

IMMINGHAM EASTERN RO-RO TERMINAL



**Outline Onshore Construction Environmental Management Plan (CEMP) with
Appendices
Document Reference 9.2.1**

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Associated British Ports

Immingham Eastern Ro-Ro Terminal

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Immingham Eastern Ro-Ro Terminal

Outline Onshore Construction Environmental
Management Plan (CEMP)

December 2023

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Executive summary

- 1 This document has been prepared on behalf of Associated British Ports (the 'Applicant') and forms the Outline Onshore Construction Environmental Management Plan (CEMP) for the Immingham Eastern Ro-Ro Terminal (IERRT) project. By implementing the measures set out in the following sections, the Detailed Onshore CEMP will help to manage environmental issues appropriately during construction.
- 2 **Section 1** provides an overview of the IERRT project, the Applicant and the implementation of the Onshore CEMP.
- 3 **Section 2** details the indicative construction programme, including construction facilities, delivery routes for construction materials, construction lighting and recycling and disposal measures for construction waste.
- 4 **Section 3** sets out the measures to be implemented during construction for specific topics relevant to the IERRT project. The tables include a summary of the potential impacts and associated mitigation, enhancement and (where relevant) monitoring measures identified for each Environmental Impact Assessment (EIA) topic that specified construction-related mitigation measures (Physical Processes; Water and Sediment Quality; Nature Conservation and Marine Ecology; Commercial and Recreational Navigation; Coastal Protection, Flood Defence and Drainage; Ground Conditions including Land Quality; Air Quality; Noise and Vibration; Cultural Heritage and Marine Archaeology; Traffic and Transport; Land Use Planning; Climate Change; and Protected Species) reported in the Environmental Statement (ES) chapters and appendices (DCO Application Documents Reference number 8.2 and 8.4).
- 5 **Appendices A – G** set out the outline management plans to which the Principal Contractor will base their detailed management plans on as construction methods and approaches are refined during detailed design.

1. Introduction

1.1 Overview

- 1.1.1 This Outline Onshore CEMP (DCO Application Document Reference number 9.2.1) has been prepared by AECOM Ltd on behalf of Associated British Ports (ABP) (the 'Applicant'). It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Transport, under section 37 of 'The Planning Act 2008' (the '2008 Act'). Once appointed, the Principal Contractor will develop their own Onshore CEMP in accordance with the principles within this Outline Onshore CEMP. The 'Principal Contractor's Onshore CEMP' would be updated regularly throughout construction, acting as a 'live' document to capture all construction and environmental issues.
- 1.1.2 The Applicant is seeking development consent for the construction, operation and maintenance of a new roll-on roll-off (Ro-Ro) facility (the 'IERRT project') within the existing Port of Immingham, Lincolnshire ('the site'). The Port of Immingham is one of the UK's busiest ports, operating 24 hours a day, 365 days a year.
- 1.1.3 The IERRT project comprises marine and landside infrastructure. The rest of this document solely discusses the landside (onshore) elements.
- 1.1.4 The IERRT project falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(j) of the 2008 Act, as it comprises an alteration of harbour facilities, and under Section 24(2) is wholly located within England; and under Section 24(3)(b) comprises Ro-Ro ships, 250,000 units. As such, a DCO application is required to authorise the IERRT project in accordance with Section 31 of the 2008 Act. The legislative details are discussed further in Chapter 5 (Volume 1 of the ES) (DCO Application Documents Reference number 8.2.5).

1.2 The applicant

- 1.2.1 The Applicant, ABP, is the owner and operator of the Port of Immingham (POI).

1.3 The proposed development

- 1.3.1 As this Outline Onshore CEMP relates only to the onshore construction activities, the following is a summary of the onshore (landside) elements of the proposed development.
- 1.3.2 The IERRT project comprises a Ro-Ro facility within the Port of Immingham. The facility will be designed for the embarkation and disembarkation of principally commercial cargo carried either by accompanied trailer or by lorry or on unaccompanied trailers which will be collected at the port of disembarkation. Further details are provided below and fully described in Chapter 2: Proposed Development (Volume 1 of the ES) (DCO Application Document Reference number 8.2.2).

