

Castlebrowne

Construction & Demolition Waste Management Plan (C&D WMP)

Project: **CBXXX Warehouse Unit, Magna Business Park
Magna Avenue, Citywest, County Dublin**

Client: **Rockface Developments Ltd**

Date: **18/04/2024**

Revision: **1.0**



Unit H, Grants Road, Greenogue Business Park, Rathcoole, Co. Dublin, D24 NN53

+353 (0)1 401 1020 | info@castlebrowne.ie | www.castlebrowne.ie

Document Revisions				
Revision Number	Date	Author	Reviewed By	Notes
0	20/06/2022	Richard Twomey BSc.	Zdenek Rydl MSc.	Original
1.0	18/04/2024	Richard Twomey BSc.	John Keaveney BEng.	Site Specific Updates

Table of Contents

1	INTRODUCTION	5
2	LEGISLATIVE FRAMEWORK & PLANNING POLICY	6
2.1	LEGISLATIVE CONTEXT	6
2.2	PLANNING POLICIES & GUIDANCE	7
3	PROJECT OVERVIEW	8
3.1	PROJECT DESCRIPTION	8
3.2	SITE LOCATION	8
3.3	DETAILS OF THE NON-HAZARDOUS WASTE TO BE GENERATED	10
3.4	DETAILS OF POTENTIALLY HAZARDOUS WASTE TO BE GENERATED	10
4	WASTE MANAGEMENT	12
4.1	DEMOLITION WASTE GENERATION	12
4.2	CONSTRUCTION WASTE GENERATION	12
4.3	PROPOSED WASTE MANAGEMENT OPTIONS	12
4.4	TRACKING & DOCUMENTATION PROCEDURES FOR OFFSITE WASTE	15
5	ESTIMATED COST OF WASTE MANAGEMENT	15
5.1	REUSE	15
5.2	RECYCLING	16
5.3	DISPOSAL	16
6	DEMOLITION PLAN	16
7	ROLES, RESPONSIBILITIES & TRAINING	16
7.1	ROLES & RESPONSIBILITIES	16
7.2	PROJECT MANAGER	17
7.3	PROJECT WASTE MANAGER	17
7.4	CONSTRUCTION SUB-CONTRACTORS / SITE PERSONNEL	17
7.5	TRAINING PROVISIONS	17
8	RECORD KEEPING	18
9	WASTE AUDITING	18
9.1	RESPONSIBILITY	18
9.2	WASTE RECORD REVIEW & TARGET ADJUSTMENT	19

10 CONSULTATION WITH RELEVANT BODIES..... 19

10.1 LOCAL AUTHORITY 19

10.2 WASTE PERMITTING, LICENSING & DOCUMENTATION..... 19

11 REFERENCES 21

1 INTRODUCTION

This document has been prepared with all reasonable skill, care and diligence by Castlebrowne in accordance with best practice policies, industry standards as well as legislative requirements for the development on lands at Magna Business Park, Magna Avenue, Citywest, County Dublin.

The then Department of Environment, Heritage and Local Government (DoEHLG) issued “*Best Practice Guidelines on the Preparation of Waste Plans for Construction and Demolition Projects*” in 2006, which states that a Construction & Demolition Waste Management Plan (C&D WMP) should be prepared for projects that meet or exceed the below thresholds:

1. New residential development of 10 houses or more,
2. New developments other than (1) above, including institutional, educational, health and other public facilities, with an aggregate floor area in excess of 1,250m²,
3. Demolition/renovation/refurbishment projects generating in excess of 100m³ of C&D waste and,
4. Civil engineering projects producing in excess of 500m³ of waste, excluding materials used for development works on the site.

As this project may meet or exceed both thresholds 2 and 4 of the above guidelines, best practice has resulted in the preparation of this C&D WMP as well as due to legislative requirements, having respect to condition 7 of granted planning permission (Ref. SD22A/0065).

