



## Appendix 15.3

# Construction Resource and Waste Management Plan

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# 1. Introduction

## 1.1 Overview

This report sets out the Construction Resource and Waste Management Plan (CRWMP) prepared by Arup as part of the planning application for the proposed pedestrian and cyclist bridge at Little Island, Co. Cork (hereafter referred to as the ‘*Proposed Development*’).

The content presented in this CRWMP has regards to the guidance outlined in the following documents:

- Environmental Protection Agency Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects – (EPA, 2021) (Tier 2 development guidance applied); and
- The EU Construction & Demolition Waste Management Protocol (European Commission, 2016).

Waste management objectives, policy and legislation are outlined in this Section.

Subsequent Sections are included in this report which address the roles and responsibilities of relevant personnel (**Section 3**), details regarding wastes arising (**Section 4.2 – Section 4.4**), the costs of waste management (**Section 4.6**), waste collection (**Section 5.3**), waste recovery/disposal off site (**Section 5.4**), and record keeping (**Section 5.5**).

Following appointment, the contractor will be responsible for detailing and maintaining this report and updating it as appropriate. The responsibilities as set out in the EPA Guidelines are included in **Appendix A**.

## 1.2 Waste Management Objectives

The principal objective of sustainable resource and waste management is to use material resources more efficiently, to re-use, recycle and recover material and to reduce the amount of waste requiring final disposal. The value of products, material and resources should be maintained in the economy for as long as possible such that the generation of waste is minimised.

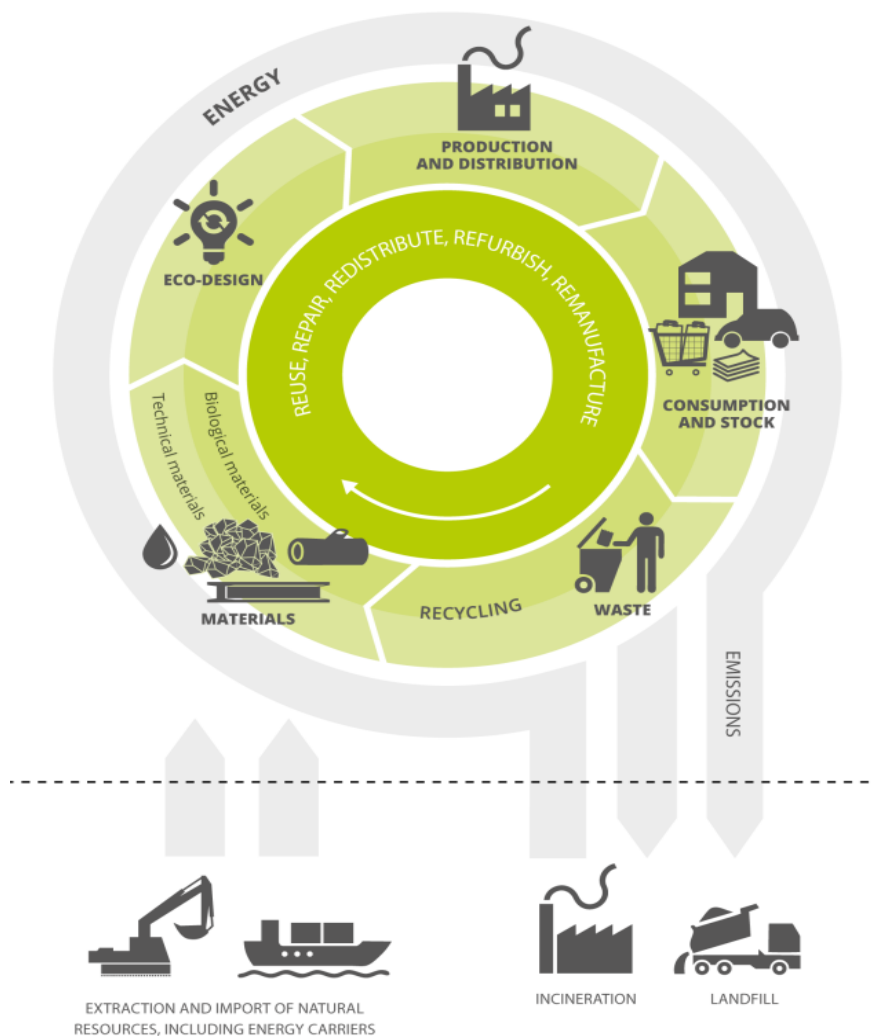
To achieve resource efficiency there is a need to move from a traditional linear economy to a circular economy (refer to **Image 1**).

The Department of Environment, Climate and Communication’s (DECC) A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020 – 2025 (DECC 2020) notes that:

*“In a circular economy the value of products and materials is maintained for as long as possible; waste and resource use are minimised, and resources are kept within the economy when a product has reached the end of its life, to be used again and again to create further value.”*

The EU Circular Economy Action Plan (European Commission, 2020) notes that:

*“the EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade.”*



**Image 1: A simplified model of the circular economy for materials and energy (European Environment Agency, 2016)**

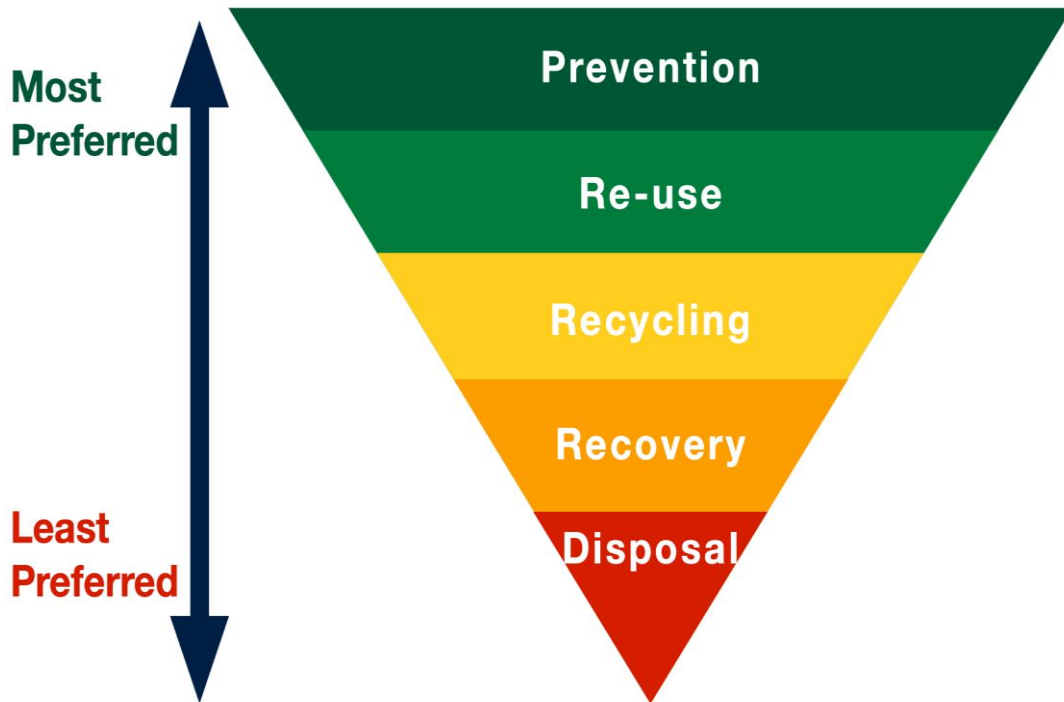
Where residual waste generation is unavoidable, it will be dealt with in a way that follows the waste hierarchy (as illustrated in **Image 2**) and set out in Directive 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (hereafter referred to as the ‘Waste Framework Directive’).

The European Commission has adopted a new Circular Economy Action Plan (EC, 2020) - one of the main blocks of the European Green Deal, Europe’s new agenda for sustainable growth. The Circular Economy Action Plan identifies buildings and construction as a key area where there are opportunities for resource efficiency and circularity.

The Department of the Environment, Climate and Communications published the Irish Waste Action Plan for a Circular Economy in September 2020 (DECC, 2020). The Plan outlines the commitment in the new Programme for Government to implement a new National Waste Action Plan providing new waste policy and giving direction to waste planning and management in Ireland.

The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

The Plan includes the target of preparing for reuse, recycling and other material recovery (including beneficial backfilling operations using waste as a substitute) of 70% by weight of Construction and Demolition non-hazardous waste (excluding natural soils & stone).



**Image 2: Waste hierarchy**

The Department of Environment, Climate and Communications published the ‘Whole-of-Government Circular Economy Strategy 2022-2023’ (DECC, 2021a) in December 2021. The Strategy aims to support and implement measures that significantly reduce Ireland’s circularity gap, so that Ireland’s rate is above the EU average by 2030.

In July 2022, the Circular Economy and Miscellaneous Provisions Act 2022 was signed into law (Government of Ireland, 2022). This Act aims to place the Strategy, and the commitment to a circular economy, on a clear statutory footing. It underpins Ireland’s shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will to significantly reduce our greenhouse gas emissions. The Act is a key step in the successful transition of Ireland’s economy to a circular economy and is evidence of Government’s commitment to the achievement of that goal.

It also aims to streamline the statutory mechanisms for construction and demolition material reuse which are known as ‘Article 27’ and ‘Article 28’.

The objectives of this CRWMP will facilitate reuse and recycling and divert waste from landfill. The content and headings used in this CRWMP comply with the EPA Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects (EPA, 2021).

Following appointment, the contractor will be responsible for detailing and maintaining this CRWMP and updating it as appropriate.

### 1.3 Waste Management Legislation, Policy and Guidance

Resource and waste management takes place in a legislative and policy framework. Applicable legislation, policy and best practice guidance was reviewed during preparation of this CRWMP.

The key components of EU, national and local policy, legislation and guidance relevant to proposed site clearance and construction are summarised as follows:

- prevention and minimisation of waste is the preferred option;
- where construction waste is generated, it should be source separated to facilitate reuse and recycling and to maximise diversion of waste from landfill;
- where waste may not be prevented or recycled it should be transported and disposed of in accordance with applicable legislation and without causing environmental pollution; and
- waste may only be transferred by a waste collection permit holder and delivered to an authorised waste facility.

An overview of relevant legislation, policy and best practice guidance related to waste management is presented in **Appendix B**, with a summary of key documents provided below.

