



OUTLINE SITE WASTE MANAGEMENT PLAN: 7.10

DECARBONISATION

Cory Decarbonisation Project

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1. BACKGROUND AND CONTEXT

- 1.1.1. WSP has been instructed by Cory Environmental Holdings Limited (hereafter referred to as the Applicant) to provide materials and waste support for the Cory Decarbonisation Project.
- 1.1.2. This includes the requirement to prepare an Outline Site Waste Management Plan (SWMP) for the Cory Decarbonisation Project, to be located at Norman Road, Belvedere in the London Borough of Bexley (LBB; National Grid Reference/NGR 549572, 180512). The following figures are available in the ES:
- **Figure 1-1: Site Boundary Plan (Volume 2);** and
 - **Figure 1-2: Satellite Imagery of the Site Boundary Plan (Volume 2).**
- 1.1.3. The Applicant intends to construct and operate the Proposed Scheme to be linked with the River Thames. It comprises of the following key components, which are described below, and further detail is provided within **Chapter 2: Site and Proposed Scheme Description (Volume 1)**:
- The Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure): the construction of infrastructure to capture a minimum of 95% of carbon dioxide (CO₂) emissions from Riverside 1 and 95% of CO₂ emissions from Riverside 2 once operational, which is equivalent to approximately 1.3Mt CO₂ per year. The Carbon Capture Facility will be one of the largest carbon capture projects in the UK.
 - The Proposed Jetty: a new and dedicated export structure within the River Thames as required to export the CO₂ captured as part of the Carbon Capture Facility.
 - The Mitigation and Enhancement Area: land identified as part of the **Outline LBRSDP (Document Reference 7.9)** to provide improved access to open land, habitat mitigation, compensation and enhancement (including forming part of the drainage system and Biodiversity Net Gain delivery proposed for the Proposed Scheme) and planting. The Mitigation and Enhancement Area provides the opportunity to improve access to outdoor space and to extend the area managed as the Crossness Local Nature Reserve (LNR).
 - Temporary Construction Compounds: areas to be used during the construction phases for activities including, but not limited to office space, warehouses, workshops, open air storage and car parking, as shown on the **Works Plans (Document Reference 2.3)**. These include the core Temporary Construction Compound, the western Temporary Construction Compound and the Proposed Jetty Temporary Construction Compound.
 - Utilities Connections and Site Access Works: The undergrounding of utilities required for the Proposed Scheme in Norman Road and the creation of new, or the improvement of existing, access points to the Carbon Capture Facility from Norman Road.

- 1.1.4. Together, the Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure), the Proposed Jetty, the Mitigation and Enhancement Area, the Temporary Construction Compounds and the Utilities Connections and Site Access Works are referred to as the 'Proposed Scheme'. The land upon which the Proposed Scheme is to be located is referred to as the 'Site' and the edge of this land referred to as the 'Site Boundary'. The Site Boundary represents the Order Limits for the Proposed Scheme as shown on the **Works Plans (Document Reference 2.3)**.

1.2. PURPOSE OF REPORT

- 1.2.1. An **Outline SWMP (Document Reference 7.10)** has been drawn up to ensure the economic and environmental effects of managing waste are identified, measured, and mitigated through both the design and construction phases of the Proposed Scheme.
- 1.2.2. This document applies to the management of materials and waste generated during construction works delivered as part of the Proposed Scheme.
- 1.2.3. This document provides:
- a framework that sets out the principles of designing out waste, resource efficiency and circular economy activity for the Proposed Scheme; and
 - modelled waste forecasting data for the Proposed Scheme (**Table 8-1**).
- 1.2.4. It has thus been designed as a supporting document for the Proposed Scheme, that should be advanced and updated iteratively as the development progresses.
- 1.2.5. It is anticipated that, eventually, waste forecasts in this document will be transposed into a full SWMP and this would be the responsibility of the Contractor employed by the Applicant.
- 1.2.6. This document ensures that the management of materials and waste generated during the construction of the Proposed Scheme is undertaken in accordance with legal and best practice requirements. This document aims to improve resource efficiency by driving forward the following principles of a circular economy:
- eliminating waste from every stage of a resource's lifecycle; and
 - stimulating industrial and other business activity that improves material knowledge, transfer, and high value application reuse.
- 1.2.7. To ensure a proportionate approach, this document focuses on promoting reuse, recycling, and recovery of waste from the Proposed Scheme (hence minimising disposal) during both the design and construction phases. It also sets out waste Duty of Care responsibilities (**Section 7.3**) and aims to reduce fly-tipping by, for example, ensuring a full audit trail of waste removed from the Site.

- 1.2.8. In the following sections, this document outlines: key roles and responsibilities for implementation; its origins and aims; current legislation and national and local waste policy; and requirements for managing waste during construction. Where design detail permits, it lists the types of waste that are expected to result from the Proposed Scheme and the anticipated volume and management routes of those wastes. This document will be updated as required through the construction phase with actions to ensure that all wastes are managed in accordance with the principles set out.
- 1.2.9. This document is designed to complement and support any Contractor activities undertaken to comply with the CL:AIRE Definition of Waste Code of Practice¹.

1.3. OBJECTIVES AND TARGETS

- 1.3.1. The objectives of this document are to:
- minimise waste production and disposal during the construction phase of the Proposed Scheme;
 - capture and record the benefits of best practice waste minimisation during the construction phase of the Proposed Scheme;
 - improve material resource efficiency across the Proposed Scheme; and
 - encourage activity that incentivises the move towards a circular economy.
- 1.3.2. The target of this Plan is to divert 100% of inert and non-hazardous waste generated during construction from disposal to landfill.
- 1.3.3. These objectives and targets respond to national requirements and ambition, as set out in UK Strategy, Policy, and Legislation (**Section 5.1**) that is applicable to the Proposed Scheme.
- 1.3.4. The London Plan²⁷ includes a target of 95% reuse/recycling/recovery of construction and demolition waste and 95% beneficial use of excavation waste.