The purpose of this Construction & Demolition Waste Management Plan is to outline the manner in which construction and demolition waste will be managed throughout the construction phase of the development to ensure compliance with the relevant waste legislation and planning conditions and to ensure construction waste does not have an adverse impact upon the environment.

This is a live document which will be updated on an on-going basis, in line with design adjustments and/or varying site conditions, as the project progresses.

2 LEGISLATIVE FRAMEWORK & PLANNING POLICY

2.1 Legislative Context

The primary legislative instruments that govern waste management in Ireland and are applicable to the project are:

- Waste Management Act 1996 (No. 10 of 1996) as amended,
 - Sub-ordinate legislation:
 - Waste Management (Collection Permit) Regulations (SI No. 820 of 2007) as amended,
 - Waste Management (Facility Permit and Registration) Regulations 2007, (SI No. 821 of 2007) as amended,
 - Waste Management (Licensing) Regulations 2004 (SI No. 395 of 2004) as amended,
 - Waste Management (Packaging) Regulations 2014 (SI 282 of 2014) as amended,
 - Waste Management (Planning) Regulations 1997 (SI No. 137 of 1997),
 - Waste Management (Landfill Levy) Regulations 2015 (SI No. 189 of 2015),
 - Waste Management (Food Waste) Regulations 2009 (SI 508 of 2009), as amended,
 - Waste Management (Hazardous Waste) Regulations, 1998 (SI No. 163 of 1998) as amended,
 - Waste Management (Shipments of Waste) Regulations, 2007 (SI No. 419 of 2007) as amended,
 - Waste Management (Movement of Hazardous Waste) Regulations, 1998 (SI No. 147 of 1998),
 - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended,
 - European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (SI No. 149 of 2014),
 - European Union (Batteries and Accumulators) Regulations 2014 (SI No. 283 of 2014) as amended,
 - European Union (Household Food Waste and Bio-waste) Regulation 2015 (SI No. 191 of 2015),
 - European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994) and,
 - European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (SI No. 233 of 2015).
 - Environmental Protection Act 1992 (No. 7 of 1992) as amended,
 - Litter Pollution Act 1997 (No. 12 of 1997) as amended by the Protection of the Environment Act 2003 and,
 - Planning and Development Act 2000 (No. 30 of 2000) as amended.

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law².

The principle of “Duty of Care” and the “Polluter Pays” are two core concepts of European Union waste legislation. Duty of care is the onus on the producer of waste to be responsible for waste from its production until it is treated, either by reuse, recycling or disposal. Appointed waste contractors take on the responsibility of ensuring the waste is legally treated. However, the producer is ultimately accountable until the waste is treated. The polluter pays concept puts the onus of the producer of waste to be financially and legally accountable for pollution incidents or incorrect management of produced wastes.

To avoid this risk, methods to ensure compliant waste contractors are used is discussed in section 4, 8 and 10.

2.2 Planning Policies & Guidance

2.2.1 National Planning

The most current national-level policy on waste management is the ‘*Resource Opportunity, Waste Management Policy for Ireland*’³ published in 2012 by the then Department of the Environment, Community and Local Government. This policy document identifies both the environmental as well as economic benefits of improved waste management, highlighting the effectiveness of waste prevention. The key measure highlighted for implementation from this policy is an examination of financial mechanisms to be used against producers of waste “*without a successful voluntary initiative*” to tackle the significant volumes of waste produced on projects over a certain threshold within the construction industry.

2.2.2 Regional Planning

Eastern-Midlands Region Waste Management Plan 2015-2021

The development is located on lands in the Magna Business Park, Citywest, County Dublin, and falls within the Eastern-Midlands Region and the subsequent *Eastern-Midlands Region Waste Management Plan (EMR WMP) 2015-2021*⁴. This region comprises the local authorities of Dublin City Council, Dun Laoghaire-Rathdown, Fingal, South Dublin County Council, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow County Councils.