#### 1.3.1 Southern Region Waste Management Plan 2015 - 2021

For the purposes of waste management planning, Ireland is now divided into three regions: Southern, Eastern-Midlands, Connacht-Ulster. The Southern Region includes Cork County Council. The Southern Region Waste Management Plan 2015 - 2021 was launched in 2015 (Limerick City & County Council/Tipperary County Council, 2015). The strategic approach of the plan places a stronger emphasis on preventing wastes and material reuse activities. Three strategic targets have been set in the plan which include:

- 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill in favour of higher value pre-treatment processes and indigenous recovery practices.

The plan looks to 2030 and includes a goal of reaching a recycling rate of 60%. Note that the Southern Region Waste Management Plan 2015 - 2021 is currently out of date – a National Waste Management Plan for a Circular Economy is currently being prepared to replace the existing Regional Waste Management Plans, including the Southern Region Waste Management Plan 2015 – 2021.

#### 1.3.2 A Waste Action Plan for a Circular Economy – Ireland’s National Waste Policy 2020-2025

‘A Waste Action Plan for a Circular Economy’ was published in 2020 (DECC, 2020) and fulfils the commitment in the Programme for Government to publish and start implementing a new National Waste Action Plan. The policy document shifts focus away from waste disposal and moves it back up the production chain. It contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

The overarching objectives of this action plan are to:

- Shift the focus away from waste disposal and treatment to ensure that materials and products remain in productive use for longer, thereby preventing waste and supporting reuse through a policy framework that discourages the wasting of resources and rewards circularity;
- Make producers who manufacture and sell disposable goods for profit environmentally accountable for the products they place on the market;
- Ensure that measures support sustainable economic models (for example by supporting the use of recycled over virgin materials);
- Harness the reach and influence of all sectors including the voluntary sector, R&D, producers / manufacturers, regulatory bodies, civic society; and
- Support clear and robust institutional arrangements for the waste sector, including through a strengthened role for local authorities.

The plan identifies opportunities for the application of circular economy principles across a range of areas in Ireland, including C&D waste.

### 1.3.3 Construction and Demolition Waste Soil and Stone Recovery / Disposal Capacity Update Report 2020

The Regional Waste Management Planning Offices (RWMPOs) quantified and analysed national capacity within the market for the management of soil and stone waste arisings, including hazardous material, based on 2018 data, and published this in 2020. This report (RWMPOs, 2020) updates the most recent previous Soil and Stone Recovery / Disposal Capacity report published in 2016.

The report shows that the Covid-19 crisis significantly impacted development and construction. The forecast for 2023 predicted a continued gradual return to normal economic activity. By the end of 2029, it is forecast that C&D waste will grow to a total of 10.1m tonnes per annum. The corresponding forecast data for soil and stone waste is 8.7m tonnes by end of 2029. The report indicates that there is sufficient capacity at licenced facilities. As per the report, there are seven soil recovery facilities in the EPA licensing system for the Southern Region (SR). The annual active licenced capacity for the SR, at end-2018, was 525,000 tonnes.

### 1.3.4 Cork County Development Plan 2022 – 2028

The Cork County Development Plan 2022-2028 (Cork County Council, 2022) sets out Cork County Council’s policies and objectives for the development of the County over the Plan period.

The Council includes a number of waste prevention and management objectives as part of Chapter 15 Biodiversity and Environment. Objectives relevant to the Proposed Development include the following:

*“Objective BE 15-14: Waste Prevention and Management:*

*a) Support the policy measures and actions outline in*

*- ‘A Waste Action Plan for a Circular Economy Ireland’s National Waste Policy 2020-2025’, and*

*- Southern Region Waste Management Plan 2015 – 2021, or any successor plans*

*b) Support circular and climate resilient economy principles and associated strategic infrastructure, prioritising prevention, reuse, recycling and recovery, and to sustainably manage all types of waste by ensuring the provision of adequate waste recovery, recycling and disposal facilities for the county.”*

*“Objective BE 15-17: Waste Prevention and Management:*

*a) Planning applications for infilling of marginal land through soil importation will be supported where it can be demonstrated that the developments accord with proper planning and sustainable development,*



*ensuring that they are compatible with the protection of environmental resources including water quality, Natura 2000 sites, biodiversity, archaeological and landscape resources.*

*b) Support will be provided for locating suitable sites within the county for the safe disposal of construction and demolition waste in conjunction with the Southern Waste Region.*

*c) Construction and Environmental Management Plans (CEMPs)/Construction and Demolition Management Plans shall be prepared for larger scale projects as set out in paragraph 15.12.24 and this requirement shall be assessed on a case-by-case basis as part of the development management process.*

*d) Support the implementation of the recommendations and policies of the National Hazardous Waste Management Plan 2014-2020.”*

Sections 15.12.23 to Section 15.12.25 of the Cork County Council Development Plan 2022-2028 also outline specific considerations for Construction and Demolition (C&D) waste.

### **1.3.5 European Commission (2016) EU Construction & Demolition Waste Management Protocol**

This protocol was published by the European Commission in September 2016 (European Commission, 2016). The overall aim of the protocol is to increase confidence in the Construction and Demolition (C&D) waste management process and the trust in the quality of C&D recycled materials. This will be achieved by:

- a) Improved waste identification, source separation and collection;
- b) Improved waste logistics;
- c) Improved waste processing;
- d) Quality management; and
- e) Appropriate policy and framework conditions.

### **1.3.6 Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects (EPA, 2021)**

These guidelines were published in 2021 (EPA, 2021) and supersede the guidelines published by the Government in 2006 (DEHLG, 2006).

The replacement guidelines reflect current waste legislation and policy including ‘A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025’ (DECC, 2020). Since the publication of the 2006 guidelines, waste management legislation and policy have evolved towards prioritising waste prevention and life-cycle thinking through an increased emphasis on waste prevention and the promotion of circular design and construction principles in line with the EU Circular Economy Action Plan under the EU Green Deal.

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

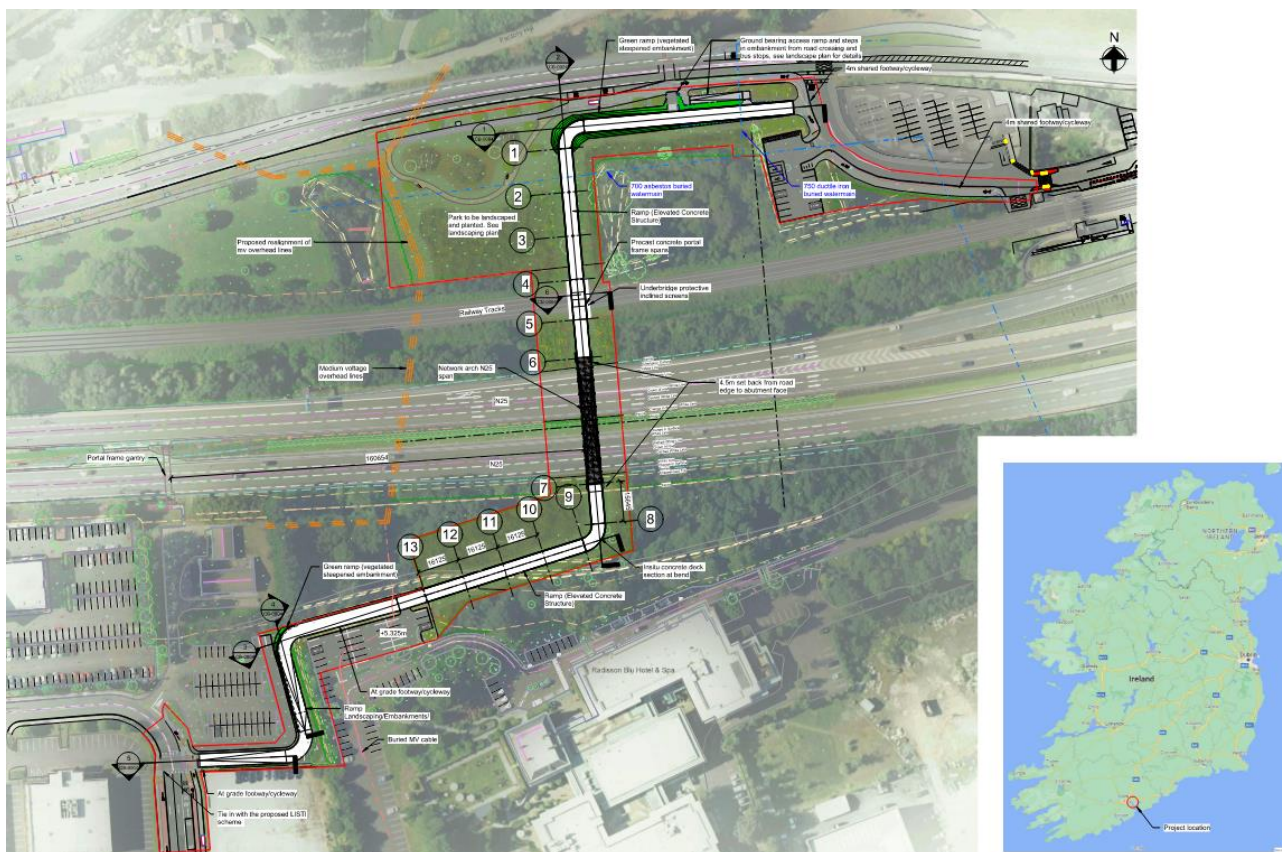
- Prior to Construction – including the stages of design, planning and procurement in advance of works on site; and
- During Construction – relating to the effective management of resources and wastes during construction or demolition operations.

## 2. Description of the Proposed Development

### 2.1 Proposed Development

The Proposed Development will include the construction of a new pedestrian and cyclist bridge and associated ramps over the existing N25. The Proposed Development will be located approximately 10km to the east of Cork City and will cross over the N25 and the Cork City to Middleton Cobh railway line, connecting the Little Island Train Station, the Glounthaune Road and the future greenway to the Eastgate Business Park in Little Island, Cork. The Proposed Development site is bounded by the Glounthaune Road to the north and the Eastgate Business Park to the south. When operational, it will function as an active travel link for pedestrians and cyclists to travel from the Little Island Train station and surrounds to the Eastgate Business Park and further surrounds of Little Island.

Refer to **Image 3** for a site location map showing the site boundary.



