Health & Safety Department

Resource & Waste Management Plan

Construction & Demolition (RWMP)

MMD-WMP-01

APPROVAL

DOCUMENTATION RESPONSIBILITY	NAME	TITLE	DATE
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REVISION SUMMARY

REVISION	DATE	DESCRIPTION OF REVISION
0	04/09/2024	Initial draft- RWMP

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SECTION 1 - INTRODUCTION

Waste Management Planning is the process of setting out the activities and actions required to manage waste generated in an environmentally responsible way and to achieve the targets agreed for reuse, prevention, recycling, and treatment. The establishment of a plan allows taking stock of the existing situation, defining the objectives that need to be met, formulating appropriate strategies, and identifying the necessary implementation means

This Construction waste management plan relates to the construction of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork.

The project involves the construction of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping, utilities and boundary treatments on a brownfield infill at Gerald Griffin Street/Burkes Avenue, Blackpool. The proposal comprises a 3-storey block facing onto Gerald Griffin Street (within the ACA) with 4 staggered apartment blocks behind building up to 7 stories and fronting onto North Monastery Road to the west (5 stories visible above level of North Monastery Road, outside the ACA).

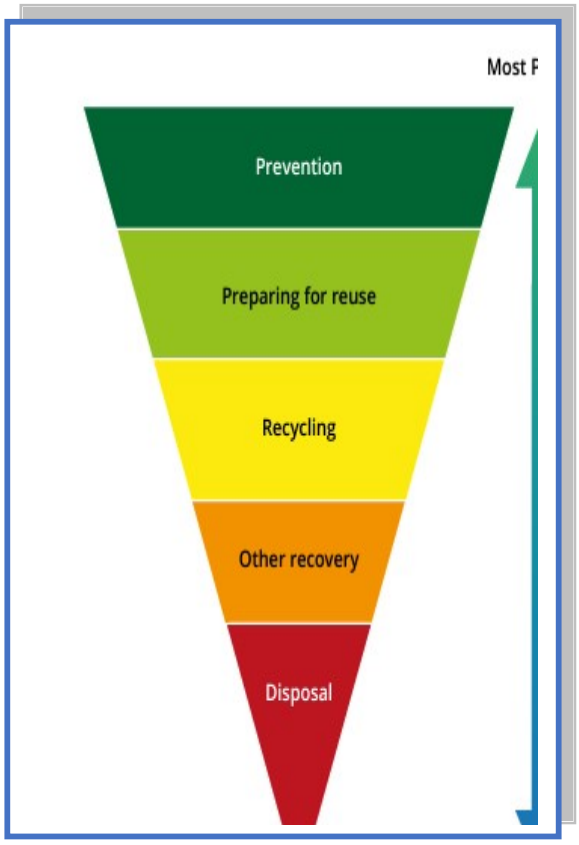
Waste from Construction activity is the largest waste stream in the EU and represents one third of all waste produced within the EU. The quantity of Construction waste managed nationally has shown an increasing trend in the period 2012 to 2019, with 8.8 million tonnes of C&D waste managed in 2019. The current growth trend is expected to continue over the medium to long term in line with planned delivery of housing and infrastructure projects described in Project Ireland 2040.

The proper management of C&D waste and resources can have significant benefits in terms of sustainability and quality of life and increased demand for C&D recycled materials.

The best practice guidelines 2021 supersede the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Waste Projects which were published by the Government in July 2006. The replacement/current guidelines reflect current waste legislation and policy including A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020–2025 published in September 2020. Since the publication of the 2006 guidelines, waste management legislation and policy have evolved towards prioritising waste prevention and lifecycle thinking as follows:

An increased emphasis on waste prevention, in line with the waste hierarchy (Figure 1-1), through established principles such as designing out waste and the use of green procurement. Options to prevent waste are typically greater during the early stages of a project through design, planning and procurement and the guidelines for these phases highlight the primacy of prevention.

The guidelines have also been prepared to promote more circular design and construction principles in line with the EU Circular Economy Action Plan under the EU Green Deal.1 The circular economy model tries to avoid using unnecessary resources in the first place and to keep resources 'in flow' by means of effective and smart reuse and recycling strategies reducing the use of virgin materials.



The purpose of these guidelines is to provide a practical and informed approach which is informed by best practice in the prevention and management of Construction wastes and resources from design to construction of a project, including consideration of the deconstruction of a project. They provide clients, developers, designers, practitioners, contractors, sub-contractors and competent authorities with a common approach to preparing Resource and Waste Management Plans (RWMPs) for construction and demolition projects in Ireland.

The guidelines address the best practice approach for the following phases of a project:

- Prior to Construction – including the stages of design, planning and procurement in advance of works on site (in the 2006 guidelines this was referred to as an outline or preliminary plan);
- During Construction – relating to the effective management of resources and wastes during construction operations (in the 2006 guidelines this was referred to as the detailed plan).

This Resource & Waste Management Plan Construction (RWMP) sets out the requirements for the construction site, welfare facilities, together with associated external site works when required.

1.1 LIVE DOCUMENT

The RWMP is considered a 'live' document and as such will be reviewed on a regular basis. Updates to the RWMP may be necessary due to any changes in waste management practices and / or contractors. As explained in more detail in the later sections, the procedures agreed in this RWMP will be audited regularly throughout the construction phase to ensure compliance. In addition, any changes in legislation will be incorporated into the RWMP.

SECTION 2 – LEGISLATION AND POLICY

2.1 LEGISLATION

The EU Waste Framework Directive (Directive 2008/98/EC) set the basic concepts and definitions related to waste management, such as definitions of waste, recycling and recovery. It also included definitions for when waste ceases to be waste and becomes a secondary raw material (end-of-waste criteria) and how to distinguish between waste and by-product. The Directive, enacted in Ireland under the Waste Directive Regulations 2011 (S.I. No. 126 of 2011), requires Member States to undertake the following:

1.) Apply the waste hierarchy in waste management legislation and policy.

2.) Take measures, as appropriate, to promote the reuse of products and preparing-for reuse activities, notably by encouraging the establishment and support of reuse and repair networks, the use of economic instruments, procurement criteria, quantitative objectives or other measures.

3.) Establish waste management plans.

4.) Promote the high-quality recycling of waste materials as part of the overall aim to make the EU a 'recycling society'; and

5.) Ensure that the preparation for reuse, recycling and other material recovery of non-hazardous construction and demolition waste (excluding naturally occurring material defined in List of Waste category 17 05 04) is a minimum of 70% by weight by 2020. The Directive specifies that this target should be achieved by preparing for reuse, recycling and other material recovery, including backfilling operations using waste to substitute other material.

The revised legislative framework on waste (Directive (EU) 2018/851) entered into force in July 2018 and sets clear targets for reduction of waste and establishes an ambitious and credible long-term path for waste prevention and waste treatment. This Directive has been transposed into Irish legislation through the European Union (Waste Directive) Regulations 2020 (S.I. No. 323 of 2020).

The 2018 Directive states that by the 31 December 2024, the Commission shall consider the setting of preparing for reuse and recycling targets for C&D waste and its material-specific fractions. In this regard, the 2011 target is subject to change throughout the lifetime of these guidelines and practitioners and regulators should consult the relevant legislative portals for changes to obligations and/or targets.

In Ireland the primary waste legislation is the Waste Management Act 1996, as amended, and Section 32 of the Act places a general obligation on the holder of waste to comply with legislation and ensure all wastes are managed within the requirements of the Act. In short, the obligation to manage waste legally lies with the holder of waste which means the waste producer or the person who is in possession of the waste. At a construction site, the mandatory obligation to appropriately manage waste generated at a construction site lies with the Client and the Contractor.

Under Section 3(1) of the Act the requirements do not apply to the following materials, which hence are not considered 'waste':

1.) Land (in-situ) including unexcavated contaminated soil and buildings permanently connected with land – relates to land and buildings prior to any construction or demolition where material remains untouched. Once it has been excavated or otherwise removed, the material may enter into the control regime set down by the Waste Management Acts.

2.) Uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated.