The strategic vision of the EMR WMP is; “*To rethink our approach to managing waste, by viewing our waste streams as valuable material resources. Making better use of our resources and reducing the leakage of materials, as wastes, from our economies, will deliver benefits economically and environmentally to the region.*”.

The EMR WMP sets out the strategic targets for waste management in the region and sets a specific target for C&D waste of “70% preparing for reuse, recycling and other recovery of construction and demolition waste”.

South Dublin County Development Plan 2022-2028

The lands at Kingswood Avenue, located in the Citywest Business Campus, where the development is sited, is within County Dublin and is under the local authority of South Dublin County Council.

SDCC published the *South Dublin County Development Plan 2022-2028*⁵ which lists the County Council Policy of IE7, implementing European Union, National and Regional waste related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

This policy is supported by the following objectives from the development plan;

IE7 Objective 1	Encourage a just transition from a waste economy to a green circular economy in accordance with 'A Waste Action Plan for a Circular Economy 2020-2025'.
IE7 Objective 2	To support the implementation of the <i>Eastern Midlands Region Waste Management Plan 2015-2021</i> or as amended.
IE7 Objective 8	To adhere to the recommendations of the National Hazardous Waste Management Plan 2014-2020 and any subsequent plan, and to co-operate with other agencies including the EPA in the planning, organisation and supervision of the disposal of hazardous waste streams, including hazardous waste identified during construction and demolition projects.

Local Area Plan

The Magna Business Park, where the development is sited, is currently not covered by a specific local area plan.

3 PROJECT OVERVIEW

3.1 Project Description

The development will comprise the provision of a warehouse with ancillary office and staff facilities and associated development. The building will have a maximum height of 15.5 metres with a gross floor area of 13,604m² including a warehouse area (12,568m²), staff facilities (489m²) and ancillary office area (538m²); the development will also include: a vehicular and pedestrian entrance to the site from Magna Avenue; a separate HGV entrance from Magna Drive; 69 ancillary car parking spaces; covered bicycle parking; HGV parking and yards; level access goods doors; dock levellers; access gates; signage; hard and soft landscaping; lighting; boundary treatments; ESB substation; sprinkler tank and pump house; and all associated site development works above and below ground.

3.2 Site Location

The site is located in the existing Magna Business Park, bounded to the north by Magna Drive and existing industrial/commercial properties as well as to the east, the west is bounded by Magna Drive and residential development and to the south by Magna Avenue and existing residential properties.

The location of the development is shown in Figure 1 below with the context depicted in Figure 2.



Figure 1. Site Location



Figure 2. Context of the development

3.3 Details of the Non-Hazardous Waste to be Generated

Soil, stones, and other geological material will be generated during the excavation of the site and the preparation of the development. Excavated material will be retained on the site, engineered, and reused as suitable fill material where possible. It is our intention to control the site works in such a way that the maximum achievable volume of site won material will be reused on site.

Construction waste will arise on the project mainly from excavated materials but also through unavoidable construction waste. The Site Manager will ensure that materials are ordered such that the quantity delivered, the timing of the delivery and the storage is not conducive to the creation of unnecessary waste. This waste could include material types such as PVC piping, timber, broken concrete or tar and plasterboard. Excess concrete may also be generated.

The welfare facilities on the site will also generate waste. This would include office units and canteens whereby recyclable materials such as paper, plastics, cardboard, aluminium cans, and packaging waste may be produced. Non-recyclable material may also be generated as well as organic waste from canteens and sewage sludge from temporary welfare units.

3.4 Details of Potentially Hazardous Waste to be Generated

3.4.1 Hazardous Soils

Any volume of soil required to be removed from the site will be classified as either hazardous or non-hazardous waste in accordance with the EPA publication on *'Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous'*⁷ either through the HazWasteOnline system (or similar) or through a third party such as an environmental or geotechnical consultancy. Once determined, the material will be classified as clean material, inert waste, non-hazardous waste or hazardous waste in accordance with the *EC Council Decision 2003/33/EC*⁸, which provides the criteria for landfills to accept waste.