Landside works

- 1.3.3 Landside works are primarily required to improve the site's surface so as to provide suitable areas to accommodate wheeled cargo, containers and heavy goods vehicles (HGVs) either awaiting embarkation or collection, together with essential storage. These will be known as the Northern Storage Area, Central Storage Area, Southern Storage Area and Western Storage Area as shown in the Engineering Sections Drawings and Plans (Application Document Reference 2.6) in drawings B2429400-JAC-00-ZZ-DR-ZZ-0801 and B2429400-JAC-00-ZZ-DR-ZZ-0802.
- 1.3.4 The proposed landside works are summarised below. Further details can be found in ES Volume 1, Chapter 2: Proposed Development DCO Application Documents Reference number 8.2.2).
- Simple upgrade of the vast majority of landside areas through provision of new pavements and associated infrastructure (some peripheral parts of the areas which will be used for waiting vehicles/ cargo trailers are likely to require additional ground works);
 - A new substation in the Northern Storage Area to provide shore power to the berths and power for closed-circuit television (CCTV) and lighting for the yard;
 - A small workshop with fuel station in the Central Storage Area;
 - A new level crossing will be created across an ABP controlled railway between the Southern Storage Area and the Central Storage Area whilst a new internal bridge and another level crossing will link the Central and Northern Storage Areas;
 - A terminal building, together with ancillary buildings (in and out gates, a welfare building for HGV drivers and passengers awaited embarkation, and administrative and inspection buildings and infrastructure for the UK Border Force);
 - In and out gates in the Western Storage Area;
 - A two lane bridge to ensure contiguous terminal operations between the currently separate Northern and Central Storage Areas, with a maximum length of 86 m and a maximum width of 12 m, spanning Robinson Road – an existing dock road. The bridge will land before joining into an at-grade level crossing over an ABP controlled railway;
 - Demolition of four existing buildings to the south of the Northern Storage Area and two welding bays as well as an extension of a further building, a workshop/shed, and temporary structure – all of which are located in the southern part of the Northern Storage Area;
 - Improvements to the East Gate entrance to the Port including demolition of the existing gatehouse, widening of the existing entrance road, construction of a new gatehouse, new warning signals and line markings at the junction of Robinson Road and the IOT access road, repositioning of a bus stop, removal of an existing layby, and provision of a new footway between East Gate and the bus stop;
 - Highway improvements and new footways within the Port;

- Remotely operated barriers for access into the IERRT;
- Fencing around the IERRT to comply with International Ship and Port; Facility Security (ISPS) Code criteria;
- Lighting and security provision; and
- Appropriate drainage and services infrastructure.

Environmental enhancements

- 1.3.5 Environmental enhancements will be undertaken as part of the IERRT project in order to maintain and enhance biodiversity. This will involve enhancements to an existing 1.17 hectares (ha) area of woodland south of Laporte Road named Long Wood (see Appendix 6.2: Preliminary Ecological Appraisal Report (ES Volume 2 DCO Application Document Reference number 8.4.6(b)) for further details).

1.4 The purpose of the Outline Onshore CEMP

- 1.4.1 The purpose of this Outline Onshore CEMP is to:

- manage the environmental effects of the Scheme as identified in the ES;
- provide the equivalent of a Code of Construction Practice (CoCP); and
- provide the ‘blueprint’ for the detailed Onshore CEMP that will follow, enabling the Examining Authority and the Secretary of State to identify those mitigation measures proposed within the Scheme which are secured.

- 1.4.2 Producing a detailed Onshore CEMP is considered a multi-staged process, developing in step with the Proposed Development’s design evolution from the consenting to build-out phases. As the Proposed Development’s final and technical details are refined, the Onshore CEMP will similarly be refined to include more detailed information; thus, developing from an outline to a final (detailed) document.

- 1.4.3 As such, this document constitutes the “Outline Onshore CEMP” for the Scheme, which will be fully refined into the “Detailed Onshore CEMP” for implementation during construction.

- 1.4.4 This Outline Onshore CEMP is a document which sets out the management measures that the Applicant and the Principal Contractor will adhere to during construction. It is structured by technical environmental discipline, following the topics of the Environmental Statement (ES). It contains a series of outline environmental management plans and related documents for the Onshore Scheme, which are, subject to the DCO being granted, to be produced by the Principal Contractor (“PC”) during the detailed design stage of the Project. This Outline Onshore CEMP is based on the preliminary design of the Scheme, as submitted by the Applicant within the DCO application, and contains the measures and steps required for the production of the Detailed Onshore CEMP.

- 1.4.5 Following the PC led process described above, the “Detailed Onshore CEMP” will be produced. This document will contain a series of detailed environmental management measures and topic-specific management plans and related documents for the Onshore Scheme, which is produced in advance of Onshore Scheme construction by the PC and refined during the

construction stage as necessary. All of the detailed environmental management plans and related documents prepared must be in full accordance with this Outline Onshore CEMP, including the approval requirements set out below.