2. ROLES AND RESPONSIBILITIES

- 2.1.1. The Applicant has initiated the production of this document, which has been prepared by WSP in consultation with the wider consultant team. Preparation of this document will help ensure that best practice waste management is adopted by all delivery partners for the Proposed Scheme.
- 2.1.2. The appointed Principal Contractor (herein the 'Contractor') will be responsible for ensuring compliance with relevant waste regulations, instructing workers, overseeing and documenting results of the SWMP, and for monitoring the effectiveness and accuracy of waste documentation.
- 2.1.3. It is anticipated that, waste forecasts in this document will be refined and transposed into a full SWMP and this would be the responsibility of the Contractor.
- 2.1.4. Copies of the full SWMP shall be distributed within the relevant teams of the Contractor and to each relevant sub-contractors in the value chain. This will be undertaken prior to construction commencing, and each time the SWMP is updated.

3. SITE WASTE MANAGEMENT PLAN

3.1. CONTEXT

- 3.1.1. Originally a part of the legal framework in England (Site Waste Management Plan Regulations 2008²), SWMP were once a statutory requirement to proactively manage and reduce the volume of waste disposed to landfill from construction and other work sites. Through these regulations, the use of a SWMP was mandatory in England for projects of a value of £300,000 or above.
- 3.1.2. Whilst the 2008 Regulations were repealed in 2013, SWMP are still considered a best practice approach to reducing construction site waste. SWMP are deployed on developments from the design stage to describe, forecast and (during onsite works) validate the type and amount of waste from a construction, excavation or demolition project, and how it will be managed in accordance with the highest tiers of the Waste Hierarchy (**Section 4.4**) and Proximity Principle (**Section 4.5**).

3.2. COMMUNICATION AND TRAINING

- 3.2.1. The Contractor will be responsible for providing adequate waste awareness and training throughout their organisations and the value chain. Site inductions and toolbox talks for sub-contractors and site workers will be a key part of this communication process.
- 3.2.2. The contents of this document (and progress against it or any updates to it) will be included as an agenda item during both design and construction meetings on a regular basis.

4. SITE WASTE MANAGEMENT PLANS AND SUSTAINABLE DEVELOPMENT

4.1.1. This section provides brief details on the role of SWMP in the wider context of sustainable development during the construction phase, specifically the circular economy. Actions taken throughout design and construction of the Proposed Scheme will aim to respond to this context wherever economically, socially, and environmentally viable.

4.2. CIRCULAR ECONOMY

4.2.1. A circular economy is the desired alternative to a traditional linear economy (make, use, dispose) in which resources are kept in use for as long as possible: maximum value is extracted during use, and products and materials are recovered and regenerated at the end of each service life.

