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DUBLIN CITY COUNCIL
RESOURCE WASTE MANAGEMENT PLAN

SHB5-BMD-RP-CV-CS-P3-001-
RESOURCE WASTE MANAGEMENT PLAN

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1 Introduction

Dublin City Council are developing a residential development at the location of Balcurris Road, Dublin 11, see Figure 1 of Appendix A. In general, the proposed development requires the removal of any pre-existing infrastructure, removal of redundant associated service trenches, the cutting to foundation levels, construction of site drainage and surface water detention basin system, and the construction of wastewater services, construction of new water supply services, the construction of residential units, carparking and ancillary services. Please refer to the proposed site development section in S3.4 for full details of the proposed works.

1.1 RWMP Purpose and Objectives

Under the Waste Framework Directive (WFD), waste shall be managed to prevent risk to human health and environment receptors. The appropriate management of waste within the WFD will prevent or limit potential noise or nuisance odours without adversely affecting the environment.

The primary purpose of the RWMP is to facilitate appropriate management of potential wastes generated during the groundworks & construction phase through utilising raw material management, storage practices, prevention where possible, reuse, recovery or off-site disposal. These fundamental practices will also need to comply with the legal requirements of the Waste Management Act and associated regulations.

This plan sets out the outline resource and waste management requirements of the contractor for the groundworks & the proposed construction activities associated with the proposed new development. The construction contractor and any subcontractors will be required to fulfil all requirements set out by the outline Resource Waste Management Plan (RWMP).

Abiding by the EU Waste Hierarchy (as presented in Figure 1.1 below), the plan aims to maximise the re-use of raw materials, minimise waste prevention, and maximise re-use and within a circular economy rather than a linear based economy (as presented in Figure 1.2 below).

The overall objectives of the RWMP are summarised as follows:

- To provide staff training and awareness on all project construction waste management obligations and protocols. To ensure best practice techniques are utilised by the staff and management.
- Describe the sites proposed waste management practices.
- Minimise potential material spoilage by utilising a 'Just-in-Time' (JIT) delivery processes.
- To prevent and reduce waste streams generated during the construction phase of the project.
- Reuse of materials on-site by re-using suitable soil following cut/fill assessment. Soil could be used for landscaping and achieving formation levels whilst certain demolition materials could be reused as aggregates where appropriate to do so.
- To encourage off-site prefabrication to manage sustainable resource and waste practices at source.
- Where practical, facilitate source segregation of waste streams onsite to accelerate Recycling, Re-use and Recovery of waste.

- To guarantee that all waste leaving the site is transported by suitable permitted/licenced and experienced hauliers with suitable vehicles and equipment and to ensure the legal transfer of all waste to suitably licenced or permitted waste recovery facilities.
- Maintain a paper or electronic register of all potential permits and licences that will need to be referenced prior to waste transfer.
- Maintain a register of all waste transferred from site.
- Outline waste management protocols for resource, waste auditing, resource and waste record keeping.

1.2 Subcontractors and Staff

The contractor will appoint an experienced Resource and Waste to ensure that the requirements of this RWMP are implemented. All subcontractors will be briefed on the protocols of this Resource & Waste Management Plan with respect to relevant site waste management procedures and will need to implement this plan in their work.

All personnel at the site have an obligation to manage resources and waste according to the RWMP.

Figure 1.1: EU Waste Management Hierarchy

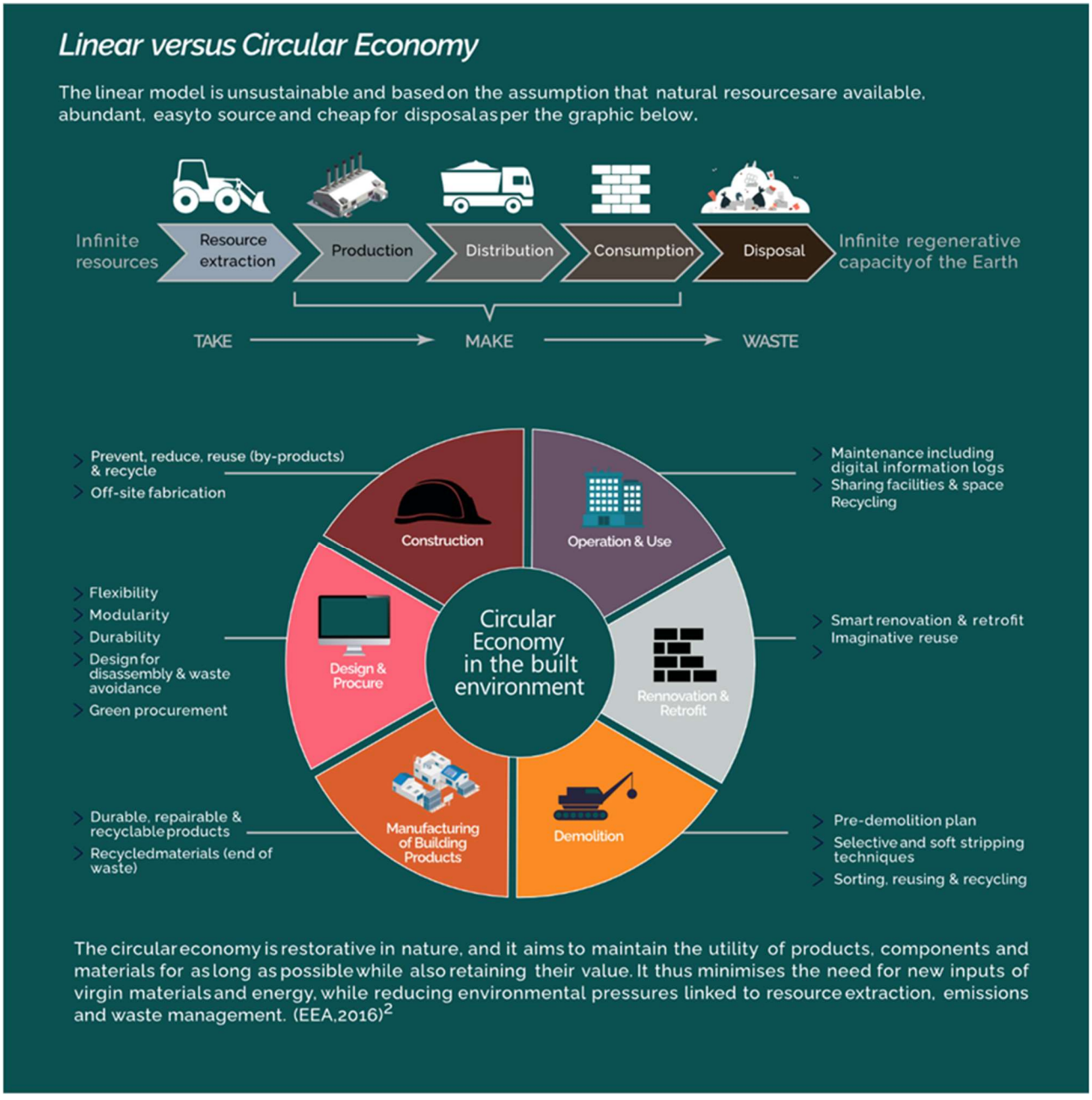

Figure 1.2: Circular Economy (adapted from EPA, 2021)

1.3 Waste Management Plan Review

The effectiveness of the RWMP will be strictly monitored, evaluated and audited. The Plan will be reviewed by the Resource and Waste Manager on a monthly basis during the construction phase to ensure effective implementation. It is expected that the contractor's Resource and Waste Manager will review all waste records daily and audit the RWMP implementation on a monthly basis.

1.4 Relevant Waste Management Legislation

All waste including excavated soil & stone / fill material will be transferred off-site in accordance with all relevant legislation including the following primary legislation instruments:

Table 1 Relevant Waste Management Legislation

Legislation	
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 Act 1996 (No. 10 of 1996) as amended 2001 (No. 36 of 2001), 2003 (No 27 of 2003) and 2011 (No. 20 of 2011).
	European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) as amended.
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).	Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820 of 2007) as amended.
	Waste Management (Facility Permit and Registration) Regulation 2007 (S.I No. 821 of 2007) as amended.
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 (Licensing) Regulations 2000 (S.I No. 185 of 2000) as amended.
	European Union (Packaging) Regulations 2014 (S.I. No. 282 of 2014) as amended.
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 (Planning) Regulations 1997 (S.I. No. 137 of 1997) as amended.
	Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015).
	European Communities (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014).
Environmental Protection Act 1992 (S.I. No. 7 of 1992) as amended.	Waste Management (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended.
Litter Pollution Act 1997 (Act No. 12 of 1997) as amended. Planning and Development Act 2000 (S.I. No. 30 of 2000).	Waste Management (Shipments of Waste) Regulations 2007 (S.I. No. 419 of 2007) as amended.
	European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994).

