codling wind park

# Construction & Demolition Waste Management Plan


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## Abbreviations

| Abbreviation | Term in Full |
|---|---|
| CDP | City/county development plan |
| C&D | Construction and Demolition |
| CDW | Construction and Demolition Waste |
| CDWMP | Construction and Demolition Waste Management Plan |
| CE | Circular Economy |
| CEMP | Construction Environmental Management Plan |
| CoR | Certificate of Registration |
| CSO | Central Statistics Office |
| CUR | Connacht–Ulster Region |
| CWP | Codling Wind Park |
| CWPL | Codling Wind Park Limited |
| DCC | Dublin City Council |
| DECC | Department of the Environment, Climate and Communications |
| DHLGH | Department of Housing, Local Government and Heritage |
| DLRCC | Dún Laoghaire–Rathdown County Council |
| EC | European Commission |
| ECC | Export Cable Corridor |
| EIA | Environmental Impact Assessment |
| EIAR | Environmental Impact Assessment Report |
| EMR | Eastern–Midlands Region |
| EPA | Environmental Protection Agency |
| EU | European Union |
| HDD | Horizontal directional drilling |
| IE | Industrial Emissions |
| NWCPO | National Waste Collection Permit Office |
| NWMP | National Waste Management Plan |
| O&M | Operations and maintenance |
| RWMP | Regional Waste Management Plan |
| SR | Southern Region |
| SWR | Southern Waste Region |

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|---|---|
| TJB | Transition joint bay |
| WAPCE | Waste Action Plan for a Circular Economy |
| WEEE | Waste electrical and electronic equipment |
| WFP | Waste Facility Permit |
| WMA | Waste Management Act |

## Definitions

| Glossary | Meaning |
|---|---|
| aggregates | Broad category for coarse particulate material used in construction, including sand, gravel, crushed stone, slag, recycled concrete and geosynthetic aggregates (EC, 2015). |
| the Applicant | The developer, Codling Wind Park Limited (CWPL). |
| biodegradable waste | Means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard (EEA, 2023). |
| bulky waste | Large items of waste material such as electric appliances, furniture, large car parts, trees, etc. (EEA, 2023). |
| circular economy | A circular economy aims to maintain the value of products, materials and resources for as long as possible by returning them into the product cycle at the end of their use, while minimising the generation of waste. The fewer products we discard, the fewer materials we extract, the better for our environment This process starts at the very beginning of a product's lifecycle: smart product design and production processes can help save resources, avoid inefficient waste management and create new business opportunities (Eurostat, 2023). |
| Codling Wind Park (CWP) Project | The proposed development as a whole is referred to as the Codling Wind Park (CWP) Project, comprising the offshore infrastructure, the onshore infrastructure and any associated temporary works. |
| Codling Wind Park Limited (CWPL) | A joint venture between Fred. Olsen Seawind (FOS) and Électricité de France (EDF) Renewables, established to develop the CWP Project. |
| Construction and Demolition Waste | Rubble and other waste material arising from the construction, demolition, renovation or reconstruction of buildings or parts thereof, whether on the surface or underground. Consists mainly of building material and soil, including excavated soil. Includes waste from all origins and from all economic activity sectors (EEA, 2023).<br>It contains a wide variety of materials, such as concrete, bricks, wood, glass, metals and plastic. It includes all the waste produced by the construction and demolition of buildings and infrastructure, as well as road planning and maintenance (EC, 2022). |
| Compound A | A temporary construction compound, support area and storage facility for the landfall works, and to support the installation of the onshore export cables. It will operate as a hub for the onshore construction works as well as acting as a staging post and secure storage for equipment and component deliveries. |
| Compound B | A temporary construction compound/laydown area for general cable route and onshore substation construction activities. |
| Compound C | A temporary construction compound for the onshore substation site. Contractor welfare facilities will be located in this compound as well as some material storage space. |

| Glossary | Meaning |
|---|---|
| Compound D | A temporary construction compound and laydown area to facilitate the construction of the bridge over the cooling water channel. |
| Cumulative impacts | The impacts (positive or negative, direct and indirect, long-term and short-term impacts) arising from a range of activities throughout an area or region, where each individual effect may not be significant if taken in isolation. Such impacts can arise from the growing volume of traffic, the combined effect of a number of agriculture measures leading to more intensive production and use of chemicals, etc. Cumulative impacts include a time dimension, since they should calculate the impact on environmental resources resulting from changes brought about by past, present and reasonably foreseeable future actions (EEA, 2023). |
| disposal | Disposal of waste means: the collection, sorting, transport and treatment of waste as well as its storage and tipping above or underground; the transformation operations necessary for its reuse, recovery or recycling (Eurostat, 2023). |
| energy recovery | A form of resource recovery in which the organic fraction of waste is converted to some form of usable energy. Recovery may be achieved through the combustion of processed or raw refuse to produce steam through the pyrolysis of refuse to produce oil or gas; and through the anaerobic digestion of organic wastes to produce methane gas (EEA, 2023). |
| Environmental Impact Assessment (EIA) | A systematic means of assessing the likely significant effects of a proposed project, undertaken in accordance with the EIA Directive and the relevant Irish legislation. |
| Environmental Impact Assessment Report (EIAR) | The report prepared by the Applicant to describe the findings of the EIA for the CWP Project. |
| ESBN network cables | Three onshore export cable circuits connecting the onshore substation to the proposed ESBN Poolbeg substation, which will then transfer the electricity onwards to the national grid. |
| export cables | The cables, both onshore and offshore, that connect the offshore substations with the onshore substation. |
| hazardous waste | A term applied to those wastes that because of their chemical reactivity, toxic, explosive, corrosive, radioactive or other characteristics, cause danger, or are likely to cause danger, to health or the environment (EEA, 2023). |
| horizontal directional drilling (HDD) | HDD is a trenchless drilling method used to install cable ducts beneath the ground through which onshore export cables from can be pulled. HDD enables the installation of cables beneath obstacles such as roads, waterways and existing utilities. |
| household waste | Solid waste composed of garbage and rubbish, which normally originates from houses (EEA, 2023). |
| incineration | Incineration is a method of waste disposal that involves the combustion of waste. It may refer to incineration on land or at sea. Incineration with energy recovery refers to incineration processes where the energy created in the combustion process is harnessed for reuse, for example for power generation. Incineration without energy recovery means the |

| Glossary | Meaning |
|---|---|
| | heat generated by combustion is dissipated in the environment (Eurostat, 2023). |
| preparing for reuse | 'Preparing for reuse' means checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be reused without any other pre-processing. (Eurostat, 2023). |
| recycling | Recycling of waste is defined in the Waste Framework Directive as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. Recycling can be split into the subcategories 'Material recycling' and the organic recycling 'Recycling - composting and digestion'. The latter is only possible for separately collected organic waste. (Eurostat, 2022). |
| reuse | Reuse of material without any structural changes to the material (EEA, 2023). |
| landfall | The point at which the offshore export cables are brought onshore and connected to the onshore export cables via the transition joint bays (TJB). For the CWP Project The landfall works include the installation of the offshore export cables within Dublin Bay out to approximately 4 km offshore, where water depths that are too shallow for conventional cable lay vessels to operate. |
| landfill | Landfill is the deposit of waste into or onto land (i.e. underground) (EEA, 2023). It includes specially engineered landfill sites and temporary storage of over one year on permanent sites. The definition covers both landfill in internal sites, i.e. where a generator of waste is carrying out its own waste disposal at the place of generation, and in external sites. Landfill is often simply referred to as deposit (Eurostat, 2023). |
| limit of deviation (LoD) | Locational flexibility of permanent and temporary infrastructure is described as a LoD from a specific point or alignment. |
| material recovery | Restoration of materials found in the waste stream to a beneficial use which may be for purposes other than the original use (EEA, 2023). |
| municipal waste | Waste from households, as well as other waste which, because of its nature or composition, is similar to waste from household (EEA, 2023). |
| non-hazardous waste | Non-hazardous waste means waste which is not classified as hazardous waste (EEA, 2023). |
| onshore export cables | The cables which transport electricity generated by the WTGs from the TJBs at the landfall to the onshore substation. |
| onshore development area | The entire footprint of the OTI and associated temporary works that will form the onshore boundary for the planning application. |
| onshore transmission infrastructure (OTI) | The onshore transmission assets comprising the TJBs, onshore export cables and the onshore substation. The EIAR considers both permanent and temporary works associated with the OTI. |
| onshore substation | Site containing electrical equipment to enable connection to the national grid. |

| Glossary | Meaning |
|---|---|
| onshore substation site | The area within which permanent and temporary works will be undertaken to construction the onshore substation. |
| operations and maintenance (O&M) activities | Activities (e.g., monitoring, inspections, reactive repairs, planned maintenance) undertaken during the O&M phase of the CWP Project. |
| O&M phase | This is the period of time during which the CWP project will be operated and maintained. |
| organic waste | Waste containing carbon compounds. |
| packaging (waste) | Packaging waste is waste comprising materials, or items, used to protect, contain or transport a commodity or product and usually considered a type of consumer waste. Packaging waste management shall mean the management of waste as defined in Directive 2008/98/EC (waste means any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force). (EEA, 2023) |
| Poolbeg 220kV substation | This is the ESBN substation that the ESBN network cables connect into, from the onshore substation. This substation will then transfer the electricity onwards to the national grid |
| prevention (waste / pollution) | The use of materials, processes, or practices to reduce, minimise, or eliminate the creation of pollutants or wastes. It includes practices that reduce the use of toxic or hazardous materials, energy, water, and/or other resources (EEA, 2023). |
| solid waste | Discarded solid materials. Includes agricultural waste, mining waste, industrial waste and municipal waste (EEA, 2023). |
| temporary HDD compound 1 | The area within Compound C that will house the ESBN network cable HDD entry or exit pits as well as associated plant, equipment and facilities. |
| temporary HDD compound 2 | The area adjacent to the Poolbeg 200kV substation that will house the ESBN network cable HDD entry or exit pits as well as associated plant, equipment and facilities. |
| temporary tunnel compound 1 | The area within Compound A, near the landfall, within which the Compound A tunnel launch shaft will be located. |
| temporary tunnel compound 2 | The area within which the Shellybanks Road tunnel reception shaft will be located. |
| temporary tunnel compound 3 | The area within the onshore substation site, within which the onshore substation tunnel launch shaft will be located. |
| transition joint bay (TJB) | This is required as part of the OTI and is located at the landfall. It is an underground bay housing a joint which connects the offshore and onshore export cables. |
| tunnel | The onshore export cables will be installed within a tunnel that extends from within Compound A, near the landfall, to the onshore substation site. |