Development of the Outline Onshore CEMP

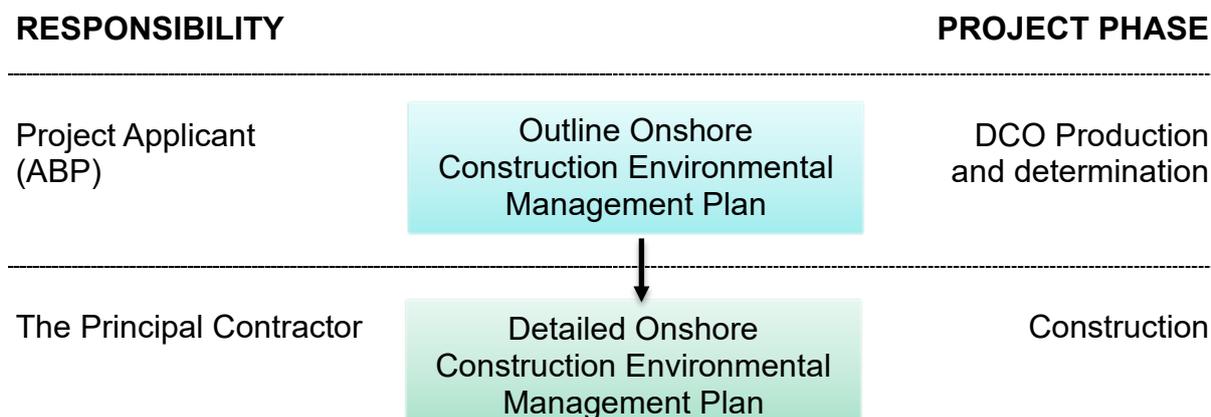
- 1.4.6 This Outline Onshore CEMP has been prepared iteratively and in parallel with the development of the project design, proposed construction methodologies and the EIA. Measures within the Outline Onshore CEMP include construction mitigation which, in part, arise from the technical assessments reported in the ES. These assessments have taken account of the effectiveness of mitigation measures embedded into the design of the Onshore Scheme prior to identifying the likely environmental effects of the Onshore Scheme.
- 1.4.7 Construction of the Onshore Scheme will be subject to measures and procedures defined within the Detailed Onshore CEMP. The Detailed Onshore CEMP will be based on, and will fully incorporate, the requirements of this Outline Onshore CEMP that are relevant to that construction element and the PC's contractual scope. It will also include the implementation of appropriate industry standard practices and control measures for environmental impacts arising during the works.
- 1.4.8 Subject to the potential for alternative measures being identified, the measures defined in the Detailed Onshore CEMP will be applied by the PC (as stipulated in the relevant parts of the Outline Onshore CEMP) throughout the duration of their contract to provide planning, management and control during the construction phases of the Onshore Scheme with the aim of controlling potential impacts upon the natural environment, people and businesses.
- 1.4.9 All contractors will be required to comply with applicable environmental legislation, together with any additional environmental controls imposed within the DCO. The induction, training and briefing procedures for staff are outlined in Section 1.5. The measures implemented, such as dust management and noise abatement, are set out in relation to each environmental discipline of the ES with Table 3.1 to Table 3.9 within Section 3 of this document. These form the basis of the management plans to be produced.
- 1.4.10 As noted, this Outline Onshore CEMP contains a number of management measures, which have been developed to the highest possible level of detail prior to a PC being appointed. As described above, these are to be developed into a final Detailed Onshore CEMP by the PC (and where applicable other organisations, such as subcontractors) prior to construction commencing.
- 1.4.11 Table 1.1 outlines specific management plans that the Applicant will produce within the Detailed Onshore CEMP. These will be based upon the outline documents presented as Appendix A to Appendix F of this document and updated by the PC and incorporated into the Detailed Onshore CEMP, in consultation with the relevant bodies listed for each discipline.

Table 1.1: Detailed Onshore CEMP documents and relevant body to be consulted

Document to be developed in Detail by PC	Consultees
Construction Workers' Travel Plan (CWTP)	NELC
Construction Traffic Management Plan (CTMP)	NELC, Royal Mail, Network Rail, National Highways
Flood Emergency Response Plan (FERP)	NELC
Materials Management Plan	The Environment Agency
Stakeholder Management Plan	NELC
Site Waste Management Plan (SWMP)	NELC
Final Remediation Strategy (if required)	NELC The Environment Agency
Drainage Strategy	North East Lindsey Internal Drainage Board / NELC

- 1.4.12 Following any necessary amendments arising from the consultation process, overall approval of the Detailed Onshore CEMP will fall to North East Lincolnshire Council ("NELC") as per Requirement 8 of the DCO.
- 1.4.13 The Detailed Onshore CEMP (and any other document that forms part of it) will be a live document maintained by the PC throughout the construction phase of the Scheme. As a minimum, the Detailed Onshore CEMP will be reviewed by the PC every six months to ensure that its content remains up to date and relevant. Figure 1.1 presents how the Onshore CEMP develops and advances through each phase of the Project and the parties responsible.

Figure 1.1: Development of the Construction Environmental Management Plan



- 1.4.14 Should any amendments to documents which have been consulted upon and subsequently approved be necessary, a further consultation and approval process as set out in paragraphs 1.4.11 to 1.4.13 and Table 1.1 above shall be undertaken.
- 1.4.15 The Applicant will assist the PC in the preparation of the Detailed Onshore CEMP and other detailed documents and management plans defined as being required within the Outline Onshore CEMP and implementation of other matters stated within the Outline Onshore CEMP, such as training or working relations with the Port and Harbour Master of Immingham.
- 1.4.16 It is expected that the Principal Contractor will comply, as a minimum, with applicable environmental legislation and environmental mitigation measures at the time of construction, together with any additional environmental controls imposed by the DCO.
- 1.4.17 Any additional construction licences, permits or approvals that are required as listed within this Outline Onshore CEMP, including any environmental information submitted in respect of them will also be adhered to.