1.4.1 Waste Collection Permitting

The contractor will ensure that a valid waste collection permit will be in place for all waste collected from site. Each waste code and waste stream will need to have a suitable waste collection permit associated with the waste. The contractor will need to adhere to the requirements of the Waste Management (Collection Permit) Regulations 2007. Waste transport compliance with the Waste Management (Movement of Hazardous Waste) Regulations, 1998 is compulsory for the transportation of hazardous waste by road. The export of waste from Ireland is subject to the requirements of the Waste Management (Shipment of Waste) Regulations 2007. The Contractor will ensure that the transport and movement of all wastes are carried out in compliance with these regulations.

It is possible that small volumes of hazardous ground conditions and/or waste materials will be encountered during the construction phase given the brownfield site setting. If encountered, hazardous soils and stones would be exported to an out of state hazardous waste disposal facility. The

requirements for handling waste of this nature are further described in subsequent sections of this RWMP. The presence of any asbestos containing materials or asbestos fibres in the ground may need to be considered given the site history as a demolished brownfield residential site. The presence (if any) of asbestos fibres, materials, or hazardous ground conditions will need to be determined and the materials categorised for waste disposal or reuse where appropriate. For the purposes of this management plan, it is assumed that site has a moderate level of ground risk with respect to ground contamination.

The general management requirements with respect to asbestos containing materials will be discussed below. The contractor should refer to any management requirements outlined within any site-specific asbestos surveys or asbestos management plans for the site.

1.4.2 Waste Disposal Permitting and Licencing

The contractor will require all waste disposal facilities to have a valid certificate of registration, waste disposal permit or licence for the proposed waste code/waste stream. Only waste facilities granted by the relevant Local Authority under the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments, or a Waste or Industrial Emissions Licence granted by the EPA will be considered for waste disposal. All COR / permits / licences will need to detail the type and quantity of waste which the facility can intake, store, sort, recycle, recover and/or dispose of at the specified site.

All hazardous wastes will need to be managed for out of state disposal or recovery by a suitably experienced hazardous waste agent such as Enva or similar who are licenced to handle/dispose of such hazardous wastes. This agent will be licenced to manage hazardous wastes on a waste code by code basis; thus, the correct waste agent will need to be assessed and selected for the management of hazardous waste streams.

1.4.3 Duty of Care

The Waste Management Act 1996 (as amended) and subsequent Irish legislation forms the basis for the legal management of waste in Ireland. Under The Waste Management Act, the waste producer is responsible for waste from the point of generation until the waste materials legal recycling, recovery or disposal (including its method of disposal). The Waste Management Act also relies on the concept of "Polluter Pays". Under the Polluter Pays principle, the waste producer is liable to be prosecuted for mismanagement of waste, pollution or contamination incidents, and remediation of these wastes or risks.

The contractor will ensure that the waste contractors engaged are legally compliant with respect to waste transportation, recycling, recovery, and disposal.

1.4.4 National Waste Action Plan

This National Waste Action Plan targets Construction & Demolition Waste generation, providing a framework for:

- Prevention of soil arisings which are a significant financial burden on the sector are to progress by placing value on the used material where possible. There is a strong focus on Article 27 by-product and Article 28 end-of-waste decision making process. These processes are to be streamlined and detailed guidance will be developed for specific problematic materials.
- The use of recycled construction materials will be incentivised (potentially by introducing a levy

on virgin aggregates).

- The plan looks to make national end-of-waste decisions for specific construction and demolition waste streams at the earliest possible stage.

This RWMP will support this framework application with respect to the construction phase of the development.

1.5 RWMP Format

The appointed Contractor will need to develop this document further following appointment, particularly with respect to additional waste and volume estimation if more information with respect to potential resource reuse and waste stream generation becomes available.

This RWMP will be revised as necessary throughout this project lifecycle to maximise waste reduction/efficiencies from design phase through to completion phase. This RWMP is dynamic and certain revisions may result following the contractor's management review and implementation of this plan. The contractor and their project team will revise this RWMP as the groundworks & construction phases proceed. Any further revisions will be provided within the revised RWMP and kept on-file at the site.

1.6 RWMP Thresholds and Reporting

Under *The Best Practice Guidelines for The Preparation Of Resource & Waste Management Plans For Construction & Demolition Projects*, the EPA have delineated two tiers of project scale which will require differing levels of Resource and Waste Management Plan reporting which shall be reflective of the scale and complexity of the project. The two tiers: Tier 1 and Tier 2 are their respective thresholds for implementation as described as follows by the EPA:

Table 2 Waste Management Plan Reporting Tiers

Tier	Template Reference	Thresholds	Applicable
Tier 1	Appendix B	• New residential development of less than 10 dwellings.	No
		• Retrofit of 20 dwellings or less.	No
Tier 1	Appendix B	• New commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 1,250 m2.	No
		• Retrofit of commercial, industrial, infrastructural, institutional, educational, health and other developments with an aggregate floor area less than 2,000 m2.	No
		• Demolition projects generating in total less than 100m3 in volume of C&D waste.	No
Tier 2	Appendix C	Any project exceeding Tier 1	Yes

This project scale and complexity meets the EPA defined threshold for Tier 2 Resource Waste Management Plan reporting on the basis that the volume of generated waste will exceed the 100 m^3 waste threshold.

2 Proposed Development Details

The details of the proposed site contractor and the site contractor's proposed relevant personnel and contact information shall be listed in Table 3 below following appointment and subsequent revisions to this live document.

Table 3 Project Details

Name of the Developer:	Dublin City Council
Name of the Contractor:	TBC by Site Developer (post planning)
Name of the Site Manager:	TBC by Site Contractor (post planning)
Address of Contractor / Sub-Contractor / Developer:	TBC by Site Contractor (post planning)
Address of Development:	Balcurris Road, Ballymun, Dublin 11
Planning Register Reference:	TBC by Site Contractor
Name of the Person responsible for Implementation of this Plan (Resource & Waste Manager):	TBC by Site Contractor
Site Telephone Number:	TBC by Site Contractor
Mobile Phone Number:	TBC by Site Contractor
E-mail address:	TBC by Site Contractor

3 Proposed Development Description

3.1 Site Location

The Site is located at a brownfield site either side of Balcurris Road, Ballymun, Dublin 11, at 53.399475, -6.264680, please see Figure 2 of Appendix A. The Site is located in an urban setting. The site borders a number of two storey residential properties to the west of Balcurris Road at Balcurris Close, a four storey residential development at The Charter located to the east and north, a commercial Lidl supermarket to the south, and residential two storey properties to the south at Ballcurris Gardens.

Vehicular access is currently provided Balcurris Road. The site is currently gently sloping from the northwest to the southeast at an elevation of approximately 65-63 maOD.

3.2 Existing Site Development and Layout

As noted above, the existing site comprises a brownfield site. The overall site area is approximately 16,650 m^2 in size.

3.3 Enabling Works Required

Groundworks will be required on this project to carefully remove any existing redundant services located across the site.

The presence of any ground contamination such as asbestos containing materials or asbestos fibres in the ground may need to be considered given the site history as a residential development as part of the Ballymun complex. Aerial photography online circa 2006-2009 shows that the site was used as a compound area for the demolition of the flats on Balcurris Road, as a soil/fill stockpile storage area, and as former residential development.

Some remnants of foundations of the former flat complex maybe encountered if these were not fully demolished/excavated from the ground at demolition stage in 2008/2009.

The proposed development will tie in with existing site services for water, wastewater, as well as heating and electricity supplies. The construction of the new ancillary services will require excavation, trenching and backfill civil works and these items have been high flagged as items that this RWMP will need to consider at construction phase.

A project construction compound will be built as a temporary measure which will include a dedicated waste storage area, materials storage area, temporary laydown area, potentially contaminated quarantine area, and temporary soil stockpile area, please see Figure 4 of Appendix A for an initial outline location of these proposed compounds.