| Glossary | Meaning |
|---|---|
| tunnel shaft | Located within the temporary tunnel compounds, the tunnel shafts will facilitate the two tunnel drives required to complete the construction of the tunnel. |
| waste | Waste means materials that are not prime products (that is, products produced for the market) for which the generator has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. Wastes may be generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, and other human activities. Residuals recycled or reused at the place of generation are excluded (EEA, 2023). |
| waste generation | The weight or volume of materials and products that enter the waste stream before recycling, composting, landfilling or combustion takes place. Also can represent the amount of waste generated by a given source or category of sources (EEA, 2023). |
| waste management | The collection, transport, treatment and disposal of waste (including after-care of disposal sites) (EEA, 2023). |
| waste minimisation | Measures and/or techniques that reduce the amount of wastes generated during any domestic, commercial and industrial process (EEA, 2023). |
| waste recovery | The process of obtaining materials or energy resources from waste (EEA, 2023). |
| waste stream | The total flow of solid waste from homes, businesses, institutions and manufacturing plants that is recycled, burned, or disposed of in landfills, or segments thereof such as the 'residential waste stream' or the 'recyclable waste stream.' (EEA, 2023). |
| waste-to-energy | Waste-to-energy scheme means incineration of waste with recovery of generated energy. Waste-to-energy schemes turn waste into steam or electricity to heat, cool, light and/or otherwise power homes and industry through the process of combustion. Just as coal, oil or natural gas is burned in boilers to generate electricity, waste is used as a fuel to generate power (EEA, 2023). |
| waste treatment | The physical, thermal, chemical or biological processes, that change the characteristics of the waste in order to reduce its volume or hazardous nature, to facilitate its handling or to enhance recovery (EEA, 2023). |

# 1 INTRODUCTION

## 1.1 Background

1. Codling Wind Park Limited (hereafter 'the Applicant') is proposing to develop the Codling Wind Park (CWP) Project, which is located in the Irish sea approximately 13 - 22 km off the east coast of Ireland, at County Wicklow.

2. The Applicant is applying for permission for all components the CWP Project under Section 291 of the Planning and Development Act (PDA) (as inserted by the Maritime Area Planning (MAP) Act 2021). This includes:

   - The **Generating Station** which comprises the wind turbine generators (WTGs), inter array cables (IACs) and interconnector cables;
   - **Transmission Component 1:** The offshore transmission infrastructure (OfTI) which comprises the offshore substation structures (OSSs) and offshore export cables;
   - **Transmission Component 2:** The landfall which describes the point at which the offshore export cables are brought onshore; and
   - **Transmission Component 3**: The onshore transmission infrastructure (OTI), which comprises the onshore export cables, the onshore substation and associated infrastructure.

3. This outline Construction and Demolition Waste Management Plan (CDWMP) is provided as part of the planning application for the CWP Project and is provided to ensure appropriate controls are in place to manage waste streams associated with the construction of the onshore components of CWP Project. This includes the landfall works and works to install the OTI.

4. This CDWMP is based on the estimated quantities of waste generation and the proposed management measures from the CWP Project at planning stage. This CDWMP relates to waste generation within the onshore development area boundary as a result of construction of the landfall and OTI.

5. This appendix forms part of **Chapter 32 Waste and Resource Management** of the Environmental Impact Assessment Report (EIAR) for the CWP Project.

## 1.2 Legislation and Policy

### 1.2.1 EU Legislation

6. The EU Waste Framework Directive (2008/98/EC) lays down the basic principles and concepts related to waste management. It requires that waste be managed:

   - Without endangering human health and harming the environment;
   - Without risk to water, air, soil, plants or animals;
   - Without causing a nuisance through noise or odours; and
   - Without adversely affecting the countryside or places of special interest.

7. The Directive also sets out key definitions including for waste, recycling and recovery, while also defining when waste ceases to be waste and becomes a secondary raw material (end-of-waste criteria) and how to distinguish between waste and by-product. The Directive also introduces the "polluter pays principle" and the "extended producer responsibility".

8. The basis of EU waste management is the 5-step "*waste hierarchy*", established in the Directive. It confirms the order of preference for managing and disposing of waste and requires EU Member States to carry out the following:

- Apply the waste hierarchy in their waste management legislation and policy;
- Take measures to promote the reuse of products and preparing-for reuse activities;
- Establish waste management plans;
- Encourage high-quality recycling of waste materials as part of the aim to make the EU a 'recycling society'; and
- Ensure that the preparation for reuse, recycling and other material recovery of non-hazardous C&D waste (excluding naturally occurring material defined in List of Waste category 17 05 04) is a minimum of 70% by weight by 2020. The Directive states that this target should be achieved by preparing for reuse, recycling and other material recovery, such as backfilling operations making use of waste to substitute other material.

9. In Ireland, the Directive is legislated under the *European Union (Waste Directive) Regulations 2020* (S.I. No. 323 of 2020).

10. In March 2020, as part of the European Green Deal, the EU adopted the new Circular Economy Action Plan (CEAP). The new action plan includes initiatives along the entire life cycle of products. It targets how products are designed, promotes circular economy processes, encourages sustainable consumption, and aims to ensure that waste is prevented, and the resources used are kept in the EU economy for as long as possible.

### 1.2.2 National Legislation and Policy

11. The primary legislative instrument that governs waste management in Ireland is the *Waste Management Act (WMA) 1996*, as amended. The WMA is a key instrument which, among other legislation, implements the EU *Waste Framework Directive* (2008/98/EC) in Ireland. The WMA provides for a general duty on everyone not to hold, transport, recover or dispose of waste in a manner that causes or is likely to cause environmental pollution. The WMA also sets out the provisions for the collection of waste and for its recovery/disposal.

12. Any person or contractor engaged in the collection of waste on a commercial basis is required to hold a Waste Collection Permit in accordance with the requirements of the *Waste Management (Collection Permit) Regulations 2007*, as amended. A Waste Collection Permit is issued to appropriate contractors by the National Waste Collection Permit Office (NWCPO).

13. Waste materials collected by a suitably permitted waste contractor must only be transported to appropriately permitted or licensed waste facilities. Authorisation for receiving waste materials are provided in accordance with the *Waste Management (Facility Permit & Registration) Regulations 2007*, as amended, for waste permits and certificates of registration (COR) granted by the relevant Local Authority. Waste management authorisations granted by the Environmental Protection Agency (EPA) are issued in accordance with the *Waste Management (Licensing) Regulations 2004*, as amended, and the *Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013*, as amended.

14. Ireland's waste management policy is based on the EU waste hierarchy and establishes a priority order for waste handling and treatment as set out in **Plate 1-1**.

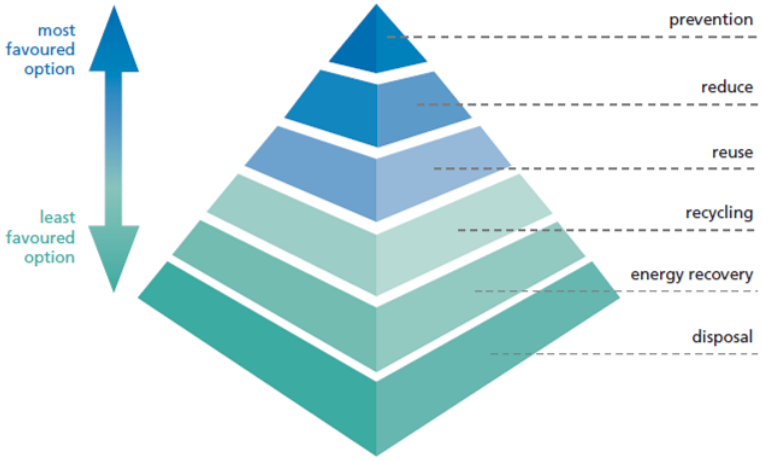


Plate 1-1 Waste Management Hierarchy (Source: EPA Ireland)

15. The current government policy document on waste, which covers the period from 2020 – 2025, is entitled A Waste Action Plan for a Circular Economy (WAPCE) and was published in June 2020. This document is Ireland's new roadmap for waste planning and management and aims to embed climate action in all strands of public policy.

16. The Plan outlines the contribution of the sector to the achievement of a number of other national plans and policies including the Climate Action Plan.

17. The key targets under the WAPCE in relation to C&D waste are:

- *Streamlining by-product notification and end-of-waste decision making process;*
- *Revision of the 2006 best practice guidelines for C&D waste; and*
- *Working group to develop national end-of-waste applications for priority streams.*

18. Most notably in respect of the proposed development works, the new WAPCE states that:

- *C&D waste management plan guidelines will be updated, and we will ensure that there is a consistent application of planning requirements;*
- *We will develop reuse and recovery targets for plastic from the construction and demolition sector; and*
- *We will examine methods to encourage source segregation of waste materials on site which could include moving away from the use of mixed skips or incentivised pricing or other financial instruments to support segregation.*

19. In 2021 the Department of the Environment, Climate and Communications (DECC) launched the "*Whole of Government Circular Economy Strategy*", Ireland's first national circular economy strategy. The Strategy was a specific commitment in the WAPCE and is a key addition to Government's drive to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and to get on a path to reach net-zero emissions by no later than 2050, as per commitments in the Programme for Government and the Climate Act 2021.