In addition, there are two important provisions within the European Union (Waste Directive) Regulations 2011–2020 that are of relevance to the construction sector and the prevention of waste and these allow for the classification of resources out of the waste regime as follows:

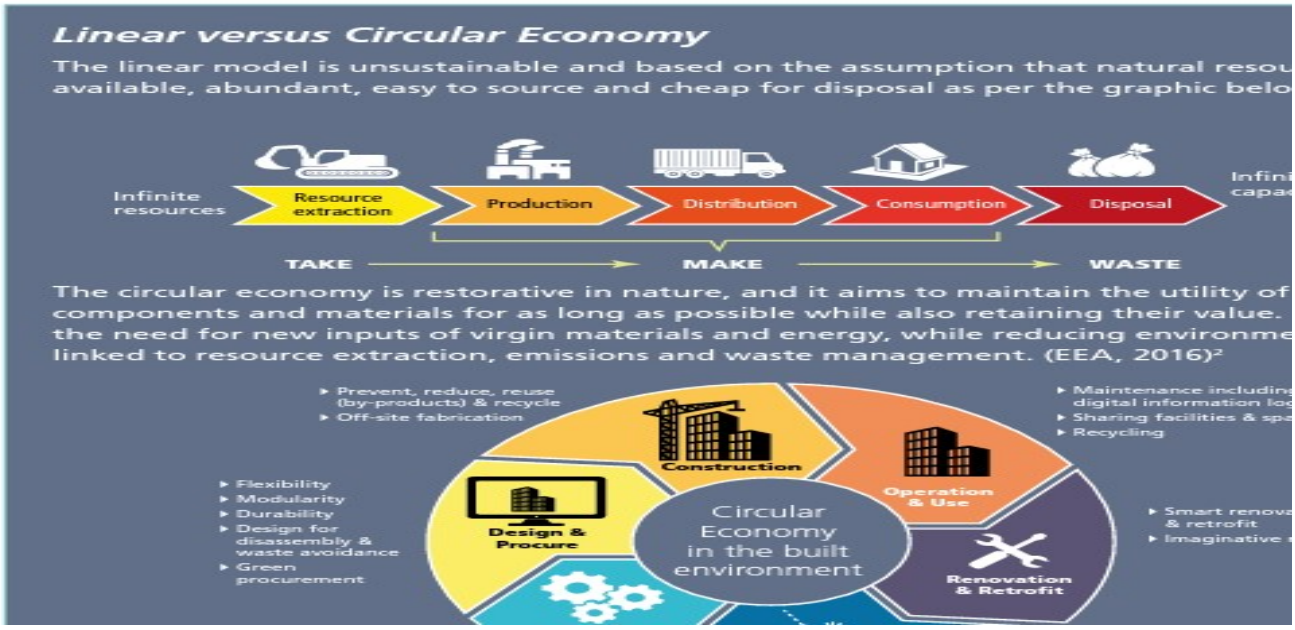
1.) Article 27 allows for the notification of a material as a by-product rather than a waste where certain criteria can be demonstrated by the legal person (i.e., further use is certain, no need for further processing, produced as part of a process and further use is lawful).

2.) Article 28 sets out the grounds by which a material, which is recovered or recycled from waste, can be deemed to be no longer a waste and complies with a set of end-of-waste criteria (substance/ object to be used for specific purposes, a market or demand exists, fulfils technical requirements and no overall adverse impact to human health or the environment).

2.2 WASTE POLICY

Since the publication of the 2006 guidelines, waste policy in Europe has shifted from the established linear economic model to a circular economic model (Figure 2-1). Circular economy-inspired interventions focus not only on increasing recycling quantitatively but also on:

- Reducing the use of virgin resources.
- Keeping materials in the economy as long as possible.
- Maintaining their intrinsic value/quality as high as possible; and
- Reducing hazardous substances in products and waste.


Linear versus Circular Economy
The linear model is unsustainable and based on the assumption that natural resou
available, abundant, easy to source and cheap for disposal as per the graphic belo
Infinite resources
Resource extraction
Production
Distribution
Consumption
Disposal
TAKE
MAKE
WASTE
The circular economy is restorative in nature, and it aims to maintain the utility of
components and materials for as long as possible while also retaining their value.
the need for new inputs of virgin materials and energy, while reducing environme
linked to resource extraction, emissions and waste management. (EEA, 2016)²
Prevent, reduce, reuse (by-products) & recycle
Off-site fabrication
Maintenance including digital information log
Sharing facilities & spa
Recycling
Flexibility
Modularity
Durability
Design for disassembly & waste avoidance
Green procurement
Construction
Operation & Use
Design & Procure
Renovation & Retrofit
Circular Economy in the built environment
Smart renova & retrofit
Imaginative

2.3 MMD CONSTRUCTION EVIRONMETAL & WASTE MANAGEMENT POLICY

Resource & Waste Management Policy

MMD Construction is committed to ensuring that the optimum levels of waste reduction, recycling are achieved.

In accordance with the EU Waste Hierarchy, the following waste management priorities w with respect to all projects.

- Prevent material wastage.
- Minimise the quantity of waste.
- Reuse of site materials.
- Recycling of waste.
- Energy recovery.
- Disposal.

The purpose of this policy is to ensure that the management of waste at the site during co demolition phase of the project is undertaken in accordance with current legislation and i standards including the waste management act 1996 (as amended) and associated Regula pollution act 1997-2007 and the Southern Region Waste Management Plan 2015-2021.

MMD Construction's commitment to Circular economy-inspired interventions focus not recycling quantitatively but also on:

- Reducing the use of virgin resources.
- Keeping materials in the economy as long as possible.
- Maintaining their intrinsic value/quality as high as possible; and
- Reducing hazardous substances in products and waste.

Compliance with this policy, the procedures, work practices and controls will be mandato adhered to by all personnel and contractors employed on the construction phases of our

SECTION 3 – PURPOSE/OBJECTIVE

3.1 PURPOSE

The purpose of this plan is to provide the information necessary to ensure that the management of waste during the construction activities of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork undertaken in accordance with current legislation and industry standards including the waste management act 1996 (as amended) and associated Regulations, litter pollution act 1997-2007 and the Southern Region Waste Management Plan 2015-2021 and also include Construction Waste, Soil and Stone Recovery/Disposal Capacity- Eastern Midlands Region/Connacht Ulster Region/Southern Region- Waste Management Plans 2015-2021.

There are three waste management planning regions in Ireland: Connacht-Ulster, Eastern-Midlands and Southern. In line with the Waste Action Plan for a Circular Economy, the three Regional Waste Management Planning Offices are preparing a combined National Waste Management Plan for a Circular Economy. The Plan will contain targets for reuse, repair, resource consumption and reducing contamination levels and is due to be published for consultation in early 2023.

This plan shall be adopted by all contractors and all sub-contractors involved in activities on site. The site supervisor will ensure that adequate instruction is provided to contractors regarding the control measures contained within this plan.

MMD Construction will be responsible for ensuring that all management of waste is carried out in accordance with the procedures outlined in this document. MMD Construction will ensure that appropriately skilled site supervisors, operatives are assigned to this project.

MMD Construction are committed to maximising sustainable construction and minimising the environmental effect of our projects on society. This approach is rooted in the recognition that active engagement in environmental protection and economic balance is necessary for long term development. Our company environmental policy is communicated, implemented and reviewed in line with our ISO 14001 Environmental Quality Certified Management Systems.

3.2 OBJECTIVE

The objective / purpose of this document is to communicate key waste management obligations that apply to all contractor organisations, their sub-contractors and employees associated with construction activities of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork

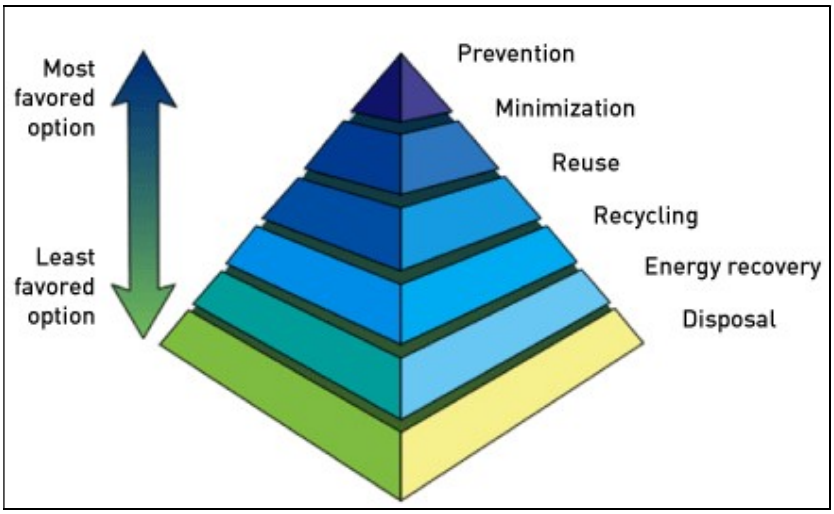
Those wastes arising from the proposed construction phases are managed, reused, recovered or disposed of by a method that ensures the provisions of the waste management acts:

- Waste Management Act 1996
- S.I. No. 821/2007- Waste Management (Facility Permit and Registration) Regulations 2007
- associated regulations are complied with.