3.4.2 Asbestos

Asbestos is not expected to be encountered during the construction stage of development. If any buried historic waste material or pipes are discovered and are identified to contain ACM, including the surrounding soil, a licensed and appropriate waste contractor will be appointed to remove this material in conjunction with *SI. No 386 of 2006 Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006-2010*.

Any material removed from the site, if encountered, will only be removed to an appropriately licensed facility.

3.4.3 Fuels/Oils

Storage of fuel/oil on the site will be contained to static tanks which, shall be at a minimum, double skinned and stored in a secondary bund capable of containing 100% of the volume of the largest tank

plus 10% capacity for incipient rainfall. Where possible, the bund shall be sheltered to reduce the ingress of rainfall.

All site crew responsible for refuelling shall be trained in methods preventing loss of fuel/oil whilst refuelling plant, machinery, or portable containers (Jerry cans). Provided there is adherence to the refuelling procedure, there should be minimal fuel waste/contaminated rainwater.

3.4.4 Chemicals

There will be a small volume of hazardous substances/chemicals used on the site, such as concrete retarders and curers, machine grease and motor oils for machinery, adhesives, paints, and glues, among others.

These chemical substances will be kept in small quantities and stored in banded containers. The small volumes of waste will be retained on the site pending removal by a suitably licensed waste contractor.

3.4.5 Waste Types Expected to be Generated & LoW Codes

Table 1 below details the anticipated waste arisings and associated List of Wastes (LoW) codes as would be expected on a typical site.

Waste Type	List of Wastes Code (LoW)
Soil & Stones	17 05 04
Concrete, Bricks, Tiles, Ceramics	17 01 01, 17 01 02, 17 01 03
Wood	17 02 01
Plastic, Plastic contaminated with dangerous substances	17 02 03, 17 02 04*
Metals (Various incl mixed metals)	17 04 01 – 17 04 07
Cables (Non-Hazardous)	17 04 10
Gypsum based construction materials	17 08 01
Mixed C&D waste	17 09 04
Mixed municipal waste	20 03 01
Paper and cardboard	20 01 01
Liquid fuels (fuel oil & diesel, petrol, other fuels including mixtures)	13 07 01*, 13 07 02*, 13 07 03*
Chemicals (solvents, paints, adhesives etc)	20 01 13* - 20 01 15*. 20 01 27*,

Table 1. Anticipated waste types and associated EWC codes

4 WASTE MANAGEMENT

4.1 Demolition Waste Generation

Demolition works are not required for this project.

4.2 Construction Waste Generation

The estimated quantities of waste arising from the construction activities are listed below in Table 2. These estimates are indicative only as there is potential for construction methodologies to change during the project. Additionally, the exact materials may also change, resulting in a disparity of the estimated volumes of waste.

The Waste Audit and completion of this C&D WMP will provide for an accurate account of all waste arisings partway through and at the end of the project.

Waste Type	Quantity (Tonnes)	Reuse/Recycling (Tonnes)	Disposal (Tonnes)
Concrete, Bricks etc	25.2	25.2	0
Timber	12.6	12.6	0
Metals	6.3	6.3	0
Plasterboard	2.5	2.5	0
Packaging/Cardboard	1.3	1.3	0
Municipal Waste	1.3	0	1.3
Mixed Waste Materials	50.4	45	5.4
Totals	99.6	92.9	6.7

Table 2. Estimated Waste Quantities from Construction

4.3 Proposed Waste Management Options

A waste management area will be established on the site to place skips for the deposition of waste materials generated throughout the project. This waste area will provide a variety of roll-on/roll-off skips, enclosed skips and bins to allow for the segregation of all waste materials produced on the site, where practical. Where it is not possible to segregate materials on the site, this will be undertaken off-site.