20. In July 2022, as part of the Strategy, the Circular Economy Act (2022) was signed into law, and for the first time defines the Circular Economy in Irish Law. In terms of C&D waste, the Act ensures that a fit-for-purpose regulatory system will be in place to allow hundreds of thousands of tonnes of material be safely and sustainably re-used as secondary raw materials.

### 1.2.3 Regional Waste Management Plan

21. For the purposes of waste planning, Ireland has been divided into three waste regions, namely the Eastern-Midlands Waste Region, the Southern Waste Region and the Connacht-Ulster Waste Region. The project is situated within the Eastern-Midlands Waste Region (EMWR), which comprises 12 no. local authority areas covering counties Dublin Kildare; Louth; Laois; Longford; Meath; Offaly; Westmeath; and Wicklow. A Regional Waste Management Plan was developed for each region to provide a framework for the prevention and management of wastes in a safe and sustainable manner. The current waste plan for the EMWR is the *Eastern-Midlands Region Waste Management Plan 2015 – 2021*.

22. The WAPCE stated that the three existing regional waste management plans will be replaced by a new single *National Waste Management Plan for a Circular Economy* (NWMP), which will contain targets for reuse, repair, resource consumption, and reducing contamination levels. The NWMP 2024-2030 was published in early 2024 after being subject to a Strategic Environmental Assessment, an Appropriate Assessment and a pre-draft consultation. The NWMP will be in respect of the Local Authority administrative areas, with the lead authority for the Eastern-Midlands Region (EMR) being Dublin City Council (DCC).

### 1.2.4 Dublin City Development Plan

23. The current development plan applicable to the proposed development is the *Dublin City Development Plan 2022-2028* (DCC, 2022). The development plan sets out a number of policies, objectives, standards and criteria with regard to waste management, with those specifically in relation to C&D waste outlined below.

24. Chapter 3 Climate Action, 3.5.4 Waste: Construction and Demolition Waste - In addition to setting out policy measures relating to issues including municipal waste, food waste and single use plastic, the Waste Action Plan addresses the issue of construction and demolition waste as it relates to the planning system. The Waste Action Plan highlights the ongoing revision of the 2006 Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Waste Projects as well as the intention to bring construction and demolition waste within the framework of statutory planning guidelines. It also notes that construction and waste management plan guidelines will be updated to ensure that there is a consistent application of planning requirements.

25. In relation to waste and construction and demolition waste, it is the Policy of Dublin City Council:

- *CA22 The Circular Economy: To support the shift towards the circular economy approach as set out in 'a Waste Action Plan for a Circular Economy 2020 to 2025, Ireland's National Waste Policy, or as updated;*
- *CA23 Waste Management Plans for Construction and Demolition Projects: To have regard to existing Best Practice Guidance on Waste Management Plans for Construction and Demolition Projects as well as any future updates to these guidelines in order to ensure the consistent application of planning requirements.*

26. Chapter 15 Development Standards, 15.18 Environmental Management, 15.18.1 Construction Management includes:

- *Demolition/renovation/refurbishment projects generating in excess of 100 cubic metres in volume of Construction and Demolition (C&D) waste; and Civil engineering projects which generate in excess of 500 cubic metres of waste materials used for development works on the site should also be accompanied by Construction Management Plans;*
- *The construction management plan shall set out the details of the onsite operations including traffic management (site access, deliveries and maintenance and staff parking),* ***waste management****,*

*environmental impacts such as noise, air quality, vibrations and any other relevant detail associated with the development. Where appropriate, excavated material from development sites is to be reused on the subject site;*

- *In reviewing construction management plans, the planning authority will have regard to the management of* ***construction and demolition waste*** *included as part of a* ***Construction and Demolition Waste Management Plan****.*

27. Chapter 15 Development Standards, 15.18 Environmental Management, 15.18.11 Ground Investigation and 15.18.12 Ground Contamination includes for management of Ground Contamination, outlining the following:

- *Any development containing significant excavation including the construction of a basement or any development on brownfield lands should include a ground investigation report to be submitted with an application. This will determine the best practice design based on the soil composition. Where lands are considered unstable or infilled, a strategy for the support and or removal of underground lands shall be provided as part of a planning application;*
- *Due to a mixture of historic industrial land-uses and land reclamation, there are a number of locations in the city where contaminated land could cause an environmental problem. Any contaminated land will require appropriate remediation prior to redevelopment, including, in some instances, removal of material from a site which may require a licence under the Waste Management Act, 1996, as amended, prior to the undertaking of such works (see Section 9.5.6). In all cases involving contaminated land, it is the policy of Dublin City Council to require the highest standards of remediation and where appropriate to consult with the Environmental Protection Agency and other relevant bodies to resolve the environmental pollution created by contaminated land;*
- *Where the previous history of a site suggests that contamination may have occurred, developers will be responsible for the following:*
    - *Undertaking a detailed site investigation, soil testing and analysis to establish whether contamination has occurred;*
    - *Providing a detailed written report of investigation and assessment (including recommendations for treating the affected ground) to Dublin City Council;*
    - *The decontamination of sites prior to new development works taking place, and the prohibition of development until Dublin City Council is satisfied that the affected ground has been satisfactorily treated;*
    - *Decontamination activities should ensure that there is no off-site migration of contaminants via run-off, soils or groundwater.*

### 1.2.5 Dublin City Council Waste Bye-Laws

28. New Waste Bye-Laws for the functional area DCC entered into force in 2018. These are referred to as the Dublin City Council Waste Management (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws 2018. The provisions of the Waste Bye-Laws do not apply to C&D waste.

### 1.2.6 National Waste Statistics

29. The EPA reports on national waste generation statistics on a regular basis. The latest reference year available in terms of C&D waste statistics is 2021 released in August 2023. The EPA reports that a total of 9 million tonnes of C&D waste was managed in Ireland in 2021.

- In 2021, soil and stones (and similar material) made up the vast majority (85.1%) of C&D waste collected, remaining at a similar level as 2020 (84.4%);

- The next largest C&D waste types generated in 2021 were concrete, brick, tile and gypsum waste at 6.7% (remaining similar to 2020 at 6.4%), and mixed C&D waste at 4.0% (also remaining similar to 4.6% in 2020);
- The proportion of segregated (wood, glass, plastic (0.4%) and metal (2.8%)) C&D waste collected remained small at 3.2% in 2021 increasing from 3% in 2020;
- Approximately 96% of C&D waste underwent final treatment in Ireland in 2021, with 4% exported abroad for final treatment (EPA, 2023);
- Backfilling, a recovery operation carried out at authorised facilities, is the most significant treatment of C&D waste in Ireland. Most of the C&D waste generated in 2021 (85%) was backfilled while 7% went for disposal, 8% of all C&D waste was recycled, and 0.3% went for energy recovery; and
- In 2021, recycling was the main treatment operation for C&D metals (100%), waste bituminous mixtures (49%), and related segregated wood, glass and plastic waste (77%). The EPA (2023) states that *"Recycling rates for C&D waste could be improved by enhanced segregation of C&D waste into individual material streams, either at source or at waste processing facilities*".

30. Under the Waste Framework Directive (2008/98/EC), EU Member States must achieve a rate of 70% material recovery of non-hazardous, non-soil and stone C&D waste (by 2020). In 2021, Ireland achieved 85% material recovery of such waste, surpassing the 70% target.

31. In terms of C&D waste statistics, the EPA states that "Greater levels of C&D waste prevention can be achieved by employing best practice circular construction activities. This includes designing out waste, application of Article 27 by-product regulation and maximising the use of resources in line with the EPA's revised Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects." (EPA, 2023).

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

33. As previously mentioned, development of this C&DWMP has been informed by these guidelines, and prevention and management of C&D waste generated on-site will follow best practice.

## 1.3 Purpose and scope

34. This CDWMP provides a mechanism for ensuring compliance with waste management legislation, and statutory consents. It defines the approach to waste management at the site during the construction phase and addresses all aspects of waste management applicable to site preparation and construction work within the onshore development area.

35. The CDWMP is intended to be a live document which will be updated by the appointed contractor as project development progresses and will be submitted to the relevant authority for approval, prior to the start of construction.

## 1.4 Implementation of the CDWMP

36. Key to the implementation of the CDWMP is the delegation of responsibility for the CDWMP by the appointed contractor to a suitably qualified person to act as Waste Manager for the duration of the construction phase.

37. The appointed contractor, in co-ordination with the Waste Manager, will regularly liaise with and update the Applicant on all waste and material management issues raised by the Waste Manager relating to the CWP Project during the construction phase. As part of the appointment of contractors and

agreement of contracts, the Applicant will determine the lines of communication for environmental compliance, including waste and material management, with the local authorities and relevant stakeholders.

38. Overall, the appointed contractor in co-ordination with the Waste Manager will be responsible for implementation of the CDWMP, and will ensure that all relevant waste management legislation is complied with, that all necessary licences and permissions are obtained, that all waste and materials management related embedded mitigation measures are applied, and that good waste and materials management practices are adhered to, at all times, to minimise waste generation, pollution and related risks to the environment.

39. All project personnel, contractors, sub-contractors are required to ensure compliance with the requirements of this CDWMP (and subsequent revisions thereof) and are responsible for ensuring that their actions constitute good waste and materials management practice. All personnel are also encouraged to provide feedback and suggestions for improvements to the Waste Manager to ensure effective waste and materials management of all construction activities.