This ensures that the optimum levels of waste reduction, re-use and recycling are achieved.

In accordance with the EU Waste Hierarchy, the following waste management priorities have been established with respect to this project.

1.) Prevent material wastage.
2.) Minimise the quantity of waste.
3.) Reuse of site materials.
4.) Recycling of waste.
5.) Energy recovery.
6.) Disposal.



Waste Hierarchy

The waste hierarchy is a useful framework that has become a cornerstone of Irish waste management. It sets out the order in which options for refuse management should be considered based on environmental impact.

Prevention and re-use are the most desirable options for managing waste. The overall intent of the hierarchy is to highlight the different levels and to one day move waste management away from landfill into those options in the upper tiers.

Irish Waste Hierarchy

Reduce, reuse and recycle are the most important parts of the system.

The diagram above illustrates the pyramid theory designed to give order to dealing with the multiples of waste produced. The options towards the top are the most desirable for dealing with our waste, as they harm the planet least. As you travel down the pyramid, the alternatives become less attractive from an environmental point of view.

3.3 SCOPE

The RWMP defines the approach to waste management on site during the construction activities of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork.
Compliance with this, the procedures, work practices and controls will be mandatory and must be adhered to by all personnel and contractors employed on the construction phases of the Development.

This Plan seeks to:

- Comply with all relevant conditions attached to Board Direction BD-007878-21 ABP-308923-20
- Promote best waste management on-site practices in the duration of construction phases.
- Optimum levels of waste reduction, re-use and recycling are achieved.
- Hazardous and non-hazardous waste manged by a professional hazardous waste industry and is treated appropriately and in accordance with legal requirements: - Waste Classification July 2018. Non-Application under waste framework directive 2008
- Movement of hazardous waste material off-site falls under the European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations 2011.
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site.
- Identifying all destinations for resources taken off-site.
- Full records of all resources (both wastes and other resources)

SECTION 4 - WASTE MANAGEMENT IN IRELAND

Ireland generated approximately 16.2 million (M) tonnes of waste in 2020, corresponding to 3.25 tonnes per person, up from 12.7 million tonnes (2.77 tonnes per person) in 2012.

Construction and demolition waste is the largest waste stream in the state, amounting to over 8.2 million tonnes in 2020.

The amount of municipal waste recycled has increased by 11% since 2016, but total waste generated also increased by 11%, so the recycling rate has stagnated.

Household waste has also grown by 27%, equivalent to over 400,000 tonnes, in the last five years.
For the fourth year in a row, the total packaging waste generated in Ireland exceeds 1m tonnes.

Ireland missed the waste electrical and electronic equipment (WEEE) collection target in 2020 and is in danger of missing future EU waste targets for municipal and plastic packaging waste recycling.

Ireland is still heavily reliant on export markets, particularly for the treatment of municipal waste, hazardous waste, packaging waste, WEEE and biowastes.

To fundamentally move Ireland's performance in managing waste in a predominantly circular approach, the following key actions are needed:
There is an urgent need to increase the municipal recycling rate which is not on track to meet the 2025 EU target.
Targeted financial, regulatory and awareness measures are urgently needed to drive a step change improvement in plastic packaging recycling in order to meet the 2025 EU target.
Address Ireland's waste infrastructure deficits to develop Ireland's circular economy opportunities and reduce the emissions associated with transporting waste over long distances.

4.1 – CONSTRUCTION & DEMOLITION WASTE STATISTICS FOR IRELAND

Key trends

The quantity of C&D waste generated and collected in Ireland in 2020 decreased to 8.2 million tonnes from 8.8 million tonnes in 2019. This decrease mirrors the trend in construction activity indicated by the CSO's construction index; and it was driven by a decrease in the generation of waste soil and stone, waste concrete, brick, tile and gypsum and waste bituminous mixtures

The overall composition of C&D waste changed little between 2019 and 2020. At 84% soil and stone waste remained dominant, followed by waste concrete, brick, tile and gypsum (6 per cent) and mixed C&D waste (5 per cent). The proportion of segregated (wood, paper, glass, plastic and metal) C&D waste collected remained small at 3.1 per cent in 2020 increasing from 2.5 per cent in 2019.

The vast majority (95 per cent) of C&D waste underwent final treatment in Ireland in 2020; only five per cent was exported abroad for final treatment.

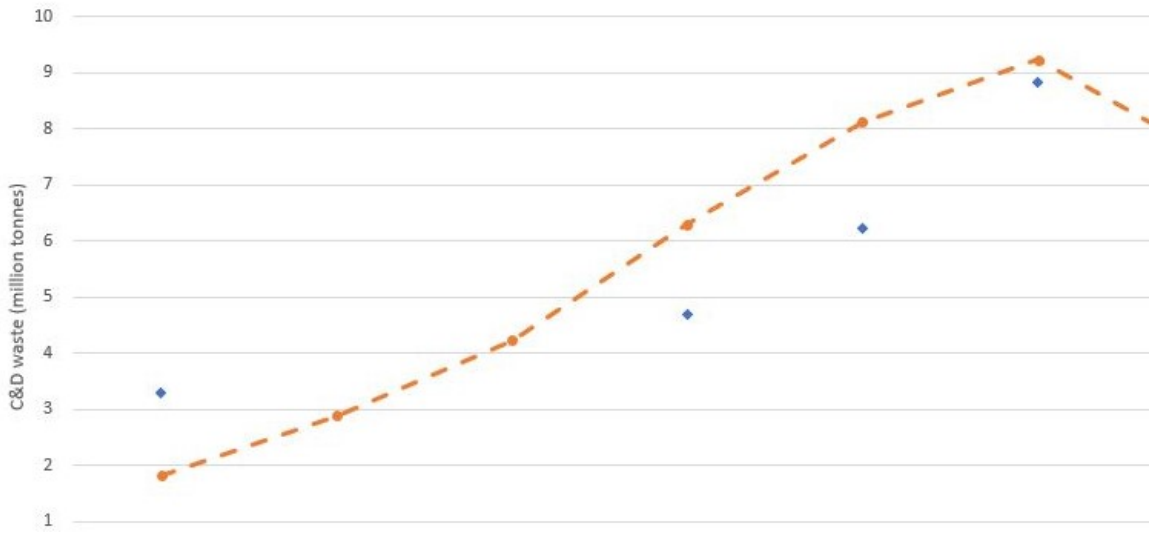
Most of the C&D waste was backfilled (82 per cent), eight per cent was recycled with 10 per cent sent for disposal. The dominance of backfilling as a treatment operation reflects the large proportion of soil and stones in C&D waste.

Recycling was the main treatment operation for metals (100 per cent), for segregated wood, paper, glass and plastic (79 per cent) and for waste bitumous mixtures (57 per cent).

Ireland achieved 78 per cent material recovery of such waste in 2020 surpassing the 70% target.

4.2 – QUANTITY OF CONSTRUTION WASTE MANAGED IN IRELAND

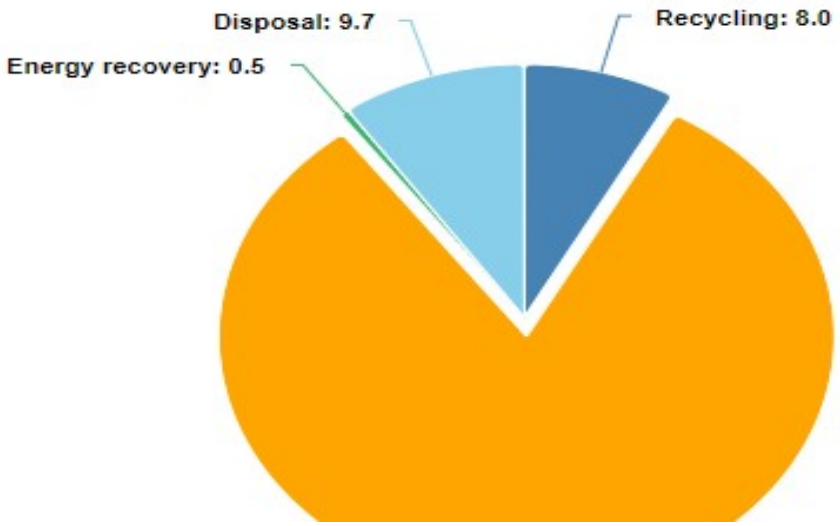
Greater levels of C&D waste prevention can be achieved by employing best practice circular construction activities. This includes designing out waste, application of Article 27 by-product regulation and maximising the use of resources in line with the EPA's revised: Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects.