**Image 3: Site location map showing site boundary. Not to scale.**

There are no buildings or structures currently present on the proposed site which will require demolition. However, clearance of some areas of the site will be required, with the resultant generation of organic materials. Excavated material will also be generated from the Proposed Development. This material will generally consist of made ground, topsoil and subsoil, and pile generated spoil material.

## 2.2 Receiving Environment

In 2021, the latest year for which there are published statistics available, 9 million tonnes of C&D waste were generated in Ireland, representing an increase of 0.8 million tonnes from 2020 (EPA, 2023a). Of this waste, approximately 7.7 million tonnes comprised soil and stones, making up approximately 85% of the material waste stream.

A breakdown of the composition of C&D waste in Ireland in 2021 is set out in **Table 1**. These figures should be considered as a guide only as C&D waste can vary significantly from one project to another, depending on the nature of the development and the waste management practices employed on-site.

**Table 1: Composition of C&D waste material collected in Ireland in 2021 (EPA, 2023a)**

C&D waste type	Quantity (tonnes)	% of material stream in reference to total
Soils, stones & dredging spoil	7,696,287	85.1%
Concrete, brick, tile & gypsum	608,235	6.7%
Mixed C&D waste	362,380	4.0%
Metal	257,558	2.8%
Bituminous mixtures	87,343	1.0%
Segregated wood, glass & plastic	31,946	0.4%
<b>Total</b>	<b>9,043,749</b>	<b>100%</b>

Data issued by the EPA demonstrates that final treatment operations (backfilling, recycling, energy recovery, disposal) of C&D waste materials varied greatly between material streams. By far the largest quantity of C&D waste was used for backfilling (a recovery operation), which mainly reflects the dominance of soil and stones in the overall composition mix.

The EPA reports that Ireland achieved 85% material recovery of construction and demolition waste in 2021 (EPA, 2023a). Under the Waste Framework Directive (2008/98/EC) Member States must achieve 70% of material recovery of non-hazardous, non-soil-and-stone C&D waste by 2020.

Article 27 of the European Union (Waste Directive) Regulations 2020 allows a material producer to declare, under prescribed circumstances, that a material is a by-product and not a waste and so can be reused onsite or offsite within the industry.

On receipt of Article 27 notifications at the EPA, materials can be determined as a waste or a by-product. In some cases, no determination is issued by the EPA, meaning the material has not been determined as a waste. In 2021, the EPA assessed 123 by-product notifications. The EPA determined that 459,836 tonnes of the soil and stone notified were by-product, and 600 tonnes were waste. Notifications for 152,400 tonnes were withdrawn (EPA, 2023a).

The EPA reports that a total of 466,941 tonnes of hazardous waste was generated in Ireland in 2021, representing a decrease of 16 per cent (over 90,000 tonnes) from 2020 (EPA, 2023b). Hazardous waste types include wastes from dredging spoil, contaminated soils, waste treatment, solvents and hazardous elements of waste electrical and electronic equipment. In 2021, 52% of hazardous waste was treated in Ireland and 48% of hazardous waste was exported. Hazardous waste treatment in Ireland takes place on site of generation (95,130 tonnes) or at Irish hazardous waste management facilities (148,575 tonnes).

A report entitled Essential Aggregates: Providing for Ireland's Needs to 2040 (Irish Concrete Federation, 2019) was published in 2019 which details and quantifies Ireland's natural aggregate reserves. At the time of

publication of that report, Ireland had approximately 500 active large commercial quarries, approximately 220 ready mixed concrete plants, 20 large scale precast concrete plants and 40 plants producing bitumen bound road surfacing materials.

The Irish Concrete Federation quantifies the annual production of these materials in Ireland on their website (Irish Concrete Federation, 2023), with the 2019 figures (the most recent available) being as follows:

- Five million cubic metres of ready-mixed concrete;
- 135 million concrete blocks;
- 38 million tonnes of aggregates;
- Two million tonnes of bituminous road surfacing materials; and
- Two million square metres of paving products.

### 3. Role and Responsibilities

Copies of the CRWMP will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the CRWMP and informed of their responsibilities.

The nominated Resource Manager (RM) responsible for implementation of this CRWMP will be identified prior to construction commencement. The RM will be responsible for informing contractor staff and sub-contractors of content of the CRWMP and for maintaining and keeping the Records set out in **Section 5**. In the event of the RM leaving the project team the contractor will nominate a suitable replacement.

The RM will be responsible for conducting ongoing resource audits at the site during construction. The RM shall ensure that where training is required regarding the handling and management of wastes on site that this is provided to staff as required.

### 4. Key Materials, Quantities and Costs

#### 4.1 Introduction

Construction and demolition (C&D) waste is defined as waste which arises from construction, renovation and demolition activities.

Also included within the definition are surplus and damaged products and materials arising in the course of construction work or used temporarily during the course of on-site activities.

Typical construction waste types which are likely to arise during the proposed site clearance, excavation and construction works are set out **Appendix C**, including EPA List of Wastes (LOW) codes.

The contractor will ensure that waste generation on site is minimised, and that waste removed from site for recovery or disposal is reduced where feasible.

Further details on site clearance, excavation and construction waste arisings during the construction works are presented in **Section 4.2** to **Section 4.4** below, along with information on the import of materials required

for the construction of the proposed bridge (**Section 4.5**). Details on the costs associated with resource and waste management are presented in **Section 4.6**.

## 4.2 Site Clearance Waste Arisings

The first stage of the construction works will involve site preparation and clearance. Clearance of the site will include the removal of any vegetation, soil and stone or other materials.

Organic materials, including vegetation from shrub, tree or grass clearance or deposits removed from within drainage ditches, will generate only minor quantities of waste material for treatment at organic waste facilities.

It is estimated that approximately 415 tonnes of cleared vegetation will be generated as a result of the Proposed Development.

There are no buildings or structures currently present on the proposed site which will require demolition.

Further details on the management of site clearance waste are provided in **Section 5.1**.

## 4.3 Excavation Waste Arisings

Excavation waste will arise from such activities as:

- Excavation for utility diversions;
- Excavation for footways / embankments;
- Excavation for piling works; and
- Excavation for foundations / piers.

In total, it is estimated that the construction of the Proposed Development will require the excavation of approximately 5,950 tonnes (bulk weight) of material. This material will comprise made ground, topsoil and subsoil.

It is estimated that approximately 300mm will need to be excavated under the proposed embankments and tie ins at grade footways / cycleways to allow for competent formation layers to be placed. The total amount of material estimated to be generated from these works will be approximately 2,260 tonnes (bulk weight).

In addition to the excavated topsoil, it is estimated that approximately 1,950 tonnes (bulk weight) of piling spoil material and approximately 1,740 tonnes (bulk weight) of excavated material for the pile caps will be generated.

Following the completion of the construction works, it is estimated that approximately 32,400 tonnes of construction surfacing material will be removed from site.

Refer to **Chapter 17, Land, Soils, Geology and Hydrogeology** in **Volume 2** of EIAR for further details on the excavation material within the Proposed Development site.

Further details on the management of excavation waste are provided in **Section 5.1**.

## 4.4 Construction Waste Arisings

A description of typical wastes from construction projects including their respective LoW Codes are outlined in **Table 2**.

**Table 2: Typical construction waste LoW codes and corresponding waste descriptions (EPA, 2019)**

LoW Code	Waste Categories
17 01*	Concrete, bricks, tiles and ceramics
17 02*	Wood, Glass and Plastic
17 03*	Bituminous mixtures, coal tar and tarred products
17 04*	Metals
17 05*	Soil (incl. excavated soil from contaminated sites), stones and degrading spoil
17 08*	Gypsum-based construction materials
17 09*	Other Construction and Demolition Waste
16 02*	WEEE
16 06*	Batteries
03 02*	Wood Preservatives
17 05 03**	Contaminated Soils
13 07*	Liquid Fuels

\*May include hazardous wastes

\*\*Hazardous

In the case of the Proposed Development, the most likely type of general construction waste will be surplus concrete and steel that may arise on-site. Quantities of these materials are estimated to be small, assumed to be between approximately 5% to 15% of construction material delivered to site (WRAP, 2014). There is adequate capacity for the management of such wastes. Segregation facilities will be provided to ensure that recovery and recycling of such wastes are maximised. The contractor will ensure that waste generation on site is minimised, and that waste removed from site for recovery or disposal is reduced where feasible.

## 4.5 Imported Material

The Construction Phase will require the importation of a number of key construction materials for the Proposed Development works. Importation of material to the Proposed Development site will be carried out throughout the Construction Phase, with different materials being required at different times. This material will include items such as primarily concrete, crushed stone, embankment build-up, footway / cycleway paving materials, steelwork, reinforcement steel and precast concrete sections.

**Table 3** provides an estimate of the quantities of the major materials required to complete the Construction Phase of the Proposed Development.

**Table 3: Estimated quantities of major construction materials required.**

Material	Estimated quantity
Concrete	3,000 tonnes
Clause 804 Hardcore	32,400 tonnes
Reinforcing steel	187,000 kg
Structural steelwork	55 tonnes N25 span + 33 tonnes parapets
Precast concrete elements	930 tonnes

Material	Estimated quantity
Embankment fill	5,560 tonnes
Link footway / cycleway surfacing	1,930 tonnes

The quantities of materials listed in **Table 3** represent a very small proportion of the Irish quantities manufactured per year. As an example, the estimated quantity of concrete required represents less than one percent of the total quantity produced in Ireland per annum.

## 4.6 Costs of Resource Management

As required by the Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects (EPA, 2021), this section addresses costs of resource management.

While landfill disposal has been the most commonly used method for waste management in Ireland in the past, waste to energy incinerators are also now in operation at Poolbeg, Dublin 4 and in Carranstown, County Meath.

Typically, the current cost of disposal of waste to landfill in Ireland exceeds €170 per tonne. In accordance with the Waste Management (Landfill Levy) Regulations 2015, the ‘landfill levy’ is €75 per tonne for waste disposed to landfill. Disposal of hazardous waste can cost from €350 upwards.

In addition to landfill operator fees and landfill levies, there are additional costs included in the ‘true cost of resource management’ including:

- The purchase cost of waste materials (including imported soil);
- Handling costs;
- Storage and transportation costs; and
- Revenue generated from sales.

Therefore, in order to reduce costs associated with resource management, surplus materials should be reused and recycled where possible, and materials should be carefully stored and handled to minimise risk of damage.