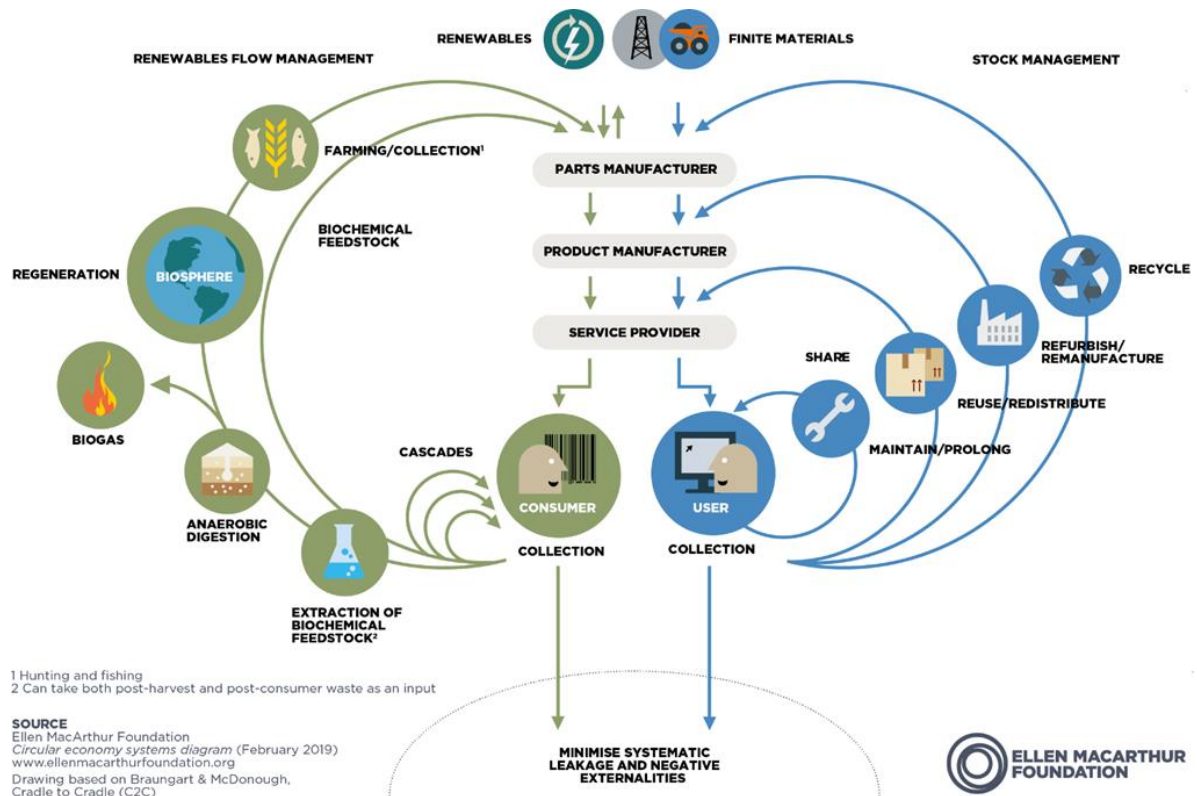


Figure 4-1: The Butterfly Diagram: Visualising the Circular Economy³

4.2.2. A circular economy is important as it creates new opportunities for growth, including:

- increasing activity around waste reduction and resource productivity;
- delivering a more competitive and stable UK economy;
- positioning the UK to better address emerging resource security/scarcity issues; and

- helping reduce the environmental effects of our production consumption in both the UK and abroad⁴.

4.3. WASTE AS A RESOURCE

- 4.3.1. Underpinning the drive for a circular economy is the knowledge that the volume of waste produced by human activity continues to grow, and that the construction sector produces 62% of all UK generated waste⁵. Part of the solution is to create a shift in mindset: from managing waste, to one of increasing resource productivity.

4.4. WASTE HIERARCHY

- 4.4.1. The Waste Framework Directive⁹ established the Waste Hierarchy (**Figure 4-2**) against which action to reduce the production and disposal of waste shall be taken through this document.



Figure 4-2: Waste Hierarchy

- 4.4.2. The main principles of the Waste Hierarchy⁶ are:
- prevention: using less material (including less hazardous materials) in design and manufacture, keeping products in use for longer;
 - preparing for reuse: checking, cleaning, repairing, refurbishing, whole items or spare parts;
 - recycling: turning waste into a new substance or product, this includes composting if it meets quality protocols;
 - (other types of) recovery: anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat, and power), recovering materials from waste, some backfilling; and
 - disposal: landfill and incineration without energy recovery.

4.5. PROXIMITY PRINCIPLE

- 4.5.1. The Proximity Principle highlights the need to manage, treat and/or dispose of wastes in reasonable proximity to their point of generation. The principle works to minimise the environmental effects and cost of waste transport. The Proximity Principle is set out in Article 16 of the Waste Framework Directive⁷. Local planning authorities are required, under Regulation 18 of the 2011 Waste (England and Wales) Regulations⁸ (transposition of the Directive), to have regard to these requirements when exercising their planning functions relating to waste management.
- 4.5.2. There is no expectation that each local planning authority in the UK should deal solely with its own waste to meet the requirements of the Proximity Principle. Nor do the Regulations require using the absolute closest facility to the exclusion of all other considerations. For example, there are clearly some wastes that are produced in small quantities for which it would be uneconomic to have a facility in each local authority. Accordingly, local authorities work together to assist with the development of a network of management facilities to enable waste to be managed appropriately.
- 4.5.3. Riverside 1 and/or Riverside 2 would be used for the treatment of residual wastes; subject to waste composition and acceptance criteria and operational availability. If capacity is not available, alternative recovery facilities will be considered.

5. BACKGROUND INFORMATION

5.1. STRATEGY, POLICY AND LEGISLATION

- 5.1.1. This section of the document lists the strategy, policy, and legislation pertaining to waste management in the UK. These documents have a direct impact on and/or influence over the management of waste resulting from construction of the Proposed Scheme and, therefore, on this document. Further detail is provided in **Chapter 16: Materials and Waste (Volume 1)** of the **ES (Document Reference 6.1)**.
- 5.1.2. The Contractor will adhere to the content and requirements of these documents. Evidence to demonstrate compliance will be made available upon request, in accordance with agreed auditing processes.

5.2. LEGISLATION

- 5.2.1. The legislative framework applicable to waste management, which sets out the conditions to be met for the storage, collection, treatment and disposal of waste in England, is listed below:
- The EU Waste Framework Directive 2008/98/EC⁹;
 - Environment Act 2021¹⁰;
 - The Controlled Waste (England and Wales) Regulations 2012 (as amended)¹¹;
 - The Waste (England and Wales) Regulations 2011 (as amended)¹²;
 - The Clean Neighbourhoods and Environment Act 2005¹³;
 - The Hazardous Waste (England and Wales) Regulations 2005 (as amended)¹⁴;
 - The Waste Minimisation Act 1998¹⁵;
 - The Environmental Protection Act 1990¹⁶;
 - The Control of Pollution (Amendment) Act 1989¹⁷;
 - The Environmental Permitting (England and Wales) Regulations 2016 (as amended)¹⁸;
 - The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020¹⁹; and
 - The Waste Electrical and Electronic Equipment Regulations 2013 (as amended)²⁰.

5.3. NATIONAL AND LOCAL WASTE STRATEGIES AND POLICY

- 5.3.1. The following policy documents set out the vision, goals, and ambition for waste in England. The original documents can be referred to for further detail and information. Both national and local waste strategy and policy applicable to the Proposed Scheme are listed below:
- Overarching National Policy Statement (NPS) for Energy EN-1 2024²¹;
 - National Planning Policy Framework (NPPF) 2023²²;

- Environmental Improvement Plan 2023²³;
- Waste Management Plan for England 2021²⁴;
- Our Waste, Our Resources: A Strategy for England 2018²⁵;
- National Planning Policy for Waste 2014²⁶;
- The London Plan 2021²⁷;
- London Environment Strategy 2018²⁸;
- Southeast London Joint Waste Planning Technical Paper 2022²⁹;
- Bexley Local Plan 2023³⁰;
- Bexley's Environmental Sustainability Strategy 2011³¹; and
- South East Inshore Marine Plan 2021³².