3.4 Proposed Site Development

As stated in the Planning Application documents submitted as part of the application, the application involves the provision of a mix of residential development, retail and community (Creche). The proposed development would comprise the following works:

- Construction of 288 apartment/duplex and housing units at a site of c. 2.6 ha (c. 2.2 ha net) bound

by Balbutcher Lane to the north, Balcurris Park to the west, the Ballymun Road to the east, and Balcurris Gardens to the south-west,, Ballymun, Dublin 11, which will consist of the following

- Construction of 288 no. apartment/duplex and housing units across 5 sites (Sites 5, 15, 16, 17 and 18) ranging from 2 to 6 storeys containing 138 no one-bed, 87 no. 2-bed units, 61 no. 3-bed and 2 no. 4-bed dwellings.
    - Site 5 consists of 132 no. apartment units (66 no. 1 bed, 44 no. 2 bed units and 22 no. 3 bed units) and ranges from 4 to 5 storeys including a new urban edge along Ballymun Road;
    - Site 15 consists of 8 no. dwellings comprising 6 no. 1 bed own-door apartments and 2 no. 3 bed houses adjoining Balcurris Gardens
    - Site 16 consists of 5 no. dwellings comprising 2 no. 1 bed own-door apartments, 1 no. 3 bed house and 2 no. 4 bed houses adjoining Balcurris Gardens
    - Site 17 consists of 34 no. apartment units (17 no. 1 bed units, 9 no. 2 bed units and 8 no. 3 bed units) and ranges from 3 to 6 storeys forming an urban block with incomplete urban cell at the Linnbhla and Charter apartments;
    - Site 18 consists of 109 no. apartments (47 no. 1 bed units, 34 no. 2 bed units and 28 no. 3 bed units) and ranges from 4 to 5 storeys with edges to Balcurris Road, Balcurris Park and a new edge to Balbutcher Lane;
- 70 no. car parking spaces, 4 no. loading bays and 4 no. motorbike parking spaces
- 551 no. long stay and 180 no. short stay bicycle parking spaces to serve the housing units.
- Provision of 1611 m^2 Retail/Commercial floor space at ground level facing Ballymun Road/St. Pappins Square (sites 5 and 17)
- Provision of a 324 m^2 childcare facility at ground floor in Site 5.
- Provision of 1,058 m^2 of community, cultural and arts space located at ground floor level in sites 5 and 17.
- Provision of 91 no bicycle spaces to serve the non-residential uses distributed across the site.
- The provision of a public open space in a new plaza at St Pappin's Square (1,953 m^2) and additional areas of 979m^2, 496m^2 and 839 m^2 with 2,969 m^2 of communal open space
- Realignment of Balcurris Road, provision of two new vehicular accesses (one off the Balbutcher Lane and one off the Ballymun Road) and a dedicated pedestrian and cycle lane off the Balbutcher Lane
- Boundary treatments, public lighting, site drainage works, internal road surfacing and footpaths, ESB meter rooms, ESB substations, stores, bin and cycle storage, plant rooms, landscaping; and
- All ancillary site services and development works above and below ground.

The site boundary area of the proposed development is presented in Figure 3 of Appendix A and an outline location of the proposed waste storage areas and site compound is presented in Figure 4 of Appendix A. Further details of the proposed development are presented in the planning documents and drawings submitted as part of this planning application. The appointed contractor may seek to

revise/refine the outline locations of the proposed waste compound, quarantine area, and temporary stockpile storage areas upon commencement or as the project progresses. Any amendments would be described within the contractors updated RWMP document.

3.5 Main Construction Elements & Waste Generation

The main construction phasing impacting waste will likely comprise of:

- Review the determine Soil Waste Classification of the brownfield soil and stone prior to excavation & off-site disposal, refer to GII Waste Classification Report (May 2024).
- Soil suitability assessment determining soil suitability for re-use on-site.
- Careful removal of any known ground contamination prior to bulk ground works.
- Demolition/removal of existing any pre-existing infrastructure as outlined above.
- Removal of any residual concrete foundations.
- Excavation to reduced levels where required.
- Excavate trenches to lay services.
- Excavation of foundations and surface water detention basin areas.
- Reuse of clean uncontaminated excess material off-site or use in landscaping on-site if/where possible.
- If not possible to re-use on-site or off-site as a soil by-product, dispose of the excess soil and stone at a suitable soil waste disposal facility following appropriate classification and/or assessment.
- Upfill road levels where required using imported crushed stone. Stone would be compacted in layers by vibrating roller.
- Pour foundations and construct rising walls.
- Construct residential units.
- Finish road and pavement surfaces (tarmac/concrete).
- Undertake landscaping to the landscaping design.

The construction method will predominantly rely on a:

- Concrete floor slab
- External Walls: Block outer leaf/ cavity/ block inner leaf
- Inner Walls: Block leaf
- Floor Slab: Precast Hollow Core Units/ Concrete slab
- Roof: Precast Hollow Core Unit with Screed

3.6 Waste Minimisation Design Elements

At design stage, where at all possible, potential offsite waste disposal associated with the volume of

excavation of soils has been designed out by utilising the natural ground levels encountered on-site within the proposed development. Potential HGV movements through the local road network will also be reduced from this design implementation.

The developer proposes to re-use as much as possible clean and uncontaminated soil and stone on-site to achieve the required landscaping plan and final site levels. The volume of potential soil for re-use will be determined by cut-fill analysis post planning. The analysis will determine the requirement of the development to either export or import soil and stone. There is potential for site won material to be utilised to form the landscaping areas of the proposed development. The reuse of any soils and stones on-site would be assessed by a suitably qualified and experienced environmental consultant. As there is some existing topsoil on-site, topsoil could be re-used from within the site and without the need for importation to the site. The depth of the topsoil onsite may vary due to the brownfield nature of the site.

The requirement for additional soil and stone locally may facilitate the opportunity for the contractor to explore the potential to import/ export virgin uncontaminated soil and stone by-product to/from the site with respect to receptor site under Article 27 of the European Communities (Waste Directive) Regulations 2011. At this point is assumed that there will be a requirement to export soil and stone from site most likely as a waste material rather than a soil by-product given the brownfield site setting.

As mentioned above, the contractor will also explore the potential for soil and stone by-product importation into the site from a suitable donor site under Article 27 of the European Communities (Waste Directive) Regulations 2011.

3.7 Waste Prevention Design Mechanisms

Design waste prevention measures concerning, re-use, recycling, materials optimisation and design for flexibility and deconstruction are discussed in Sections 5.0 through to Section 8.0 below.

4 Roles & Responsibilities

4.1 Overview of Design Team

The project design team is described as follows:

Table 4 Project Design Team

Project Role	Company
Client	Dublin City Council
Planners	TBC
Architect	TBC
Consulting Engineer	Malone O'Regan
Landscape Architects	TBC
Environmental Consultant (RWMP)	Conviro
Environmental Consultant (CEMP)	Panther Environmental
Archaeologist	TBC
Contractor	To Be Determined by Contractors RWMP
Contractors Resource and Waste Manager	To Be Determined by The Contractors s RWMP
Waste Haulage Contractor	Not required
Waste Disposal Contractor	TBC

4.2 Team Roles

All parties involved in the project will have responsibility for waste management. Responsibility will vary at different stages of the project lifecycle. Key responsibilities are set out in Table 5. The contractor will be responsible for refining and implementing the findings of this outline RWMP. The defined roles of all members of the project design team are described as follows:

Table 5 Roles & Responsibilities

Project Role	Responsibility	Project Stage
Client	Contract and appoint main contractor and design team members.	Project design and construction.
Contractor	Resource Waste Management Plan (RWMP) Review and Implementation. RWMP revision and submissions to project team. Appoint waste agents, waste collectors, and waste disposal contractors.	Construction stage of residential development.
Subcontractors	Comply with RWMP	Construction stage of residential development.
Architect	Design and liaise with main contractor during RWMP implementation.	Construction stage of residential development.
Consulting Engineer	Design and provide feedback to RWMP, particularly with respect to drainage and wastewater design requirements. Liaise with designers to minimise waste production.	Construction stage of residential development.
Environmental Consultant	Draft Outline RWMP in consultation with design team.	Construction stage of residential development.
Contractors Resource and Waste Manager	Implement the RWMP and the objectives. Ensure subcontractor compliance with the RWMP. Waste assessment and characterisation. Waste management on-site. Waste record keeping. Waste training and toolbox talks. Waste and resource tracking. Waste auditing. Waste management reporting.	Project design phase. Construction stage of residential development.
Waste Haulage Contractor	Waste record keeping and reporting to contractor.	Construction stage of residential project.
Waste Disposal	Waste record keeping and reporting to contractor.	Construction stage of residential

Project Role	Responsibility	Project Stage
Contractor		project.
Design Team	Identification of Project Waste Streams. Design to minimize waste generation in lifecycle of completed construction.	Project design and construction.

5 Design Approach

At project design stage, the developer proposes to minimise resource utilisation during the groundworks and the construction stage of the proposed development by reusing on-site the existing fill and the underlying geology following extraction. The nature of the project requires suitable grade soil and stone for construction stage civil engineering purposes on-site. The reuse of suitable material will prevent the need for off-site disposal and limit the need for virgin soil and stone resources to be extracted and hauled to site from suitable quarries. The developer where possible would utilise suitable soils for project landscaping.

The developer proposes to design out the potential need to import landscaping soil and stone by managing the project cut/fill in a systematic manner to minimise potential doubling handling of soil and stone or soil stockpiles scheduled for re-use where possible.

Where at all possible, offsite waste disposal associated with the excavation of soils and stones will be designed out further and potential HGV movements through the local road network will also be reduced.

As discussed above, some soils maybe suitable for re-use on-site or for declaration as a soil by-product limiting the generation of off-site waste associated with the project. But, given the brownfield site setting, the suitable volumes may be limited and the balance of excess soil and stone requiring off-site waste disposal.