Bins and transportable skips will be provided at the work face to assist in source segregation where possible, to reduce the mixing or contamination of waste types.

All waste produced on the site shall only be removed from the site by an agreed waste contractor holding a relevant waste collection permit (NWCPO) for those wastes being removed. The destination facility of the waste arisings shall hold a relevant license to operate handling those wastes. There are various waste contractors available within the region for the types of waste envisaged to be produced.

Waste produced by sub-contractors may be removed from the site whereby this material is considered to be non-hazardous, provided it is equal to or less than two tonnes in weight. These contractors are not required to be involved with the waste industry, nor are their vehicles required to be designed for waste transportation. They are exempt from requiring a waste collection permit. However, any receiving facility must be licensed appropriately to receive these materials (Article 30 (1)(b) of the Waste Collection Permit Regulations 2007 as amended).

Bunded containers will be used for the temporary storage of hazardous wastes on the site pending removal by an approved hazardous waste contractor. These containers shall be bunded so as to prevent the spillage or loss of any substance into the environment.

The following is the proposed management options for the main waste streams:

Soil, stones and made ground

Excavation of material on site is required to progress the construction of the development. Under the waste hierarchy, minimisation is the most preferred option for dealing with waste. Since minimisation cannot be achieved due to the required excavations, groundworks and eventual landscaping, reuse is the next preferred option. All site won material shall be reused on the development wherever possible such as in soil stabilisation works, cut and fill and landscaping.

In the event that excavated material cannot be reused on site, Article 27 status of the material shall be investigated to reuse the material offsite pending approval from the EPA. If the material is investigated and determined to be a waste rather than a byproduct, disposal of the material as waste will be the last method employed and carried out in accordance with the Waste Management Acts 1996 – 2011 as amended.

Bedrock

Bedrock is not envisaged to be encountered during the earthworks phase of construction.

Tarmacadam

Waste tarmacadam may be generated through tying the new road network into the existing road network. This minor volume will be taken off site to a bitumen plant for recycling.

Silt and Sludge

Where required, silt interception and petrochemical interception will take place on runoff and pumped surface and groundwater from site works. These waste materials will be removed by a suitably licensed waste contractor and taken off-site for disposal.

Waste Concrete, Concrete blocks, Bricks, Tiles & Ceramics

Waste concrete will be produced from tying the constructed roads into the existing road network and from the concrete washout bay on site. Waste concrete will be sent offsite to a concrete recycling facility or used as inert infill at a licensed facility.

Bricks, blocks, tiles and ceramics may arise from off cuts or accidental damage. These materials will be managed with waste concrete.

Hard Plastics

Hard plastics such as PVC piping from off-cuts can be easily recycled as well as hard plastic containers and similar materials. Provided these materials are uncontaminated, they will be segregated where possible and sent off-site for recycling.

Timber

Timber off-cuts, damaged materials, pallets or timber used in temporary works designs shall be segregated and sent off-site for recycling. Pallets used in the delivery of materials shall be stored on site and returned where possible to suppliers for reuse.

Metal

Any metal off-cuts produced will be sent off-site for recovery as metal is highly recoverable.

Plasterboard

Plasterboard can be recycled through the material provider, and as a result, offcuts or damaged boards will be segregated and sent for reuse in the manufacturing plant.

Waste Electrical and Electronic Equipment (WEEE)

Office equipment or other electronic or electrical equipment designated as waste shall be stored indoors pending removal from the site for recycling.

Packaging Recyclable Wastes

Cardboard and soft plastics associated with material deliveries and packaging will be segregated at source and placed into bins/skips pending removal from site for recycling.

Non-Recyclable Waste

Municipal wastes generated in canteens, offices and welfare units will be disposed of within a separate bin/skip to recyclable materials, pending removal from site. To minimise wastes sent for disposal, a member of the waste team (see Section 7) will inspect the municipal waste storage to ensure recyclable materials are not deposited within this waste stream.