5.4. WASTE CONTEXT FOR UK AND SOUTH EAST ENGLAND

- 5.4.1. Details of the current waste management baseline information for the region is provided for context in **Chapter 16: Materials and Waste (Volume 1)** of the **ES (Document Reference 6.1)**.

6. DESIGNING OUT WASTE MEASURES ADOPTED

6.1. PRINCIPLES OF DESIGNING OUT WASTE

- 6.1.1. This section of the document describes principles and actions already taken or to be considered during design development to respond to the principles of designing out waste. Examples that demonstrate where these principles have been adopted (as expanded upon in **Table 8-1**) have been included in the descriptions of each principle, where applicable.

DESIGN FOR REUSE AND RECOVERY

- 6.1.2. Reuse of materials (including the use of recycled content) incorporates the use of reclaimed products, demounted or deconstructed arisings from the Site (i.e. existing buildings), or crushed demolition materials. Reuse is preferable to recycling, however, additional processes which may have their own environmental burdens would be taken into account during the detailed design, e.g. treatment processes.

DESIGN FOR OFFSITE CONSTRUCTION

- 6.1.3. Prefabricated assets generate less onsite waste through reduced off-cuts and storage damage; they also minimise onsite waste arisings and associated vehicle movements. Enabling the purchase of materials in shape, dimension, and form that minimises the creation of off-cuts also reduces waste. Examples likely to be adopted on the Proposed Scheme include utilising this where practicable for plant and equipment and pre-cast drainage elements.

DESIGN FOR MATERIALS OPTIMISATION

- 6.1.4. This design approach focuses on the use of less material in a design (lean engineering), and/or design processes that will generate less waste during the construction process, whilst preserving the overall development vision/concept. For example, excavated arisings will be reused as fill to level the Site (where appropriate) and/or used in soft landscaping areas, to reduce the requirement to import primary resources. If not suitable, it will be taken offsite for reuse, unless circumstances dictate it must be disposed to landfill.

DESIGN FOR WASTE EFFICIENT PROCUREMENT

- 6.1.5. The design considers how work sequences affect the generation of site waste. Further work is undertaken with specialist subcontractors to understand and minimise these opportunities, and often related contractual conditions are set. Once work sequences that cause site waste are identified and understood, they can often be 'designed out' (and precluded from procurement practices).
- 6.1.6. The Contractor will be responsible for seeking to ensure that the design intent for reducing waste will be upheld and refined as the Proposed Scheme advances.

DESIGN FOR DECONSTRUCTION AND FLEXIBILITY

- 6.1.7. This requires the consideration, during design, of how materials can be recovered effectively during the life of the Proposed Scheme when maintenance is undertaken and at end of life. When decommissioning assets, it is beneficial to separate materials, to reduce waste to landfill according to regulations. This principle applies in so far as where site assets can be deconstructed and hence diverted from landfill through reuse or recycling, they should.
- 6.1.8. The Contractor will be responsible for the consideration of future technologies in the design that encourage streamlined maintenance and end of life procedures and management of waste, with the aim of diverting all waste from landfill.

7. SITE WASTE MANAGEMENT PLAN FOR CONSTRUCTION

7.1. GENERAL REQUIREMENTS

- 7.1.1. The Contractor will determine the best techniques for managing waste and to ensure a high level of recovery of material resources wherever practicable. The Contractor will review monthly waste collection data and identify opportunities to better segregate wastes and to move wastes up the hierarchy (**Section 6.1**).
- 7.1.2. Where construction wastes generated from the Proposed Scheme can be valuably reused onsite or on other developments/processes with necessary permits, the benefits of doing so can be quantified in tonnages, recorded, and shared with the Applicant and Contractor to confirm, and evidence, end destinations of all wastes. Common examples include – but are not limited to - the reuse of foundations, or excavation wastes.
- 7.1.3. For all waste management options, consideration will be given to whether waste exemptions or permits are required to enable effective management through storage and treatment.
- 7.1.4. Management in the highest tiers of the Waste Hierarchy will be supported by the identification of appropriately permitted recovery and waste management facilities, ideally in appropriate proximity to the Site, that will allow wastes to be reused, recycled, or recovered where practicable. Riverside 1 and/or Riverside 2 would be used for the treatment of residual wastes; subject to waste composition and acceptance criteria and operational availability. If capacity is not available, alternative recovery facilities will be considered.
- 7.1.5. Where reuse, recycling, or recovery are not suitable options, wastes will be landfilled. **Chapter 16: Materials and Waste (Volume 1)** of the **ES (Document Reference 6.1)** indicates that at the end of 2022, landfill sites in London and the South East of England were recorded as having 55 Mm³ of remaining capacity.
- 7.1.6. The following sections describe actions that can be taken to help minimise the production and disposal of waste to landfill.

7.2. WASTE CHARACTERISATION

- 7.2.1. Waste is classified as inert, non-hazardous or hazardous. To determine the suitability of a landfill or recovery facility to receive different waste classifications, Waste Acceptance Criteria (WAC) testing will be required. Responsibility for the basic classification of waste rests with the producer i.e. the Contractor and facility Operator. European Waste Code (EWC) are then used to describe the composition and origin of the wastes.
- 7.2.2. The Landfill Directive (1999/31/EC as amended)³³ also requires pre-treatment of any waste (including hazardous waste) prior to disposal offsite. Hazardous waste cannot

be reused on the Proposed Scheme and the Contractor will consider (where appropriate) additional treatment prior to disposal.