## 1.5 Structure of the CDWMP

40. In line with the purpose and scope of the CDWMP set out above, the structure of this CDWMP is as follows:

- Relevant legislation and policy;
- Project description;
- Waste management objectives;
- Roles and responsibilities;
- Training, record keeping, and auditing / monitoring;
- Waste arisings;
- Waste management procedures;
- Excavated waste management plan;
- Off-site waste collection and transportation;
- Training, record keeping and auditing;
- Environmental Emergency response plan;
- Estimated cost of waste management; and
- Interactions with other bodies.

## 1.6 CDWMP Audience

41. The CDWMP will be submitted to the relevant authority in consultation with other stakeholders, as required, and in compliance with the specific requirements of the relevant consent conditions.

42. The CDWMP is intended to be referred to by all personnel involved in the construction of the CWP Project including CWP personnel, contractors and subcontractors.

43. All method statements and work plans produced in relation to waste and material management for the CWP Project will comply with the requirements set out in this CDWMP.

44. Compliance with the CDWMP will be monitored by the appointed contractor, the Applicant, and the relevant authority.

45. Copies of the CDWMP will be held in the following locations:

- The Applicant's head office;

- The Applicant's construction office and coordination centre;
- At the premises of any contractor (as appropriate), appointed by the Applicant; and;
- At associated site office(s) where contractors are engaged in construction activities.

## 1.7 Revisions to the CDWMP

46. As mentioned, the CDWMP is considered to be a 'live' document and will be reviewed on a regular basis to allow any changes to the construction programme, operations, or unforeseen issues to be incorporated at any stage, and as deemed necessary by the Applicant, their agents or relevant authorities.

47. The CDWMP will also be subject to regular review to address, for example:

- Any conditions stipulated in the planning consents;
- Any requirements/issues highlighted through consultation prior to construction;
- Any changes/updates to waste management legislation, policy and best practice at the time of construction; and
- To ensure it incorporates the findings of any pre-construction surveys.

48. This CDWMP will be provided to the appointed contractor, Waste Manager, and all appointed contractors, who will have responsibility for ensuring compliance, throughout the construction phase. This will be informed by regular monitoring and inspections to confirm the efficacy and implementation of all relevant mitigation measures and waste and material related commitments identified in this document and the application documentation. The appointed contractor(s) are required to include further details and/or confirmation in the updated version of the CDWMP, which will include:

- Confirmation of contractor roles and responsibilities;
- Confirmation of appointed Waste Manager and their roles and responsibilities;
- Details of communication and reporting procedures relating to waste and materials management on the Project;
- Confirmation of waste and materials related mitigation measures and procedures within approved supporting plans and documentation; and
- Details of non-compliance and pollution emergency response procedures, including personnel and contact numbers.

49. The appointed contractor and the Waste Manager shall also agree and implement monitoring measures to ensure the effectiveness of the CDWMP throughout construction.

## 1.8 Relevant guidance

50. This CDWMP has been prepared in accordance with the *Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects*, published by the EPA in November 2021. These guidelines replace the 2006 guidelines previously published by the former Department of the Environmental, Heritage and Local Government (DOEHLG) and the National Construction and Demolition Waste Council (NCDWC).

51. The main objective of these guidelines is to provide a practical and informed approach informed by best practice in the prevention and management of C&D wastes and resources from design to construction of a project (including consideration of deconstruction). The guidelines provide those involved in a project, including clients, developers, designers, practitioners, contractors, sub-contractors and competent authorities, with a common approach when preparing Resource and Waste Management Plans (RWMPs) for C&D projects.

52. The updated document sets out practical guidelines informed by best practice approaches in the management and prevention of C&D waste from initial design stages onwards, including:

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

53. The guidelines state that the level of detail presented in the RWMP (in this case, the CDWMP) should be reflective of the scale and complexity of the project and the following tiers are recommended:

- Tier 1: Smaller scale projects - For such developments the requirements are for a simplified RWMP; and
- Tier 2: Larger scale projects, including Strategic Infrastructure Developments, Strategic Housing Developments, infrastructure projects (road, rail, gas, energy).

54. The final CDWMP will be developed to align with the requirements of the guidelines based.

## 1.9 Associated project documents

- EIAR Volume 3, Chapter 4 Project Description;
- EIAR Volume 3, Chapter 19 Land, Soils and Geology;
- EIAR Volume 3, Chapter 31 Waste and Resource Management;
- EIAR Volume 4, Appendix 19.5 Contamination Risk Assessment;
- Construction & Demolition Waste Management Plan (CEMP).

# 2 PROJECT DESCRIPTION

### 2.1.1 Site location

55. The onshore development area is located on the Poolbeg Peninsula situated on the east side of Dublin City, on the eastern Docklands, adjacent to both Dublin Bay and the River Liffey, and east of the River Dodder and Grand Canal Dock.

56. The Poolbeg Peninsula is an area of land which has gradually been reclaimed over the years. The area is characterised by heavy industrial development including port facilities (including berthing, docking, and storage), wastewater treatment, and thermal waste treatment. In terms of Land Use, CORINE 2018 land cover mapping, available via the EPA Geo Portal identifies the area as Land type 121 Artificial Surfaces – Industrial, commercial and transport units.

### 2.1.2 Overview of the Construction Methodology

57. Construction works at the landfall will involve open cut through an existing stone revetment (pedestrian pathway) and soil embankment, to facilitate installation of cable ducts, to bring the offshore export cables into the transition joint bays (TJBs).

58. The onshore cable route will be installed in a tunnel driven from the landfall to the onshore substation site.

59. The ESBN network cables will be installed by a combination of open cut and trenchless techniques (e.g. horizontal directional drilling (HDD)).

60. For the onshore substation building structures will require excavations for foundations. Excavations will also be required for underground utilities and surface water drainage infrastructure.

61. The following sections provide an overview of the site operations, facilities and construction methodologies. A detailed description of construction methodologies associated with the OTI can be found within **Chapter 4 Project Description**.

### 2.1.3 General Site Operations and Facilities

62. The onshore development area will include four temporary construction compounds (A, B, C, D) which will include site offices and various site welfare facilities (canteen, toilets and handwash facilities).

63. Compounds will also be used for storage of plant and machinery, waste segregation receptacles and storage tanks.

### 2.1.4 Landfall

Open cut installation

64. Open cut installation will require the excavation of a single swathe with three cable trenches between the TJBs and the intertidal area, within which cable ducts for each of the three cable circuits will be laid and buried. The open cut excavation between the TJBs and the HWM will consist of a single swathe, approximately 40 m in length and 70 m wide.

65. In summary, as detailed in **Chapter 4**, project description open cut cable duct installation during phase one of the landfall works will require the following activities:

- Site clearance between the TJBs and the HWM;
- Construction of a temporary access ramp onto the intertidal area;
- Excavation of the rear berm;
- Excavation of the front berm and temporary diversion of the adjacent footpath;
- Construction of a temporary cofferdam;
- Removal of the existing coastal revetment;
- Open cut cable duct installation between the repositioned footpath and the intertidal area;
- Backfilling of trenches and reinstatement of the footpath to its original position;
- Reinstatement of the existing coastal revetment;
- Removal of the temporary cofferdam;
- Complete open cut cable duct installation onshore to TJBs (within the front berm);
- Backfilling of trenches and reinstatement of the front berm; and
- Landscaping of disturbed areas between HWM and TJBs.

66. The excavation of the rear berm forms part of the excavation of the TJB. The berms will be excavated using land-based equipment such as excavators, wheeled dumpers, and bulldozers. Further information to the landfall cable duct installation is detailed in **Chapter 4 Project Description**.

67. The typical quantity of excavated material produced for open cut works at the landfall will be 21,497 $m^3$, all of which will require removal off site for disposal.

*TJBs*

68. As detailed in **Chapter 4 Project Description**, the construction of the TJBs is expected to be phased in line with the installation phases of the offshore and onshore export cables. Broadly, this can be broken down as follows:

- Excavation of the TJB construction area;
- Installation of cable ducts between the TJBs and the intertidal area;
- Construction of TJB base structures;
- Pulling of the onshore and offshore export cables into the TJBs and the jointing of the cables;
- Completion of the TJB structures; and
- Backfilling of excavations, reinstatement of construction areas and construction of the operational service road.

69. The first phase will involve the excavation of the rear berm to create a construction area for the three TJBs and to facilitate the laying of the cable ducts towards the intertidal area. It is currently assumed that the material will not be suitable for re-use and will therefore be taken off site for disposal. Where invasive species were encountered on the embankments, material will be removed in advance of the main construction works to avoid cross contamination.

70. During the detailed design stage, maximising beneficial re-use of the excavated material on site will be prioritised over offsite disposal. A testing programme and updated waste classification will be required prior to disposal/reuse of material.

### 2.1.5 Onshore Transmission Infrastructure

Onshore Export cables

71. Three 220 kV HVAC onshore export cable circuits will connect to the offshore export cables at the TJBs and will transfer the electricity onwards to the onshore substation.

72. It is proposed to install the onshore export cable circuits within an underground tunnel, which will run from Construction Compound A (Compound A), near the landfall, to the onshore substation site. An open cut trench will be formed from the TJBs to the invert level of the launch shaft using temporary trench supports. Ducts will be pre-laid, extended into the launch shaft and backfilled ready for pulling cables as described in the following sections.

73. The tunnel will be constructed to house the ducting for the three 220 kV onshore export cable circuits, alongside three additional spare ducts.

74. The tunnel will be constructed within the underlying clays at c -25.3 mODM. To enable the construction of the tunnel, tunnel shafts are required at the proposed onshore substation site, near pigeon house road and Compound A, respectively. The launch/reception sites will require a compound area for shaft installation, tunnel boring machine (TBM) preparation and launch, and for ongoing tunnelling operations including spoil handling and possible treatment, pipe stringing and installation. It is anticipated that the method of construction for the tunnel shaft is by wet caisson with a "tremied" base plug. It is expected that, there will be a requirement to install a concrete plug to resist hydrostatic forces in the temporary state. Waste arising from the construction of the three shafts will be managed separately from the natural sand and gravel material.