The design approach minimising the generation and impact of waste, the re-use of materials, recycling of materials, and resource optimisation are discussed further in Section 6.0 and Section 7.0 below.

6 Key Materials, Quantities, and Costs

6.1 Waste Inventory and Types

As the proposed project design is well understood at this point, the wastes and resources listed in this outline RWMP are unlikely to vary considerably from the waste streams that will be logged in the contractor's own waste inventory and the waste despatch log which will be compiled by the contractor during the project construction.

Given the nature of the project, it is anticipated that the main waste type generated during the construction phase of the project will be soils and stones excavated on-site as well as any pre-existing concrete foundation infrastructure. The generation of the soil and stones waste will be driven by the proposed foundation levels required for the proposed buildings and associated roadways, services, and infrastructure.

The volumes of waste materials may vary depending on the nature of the existing ground conditions, former foundations, the method of the former flat complex demolition, or if soil by-products are declared by the developer or the contractor.

The EPA National Waste Reports have been referenced in Table 6 to demonstrate the typical breakdown of C&D waste types produced on a typical Irish construction site.

Table 6 Waste Materials Generated on a Typical Irish Construction Site (EPA 2019)

Waste Material	Percentage
Soil and Stones	84.4
Concrete, brick, tile, and gypsum waste	6.4
Mixed C&D waste	4.6
Metals	2.4
Bituminous mixtures	1.6
Segregated (wood, paper, glass, plastic and metal)	0.6
Sub Total Waste	100

These typical wastes at "Typical Irish Construction Site" have been used to generate a waste inventory of the quantities of general construction waste that will be generated by the project. An outline post design resource and waste inventory of all estimated residual resources has been provided in Table 7 below. The table provides a best estimate of the resources and proposed wastes associated with the project at this time. The table identifies the proposed resource/waste volumes that will be subject to reuse, recycling, energy recovery, or backfilling to inform the construction phase of the project.

6.2 Waste Quantities

Whilst it is difficult to predict at this stage the exact volume or tonnage of each these waste streams, an estimation of the composition of waste materials that could be generated by the project are presented by Table 7 below.

The estimated cost of the various aspects of waste management shall be further refined by the site contractor and amended as required as the project proceeds.

Table 7 Non-Hazardous & Hazardous Material for Resource and Waste Management

Material	List of Waste Code	Prevention (tonnes) (non-waste)	Reused (tonnes if not otherwise stated) (non-waste)	Recycled (tonnes) (waste)	Recovered (tonnes)	Disposed (tonnes) (waste)	Unit Cost Rate Off Site Recovery or Disposal (€/tonne)	Cost Estimate of Resource Management Recycling, Recovery, Disposal
Non-Hazardous Materials								
Soil and Stone	17 05 04	0	1,000t Net Export Potentially Exported As A Soil and Stone By-Product	0	0	7,000	25	€175,000
Wood/Timber	17 02 01	0	0.5	0	20	0	70	€1,400
Cardboard	20 01 01	0	0	10	0	0	70	€700
Mixed Metal	17 04 07	0	0	10	0	0	70	€350
Insulation Materials	17 06 04	0	0	10	0	0	150	€1,500
Plastic	17 02 03	0	0	10	0	0	70	€700
Gypsum based construction material	17 08 02	0	0	0	0	10	150	€1,500
Concrete	17 01 01	0	0	0	500	0	60	€30,000
Bricks	17 01 02	0	9	0	0	10	150	€1,500
Mixed Construction & Demolition Wastes	17 09 04	0	0	0	0	500	150	€75,000
Mixed Municipal	20 03 01	0	0	0	0	10	185	€1,850
Tarmacadam	17 03 02	0	0	0	0	30	150	€4,500
Glass	17 02 02	0	0	0	2	0	70	€140
Tiles & Ceramics	17 01 03	0	0	0	10	0	150	€1,500
Bituminous Mixtures	17 03 02	0	0	0	0	2	150	€300
Cables	17 04 11	0	0	0	1	0	70	€70
WEEE	20 01 36	0	0	0	0	0	50	€0
Wastewater	20 03 04	0	0	0	0	2	100	€200
Hazardous Soil and Stone	17 05 03	0	0	0	0	200	130	€26,000
Construction materials containing asbestos	17 06 05	0	0	0	0	0	650	
Other C&D wastes containing hazardous substances	17 09 03	0	0	0	0	0	Ad Hoc Priced by Waste Agent	
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13*, 20 10 19* 20 10 27*, 20 10 28* 20 01 29*, 20 01 30*	0	0	0	0	1	Ad Hoc Priced by Waste Agent	
Liquid fuels	13 07 01* 13 07 02* 13 07 03*	0	0	0	0	3	Ad Hoc Priced by Waste Agent	
Batteries and accumulators	13 07 01* 13 07 02* 13 07 03*	0	0	0	0	0	Ad Hoc Priced by Waste Agent	
Tarmacadam	17 03 01*	0	0	0	0	0	Ad Hoc Priced by Waste Agent	
Wastes from wood preservation	03 02 01*, 03 02 02* 03 02 03*, 03 02 04* 03 02 05*	0	0	0	0	1	Ad Hoc Priced by Waste Agent	

7 Site Infrastructure & Storage

7.1 Resource Storage

In order to prevent and minimise the generation of wastes the Contractor will ensure raw materials are ordered in a just in time process. This will reduce storage volumes, breakage, and waste volumes produced, preventing unnecessary waste disposal to landfill.

To effectively manage raw material resources, the contractor will need to separately store all resources and materials to be used during the construction phase separately from the waste management storage area of the site. The resource storage area will be signposted with visible signage and will describe the types of materials that will be stored at the designated area. This signage will uphold good housekeeping and resource management.

7.2 Soils and Stones Management Prior to Reuse

Soil and stone or fill removed from excavations will form a substantial volume of potentially reusable material generated during the construction project.

The contractor will re-use as much of this soil and stone for fill and landscaping purposes as possible. Each soil and stone stockpile will be named, labelled, and will be fully risk assessed for reuse prior to placement in-situ.

Only some soils excavated from the brownfield site will likely be suitable for a soil by-product declaration under Article 27 of the European Communities (Waste Directive) Regulations 2011 following suitable assessment and subsequent approval by the EPA. The suitability of all proposed soil by-products shall be determined by environmental and civil engineering assessment by suitably qualified and experienced personnel. The remaining volume of the soil will be transferred off-site as a waste material.

7.3 Hazardous Materials and Chemicals

Hazardous raw materials such as oils, paints, adhesives, treatments, finishes and chemicals used during the construction phase will require careful handling. These materials will be kept in a separate secure storage unit. This management protocol will prevent uncontrolled losses and the generation of hazardous wastes. All hazardous materials containers are to be carefully labelled with MSD Sheets available nearby in the case of an emergency.

8 Site Waste Management

8.1 Waste Compound

The contractor will setup a dedicated waste storage area within the contractor's compound at the site for the storage of waste materials and waste soils and stones. The site compound and car park area will be located initially in the eastern area of the site. The waste storage area will be located initially at the central area of the site to facilitate waste segregation at source. Please see these proposed areas outlined in Figure 8.1 below.

Figure 8.1: Outline Proposed Waste Compound, Quarantine Area, Temporary Soil Stockpile Storage, Material Storage Area, Dedicated Refuelling Area in the central area of the site.

The waste storage area will be clearly signposted with appropriate access and the area visibly delineated on-site. All signage will be visible from a suitable distance and secured in place to prevent waste generation.

All waste contractors and site personnel shall follow a dedicated access route to the waste storage areas preventing uncontrolled storage or fly tipping of waste materials.

The storage area will be secured with preventing unauthorised access to the compound. It is expected that the construction waste storage compound will be constructed from crushed stone of suitable grade. It is not expected that the stone could be recovered from the greenfield site.

Segregation of waste streams will be implemented by use of dedicated waste skips or waste storage receptacles and bins.

All waste removed from the construction compound will be carried out by a permitted waste contractor. Only companies holding suitable permits will haul and dispose of this waste. Dedicated waste receptacles for expected waste streams are discussed further below.

8.2 Concrete Waste Management

Some groundworks stage concrete wastes could be generated during this stage of the project (depending on the degree of the concrete foundation removal achieved at demolition stage of the former residential development.

The project construction will generate waste concrete. The RWMP will require that all excess concrete will be returned to the concrete batching plant. No concrete washout of the truck storage will take place on-site with concrete washout taking place off-site at the concrete batching facility. On-site concrete washout of the delivery chute will be facilitated. A dedicated sealed unit will be used to store & prevent the loss of concrete runoff to ground or to surface water drainage on-site.

The waste concrete wash water will be removed from the site for off-site disposal at the end of the project following breaking.