- 7.2.3. Pre-treatment relies on physical, thermal, chemical, or biological processes, which includes sorting. The chosen process must change the characteristics of the waste, and it must either: reduce the wastes volume; or reduce its hazardous nature; or facilitate its handling; or enhance its recovery.

7.3. DUTY OF CARE

- 7.3.1. As part of the Environmental Protection Act (1990) waste produced onsite will be subject to Duty of Care Requirements. The Contractor will receive Waste Transfer Notes (WTN, or a 'consignment note', if the waste is hazardous) from any waste management company contracted to move waste from site. The WTN will show the amount and type of waste removed from site, with EWC codes describing the wastes taken from Site, and the chain of transactions as the wastes are transferred from one destination to another. In each case, the Contractor will document the name of each company removing waste, and the details of the site (including transfer stations) where the waste is being transferred to for each waste type.
- 7.3.2. Liaison with the Environment Agency will also, where required, be undertaken by the Contractor to ensure that all onsite materials and waste management is conducted in accordance with legal and good practice requirements.
- 7.3.3. Any waste contractor that removes waste from the Proposed Scheme must be registered with the Environment Agency. The production, reuse, and recycling of waste on the Proposed Scheme is to be monitored and reported on a monthly basis to be able to identify trends in waste creation and to identify opportunities for reducing waste or increasing the rate of recycling, where practicable.
- 7.3.4. **Table 7-1** (or similar) shall be used to log the relevant details of any waste contractors to be commissioned, as obtained through early engagement:

Table 7-1: Waste Management Log (Example)

Waste Contractor Name	Waste Contractor Address	Waste Carrier Licence Number; Date of Issue and Expiry	Waste Management Licence Number; Date of Use and Expiry	Waste Transfer Note; Storage Location

- 7.3.5. To comply with Duty of Care requirements, site-wide waste minimisation measures will be implemented by the Contractor to encourage the reduction of waste, reuse of waste and recycling of waste. Measures could include:
- reduction of materials wastage through good storage and handling;
 - use of modern methods of construction and operation wherever possible, allowing significant reductions in waste and facilitating greater recycling;
 - providing waste minimisation induction courses for all Site personnel;
 - regular toolbox talks throughout the construction phase to raise awareness of the importance of minimising, segregating, and recycling wastes during the construction processes;
 - ensuring adequate storage facilities are provided for both raw materials and waste streams generated; and
 - ensuring adequate security measures are in place.
- 7.3.6. The following commitments will be delivered through implementation of the full SWMP during construction of the Proposed Scheme:
- the document will be approved and signed off by the Applicant, in accordance with internal procedures;
 - waste management targets will be set and agreed; continual progress against these will be measured, monitored, and reported by the Contractor at a frequency agreed with the Applicant;
 - regular full SWMP planning meetings will be arranged by the Contractor;
 - training and briefings appropriate to the scale and nature of the works will be provided by the Contractor for its own staff and its contracted value chain;
 - The Contractor shall agree to data reporting procedures (including timings) with all waste contractors employed to remove waste from Site; and
 - an area for waste segregation and collection will be created on the works site compound with clear signposting as to the location for each waste product. This area will be within the temporary construction compounds described in the **Outline CoCP (Document Reference 7.4)** and shown in the **Works Plans (Document Reference 2.3)**.

7.4. WASTE SEGREGATION

- 7.4.1. As outlined in the **Outline CoCP (Document Reference 7.4)**, the full SWMP will require that specific area(s) at Site shall be laid out and clearly demarcated to facilitate the separation of wastes and materials, ready for potential diversion from landfill in accordance with the Waste Hierarchy. The Contractor will validate space requirements to accommodate skips and storage of arisings and waste.
- 7.4.2. Recycling and waste bins are to be kept clean and clearly marked in order to avoid contamination of materials. Skips for segregation of waste will include, but not necessarily be limited to, the following. Where it is possible to segregate further, by waste type (for example, segregating inert plastics, concrete and brick), this should be undertaken:
- mixed inert;
 - mixed non-hazardous;
 - hazardous;
 - metals;
 - wood;
 - food;
 - paper, cardboard and glass; and
 - waste electronic and electrical equipment (WEEE).
- 7.4.3. Suitably qualified and/or experienced personnel, well defined responsibilities, and clear signage shall be used by the Principal Contractor to make sure waste management through skips is effective and maximised. This will reduce levels of contamination in the skips and increase the likelihood that a load will be accepted for offsite for reprocessing. In cases where a load is rejected, the likely destination would be landfill, which will increase the costs of the project and have adverse environmental effects.
- 7.4.4. Skips shall be monitored to ensure that cross-contamination of segregated waste does not occur.
- 7.4.5. Shelter may be needed to prevent materials (cardboard and paper, for example) from deteriorating while being sorted or awaiting collection.
- 7.4.6. Dust suppression measures will be put in place, and drainage shall be carefully addressed to eliminate the potential for pollution of nearby drainage ditches, water courses and groundwater.

7.5. HAZARDOUS WASTE

- 7.5.1. Hazardous materials include any substance that can pose an unreasonable risk to health, safety or environment. The cost of hazardous waste treatment and disposal is significantly higher than treatment and disposal of non-hazardous or inert waste. Any

such hazardous waste and associated contaminated materials, will be managed in accordance with legislation and best practice guidelines prior to disposal.