75. Further detail in respect of the onshore export cable tunnel route, design and the approach to construction is provided in **Chapter 4 Project Description**.

76. The estimated volume of excavated material associated with tunnel construction is c. 22,085 $m^3$ and the estimated volume material assumed for off-site management will be a volume of c. 22,529 $m^3$ (including estimated imported materials (i.e., virgin material - stone, bedding material for trenches).

Onshore Substation

77. A temporary construction compound for the site (Compound C) will be located to the south east of the onshore substation site, adjacent to the former Pigeon House Hotel.

78. The main excavation works proposed at the onshore substation site are:

- Removal of C&D stockpiles on the site;
- Construction of revetments and combi-wall to the north of the onshore substation; and
- Raising site levels to a minimum site level of +4.64 mOD.

79. The removal of stockpiles of C&D will be undertaken to avoid cross contamination with natural subsoil materials. The main potential to mobilise contamination on the onshore substation site is the stockpiles. The waste at the onshore substation for the stockpiles is predominantly C&D (concrete, brick, timber). Asbestos fibres were noted in a number of stockpile samples. This work will be undertaken in advance of the main dig.

80. New revetments and combi wall structures will be installed along the perimeter of the onshore substation site.

81. The estimated volume of excavated material for the onshore substation site requiring management offsite is c. 44,129 $m^3$. Material at the turning circle is likely to suitable for reuse on site (such as in the

area proposed for reclamation at the onshore substation site), subject to testing and classification tests.

# 3 WASTE MANAGEMENT OBJECTIVES

82. The following waste management objectives are identified for the CWP Project:

- Maximise the on-site segregation of C&D wastes;
- Consideration of all reuse opportunities for material surpluses within the site;
- Avoid oversupply of incoming construction materials which have the potential to become waste; and
- Engage appropriately licensed waste contractors that can provide maximum off-site reuse, recovery and recycling of waste materials in preference of disposal.

83. The national target for preparing for reuse, recovery and recycling of C&D waste (excluding soil and stone) is 70% and the waste industry in Ireland is currently achieving 85% (2021 reference year).

84. The target set for C&D waste management for the CWP Project is to exceed the national target of preparing for reuse, recovery, and recycling of 70% of non-hazardous C&D waste (excluding soil and stone).

85. The appointed contractor will be made aware of this project target and will be required to engage suitably permitted/licenced waste contractors that will be able to provide a commitment to achieving, or exceeding, this target.

# 4 ROLES AND RESPONSIBILITIES

86. Overall anticipated roles and responsibilities of key personnel relevant to the implementation, management and monitoring of environmental management on the Project are set out in **Table 4-1** or the **CEMP**. Roles and responsibilities will be subject to specific contractual agreements upon appointment of contractors and any additional/further appointments required as conditions of consent.

87. An indicative organisation chart will also be provided which will set out the anticipated chain of command and communication pathways. This will be reviewed and updated, as required, prior to construction of the CWP Project.

88. Key roles associated with waste and materials management and implementation of the CDWMP are outlined in the following sections.

### 4.1.1 The Applicant

89. The Applicant will have overall responsibility of waste management for the CWP Project for the duration of the Project phases.

90. The Applicant will be responsible for the appointment of a competent appointed contractor and project design team.

91. The Applicant will liaise with the appointed contractor and appointment Waste Manager regularly to assess progress made on project waste management objectives and remain informed of any waste management issues as they arise.

### 4.1.2 The Appointed Contractor

92. The Applicant will appoint the contractor who will be required to ensure that the waste management objectives for the Project are included as part of the site induction for all new employees on the site, including outlining the importance of source segregation and maintaining a clean site will be highlighted and the locations of skips on the site will be provided.

93. The appointed contractor will be responsible for the appointment of a suitably qualified construction phase Waste Manager.

### 4.1.3 The Waste Manager

94. The appointed Waste Manager will be trained in setting up the waste log and checking waste dockets as described in the previous section. The Waste Manager will also be given responsibility for providing toolbox talks on waste management, organising specific training where required and educating workers throughout the project.

95. The Waste Manager will also liaise with DCC to provide details on the waste facilities to be used and provide waste data as required. It is also beneficial for the Waste Manager to provide feedback on waste statistics to the project team on a regular basis to acknowledge good performance or identify areas for improvement.

96. The Waste Manager will be familiar with the content of this document and will ensure compliance with the measures set out herein for the duration of the project. Where appropriate, the Waste Manager may delegate responsibility to others for management of waste in particular areas of the site or may seek appointment of Waste Mangers for specific sub-contracts.

97. The Waste Manager will also establish an audit checklist to inspect skips and waste containers across the site and identify contamination of skips or other waste related issues which may arise. A review of waste records held for each movement of waste off-site will also be carried out.

98. As part of the recording of waste quantities, the Waste Manager will monitor authorisations for the waste (haulage) contractors and selected waste facilities to ensure there are suitable authorisations in place for the wastes generated over the course of the construction phase.

99. The waste log will be cross-checked with hard copy dockets and any missing details filled in. Depending on the nature of the wastes generated, the Waste Manager may also carry out an audit of the receiving waste facilities to confirm that the waste sent from the site is being treated as described on the waste dockets.

100. The costs associated with waste management will also be reviewed during the project and highlighted to the appointed contractor as to where savings can be made, if any. Typically, maximum on-site segregation of waste and reuse of material where appropriate reduces the costs associated with mixed C&D waste collection which is required to be processed off-site.

### 4.1.4 Safety, Health, Environment and Quality (SHEQ) Advisor

101. A suitably qualified Safety, Health, Environment and Quality (SHEQ) Advisor will be appointed by the contractor for the duration of the construction period. The SHEQ will ensure compliance with all relevant Health and Safety regulations, environmental regulations, and quality control on-site during the construction stage. The SHEQ will be on-site full time during the construction phase.

Table 4-1 Key waste management responsibilities

| Project Role | Responsibility in relation to waste and excavation management | Project Phase |
|---|---|---|
| The Applicant | Appointment of competent contractor and Project design team | Project initiation and subsequent tendering phases |
| | Overall responsibility of waste management | All project phases |
| Project design team | Identification of Key Waste Streams | Project Design Phase |
| | Design to minimize waste generation in lifecycle of completed construction. | Project Design Phase |
| Appointed contractor | Construction & Demolition Waste Management Plan implementation | Project Implementation |
| | Refinement and implementation of the CDWMP within their Waste Management Plan (WMP) | Project Implementation |
| | Appoint competent and authorized waste management contractor(s) | Project tendering phase |

| Project Role | Responsibility in relation to waste and excavation management | Project Phase |
|---|---|---|
| | Appointment of a trained, suitably qualified Waste Manager | Construction phase |
| Waste Manager | Implementation of the CDWMP and excavation management plan | Project Implementation |
| | Ensure that the objectives of both the CDWMP and the contractors SWMP are put in place. | Construction phase |
| | Train site staff, external contractors and suppliers on construction waste disposal | Construction Phase |
| | Waste characterisation | Construction phase |
| | Selection of techniques and design to minimize waste and to maximise recovery and recycling of waste during the project | Construction phase |
| | Maintenance of Waste Documentation for a minimum of 7 years. | Project Design Phase and during project implementation |
| | Completion of Final Waste Management Report | Post-construction phase |
| Safety, Health, Environment and Quality (SHEQ) Advisor | The SHEQ will co-ordinate with the appointed contractor and the Waste Manager on any health & safety issues associated with waste management and management of contaminated material. | Construction phase |

# 5 WASTE ARISINGS

### 5.1.1 Introduction

102. C&D waste statistics from 2020 published by the EPA identify the primary waste types generated in the construction industry in Ireland. **Table 5-1** provides a breakdown of the composition of the 8.2 million tonnes of C&D waste generated in 2020.

Table 5-1 EPA C&D waste statistics composition of C&D waste for 2021

| Waste Type | % of total (by weight) | List of Waste Codes (LoW)* |
|---|---|---|
| Soil, stones and dredging spoil | 85.1 | 17 05 03 to 17 05 08 |
| Concrete, brick, tile and gypsum | 6.7 | 17 01 01 to 17 01 07 |
| Mixed C&D waste | 4.0 | 17 09 03, 17 09 04 |
| Metal | 2.8 | 17 04 01 to 17 04 11 |
| Bituminous Mixtures | 1.0 | 17 03 01 to 17 03 03 |
| Segregated wood, glass and plastic | 0.4 | 17 02 01 to 17 02 03 |

* Waste codes listed include hazardous and non-hazardous wastes

103. During construction works, waste material will be generated mainly from excavations, material off-cuts and packaging. Oversupply of materials can also lead to waste generation. The typical waste materials generated again will be concrete rubble, metals, wood and plastics.

104. Arisings from piling and excavation works will be reused on site wherever possible for site profiling and landscaping works.

105. Other waste types generated in smaller quantities on construction sites may include materials such as waste oils, resins, paints and adhesives, as well as waste generated from office and welfare facilities on site, such as paper, packaging, food and canteen waste, and wastewater and effluent. Some of these materials may be hazardous and will require specific handling procedures. It is expected that waste quantities of these materials will be small.

### 5.1.2 Construction Waste

106. The OTI works will be characterised by pre-construction gradually phasing out to a number of main civil engineering works to provide the necessary infrastructure for completion.