The Structure of the Onshore CEMP

- 1.4.18 The structure of this Outline Onshore CEMP is as follows:
- Section 1 provides an introduction to the IERRT project and the purpose, use and implementation of the Onshore CEMP;
 - Section 2 provides information on the onshore construction arrangements;
 - Section 3 presents additional topic specific information, which includes –
 - Environmental impacts (assessed through the EIA),
 - Impact avoidance or reduction of measures to be applied, where the ES has assumed they would be applied during the detailed design or construction phase,
 - Any other additional mitigation measures,
 - Additional surveys or monitoring considered necessary pre-construction or during construction in order to confirm the status of receptors, and the effectiveness of impact avoidance/ mitigation measures,
 - Corrective action procedure to be applied, where necessary, and
 - Links to other complementary plans and procedures;
 - Appendix A: Outline Construction Workers' Travel Plan (CWTP)
 - Appendix B: Outline Construction Traffic Management Plan (CTMP)
 - Appendix C: Outline Flood Emergency Response Plan (FERP)
 - Appendix D: Outline Materials Management Plan (MMP)
 - Appendix E: Outline Stakeholder Management Plan (SMP)
 - Appendix F: Outline Site Waste Management Plan (SWMP)

- Appendix G: The project's Construction Materials and Waste Management Assessment

1.4.19 In summary, this Outline Onshore CEMP identifies how commitments made during the EIA (and reported in the ES) will be translated into actions on-site.

1.4.20 The Principal Contractor will be responsible for working in accordance with the environmental controls documented in this Outline Onshore CEMP, which will allocate responsibilities for environmental performance. The overall responsibility for implementation of the Outline Onshore CEMP will lie with the Applicant.

1.5 Implementation

1.5.1 This Outline Onshore CEMP sets out all roles, responsibilities and actions required in respect of implementation of the measures, including:

- Training requirements and roles and responsibilities for relevant personnel on environmental topics;
- Information on site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
- Measures to advise employees of changing circumstances as works progress;
- Communication methods (e.g., updates via the Applicant's website);
- Document control; and
- Environmental emergency procedures.

1.5.2 All construction works associated with the IERRT project must be carried out in accordance with the approved Onshore CEMP unless otherwise agreed with the relevant authorities.

2. Construction phase arrangements

2.1 Indicative programme

2.1.1 Subject to all necessary consents and licences being granted, construction work is expected to start in 2024, however, there are currently two alternative construction programme scenarios:

- Construction of all elements at the same time: this scenario comprises the construction of all three berths at once followed by their operation and will be largely completed by mid-2026; and
- Sequenced construction: this scenario comprises the construction of the northern pier and the Northern, Central and Southern Storage Area first, with the first two berths becoming operational around mid-2025, followed immediately by the construction and operation of the southern pier and the construction of the Western Storage Area. This scenario would be complete in 2028.

2.2 Working hours

2.2.1 For landside construction, working hours will be 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays, with no works taking place on Sundays, unless otherwise agreed with the local planning authority.

2.3 Traffic management

2.3.1 During construction, the appointed Principal Contractor will ensure that the impacts from construction traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable, by implementing the measures set out in a detailed Construction Traffic Management Plan (CTMP) and the Construction Workers' Travel Plan (CWTP) both of which will be prepared by the Principal Contractor once the final construction details are confirmed in accordance with this Onshore CEMP. These documents and subsequent changes, if required as part of the ongoing review, will be approved by NELC.

2.3.2 Access to the site during construction for both construction workers and HGV traffic will be via the existing East Gate entrance to the Port and Robinson Road/ East Riverside (existing, purpose-built access roads that serve the port).