Asbestos Containing Materials (ACM)

Asbestos, if encountered, will be removed, managed and disposed of under supervision of a specialist waste contractor and sent for disposal in a licensed facility.

Other Hazardous Wastes

Contaminated soils, waste fuel/oils and chemical substances will be kept to a minimum and removed from site as frequently as possible. This will reduce the exposure to work operatives, the public and the environment.

Hazardous wastes, where possible, will be recovered whilst non-recoverable material will be disposed of.

4.4 Tracking & Documentation Procedures for Offsite Waste

All waste on the site will be documented before leaving the site. The appointed waste contractor shall weigh the waste materials either on arrival to the designated receiving facility by weighbridge or through onboard weighing of the vehicle.

The appointed Project Waste Manager (see section 7) will maintain a record on site of all waste movements throughout the project. All waste contractors removing waste from the site shall have a waste collection permit issued by the NWCPO. These requirements are in accordance with the Waste Management Acts 1996-2011, Waste Management (Collection Permit) Regulations 2007 as amended, and the Waste Management (Facility Permit & Registration) Regulations 2007 as amended.

All receiving facilities for waste generated on the site will be in possession of an EPA IED or Waste License. Other facilities or receiving locations may require only a Local Authority waste permit or COR permit. These licenses or permits shall be provided to the Project Waste Manager and be maintained within the site waste records.

For wastes requiring movement outside of Ireland, a Transfrontier Shipping document will be obtained from the Dublin City Council (DCC) (as the relevant authority on behalf of all local authorities within Ireland) and be kept with the site waste records. The records (Permits/Licenses) from the final destination facility of this material will also be kept in the site waste records, including a receipt of delivery.

5 ESTIMATED COST OF WASTE MANAGEMENT

The cost of all C&D waste management will be measured throughout the project with a figure available during the audit and a final figure of the total costs available upon completion. The costs shall include handling, storage, shipping/transportation, disposal as well as rebates generated from salvageable material.

5.1 Reuse

The reuse of materials on the site is the most cost-effective method of managing waste. There will be no shipping, disposal or storage costs linked with a waste contractor.

Using the material off-site on another development such as soil or stones would only incur a transportation fee, whereas some industries such as landfill sites may take the material at a reduced fee or free of charge for capping material or for haul roads.

5.2 Recycling

Some materials, when recycled or salvaged, can produce a rebate, such as metals when segregated appropriately. Waste contractors can offer a reimbursement from this material which can offset against the handling of skips for other waste types.

All segregated materials will be accepted at a demonstrably lower cost than Mixed C&D waste. Timber, metals and hard plastics are readily recoverable and will reduce the overall cost of waste management during the construction phase of the project.

5.3 Disposal

Disposal of waste to landfills is the least preferential option when dealing with waste in accordance with the waste hierarchy. Resultantly, there is a €75 per tonne landfill levy as a legal requirement due to the *Waste Management (Landfill Levy) Regulations 2015*. Not inclusive of this, gate fees for landfill sites or a disposal fee can increase costs to approximately €130-€150 per tonne within the Leinster area. Additionally, a collection fee of skips from the site by waste contractors will further increase this cost.

Segregated materials that are not readily recoverable can be classified as Mixed C&D. This material may be segregated by a waste contractor after collection who may be able to recover additional materials. This results in Mixed C&D waste at times being cheaper than municipal waste.

6 DEMOLITION PLAN

Demolition is not required for this project.

7 ROLES, RESPONSIBILITIES & TRAINING

7.1 Roles & Responsibilities

Castlebrowne, as the principal contractor, will be responsible for implementing and ensuring compliance to this C&D WMP for the duration of the project.

The following roles will be fulfilled by Castlebrowne staff on the project.