## 5. Site Management

The contractor will ultimately be responsible for the management of resources on a project and agreeing and revising as necessary any commitments or targets included in the CRWMP developed at design/planning with the Client for acceptance and adoption in the CRWMP for construction.

The contractor will allocate responsibility for resource management to one or more individuals of sufficient seniority to put the relevant procedures into practice. The contractor will nominate a suitably qualified Resource Manager (RM) with expertise in waste and resource management to implement the CRWMP.

The nominated RM responsible for implementation of this CRWMP will be identified prior to construction commencement.

Copies of the CRWMP will be made available to all relevant personnel on site.

All site personnel and sub-contractors will be provided with a copy of the CRWMP and will be informed of the objectives of the CRWMP and their responsibilities in relation to compliance with the CRWMP.

The RM shall ensure that where training is required regarding the handling and management of wastes on site that this is provided to staff as required and that the CRWMP is included in site induction training.

The RM will be responsible for informing contractor staff and sub-contractors of content of the CRWMP and for maintaining and keeping the Records set out below.

In the event of the RM leaving the project team the contractor will nominate a suitable replacement.

## 5.1 Site Clearance and Excavation Waste Management

Organic materials (such as vegetation from shrub, tree or grass clearance or deposits removed from within drainage ditches) will be removed from site by a waste collection permit holder and delivered to an authorised composting or organic waste facility. The extent of vegetation clearance will not be significant. The vegetation clearance will be kept to the minimum required to facilitate construction.

Possibilities for re-use of clean, non-hazardous excavation material in construction works, as fill or in landscaping works on site will be considered following appropriate testing to ensure the material is suitable for its proposed end use. Should such suitable material arise and be re-used on site it will be exempt from waste regulations.

Excavation material, which is not suitable for reuse on site, or surplus to requirements, will be stockpiled, tested and classified. Where feasible classification for reuse on other construction site(s), for example as a “by product” under Article 27, will be considered. Where the material is not suitable for reuse it will be categorised in accordance with the EPA List of Waste and Determining if Waste is Hazardous or Non-hazardous (EPA, 2018).

Waste may only be transferred from site by a waste collection permit holder and delivered to an authorised waste facility (i.e., a facility which holds a Certificate of Registration, Waste Facility Permit or Waste Licence) for the specific waste types it receives.

Where removal from site of construction by-products for further use is proposed, this will take place in compliance with Article 27 of the European Communities (Waste Directive) Regulations, 2011, where appropriate. The contractor will be responsible for ensuring compliance with this article where appropriate.

Should excavated material containing hazardous substances be discovered as part of the Proposed Development, this will be treated at an authorised facility either in Ireland or abroad. Export of hazardous waste from the Proposed Development outside of the State is subject to a Europe-wide control system founded on EU Regulation 1013/2006 on the Shipments of Waste (known as the Transfrontier Shipment Regulations), as amended. This legislation is supplemented by the Waste Management (Shipments of Waste) Regulations 2007, as amended, which makes Dublin City Council responsible for the enforcement of this regulatory system throughout Ireland. In 2021 in Ireland, 466,941 tonnes of hazardous waste was generated and of this, 48% was exported for treatment (EPA, 2023b). The above procedures will be applied to any hazardous waste generated during the Construction Phase. Export of hazardous waste from site outside the state will comply with the procedures set out in this legislation.

As noted in **Section 1**, following appointment, the contractor will be responsible for detailing and updating this CRWMP. The detailed CRWMP will include a description of how site clearance and excavation material from the Proposed Development will be managed. A full list of all facilities to which uncontaminated site clearance and excavation material will be sent will be provided in the detailed CRWMP.

### 5.1.1 Article 27

Surplus excavation material may be declared a by-product under (under Article 27 of the EC Waste Directive Regulations, 2011-2020) for reuse in one or more known construction projects.



By-product notifications to the EPA provide an opportunity for reuse of surplus clean soil and stone material arising from construction activity. This can apply to locations other than authorised recovery facilities e.g., quarries operating under planning permission, parks or other developments requiring earthworks and importation of clean soil and stone. This option can bring significant economic benefits while facilitating beneficial re-use of by-products. This plays a role in Ireland's implementation of Circular Economy principles.

An Article 27 notification to the EPA under Article 27 (S.I. No. 323/2020) European Union (Waste Directive) Regulations 2020 is required to achieve by-product status for soil and stones. It is noted that the use of Article 27 is limited to clean soil and stone, and it must be demonstrated to the EPA that the following four conditions are met:

- further use of the soil and stone is certain;
- the soil and stone can be used directly without any further processing other than normal industrial practice;
- the soil and stone is produced as an integral part of a production process; and
- further use is lawful in that the soil and stone fulfil all relevant requirements for the specific use and will not lead to overall adverse environmental or human health impacts.

Where it is proposed to use an Article 27 EPA notification in relation to excavation material from the Proposed Development, the contractor is responsible for submission of the Article 27 notification to the EPA. Where it is proposed to use soil from off-site with an Article 27 notification, the contractor is responsible for carrying out any necessary due diligence regarding the material and ensuring that all EPA guidelines relating to that Article 27 notification have been complied with before the soil is imported into the site. Where feasible, appropriate and available Article 27 materials arising from other sites will be used in the development of this site.

The contractor is responsible for ensuring all applicable regulatory requirements under waste, planning and other laws are complied with prior to movement of excavation material.

### 5.1.2 Soil Recovery at Sites Holding Waste Facility Permits or EPA Licences

Where removal of wastes from the Proposed Development is unavoidable it will be delivered by the contractor only to facilities which are authorised under the Waste Management Act, 1996 as amended and which hold the appropriate certificate of registration, waste facility permit or EPA licence.

The Waste Management (Facility Permit and Registration) Regulations 2007, as amended sets out the classes of waste activity requiring waste facility permits and certificate of registration. The most relevant class of activity in relation to soil recovery facilities is:

*Class 5 (Third Schedule, Part 1 of the Regulations) for the "Recovery of excavation or dredge spoil, comprising natural materials of clay, silt, sand, gravel or stone and which comes within the meaning of inert waste, through deposition for the purposes of the improvement or development of land, where the total quantity of waste recovered at the facility is less than 100,000 tonnes."*

For waste facility permits and certificate of registration the capacity is typically a lifetime capacity, and when reached, the facility typically closes. Waste facility permits and certificates of registration are granted to private operators by local authorities.

EPA licensed waste activities authorised to accept soil and stones for recovery and disposal include soil recovery sites, landfills, transfer stations and materials recovery facilities. These typically handle a larger tonnage of wastes than facilities holding certificates of registration of waste facility permits.

EPA licences typically include an annual maximum intake capacity and a maximum lifetime capacity for the licenced facility.

Where the contractor proposes to deliver excavated materials from the Proposed Development to facilities holding a certificate of registration, waste facility permit or EPA waste licence the contractor is responsible for ensuring the authorisation is valid and allows acceptance of the relevant List of Waste Code.

A copy of the authorisation will be included in the CRWMP and evidence will be provided that the proposed facility will have capacity to accept the required quantity of waste from the Proposed Development.

## 5.2 Construction Waste Management

The contractor shall take the following measures to prevent waste, facilitate recycling and minimise waste disposal during the Construction Phase:

- Where waste generation cannot be avoided, waste disposal will be minimised;
- Opportunities for reuse of materials, by-products and wastes will be sought throughout the Construction Phase of the Proposed Development;
- Possibilities for reuse of clean non-hazardous excavation material as fill on the site or in landscaping works will be considered following appropriate testing to ensure material is suitable for its proposed end use;
- Where non-hazardous excavation material cannot be reused within the Proposed Development works, material will be sent for recycling or recovery, where practicable;
- Excavations of made ground will be monitored by an appropriately qualified person to ensure that any hotspots of possible contamination are properly identified, with the contaminated material segregated and disposed of appropriately. Any potential contaminated material identified will be segregated and stored in an area where there is no possibility of runoff generation or infiltration to ground or surface water drainage. Care will be taken to ensure that the hotspot does not cross contaminate clean soils elsewhere throughout the site;
- If encountered, any potential asbestos during the Construction Phase will be managed using standard health and safety measures as outlined in ‘Asbestos-containing Materials (ACMs) in Workplaces: Practical Guidelines on ACM Management and Abatement’ (HSA, 2013). This document states that *“removal of asbestos from contaminated soil will require a specialist asbestos contractor for any friable asbestos to be removed”* and *“a risk assessment by an independent competent person should determine the most appropriate control measures and remediation strategies”* (HSA, 2013);
- Only a suitably experienced contractor shall be used to carry out the excavation works. During construction, they shall employ standard practices to manage risk from contaminated soils. These will be determined by the contractor depending on their construction practices but are likely to include the use of gloves, dust masks and potentially disposable overalls. These and other appropriate measures will minimise the exposure of site workers and members of the public;
- The site will be maintained to prevent litter and regular litter picking will take place throughout the site;
- ‘Just-in-time’ delivery will be used, where practicable, to minimise material wastage;
- Paints, sealants and hazardous chemicals will be stored in secure, bunded locations;
- All staff on-site will be trained on how to minimise waste (i.e., training, induction, inspections and meetings);
- Materials on-site will be correctly and securely stored;

- Where possible, recyclable material will be segregated and removed off site to a permitted / licensed facility for recycling. Waste stream colour coding and photographs will be used to facilitate segregation;
- On-site municipal waste arising will be source separated at least into dry mixed recyclables, biodegradable and residual wastes;
- Waste bins, containers, skip containers and storage areas will be clearly labelled with waste types which they should contain, including photographs as appropriate;
- Segregated skips will be used within a designated waste segregation area to be located in the on-site construction compound (particularly for hazardous, inert waste and general waste);
- The appointed contractor will record the quantity in tonnes and types of waste and materials leaving the site during the Construction Phase. The name, address and authorisation details of all facilities and locations to which waste and materials are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility. Records will show material, which is recovered, which is recycled, and which is disposed of;
- Waste generated on-site will be removed as soon as practicable following generation for delivery to an authorised waste facility;
- The appointed contractor will ensure that any off-site interim storage facilities for excavation material have the appropriate waste licences or waste facility permits in place;
- Where Article 27 notifications are required in relation to the Proposed Development, the appointed contractor will complete and submit these Article 27 notifications to the EPA for by-product reuse; and
- The relevant appropriate waste authorisation will be in place for all facilities that wastes are delivered to (i.e., EPA Licence, Waste Facility Permit or Certificate of Registration).