107. The OTI will be constructed using standard construction and building materials and methodologies. Materials will be required for construction of the elements of the design including building structures (e.g. onshore substation site), concrete floors, and metal decking. Therefore, the majority of construction waste material will be streams including mixed C&D waste, metal, wood, plasterboard, glass and waste electronic and electrical equipment (WEEE) as would typically be generated from the building of a similar industrial style facility.

108. Materials required for the construction works will be sourced locally, where feasible. Material importation to site will be required such as ready mixed concrete, road surface, etc.

109. It is anticipated that much of the waste streams generated during the construction phase will be suitable for recovery and recycling. They will be appropriately segregated in order to facilitate this.

110. The following provides a non-exhaustive list of the waste types predicted to be generated during the construction phase due to the nature of the construction methodologies and activities:

- Non-Hazardous
    - General office waste;
    - Organic waste (canteen and food waste);
    - Waste from portable site welfare/toilet facilities);
    - Top-soil, sub-soil, stones, made-ground (excavations);
    - Wood / Timber;
    - Paper & cardboard;
    - Mixed Metals;
    - Concrete, brick, tiles & ceramics;
    - Plastics;
    - Glass;
    - Non-hazardous WEEE / Batteries;
    - Non-hazardous bituminous mixtures; and
    - Miscellaneous non-hazardous materials
- Hazardous waste
    - WEEE / Batteries;
    - Oils, fuels, lubricants;
    - Paints;
    - Contaminated soils (excavations);
    - Asbestos containing materials; and
    - Hazardous bituminous mixtures.

111. The anticipated waste types outlined above are based on the typical waste types resulting from construction of similar civil engineering developments, but can be viewed as an example of the typical waste types predicted for the proposed development. Waste type breakdown will vary depending on final selection of material types and the extent of on or off-site construction employed.

### 5.1.3 Excavation waste generation

112. The key potential source of waste material during the construction of the development will be from the excavation of ground material to allow for the cable route, grid connection, laying of foundations and construction of the building structures. Material from piling and excavation works will be reused on site wherever possible. Construction of the onshore substation will require removal of soils to a competent founding layer and upfilling with structural fill and/or concrete to the required finished floor level.

113. It is estimated up to 91,357 $m^3$ of excavated material will require management as part of the cut and fill balance.

114. Section 7 of this CDWMP outlines the Excavated Materials Management Plan, which sets out the anticipated excavated materials associated with the installation of the OTI, and the approach to management of excavated materials.

# 6 WASTE MANAGEMENT PROCEDURES

### 6.1.1 General Waste Management Control Measures

115. The Applicant will require that all contractors and their subcontractors are responsible for the collection, storage and disposal of any waste produced as part of the CWP Project.

116. In line with the revised 2011 EU (Waste Directive) Regulations 2011 [S.I. No. 126/20011], the Applicant will require waste will be managed in accordance with the waste hierarchy as defined by the EU Directive 2008/98/EC on Waste. This means that all waste will be reduced, reused, recovered, and recycled as far as reasonably practicable to reduce waste to landfill.

117. A duty of care shall be maintained at all times to ensure that waste generated during the construction of the CWP Project is handled in accordance with the relevant legislation governing its storage, transfer, treatment and disposal. It is anticipated that waste management measures will include waste stream management procedures that include protocols for the correct handling, segregation, and disposal of waste, to ensure that it causes the least practicable damage or disturbance.

118. The Applicant will require all contractors to obtain relevant permits and authorisations prior to the removal of any waste from site (onshore and offshore) and maintain a register of this information. Contractors will also maintain a register of all waste loads leaving the site and/or excavated material destined for reuse, to facilitate monitoring and reporting of waste and material types, quantities, and management methods.

119. Adequate spill prevention measures will be implemented to prevent any material (e.g., concrete, grout, sediment etc.) entering controlled waterways and impacting on water quality. Emergency spill kits will also be kept on site, and all personnel will be made aware of the location of spill kits and trained in their use. Any hazardous wastes generated will be segregated, based on classification as (potentially) hazardous or non-hazardous.

120. It is anticipated that contractors will produce waste management plans that set out all waste management procedures for construction activities, including expected waste arisings and proposed procedures for waste management. This will be provided to the Applicant for approval prior to the commencement of any offshore construction activities.

### 6.1.2 Signage

121. The Waste Manager shall ensure that appropriate signage for waste and materials management is erected at relevant locations across the onshore development area (e.g., within construction compounds and onshore transmission infrastructure construction areas) and remains in place for the duration of the construction phase. Periodic checking of signage will be undertaken to ensure correct placement and visibility of signage is maintained.

### 6.1.3 Waste Storage

122. The Waste Manager will ensure appropriate storage is in place for construction phase waste streams including:

- Dedicated containers, bins and skips for all identified construction waste streams;
- Dedicated stockpile management areas;
- Appropriate storage facilities (designated areas / bins / containers) for hazardous materials.

123. An area for waste collection and materials delivery and storage will be provided within the onshore development area. Materials that can be beneficially used in the future development of the site will be segregated directly on site.

124. Waste storage areas will be relocated at different stages of the construction process and multiple areas may be allotted for the purpose of waste storage and removal at peak turnovers.

### 6.1.4 Non-hazardous waste management

125. Non-hazardous waste streams, including wastes arising from construction site offices and staff, plastics, glass, clean timber / wood, metals, and other non-hazardous waste types, will be segregated at source, and placed in appropriate bins and skips until they are collected and removed to a suitable waste management facility for recycling or recovery.

126. Waste streams will be periodically assessed and reviewed by the Waste Manager in consultation with the appointed contractor and other contractors on site, to ensure a consistent approach to on-site management and adherence to waste management and source segregation throughout the course of the construction phase.

### 6.1.5 Hazardous waste management

127. Management of hazardous wastes generated during the construction phase will be coordinated by the appointed contractor, the Waste Manager and the SHEQ.

128. Hazardous wastes are anticipated to comprise primarily of waste oils, lubricants and other construction liquids.

129. Hazardous wastes will be removed as required and stored in suitable secure and impermeable storage containers, within designated hazardous waste storage areas, until they can be removed offsite to an appropriately licenced waste management facility.

130. Management of contaminated soils are outlined in the Excavated Materials Management Plan, outlined in **Section 7** of this CDWMP.

131. Hazardous waste streams will be periodically assessed and reviewed by the Waste Manager in consultation with the appointed contractor and other contractors on site, to ensure a consistent approach to on-site management and source segregation occurs throughout the course of the construction phase.

# 7 EXCAVATED MATERIALS MANAGEMENT PLAN

### 7.1.1 Materials and waste arisings from the site excavations

Introduction

132. Construction and Demolition (C&D) waste refers to the waste generated from activities such as construction, renovation, and demolition. This definition encompasses surplus and damaged products and materials arising during construction or temporarily utilized on-site. Typical types of construction and demolition waste likely to arise during the proposed site clearance, demolition, excavation, and construction activities are outlined below.

133. The appointed contractor will ensure the minimisation of on-site waste generation and to reduce the amount of waste removed from the site for recovery or disposal whenever possible.

Material and Waste Arisings

134. A review of the OSI historical maps (OSI, 2022) shows that the area has been developed from a large strand area comprising of a small portion of developed land, sand banks and historical rivers and lakes. Over time, the Poolbeg Peninsula was developed by reclaiming land and industrial activities became commonplace in the area. The historical use of unregulated industry has led to contamination of soils in the area.

135. The excavation and management of soil and C&D material is required for the installation of the OTI. Earthworks will result in generation of quantities of material requiring waste and resource management, including removal offsite for disposal, or reuse where possible. Due to the nature of the Poolbeg Peninsula there is potential for contaminated material to be encountered during the construction phase works. A summary of the construction works and waste materials encountered at the landfall site and onshore substation site are outlined below.

### 7.1.2 Excavation Soil Management

136. Where naturally occurring, material is excavated this will be proposed for reuse within the construction works where feasible, provided it is suitable for its proposed use.

137. All waste generated on-site will be segregated appropriately and removed offsite, by an appropriately permitted collector, to a suitably licenced facility for recycling, recovery, or disposal. Materials that can be reused on-site will be where feasible. Construction will be phased to ensure cross contamination with clean stone and soils is minimised.

138. Haulage vehicles will be used to transport excavated soils and material from excavation areas to designated storage/ stockpiling areas as well as off site. This includes movement and management of excavated contaminated material and non-contaminated material on site as well as movement and management of material brought onto site for levelling or land raising works.

139. Where direct removal form site is not possible, impermeable storage areas (bunds), together with measures to prevent run-off of contaminated material onto open ground, will be required.

140. Waste will be removed from onshore substation and landfall site prior to the main construction period. Material will be removed in accordance with the Waste Management Act 1996, as amended and delivered to licensed landfill facilities, the locations of which are outlined in EIAR **Appendix 31.2**.

141. Any identified contaminated soil / materials will be removed offsite, by an appropriately permitted collector, to a suitably licenced facility for disposal.

Invasive species including Japanese knotweed

142. Japanese knotweed and other invasive species were identified on the landfall embankment and at the edge of the compound B and onshore substation site. Invasive species will be pre-treated prior to excavation. Excavation of material containing Japanese knotweed or other invasive species should be removed prior to the main excavation to prevent the possibility of cross contamination. Sea Buckthorn was also identified in a number of areas.

143. Excavation of Japanese knotweed-contaminated soils has been successfully managed in construction sites and on disused land. Methods of disposal include deep burial (> 5m deep), bunding (encapsulation in root barrier membrane) and off-site disposal to licensed landfill. Offsite disposal is considered appropriate on this site due to land use constraints.

144. The excavation and disposal offsite method will require site operations to excavate all Japanese knotweed plants and associated contaminated soil. The soil and plant material will be carefully loaded onto bio secure trucks that will transport the contaminated material to the appropriately licenced landfill. When excavating, a buffer zone of up to 7 metres from the last visible plant may be removed in order to ensure that all rhizome material is removed. Contaminated soil will be removed to a depth of up to 3 m or to a depth determined by an on-site knotweed control specialist. Further measures for the management of Japanese Knotweed and other invasive species are set out in EIAR **Chapter 21 Biodiversity**. An **Onshore Invasive Species Management Plan** has been submitted with the planning application.