4.3 – TREATMENT

The vast majority (95 per cent) of C&D waste underwent final treatment in Ireland in 2020 and only five per cent was exported abroad for final treatment.
Most of the C&D waste undergoing final treatment in Ireland was recovered by backfilling (82%), while 10% went for disposal and only 8% was recycled:

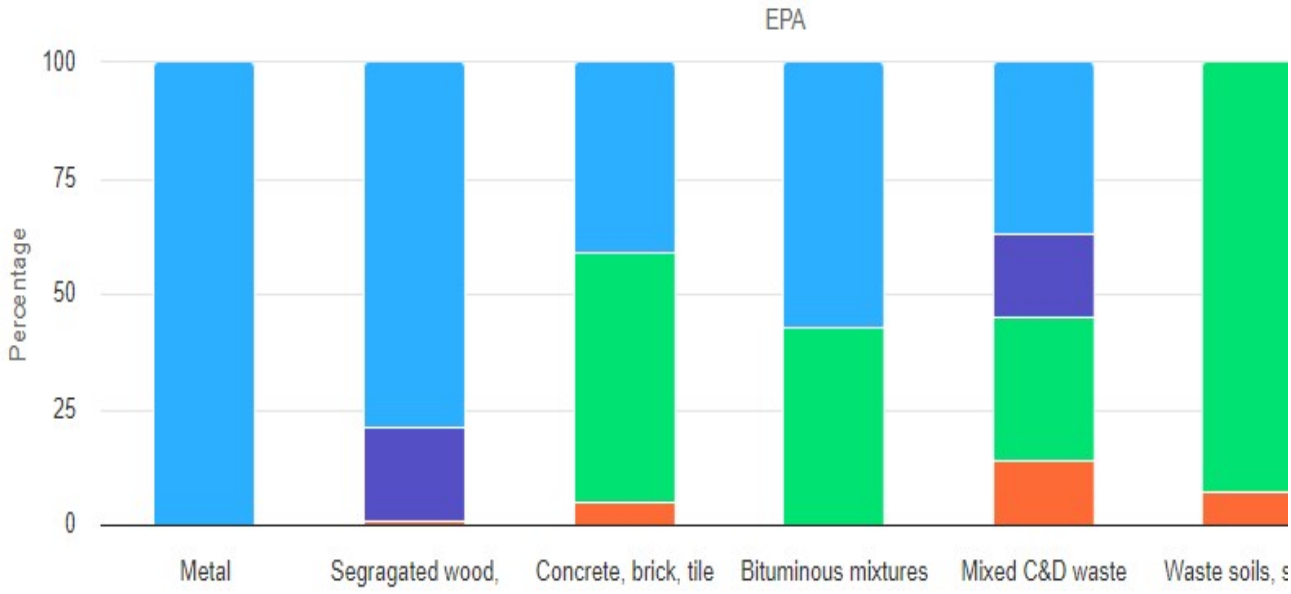
Treatment of C&D waste in Ireland 2020



Backfilling is the most significant treatment of C&D waste. It refers to a recovery operation carried out at authorised facilities, where suitable waste is used for land improvement, for reclamation purposes in excavated areas or for engineering purposes in landscaping. Soil recovery facilities are typically worked out quarries in the process of being restored or sites where soil and stone is imported to raise natural ground levels. The prominence of backfilling as a final treatment operation reflects the high tonnages of waste soil and stones in the C&D waste stream.
Disposal was mainly used for C&D waste treatment residues and a smaller share of mixed C&D waste and soil and stones.

4.4 – FINAL TREATMENT OPERATION CARRIED OUT OF DIFFERENT C&D WASTE STREAMS

Recycling was the main treatment operation for metals (100 per cent), segregated wood, paper, glass and plastic (79 per cent) and waste bituminous mixtures (57 per cent). Recycling rates for C&D waste could be improved by enhanced segregation of C&D waste into individual material streams, either at source or at waste processing facilities.



Treatment type	Recycling (t)	Energy recovery (t)	Backfilling (t)	Disp
Metal waste	277,911			
Segregated wood, glass & plastic	70,415	17,632	13	
Concrete, brick, tile & gypsum	208,307		278,192	2
Waste Bituminous mixtures	61,306	1	46,741	
Mixed C&D waste	27,728	13,654	23,942	1
Waste soils, stones & dredging spoil	5,548		6,276,522	49
Waste treatment residues	0	7,402	3,465	25

4.5 – C&D BY-PRODUCT NOTIFICATIONS

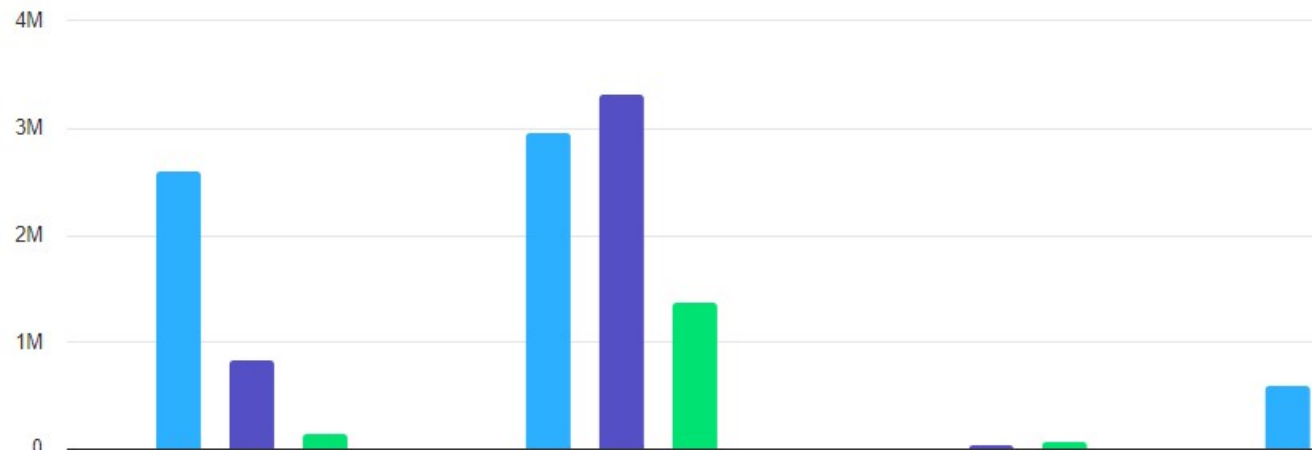
Preventing waste and promoting reuse are integral to the circular economy. While this applies to all economic sectors, it is particularly relevant for the construction sector which handles large volumes of natural resources, such as soil and stone. Successful activation of the circular economy in this sector could see millions of tonnes of resources beneficially reused every year.
Article 27 of the European Communities (Waste Directive) Regulations, 2011 allows an economic operator to decide, under certain circumstances, that a material is a by-product and not a waste. It allows

construction and demolition materials to be used elsewhere on development projects as a by-product and not discarded as a waste. Decisions made by economic operators under Article 27 must be notified to the EPA. The EPA may determine to agree with the economic operator's decision, as notified; alternatively, after consultation with the notifier and the relevant local authority, the EPA may determine that the notified material is waste.

For more information on By-products Regulation 27 | Environmental Protection Agency (epa.ie) and End of Waste (Art. 28) | Environmental Protection Agency (epa.ie) are available on EPA website.

The EPA received by-product notifications for 3,217,523 tonnes of soil and stone material. Notifications for 155,200 tonnes were withdrawn. The EPA determined that 1,374,575 tonnes of the soil and stone notified were by-product and that 73,000 were waste (Figure 5). The estimated quantity of soil and stone material notified in 2020 for which no determination was made to date, amounted to 1,614,748 tonnes.
It is important to note that by-product notifications do not necessarily mean that any or all of the material was generated or indeed moved. Notifiers of by-product may not have proceeded with the activities related to the by-product notifications. However, if they did proceed, the materials would not have entered the waste management network or be included in the 2020 C&D waste statistics data presented here. Only material notified as by-product, determined to be waste, generated and moved as waste in 2020 is covered by the EPA's 2020 C&D waste statistics.

Soil & stone by-product notifications submitted 2018-2020



4.6 – REGIONAL LEVEL

The Southern Waste Region has a population of 1,541,439 (34% of Ireland's population) and currently incorporates 13 Local Authority areas namely: Carlow, Clare, Cork City, Cork County, Kerry, Kilkenny, Limerick City, Limerick County, Tipperary North, Tipperary South, Waterford City, Waterford County and Wexford. The Limerick and Tipperary Authorities have been appointed as joint lead authority for the Southern Waste Region.

The proposed development is located in the local authority area of **Cork City Council**.

Southern Region

In the southern region there are three dedicated soil recovery facilities which are ibn the waste licensing system. The table below details soil recovery sites and their total annual authorised capacity for accepting wastes including soil and stone wastes.