The appointed contractor will be required to produce a detailed CRWMP prior to commencement of the proposed works. This will include the names, addresses and authorisation details of the facilities to which waste from the Proposed Development will be delivered. **Appendix D** provides further details of the information which shall be contained in the detailed CRWMP.

### 5.3 Waste Collection

Waste from construction will be transported by authorised waste collectors in accordance with the Waste Management (Collection Permit) Regulations, 2007 as amended.

A list of currently authorised waste collectors is available on the following website:  
<https://www.nwcpo.ie/permitsearch.aspx>.

An up-to-date list of all waste collectors used to transport waste from site during the Proposed Development will be maintained on site and updated by the contractor. Copies of valid appropriate waste collection permits will be held on site by the contractor.

### 5.4 Waste Recovery and Disposal Offsite

Waste from construction will be delivered to authorised waste facilities in accordance with the Waste Management Acts 1996 to 2011, as amended.

The following authorisations are applicable:

- Certificates of Registration (CoR) from the Local Authority (issued to private sector);
- Certificates of Registration (CoR) from the EPA (issued to Local Authority);
- Waste Facility Permit (WFP) from the Local Authority;

- Waste or Industrial Emissions Licence from the EPA.

A list of currently authorised (CoR or WFP) waste sites in each Local Authority is available on the following website: <http://facilityregister.nwcpo.ie/>.

Lists of sites currently licensed by the EPA (Industrial Emissions or Waste Licence) are available on the following websites:

- [Environmental Protection Agency \(epa.ie\)](http://epa.ie) (for Waste Licensed sites);
- [Environmental Protection Agency \(epa.ie\)](http://epa.ie) (for Industrial Emission Licensed waste facilities).

An up-to-date list of all waste facilities to which waste from the site will be delivered will be maintained on site and updated by the contractor. Copies of valid facility Certificates of Registration, Waste Facility Permits, and Waste Licences will be held on site by the contractor.

## 5.5 Record Keeping and Auditing

The appointed RM will arrange for audits to be completed on the Proposed Development prior to any construction works commencing and during the construction works. Audits will be of all existing structures and hard surfaces within the Proposed Development site which will be impacted by the works. The audits will identify and quantify the key materials associated with the Proposed Development, outline potential reuse and recycling applications for these materials, identify reuse, recycling and landfill diversion targets for these materials and identify potential local recovery and recycling facilities to which these materials may be delivered.

The contractor will record the quantity in tonnes and types of waste and materials leaving the development site during site clearance, excavation and construction of the Proposed Development. Quantities will be regularly reviewed and compared with targets set during initial audits (including the pre-demolition audit).

The name, address and authorisation details of all facilities and locations to which waste and materials from the Proposed Development are delivered will be recorded along with the quantity of waste in tonnes delivered to each facility and the date of the waste movement. Records will show material which is recovered and disposed of.

A sample resource and waste inventory as included in the EPA Guidance is included in **Appendix E**.

## 6. Site Infrastructure

The following infrastructure requirements must be adopted by the contractor at construction stage:

- While earthworks are underway, sufficient space will be made available for wastes, by-products and material storage, as necessary. It will be the responsibility of the contractor to ensure all necessary relevant waste authorisations are in place for any such storage in accordance with the Waste Management Act, 1996 as amended;
- Waste storage areas may include stockpiles (for soil and stone, aggregates, etc.), skips (for metals, etc.) or secure containers for hazardous materials. All waste storage areas should be assessed as fit for purpose and should be suitably contained, banded or defined as required;
- The waste storage areas should be set out to reduce any potential for impact on sensitive human (e.g., residential) or natural (e.g., water courses) receptors and a suitable buffer should be applied to mitigate any impact;

- Labelling and signage shall be used on site to inform personnel of key waste storage area requirements and restrictions with clear signage provided;
- Signage is also required to provide information to assist good resource practice across the site;
- In relation to resource storage, the Waste Management Act 1996, as amended, allows for the temporary storage of resources defined as ‘waste’ at the site where it was produced. The Act defines the phrase ‘the temporary storage of waste’ limiting it to having a six-month duration. As such, it is acceptable to store waste on the site of generation for up to six months without the need for any further waste permit / licence.

## 7. References

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Waste Management Acts, 1996 to 2011 and regulations made under the acts.

Waste Management (Collection Permit) Regulations, 2007 as amended.

Waste Management (Shipments of Waste) Regulations 2007 (S.I. No. 419 of 2007)

# Appendix A

## Responsibilities as set out in the EPA Guidelines



## A.1 Responsibilities as set out in the EPA Guidelines

The contractor procured by the Client to undertake the construction operations is responsible for the following:

- Preparing, implementing and reviewing the CRWMP through construction (including the management of all suppliers and sub-contractors) as per the requirements of these guidelines;
- Identifying a designated and suitably qualified Resource Manager (RM) who will be responsible for implementing the CRWMP;
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site. Note that any resource that is legally a 'waste' must only be transported by a haulier with a valid Waste Collection Permit (refer to Appendix F of the Guidelines for a resource to find a suitably permitted local haulier);
- Identifying all destinations for resources taken off site. As above, any resource that is legally a 'waste' must only be transported to a facility holding a valid Cert of Registration, Waste Permit or Waste/Industrial Licence (refer to Appendix F of the Guidelines for a resource to find a suitably authorised facility);
- Maintaining full records of all resources (both wastes and other resources) should be maintained for the duration of the project; and
- Preparing a CRWMP Implementation Review Report at project handover.

# Appendix B

## Waste Management Legislation, Policy and Best Practices Review

## B.1 European Legislation

### ***Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives***

Directive 2008/98/EC, known as the “Waste Framework Directive” came into force on 12th December 2008. It provides for a general framework of waste management requirements and sets the basic waste management definitions for the EU.

The Directive lays down the five-step hierarchy of waste management options, with waste prevention as the preferred option, followed by re-use, recycling, recovery and safe disposal, in descending order. In addition, the Directive deals with the issue of ‘end of waste’ and clarifies the definitions of recovery, disposal and by-product. The directive states that, “The recovery of waste and the use of recovered material as raw materials should be encouraged in order to conserve natural resources.”

### ***Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste***

This Directive amends Directive 2008/98/EC. It provides a number of updated waste management definitions. The Directive allows Member States to use economic instruments including taxes and levies as an incentive for the application of the waste hierarchy. The Directive was transposed into Irish law in August 2020 by S.I. No. 322 of 2020.

The Directive sets targets for the preparing for re-use and the recycling of municipal waste as follows:

- By 2025, at a minimum 55% (by weight) will be prepared for re-use or recycling;
- By 2030, at a minimum 60% (by weight) will be prepared for re-use or recycling;
- By 2035, at a minimum 65% (by weight) will be prepared for re-use or recycling.

With regard to construction and demolition waste, Member States must take measures to promote selective demolition in order to enable removal and safe handling of hazardous substances, facilitate re-use and high-quality recycling. The Directive obliges Member States to take measures to prevent waste generation including reduction of waste generation in processes related to construction and demolition, taking into account best available techniques.

### ***Commission Decision of 18 December 2014, amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European parliament and of the Council (2014/955/EEC) and Commission Regulation (EU) No 1357/2014 of 18 December 2014, replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives.***

This decision (referred to as ‘the List of Waste’ (LoW)) and regulation consolidate the legislation relating to waste classification and allow the generators of waste to classify the waste as hazardous or non-hazardous and in the process assign the correct List of Waste entry codes. Each list of waste entry is a six-digit code which is closely linked to the list of the main characteristics which render waste hazardous contained in Annex III to the Waste Framework Directive. It is noted that Council Regulation (EU) 2017/997 of 8 June 2017 amending Annex 111 to Directive 2008/98//EC of the European parliament and of the Council as regards the hazardous property HP 14 ‘Ecotoxic’ provides additional criteria in relation to determining whether the ecotoxicity of wastes would result in a hazardous classification.

## B.2 National Legislation

### ***Circular Economy and Miscellaneous Provisions Act 2022***

The Circular Economy and Miscellaneous Provisions Act 2022 aims to place the Whole-of-Government Circular Economy Strategy 2022-2023, and the commitment to a circular economy, on a clear statutory footing.

The Circular Economy and Miscellaneous Provisions Act is a key step in the successful transition of Ireland's economy to a circular economy and is evidence of Government's commitment to the achievement of that goal.

### ***Waste Management Acts, 1996 as amended and Regulations Made under the Acts***

The Waste Management Act, 1996 sets out the responsibilities and functions of various persons in relation to waste. The 1996 Act has been amended by a number of subsequent acts including the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003. The Act:

- Prohibits any person from holding, transporting, recovering or disposing of waste in a manner which causes or is likely to cause environmental pollution.
- Requires any person who carries on activities of an agricultural, commercial or industrial nature to take all such reasonable steps as are necessary to prevent or minimise the production of waste.
- Prohibits the transfer of waste to any person other than an authorised person (i.e., a holder of a waste collection permit or a local authority).
- Requires the Environmental Protection Agency (EPA) to make a national plan in relation to hazardous waste.
- Requires local authorities to make waste management plans in relation to non-hazardous waste.
- Imposes certain obligations on local authorities to ensure that a service is provided for collection of household waste and to provide facilities for the recovery and disposal of such waste.
- Enables the Minister for Environment, Climate and Communications to make regulations for various purposes to promote better waste management.
- Provides for substantial penalties for offences including fines, imprisonment and/or liability for clean-up measures.

### ***Waste Management (Collection Permit) Regulations, 2007, S.I. No 820 of 2007, as amended***

A waste collection permit is required by anyone collecting waste on a commercial basis to ensure that the waste is gathered, sorted and transported correctly. Waste collection permits are granted in accordance with the Waste Management (Collection Permit) Regulations, 2007 as amended. All Waste Collection Permits are issued by the National Waste Collection Permit Office (NWCPO).

### ***Waste Management (Shipments of Waste) Regulations 2007, S.I. No. 419 of 2007***

Where waste is exported from Ireland for recovery or disposal the National Transfrontier Shipment (TFS) Office within Dublin City Council must be notified. Certain financial guarantees must be in place and a certificate issued by the National TFS Office prior to the waste movement taking place.