145. It is conservatively assumed that the berm material at the landfall site will not be suitable for re-use and will therefore be taken off-site for disposal. A percentage of the material will require disposal due to the presence of invasive species. However, during the detailed design stage, maximising beneficial re-use of the excavated material on site will be prioritised over off-site disposal.

146. Detailed records of all operations will be maintained by throughout the CWP Project. This will specifically focus on the exact areas excavated, the method of excavation, the depth of excavation, the volume of material (as numbers of truck loads) removed, an inventory of personnel and equipment entering and leaving the Knotweed demarcated areas, and the operation of cleaning and disinfection facilities provided at each area.

### 7.1.3 Waste classification

147. Selected samples were submitted to the accredited labs for chemical and asbestos analysis, The suite also includes those parameters specified in the EU Council Decision establishing criteria for the acceptance of waste at Landfills (Council Decision 2003/33/EC), which for the solid samples are pH, total organic carbon (TOC), speciated aliphatic and aromatic petroleum hydrocarbons, BTEX, phenol, polychlorinated biphenyls (PCB) and PAH.

148. To facilitate waste classification, the samples were scheduled for the following analysis:

- Total Organic Carbon (TOC) and Loss on Ignition (LoI);
- Bulk analysis:
    - Asbestos fibre screen/ asbestos ID;
    - pH and moisture content;
    - Metals (As, Ba, B, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Zn);
    - Hexavalent Chromium and Trivalent Chromium;

- Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and Methyl tert-butyl ether (MTBE);
- Polychlorinated biphenyls (PCBs) (7 congeners);
- Total Petroleum Hydrocarbons Critical Working Group; and
- Speciated 17 Polycyclic Aromatic Hydrocarbons (PAHs) (inc. coronene).

- Leachate analysis:
  - Metals (As, Ba, B, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Zn);
  - Chloride, Fluoride, Sulphate;
  - Phenol;
  - Dissolved Organic Carbon; and
  - Total Dissolved Solids.

149. In line with the requirement of Council Decision 2003/33/EC a leachate was generated from the solid samples which was in turn analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). The suite was selected due to the unknown origin of the material underlying the site and no evidence of specific contaminants of concern highlighted in the site history. The full laboratory reports are included in **Appendix 19.2** and **19.3**.

HazWasteOnLine Results

150. In total, c. 70 No. samples were assessed using the HazWasteOnLine™ Tool. All samples were classified as being non-hazardous.

151. The specific List of Waste (LoW) code which should be applied to the material at each SI location is summarised in **Table 7-1** below. The assigning of the LoW code is based on observations recorded in the trial pits, an estimation of the % of anthropogenic material present and the results of the HazWasteOnline™ output. The final LoW codes applied at the time of disposal may vary due to variations in % of anthropogenic material observed in the excavation phase.

152. Where there is in excess of 2% anthropogenic material observed the LoW code 17 09 04 may be applied. Material from the landfall site is a mix of C&D, soil, and organic material.

153. Surplus excavated material will be stockpiled, tested, and classified prior to leaving site. It Excavated material from the onshore development area is likely to require recovery or disposal as:

- 17 05 04 (stone and soil);
- 17 09 04 (mixed construction and demolition wastes);
- 20 03 99 (municipal waste not otherwise specified); and/or
- 17 05 03 (soil and stones containing hazardous substances).

154. Material from the stockpiles and berm will be removed separately in advance of the main excavation. Material in the berm was >2% C&D including tarmac, concrete plastic and brick.

Table 7-1 Potential Waste Categories for stone and soil Disposal/Recovery

| Waste Category | Classification Criteria |
|---|---|
| Category A<br>Unlined Soil Recovery Facilities | Soil and Stone only which are free from anthropogenic materials such as concrete, brick, timber. Soil must be free from "contamination" e.g.<br><br>Total BTEX 0.05mg/kg, Mineral Oil 50mg/kg, Total PAHs 1mg/kg, Total PCBs 0.05mg/kg and No Asbestos Detected |
| Category B1<br>Inert Landfill | Reported concentrations within inert waste limits, which are set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002).<br><br>Results also found to be non-hazardous using the HWOL6 application. |
| Category B2<br>Inert Landfill | Reported concentrations greater than Category B1 criteria but less than i.e., IMS Hollywood Landfill acceptance criteria, as set out in their Waste Licence W0129-02.<br><br>Results also found to be non-hazardous using the HWOL application. |
| Category C<br>Non-Haz Landfill | Reported concentrations greater than Category B2 criteria but within non-Haz landfill waste acceptance limits set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002).<br><br>Results also found to be non-hazardous using the HWOL application. |
| Category C 1<br>Non-Haz Landfill | As Category C but containing < 0.001% w/w asbestos fibres. |
| Category C 2<br>Non-Haz Landfill | As Category C but containing >0.001% and <0.01% w/w asbestos<br><br>fibres |
| Category C 3<br>Non-Haz Landfill | As Category C but containing >0.01% and <0.1% w/w asbestos fibres. |
| Category D<br>Hazardous Treatment | Results found to be hazardous using HWOL Application or above non-Haz criteria. |
| Category D 1<br>Hazardous Disposal | Results found to be hazardous due to the presence of asbestos.<br><br>(>0.1%). |

155. For stone and soil material (17 05 04) Waste Acceptance Criteria (WAC) is required for disposal. WAC as detailed in Council Decision 2003/33/EC are only applicable to material if it is to be disposed of as a waste at a landfill facility. The WAC data considered in combination with the waste classification outlined in above allows the most suitable waste category to be applied to the material tested.

156. Soils from the asbestos areas would require disposal at a Category C2 - Non-Haz Landfill. Due to the history of infilling, any soil removal will potentially entail disposal at an Inert (B1) to Hazardous (D). Natural soils may be suitable for disposal at Class A facility. Elevated total organic carbon (>5%) was detected in two samples from P_BH20 on site and is likely to reflect topsoil or organic material in the soil. As previously stated, the most sustainable approach is to retain material on site.

157. Additional amounts of bentonite will also be generated as part of the installation of the onshore export cables (associated with installation of the tunnel shafts and the tunnel boring) and ESBN Network Cables (use of HDD). For the tunnel and HDD works, a bentonite suspension will be used to help convey the soil cuttings out of the excavations. The bentonite and excavated material will be separated in a treatment plant, located in the temporary compounds. The bentonite will then be reused in the tunnelling/HDD process. At the end of these processes, any bentonite which is no longer needed is expected to require disposal as 01 05 04 (freshwater drilling muds and wastes).

### 7.1.4 Verification plan

Stone/Soil import

158. The verification process will ensure that the material conforms to the by-product or raw material characterisation. Checks at this stage are primarily visual and through verification of the accompanying documentation for each load received. However, routine samples and testing of material will also be undertaken to confirm the characterisation.

159. Safeguards to ensure that only suitable material is received on site include but are not limited to:

- All material arriving on site will be subject to a visual inspection on site prior to and during unloading;
- Weekly chemical spot sampling & testing;
- In the event of unacceptable material arrives at the site, these materials will be returned to the economic operator; and
- Any attempt to import unacceptable material will be refused further access to the construction site.

160. Verification testing shall be carried out in accordance with BS EN 12457-2002. The results will be assessed on behalf of applicant. If further testing is required, this will be requested of the material provider. Ongoing testing and record keeping will be required to complete the report for each source site, and same will be kept on site for review.

Material reuse

161. Potential reuse of the recovered soil will result in less traffic meaning lower noise, decreased amount of lorry movements on the roads, decrease in vehicle emissions, lower utilisation of landfill void space and supports government policy in relation to the circular economy i.e. encouraging waste minimisation/reuse.

162. All material for reuse shall have the appropriate chemical analysis or risk assessments to prove that they have no hazardous properties and will not have adverse effect on humans, water courses or the environment.

163. Laboratory testing of soil should be undertaken at an ILAB/UKAS accredited laboratory. Any validation testing and laboratory testing required to confirm classification of soil as inert will also be undertaken by ILAB/UKAS accredited laboratory. Spot samples will be taken on-site will be forwarded to the laboratory and test results will typically be forwarded to site within ten working days.

164. The risk assessment and verification report will include, but not be limited to, the following information: Project description;

- A summary of the source characterisation;
- A summary of the reuse process;
- Site plans and surveys including as built construction drawings;
- Validation sampling results;
- An accurate record of the quantities of materials reused at the site; and
- Conclusions and compliance sign-off.

# 8 OFF-SITE WASTE COLLECTION AND TRANSPORTATION

165. During construction, excess material will need to be transported offsite as waste for appropriate management. The appointed contractor will appoint a suitably permitted waste contractor(s) to collect waste from the site and transfer to appropriately permitted or licensed waste facilities. It is not possible at this stage to identify who the waste contractor(s) will be or to provide their waste collection permit number(s). However, these details will be retained on site following appointment as is described in Section 9 (Training, Record Keeping and Auditing).

166. The appointed waste contractor(s) will typically determine the facilities where C&D waste will be taken to. Upon appointment of a waste contractor, details of the waste collection permit(s) and chosen waste facilities (including waste licence details) will be collated and retained on site. Written confirmation of the acceptance of the material at the chosen facilities can be obtained and provided to DCC if required.

167. There are numerous waste transfer stations, treatment facilities, and recovery facilities in the Greater Dublin Region (including Dublin, Meath, Kildare, and Wicklow) that can accept C&D waste for reuse, recycling and recovery.