8.3 Metal Management

It is unlikely that large quantities of metal waste will be generate during the construction phases of the project. Metal materials will be cut into smaller pieces for transportation within licenced vehicles for off-site recovery. Metal pieces will be placed into a segregated skip pending recovery off-site at a suitable waste disposal/recovery facility.

8.4 Wood Waste Management

There will be wood waste generated during the construction work as off-cuts or damaged pieces of timber. All supply pallets will be returned to the supplier for reuse. Construction methods will be able to utilise off-cuts as the project progresses. A waste storage skip for waste wood, covered where possible, will be stored in the Site Waste Storage Compound. It is expected that wood waste will be recovered at a suitable wood recycling facility.

8.5 Plastic and Packaging Material Management

All packaging waste will be segregated on-site and stored in a suitable covered containers within the waste storage compound.

Canteen areas will contribute to the recycling of packing materials and the contractor will provide suitable storage for recyclables in the welfare units.

8.6 Blocks, Bricks, & Tile Waste Management

At groundworks stage, waste consisting of blocks, bricks, and tiles could be recovered depending on the degree of infill achieved at demolition stage of the former flats.

Blocks, bricks, and tile waste will also be generated during the construction phase of the project. The majority of wastes produced during the construction phase will be off cuts, trimmings, and wastes from breakages. Any blocks, bricks, and tiles that may be re-used will be allocated a temporary storage area; materials that are considered to be wastes will be temporarily stored following source segregation.

All construction waste generated on-site will be sent for off-site disposal as a waste material in accordance with Irish and EU Legislation and guidance.

8.7 Canteen Waste Management

An on-site staff canteen will be provided during the groundworks & construction phase. Separate receptacles for the recyclable fractions may be provided such as plastics, metals and glass which will be dealt as separate waste streams.

The staff canteen will generate food waste and packaging waste. The contractor will provide designated receptacles for food waste, dry recyclables. And residual waste not suitable for recycling such as wet waste (mixed food waste and food packaging), contaminated cardboard, contaminated plastic etc.

8.8 Wastewater Management

Regular housekeeping of the water closet/toilet facilities will be carried out. Any temporary W/C utilities used on site during the construction phase will be maintained by an approved and permitted contractor.

Where utilised, all wastewater and septic tank waste will be retained within a sealed unit to prevent loss to ground before disposal at the licensed approved waste facility. Wastewater will be managed by the contractor and safely removed off-site for appropriate disposal by suitably licenced hauliers and waste disposal contractors.

If agreed with the local authority, foul water from the construction welfare units may discharge to the existing foul water drainage network at the outfall from the site.

8.9 Insulation Wastes

Insulation wastes will be generated during the construction phase. These wastes can be difficult to recover as a separate waste stream and thus are likely to be disposed of as part of a mixed C&D waste stream.

Use of these construction materials will generate some insulation waste from off cuts. The insulation off-cuts will be placed into a covered dedicated temporary storage unit with unusable off-cuts disposed as EWC 17 06 04. These waste materials will be managed and disposed separately from other waste streams.

Fiberglass and plasterboard off cuts can be reused straight away on-site but some wastes will be generated for disposal.

8.10 Management of Other Wastes

All other waste materials other than those mentioned above will likely be of minimal volume.

8.11 Excess Soils and Stones Assessment

Prior to the excavation of any waste soil and stones, the contractor will review and refer to the May 2024 GII Soil Waste Classification Report which classifies the soil waste on-site as non-hazardous 17 05 04 as Cat A, Cat B1, Cat B2, and hazardous soil and stone as Cat D. If required, the contractor would also undertake any additional environmental waste sampling of the proposed soil and stone wastes to

further refine the suitability for off-site waste disposal. The contractor will ensure that any additional investigations will be completed to a suitable scale and that a soil waste classification report shall be produced outlining the conclusions and recommendations of the of the Soil Waste Classification Report. The sampling, testing specification and classification would need to be undertaken by a suitably qualified Environmental Consultant using the "hazwasteonline" tool or equivalent. Waste classification of any soils to be excavated from development will be conducted by a competent Environmental Consultant via visual assessment, sampling and analysis following best industry practice and relevant legislation including:

- List of Waste & Determining if Waste is Hazardous or Non-Hazardous (EPA, 2015).
- Guidance on the classification and assessment of waste, Technical Guidance WM3 (EA et al, 2015).
- EU Council Decision 2003/33/EC and 1999/31/EC (2002).
- European Union (Properties of Waste which render it Hazardous) Regulations 2015 – S.I. 233 of 2015.
- EC Classification, Labelling & Packaging Regulations (No. 1272/2008).

With respect to soil and stone waste proposed to be disposed at Soil Recovery Facilities (SRF), the Contractor will ensure that the assessment of all greenfield and brownfield soil and stone waste acceptance criteria shall meet the requirements set out within the EPA Guidance Document titled "Guidance on waste acceptance criteria at authorised soil recovery facilities, 2020" (or subsequent revisions). This includes the reporting of letters of suitability regarding any greenfield soil and stone up to the tonnage limit of 5,000 tonnes. Given the majority brownfield setting, the scope for producing a letter of waste suitability for greenfield soil and stone waste disposal at a suitable SRF is likely low.

It is expected that a dig plan of all proposed soil wastes and the particular soil waste classification is produced in advance of the groundworks commencing on-site. It is expected that the dig plan would be produced by the site contractor if not already produced by the project team post planning.

Where it is unknown at the time if the inert soil waste shall be disposed at an inert SRF, the contractor shall assess the suitability for that inert waste to be disposed in accordance with the 2020 EPA Guidance. It is expected that all inert soil and stone waste destined for a SRF shall meet that facilities' "Trigger Levels" in soil.

If waste material cannot be loaded directly to haulage vehicles for immediate off-site disposal, excavated material will be temporarily stockpiled above ground within the waste compound, before being sent for appropriate off-site disposal.

Written confirmation shall be obtained from the proposed authorised waste disposal facility in advance of materials being removed from site by a suitably permitted haulier, this is further described in the Section 8.19 below. All waste facilities and waste hauliers shall hold valid and appropriate permissions and shall be pre-approved by the Resource & Waste Manager and the client as necessary.

Prior to the excavation of any soil and stones, the contractor will undertake environmental sampling of all brownfield soils and stones that are intended for re-use on-site. The contractor shall determine if the brownfield soils are suitable for re-use on-site following assessment. The sampling, testing specification and classification shall be undertaken by a suitably qualified and experienced Environmental Consultant.

8.12 Hazardous Waste Management

The contractor will minimise the storage of hazardous waste on-site. All hazardous materials will be appropriately stored in a dedicated secured storage unit. Bunding maybe required depending on the type of wastes requiring storage, preventing potential loss to ground or surface waters.

8.12.1 Hazardous Soil and Stone Management

The potential for hazardous soil and stones to be encountered during the construction phase of the development is likely to be moderate, given the brownfield site setting.

If contaminated soil is recovered from an excavation (that the contractor was previously unaware of) or if soil is suspected to be potentially contaminated due to odour or other physical signs of contamination, the soil will be quarantined and stockpiled separately to all other materials within the site on impervious heavy gauge polythene and covered to prevent runoff. The contractor will ensure that a refined suitable scale soil classification report shall be produced and that all excavations shall adhere to the conclusions and recommendations of the of the Soil Waste Classification Report. The sampling, testing specification and classification will be undertaken by a suitably qualified environmental consultant using the "hazwasteonline" tool or equivalent.

Following soil sampling and soil waste classification, the Resource & Waste Manager will arrange for a suitable soil waste classification and subsequent safe disposal off-site at suitable waste disposal facility or licenced site.

It is proposed that any known impacted soil waste will be loaded directly to haulage vehicles for immediate off-site disposal. The contractor will ensure that all the necessary approvals, notifications, and waste transfer records are in place prior to the movement of the impacted or hazardous soil and stone waste.

Written confirmation shall be obtained from the proposed authorised waste disposal facility in advance of materials being removed from site by a suitably permitted haulier. All waste facilities and waste hauliers shall hold valid and appropriate permissions and shall be pre-approved by the Resource & Waste Manager and the client as necessary.

8.12.2 Hazardous Asbestos Containing Materials Management

If encountered, asbestos containing materials will need to be managed in a controlled manner if identified on-site. Any asbestos waste, debris or contaminated material (including cleaning rags) should be placed into a suitable, UN-approved red bag which displays the appropriate asbestos warning label, and then sealed with tape. The red bag should then be wiped clean before being carefully placed into a suitable approved clear asbestos bag which should then also be sealed. The waste bags must be labelled to identify that they contain asbestos waste.

If the asbestos waste, debris or other material cannot fit into a waste bag, it must be double wrapped in two layers of strong polythene. A red asbestos 1,000-gauge bag or printed label (with the same information as the bag) should be securely attached to indicate that it contains asbestos waste.

