Site, while New Zealand flax was observed growing behind a rear garden, to the west of the Site, just behind a dense willow tree canopy.

Transport Infrastructure Ireland (2020) guidance '*The Management of Invasive Alien Plant Species on National Roads – Technical Guidance*' will be consulted with regards the treatment, removal and disposal of invasive flora at the Site.

6.5.1 Biosecurity Mitigation Measures

The following measures are recommended to control the spread of the identified IAPS, and the introduction of any other IAPS's on-site:

- The Proposed Development Site is located 0.15km north of the Blackwater River, and, while no works along the riparian zone or within the River are proposed as part of this Development. However, it is noted that ecological monitoring of the Blackwater River by the ECOW/SOWOR during the project are planned. As a result, steps should be taken in order to ensure that no IAPS are introduced into the Blackwater River. As White-Clawed Crayfish occur within the Blackwater System the Inland Fisheries Ireland (IFI) Check, Clean, and Dry protocol should be implemented. (Where completed drying is not possible, then the equipment should be completely disinfected, prior to use).
- An IAPS specialist will be instructed to treated and eradicate the Butterfly Bush on Site per TII Technical Guidance on: 'The Management of Invasive Alien Plant Species on National Roads' published in December 2020, and per the methods outlined in the CEMP report.
- To reduce the likelihood of invasive species (IAPS) being introduced to the Site from construction works on other sites, all soils/materials being introduced to the Site will be sourced from a certified invasive flora-free source Site, to ensure no introduction of invasive plant materials to the Site occurs. All plant and equipment will be visually inspected before being permitted on Site.

- Vehicular movements will be restricted to the footprint of the Proposed Development. Construction plant and vehicles will not encroach onto areas that are not permitted for the development.
- All vehicles leaving the Site and/or transporting infested IAPS soil/materials must be thoroughly pressure-washed with clean water in a designated wash-down area before being used for other work. Mud and organic debris will not be allowed to accumulate on tyres, wheels or under wheel arches. Any machinery or equipment returning from a different construction Site will be cleaned, steam washed and visually inspected again before re-entering the Site.
- Material handling systems and Site stockpiling of materials will be designed and laid out to minimise exposure to wind.
- Water misting or sprays will be used on stockpiles as required if particularly dusty activities are necessary during dry or windy periods to prevent seed dispersal of IAPS.
- Where any material containing invasive plant species is collected (e.g., by hand-pulling or cutting), it is important that its disposal does not lead to a risk of further spread. The movement of plant material of any plants listed on the Third Schedule requires a licence from the National Parks and Wildlife Service (NPWS) under Section 49 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). Invasive species (particularly roots, flower heads or seeds) must be disposed of at licensed waste facilities or composting sites, appropriately buried, or incinerated having regard to relevant legislation. All disposals must be carried out in accordance with the relevant Waste Management legislation.

PPE Measures

- Personnel working on the Site will ensure that all PPE including clothing and footwear brought to the Site is to be clean and dry. All PPE is to be visually inspected, and any attached vegetation or debris removed. Work boots will be dipped in or scrubbed with a disinfectant solution and thoroughly dried afterwards before being used on the Site for the first time, ensuring they are visually free from soil and organic debris, to prevent the inadvertent spread of IAPS material.

Training and Response Plans/Measures

- Construction personnel involved in works are to be trained in basic relevant invasive species identification, prevention, and management.
- Where any IAPS is identified within the footprint of the work, the appointed contractor is to develop and implement an appropriate method statement with regard to managing IAPS on-Site. Fencing and/or advisory signage is to be erected. Where stands are small, comprising individual plants, the use of signage may suffice.

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 Manager

The appointed Environmental Manager 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 wastes generated throughout the construction phase of the Proposed Development including structural concrete, metal, timber, cladding, plastics, cardboard, and tiles will be based on visual observations by the Construction Waste Manager or appointed delegate.