Facility Name / Licensee	Licence No	Status	Local Authority	Total Annua Authoris Capacit
Crystalhill Inns Ltd[13]	W0260-01	Active	Kilkenny County Council	170,00
Roadstone Ltd	W0280-01	Authorised Not Commenced	Wexford County Council	401,00
Mallow Contracts Ltd.	W0266-01	Authorised Not Commenced	Cork County Council	50,00(
Total (Authorised				

SECTION 5 - ESTIMATED CONSTRUCTION WASTE ARISING

Below is a list of the expected waste material that will be generated throughout Block 9 Office conversion project at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork.

Waste Material	LoW Code	Quantity (Tonnes)
Concrete, Brick, Tiles, Ceramics	17 01 01, 17 01-03, 17	0
Wood, Glass & Plastic	17 02 01-03	0
Bituminous Mixtures	17 03 02	0
Metals (Including Their Alloys)	17 04 01-07	0
Soil & Stones	17 05 04	0
Gypsum Based Construction Material	17 08 02	0
Paper & Cardboard	20 01 01	0
Mixed Construction Waste	17 09 04	0
Green Waste	20 02 01	0
Insulation Materials	17 06 04	0
Batteries & Accumulators	20 01 33-34*	0
Liquid Fuels	13 07 01-03*	0
Chemical (Solvents, Pesticides, Paints, Adhesives & detergent etc.)	20 01 13, 19, 27-30*	0
Construction Material Containing Asbestos (18)	17 06 05*	0

Hazardous Materials marked with an Asterix *

It is the responsibility of all site personnel on site including contractors, sub-contractors and their employees to ensure compliance with this plan

5.1 - CONSTRUCTION WASTE GENERATION

5.1.1 Clearing & Grubbing

Land clearing and grubbing is generally a surface operation that consists of the removal and disposal of unwanted structures such as old foundations and structural concrete. In special circumstances, unwanted or abandoned utilities such as old water and sewer lines may also be removed as part of the land clearing process.

MMD will remove all existing structures in the proposed work area using this method to minimize the dust, noise and vibration from construction activities.

5.1.2 Construction Phase

It is expected that the construction phase will result in the typical amounts of waste generated from the construction activities of apartment/duplex scheme comprising 67 social housing units and 1 community facility with associated landscaping at Gerald Griffin Street/Burkes Avenue, Blackpool, Cork. Construction of the proposed building involves excavations, retaining walls, surface works, Construction of sub structures and super structures, External and internal finishes and landscaping works.

In the event that the above waste types are not handled correctly or disposed of in an incorrect manner, there is the potential for an impact at the site and in the vicinity of the site in relation to waste management.

5.1.3 CONSTRUCTION PHASE - WASTE GENERATION

Type of Waste *(Description)*	**List of Waste Code (LoW Code)**	**Volume of Waste generated** *Estimate* *(M^3)*	**Waste Exported off-site** *Estimate* *(tonnes)*	**Name and NWCPO Ref No. of the Waste Collector proposed to be used. (Refer to www.nwcpo.ie for more information). and Name and CoR/ Permit/ Waste Licenced Ref. No. of Authorised Site(s) receiving the waste.**
Concrete, Blocks, Tiles & Ceramics	17 01 01-03 & 07		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Wood, Glass & Plastic	17 02 01-03		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Soil & Stones	17 05 04		TBA	**Name of Waste Collector & Permit: Ref No:** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Metals	17 04 01-07		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Gypsum Based Construction Material	17 08 02		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Paper & Cardboard	20 01 01		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Mixed Construction Waste	17 09 04		TBA	**Name of Waste Collector & Permit Ref No: TBC** **Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC**
Green Waste	20 02 01		TBA	**Name of Waste Collector & Permit Ref No: TBC**

				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC
Electrical & Electronic Components	20 01 35* & 36		TBA	**Name of Waste Collector & Permit Ref No: TBC**
				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No TBC
Batteries & Accumulators	20 01 33 & 34*		TBA	**Name of Waste Collector & Permit Ref No: TBC**
				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC
Liquid Fuels	13 07 01-03*		TBA	**Name of Waste Collector & Permit Ref No: TBC**
				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC
Chemicals (Solvents, Pesticides, Paints, Adhesives, Detergents Etc.)	20 01 13, 19, 27-30*		TBA	**Name of Waste Collector & Permit Ref No: TBC**
				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC
Insulation Materials	17 06 04		TBA	**Name of Waste Collector & Permit Ref No:TBC**
				Name of CoR/Waste Permit /Waste Licensed Facility & Ref No. TBC
Construction Material Containing Asbestos (18)	17 06 05*		TBA	**Name of Waste Collector & Permit Ref No:** N/A WCP Permit Number:
				Name of Notifier /Waste Licensed Facility & WTF No. N/A

5.1.4 ESTIMATED ON AND OFF-SITE REUSE, RECYCLE AND DISPOSAL RATES FOR CONSTRUCTION WASTE

Waste Type	LoW Codes	Reuse		Recycle		Disposal	
		%	Tonnes	%	Tonnes	%	Tonnes
Concrete, Brick, Tiles, Ceramics	17 01 01-03 & 07	0		90	TBC	0	0
Wood, Glass & Plastic	17 02 01-03	0		90	TBC	0	0
Bituminous Mixtures	17 03 02	0		100	TBC	0	0
Metals (Including Their Alloys)	17 04 01-07	0		100	TBC	0	0
Soil & Stones	17 05 04	0		100	TBC	0	0
Gypsum Based Construction Material	17 08 02	0		100	TBC	0	0
Paper & Cardboard	20 01 01	0		100	TBC	0	0
Mixed Construction Waste	17 09 04	0		82	TBC	0	0
Green Waste	20 02 01	0		100		0	0
Electrical & Electronic Components	20 01 35* & 36	0		0		0	0
Batteries & Accumulators	20 01 33 & 34*	0		0		0	0
Liquid Fuels	13 07 01-03*	0		0		0	0
Chemicals (Solvents, Pesticides, Paints, Adhesives, Detergents Etc.)	20 01 13, 19, 27-30*	0		0		0	0
Insulation Materials	17 06 04	0		0		100	0
Construction Material Containing Asbestos (18)	17 06 05*	0		0		100	0

5.2 - PROPOSED WASTE MANAGEMENT OPTIONS

Waste materials generated will be segregated on site, where it is practical. Where the on-site segregation of certain wastes types is not practical, off-site segregation will be carried out. There will be skips provided. All waste skips leaving site will be covered or enclosed. The Waste Management contractor will collect and transfer the wastes as skips are filled.

5.2.1 SUB-CONTRACTORS:

There are numerous waste contractors in the Cork City Region that provide this service. Some of the sub-contractors on site will generate waste in relatively low quantities.

The transportation of non-hazardous waste by persons who are not directly involved with the waste business, at weights less than or equal to 2 tonnes, and in vehicles not designed for the carriage of waste, are exempt from the requirement to have a waste collection permit (Ref. Article 30 (1) (b) of the Waste

Collection Permit Regulations 2007 as amended). Any sub-contractors engaged that do not generate more than 2 tonnes of waste at any one time can transport this waste offsite in their work vehicles (which are not designed for the carriage of waste). However, they are required to ensure that the receiving facility has the appropriate COR / permit / licence.

Written records will be maintained by the contractor(s) detailing the waste arising throughout the construction phases, the classification of each waste type, waste collection permits for all waste contractors who collect waste from the site and COR/permit or licence for the receiving waste facility for all waste removed and disposed off-site.
Dedicated bunded storage containers will be provided for hazardous wastes which may arise such as batteries, paints, oils, chemicals etc., if required.

5.3 THE MANAGEMENT OF THE MAIN WASTE STREAMS ARE DETAILED AS FOLLOWS:

5.3.1 Topsoil & Sub Soils:

The Waste Management Hierarchy states that the preferred option for waste management is prevention and minimisation of waste, followed by preparing for reuse and recycling/recovery, energy recovery (i.e., incineration) and, least favoured of all, disposal. The excavations are required to facilitate construction works so the preferred option (prevention and minimisation) cannot be accommodated for the bulk excavation phase.

If the material is deemed to be a waste, then removal and reuse/recycling/ recovery/disposal of the material will be carried out in accordance with the *Waste Management Acts 1996 – 2011* as amended, the *Waste Management (Collection Permit) Regulations 2007* as amended and the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended. The volume of waste removed will dictate whether a COR, permit or licence is required by the receiving facility. Once all available beneficial reuse options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered.
In the event that contaminated material is encountered and subsequently classified as hazardous, this material will be stored separately to any non-hazardous material. It will require off-site treatment at a suitable facility or disposal abroad via Transfrontier Shipment of Wastes (TFS).