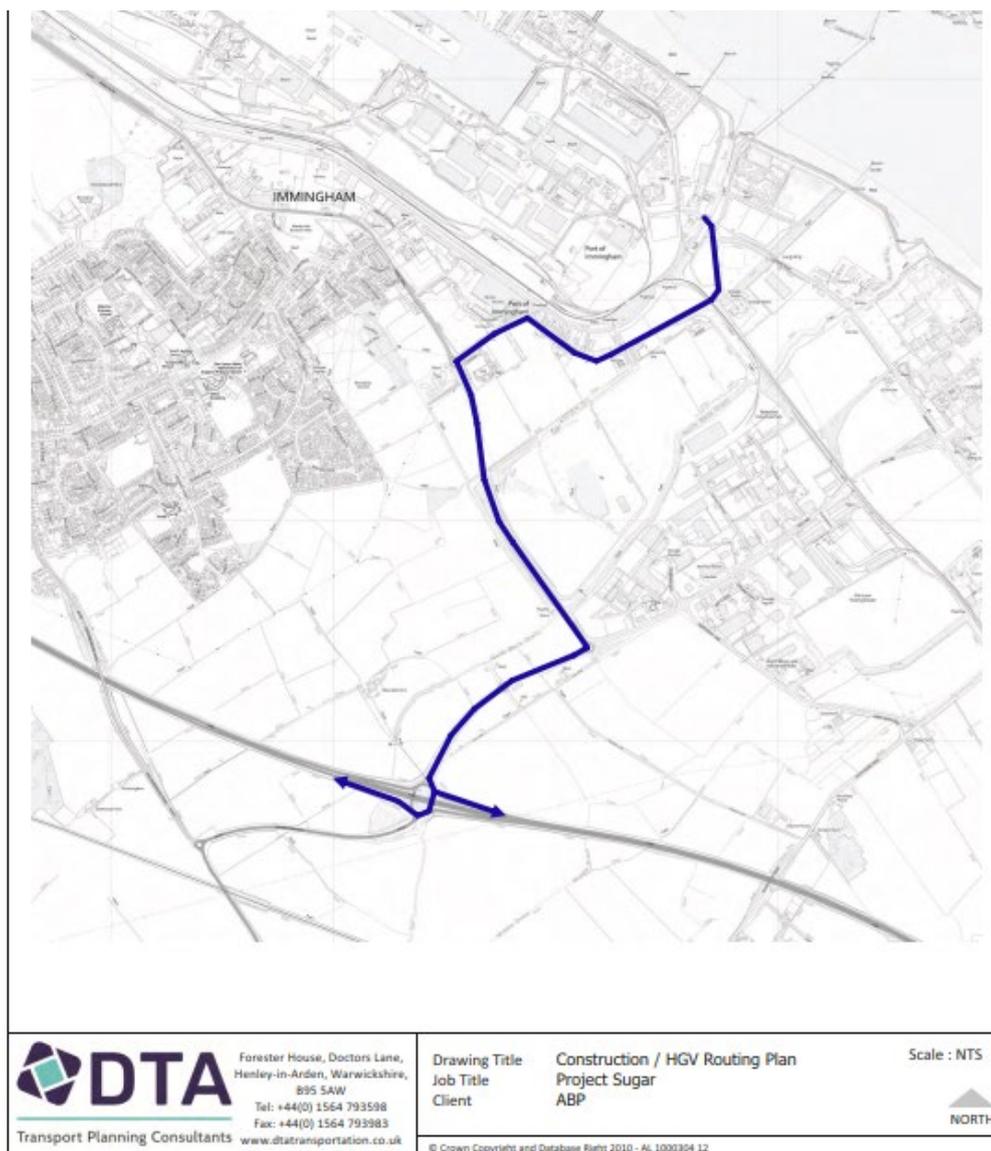
2.3.3 No construction traffic route will use South Marsh Road (between North Moss Lane and Hobson Way) and South Marsh Road Level Crossing (including in the event that Queens Road Bridge is unavailable for access) and the CTMP and all supporting documentation will state that South Marsh Road is not suitable for use by vehicles over 7.5 tonnes.

2.3.4 Network Rail will be consulted with prior to any proposed use of Kiln Lane Level Crossing by construction traffic and will comply with any reasonable requirements of Network Rail as to the use of Kiln Lane Level Crossing to

ensure the safety, security, operation and maintenance of the operational railway.

- 2.3.5 Construction staff are anticipated to travel to the site via the existing trunk road and local networks. Construction staff arriving by car will use on-site parking at designated locations within the construction site.
- 2.3.6 HGVs access into construction compounds will be controlled by a gatehouse and HGV waiting area where vehicle registration and deliveries will be recorded. The HGV routing plan is shown **Plate 1** below.

Plate 1: HGV designated route plan during construction



- 2.3.7 The volume of HGVs associated with construction of the IERRT project on the network is predicted to be an average of 180 daily two-way vehicle movements.
- 2.3.8 HGV arrivals, including deliveries, will be managed as far as reasonably practicable, such that they are spread evenly over the day to avoid on-site congestion. HGV deliveries will not be undertaken outside of core working hours, unless agreed with the local planning authority on a case-by-case

basis. Details of peak hour movements will be refined by the Principal Contractor and provided in the CTMP as described above.

- 2.3.9 Permits and consents required for the movement of Abnormal Indivisible Loads (AIL) will be sought from NELC local highway representatives as necessary once the number and type of AIL movements has been established following appointment of the contractor. The contractor must distribute the HGV routing plan (shown in **Plate 1**) to all HGV drivers during their induction. It will be a condition of contract between the Applicant and the appointed contractor to require that all construction HGV deliveries must use the designated route to access and egress the construction site.
- 2.3.10 The Principal Contractor will erect temporary signage at the main junctions to appropriately direct all construction related HGV traffic to the proposed development (both accessing and egressing the site) towards the construction compounds. These will be in place for the duration of the construction phase and will be checked regularly to confirm they are visible throughout.
- 2.3.11 The appointed Principal Contractor will be required to maintain all the HGV route signage during the construction period.

2.4 Parking provisions

- 2.4.1 Parking demand will vary throughout the construction phase and parking areas will be set aside within the construction site to accommodate parking for construction workers.
- 2.4.2 Line markings will be applied to demarcate trailer parking bays, stacking areas, marshalling lanes, parking areas and terminal roads.

2.5 Wheel cleaning facility

- 2.5.1 In the interests of highway safety, wheel cleaning facilities will be installed at the construction site from the start of the construction phase. All HGV will be required to use the wheel wash prior to exiting the construction site. The need for this measure will be periodically reviewed throughout the construction phase.

2.6 Site lighting

- 2.6.1 Additional temporary construction site lighting will be installed to enable safe working on the construction site in the hours of darkness. However, the site is already lit at night due to the ongoing operational usage. Therefore, any additional lighting associated with the construction of the IERRT project is unlikely to alter the lighting regime within the construction site, given its location within a port environment that is lit at night and operates 24 hours a day.