- 7.5.2. Materials used in construction processes such as oils, chemicals and cleaning materials have the potential to cause serious pollution, the effect of which would be exacerbated if a pollutant is discharged into a watercourse.
- 7.5.3. The Contractor shall develop processes that specifically consider oils, fuels, and chemical and other hazardous materials and construction waste. The Contractor shall be responsible for identifying suitable areas for the storage of oils, fuels, chemical and other hazardous materials and construction waste.
- 7.5.4. Where required, the Contractor will appoint a Control of Substances Hazardous to Health (COSHH) Co-ordinator who will be responsible for ensuring the control of all substances hazardous to health on Site, both covered by the COSHH Regulations³⁴, and the Control of Asbestos Regulations³⁵ for Asbestos Containing Materials (ACM).
- 7.5.5. All workers on site should be informed of the arrangements for COSHH during induction training. This includes advice on the hazards and precautions to be taken regarding substances of general use on site.
- 7.5.6. The storage, handling, and disposal of hazardous materials and/or waste should conform to standards, regulations, customer/client requirements and the full SWMP.
- 7.5.7. The Contractor will also detail plans and procedures in the full SWMP relating to:
 - hazardous waste storage; and
 - disposal requirements.

7.6. POLLUTION CONTROL IN RESPECT OF NEARBY WATERCOURSES REUSE OF ARISING

- 7.6.1. Uncontaminated arisings (excluding dredged arisings) will, where practicable, be reused onsite for future development subject to regulations and permitting requirements. Surplus deconstructed, demounted and demolition materials will be managed in compliance with:
 - the criteria and thresholds for exemption;
 - a permit issued in accordance with the Environmental Permitting Regulations 2016³⁶;
 - a Materials Management Plan, adhering to the CL:AIRE Definition of Waste Code of Practice; and/or
 - engagement with the waste authority and/or the Environment Agency, as necessary.

8. DESIGN WASTE FORECASTS

8.1. INITIAL DESIGN WASTE FORECAST

- 8.1.1. A forecast of waste streams from the Proposed Scheme (and possible management options) has been undertaken in **Table 8-1**. The data outlines the waste types for each activity and its specific EWC, with the forecast amount and waste management technique to be applied and the expected recovery rate.
- 8.1.2. The forecast uses data provided through the preliminary design stage and anticipated knowledge of waste generation and management. The forecast shall be updated and refined as the Proposed Scheme progresses during construction, particularly where material changes to the current design intent are found to be required, or current forecasts can be refined and will form part of the full SWMP.
- 8.1.3. The prefabricated elements required for the Proposed Scheme (listed below) have been assigned a 0% wastage rate; these elements will be manufactured offsite (ready for onsite assembly), and it is therefore expected that they hold less potential for onsite waste generation. Prefabricated elements on the Proposed Scheme are assumed as follows:
- pre-cast items for drainage (e.g. pipes, manholes, culverts, gullies, water treatment equipment);
 - specialist plant and equipment, including Flue Gas Supply Ductwork and Absorber Column(s) and Stack(s); and
 - steel beams, including for the Proposed Jetty.

Table 8-1: Waste Forecasts

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
Construction of Carbon Capture Facility and Proposed Jetty					
Site preparation, clearance and groundworks	Waste from 254,960 tonnes of engineered fill and topsoil	17 05 04	12,750 (figure based on 5% wastage rate)	Early design estimates have identified that the surplus engineered fill and topsoil will be set aside for reuse on the scheme, subject to condition, or offsite (reuse).	100

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
Site preparation, clearance and groundworks	Site-won arisings from earthworks cut	17 05 04	43,770	It is assumed that 100% of excavated arisings will be reused on the Proposed Scheme, where suitable, to level the Site and use in soft landscaping areas.	100
Capital Dredging	56,100 tonnes of dredged material for new jetty	17 05 04	56,100	<p>The dredged arisings associated with the Proposed Scheme (during capital dredging) will be managed in accordance with relevant legislation and will be disposed of offsite (via vessel and only if dredged arisings are deemed suitable for this disposal method and conform with the permits for disposal sites). The removal of the dredged arisings will be undertaken by an appropriately licenced waste carrier.</p> <p>An allowance of 80% (44,880 tonnes) has been allocated, as there may be contamination present within the top</p>	80

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
				layer of sediment. A contingency allowance of 20% (11,220 tonnes) has been made for disposal to landfill	
Construction – Civils works	Waste from 5,290 tonnes of asphalt	17 03 01*	130 (figure based on 2.5% wastage rate)	Early design estimates have identified surplus bituminous mixtures used for footpaths and roads for disposal to landfill (disposal). However, there is an opportunity to manage these arisings in accordance with the higher tiers of the Waste Hierarchy – information is provided in Error! Reference source not found..	0
Construction – Civils works	Waste from 61,870 tonnes of aggregate	17 05 04	3,100 (figure based on 5% wastage rate)	Surplus granular sub-base material for pavement, footways and landscaping areas; surface chippings and gravel for pipe surround and chamber bedding will be reused off site.	100
Construction – Civils works	Waste from 73,530	17 01 01	1,460 (figure based on	At this stage it is not known how waste derived from poured	0

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
	tonnes of poured concrete		2% wastage rate)	concrete used in structures, foundations etc. will be managed. Therefore, a worst case scenario where this will be disposed to landfill has been applied.	
Construction – Civils works	Waste from 8 tonnes of geotextile sheeting and lining membrane	17 02 03	<1 tonnes (figure based on 2% wastage rate)	Off-cuts of surplus geotextile sheeting for footpaths, roads and hardstanding areas and lining membrane used for pond and drainage will be taken to local recycling centre.	100
Construction – Civils works	Waste from 65 tonnes of timber	17 02 01	5 tonnes (figure based on 5% wastage rate)	Any surplus timber used for capping beams in the construction of the berth pocket will be recycled for offsite use.	100
Construction – Civils works	Waste from 14,817 tonnes of steel	17 04 05	700 tonnes (figure based on 5% wastage rate)	It is assumed that all surplus steel used for reinforcement (rebar) and sheet piling will be taken offsite for recycling.	100
Demolition of Munster Joinery Premises					
Demolition	Steel	17 04 05	215	The steel framework will be taken offsite for recycling.	100