The collection, transport and disposal of waste containing asbestos is covered by the provisions of the Waste Management Act 1996. The collection, transport and disposal of ACM must be arranged prior to any ACM removal work and as part of developing a safe plan of works.

8.12.2.1 ACM Transport

Like all wastes, any collector used to transport asbestos waste must have a valid waste collection permit (WCP) issued under the Waste Management (Collection Permit) Regulations, 2007 as amended.

Asbestos transport is subject to notification procedures in accordance with the following legislation:

- European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations, 2011 (S.I. No. 324/2011), for waste movements within the State. A Waste Transfer Form (WTF) is a tracking document which must be used whenever hazardous waste is moved within Ireland and is obtained from the National Transfrontier Shipment Office (NTFSO).
- Waste Management (Shipments of Waste) Regulations 2007 for waste movements into/outside the State. If you plan to export/import or transit asbestos waste through the EU, you must contact the NTFSO prior to the movement of any waste i.e., the procedure of prior written notification and consent.

For further information, the notifier should contact the NTFSO at 01 222 4402/4522 or email nationaltfs@dublincity.ie or website www.dublincity.ie/residential/environment/national-tfs-office.

Asbestos transportation is regulated by the Dangerous Goods Transport Regulations. The European Communities (Carriage of Dangerous Goods by Road and Use of Transportable Pressure Equipment) Regulations, 2011 (S.I. No. 349 of 2011) as amended provides the legal framework under which all dangerous goods, including asbestos, may be transported by road.

8.12.2.2 ACM Disposal

Once collected by an appropriately authorised waste collector, any asbestos waste must be sent to an appropriately EPA licensed waste transfer facility.

There are currently no EPA-licensed waste disposal facilities for asbestos waste in Ireland, however, there are EPA licensed hazardous waste transfer stations. These facilities accept asbestos waste and then arrange to have it disposed of at an appropriate facility abroad.

8.13 Oil Separator and Fuel Infrastructure Waste Management

There will be no waste produced from oil separators as no oil separators will be installed within the construction compound.

8.14 Resource & Waste Manager

The Contractor will nominate a Site Resource & Waste Manager for the duration of the Construction Phase. The Site Resource & Waste Manager will be responsible for the implementation of the resource and waste management plan procedures. It is expected that the Resource & Waste Manager will:

- Bear responsibility for legal waste transfer of all wastes from the site and ensure that all wastes are suitably characterised in accordance with the relevant waste management framework and legislation.
- Meet the targets of the RWMP.
- Provide and teach waste management plan practices onsite by means of site induction training and toolbox talks. Toolbox talks will highlight how small behaviour practices can lead to better

waste management and segregation practices and prevent double handling.

- Draft and implement the RWMP with the primary aim to achieve the RWMP goals and targets.
- Provide a training to all staff and contractors that work on the site during the construction stage.
- Communicate with the supply chain manager, project manager, contracts manager, and the client to ensure that a just in time supply chain is adopted.
- Identify suitably authorised waste collection operators and waste disposal operators and receiving facilities destination sites per waste stream.
- Implement procedures for record keeping and reporting of all on site resource uses and waste generation. The manager may propose the use of waste dockets that record the waste generation at source as well as the daily waste haulage despatch log.
- The manager will keep a site-based folder and/or an electronic version of all waste records and approved suitably permitted or licenced waste collection operators and waste disposal operators that will be utilised. The types of information that will be stored will be discussed in S8.18 of this document.
- The manager will maintain all letters confirming waste transfer and letters of acceptance This letter of acceptance shall be received prior to the wate transfer or disposal and is discussed in more detail in S8.19 of this RWMP.
- Review all site resource and waste records to material transfer and waste disposal exported offsite.
- Communicate suitable waste management issues, fuel losses and emergency response actions with the local authority and any other stakeholders (EPA, NPWS, Waterways Ireland, Inland Fisheries, Irish Water etc) as necessary. The client shall be informed of all issues within 24 hours' notice.
- Conduct monthly relevant internal resource and waste management site audits including audits of subcontractor operations and their implementation of the contractors RWMP. At the start of the project, the manager may need to audit the transfer of waste soil and stone generated at groundworks stage at a more frequent basis until the manager is confident that the RWMP protocols are being adhered to. The manager will assist relevant external auditors with site access and accompany the auditor across the site during the site visit.
- Review all waste records daily and audit the waste management plan implementation on a monthly basis. Review the RWMP live document and revise RWMP targets for waste prevention and generation. The manager will update the plan as required to reflect new resource streams, work practices, suppliers or resource management options as required.

8.15 Waste Movements & Transfer

All movement of waste and the use of waste contractors will be undertaken in accordance with the following:

- Waste Management Act 1996 (as amended).
- Waste Management (Collection Permit) Regulations 2007 (as amended) and Waste Management

(Facility Permit & Registration) Regulations 2014.

The regulations include the requirement for all waste hauliers to hold a waste collection permit issued by the NWCPO. Copies of relevant collection permits of all hauliers involved in waste management at the site will be retained on site.

The movement of hazardous asbestos containing materials shall comply with the Carriage of Dangerous Goods by Road and Transportable Pressure Equipment Regulations and the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). These regulations provide the legal framework under which all dangerous goods, including asbestos, may be transported by road.

8.16 Waste Disposal Contractors

All waste contractors must hold a relevant, up-to-date waste collection permit to transport waste. A copy of this authorisation, issued by the National Waste Collection Permit Office (NWCPO), will be retained on site by the contractor.

Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or waste permit granted by the relevant Local Authority under the Waste Management (Facility Permit & Registration) Regulations 2007 and Amendments or a waste or IED license granted by the EPA. The COR/permit/licence held will specify the type, EWC code, and tonnage of material that can be accepted. As mentioned earlier, the contractor will obtain letters from all receiving facilities to confirm acceptance of waste material and these records will be retained on-site.

8.17 Waste Despatch Log

All waste will be documented prior to leaving the site in a Waste Despatch Log which will be managed by the Resource & Waste Manager. The waste haulage despatch log will be a dedicated log that the waste manager will utilise to record the types, tonnages, the date, the waste haulage permit no. and company name and address, the waste haulage ticket no., the waste disposal facility or licence no., and the waste facility ticket no or receipt reference. This shall be discussed further in the sections below.

The transfer of all by-products would be recorded in the same manner without exception, with the by-product destination and Article 27 No. substituted instead of the waste facility. In this case, the re-use of materials such as aggregates, and concrete shall be noted in a material's re-use register. The register will contain details around the type and volume of material usage, the process and equipment needed to form the re-use, and the end use location. In the case of soils and stones, and site investigations data and analyses as well as the naming of soil stockpiles or deposits might would also be referred to. The approval or consent notice must always be recorded in the material's re-use register.

The following documentation shall be maintained as part of a Waste Despatch Log:

- The date and time of the waste transfer, the name of the person collecting the waste, and the vehicle registration of that person.
- Waste type, tonnage, and EWC.
- The names, address, and permit No, of the agent(s) and transporter(s) of the wastes.
- The name(s), address, and the permit No. of the person(s) responsible for the ultimate recycling, recovery or disposal of the wastes.

- The ultimate facility or landfill destination(s) of the wastes
- Written confirmation prior to acceptance confirming that the waste facility will accept the waste. The letter shall refer to the waste tonnages, the waste codes, any analyses undertaken, and the permitted or licenced facility name address and number.
- The results of any waste analyses
- Haulage contractor name, address, waste collection permit, truck registration, and haulage ticket/docket number.
- Disposal contractor/facility name, address, waste permit or landfill No.
- Details of any rejected waste consignments.
- Waste Transfer Forms (WTF) for hazardous wastes transferred from site and associated appendices.
- Completed Transfrontier Shipment Forms (TFS) for hazardous wastes transferred abroad.
- Written documentation of waste classifications, including any related analyses; and
- Certificates of Recycling, Recovery, Re-Use or Disposal for all wastes transferred from the site.
- Waste acceptance letters receipt confirmation.

8.18 Waste Records

Records will be kept for each waste transfer operation whereby material leaves the site, for reuse on another site, recovery, recycling or disposal. A system will be put in place to record the tonnage of waste materials leaving the site. The following statistics will be recorded:

- Records of known contaminated material retained on-site.
- Waste taken off-site for reuse.
- Waste taken off-site for recovery.
- Waste taken off-site for recycling.
- Waste taken off-site for disposal.

For each movement of non-hazardous waste off-site, a signed waste collection docket will be obtained by the Site Environmental Manager. The waste collection docket should include the following information:

- Site source name and address.
- Date.
- Waste description and EWC code.
- Quantity of waste.
- Waste Haulier NWCP No.
- Vehicle Registration and driver name.
- Final disposal destination name and WFP.