### ***European Communities (Waste Directive) Regulations 2011, S.I. 126 of 2011***

These regulations significantly changed the provisions of the Waste Management Acts, 1996 to 2008. The Regulations define “waste disposal” and “waste recovery”, as well as setting out tests which must be complied with in order for material to be described as a “by-product” or achieve “end of waste” status.

The Regulations formally set out the following waste hierarchy which must be applied as a priority order in waste prevention and management legislation and policy:

- (a) prevention;
- (b) preparation for re-use;
- (c) recycling;
- (d) other recovery (including energy recovery); and
- (e) disposal

The Regulations require that all waste management plans and hazardous waste management plans in existence at the commencement of the Regulations to be evaluated by 31 December 2012 and where appropriate, be revised to be brought into line with Directive 2006/12/EC on Waste.

The Regulations also require the Environment Agency to establish a waste prevention programme by December 2013.

### ***European Union (Waste Directive) Regulations 2020 S.I. No. 323 of 2020***

These regulations give effect to Directive 2018/851/EC of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste. Directive 2018/851/EC provides new definitions for a number of key terms including “waste” and “non-hazardous waste”, “bio-waste”, “waste management”, “waste prevention”, “backfilling” and “construction and demolition waste”.

The Regulations give partial effect to the following: Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators as amended by Directive (EU) 2018/849, Directive 2000/53/EC on end-of-life vehicles as amended by Directive (EU) 2018/849, Directive 2012/19/EU on waste electrical and electronic equipment as amended by Directive (EU) 2018/849, Directive (EU) 2018/852 amending Directive 94/62/EC on packaging and packaging waste and Directive (EU) 2018/850 amending Directive 1999/31/EC on the landfill of waste. The Regulations set out additional measures to protect the environment and human health by preventing or reducing the generation of waste, the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use, which are crucial for the transition to a circular economy and long-term competitiveness.

## B.3 European Policy

### *7th Environmental Action Programme, European Commission (2014)*

The 7th Environmental Action Programme came into force in January 2014 and will guide European environment policy until 2020. A key objective of the programme is to turn the Union into a resource-efficient, green and competitive low carbon economy. There is a special focus on turning waste into a resource, with more prevention, re-use and recycling, and phasing out wasteful and damaging practices like landfilling. By 2020 the European Union and member states are to ensure that:

- The environment and human health are protected by preventing or reducing the adverse impacts of the generation and management of waste.
- Per capita waste generation and waste generation in absolute terms are reducing.
- Landfilling is phased out for recyclables and recoverable wastes and limiting energy recovery to non-recyclable materials.

The European Commission published a proposal for an 8th Environmental Action Programme on 14th October 2020. The proposal supports the environment and climate action objectives of the European Green Deal and will form the EU's basis for achieving the United Nation's 2030 Agenda and its Sustainable Development Goals. It is expected that the 8th Environmental Action Programme will be adopted in 2021 – however, a date is yet to be confirmed.

### *European Commission Circular Economy Strategy (2015; 2018; 2020)*

In December 2015, the European Commission adopted an ambitious Circular Economy Package, which includes revised legislative proposals on waste to stimulate Europe's transition towards a circular economy.

The Circular Economy Package consists of an EU Action Plan for the Circular Economy that establishes a programme of action, with measures covering the whole cycle: from production and consumption to waste management and the market for secondary raw materials. The annex to the action plan sets out the timeline when the actions will be completed.

The proposed actions will contribute to "closing the loop" of product lifecycles through greater recycling and re-use and bring benefits for both the environment and the economy.

The revised legislative proposals on waste set clear targets for reduction of waste and establish an ambitious and credible long-term path for waste management and recycling. Key elements of the revised waste proposal include:

- An EU target for recycling 65% of municipal waste by 2030;
- An EU target for recycling 75% of packaging waste by 2030;
- A target to reduce landfill to maximum of 10% of all waste by 2030;
- A ban on landfilling of separately collected waste;
- Promotion of economic instruments to discourage landfilling;
- Simplified, improved definitions and harmonised calculation methods for recycling rates throughout the EU;
- Concrete measures to promote re-use and stimulate industrial symbiosis - turning one industry's by-product into another industry's raw material;

- Economic incentives for producers to put greener products on the market and support recovery and recycling schemes (e.g., for packaging, batteries, electric and electronic equipment, vehicles).

The Circular Economy Package was updated in 2018 to comprise a new set of measures including:

- A Europe-wide EU Strategy for Plastics in the Circular Economy;
- A Communication on options to address the interface between chemical, product and waste legislation;
- A Monitoring Framework on progress towards a circular economy at EU and national level; and
- A Report on Critical Raw Materials and the circular economy.

Key legislative measures adopted to date under the plan include:

- Directive (EU) 2018/851 amending Directive 2008/98/EC on waste;
- Directive (EU) 2018/850 amending Directive 1999/31/EC on the landfill of waste;
- Directive (EU) 2018/852 amending Directive 94/62/EC on packaging and packaging waste; and
- Directive (EU) 2018/849 amending Directives 2000/53/EC on end-of-life vehicles, Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and Directive 2012/19/EU on waste electrical and electronic equipment.

***European Commission, 2020. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A new Circular Economy Action Plan For a cleaner and more competitive Europe. COM (2020).***

The European Commission has adopted a new Circular Economy Action Plan, which is one of the main blocks of the European Green Deal, Europe’s new agenda for sustainable growth.

The new Action Plan announces initiatives along the entire life cycle of products, targeting for example their design, promoting circular economy processes, fostering sustainable consumption, and aiming to ensure that the resources used are kept in the EU economy for as long as possible.

The new Action Plan introduces legislative and non-legislative measures targeting areas where action at the EU level brings real added value.

The new Circular Economy Action Plan presents measures to:

- Make sustainable products the norm in the EU;
- Empower consumers and public buyers;
- Focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients;
- Ensure less waste;
- Make circularity work for people, regions and cities; and
- Lead global efforts on circular economy.

### ***European Commission (2019) European Green Deal***

The European Green Deal, published by the European Commission in December 2019, provides an action plan to boost the efficient use of resources by moving to a clean, circular economy while cutting pollution and restoring biodiversity.

The plan outlines investments needed and financing tools available. It explains how to ensure a just and inclusive transition.

## **B.4 National Policy**

### ***Introduction***

The first national waste policy statement was published by the Department of Environment and Local Government in 1998. A number of statements have been published since, each of which builds on the objectives of the previous policy statements to improve how waste is managed in Ireland and move waste away from landfill and towards a more sustainable option. The statements published in the past include:

- Department of the Environment and Local Government (1998). 'Waste Management - Changing Our Ways' – A Policy Statement.
- Department of the Environment and Local Government (2002). Preventing and Recycling Waste – Delivering Change – A Policy Statement.
- Department of the Environment, Heritage and Local Government (2004). Waste Management - Taking Stock and Moving Forward.
- Department of the Environment, Heritage and Local Government (2006). National Strategy on Biodegradable Waste Management.
- Department of the Environment, Heritage and Local Government (2012). A Resource Opportunity- Waste Management Policy in Ireland.

More recent policy documents and reports are summarised below.

### ***EPA National Waste Statistics and Bulletins***

The EPA publishes national statistics and bulletins relating to waste generation, management and disposal in Ireland. The published data provide information on key statistics and trends in waste as well as information on Ireland's progress in meeting EU waste collection, recovery and disposal targets. Key topics include municipal waste generation and management, packaging waste, waste electronic and electrical equipment, end of life vehicles, tyres, hazardous waste, construction and demolition waste and waste infrastructure. The data are available on the EPA website at <http://www.epa.ie/nationalwastestatistics/>.

### ***Environmental Protection Agency (2021). National Hazardous Waste Management Plan, 2021 - 2027***

The Fourth National Hazardous Waste Management Plan was published by the Environmental Protection Agency in 2021.

This Plan set out priority actions to be taken over the six-year life of the plan in relation to:



- Prevention of hazardous waste.
- Improved collection rates for certain categories of hazardous waste.
- Steps required to improve Ireland’s self-sufficiency in hazardous waste management.
- Support effective regulation of the movement and management of hazardous wastes in line with national policy priorities.
- Promote safe reuse and recycling pathways in support of the circular economy.

Four issues are highlighted for completion during the lifetime of the plan, including the following:

1. Strengthen systemic resilience for management of hazardous waste.
2. By 2024, establish nationwide collection and transfer of farm hazardous wastes, including unused veterinary products.
3. By 2023, establish national collection of surplus / out-of-date medicines from household waste stream.
4. By 2023, establish collection platforms for surplus paint from household and commercial waste streams.

### ***EPA (2021) The Circular Economy Programme 2021 - 2027***

This document outlines Ireland’s The Circular Economy Programme which will be led by the EPA. The Circular Economy Programme incorporates and builds upon the previous National Waste Prevention Programme to support national-level, strategic programmes to prevent waste and drive the Circular Economy in Ireland. The development of the Circular Economy Programme responds to the commitment within the national policy document *The Waste Action Plan for a Circular Economy* to reconfigure the National Waste Prevention Programme into Ireland’s Circular Economy Programme.

### ***EPA (2020) Guidance to Planners, Planning Authorities and An Bord Pleanála on the Management of Excess Soil and Stone from Developments***

Excess soil and stone material may be generated in the course of developments taking place. This material must be managed in an environmentally sound manner and in doing so, may be managed either as a waste or as a by-product of the production process (the production process being the development taking place). Specific regulatory requirements apply to the management of the material as a by-product or a waste.

The aim of this guidance document is to assist planners, planning authorities and An Bord Pleanála and is prepared in accordance with the provisions set out in Section 56 of the EPA Act 1992. The guidance document is intended to be used when assessing applications for development involving either 1) the export of excess soil and stone material from a site arising out of the construction of a development, or 2) the importation of soil and stone as part of the development, or both.

### ***EPA (2020) By-Product – Guidance Note. A guide to by-products and submitting a by-product notification under Article 27 of the European Communities (Waste Directive) Regulations, 2011***

The purpose of this guidance is to:

- Encourage the presentation of waste including the lawful and beneficial use of by-products; and
- Set out the Environmental Protection Agency’s (EPA) regulatory approach to determining notifications on by-products and to provide guidance to interested parties.

The guidance has two key objectives:

- Provide the reader with guidance on how to assess whether a substance or object is a by-products or waste; and
- Explain how to submit a complete by-product notification to the EPA which clearly demonstrates compliance with the conditions of Article 27.