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
Demolition	Mixed metal items	17 04 07	55	The profiled metal roof and wall sheets, ram protection bollards and galvanised wheel guides will be recovered and taken offsite for recycling.	100
Demolition	Glass (windows)	17 02 02	1	Glass will be taken offsite for recycling.	100
Demolition	Concrete yard slab	17 01 01	1,690	The concrete slab will be lifted and crushed onsite for reuse. Any metal rebar will be removed and taken offsite for recycling.	100
Demolition	Palisade fencing	17 04 05	5	The fencing will be retained for reuse on site during construction and then it will be taken offsite for recycling.	100
Demolition	Drainage pipework	17 02 03	10	Excavated pipework will be taken offsite for recycling.	100
Demolition	Electronic sliding gate	17 04 05	1 no.	The gate will be retained on site during construction.	100
Demolition of Belvedere Power Station Jetty (disused)					
Demolition	Concrete decks and piles	17 01 01	6150	Recovered and taken offsite for recycling.	100
Demolition	Steel reinforcement	17 04 05	300	Recovered and taken offsite for recycling	100

Site Activity	Waste Type	EWC Code	Waste Forecast Amount (Tonnes)	Management Technique to Comply with the Waste Hierarchy	Forecast Recovery Rate by Technique (%)
				(depending on condition).	
Demolition	Bricks	17 01 07	350	Recovered and taken offsite for recycling.	100
Demolition	Timber fenders and cladding	17 02 01	510	Recovered and taken offsite for recycling.	100
Demolition	Mixed metals (steel and aluminium)	17 04 07	Quantity unknown at this stage	This comprises the access trestle and suspended walkway; quay furniture, e.g., fencing, stairs, poles, ladders, piping, bollards, equipment. This will be recovered and taken offsite for recycling.	100

Note:

An asterisk (*) next to a code denotes that it is hazardous waste.

8.2. OPPORTUNITIES TO IMPROVE RESOURCE EFFICIENCY

- 8.2.1. This document has identified opportunities to improve resource efficiency during the construction of the Proposed Scheme.
- 8.2.2. Further work will be undertaken to explore all opportunities listed within **Table 8-2**, and data acquired to validate progress, as the Proposed Scheme progresses into construction.

Table 8-2: Opportunities for Improved Resource Efficiency

Arising Type	Current Forecast Recovery Rate (%)	Opportunity Identified for Reuse / Recovery	Optimal Recovery Rate (%)
Asphalt	0	Surplus bituminous mixtures could be taken offsite for recovery (recycling).	100
Poured concrete used for construction of Proposed Scheme	0	The surplus pouring concrete could be taken offsite for recovery (recycling).	100

8.3. RECORDING WASTE PERFORMANCE

- 8.3.1. **Table 8-3** will be used to record waste minimisation and circular economy achievements on the Proposed Scheme. Data collated in **Table 8-3** may be transposed to the full SWMP by the Contractor, so that it can be compared with actuals.

Table 8-3: Waste Performance Data (Example)

Type of Waste	Waste Minimisation or Circular Economy Action Identified or Applied (Qualification)	Waste Avoided (m ³ or Tonnes)	Total Waste Estimated (m ³ or Tonnes)	Management Technique Adopted ^a

Note:

^a Management techniques: elimination, reuse on site, reuse off site, recycling on site, recycling off site, recovery with energy generation, recovery without energy generation, or disposal to landfill.

9. NEXT STEPS

- 9.1.1. Within three months of completion of the construction phase, the Contractor may undertake the following tasks as a course of best practice:
- confirm that the full SWMP has been finalised to the satisfaction of the responsible parties;
 - justify any deviation from the agreed Plan;
 - finalise the comparison of design forecasts for each waste type, against the actual quantities generated and recovered;
 - establish the success of any approaches taken to achieve a circular thinking or practice;
 - establish the volume of waste diverted from landfill, the commercial benefits from the approach, and any carbon and other savings achieved; and
 - identify lessons learned and describing how key messages will be communicated to the benefit of future developments to drive continual improvement.
- 9.1.2. The Contractor will keep the completed full SWMP for at least two years after the Proposed Scheme is complete at the Site.

10. REFERENCES

- ¹ CL:AIRE (2011). 'CL:AIRE Definition of Waste Code of Practice'. Available at: <https://www.claire.co.uk/projects-and-initiatives/dow-cop>
- ² HM Government. (2008). 'The Site Waste Management Plans Regulations 2008'. Available at: <http://www.legislation.gov.uk/uksi/2008/314/contents/made>
- ³ Ellen Macarthur Foundation. (2024). 'The Butterfly Diagram'. Available at: [The Butterfly Diagram: Visualising the Circular Economy \(ellenmacarthurfoundation.org\)](https://ellenmacarthurfoundation.org/The-Butterfly-Diagram-Visualising-the-Circular-Economy)
- ⁴ WRAP and the Circular Economy. (2019). 'About us'. Available at: <http://www.wrap.org.uk/about-us/about/wrap-and-circular-economy>
- ⁵ DEFRA. (2023). 'UK Statistics on Waste'. Available at: <https://www.gov.uk/government/statistics/uk-waste-data/uk-statistics-on-waste>
- ⁶ DEFRA. (2011). 'Guidance on applying the Waste Hierarchy'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69403/pb13530-waste-hierarchy-guidance.pdf
- ⁷ Waste Framework Directive (2008/98/EC). Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0098&from=EN>
- ⁸ HM Government. (2011). 'The Waste (England and Wales) Regulations 2011'. Available at: <http://www.legislation.gov.uk/uksi/2011/988/made/data.pdf>
- ⁹ EU. (2008). 'Directive 2008/98/EC of the European parliament and of the council of 19 November 2008 on waste and repealing certain directives'. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0098>
- ¹⁰ HM Government. (2021). 'Environment Act 2021'. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>
- ¹¹ HM Government. (2012). 'The Controlled Waste (England and Wales) Regulations'. Available at: <https://www.legislation.gov.uk/uksi/2012/811/contents/made>
- ¹² HM Government. (2011). 'The Waste (England and Wales) Regulations 2011'. Available at: <https://www.legislation.gov.uk/uksi/2012/1889/made>
- ¹³ HM Government. (2005). 'The Clean Neighbourhoods and Environment Act 2005'. Available at: <https://www.legislation.gov.uk/ukpga/2005/16/contents>
- ¹⁴ HM Government. (2005). 'Hazardous Waste (England and Wales) Regulations 2005'. Available at: <https://www.legislation.gov.uk/uksi/2005/894/contents/made>
- ¹⁵ HM Government. (1998). 'Waste Minimisation Act 1998'. Available at: <https://www.legislation.gov.uk/ukpga/1998/44/contents>
- ¹⁶ HM Government. (1990). 'The Environmental Protection Act 1990'. Available at: <https://www.legislation.gov.uk/ukpga/1990/43/contents>
- ¹⁷ HM Government. (1989). 'The Control of Pollution (Amendment) Act 1989'. Available at: <https://www.legislation.gov.uk/ukpga/1989/14/contents>

- 18 HM Government. (2016). 'The Environmental Permitting (England and Wales) Regulations 2016'. Available at:
<https://www.legislation.gov.uk/uksi/2016/1154/contents/made>
- 19 HM Government. (2020). 'The Waste and Environmental Permitting etc. (Legislative Functions and Amendments etc.) (EU Exit) Regulations'. Available at:
<https://www.legislation.gov.uk/uksi/2020/1540/made>
- 20 HM Government (2013) 'The Waste Electrical and Electronic Equipment Regulations 2013'. Available at:
<https://www.legislation.gov.uk/uksi/2013/3113/contents/made>
- 21 Department for Energy Security and Net Zero. (2024). 'Overarching National Policy Statement for Energy (EN-1)'. Available at:
<https://www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure>
- 22 Ministry of Housing, Communities and Local Government. (2023). 'National Planning Policy Framework'. Available at:
<https://www.gov.uk/government/publications/national-planning-policy-framework--2>
- 23 Department for Environment, Food and Rural Affairs. (2023). 'Environmental Improvement Plan 2023'. Available at:
<https://www.gov.uk/government/publications/environmental-improvement-plan>
- 24 DEFRA. (2021). 'Waste Management Plan for England'. Available at:
<https://www.gov.uk/government/publications/waste-management-plan-for-england-2021>
- 25 HM Government. (2018). 'Our Waste, Our Resources: A Strategy for England'. Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf
- 26 DCLG. (2014). National Planning Policy for Waste. Available at: [National planning policy for waste - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/national-planning-policy-for-waste)
- 27 Greater London Authority. (2021). 'The London Plan'. Available at:
https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf
- 28 Greater London Authority. (2018). 'London Environment Strategy'. Available at:
https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf
- 29 London Borough of Bexley. (2022). 'Southeast London Joint Waste Planning Technical Paper'. Available at: [Joint Waste Planning Technical Paper \(bexley.gov.uk\)](https://www.bexley.gov.uk/media/10000000/2022-05-10-southeast-london-joint-waste-planning-technical-paper.pdf)
- 30 London Borough of Bexley. (2023). 'The Bexley Local Plan 2023'. Available at:
[Bexley Local Plan](https://www.bexley.gov.uk/media/10000000/2023-05-10-the-bexley-local-plan-2023.pdf)
- 31 London Borough of Bexley. (2011). 'Bexley's Environmental Sustainability Strategy'. Available at: [Bexley's Environmental Sustainability Strategy \(adopted version\)](https://www.bexley.gov.uk/media/10000000/2011-05-10-bexleys-environmental-sustainability-strategy.pdf)

- ³² Marine Management Organisation. (2021). 'South East Inshore Marine Plan 2021'. Available at:
[\[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004493/FINAL_South_East_Marine_Plan_1_.pdf\]](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004493/FINAL_South_East_Marine_Plan_1_.pdf)
- ³³ European Union. (1993). 'EU Directive 1993/31/EC - The Landfill Directive'. Available at: <https://www.legislation.gov.uk/eudr/1999/31/contents>
- ³⁴ HM Government. (2002). 'The Control of Substances Hazardous to Health Regulations 2002'. Available at:
<https://www.legislation.gov.uk/uksi/2002/2677/regulation/7/made>
- ³⁵ HM Government. (2012). 'The Control of Asbestos Regulations 2012'. Available at:
<https://www.legislation.gov.uk/uksi/2012/632/contents/made>
- ³⁶ HM Government. (2016). 'The Environmental Permitting (England and Wales) Regulations 2016'. Available at:
<https://www.legislation.gov.uk/uksi/2016/1154/contents/made>



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