5.3.2 Concrete Blocks, Bricks, Tiles & Ceramics

The majority of concrete blocks, bricks, tiles and ceramics generated as part of the construction works are expected to be clean, inert material and will be recycled.

5.3.3 Hard Plastic

As hard plastic is a highly recyclable material, much of the plastic generated will be primarily from material off-cuts. All recyclable plastic will be segregated and recycled, where possible.

5.3.4 Timber

Timber that is uncontaminated, i.e., free from paints, preservatives, glues etc., will be disposed of in separate skips and recycled off-site.

5.3.5 Metal

Metals will be segregated into mixed ferrous, aluminium cladding, high grade stainless steel, low grade stainless steel etc., where practical and stored in skips. Metal is highly recyclable and there are numerous companies that will accept these materials.

5.3.6 Glass

Glass materials will be segregated for recycling, where possible.

5.3.7 Other Recyclables

Where any other recyclable wastes such as cardboard and soft plastic are generated, these will be segregated at waste depot.

5.3.8 Non-Recyclable Waste

Construction waste which is not suitable for reuse will put in the waste skip and an offsite segregation will be done by the authorized waste removal contractor.

5.3.9 Hazardous Wastes

Potentially Hazardous waste must be stored and handled in compliance with the relevant legislation and dispose of as per EPA guidelines. Example are: Asbestos, lead base paint, fuel & oils, used spill kits etc.

5.4 SITE CONTAMINATION AND WASTE DISPOSAL

Two samples were taken within the Made Ground within TP3 and TP5 as highlighted in the Figure below and were sent for WAC (Waste Acceptance Criteria) testing at the UKAS accredited laboratory of Chemtest, Newmarket, UK. The results of the two tests have been compared with the WAC limits for “Inert”, “Stable non-reactive hazardous waste in non-hazardous landfill” and “Hazardous Waste Landfill”.

The results of the WAC tests from TP3 show this material to be “Inert”. The results of WAC testing from TP5 shows the material to be “Stable non-reactive hazardous waste in non-hazardous landfill” die to elevated levels of Sulphate and Total Dissolved Solids. It is recommended that the accepting landfill is contacted prior to disposal of the fill material in order to verify the class of soil for disposal. Individual landfills may require additional testing prior to disposal. Due to limited number of tests undertaken to date, it is not possible at present to estimate the volumes of Inert and Stable non-reactive hazardous waste that may be present on the site.

SECTION 6 - ASSIGNMENT OF RESPONSIBILITIES

Waste management will be best managed operationally by the construction management team on site. They will assume responsibility for all aspects of waste management at the different stages of the project.

All site construction management personnel will be competent and appropriately trained, take responsibility to ensure that the measures identified within the plan are delivered, and will be assigned the requisite authority to secure achievement of this purpose.

Overall objectives will be to communicate effectively by the construction management team with colleagues in relation project waste management.

The site construction management team will maintain accurate records on the quantities of waste / surpluses arising during the construction phase.

At an operational level, appropriate personnel from the main contractor and each sub-contractor on the site will be assigned the direct responsibility to ensure that the discrete actions stated in RWMP are performed on an on-going basis.

SECTION 7 - PROJECT WASTE MANAGEMENT APPROACH

The Waste Management Hierarchy ***(Article*** 4 of ***the Waste Framework Directive 2008/98/EC)*** states that the most preferred option for waste management is prevention and minimisation of waste, followed by re-use and recycling, other recovery (i.e., waste to energy and anaerobic digestion) and, least favoured of all, disposal.

7.1 - PREVENTION OF WASTE

Priority will be given to waste prevention and reducing the amount of waste generated in the first instance. To prevent and minimise waste the following steps will be taken during construction:

- Ensure materials are ordered on an 'as needed' basis to prevent over supply to the site.
- Purchase coverings, panelling or other materials in shape, dimensions and form that minimises the creation of excessive scrap waste on site.
- Ensure correct storage and handling of construction materials to minimise generation of damaged materials/waste.
- Ensure correct scheduling of operations.
- Assign individual responsibility (through appropriate contractual arrangements) to subcontractors for the purchase of raw materials and for the management of wastes arising from their activities, thereby ensuring that available resources are not expended in an extravagant manner at the expense of the main contractor.

7.2 - MINIMISATION OF WASTE

During the construction phase, a just in time delivery system will be implemented given the spatial constraints of the site. Supplier co-ordination will be key to ensure that surplus quantities of materials are not delivered to site. On site waste can be minimised by careful ordering, storage and handling of materials. Waste prevention principles can be further reinforced by specifying that individual sub-contractors conform to the requirements of the plan for all operations.

7.3 - REUSABLE MATERIAL

Concrete slabs and foundations broken out on site will be crushed on site and used to crush up temporary haul roads, scaffold bases, temporary laydown areas. Only certified crush concrete and certified imported stone will be used under structures and roads etc.

7.4 - RECYCLING OF WASTE

Once all available beneficial re-use options have been exhausted, the options of recycling and recovery at waste permitted and licensed sites will be considered. Recycling and recovery options include, but are not limited to:

- Waste timber can be recycled as shuttering or hoarding, or it can be sent for reprocessing as medium density fibreboard.
- Construction waste generated at the site will, if not reused, be sent to the established construction waste markets for beneficial use.
- Waste concrete can be used as fill material for roads or in the manufacture of new concrete when arising at source.

  The technology for the segregation and recovery of stone, for example, is well established, readily accessible and there is a large reuse market for aggregates as fill for roads and other construction projects.

Segregated construction wastes will consist of concrete blocks, bricks, tiles, ceramics, hard plastic, metal and glass. These can also be managed via waste transfer stations.

Plasterboard may be brought to centres close to the development which will accept construction waste streams for recycling.

7.5 - DISPOSAL OF WASTE

Prior to commencement of development and removal of any waste offsite, details of the proposed destination of each waste stream will be provided to Cork City Council. The following provides the available options:

7.5.1 WASTE PERMITS AND LICENCES

Waste collection, recovery and disposal activities are controlled by both the Environmental Protection Agency (EPA) and local authorities (Cork City Council). The Waste Management Act 1996 (as amended) sets out the system of waste licensing to ensure that set standards are applied in relation to licensable waste facilities.

7.5.2 WASTE COLLECTION PERMITS

In order to collect waste for commercial purposes, a waste collection permit must be purchased from Cork City Council. The Waste Management Act 1996 outlines the procedures for making a permit application.

7.5.3 WASTE RECOVERY/DISPOSAL PERMITS

Waste permits are also required for specified waste recovery and disposal activities which, because of their size or nature, do not require licensing by the EPA, but can instead be granted by Cork City Council. Further information is available on the EPA website.

7.6 WASTE MANAGEMENT

7.6.1 WASTE REUSE & RECYCLING

All reasonable measures will be taken to avoid the generation of waste which requires offsite disposal by exploring the possibility of recycling / reuse of the material. A recycling programme will be developed to ensure that all packaging waste is recycled as far as possible.

All material designated for offsite disposal will be classified based on laboratory analysis for landfill classification suites to enable classification of the material as inert, non-hazardous, or hazardous, in accordance with Council Decision 2003/33/EC and Directive 1999/31/EC.

Electrical waste materials such as electrical components, fluorescent tubes and wiring will be recycled where possible or collected by a reputable waste management contractor.

SECTION 8 - ON SITE WASTE MANAGEMENT

Waste will be managed centrally within the confines of the site compound.

Mini Waste skips will be placed around the construction site for all contractors to dispose of waste material as soon as it is generated and brought back to the compound once full and placed in the appropriate skips.

All waste leaving the site will be taken by suitably permitted contractors and transported to suitably licensed or permitted facilities in full compliance with the relevant Sections of the Waste Management Acts of 1996 (as amended).

Quantities of waste leaving the site will be recorded and copies of relevant documentation maintained onsite.

Hazardous waste receptacles that will be used are as follows:

- Drums: Used for soak mats, wipes and any hazardous waste containing liquids.
- Drums: Used for liquids only.

The sealed hazardous waste containers will be placed on bunded pallets within the bunded area.

SECTION 9 - DOCUMENTATION PROCEDURES FOR OFF-SITE WASTE

Article 11 of the *Waste Management (Facility Permit and Registration) Regulations 2007 (as amended)* enables a request to be made to the EPA regarding a determination on whether a waste licence, facility permit, or registration certificate is required for a particular activity. A Certificate of Registration is required if the load is **<10,000** tonnes, a permit is required if the load is between 10,000 tonnes and 50,000 tonnes and a licence is required if the load is over 50,000 tonnes.