8.19 Letters of Acceptance & Additional Documentation

The contractor will request and file letters of acceptance from all receiving facilities to confirm prior acceptance of waste materials before the waste is transferred to the facility and these records will be kept in a file on-site. Waste documentation to be maintained on-site include:

- Waste facility, COR, or waste landfill authorisations number.
- Expiry date of authorisations.
- Class of waste accepted.
- Weighbridge records.
- Treatment methods for each waste stream accepted i.e., backfilling, crushing, screening, etc.
- Copies of all waste collection permits.

- Copies of all off-site waste records.
- Copies of waste letters of acceptance
- Daily waste despatch log.

8.20 Waste Auditing

The appointed Contractor's Resource & Waste Manager will be responsible for managing all waste audits during the construction phase of the development. The waste audit will review the amount, nature and composition of the waste generated on the site. The waste audit will consider the manner in which the waste is produced and will contrast this with the documented protocols for waste management which are set out in the contractors adopted RWMP.

The frequency of auditing shall reflect the waste volumes being sent for disposal and the phasing of the works but is its expected that auditing will be carried out at least monthly with daily logging of the despatched wastes. Waste auditing will include the following items:

- Review of records for the waste generated and transported off-site.
- Each material type will be examined to establish where the largest percentage of waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how effective they are.
- The waste management methods for each material type will be reviewed in order to highlight how improvements can be achieved.
- A review of all records for the waste generated and transported off-site. If appropriate details for each waste movement are not available, the reasons for this should be established to better maintain the record keeping system.
- Waste management costs will be reviewed, where possible.
- Findings of the waste audits over the course of the works will be available for review.
- Each waste storage area and receptacle will be checked during the audits to ensure correct segregation and appropriate classification of waste streams and to ensure receptacles are not over-filled.
- Each waste receptacle to be checked to ensure correct segregation of waste streams and the correct EWC reference has been utilised. If cross contamination is found the works crew will be briefed on the importance of the correct segregation of waste streams.

8.21 Waste Management Action items Following Auditing

If cross contamination of waste is found, personnel will be further briefed through a toolbox talk on the importance of correct segregation and classification of waste streams.

A final waste management audit of all waste management processes adopted and the total recycling/reuse/recovery figures for the development will be produced by the contractor at the end of the construction programme.

If waste movements are not accounted for, copy dockets and invoices will be gathered to demonstrate legal waste transfer. A lesson learned log will be maintained at this point to communicate how the RWMP or site management may be improved.

9 Outline Proposed Waste Hauliers and Facilities

Whilst the final contractors may vary, the following outline authorised waste hauliers and waste disposal outlets could be utilised by the contractor for this project. Only typical waste streams have been suggested in this outline list. The data provided in Table 8 provides a base list which can be amended as necessary.

Table 8 Authorised Hauliers & Outlets for Waste

Waste Type	EWC Code	Haulier	Collection Permit No.	Destination	Facility License
Inert Soil and Stone	17 05 04	J Ryan Haulage Ltd.	NWCPO-10-01298-03	Padraic McMahon, Fieldstown Killsallaghan, Co. Dublin	WFP-FG-21-0001-01
Non-Hazardous Soil and Stone	17 05 04	J Ryan Haulage Ltd.	NWCPO-10-01298-03	Corranure Landfill	W0077-04
Wood Waste	17 02 01	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Cardboard	20 01 01	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Mixed Metal	17 04 07	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Insulation Materials	17 06 04	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	Everyday Waste & Skip hire	WFP-DC-10-0020-02
Plastic	17 02 03	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Gypsum based construction material	17 08 02	JOC Construction Recruitment Ltd	NWCPO-18-12104-01	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Concrete	17 01 01	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Bricks	17 01 02	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Mixed Construction & Demolition Wastes	17 09 04	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Mixed Municipal	20 03 01	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Bituminous mixtures containing other than those mentioned in 17 03 01	17 03 02	M50 Skip Hire & Recycling Ltd	NWCPO-18-12181-02	Breffni Building & Civil Engineering Ltd	COR-FG-21-0003-01
Glass	17 02 02	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	M50 Skip Hire and Recycling Ltd	WFP-FG-15-0001-04
Tiles & Ceramics	17 01 03	Bulldog Wrap Ltd T/A Ace Skip Hire	NWCPO-22-12791-01	Key Waste Management Limited	W0045-01
Cables	17 04 11	Hammond Lane Metal Co. Ltd	NWCPO-09-01184-06	G & T McGoverns Ltd	WFP-DC-08-0002-03
WEEE	20 01 36	Padraig Thornton Waste Disposal Ltd T/A T/A	NWCPO-09-01190-05	Green Circular Economy Unlimited Company	W0205-01

Waste Type	EWC Code	Haulier	Collection Permit No.	Destination	Facility License
		Thorntons Recycling, Access Waste Recycling, A Plus Skips, Skip Trans			
Wastewater	20 03 04	Padraig Thornton Waste Disposal Ltd	NWCPO-09-01190-05	Ringsend WWTP	D0034-01
Wood preservatives wood preservatives not otherwise specified	03 02 99	Enva Ireland	NWCPO-08-01116-03	Collection and safe disposal to be managed by specialist environmental waste handlers: Enva Ltd.	W0185-01
Hazardous Wastes					
Hazardous Soil and Stone	17 05 03	J Ryan Haulage Ltd.	NWCPO-10-01298-03	Enva Ireland	W0185-01
Construction materials containing asbestos	17 06 05	Enva Ireland	NWCPO-08-01116-03	Enva Ireland	W0185-01
Other C&D wastes containing hazardous substances	17 09 03*	J Ryan Haulage Ltd.	NWCPO-10-01298-03	Enva Ireland	W0185-01
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)	20 01 13* 20 10 19* 20 10 27* 20 10 28* 20 01 29* 20 01 30*	Enva Ireland	NWCPO-08-01116-03	Enva Ireland	W0185-01
Liquid fuels	13 07 01* 13 07 02* 13 07 03*	Enva Ireland	NWCPO-08-01116-03	Enva Ireland	W0185-01
Batteries and accumulators	20 01 33* 20 01 34*	Enva Ireland	NWCPO-08-01116-03	Enva Ireland	W0185-01
Tarmacadam	17 03 01*	McGuire Plant Hire Limited	NWCPO-21-12630-01	Enva Ireland	W0185-01
Wastes from wood preservation	03 02 01* 03 02 02* 03 02 03* 03 02 04* 03 02 05*	Enva Ireland	NWCPO-08-01116-03	Enva Ireland	W0185-01

10 Consultation with Relevant Bodies

As needed, the local authority will be consulted during the construction phase. Consultation with relevant statutory and regulatory maybe required throughout the project. Relevant consultees include, but are not limited to, the following;

- Dublin City Council (as the relevant local authorities for the site location).
- Dublin City Council (as the local authority tasked with the management of hazardous waste transfrontier waste records)
- The EPA (as relevant regulatory body for environmental matters).
- NWCPO.
- Permitted hauliers.
- Suitably permitted / licenced waste disposal / recovery facilities.
- Hazardous Waste Agents