2.7 Recycling and disposing of waste

- 2.7.1 To control the waste generated during the site preparation and construction phase, the Principal Contractor will minimise the creation of waste, maximise the use of recycled materials and assist the collection, separation, sorting, recycling and recovery of waste arisings, as far as reasonably practicable.

- 2.7.2 An Outline SWMP is included in Appendix F to minimise, as far as reasonably practicable, impacts on the environment, specify the waste streams to be estimated and monitored, and set key performance indicators with regards to the waste produced.
- 2.7.3 The SWMP will be updated by the PC once appointed to include the site-specific management arrangements, actual quantities and named individuals with responsibilities under the SWMP. As described in Section 1.4 and Table 1.1, this will be consulted upon and incorporated into the Detailed Onshore CEMP.
- 2.7.4 The Applicant will require that the Principal Contractor segregates the waste streams on-site, prior to them being taken to a waste facility for recycling or disposal. All waste to be removed from the site will be undertaken by fully licensed waste carriers and taken to permitted waste facilities.

2.8 Best practice measures

- 2.8.1 The selected Principal Contractor will be encouraged to be a member of the 'Considerate Constructors Scheme' which is an initiative open to all contractors undertaking building work.
- 2.8.2 Construction industry guidance (e.g. from the Construction Industry Research and Information Association (CIRIA)) will be adopted as far as reasonably practicable to assist in reducing the potential for pollution and nuisance. This will be achieved by employing best practice measures.

2.9 Soil management

- 2.9.1 Impacts relating to the handling, movement and temporary storage of soils that will be disturbed during construction phase are discussed in Table 3.3 and in Appendix F of this Onshore CEMP.

2.10 Training and communications

- 2.10.1 All staff working on the construction of the IERRT project will be inducted on the project requirements. This Outline Onshore CEMP and the associated risks and opportunities will be distributed to the Principal Contractor, key members of the design team and contracting teams to ensure that the environmental requirements are communicated.
- 2.10.2 Any change in design, programme or other changes to the IERRT project as the works progress must be communicated as appropriate to all staff working on the IERRT project. It is advised that this is done via a top-down approach, whereby managers disseminate information to their team.
- 2.10.3 Site briefings and training will be supplemented as necessary and appropriate through toolbox talks during delivery the IERRT project and will include key environmental risks. Toolbox talks are to be delivered by the Principal Contractor's worksite lead or environmental specialist (if required) to all members of site staff at the start of each shift.

2.11 Stakeholder communications

- 2.11.1 Stakeholder communications will be managed via the Stakeholder Management Plan (Appendix E) that will be put in place prior to the works commencing. This will include relevant project information and contact details for stakeholders to communicate queries to the project team and make complaints. The Stakeholder Management Plan will be developed by the appointed Principal Contractor in conjunction with ABP and approved by NELC to ensure transparency of reporting and appropriate lines of communication into and out of the Project are established.
- 2.11.2 Based on ABP's existing knowledge and developed relationships with the surrounding stakeholders and communities, the Stakeholder Management Plan will cover the following topics:
- Roles and responsibilities;
 - Communication plan during construction (e.g. frequency, means of recording communications and tracking progress, and escalation process);
 - Communication methods (i.e. project website, email address, phone number, committee meetings and community liaison); and
 - Complaints strategy and process.
- 2.11.3 Parties that ABP considers are likely to be affected by traffic management measures implemented during construction will be notified no less than 1 month in advance of any relevant road diversions and/or closures. These notifications will form part of the wider communications plan associated with the scheme, with methods of communication agreed as part of the Stakeholder Management Plan by the appointed Principal Contractor in conjunction with ABP.
- 2.11.4 A piling specific community liaison protocol will be developed by the Principal Contractor, with input from ABP and included within the Stakeholder Management Plan, so that businesses/ occupiers are kept informed of the piling activities, their duration, and their expected impact.
- 2.11.5 Measures relating to stakeholder communications regarding noise are detailed in Table 3.5, in Section 3 of this Onshore CEMP.

3. Impact avoidance and mitigation measures implementation plan

3.1 Overview

- 3.1.1 This section sets out the embedded impact avoidance and additional mitigation, enhancement and management measures to be implemented during onshore construction, as specified within the ES. It identifies where additional surveys will be required, either pre-construction or during construction.
- 3.1.2 This section also identifies the responsible party for each mitigation, enhancement measure or monitoring requirements. The majority of these will, however, be assigned to the appointed Principal Contractor.
- 3.1.3 The topics covered in this Onshore CEMP include:
- Water and sediment quality (Table 3.1)
 - Coastal Protection, Flood Defence and Drainage (Table 3.2);
 - Ground Conditions including Land Quality (Table 3.3);
 - Air Quality (Table 3.4);
 - Noise and Vibration (Table 3.5);
 - Traffic and Transport (Table 3.6);
 - Land Use Planning (Table 3.7);
 - Climate Change (Table 3.8); and
 - Protected Species (Table 3.9).
- 3.1.4 Sections 3.2 and 3.3 below, describe how the monitoring strategy will be implemented in order to assess the effectiveness of mitigation measures, monitor the impact of construction works and take other actions necessary to enable compliance.