7.2 Project Manager

The Project Manager has the responsibility for the overall implementation of the C&D WMP. He/she will ensure that there are adequate resources allocated for implementing this Plan.

7.3 Project Waste Manager

The Project Manager will appoint a Project Waste Manager from the site construction team for the duration of the construction works. This person will likely be the site manager or the site environmental health and safety officer and afforded the authority to instruct all site personnel to comply with the implementation of this Plan.

The Project Waste Manager will be responsible for ensuring the Plan is implemented on the site and provide training to site personnel where source segregation, selective demolition and material reuse techniques apply and will be given instructions on how to comply with this Plan.

The Waste Manager will keep a copy of the C&D WMP and make it available to all site personnel. Relevant details will be advertised on signage within the site facilities such as the canteen and site offices.

7.4 Construction Sub-Contractors / Site Personnel

All site personnel will be responsible for adhering to this Plan. They will be instructed by the Project Waste Manager on how to implement the policies and procedures contained herein. Site inductions, toolbox talks, and signage will further the knowledge and training required to ensure this Plan is carried out.

7.5 Training Provisions

The Project Waste Manager will be suitably trained in waste management such as segregation and material recovery to minimise waste and maximise reuse and recycling. They shall also be trained in how to implement and maintain a waste record system.

The Project Waste Manager will implement a waste training programme which can be included in the site induction to site personnel and sub-contractors detailing the requirements for effective waste management and their responsibility to comply with the waste management strategy.

Waste management training shall include instruction on waste segregation at source, instruction on salvageable materials for reuse on the site, location of the waste management area for deposit of waste materials, as well as instruction on hazardous materials, including the risks of the same.

8 RECORD KEEPING

The Project Waste Manager is responsible for producing a record-keeping system of all waste materials sent off-site for reuse on another site or sent for recovery or disposal.

This system will allow the Project Waste Manager to record the quantities of waste generated and highlight areas from which most waste occurs. This will also enable the C&D WMP to adapt to targets. These records can be compared to the delivery of materials brought to the site to determine the percentage of waste generated by each material type. This will provide a result of the success or failure of targets within this Plan.

To ensure effective records are kept, the Project Waste Manager or delegated waste team member shall record the following;

- Waste taken for reuse off-site,
- Waste taken for recycling,
- Waste taken for recovery,
- Waste taken for disposal, and
- Waste materials brought to the site for reuse.

Every movement of waste sent off-site will require a signed docket from the waste contractor provided to the Waste Manager. This docket will detail the following;

- Weight of waste material,
- EWC code of waste material,
- Date of waste movement,
- Source of the waste material, and
- Destination of the waste material.

The Waste Manager would also maintain copies of any contracted waste contractors waste collection permits and waste facility licenses as issued by the NWCPO and EPA, respectively.

9 WASTE AUDITING

9.1 Responsibility

The Project Waste Manager shall be responsible for conducting an audit of the waste management programme approximately halfway through the construction phase of the development.

9.2 Waste Record Review & Target Adjustment

All records of waste generated and removed from the site shall be reviewed and compared with the set target goals for waste minimisation. Any unaccounted records of waste movements must be acquired, or else detailed reasons shall be given for the lack of maintenance of the waste management system.

All waste material types will be examined to determine the source of waste generation on site. The C&D WMP shall be reviewed after the audit to identify how the set targets can be reached based upon the production of waste volumes by the time of the audit. The cost of waste management shall also be reviewed at this time.

Once the construction phase of the development has been completed, a final waste management report shall be produced to summarise the volumes of recycling, reuse, recovery and disposal numbers for the development. This will also include what waste management processes were utilised to manage waste during the construction phase as well as the costings of the waste management plan.

10 CONSULTATION WITH RELEVANT BODIES

10.1 Local Authority

As per condition 7 of the granted planning permission and best practice policies, this C&D WMP has been produced to manage the waste arisings from the demolition and the construction stages.