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

7.2.2 Asbestos and Asbestos Containing Materials (ACMs)

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

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

7.2.3 Soil and Stone

During the enabling and clearance works, it is anticipated that there will be approximately 4,003 m^3 of inert / non-hazardous soil and stone generated during the ground clearance, excavation, and levelling works undertaken across the Site.

Additionally, it is estimated that 11,460 m^3 of topsoil will be stripped and reused on site.

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

7.2.3.1 Soil Sampling Plan

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

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

- Following excavation, all excavated materials regardless of previous classification will be stockpiled onsite to facilitate the collection of representative samples.
- Stockpiled soils pending waste classification and removal offsite will be segregated for appropriate sampling and testing (refer to Section 8.5.1).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 8.5.1).

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; CCC, the EPA and other relevant authorities will be notified as required and agreed with the Client and a supplementary soil management plan will be designed and implemented detailing the delineated extents of contaminated soil, the estimated volumes,

mitigation measures, destinations for the authorised disposal/treatment and the designated authorised contractors for the movement of the material.

7.2.3.2 Laboratory Analysis for Soil Waste Classification

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

Table 7-1 Soil Analysis Summary Table.

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

7.2.3.3 Soil Waste Classification

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

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

- Assessment of results to determine if the sample is a hazardous or non-hazardous waste in accordance with EPA guidance '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*' (EPA, 2018) using the http://www.hazwasteonline.com application developed by One Touch Data Limited based on Regulation (EC) No. 1272/2008: the classification, labelling and packaging of substances and mixtures (CLP), UK Environment Agency, 2021 Version 1.1 GB (EU Exit Update): Guidance on the Classification and Assessment of Waste (1st Edition v1.1.GB) Technical Guidance WM3 (UK EA, WM3 2021) and the Northern Ireland Environment Agency, 2021. Version 1.1 NI (EU Exit): Guidance on the Classification and Assessment of Waste (1st Edition v1.1.NI)

Technical Guidance WM3 (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).
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	As category C and containing <0.1% w/w asbestos fibres.

Waste Category	Classification Criteria
(Non- Hazardous) with asbestos fibre content <0.1% w/w	
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.

7.2.3.4 Soil Waste Classification Assessment Report

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

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

8 WASTE MANAGEMENT

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

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

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

Figure 8-1 Waste Hierarchy (Source: Waste Framework Directive[1])

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

8.1 Opportunities for Prevention and Reduction

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

Table 8-1 shows the targets for recovery during the Construction Phase of the Proposed Development based on data from the EPA National Waste Statistics (EPA, August 2023. National Waste Statistics Summary Report for 2021).

Table 8-1 Predicted Recovery Targets

Waste Type	Recycling	Energy Recovery	Backfilling	Disposal
	%	%	%	%
Mixed C&D waste	0%	0%	72%	28%
Segregated wood, glass, and plastic	77%	21%	1%	1%
Bituminous Mixtures	49%	2%	40%	10%
Metals	100%	0%	0%	0%
Concrete, brick, tile, and gypsum	45%	0%	52%	3%
Soil and Stone	0%	0%	94%	6%
Waste treatment residues	24%	4%	18%	53%
Total	**8.0%**	**0.3%**	**84.7%**	**7.0%**

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, 2023)

The predicted recovery targets will be reviewed and updated by the appointed Main Contractor in advance of construction works commencing onsite when the final materials and detailed construction methodologies have been confirmed. The resources management objective will be to prevent waste arising in the first place, and to re-use, recycle or recover 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 of the Proposed Development Construction Phase will be undertaken under an Article 27 By-product notification to the EPA. All statutory requirements of Article 27 By-product under the European Communities (Waste Directive) Regulations 2011 (S.I. No 126 of 2011) must be demonstrated to the satisfaction of the EPA. A separate assessment would be required to verify that the any surplus material meets the four conditions of Article 27 by-product prior to notifying the EPA

or moving material off-site. It should be noted that the EPA advises that material should not be moved off-site until a determination has been made by the EPA regarding the notified material.

8.3 Demolition and Construction Waste Management

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

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

8.3.1 Asbestos and Asbestos Containing Materials

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

Asbestos and ACMs will be removed by the specialist contractor into laminated, double walled and sealed 1 tonne bags. Temporary storage of asbestos and ACMs will be, where required, in a dedicated, secure, dedicated quarantine skip for non-conforming materials. The Resource Waste Manager or appointed delegate (i.e., Environmental Manager) 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 waste concrete blocks and bricks generated as part of the demolition & construction works are expected to be clean, inert material. Waste concrete and bricks will be segregated for removal offsite to an authorised permitted/ licensed waste facility for recovery and/ or recycling.

8.3.3 Tarmacadam

Where possible it is anticipated that tarmacadam generated during site clearance works will be reused onsite (e.g., capping layer below access roads) subject to assessment of the suitability for use in accordance with engineering and environmental specifications for the Proposed Development. However, where the removal offsite of tarmacadam's is required, it will be segregated pending transfer 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 uncontaminated timber (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 at source into dedicated skips/receptacles and transferred off-site for recycling at an authorised recycling facility.

Under no circumstances, will gypsum containing materials (e.g., plasterboard) be stored with mixed waste. The Resource Waste Manager or appointed delegate (i.e., Environmental Manager) will ensure that supply of new plasterboard is carefully monitored to minimise waste.

8.3.7 Waste Electrical and Electronic Equipment (WEEE)

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

8.3.8 Other Recyclables

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

8.3.9 Non-Recyclable Waste

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

8.3.10 Hazardous Wastes

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

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

mitigation measures, destinations for the authorised disposal/treatment and the designated authorised contractors for the movement of the material. This is precautionary as there is no indication of hazardous materials on site.

Potentially hazardous waste soil and stone will be segregated and stored appropriately as outlined in Section 8.5 pending soil sampling, laboratory analysis and waste classification as outlined in Section 7.2.

8.3.11 Soil and Stone

During the enabling and clearance works, it is anticipated that there will be approximately 4,003m^3 of inert / non-hazardous soil and stone generated during the ground clearance, excavation, and levelling works undertaken across the Site.

Additionally, it is estimated that 10,212 m^3 of topsoil will be stripped and reused on site.

If required, the removal of soil and stone offsite for recovery 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 7.2.3.2) will be managed in accordance with the procedures outlined in Section 8.5 below.

8.3.12 Invasive Species

According to the biodiversity chapter in the EIAR for the Site (Enviroguide, 2024), no significant risk of impacts relating to the spread of invasive plant species exists at the Site. Nevertheless, efforts should be made to remove such plants and minimise any risk of spread offsite.

The measures as outlined within the biodiversity chapter of the EIAR (see also section 6.5 of this RWMP), will be adhered to, to avoid the introduction or dissemination of invasive species to and from the Site of the Proposed Development site.

8.4 Segregation of Waste On-Site

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

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

C&D waste will be segregated onsite into labelled dedicated skips and the Main Contractor will make arrangements for regular collection and disposal of same offsite. Where the onsite segregation of certain waste types is not practical, offsite 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.

Asbestos and ACMs will be stored, where required, in a dedicated, secure, dedicated quarantine skip for non-conforming materials.

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

The temporary storage of any contaminated material/soil will be stored in accordance with best practice and as set out in Section 8.5.

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

8.5 Storage of Waste and Stockpile Management

A designated waste storage area will be provided onsite for the duration of the construction works as presented in Figure 4-1. The dedicated waste storage area 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 the waste types to be placed into each container.

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

8.5.1 Soil Stockpiles

Where material is being temporarily stockpiled onsite pending classification for removal off-site or for reuse in the Proposed Development, the material will be temporarily stockpiled in a designated, secure and impermeable area onsite. The temporary stockpiling of materials onsite will be undertaken in consultation with the Client, and where required the Environmental Regulation Unit of CCC 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 that cannot be reassigned under Articlae 27 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 materials will be located, maintained, and separated by a sufficient distance to prevent any inadvertent mixing of excavated material. All stockpiles will be clearly identified (e.g., signage) and recorded on a site map.

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

- Stockpile number;
- Origin (i.e., location and depth of excavation);
- Approximate volume of stockpile;
- Date of creation;
- Description and Classification of material;
- Date sampled;
- Date removed from site;
- Haulier details including waste collection permit details;
- Recovery/disposal 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 (Enviroguide Consulting, 2024). 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 WASTE

9.1 Removal and Disposal of Waste Materials

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

9.2 Waste Management Procedure

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

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

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

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

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

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

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

All waste will be documented prior to leaving the Site. Waste volumes will be recorded by the Main Contractor, either by obtaining the weighbridge weight from 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 Main Contractor within 48 hours unless otherwise agreed with the Client.

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

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

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

All necessary documentation requirements are detailed in section 11 below. A copy of the Waste Management Log Sheet Template is included in Appendix E.

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 Cork County Council (CCC) once appointed by the Main Contractor in advance of construction works commencing on-site. The Register of Authorised Waste Facilities, which will be updated and provided to CCC in advance of construction works commencing onsite, is included in Appendix B.

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

The expiry dates on all licences and permits will be reviewed routinely by the Construction Waste Manager as part of the waste audits. The Construction Waste Manager will ensure that only facilities with a valid permit or licence 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 List of Waste (LoW) Code and delivery to the receiving facility will be appointed to transport the waste from the Site.

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

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

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

10 WASTE AUDIT AND INSPECTION

The Environmental Manager and Construction Waste Manager will be responsible for conducting waste inspections at the site during the demolition and construction 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 Environmental Manager and Construction Waste Manager to ensure materials are segregated on-site for the appropriate waste stream and disposal destination.

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

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

Reports regarding the management of the waste during works, will be made available to the Client as required.

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

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

11 RECORD KEEPING AND REPORTING

11.1 Maintaining Records

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

The details recorded for each consignment will, at a minimum, include:

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

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

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

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

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

As well as the Waste Management Log Sheet (register) (refer to Appendix E), the appointed Environmental Manager 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 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.

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

11.2 Non-Conformance and Corrective and Preventative Action

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

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

CARs may be raised as a result of:

- An internal or external communication;
- An internal audit;
- A regulatory audit or inspection;
- A suggestion for improvement;
- A complaint; or
- An incident or potential incident.

All corrective action requests will be numbered and logged.

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

11.3 Reporting

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

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

Reports regarding the management of the waste during works, will be forwarded electronically to the Client by the Construction Waste Manager as required.

On completion of the waste classification assessment of stockpiled soils excavated across the 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 Construction Waste Manager will immediately notify the Client, CCC, 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 (Cork County Council) will be consulted as required with prior agreement with the Client.

Reports regarding the management of the waste during works, will be made available electronically to the Environmental Regulation Unit of CCC as required.

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, the Client will be immediately notified by the Project Manager; noting that Client or their representative may require to complete a visual assessment.

13 REFERENCES

BRE Waste Benchmark Data 2012, Buildings Research Establishment (BRE), 2012.

Cork County Council Development Plan 2022-2028

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

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

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

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

Enviroguide Consulting, Construction and Environment Management Plan (2024).

Environmental Protection Agency, August 2023 National Waste Statistics Summary Report for 2021.

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).

Environmental Protection Agency, 2020. Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities.

Environment Agency, (2021). Technical Guidance WM3: Guidance on the classification and assessment of waste (1st Edition v1.1 GB).

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

Environmental Protection Agency, 2021. BEST PRACTICE GUIDELINES for the preparation of resource & waste management plans for construction & demolition projects.

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).

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

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

Forum for the Construction Industry – Recycling of Construction and Demolition Waste.

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

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

National Waste Management Plan for a Circular Economy 2024-2030

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.

One Touch Data Limited, 2019. HazWasteOnline™ Application http://www.hazwasteonline.com

Outline Construction Traffic Management Plan, Punch Consulting Engineers, September 2024.

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.

UK 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.

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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