Table 3.1: Water and sediment quality

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Impaired water and sediment quality due to accidents and spillages/ leaks	In terms of water and sediment quality, the potential risk from accidents and spillages/ leaks during construction will be avoided or minimised by ensuring that the onshore construction methods, proposed design, and the contractual arrangements follow environmental management best practice (ES Volume 1 Chapter 3, Section 3.3, DCO Application Document Reference number 8.2.3). In particular, the following guidance will be adopted:	Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Pollution prevention for businesses' Guidance in England (Defra and Environment Agency, 2019); • 'Pollution prevention for businesses' Guidance in England (Defra and Environment Agency, 2019); • Pollution Prevention Guidance (PPG), or Guidance for Pollution Prevention (GPP) in the UK (NetRegs, 2020): <ul style="list-style-type: none"> - Understanding Your Environmental Responsibilities – Good Environmental Practices (PPG1); - Works and maintenance in or near water (GPP5); - Working at construction and demolition sites (PPG6); and - Safe storage and disposal of used oils (GPP8). • The Oil Care Code; and • CIRIA's Environmental Good Practice on Site (CIRIA, 2015). <p>Best practice measures will include:</p> <ul style="list-style-type: none"> • Removal of waste from site in a timely manner. • Materials and containers which could possibly spill or contaminate the surrounding environment will be removed from site in a timely manner and taken to be processed at a licensed facility. • Storage of liquid oils/ chemicals in suitable containers/ bunded storage areas. • In the event of a pollution incident measures to report, manage, and minimise any impacts will be pursued, with construction spill response procedures to contain any accidental spills. • The existing oil spill contingency plan for Immingham Port will be followed in the event of a spillage, to minimise impacts of a spill entering the port waters. • Regular maintenance of plant. • Spill kits present and available for use in the event of a spill onsite. 	

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Designated refuelling areas. • Fuel will be stored in the site compound overnight, limiting the potential for fuel theft and vandalism which could cause pollution. • Any pollution incidents will be reported immediately to the relevant authorities, namely the Environment Agency, the Statutory Harbour Authority and NELC. • The workforce will be trained in preventing and dealing with pollution incidents. 	

Table 3.2: Coastal protection, flood defence and drainage

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Management of flood risk	<p>During the construction phase, the Contractor will monitor weather forecasts on a monthly, weekly and daily basis, and plan works accordingly. The Contractor will sign up to the Environment Agency's flood warning alerts and produce a Flood Emergency Response Plan (FERP) which will detail the actions to be taken on-site by the Contractor should a flood event occur during the construction phase. This FERP will be shared with and approved by the Environment Agency.</p> <p>No work will be undertaken on-site during a flood warning period and no visitors will be allowed access to the site during periods of inclement weather. These measures are important to ensure all workers, the construction site and third-party land, property and people are adequately protected from flooding during the construction phase.</p> <p>If water is encountered during below ground construction, suitable de-watering methods will be used. Any significant groundwater dewatering required will be undertaken in line with the requirements of the appropriate regulatory authority.</p> <p>All construction workers will undergo site induction training prior to being allowed access. This will include instructions on what to do in the event of emergency incidents such as flooding, access and egress routes and the location of safe refuge, if required.</p> <p>In line with best practice, flood resilience measures can be incorporated into the IERRT project to</p>	Contractor / ABP

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>minimise the amount of damage and reduce recovery time in the unlikely case of the site becoming inundated:</p> <ul style="list-style-type: none"> • Finished floor level raising; • Use of flood resistant building materials; • Use of water-resistant coatings; • Use of galvanised and stainless-steel fixings; • Raising electrical sockets and switches; and • Provision of an appropriate safe refuge. <p>Further details regarding the management of flood risk are available within Appendix 11.1: FRA (in Volume 3 of this ES Application Document Reference number 8.4.11).</p>	
<p>Management of construction site runoff</p>	<ul style="list-style-type: none"> • Construction waste/ debris will be prevented from entering any surface water drainage or water body. • Surface water drains on roads or within the construction compound will be identified and, where there is a risk that fine particulates or spillages could enter them, the drains will be protected (e.g., using covers or sand bags). • Debris and other material will be prevented from entering surface water drainage, through maintenance of a clean and tidy site, provision of clearly labelled waste receptacles, grid covers and the presence of site security fencing. • Temporary drainage facilities will be provided during the construction phase, where necessary, to ensure controlled discharge of surface water run-off. Measures that will be considered for temporary drainage include installation of measures such as swales, silt fences, and appropriately sized settlement tanks/ ponds to reduce sediment load and thus prevent blockages. • Where work is required within the channel of a waterbody e.g., a new outfall requires construction, if necessary, works will be undertaken in line with the requirements of the appropriate regulatory authority. 	<p>Contractor</p>