Specialist waste service contractors who possess the requisite authorisations, for the collection and movement of waste off-site will be engaged as required throughout the project.

Before a waste contractor is appointed it must be demonstrated that the waste contractor has a current waste collection permit in accordance with the *Waste Management (Collection Permit) Regulations 2007 (as amended)* and current waste facility permits/licences for any waste facilities that will be used in

accordance with the *Waste Management (Facility Permit & Registration) Regulations 2007 (as amended)* and the *Waste Management (Licensing) Regulations 2000 (as amended).*

In order to transfer waste off site a waste collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a waste permit granted by the relevant Local Authority, where the facility is located, under the *Waste Management (Facility Permit &Registration) Regulations 2007 (as amended)* or a waste licence granted by the EPA. The permit / licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled and/or disposed of at the specified site.

All movement of waste and the use of waste contractors will be undertaken in accordance with the *Waste Management Act 1996 (as amended), Waste Management (Facility Permit & Registration) Regulations 2007 (as amended)* and the *Waste Management (Collection Permit) Regulations 2007 (as amended).* This includes the requirement for all waste contractors to have a waste collection permit. The Plant Manager will maintain a copy of all waste collection permits.

If the waste is being transported to another site, a copy of the Local Authority waste permit or EPA Waste Licence for that site must be provided to the site management team. If the waste is being shipped abroad, a copy of the Transfrontier Shipping (TFS) document must be obtained from Dublin City Council (as the relevant authority on behalf of all local authorities in Ireland) and kept on site along with details of the final destination (permits, licences etc.). A receipt from the final destination of the material will be kept as part of the on-site waste management records.

All information will be entered in a waste management system to be maintained on site.

The appointed waste contractors will have the necessary collection permits and facility permits / licences in place to allow them to transport and dispose / recover / recycle the waste streams generated at the site.

Any hazardous waste arising from the construction phase such as waste oils, lubricants, chemicals etc. will be managed by an appointed Hazardous Waste Contractor and treated/disposed of in accordance with the Waste Management Regulations (as amended).

The Plant Manager will arrange for full details of all waste arising, movements and treatment of waste discards to be recorded during the project. Each consignment of waste taken from the site will be subject to documentation, which will conform to
Table 8.1 and ensure full traceability of the material to its final destination. Copy of all documentation to be kept on site for the duration of the project.

Information to be Recorded on all Waste Documentation

Heading	Information
Name of Project of Origin	
Material Type	Concrete, Metal etc
EWC Code	19 07 XX
Quantity of Material	20.5 Ton
Date of Collection	24/01/2024
Vehicle Registration Number	201-C-XXX
Waste Collector Permit No.	NWCPO-XX
Waste Facility and Permit No.	Waste Facility Number -
Recovery / Disposal Code	R1/D1

SECTION 10 - TRAINING

The training of the site staff is the responsibility of the site management team. All site personnel and sub-contractors will be instructed about the objectives of the WMP and informed of the responsibilities which fall upon them as a consequence of its provisions during site induction.

Where source segregation, and material reuse techniques apply, each member of staff will be given instructions on how to comply with the WMP.

The site foreman / manager will be given responsibility and authority to select a waste team if required, i.e., members of the site crew that will aid them in the organisation, operation and recording of the waste management system implemented on site.

The site foreman / manager will have overall responsibility to supervise and record everyday waste management at the site. Authority will be given to the site foreman / manager to delegate responsibility to sub-contractors, where necessary, and to coordinate with suppliers, service providers and sub-contractors to prioritise waste prevention and salvage.

A waste awareness session will be held for **all** site crew to outline the WMP and to detail the segregation of waste materials at source. This will be incorporated into the site induction.

MMD Construction will ensure that the training is appropriate for the level of works being undertaken. Training is provided in the format below;

- Site inductions including awareness of environmental sensitivities, reporting procedures, spill kits, designated re-fuelling areas, chemical use and storage etc.
- Daily Pre-Start Meetings
- Environmental Tool Box Talks
- Incident and Near Miss reports/TBT

Only suitably qualified personnel will conduct tasks, conducting specialised environmental monitoring, management of waste, management of chemical stores etc.

10.1 TOOLBOX TALKS

Toolbox talks will be conducted on at least a weekly basis or as the need arises due to a new or introduced hazards, risks or environmental aspects. Toolbox talks will be distributed via Skillko. Employees will be given 1 week to complete the Toolbox Talk after distribution. Email reminders will be sent to the Employees via Skillko each day after until Toolbox Talk is complete. EHS Advisors and members of the Site Management Team will also give verbal reminders to ensure Toolbox Talks are completed by employees.

10.2 COMMUNICATION

All employees, subcontractors, client representatives and other interested parties will be included in consultation on safety, health and environment matters through daily pre-start consultation, toolbox talks, project meetings, incident reporting, incident investigation, quality audits, safety audits and ongoing workplace inspections by supervisors.

Information and specific training will be communicated to employees through toolbox meetings, job pre-start meetings, safety alerts, notice boards and inductions.

The project manager and site supervisor will ensure that issues are resolved, and feedback given to employees, subcontractors and interested parties through the above channels.

10.3 SITE ENVIRONMENTAL AWARENESS

The following general site Environmental Rules will apply for the construction phase of the proposed development. These general rules will be communicated to all site personnel via the site induction training and they will be posted across the site at strategic locations, such as the site entrance, canteen and near the entrances to buildings.

10.4 GENERAL SITE ENVIRONMENTAL RULES

DO Report any signs of pollution or environmental damage to the site foreman/environmental manager no matter how small;

DO Report any spills, incidents or near misses that occur on site immediately to the site foreman;

DO Refuel only in designated areas with spill kits available

DO NOT Dispose of anything into a river or stream or onto land. All waste must be sent to the designated site waste management areas;
DO NOT Throw litter, all waste must be sent to site waste management contractor;
DO NOT Drive plant or machinery outside the authorised working boundaries of the site.
DO NOT Disturb batboxes in the site.

IF IN DOUBT, ASK – *THE SITE SUPERVISOR FOR FURTHER INFORMATION*.

SECTION 11 - WASTE AUDITING & INCIDENT REPORTING

The Safety Advisor will be responsible for conducting a waste audit on a regular basis at the site. If waste movements are not accounted for, the reasons for this should be established in order to determine if and why the record keeping system has not been maintained.

A summary report will be prepared and compared with the established recovery/reuse/recycling targets for the site. Each material type will be examined, in order to determine where the largest percentage waste generation is occurring. The waste management methods for each material type will be reviewed in order to highlight how the targets can be achieved. On-going consultation with waste contractors will be undertaken in order to ensure that the best practicable option is being followed for waste management on site.

The Waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices may inherently contribute to the production of construction waste. The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit Report, which will also record lessons learned from these experiences which can be applied to future projects.

MMD Construction will be responsible for ensuring at all necessary documentation relating to quality, safety, health and environmental issues are maintained in hard copy and electronic format. Any changes in legislation will be communicated to the site supervisor by the Health, Safety and Environmental Manager. The site supervisor will keep a current copy of the plan at all times.
All revisions of the plan are to be recorded electronically and communicated to the site supervisor by e mail.

Complaints management – upon receipt of a complaint the person receiving the complaint will complete MMD's Incident report form. The site supervisor or project manager will be notified to in order to formulate an immediate response or corrective action if required. The non-conformance report will be completed by the site supervisor and stored electronically.

Site waste management audit – The audit is to be carried out by the site safety advisor and reviewed by the site supervisor and the health, safety and environmental manager. The construction site supervisor is responsible for ensuring that non-conformance is logged on to Procore and for following up any implemented actions prior to closing out the non-conformance.

Results of the audits and all non-conformance issues will be relayed to the relevant parties at the weekly project meeting.

Incidents that have the potential to cause localised environmental impacts need to be reported to the EPA, IFI, PSDP and clerk of works.

Incidents that cause or have the potential to cause environmental impacts external to the site boundary need to be reported to the site supervisor, health, safety and environmental manager and contracts manager.

All incident reports will be reported and discussed at toolbox meetings and project management meetings to ensure all construction contractor personnel are fully appreciative of the corrective and preventative action required to prevent re occurrence of the incident. It is also the responsibility of the project manager that all relevant subcontractors receive a copy of the report.

Site management practices will be strictly implemented to prevent nuisance impacts

11.1 COMPLAINTS MANAGEMENT

The site team is responsible for responding to complaints or queries and must ensure that:

- All complaints are investigated and dealt with appropriately;
- Any corrective actions required are implemented;
- A record is made of all complaints, along with any response and/or actions taken;
- The complaints recorded is periodically reviewed to identify any trends and appropriate actions are taken

(Environmental Incident report form 01-06)

The following information must be recorded for all complaints received:

- Stakeholder name;
- Stakeholder address;
- Stakeholder contact details;
- Complaint category type (e.g., noise, dust, waste, traffic)
- Details of the complaint
- Timing and duration of nuisance or pollution
- Any additional information

11.2 CORRECTIVE ACTION

Where monitoring identifies an impact on the receiving environment the EHS Advisor shall be notified immediately. The EHS advisor will conduct an inspection of the location and the surrounds to identify the source of the impact.

If the source of the impact is identified as an emission from the site, the site team is responsible for undertaking corrective action to isolate and minimise the effects of the emission.

The site team is required to monitor implementation of any corrective actions to ensure that they are carried out and are effective and deficiencies are rectified to avoid recurrence.

SECTION 12 - CONSULTATION WITH THE RELEVANT AUTHORITIES

Cork City Council will be consulted regularly during the project in order to ensure that all available waste reduction, re-use and recycling opportunities are identified and utilised and that compliant waste management is carried out.

Companies that specialise in Construction waste management will be contacted to determine their suitability for engagement. In addition, information regarding individual Construction materials will be obtained, including the feasibility of recycling each material; the costs of recycling/reclamation; the means by which the wastes will be collected and transported off-site; and the recycling/reclamation process each material will undergo off site.

SECTION 13- LEGISLATIVE REQUIREMENTS

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

- Waste Management Act **1996 (S.I.** No. **10** of **1996)** as amended by the Waste Management (Amendment) Act **2001.** Sub-ordinate legislation includes:

Regulations

European Union Waste Management (Environmental Impact Assessment) Regulations 2020
SI. No 130 of 2020
European Union (Ship Recycling) (Waste) Regulations 2019
SI. No 13/2019
European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015
SI. No. 355 of 2015
European Union (Environmental Impact Assessment) (Waste) Regulations 2013
SI. No. 505 of 2013
European Union (Industrial Emissions) Regulations 2013
S.I. 138 of 2013
Environmental Protection Agency (Industrial Emissions) (Licensing)Regulations 2013
SI. No. 137 of 2013
European Union (Large Combustion Plants) Regulations 2012
SI. 566 of 2012
European Union (Environmental Impact Assessment) (Waste) Regulations 2012
SI. No. 283 of 2012
European Communities (Birds and Natural Habitats) Regulations 2011
S.I. No. 477 of 2011
European Communities (Waste Directive) Regulations 2011
S.I. No. 126 of 2011

Waste Management (Licensing) (Amendment) Regulations 2010
S.I. No. 350 of 2010
Waste Management (Registration of Brokers and Dealers) Regulations 2008
S.I. No. 113 of 2008
Waste Management (Facility Permit and Registration) (Amendment) Regulations 2008
S.I. No. 86 of 2008
Waste Management (Facility Permit and Registration) Regulations 2007
S.I. No.821 of 2007
Waste Management (Tyres and Waste Types) Regulations 2007
S.I. No.664 of 2007
Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005
S.I. No.340 of 2005
Waste Management (Licensing) Regulations 2004
S.I. No.395 of 2004
Waste Management (Permit) Regulations 1998
S.I. No.165 of 1998
Waste Management (Facility Permit and Registration) (Amendment) Regulations 2019
S.I. No. 250 of 2019

EU
Industrial Emissions Directive **2010/75/EU**
Landfill Directive **1999/31/EC**
Acts
Waste Management Act 1996 as amended
Protection of the Environment Act 2003

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law.
One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996 - 2001* and subsequent Irish legislation, is the principle of *"Duty of Care"*. This implies that the waste producer is responsible for waste from the time it is generated through until its legal recycling, recovery or disposal (including its method of disposal). As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final destination, waste contractors will be employed to physically transport waste to the final destination. Following on from this is the concept of *"Polluter Pays"* whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from the incorrect management of waste produced, including the actions of any contractors engaged (e.g., for transportation and disposal/recovery/recycling of waste).

It is therefore imperative that the client ensures that the waste contractors engaged by construction contractors are legally compliant with respect to waste transportation, recycling, recovery and disposal.

This includes the requirement that a contractor handle, transport and recycle/recover/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). 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 licence granted by the EPA. The COR/permit/licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and/or disposed of at the specified site.

APPENDIX 1 – ASPECTS AND IMPACT

Environmental Aspects

An environmental aspect is anything resulting from the companies' activities, products or services that has the potential to cause an environmental impact, even if it is presently controlled, or prevent such impact. The fact that the potential exists (if something goes wrong, for instance) makes it an environmental aspect an environmental aspect can be either negative or positive. Negative aspects include emissions to the air or water, discharge of oil to the land or water, generation of hazardous waste, generation of solid waste, community impact, and the generation of dust and noise. Positive aspects include recycling of used materials such as steel, aluminium, copper, glass bottles and paper, removal of pollutants from the air or water, and restoring land by removing decontaminated soil.

Environmental Impact

In cause and effect, if one considers an environmental aspect to be the cause, then the environmental impact is the effect. An environmental impact is any change to the environment, whether adverse or beneficial, wholly or partially resulting from the organization's activities, products or services. Essentially, the environmental impact is the result of the environmental aspect.

Environmental Aspects & Impacts

Aspects	Impacts	
Storage of Fuel	Spill & Leaks	All fuels to be stored in bunked areas. Refuelling to take place in re-fuelling area only. Spill kits to be in place. Report any spills immediately
Storage of chemicals	Spills & Leaks	To be stored in lockable container only. Signs to be

		in place. Spill kits to be available.
Concrete washout area	Spill & leaks, contamination to water and soil	Wash out area required. Spill kits to be in place to prevent materials entering the drains
Delivery of Concrete	Air emissions, noise and spills	Keep noise levels to a minimum, turn off engines. Wash out area to be in place. Spill kits
Site vehicles	Air emissions, noise and spills	Keep noise levels to a minimum, turn off engines when not in use. Spill kits on site.
Dust	Air emissions	Damp down all works when required. Good housekeeping
Noise	Noise emissions	Keep noise levels to a minimum, choose the correct tools, turn off equipment when not in use
Vibration	Vibration emissions	Keep vibration levels to a minimum, Choose the correct tools for task
Use of gases	Fire spills	Hot works permit to be in place. Fire extinguishers. Pre-maintenance checks to prevent spills, gases been released
Electrical use	Air pollution, global warming	Turn off lights when not in use, turn off all electrical equipment when not in use. Ensure temp accommodation is certified
Recycling	Conservation	Separate bins and waste skips. Skips to be levelled and checked visually every day
Waste management of materials	Conservation	Ensure permits and licences are in place
Soil heaps	Conservation of natural resources	TBA

Hazards materials	Spills and leaks. Incorrect disposal areas, legal	Ensure all hazards waste is removed as per legal requirements. Records to be reviewed and stored on site.
Storm water discharge	Conservation	Ensure all taps are turned off when not required
Water use	Conservation	Ensure all taps are turned off when not required
Paper	Conservation	Recycle, print on both sides.
Wooden pallets	Put into skips recycling	Send back to supplier
Discharges to the soil	Contamination	Spill kits to be made available on site. Report any environmental incident to site management

Specific, Measurable Goals

Area	Goal	% Change	Personnel	Measurement
Water Use	Increase use of recycled water	10% increase	Site Management	Water bill, water meter
Sustainability/carbon footprint reduction	Reduce photocopy and printing	20% increase	All site management Anthony O Reilly	Measurement from IT department
Returned Concrete	Recycle 30%	30%	Site Management	Qualities to be double checked, track cost savings
Waste management	Reduce waste management	10% decrease	Site management Subcontractors	Recycle, check qualities of materials before works. Recycle, request subcontractors reuse on their other projects
Wooden pallets	Reduce waste management	50%	Site management Subcontractors	Store in barriered area to prevent the pallet being damaged. Send back to supplier in good condition
Electricity use	Reduce electricity	10%	Site management	Turn of lights,

			Subcontractors	equipment etc when not in use. Charging to be as per equipment manual. Turn off computers at the end of each shift
Use of Chemicals	Reduce chemicals on site	10%	Site management Subcontractors	Order only what is required. Use fully and dispose correctly. Research less hazards chemicals for the environment
Site Vehicles	Reduce air emissions	5%	Site management Subcontractors	Turn of all machinery when not in use. Turn of Genny's when not in use. Ensure they are double bunded.
Discharge of water, chemicals into the soil-steams etc	Reduce contamination to soil, lakes, streams etc from construction activities.	20%	All Management	Ensure all planning conditions are met before works commence. Environmental plan to be completed before works to ensure the correct control measures are implicated.