### ***EPA (2018) Waste Classification – List of Waste and Determining if Waste is hazardous or Non-Hazardous.***

Waste classification is based on:

- Commission Decision of 18 December 2014, amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European parliament and of the Council (2014/955/EEC);
- Commission Regulation (EU) No 1357/2014 of 18 December 2014, replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives; and
- Council Regulation (EU) 2017/997 of 8 June 2017 amending Annex 111 to Directive 2008/98/EC of the European parliament and of the Council as regards the hazardous property HP 14 ‘Ecotoxic’.

This waste classification system applies across the EU and is the basis for all national and international waste reporting obligations. This document consolidates the Decision and Regulations and provides guidance on how to follow them.

There are two main elements:

- List of Waste (LoW) (Appendix 1);
- Determining if waste is hazardous or non-hazardous (Appendix 2).

### ***Government of Ireland (2020) A Waste Action Plan for a Circular Economy Ireland’s National Waste Policy 2020-2025.***

The ‘Waste Action Plan for a Circular Economy’ is an action focused plan that reflects the 2020 Circular Economy Action Plan ‘For a cleaner and more competitive Europe’ from the European Commission (see above).

The Waste Action Plan for a Circular Economy fulfils the commitment in the Programme for Government (2020) to publish and start implementing a new National Waste Action Plan. This new national waste policy will inform and give direction to waste planning and management in Ireland over the coming years.

The previous national waste policy, A Resource Opportunity – Waste management policy in Ireland, drove delivery on national targets under EU legislation, but the Irish and international waste context has changed in the years since its launch. The need to embed climate action in all strands of public policy aligns with the goals of the European Green Deal.

The policy document shifts focus away from waste disposal and moves it back up the production chain. To support the policy, regulation is already being used (Circular Economy Legislative Package) or in the pipeline (Single Use Plastics Directive). The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

The overarching objectives of this action plan are to:

- Shift the focus away from waste disposal and treatment to ensure that materials and products remain in productive use for longer thereby preventing waste and supporting reuse through a policy framework that discourages the wasting of resources and rewards circularity;
- Make producers who manufacture and sell disposable goods for profit environmentally accountable for the products they place on the market;
- Ensure that measures support sustainable economic models (for example by supporting the use of recycled over virgin materials);
- Harness the reach and influence of all sectors including the voluntary sector, R&D, producers / manufacturers, regulatory bodies, civic society; and
- Support clear and robust institutional arrangements for the waste sector, including through a strengthened role for Local Authorities (LAs).

The plan identifies opportunities for the application of circular economy principles across a range of areas in Ireland including:

- Municipal waste;
- Consumer Protection;
- Food waste;
- Plastic and packaging waste;
- Construction and demolition waste;
- Textiles; and
- Procurement.

### ***Department of the Environment, Climate and Communications (2022) Climate Action Plan 2023***

The Climate Action Plan 2023 was published on the 21 December 2022 and represented the second annual update to the Climate Action Plan 2019. The Plan sets out the actions the Government intends to take to address climate breakdown across sectors such as electricity, transport, built environment, industry and agriculture.

The Plan provides that the Government will lead the transformation from waste management to circular economy practice through delivery of a new national policy. The implementation plan for actions by Government and other actors in relation to waste and the circular economy are as follows:

- Publish a Whole-of-Government Circular Economy Strategy and promote the Circular Economy;
- Establish a Circular Economy Innovation Scheme;
- Reduce demand for virgin raw materials and support re-use, by keeping material out of waste streams through streamlined end-of-waste and by-product decision-making processes and national end-of-waste decisions for specific construction and demolition waste streams;
- Continue to drive the rollout of CirculEire, the national programme for circular manufacturing and innovation;
- Develop a Food Waste Prevention Roadmap that sets out a series of actions to deliver the reductions necessary to halve our food waste by 2030 and promote our transition to a circular economy;

- Enhance food waste segregation, collection and treatment (anaerobic digestion and composting);
- Develop and implement a new Regional Waste Management Plans that will guide our transition to a circular economy;
- Develop new and expanded environmental levies to encourage reduced resource consumption and incentivise higher levels of re-use and recycling;
- Begin work on consumer information actions to inform consumer choice aimed at driving improvements in the environmental sustainability of the electronic communications sector;
- Implement Regulation (EU) No 517/2014 on F-Gases; and
- Separate collection obligations extended to include bio-waste by end of 2023.

## B.5 Regional Policy

### *The Southern Region Waste Management Plan 2015 - 2021*

For the purposes of waste management planning, Ireland is now divided into three regions: Southern, Eastern-Midlands, Connacht-Ulster. The Southern Region Includes Cork County Council.

The Southern Region Waste Management Plan 2015 - 2021 was launched in 2015. The strategic approach of the plan places a stronger emphasis on preventing wastes and material reuse activities. Three strategic targets have been set in the plan which include:

- 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill in favour of higher value pre-treatment processes and indigenous recovery practices.

The plan looks to 2030 and includes a goal of reaching a recycling rate of 60%. Note that the Southern Region Waste Management Plan 2015 - 2021 is currently out of date – a National Waste Management Plan for a Circular Economy is currently being prepared to replace the existing Regional Waste Management Plans, including the Southern Region Waste Management Plan 2015 – 2021.

### *Cork County Development Plan 2022-2028*

The Cork County Development Plan 2022-2028 (Cork County Council, 2022) sets out Cork County Council’s policies and objectives for the development of the County over the Plan period.

The Council includes a number of waste prevention and management objectives as part of Chapter 15 Biodiversity and Environment. Objectives relevant to the Proposed Development include the following:

#### “Objective BE 15-14: Waste Prevention and Management:

a) *Support the policy measures and actions outline in*

- ‘A Waste Action Plan for a Circular Economy Ireland’s National Waste Policy 2020-2025’, and
- Southern Region Waste Management Plan 2015 – 2021, or any successor plans

*b) Support circular and climate resilient economy principles and associated strategic infrastructure, prioritising prevention, reuse, recycling and recovery, and to sustainably manage all types of waste by ensuring the provision of adequate waste recovery, recycling and disposal facilities for the county.”*

*“Objective BE 15-17: Waste Prevention and Management:*

*a) ....*

*b) ...*

*c) Construction and Environmental Management Plans (CEMPs)/ Construction and Demolition Management Plans shall be prepared for larger scale projects as set out in paragraph 15.12.24 and this requirement shall be assessed on a case-by-case basis as part of the development management process.*

*d) Support the implementation of the recommendations and policies of the National Hazardous Waste Management Plan 2014-2020.”*

Sections 15.12.23 to Section 15.12.25 of the Cork County Council Development Plan 2022-2028 also outline specific considerations for Construction and Demolition (C&D) waste.

### ***RPS (2020) Construction and Demolition Waste Soil and Stone Recovery/Disposal Capacity Eastern Midlands Region / Connacht Ulster Region / Southern Region Waste Management Plans 2015 – 2021.***

This report was undertaken on behalf of the Irish regional waste management offices to analyse the national waste capacity market for safe treatment of waste soils. A review was undertaken of soil waste generation and available capacity to accept soil waste in authorised facilities within the three waste regions.

The report identifies that the future authorised capacity available to recover soil and stones is an issue in each waste region in the context of likely strong construction activity. Possible options recommended include expanding capacities at existing sites and the use of Article 27 By-Product notifications.

## **B.6 Guidance**

### ***Environmental Protection Agency (EPA) (2021) Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects – 2021.***

These guidelines 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 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 life-cycle thinking as follows:

- An increased emphasis on waste prevention, in line with the waste hierarchy, through established principles such as designing out waste and the use of green procurement.
- 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. The circular economy model tries to avoid using unnecessary resources in the first place and keep resources ‘in flow’ by means of effective and smart reuse and recycling strategies reducing the use of virgin materials.

The guidelines provide a practical and informed mechanism to document the prevention and management of C&D wastes and resources from design to construction or demolition of a project. They provide clients,

developers, designers, practitioners, contractors, sub-contractors and competent authorities with a common approach to preparing and determining Resource and Waste Management Plans (RWMP) for the construction and demolition sector 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; and
- During Construction – relating to the effective management of resources and wastes during construction or demolition operations.

### ***European Commission (2016) EU Construction & Demolition Waste Management Protocol***

This protocol was published by the European Commission in September 2016.

The overall aim of the protocol is to increase confidence in the C&D waste management process and the trust in the quality of C&D recycled materials. This will be achieved by:

- a) Improved waste identification, source separation and collection;
- b) Improved waste logistics;
- c) Improved waste processing;
- d) Quality management; and
- e) Appropriate policy and framework conditions.

### ***EPA (2019) Guidance on Soil and Stone By-products in the context of Article 27 of the European Communities (Waste Directive) Regulations 2011***

Article 27 of the European Communities (Waste Directive) Regulations, 2011, as substituted by article 15 of the European Communities (Waste Directive) Regulations, 2020, S.I. No. 323 of 2020, states the following:

*“27. (1) the Agency shall take appropriate measures to ensure that a substance or object resulting from a production process the primary aim of which is not the production of that substance or object is considered not to be waste, but to be a by-product if the following conditions are met:*

*(a) further use of the substance or object is certain;*

*(b) the substance or object can be used directly without any further processing other than normal industrial practice;*

*(c) the substance or object is produced as an integral part of a production process; and*

*(d) further use is lawful in that the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts.*

*(2) (a) Where a natural or legal person holds a substance or object in accordance with paragraph (1) which he or she believes is to be considered as a by-product, he or she shall notify the Agency and seek a determination on the matter from the Agency*

*(b) He or she shall comply with relevant Agency guidance and submit information in a form and format as may be prescribed by the Agency in order to establish that the conditions in paragraph (1) are met.*

*(c) Where there is no notice given to the Agency under subparagraph (a) in respect of a substance or object and the substance or object, as the case may be, is discarded or otherwise dealt with as if it were waste, the substance or object, as the case may be, shall be presumed to be waste until the contrary is proved.*

*(3) The Agency—*

*(a) may determine, in consultation with the relevant local authority and the natural or legal person concerned, whether a substance or object notified to it as a by-product in accordance with paragraph (2)(a) should be considered as a by-product or as a waste, and*

*(b) shall notify the local authority and the natural or legal person concerned of the determination made.*

*(c) may attach reporting conditions to a determination, pursuant to regulation 31a.*

*(4) Nothing in this Regulation shall relieve a natural or legal person from his or her responsibilities under the Act of 1992 or the Act of 1996.*

*(5) The Agency shall establish and maintain a register of by-products to record substances or objects notified to it as by-products under paragraph (2)(a).*

*(6) Where the Agency makes a determination in accordance with paragraph (3) that a substance or object should be considered as waste and not as a by-product, the determination shall be final.*

*(7) Where criteria have not been set at Union level, the Agency may establish detailed criteria on the application of the conditions laid down in paragraph 1 to specific substances or objects. The Agency shall notify the Commission of those detailed criteria in accordance with Directive (EU) 2015/153513 of the European Parliament and of the Council where so required by that Directive.”*

Economic operators, who hold a substance, which they believe to be a by-product under Article 27, must notify the Environmental Protection Agency. Conditions (1) (a) to (1)(d) must be satisfied for an Article 27 notification to be successful.

The EPA has produced guidance on the notification process. The purpose of the guidance is to inform economic operators how to prevent waste soil and stone by classifying it as a by-product in accordance with the legislation and the EPA’s regulatory approach to determinations on soil and stone by-products. This guidance document covers soil and stone only.

The guidance is aimed at local authorities, developers, the construction sector, the waste management sector and consultants.

Its environmental objective is that, by making certain excess uncontaminated soil and stone is beneficially used with no overall adverse impacts on the environment or human health, a material producer will ensure that the material is regarded as a by-product rather than a waste.

### ***Environmental Protection Agency (2020) Draft End of Waste Guidance Part 1 and Part 2***

The EPA has published guidance on the ‘end-of-waste’ concept under Article 28 of the European Communities (Waste Directive) Regulations, 2011. Part 1 of the guidance describes the context and benefits, and introduces the end-of-waste test, under Article 28, to potential applicants. Part 2 provides guidance for applicants on how to address the requirements of the end-of-waste test.

***FÁS and CIF (2002) Construction and Demolition Waste Management – A Handbook for Contractors & Site Managers***

This handbook was produced in conjunction with Fás and the CIF in 2002. It provides advice for contractors and site managers on how to manage construction and demolition waste to make financial savings in purchasing material and disposal costs in a sustainable manner.



# Appendix C

## EPA – List of Waste Codes for Construction and Demolition Wastes

**03 WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD**

**03 02 wastes from wood preservation**

- 03 02 01\* non-halogenated organic wood preservatives
- 03 02 02\* organochlorinated wood preservatives
- 03 02 03\* organometallic wood preservatives
- 03 02 04\* inorganic wood preservatives
- 03 02 05\* other wood preservatives containing hazardous substances
- 03 02 99 wood preservatives not otherwise specified

**13 OIL WASTES AND WASTES OF LIQUID FUELS (except edible oils, and those in chapters 05, 12 and 19)**

**13 07 wastes of liquid fuels**

- 13 07 01\* fuel oil and diesel
- 13 07 02\* petrol
- 13 07 03\* other fuels (including mixtures)

**15 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED**

**15 01 packaging (including separately collected municipal packaging waste)**

- 15 01 01 paper and cardboard packaging
- 15 01 02 plastic packaging
- 15 01 03 wooden packaging
- 15 01 04 metallic packaging
- 15 01 05 composite packaging
- 15 01 06 mixed packaging
- 15 01 07 glass packaging
- 15 01 09 textile packaging

## 16 WASTES NOT OTHERWISE SPECIFIED IN THE LIST

### 16 02 wastes from electrical and electronic equipment

- 16 02 09\* transformers and capacitors containing PCBs
- 16 02 10\* discarded equipment containing or contaminated by PCBs other than those mentioned in 16 02 09
- 16 02 11\* discarded equipment containing chlorofluorocarbons, HCFC, HFC
- 16 02 12\* discarded equipment containing free asbestos
- 16 02 13\* discarded equipment containing hazardous components<sup>1</sup> other than those mentioned in 16 02 09 to 16 02 12
- 16 02 14 discarded equipment other than those mentioned in 16 02 09 to 16 02 13
- 16 02 15\* hazardous components removed from discarded equipment
- 16 02 16 components removed from discarded equipment other than those mentioned in 16 02 15

### 16 06 batteries and accumulators

- 16 06 01\* lead batteries
- 16 06 02\* Ni-Cd batteries
- 16 06 03\* mercury-containing batteries
- 16 06 04 alkaline batteries (except 16 06 03)
- 16 06 05 other batteries and accumulators
- 16 06 06\* separately collected electrolyte from batteries and accumulators

## 17 CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)

### 17 01 concrete, bricks, tiles and ceramics

- 17 01 01 concrete
- 17 01 02 bricks
- 17 01 03 tiles and ceramics
- 17 01 06\* mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances
- 17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

<b>17 02</b>	<b>wood, glass and plastic</b>
17 02 01	wood
17 02 02	glass
17 02 03	plastic
17 02 04*	glass, plastic and wood containing or contaminated with hazardous substances
<b>17 03</b>	<b>bituminous mixtures, coal tar and tarred products</b>
17 03 01*	bituminous mixtures containing coal tar
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 03 03*	coal tar and tarred products
<b>17 04</b>	<b>metals (including their alloys)</b>
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals
17 04 09*	metal waste contaminated with hazardous substances
17 04 10*	cables containing oil, coal tar and other hazardous substances
17 04 11	cables other than those mentioned in 17 04 10
<b>17 05</b>	<b>soil (including excavated soil from contaminated sites), stones and dredging spoil</b>
17 05 03*	soil and stones containing hazardous substances
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 05*	dredging spoil containing hazardous substances
17 05 06	dredging spoil other than those mentioned in 17 05 05
17 05 07*	track ballast containing hazardous substances
17 05 08	track ballast other than those mentioned in 17 05 07
<b>17 06</b>	<b>insulation materials and asbestos-containing construction materials</b>
17 06 01*	insulation materials containing asbestos
17 06 03*	other insulation materials consisting of or containing hazardous substances
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03
17 06 05*	construction materials containing asbestos
<b>17 08</b>	<b>gypsum-based construction material</b>
17 08 01*	gypsum-based construction materials contaminated with hazardous substances
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
<b>17 09</b>	<b>other construction and demolition wastes</b>
17 09 01*	construction and demolition wastes containing mercury

**20 MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS**

**20 01 separately collected fractions (except 15 01)**

20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 11	textiles
20 01 21*	fluorescent tubes and other mercury-containing waste
20 01 25	edible oil and fat
20 01 27*	paint, inks, adhesives and resins containing hazardous substances
20 01 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 39	plastics
20 01 40	metals

**20 03 other municipal wastes**

20 03 01	mixed municipal waste
20 03 07	bulky waste

# Appendix D

## Typical Content – Detailed Resource and Waste Management Plan

The detailed CRWMP and the requirements to be adopted by the contractor will include the following:

- A named Resource Manager (RM) of the CRWMP with responsibility for implementation at Construction Phase must be identified by the contractor;
- The CRWMP must be included in the site induction training;
- Toolbox talks and all other training on the CRWMP must be provided in line with EPA Guidance Section 5.4;
- There must be appropriate procedures for identifying suitably permitted waste collection operators and waste destination sites implemented – a resource for this task is included in Appendix F of the EPA Guidance;
- Resource efficient supply chains should be implemented as appropriate in line with EPA Guidance Section 5.5;
- There must be appropriate procedures for record keeping and reporting of all off-site export of resources implemented;
- There must be procedures for record keeping and reporting of all on site resource uses – this may include measures such as the use of an on-site a mobile crusher for producing aggregate from suitable residual concrete (subject to the appropriate waste consent) – in line with EPA Guidance Section 5.7;
- There must be appropriate procedures for audits and inspections of resource management practices in line with EPA Guidance Section 5.6;
- There must be appropriate procedures for engagement with the Local authority and other stakeholders in line with EPA Guidance Section 5.8;
- There must be a final report prepared summarising the outcomes of resource management processes adopted and the final inventory and cost for the project in line with EPA Guidance Section 5.8;
- Procedures for audits and inspections of resource management practices;
- There should be appropriate site signage on resource management put in place;
- There should be appropriate resource storage implemented on site (i.e., dedicated skips, hazardous materials storage, stockpile management, etc.). Note there are specific requirements on stockpiling more than 50kg of certain persistent organic pollutants (from a construction perspective these may include some chlorinated hydrocarbon contaminants in ground contamination, EPS/XPS insulation building material containing brominated flame retardant (HBCDD) or polychlorinated biphenyls from removal of electrical equipment) under Article 5 of EU Regulation (EU) 2019/1021; and
- There must be appropriate procedures for handling and export of resources in line with EPA Guidance Section 5.3.

# Appendix E

## Resource and Waste Inventory Template



LoW Code	Description	Volume Generated (tonnes)	Prevention (tonnes) (non-waste)	Reused (tonnes) (non-waste)	Recycled (tonnes) (waste)	Recovered <sup>6</sup> (tonnes) (waste)	Disposed (tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost (€)
17 01 01	Concrete								
17 01 02	Bricks								
17 01 03	Tiles and Ceramics								
17 02 01	Wood								
17 02 02	Glass								
17 02 03	Plastic								
17 03 02	Bituminous mixtures								
17 04 01	Copper, Bronze, Brass								
17 04 02	Aluminium								
17 04 03	Lead								
17 04 04	Zinc								
17 04 05	Iron and Steel								
17 04 06	Tin								
17 04 07	Mixed Metals								
17 04 11	Cables								
17 05 04	Soil and Stone								
17 06 04	Insulation Material								
17 08 02	Gypsum								
17 09 04	Mixed C&D Waste								
17 01 06*	<i>Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances</i>								

LoW Code	Description	Volume Generated (tonnes)	Prevention (tonnes) (non-waste)	Reused (tonnes) (non-waste)	Recycled (tonnes) (waste)	Recovered <sup>6</sup> (tonnes) (waste)	Disposed (tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost (€)
17 02 04*	<i>Glass, plastic and wood containing or contaminated with hazardous substances</i>								
17 03 01*	<i>Bituminous mixtures containing coal tar</i>								
17 04 09*	<i>Metal waste contaminated with hazardous substances</i>								
17 05 03*	<i>Soil and stones containing hazardous substances</i>								
17 06 05*	<i>Construction materials containing asbestos</i>								
	Other resources (non-waste materials) (specify as needed)								
	Other Wastes (specify as needed)								