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Appendix A Figures 1-4

Figure 1: Regional Location Map

Figure 2: Site Location Map

Figure 3: Existing Site Drawing

Figure 4: Proposed Waste Compound Drawing

Ireland
15 Outrath Court,
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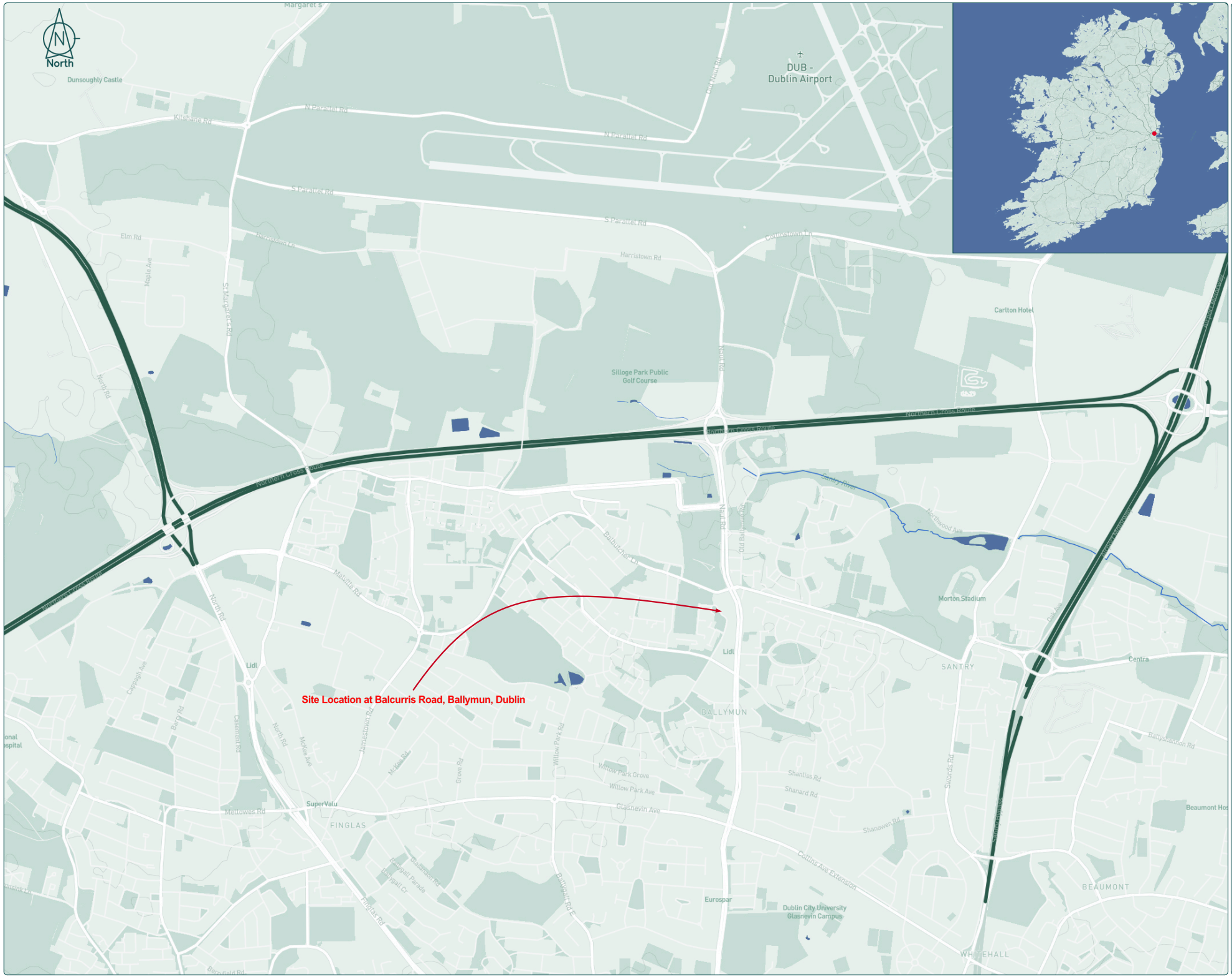

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Drawn by:	Conviro	Date:	02.04.2024
Edited by:	Conviro	Date:	02.04.2024
Drawn by:	Conviro	Date:	02.04.2024

Revisions		
0	2024	Basemap
1	02.04.2024	Basemap

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Client:	Dublin City Council
Project:	Resource Waste Management Plan
Date: 02.04.2024	Scale: NTS
Description:	Figure 1: Regional Location Map
Drawing Number:	CV1107-004-001

Map Sheet Layout:

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Revisions		
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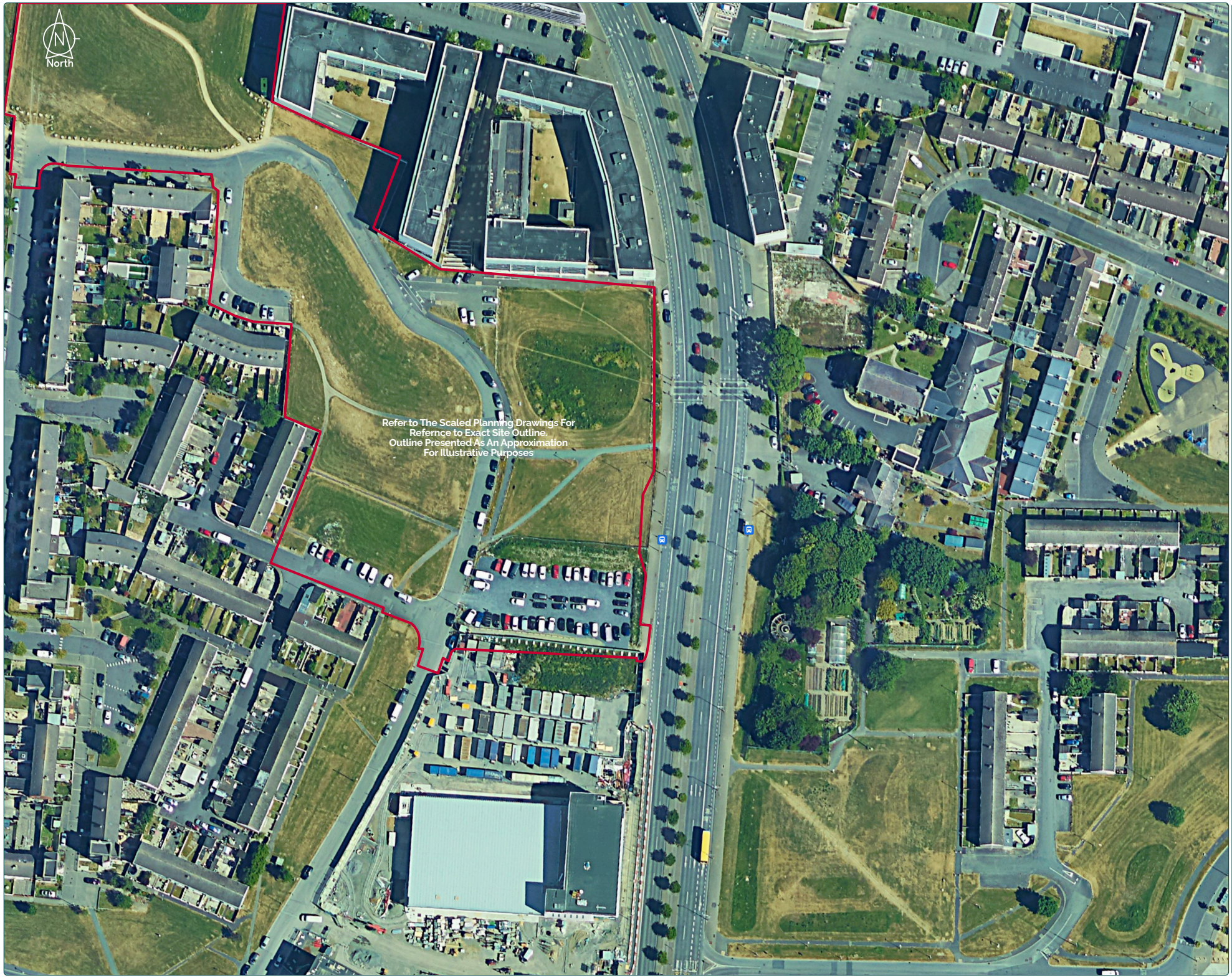
Client:	Dublin City Council
Project:	Resource Waste Management Plan
Date: 02.04.2024	Scale: NTS
Description:	Figure 2: Site Location Map
Drawing Number:	CV1107-004-002



Map Sheet Layout:

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0	2024	Basemap - Google Earth.
1	02.04.2024	Basemap

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Client:	Dublin City Council
Project:	Resource Waste Management Plan
Date: 22.10.2024	Scale: NTS
Description:	Figure 3: Existing Site Layout Drawing
Drawing Number:	CV1107-004-003

Map Sheet Layout:

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Edited by:	Conviro	Date:	22.10.2024
Drawn by:	Conviro	Date:	22.10.2024

Revisions

0	2024	Basemap From MOR.
1	22.10.2024	Basemap

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Client:	Dublin City Council
Project:	Resource Waste Management Plan
Date:	22.10.2024
Scale:	NTS
Description:	Figure 4: Proposed Site Layout Drawing
Drawing Number:	CV1107-004-004

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Appendix B

Sample Waste Dispatch Log

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Waste Type	Tonnage	EWC Code	Waste Collection Contractor Name and Address	Waste Haulage Docket	Date and time	Waste	Collection Permit No.	Waste Facility Name & Address	Waste Facility Name and Address	Waste Facility Permit / Licence	Waste Acceptance Letters
Inert Soil											
Non-Hazardous Soil											
Wood Waste											
Cardboard											
Mixed Metal											
Insulation Materials											
Plastic											
Gypsum based construction material											
Concrete											
Bricks											
Mixed Construction & Demolition Wastes											
Mixed Municipal											
Bituminous mixtures containing other than those mentioned in 17 03 01											
Glass											
Wood preservatives wood preservatives not otherwise specified											
Hazardous Soil and Stone											
Construction materials containing asbestos											
Other C&D wastes containing hazardous substances											
Chemicals (solvents, pesticides, paints, adhesives, detergents etc.)											
Liquid fuels											
Batteries and accumulators											
Tarmacadam											
Wastes from wood preservation											

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Appendix C

Photographic Log

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Photo 1: Waste and raw materials for removal by DCC.

Photo 2: Proposed site for development.

Photo 3: Proposed site for development.

Photo 4: Proposed site for development.

Photo 5: Proposed site for development.

Photo 6: Proposed site for development.

Photo 7: Proposed site for development.

Photo 8: Outline Location of the Proposed Construction Car Park.

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