Where required, before any waste is removed from the site, proposed destinations for each waste stream will be provided to South Dublin County Council (SDCC). Additionally, where required, SDCC shall be consulted throughout the excavation, and construction stages in order to adhere to compliant waste management practices such as minimising waste and taking advantage of reuse and recycling opportunities on the site.

10.2 Waste Permitting, Licensing & Documentation

The removal of site waste and the recovery or disposal of waste materials will be carried out by a waste management specialist for waste types authorised under their licensing conditions. A waste management specialist has yet to be agreed through contracts but there are many available within the Dublin region such as Panda Waste or Greyhound Recycling. The permits and licenses required by these contractors will be retained as per the example below.

Waste Contractor	NWCPO Number	Destination Facility	Facility License Number
Panda Waste	NWCPO-13-11193-07	West Dublin	W0188-01
		S.D.C.C Baler	W0003-3
		Merrywell (IPR)	W0238-01

Other waste contractors shall be appointed where required, for waste collection and recovery or disposal, notably for hazardous waste, provided they are licensed to do so.

Any appointed waste contractor will be contracted on the basis of being experienced in C&D waste management, are licensed to handle waste, and the receiving facilities of waste materials hold a relevant permit.

The Waste Manager or Project Contracts Manager will be responsible for ensuring appointed waste contractors hold the above-mentioned licenses and permits. Additionally, waste contractors will be screened to ensure they are not featured on the Environmental Protection Agency’s National Priority Sites List of offending industries and waste facilities.

11 REFERENCES

1. Department of Environment, Heritage and Local Government, Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (2006).
2. 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 as amended).
Sub-ordinate and associated legislation includes:
 - Waste Management (Collection Permit) Regulations 2007 (SI No. 820 of 2007) as amended,
 - Waste Management (Facility Permit and Registration) Regulations 2007 (SI No. 821 of 2007) as amended,
 - Waste Management (Licensing) Regulations 2000 (SI No. 185 of 2000) as amended,
 - Waste Management (Packaging) Regulations 2014 (SI No. 282 of 2014) as amended,
 - Waste Management (Planning) Regulations 1997 (SI No. 137 of 1997) as amended,
 - Waste Management (Landfill Levy) Regulations 2015 (SI No. 189 of 2015),
 - Waste Management (Food Waste) Regulations 2009 (SI No. 508 of 2009) as amended,
 - Waste Management (Hazardous Waste) Regulations 1998 (SI No. 163 of 1998) as amended,
 - Waste Management (Shipments of Waste) Regulations 2007 (SI No. 419 of 2007) as amended,
 - Waste Management (Movement of Hazardous Waste) Regulations, 1998 (SI No. 147 of 1998),
 - European Communities (Waste Directive) Regulations 2011 (SI No. 126 of 2011) as amended,
 - European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (SI No. 149 of 2014),
 - European Union (Batteries and Accumulators) Regulations 2014 (SI No. 283 of 2014) as amended,
 - European Union (Household Food Waste and Bio-waste) Regulations 2015 (SI No. 191 of 2015),
 - The European Communities (Transfrontier Shipment of Hazardous Waste) Regulations 1988 (SI No. 248 of 1988) and,
 - European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (SI No. 233 of 2015).
 - Environmental Protection Act 1992 (No. 7 of 1992) as amended,
 - Litter Pollution Act 1997 (No. 12 of 1997) as amended by the Protection of the Environment Act 2003 and,
 - Planning and Development Act 2000 (No. 30 of 2000) as amended.
3. Department of Environment, Communities and Local Government, A Resource Opportunity - Waste Management Policy in Ireland (2012).
4. Eastern-Midlands Region Waste Management Plan 2015 – 2021 (2015).
5. South Dublin County Development Plan 2023-2029 (2022)
6. EPA, Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous (2015)
7. Council Decision 2003/33/EC, establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC.