

Project Site Waste Management Plan

DCO Requirement 22 (2) (g)

(Applicable to Work Numbers 5B to 69)

Prepared by:	Checked by:	Approved by:
<i>K Griffin, SLR</i>		

Revision Summary				
Rev	Date	Prepared by	Checked by	Approved by
1	06/08/21	Kay Griffin	Phil Williamson	Rew- Catherine Sibley
2	17/12/21	Kay Griffin	Phil Williamson	Rew- Gareth Mills
3	15/03/22	Kay Griffin	Phil Williamson	Rew- Gareth Mills

Description of Revisions			
Rev	Page	Section	Description
1	ALL	ALL	New Document
2	11	7.4.1	Document updated with respect to key waste stream information and also minor project updates. Document also amended to be project-wide.
3	4 5 8	1.1 1.2 4	Document amended in accordance with stakeholder comments (ESC, 10/02/22)

FOR DISCHARGE

TABLE OF CONTENTS

1. INTRODUCTION AND SCOPE	4
1.1. Project Overview	4
1.2. Purpose and Scope	4
2. ABBREVIATIONS	5
3. BACKGROUND	5
3.1. Waste Elimination and Reduction	6
3.2. Re-use	6
3.3. Recycling	7
3.4. Recovery	7
3.5. Disposal	7
4. REGULATORY FRAMEWORK	7
5. ROLES AND RESPONSIBILITIES	8
5.1. Specific Responsibilities	8
6. TRAINING	10
6.1. On-site Training	10
7. WASTE MANAGEMENT PROCESS	10
7.1. SWMP Implementation	10
7.1.1. Preparation Stage	11
7.2. Detailed Design Stage and Pre-construction Stage	11
7.3. Construction and Excavation Stages	11
7.4. SWMP Distribution	11
7.4.1. Key Waste Streams	11
7.5. Waste Prevention, Reduction, Minimisation and Management Actions	12
7.6. Forecast of Waste Generation	13
7.7. Waste Carriers and Waste Management Facilities	14
8. MONITORING AND REPORTING	15
8.1. Data Collection	15
8.2. Monitoring and Reporting	15
9. REFERENCES	15

1. INTRODUCTION AND SCOPE

1.1. Project Overview

1. East Anglia Three Limited (EATL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Business, Energy and Industrial Strategy (DBEIS) on 7 August 2017 for the East Anglia THREE Offshore Windfarm (EA THREE). The DCO granted consent for the development of a 1200MW offshore windfarm and associated infrastructure and is live until 28 August 2022.
2. The DCO has now been subject to three non-material variations:
 - In March 2019 EATL submitted a non-material change application to DBEIS to amend the consent to increase the maximum generating capacity from 1,200MW to 1,400MW and to limit the maximum number of gravity base foundations to 100. In June 2019 DBEIS authorised the proposed change application and issued an Amendments Order.
 - In July 2020 EATL submitted a second non-material change application to DBEIS to amend the parameters of its offshore substations (reducing the number of these to one) and wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). On 15 April 2021 DBEIS authorised this proposed change application and issued an Amendments Order.
 - In August 2021 EATL submitted a third non-material change application to DBEIS to amend the consent to remove the maximum generating capacity of 1,400MW and to amend the parameters of its wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). The application is currently in the consultation phase.
3. The onshore construction works associated with EA THREE will have a capacity of 1400MW and transmission connection of 1320MW. The construction works will be spread across a 37km corridor between the Suffolk coast at Bawdsey and the converter station at Bramford, passing the northern side of Ipswich. As a result of the strategic approach taken, the cables will be pulled through pre-installed ducts laid during the onshore works for East Anglia ONE Offshore Windfarm (EA ONE), thereby substantially reducing the impacts of connecting to the National Grid (NG) at the same location. The infrastructure to be installed for EA THREE, therefore, comprises:
 - The landfall site with one associated transition bay location with two transition bays containing the connection between the offshore and onshore cables;
 - Two onshore electrical cables (single core);
 - Up to 62 jointing bay locations each with up to two jointing bays;
 - One onshore converter station, adjacent to the EA ONE Substation;
 - Three cables to link the converter station to the National Grid Bramford Substation;
 - Up to three onshore fibre optic cables; and
 - Landscaping and tree planting around the onshore converter station location.
4. Since the granting of the DCO, the decision has been made that the electrical connection for EA THREE will comprise a high voltage direct current (HVDC) cable rather than a high voltage alternating current cable and, therefore, the type of substation that will be required is a HVDC converter station. The substation will, therefore, be referred to here as a 'converter station' and this amended terminology has been agreed with the relevant authorities on 15 October 2020. It has also been determined that only one converter station will be constructed rather than two and that the converter station will be installed in a single construction phase.

1.2. Purpose and Scope

5. This Employer's Project Site Waste Management Plan (SWMP) sets out the methods that will be used in reducing, controlling and managing waste, arising from all stages of the EA THREE construction works. This document forms an appendix to the Code of Construction Practice (CoCP), and fulfils DCO Requirement 22 (2) (g) which states:

22.—(2) The code of construction practice must include (...)
(g) a site waste management plan
6. The scope of this document relates to the management of waste associated with the EA THREE onshore construction works (i.e. for the Converter Station and all elements of the onshore cable installation). The Principal Contractors will develop their own detailed SWMPs in accordance with this Employer's SWMP.
7. The purpose of this document is to encourage the review of waste reduction and recovery practice levels, highlighting areas where Best Practice in waste minimisation and management can be achieved through the implementation of the Waste Hierarchy. The

SWMP also facilitates the identification and implementation of waste minimisation measures at the design stage and reuse and recycling opportunities during on site operations ultimately reducing the quantities of waste sent to landfill.

8. This SWMP provides options for planning and processing waste during the construction and excavation activities. It also demonstrates that EATL is committed to maximising opportunities for reuse and recycling that are cost neutral (or cost negative) and in diverting waste from landfill. Where practicable, EATL and its Principal Contractors will explore the re-use of waste materials in conjunction with other major developers in the East Anglia area.
9. A Waste Management Database will be used by all staff for inputting waste data and maintaining records relevant to their activities, allowing EATL to report and analyse waste management options (e.g., reuse on site, recycle off-site, or dispose off-site) for each waste produced, providing the necessary information to identify trends and areas for improvement.
10. The information contained herein shall be adhered to by the appointed Principal Contractors and implementation and compliance will be monitored by the Construction Management Team. These measures will only be revised with the agreement of Mid Suffolk District Council (MSDC) and East Suffolk Council (ESC).
11. The Principal Contractors for the EA THREE onshore connection works comprise Siemens Energy with respect to the Converter Station and NKT with respect to the cable.

2. ABBREVIATIONS

CL:AIRE	Contaminated Land: Applications in Real Environments
DBEIS	Department for Business, Energy and Industrial Strategy
DCO	Development Consent Order
EA ONE	East Anglia ONE Offshore Windfarm
EA THREE	East Anglia THREE Offshore Windfarm
EATL	East Anglia Three Limited
ESC	East Suffolk Council
HVDC	High Voltage Direct Current
HWCN	Hazardous Waste Consignment Notes
MMP	Material Management Plan
MSDC	Mid Suffolk District Council
NG	National Grid
SCC	Suffolk County Council
SWMP	Site Waste Management Plan
WRAP	Waste and Resource Action Plan
WTN	Waste Transfer Note

3. BACKGROUND

12. Waste materials can arise from materials imported to the works or from those generated on site. Imported materials are those which are brought onto the site for temporary use (in enabling and construction activities) and also those brought in for inclusion into the permanent works. Generated materials are those which exist on the site such as subsoil arising from excavation works. However, there are other considerations to waste management, such as waste reduction; segregation of waste; reuse, recycling and recovery of waste; the financial impacts of waste management and the processes of recording, monitoring, training and reviewing the SWMP.

13. This SWMP outlines the procedures that will be implemented during the construction activities associated with the EA THREE onshore construction works and demonstrates the benefit to the environment. It also details how the effects of these procedures have been measured and how they are sustainable. In order to optimise the sustainable management of waste, the Principal Contractors will follow the Waste Hierarchy. The Waste Hierarchy sets out the order in which options for waste management should be considered based on environmental impact.
14. The Waste Hierarchy is set out below, with each level of the Hierarchy described then subsequently discussed in more detail:

Table 3-1 Waste Hierarchy

Waste Hierarchy	
Stage	Includes
Eliminate Waste	Avoid producing waste in the first place.
Reduce Waste	Minimise the amount of waste produced.
Re-use waste	Use items as many times as possible.
Recycle	Recycle materials to create new products where they cannot be reused.
Recovery	Recover energy or materials from wastes that cannot be recycled.
Disposal	Dispose of what cannot be recycled or recovered in a responsible way.

3.1. Waste Elimination and Reduction

15. Waste minimisation is at the pinnacle of the waste hierarchy and is essentially concerned with avoiding the production of waste in the first place. Whilst complete avoidance of waste is impossible, adopting certain waste minimisation practices will ensure that the overall quantity of materials not beneficially used on site is kept to a minimum. The following factors will be adopted to help to minimise waste on site:
- Improved precautions in handling of materials on site can have a major impact on the reduction of waste on site. Wherever possible materials will be kept in locked and covered storage, until time of use, to avoid damage from vandalism, theft, vehicle movements, weather etc.
 - On time delivery of materials when they are required.
 - Maintaining a record of materials delivered on-site and dispatched – recording the number of skips used so that the amount of material consumed, sent for landfill or recycling can be determined.
 - Avoidance of over-ordering materials according to the stage of construction need;
 - Responsibility for overseeing waste minimisation activities will be assigned to specific site personnel (see Section 5.1), who will monitor the progress and smooth running of waste minimisation activities.
 - Reducing the need for temporary work through reusing spoil for backfilling.

16. Significant reductions in waste quantities can be achieved through waste minimisation and re-use, which also has significant carbon benefits through avoidance of surplus raw materials used. The procurement of sustainable, recycled or recovered materials reprocessed locally can also further enhance carbon savings.

17. Waste that will not be eliminated or reduced falls into one of the following four waste management categories.

3.2. Re-use

18. Where avoidance of excess materials on site is not feasible, all available materials will be recorded and considered for possible re-use on site before recycling. Suitable materials (e.g., materials derived from excavation works) will be classified as materials to be reused on site. Materials such as timber and topsoil will be stored separately on site and will all be considered for re-use elsewhere. The purpose of storing re-use materials in separate skips is to reduce the potential for contamination and to encourage the re-use of materials by offering clean material streams from which to choose.

19. Options for re-use include:

- use of reclaimed materials (where appropriate).

20. All materials subject to any reuse will be managed via one or more of the following available mechanisms as appropriate:

- Environmental Permit;
- Environmental Permitting Regulations Exemption;
- Materials Management Plan; CL:AIRE
- Non-Directive Waste Exemption;
- Waste and Resource Action Plan (WRAP) Protocols, each depending on the applicable reuse scenario.

21. If waste materials are to be exported off site for reuse, they will be subject to inspection (and testing if appropriate) to ensure that they are suitable for the intended use and will again require to be managed within one of the above mechanisms. Materials that are reused again for the same purpose that they were originally intended for are not considered to comprise 'waste' under waste legislation and do not, therefore, need to be handled in accordance with waste legislation.

22. Alternative end destinations will also be sought for materials that can be recovered off site such as haul road stone and fence posts. Under a U1 exemption (under the Environmental Permitting (England and Wales) Regulations 2016), stone used for the haul road, once no longer required on site, is permitted to be used for the same/similar use elsewhere. EA ONE primarily recovered large volumes of stone for landowner's use such as track improvements/hard standing areas. Exemptions permitting the use of waste offsite will be sought where possible as another means of recycling, ensuring adherence to the relevant legislation requirements and conditions.

3.3. Recycling

23. Surplus materials which will not be reused in their present form but may be used on site in a different form, will then be classified as recycled on site (provided they have been processed on site). Materials which are not reused on site in any form will be classified as recycled off site, e.g., non-returnable pallets reprocessed off site to make chipboard.

24. The management of all waste and recycling off site will be undertaken by a suitably qualified waste management contractor who specialises in reprocessing and recovery of construction waste. Where possible the Principal Contractors will manage the reprocessing and recovery of construction waste produced on site using their own equipment or that of their on-site sub-contractors.

25. Skips shall be allocated to specific waste streams on-site to aid recycling. Skips for individual material streams would be easily accessible and placed near to the point of waste generation (but away from traffic routes). Skips would be designated by type of waste or recyclable material and will be clearly labelled and secured.

26. An alternative management solution is to co-collect the waste on-site and separate the recyclables at a waste management contractors recycling site, subject to the type of wastes the waste contractor can take.

3.4. Recovery

27. For those surplus materials which will not be reused in their present form or used on site in a different form will be recovered where possible. Recovery mainly refers to energy recovery (e.g., reuse as fuel) or biological recovery (e.g., composting).

3.5. Disposal

28. Where it is not possible to re-use or recycle materials, the residual waste will be taken to an appropriate residual treatment facility or landfill site. The same procedure will also apply to hazardous wastes on site. Disposal of waste is at the bottom of the waste hierarchy, as this is the least sustainable method of waste management and one of the overarching aims of this SWMP is to reduce the disposal of waste.

4. REGULATORY FRAMEWORK

29. The following list provides a brief description of the main legislation and other relevant reference documentation on waste management in the UK (relevant to England).

- Waste (England and Wales) Regulations 2011:
Updates some aspects of previous legislative requirements for waste and implements the Waste Framework Directive. Includes requirements on the use of waste transfer notes and Duty of Care requirements.
- The Site Waste Management Plans Regulations 2008 SI 314 (England):
As of the 1st December 2013, the SWMP Regulations have been revoked, however, East Anglia THREE will continue to use waste management criteria which use these regulations as a basis.
- The Environmental Permitting (England and Wales) Regulations 2016 (as amended):
Requires operators of specified activities to obtain and comply with the conditions of an environmental permit. Several Exemptions are listed within the Regulations with regard to waste treatment, use and disposal.
- Landfill (England and Wales) Regulations 2002;
Aims to improve standards of waste to landfill across Europe, by setting specific requirements for the design, operation and aftercare of landfills, and for the types of waste that can be accepted at landfill sites.
- Hazardous Waste Regulations 2005 (as amended):
Sets out the criteria under which hazardous waste is being produced and removed from premises.
- Waste Framework Directive: (2008/98/EC)
Establishes a framework for the management of waste across the EU and aims to encourage reuse and recycling of waste. It also aims to define certain terms such as 'waste', 'recovery' and 'disposal'.
- Environmental Protection Act 1990:
Part II relates to waste on land, defining all aspects of waste management licencing and imposing the Duty of Care.
- Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste :
Development Industry Code of Practice: Sets out good practice in dealing with excavated materials and their reuse, without the requirement for an Environmental Permit.
- ICE Demolition Protocol:
Describes the overarching implementation approaches for Materials Resource Efficiency associated with demolition activities.
- National Planning Policy for Waste (2014):
Establishes decision making principles to which regional planning bodies and all planning authorities should adhere when preparing planning strategies.
- The 2018 Defra guidance 'Our Waste, Our Resources: A Strategy for England' sets out a vision for 'zero avoidable waste' on construction projects. This was followed in 2020 by 'Zero Avoidable Waste in Construction: What Do We Mean By It and How Best to Interpret It. A Recommendation from the Green Construction Board'.

5. ROLES AND RESPONSIBILITIES

30. The Principal Contractors will be responsible for adopting, implementing and updating the SWMP throughout the construction works, in accordance with this Employer's SWMP. EATL will require the Principal Contractors to manage waste in accordance with the Waste Hierarchy, the Employer's Environmental Management System (as set out in the Project Environmental Management Plan (Appendix 10 of the CoCP) and also, to meet the following key objectives:

- Environmental Protection: The SWMPs help to manage and reduce the amount of waste produced, and therefore to be disposed of at landfill. Additional environmental benefits include: less harm to the local environment, avoidance of fly tipping, reduced energy consumption and greater opportunities for reusing and recycling materials.
- Cost Saving: Managing materials more efficiently will immediately cut costs. Better storage and handling of materials will reduce waste and enable better recovery. Reusing and recycling materials cuts disposal costs.
- Legal Requirements: Compliance with the SWMP will ensure compliance with relevant waste legislation, including all Duty of Care obligations. The Duty of Care also requires all parties (operator, Principal Contractors, subcontractors, waste management companies etc.) to ensure that waste is only transported and received by those licenced to do so. In addition, the written record of all waste movements will be retained for 2 years (where non hazardous) and 3 years (where waste is hazardous). The Duty of Care obligations also extend to ensuring that waste is stored and contained appropriately at all times.
- The Principal Contractors will take all reasonable steps to ensure that—
 - (a) all waste from the site is dealt with in accordance with the waste Duty of Care in Section 34 of the Environmental Protection Act 1990(1) and the Environmental Protection (Duty of Care) Regulations 1991(2); and
 - (b) materials will be handled efficiently and waste managed appropriately.'

5.1. Specific Responsibilities

31. The key roles and associated responsibilities for delivery of this SWMP are summarised below. These roles and responsibilities have been based on those required by the Site Waste Management Plans Regulations 2008 (England), which although revoked, as of the

1st December 2013, EATL will continue to use waste management criteria and use these regulations as a basis for delivering the waste management.

32. The onshore construction works designers shall:

- Apply the WRAP 'Designing out Waste' process. This will help them identify, prioritise and implement ways of meeting the onshore construction works targets for waste reduction.
- Identify methods to reduce total waste and waste sent to landfill.
- Identify opportunities to increase the reused and recycled content (where there will not be a significant impact on cost or performance).
- Work with the onshore construction works team to ensure design actions to reduce construction waste and increase reused / recycled content are implemented.
- Support the development / implementation of the SWMP from an early design stage, including waste forecasts and data on reduction targets and actions.
- Provide the Client with a full Design Decision Record.

33. The designers will refine and implement these responsibilities throughout the duration of the works. Designers will refer to the WRAP guidance on Designing out Waste.

34. The Principal Contractors will:

- Ensure that the waste is managed, with regard to their Duty of Care obligations, the Environmental Statement, and Waste Hierarchy.
- Ensure that each Principal Contractor's SWMP is implemented and updated, to include all contractor responsible waste information.
- Provide necessary direction to their appointed sub-contractors e.g., setting contractual obligations on waste handling.
- Review, revise and refine the SWMP as necessary, in liaison with their appointed sub-contractors.
- Ensure that the volumes and type of waste material used remain consistent with the applicable Permit / Exemption / Material Management Plan (MMP) in place.
- Ensure all procedures within this SWMP document are followed.
- Demonstrate they are suitably qualified and experienced in waste management and associated environmental issues, and that the waste management responsibilities, contained within the terms of their contract, are fully understood.
- Ensure that all legal and contractual requirements relating to the SWMP and the environment, are met by implementing adequate and realistic plans/procedures and by obtaining relevant licences/permits and certificates, including undertaking duty of care checks of all appointed waste contractors prior to any waste movements from site.
- Ensure that waste is classified correctly (including arranging sampling and analysis, where required).
- Ensure that any unexpected contamination found in the ground, during excavation, is managed in a way that does not cause an unnecessary degree of risk to environment and in accordance with Section 11 of the Code of Construction Practice.
- Assist with required inputs, providing forecasts of waste streams produced through their activities when requested.
- Measure and routinely report onshore construction works waste generated and waste to landfill, measured in tonnes/m³.
- Oversee all waste management on site to ensure waste is being managed correctly and suitably such as condition and management of waste collection points, waste collection schedules, segregation of waste on site etc.
- Ensure the written record of waste movements is retained for 2 years (where non-hazardous) and 3 years (where waste is hazardous).
- Maintain all records relevant to the Waste Management Database.
- Regularly review SWMP and regularly input data into the Waste Management Database to ensure that it accurately reflects the progress of the onshore works.
- Within three months of work being completed, confirm that the SWMP / Waste Management Database has been fully updated with all relevant records throughout the onshore construction works; compare the actual waste quantities against the earlier forecasted quantities of each waste type; and provide an explanation of any deviation from the plan.
- Record any lessons learnt that could be incorporated into future SWMPs.
- Implement these responsibilities, throughout the duration of the onshore construction works, and will include the requirements into their own respective SWMP.

35. Responsibility for waste management will fall to the Principal Contractors' nominated Waste Management Coordinator who will be appointed prior to commencement of site works. The Principal Contractors will refine and implement their responsibilities, throughout the onshore construction works.

36. Waste Management Companies retained shall:

- Provide a copy of their Waste Carrier's Licence and licence for the waste facility before starting work.
- Provide permits or exemption notifications, authorising the use of mobile plant, i.e., crushing / screening plant, Waste Carriers Licence(s), Environmental Permit(s), Notification of Waste Exemption(s).
- Provide copies of all Waste Transfer Notes (WTNs) (for inert and non-hazardous waste); and all Hazardous Waste Consignment Notes (HWCNs), including Hazardous Waste Quarterly Returns, to track the movement of the waste to the specified disposal or recovery facility.
- Identify ways to increase the recovery rate of materials by finding end destinations with high recovery rates.
- Advise on the most appropriate waste management actions.
- Provide details of the end-destination of all waste removed from site, including the following information: name and address of destination, type of facility, copies of Environmental Permit and recovery rate achieved for that material.
- Report on the different types of waste managed, and the split of each different type of waste, according to the appropriate waste management method (reuse, recycling, recovery, landfill and other) and, in the case of reuse, recycling and recovery, whether this has taken place on or off site.
- Submit relevant data quarterly, in the form of an Environment Agency Return from the waste transfer station.
- Use a systematic process to record and check waste, recovery and recycling data and this will be made available for inspection on request.

37. The Waste Management Companies appointed will refine and implement their responsibilities, throughout the onshore construction works.

6. TRAINING

6.1. On-site Training

38. The Principal Contractors will provide suitable on-site instruction on the appropriate segregation, handling, recycling, reuse, recovery and disposal methods which will be used by all parties, during all stages of the onshore construction works. The SWMP will also be outlined in the site induction process.

39. In addition to the site environmental inductions, targeted Toolbox talks will be carried out, which will inform all staff and sub-contractor staff as to how they should be involved with the waste, reuse and recycling requirements of their works. In a number of contracts, they will retain full responsibility for the waste management and disposal and this will be reflected in the training and awareness provided.

40. Training and awareness on site waste management will be mandatory for all staff, including sub-contractors. Training will include:

- Understanding the SWMP and the Waste Management Database input.
- Roles & Responsibilities.
- Waste Procedures.
- Hazardous Waste.
- Duty of Care.
- Material Storage.

7. WASTE MANAGEMENT PROCESS

7.1. SWMP Implementation

41. The implementation and management of the SWMP will be secured as works progresses through the construction phases. These responsibilities are set out in more detail below.

7.1.1. Preparation Stage

42. The Principal Contractors will prepare their SWMPs, that reflect the requirements stated in this document. Each Principal Contractor’s SWMP will then continue to be populated and updated, as relevant information becomes available.

7.2. Detailed Design Stage and Pre-construction Stage

43. At detailed design stage, the SWMP will be further updated with relevant updated and refined waste information. As required, the following stakeholders will also provide information to further inform the SWMP:

- Project Design Coordinator; and
- Project Quantity Surveyor.

7.3. Construction and Excavation Stages

44. By the commencement of the works, the SWMP will be fully developed, then implemented, monitored and reviewed by the onshore construction and environmental team, including:

- Reviewing the SWMP and updating it as necessary.
- Ensure information contained within the SWMP and the Waste Management Database is consistent.
- Require routine information updating on waste to be input into the Waste Management Database.
- Identify any further waste prevention actions.
- Make the SWMP accessible to all relevant staff and subcontractor staff.
- Provide instruction and training as necessary.
- Carry out regular reviews of the SWMP and record findings.
- Within 3 months of the onshore works completion, carry out a final review and describe any lessons learnt from any differences between the predicted SWMP before EA THREE broke ground on the onshore construction works and actual SWMP performance.

7.4. SWMP Distribution

45. The Principal Contractors will provide information from their respective SWMP to fully inform and update this SWMP, prior to commencement of their works, with attention drawn to any suggested actions for waste prevention and reduction.

7.4.1. Key Waste Streams

46. Key waste streams produced during the construction works will include:

Table 7-1 Key Waste Streams

Waste Type	European Catalogue Code	Waste Action	Management	Storage Arrangements
Soils and stones	17 05 04	Reuse on site		Storage bunds
Vegetation including trees and branches	02 01 03	On-Site Reuse and/or Off-site Reuse U12 Waste exemption to leave chippings on site		Labelled Skip / 20t lorry
Concrete	17 01 01	On-Site Recycle and/or Off-site Recycle		Labelled Skip
Wood	17 02 01	On-Site Reuse and/or Off-site Reuse		Labelled Skip
Mixed metals	17 04 07	Off-site recycling (segregated)	re-use and	Labelled Skip

Waste Type	European Waste Catalogue Code	Waste Action	Management	Storage Arrangements
Paper and Cardboard	15 01 01/ 20 01 01	Off-site recycling (segregated)		Labelled skip
Plastics	17 02 03/15 01 02	Off-site recycling (segregated)		Labelled Skip
Mixed Packaging	15 01 06	Off-site recycling (segregated)		Labelled Skip
Mixed Construction Waste (excluding hazardous waste)	17 09 04	Off-site recycling where possible, otherwise Disposal by waste contractor		Labelled skip
Hazardous Waste (Oily Rags)	15 02 02*	Recovery by waste contractor	special	Labelled container
Hazardous Waste (Oils)	13 02/ 13 05 / 13 07	Recovery by waste contractor	special	Labelled container
Hazardous Waste (Grease Cartridges)	15 01 10*	Recovery by waste contractor	special	Labelled container
Hazardous Waste (Aerosols)	16 05 04*	Recovery by waste contractor	special	Labelled container
Other Hazardous Waste	Various	Recovery by waste contractor (segregated)	special	As required
Mixed Office waste	20 03 01	Disposal by contractor	waste	Labelled Skip
Sewage	16 10 02/ 20 03 04	Off site treatment		Labelled Tank

7.5. Waste Prevention, Reduction, Minimisation and Management Actions

47. The Waste Elimination, Reduction, Minimisation and Management Actions will be identified and recorded at different stages throughout the construction works. The Principal Contractors will record and confirm any recommended actions, as they are identified. They will also be required to enter and record such information directly into the Waste Management Database. Any decisions taken during the construction stage, used to eliminate certain wastes or to reduce waste to landfill, will also be entered.
48. To deliver effective waste minimisation, the following topics will be implemented as a waste minimisation strategy to support decisions taken to reduce waste and consider these actions as embedded into the SWMP:
- Arrange a Kick Off meeting, with individual sub-contractors, to agree the best approach to waste minimisation for the different construction phases of the works.
 - Provide presentation material for the site induction, so that all staff are fully aware of the SWMP.
 - Prepare and deliver a series of waste management toolbox talks, to further raise the awareness of all staff working on site.
 - Skips will be labelled and/or use colour coding (in accordance with National Colour Coding Scheme) to identify segregated waste streams.
49. The key elements of waste management to be implemented by the Principal Contractors and all sub-contractors are:
- A person responsible for producing, implementing and maintaining the Project and individual sub-contractor SWMPs will be identified. This person will also be responsible for ensuring compliance with Duty of Care regulations.
 - Target recovery rates for key waste type, along with some formal measurement will be identified.
 - All waste streams (for example, soils and stones, plastics and metals etc.) to be produced during construction and excavation, will be considered for their potential for reuse (on or off site) or for recycling.
 - The most significant opportunities to increase reuse and recycling rates (termed Waste Recovery Quick Wins) and the realistic recovery rates will be identified.

- Suitable waste management contractors will be identified and the appropriate licences, permits, WTNs and HWCNs will be recorded and retained in the Waste Management Database.
- Appropriate site practices, such as identifying how waste materials will be segregated and measures that will be used to raise site operatives' awareness of waste reduction, reuse and recycling (e.g., toolbox talks) will be implemented. Separate containers for dry recyclables, such as paper and cardboard, plastic, glass, wood and metal will be provided. This will encourage recycling and increase the potential value of the recyclable items by avoiding contamination.
- The method for measuring and auditing construction and excavation waste will be set out.
- No waste will be deposited outside the boundary of the site, unless it is at a facility that holds a valid environmental permit or suitable authorised exemption. Off-site waste management facilities are legally obliged to operate under an environmental permit (or an authorised exemption), which is in place to ensure that the site is operated in a manner to prevent emissions causing harm to human health or the environment;
- Site waste management and environmental, health and safety plans will be prepared in advance of all construction or other disruptive site works.

50. The specific aspects for different construction stages and activities will include:

- Logistics
 - The development of a logistic plan at the early stages of the onshore construction works will ensure that consideration is given to material requirements throughout construction, enabling efficient management of the delivery and storage of materials to ensure that the most effective logistic methods are adopted.
 - 'Just-in-time' delivery – to alleviate space constraints for storage and site congestion, wherever possible.
- Materials Procurement
 - Sustainable and higher than average recycled content products and materials will be considered.
- Storage Facilities
 - Skips and containers used for waste must be secure, in good condition and suitable for use.
 - The area to be used for waste storage shall be clearly signed and segregated.
 - Clear signage/labelling shall be used to identify the contents of any waste container.
 - Materials stored on site will be protected, by whatever means necessary, to prevent any deterioration or contamination prior to use.
 - The waste storage facilities provided will be located on a suitable hard surface (e.g., paved or impermeable surfaces) to prevent spillage and to prevent surface run-off discharging onto the surrounding ground.
 - Hazardous waste will be stored separately from non-hazardous wastes to avoid contamination. The Hazardous Waste Regulations make it illegal to mix hazardous waste with non-hazardous waste;
 - Any spilt or lost material will be immediately dealt with to prevent seepage into the ground.
 - The location and details of the proposed material handling and storage facilities to be installed will be agreed in advance for acceptance.
 - Waste to be scheduled to be regularly collected to ensure manageable volumes of waste on site.

7.6. Forecast of Waste Generation

51. Waste forecasts will be developed by the Principal Contractors and documented in the Waste Management Database, allowing the construction team to make appropriate assumptions to enable realistically robust quantifications and to update the SWMP as necessary.
52. Waste forecasts will be broken down into likely waste stream, using the standard List of Waste Codes and the Work Package from which the waste arises.
53. In addition to the SWMP, in the wider management of the construction works and its environmental impacts, a MMP will be developed, with reference to the CL:AIRE Definition of Waste: Development Industry Code of Practice. The MMP will focus on the quantification of the wastes generated from construction related excavation and its potential reuse throughout the construction works, with an aim to maximise the reuse and so have minimal export of any these materials as waste. The MMP will also include the import and potential later removal and disposal or reuse of materials, in particular all the stone used for the installation of surfacing for the temporary Construction Consolidation Site (CCS) and accesses and haul road to be used.

7.7. Waste Carriers and Waste Management Facilities

- 54. The Waste Management Database will be used by the Principal Contractors and all sub-contractors involved in the EA THREE onshore construction works and will include details of all companies who remove waste from site. This includes the identity of the waste carriers removing the waste, all licence numbers and a copy of the licence. It will also include details of the sites that the waste is taken to and whether the operators of those sites hold a permit under the Environmental Permitting (England and Wales) Regulations or are registered under those Regulations as a waste operation exempt from the need for such a permit, and copies of the permit / exemption.
- 55. Information will be entered into Table 7-2 and Table7-3 as the onshore construction works progresses, and as and when the waste carriers and / or waste management facilities are identified. This information will be reflected in the relevant sections of the Waste Management Database.
- 56. The Principal Contractors will identify and appoint appropriate waste carriers prior to the construction elements of the works commencing, ensuring first that they are fully licenced. These details will be tabulated as follows in each Principal Contractor’s SWMP when available.

Table 7-2 Waste Carriers Table Template for Principal Contractors’ SWMPs

Name	Contact Details	Date Checked with the Environment Agency	Registration Number	Expiry Date

- 57. The Principal Contractors will identify and commit to utilising appropriate waste management facilities prior to the construction elements of their works commencing, ensuring first that they are fully licenced. These details will be tabulated as follows in each Principal Contractor’s SWMP when available.

Table 7-3 Waste Management Facilities Table Template for Principal Contractors’ SWMPs

Name	Type of facility	Date Checked with the Environment Agency	Permit Number

8. MONITORING AND REPORTING

8.1. Data Collection

58. The Waste Management Database will be maintained and act as the point of contact for all enquiries. Instructions will be given to staff and sub-contractors as to how to assess waste volumes or tonnage and how to upload data to the Waste Management Database. Data will be required to be uploaded to the Waste Management Database on a monthly basis. Persons nominated as responsible for contractor waste management will also utilise the standardised coding system for their individual waste entries and for the associated WTN and HWCNs as appropriate. All WTNs and HWCNs will be kept as a hard-copy on site and uploaded onto EATL's online document management system.

8.2. Monitoring and Reporting

59. The responsibilities of the Waste Management Coordinator will include, but not be limited to:

- ensuring that all staff and sub-contractors are aware of site requirements for management of waste. All sub-contractors will be required to attend a short introductory session on waste management principles;
- monitoring of material and waste tonnages;
- liaison with waste contractors regarding removal of waste from site;
- dealing with any hazardous wastes that may be generated;
- liaison with all project managers to ensure that materials are managed in the most sustainable manner possible. Waste management will also be included as an item on the agenda of the construction progress meetings; and
- inspections of waste collection/management points on site.

60. All waste collected from site by the waste carrier(s) will be recorded and monitored in the Waste Management Database. The waste carrier(s) will provide WTNs or HWCNs on collection of the waste and records of the quantities of waste recycled or sent to landfill. This procedure will be applied whether the waste has been segregated on site or sent off as general mixed waste. The preference is always to segregate waste, as this is generally a cheaper alternative to sending away untreated or unsegregated waste, which ultimately leads to a higher rate of recycling.

61. The waste management contractor will provide records of the quantities of each waste stream when general mixed waste is segregated at a waste transfer station, as opposed to on site. This will allow for the appropriate tracking of the quantities of individual waste streams produced by the onshore construction works.

62. Skips will be monitored to ensure that there is no contamination of any segregated waste streams. The type of surplus materials being produced will be regularly reviewed so that the site set-up can be changed to maximise reuse or recycling of waste.

63. The Waste Management Database will be used to record the total waste removed from the onshore construction works. Each Principal Contractor's SWMP will be reviewed and updated monthly and updates provided to project management.

64. Office/Welfare waste will be sorted into one or more separate container(s), to allow for the on-site segregation of general waste and mixed recyclables.

9. REFERENCES

Contaminated Land: Applications in Real Environments (CL:AIRE), 2012 The Definition of Waste: Development Industry Code of Practice Version 2,

Defra, 2018, 'Our Waste, Our Resources: A Strategy for England'

Green Construction Board, 2020 Zero Avoidable Waste in Construction: What do we mean by it and how best to interpret it. Technical Author: Katherine Adams. Editors: Robert Pearce and Jane Thornback of the Construction Products Association.

Institution of Civil Engineers (ICE), 2008: Demolition Protocol