168. Hazardous waste will only be removed from site by authorised waste contractors permitted to handle hazardous waste. Waste oils, resins and paints may be suitable for off-site recovery, and this will be explored with waste contractors.

# 9 TRAINING, RECORD KEEPING AND AUDITING

### 9.1.1 Waste management training

169. In order to ensure that waste management awareness and compliance is communicated effectively by the appointed contractor and appointed Waste Manager at the start and throughout the construction works, this CDWMP and its contents will be communicated to all site personnel, including management staff, operatives and contractors.

170. The key elements of this CDWMP will form part of the site induction which will be mandatory for all employees, contractors and visitors attending the site.

171. Waste management toolbox talks will be provided to all site personnel and contractors on a regular basis. These will be targeted at particularly sensitive waste management issues such as:

- Waste streams (MSW, C&D, hazardous, packaging, WEEE, organic, canteen/food waste;
- Appropriate on-site separation / segregation;
- Collection systems / storage; and
- Contamination.

### 9.1.2 Movement and tracking of materials

172. The movement of materials within the onshore development area will be tracked throughout the duration of the construction phase, producing evidence to establish an auditable trail.

173. The tracking system should include the following components:

- Marked site plans delineating excavation zones, planned stockpile locations, any areas designated for treatment, and planned placement locations;
- Protocols for inspection and testing to verify materials are as anticipated based on the site investigation information;
- Tracking forms and control sheets to record the movement of materials, including delivery tickets if materials are between sites; and
- Acceptance and testing procedures if materials are moving between sites.

### 9.1.3 Site Records and Record keeping

174. The appointed contractor in co-ordination with the appointed Waste Manager will be responsible for maintaining records and documenting the quantity, measured in tonnes, and types of waste and materials departing from the onshore development area, including those associated with:

- Pre-construction stage site clearance;
- Construction phase demolition activity;
- Construction phase excavation activity; and
- Other construction phase activities generating waste / materials requiring management.

175. Once authorised waste contractor(s) has been appointed, the Waste Manager will request copies of their waste collection permits which will be held on file at the site office. The waste collection permits must include an up-to-date list of approved vehicle registrations associated with the permit which can be spot checked by the Waste Manager.

176. The waste contractor(s) will also be requested to identify where waste materials will be taken to, and copies of waste licences/permits for each facility will be requested to hold on file in the site

office. The Waste Manager will confirm that the waste collection permits, and facility licences/permits are appropriate for the waste types proposed.

177. A waste log will be set up by the Waste Manager to record all outgoing waste movements from the site. Thorough records / logs will be maintained and will include the name, address, and authorisation details of all facilities and locations receiving waste and materials from the CWP Project. Dates of movement and volumes (tonnes) of waste delivered to each facility will be recorded. The records will clearly indicate the treatment option, i.e., whether materials were recovered or disposed.

178. The waste collection vehicle driver will be required to supply an individual signed waste docket (waster transfer form for hazardous waste) for each waste movement off-site which must specify the waste collection permit number, waste type, EWC code, waste treatment, source of the waste and waste destination. The docket provided by the driver may also include the weight of waste where the collection vehicle is equipped with a load cell, or the weight of waste is known.

179. Alternatively, the weight of the waste may be determined from a weighbridge at the receiving facility and the weight of waste provided to the Waste Manager as soon as possible after receipt at the off-site facility. Regardless, the waste contractor must be able to provide an accurate measurement of the waste tonnage to the Waste Manager. The waste contractor will also be required to provide feedback on waste collected identifying the percentage of waste recovered and disposed of.

180. The waste log will be used to identify the main waste types being generated and can be linked to delivery records to identify the percentage of waste from incoming building materials. The Waste Manager will be able to analyse these records to improve efficiency and seek to reduce wastage. The Waste Manager can also use the information to determine the success of the waste management objectives of the CWP Project.

### 9.1.4 Waste management audits

181. Waste management audits will be conducted during the construction phase. The quantity and types of waste and materials leaving site during the construction phase will be recorded.

182. The Waste Manager will co-ordinate a waste audit of the project once the construction phase demolition has commenced on site and for any facilities receiving waste from the project. Furthermore, the Waste Manager will facilitate a waste audit of the project when construction is underway on site and for any facilities receiving construction waste from the project, as needed.

183. 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 to each facility. Records will show material, which is recovered, which is recycled, and which is disposed of. These audits will cover work practices, record keeping, and off site tracking as follows:

- The appointed contractor will include the waste management objectives outlined in Section 3 as part of the site induction for all new employees on the site. The importance of source segregation and maintaining a clean site will be highlighted and the locations of skips on the site will be provided;
- The appointed Waste Manager will be trained in setting up the waste log and checking waste dockets as described in the previous section;
- The Waste Manager will also be given responsibility for providing toolbox talks on waste management, organising specific training where required and educating workers throughout the project;
- The Waste Manager will also liaise with DCC to provide details on the waste facilities to be used and provide waste data as required. It is also beneficial for the Waste Manager to provide feedback on waste statistics to the project team on a regular basis to acknowledge good performance or identify areas for improvement;

- The Waste Manager will be familiar with the content of this document and will ensure compliance with the measures set out herein for the duration of the project. Where appropriate, the Waste Manager may delegate responsibility to others for management of waste in particular areas of the site or may seek appointment of Waste Mangers for specific sub-contracts;
- The Waste Manager will also establish an audit checklist to inspect skips and waste containers across the site and identify contamination of skips or other waste related issues which may arise;
- A review of waste records held for each movement of waste off-site will also be carried out. The waste log will be cross-checked with hard copy dockets and any missing details filled in;
- Depending on the nature of the wastes generated, the Waste Manager may also carry out an audit of the receiving waste facilities to confirm that the waste sent from the site is being treated as described on the waste dockets; and
- The costs associated with waste management will also be reviewed during the project and highlighted to appointed contractor as to where savings can be made, if any. Typically, maximum on-site segregation of waste and reuse of material where appropriate reduces the costs associated with mixed C&D waste collection which is required to be processed off-site.

# 10 ENVIRONMENTAL EMERGENCY RESPONSE PLAN

184. The appointed contractor will establish a project specific Emergency Response Plan for handling environmental incidents and emergencies and will ensure that all staff including any subcontractors are trained in the project environmental emergency response procedures, so that they are able and prepared to respond to an incident promptly and effectively. Where appropriate, environmental emergency response plans developed will be tested by the contractor.

185. Details of Emergency Response Procedures will be set out within the final Emergency Response Cooperation Plan (ERCoP).

### 10.1.1 Contact details

186. A list of general emergency contact details is presented in **Table 10-1** below and CWP Project contact details are provided in **Table 10-2**. These will be reviewed and updated within the final **CDWMP**.

Table 10-1 Emergency Contact Details

| Contact | Telephone |
|---|---|
| Irish Coastguard | +353 1 6620922(24hr) or +353 1-6620923 |
| Harbour Master | TBC |
| Emergency Services – Ambulance, Fire, Gardaí | 112 / 999 |
| Local Garda Station | TBC |
| Local Fire Station | TBC |
| Local Doctor / GP Service | TBC |
| Hospital | TBC |
| Dublin City Council | TBC |
| Environmental Protection Agency | TBC |
| TBC | TBC |
| TBC | TBC |

Table 10-2 Project Contact Details

| Contact | Name | Contact |
|---|---|---|
| Project Director | | TBC |
| Senior Project Manager | | TBC |
| Consents Manager | | TBC |
| Development Manager | | TBC |
| HSSE Manager | | TBC |
| Marine Coordinator | | TBC |
| Operations and Maintenance Manager | | TBC |
| TBC | | TBC |
| TBC | | TBC |

# 11 ESTIMATED COST OF WASTE MANAGEMENT

187. Landfill disposal has predominantly been used as the method for waste management in Ireland. Disposal is the most expensive waste management option in Ireland, the Waste Management (Landfill Levy) Regulations (S.I. No. 189 of 2015) stipulates the costs for disposal of waste per tonne at EPA waste licenced landfills:

- From 1 September 2023, the existing government levy increased by €10, to €85 per tonne. A gate fee is charged by the owner; fee costs can be confirmed with the local authority or private company that runs the site.

188. Other cost considerations for waste management activity include; handling costs, storage and transportation costs, administration costs, and any purchase costs associated with imported material.

189. With the closure of landfills and introduction of the landfill levy and associated waste handling costs, there is incentive and cost savings associated with moving away from this form of waste management.

190. Approaches to moving away from landfill and minimising waste management costs may include disposal at alternate facility types such as waste to energy facilities (e.g. at Poolbeg (Dublin Waste-to-Energy (DWtE), and Carranstown, Co. Meath (Meath Waste-to-Energy)).

- The waste recovery levy is €10 per tonne (or 1,000kg) when using a landfill site.

191. Other approaches can include driving other more cost-beneficial waste management methods on the Project such as:

- Designing out waste – opportunities to design out waste on a project can occur at various stages or the project, including design, procurement, and construction. This can include use of pre-cast / prefabricated materials / components, off-site construction methods, and standardisation and optimisation of materials used;
- Reuse – Surplus material should be inspected for reuse potential, carefully stored and reused where feasible, this allows for both minimisation of the costs associated with transport and disposal or recycling of waste, and supports the circular economy; and
- Recycling - Surplus material should be appropriately segregated, carefully stored and removed offsite to be recycled where possible, this allows for minimisation of the costs associated with off-site segregation or disposal of wastes.

# 12 INTERACTIONS WITH OTHER BODIES

192. The Waste Manager will ensure coordination with relevant bodies throughout the project. This will include compliance with any construction traffic management requirements identified by the project team or imposed by DCC.

193. The Waste Manager will provide details to DCC on the destinations of waste materials from the site and will provide waste records to DCC as required. The appointed contractor contact details will also be provided to DCC.

# 13 REFERENCES


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