Table 3.3: Ground conditions including land quality

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Excavation collapse	During the construction phase, entry into excavations or other enclosed spaces will comply with confined space legislation and be assessed prior to entry.	Contractor
Contamination risk	<p>The Outline Remediation Strategy (ES Volume 3, Appendix 12.4, Application Document Reference number 8.4.12(d)) sets out the measures required to mitigate any significant/ unacceptable contamination risks. Where necessary, the strategy sets out requirements for disposal of materials that either do not meet the re-use criteria or are considered surplus to the scheme. The strategy also defines whether any treatment may be required, prior to reuse or disposal, as well as establishing risk-based compliance criteria for soils to be screened against. A confirmatory Ground Investigation (GI) has been undertaken which includes provision for ongoing monitoring works as is normal for a project such as the IERRT.</p> <p>Following receipt of the final interpretative report, a final Remediation Strategy (which will include the results of the final round of monitoring) will be prepared to take account of any relevant matters arising during the examination of the IERRT DCO and will, where necessary, incorporate any additional appropriate mitigation measures or changes to working practices in light of reviewing the findings and conclusions of the ground investigation interpretative reports. This strategy will be developed during the detailed design stage and approved by NELC.</p> <p>If, following the confirmatory GI undertaken for the purposes of detailed design, it is concluded that piling or other deep foundations or a form of ground improvement is to take place, the detailed construction methodology will be assessed to reduce the risk of the development of preferential pathways (e.g. groundwater flow) between the Made Ground present and the underlying Secondary superficial aquifers and Principal bedrock aquifers. The best practice guidance for piling (Environment Agency, 2001) and a foundation works risk assessment will be used in piling works plans and piling operations. Location specific Piling Risk Assessments will be undertaken and piling method statements will detail mitigation measures to protect</p>	ABP/ Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>the aquifer from potential pollution associated with piling operations.</p> <p>The confirmatory GI will define the site-specific position on aggressive ground conditions and derive concrete design sulphate (DS) and aggressive chemical environment for concrete classifications (ACEC). The DS and ACEC classifications will be used to specify the appropriate class of any concrete foundation and/ or service pipes that will be used in the construction of the IERRT project infrastructure. This will mitigate the potential risk caused by aggressive ground conditions.</p>	
Disposal of waste materials	<p>A Materials Management Plan (MMP), under CL:AIRE (2011) Definition of Waste: Development Industry Code of Practice (CoP), will be prepared in accordance with the Outline MMP at Appendix D and implemented to provide suitable controls to facilitate the re-use of materials such as soils and clean crushed concrete. The Outline MMP details the procedures and measures to be taken to classify, track, store, dispose of and potentially re-use all excavated materials that are expected to be encountered during the development works. The detailed MMP will be produced by the Principal Contractor and the relevant notification submitted to the Environment Agency as required under the CL:AIRE CoP.</p>	Contractor
Construction dust	<p>Dust generation will be kept to a minimum in accordance with general best practice, as outlined in, for example, "Environmental Good Practice on Site", 3rd Edition, CIRIA Publication C692. The Onshore CEMP includes measures for the management of dust generation (see Table 3.4 below).</p>	Contractor
Re-use of excavated materials	<p>All earthworks operations will be undertaken in accordance with BS1997:2004 Eurocode 7, BS16907-1 to 7:2018 Earthworks (BSI, 2018); BS6031:2009 Code of Practice for earthworks (BSI, 2009) and National Highways (NH) guidelines including DMRB Series 600 'Earthworks' (Highways England, 2016). The IERRT project design will actively work towards achieving an earthworks balance. Best practice will be adopted during construction to prevent or minimise spillage risk and spillage impacts adhering to this Onshore CEMP.</p>	Contractor
Disposal of soil	<p>Where soil materials are deemed to be surplus to the requirements of the project, such materials, will</p>	Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>be classified as waste under the Waste Framework Directive (WFD) (2009/98/EC) as either hazardous (17-05-03) or non-hazardous (17-05-04) soils. Classification will be undertaken using a proprietary assessment tool such as “HazWasteOnline™”.</p> <p>Waste deemed to be hazardous, will require testing using the Waste Acceptance Criteria (WAC) prior to disposal to landfill. The ‘Waste Duty of Care Code of Practice’ (Department for Environment, Food and Rural Affairs, 2018) notes that there is a duty of care for the safe management of waste, particularly for the protection of the environment and human health. The duty of care is applicable if waste is imported, produced, carried, kept, treated, disposed of, or have control (as a dealer or broker) of waste. Please refer to the Site Waste Management Plan in Appendix F of this Onshore CEMP.</p>	
<p>Contamination to the surrounding area from stockpiled excavated materials</p>	<p>Excavated material will be stockpiled in a designated area or areas of the site located away from watercourses to prevent run-off from the stockpile from entering surface water bodies.</p> <p>All areas of stockpiled soil may be reseeded or otherwise covered temporarily if they are not to be used within three months.</p> <p>All areas of unused and exposed soil following reinstatement of the proposed development will be reseeded or otherwise covered as soon as possible. Erosion protection matting may also be used to minimise sediment being entrained by water flow or becoming entrained by the wind if allowed to dry out.</p>	<p>Contractor</p>
<p>Runoff from vehicle/ equipment washing areas.</p>	<p>Washing out of vehicles or equipment will only take place in controlled areas.</p>	<p>Contractor</p>
<p>Ground gas leak</p>	<p>The design and build of temporary structures will incorporate ground gas protection measures as necessary.</p>	<p>Contractor</p>
<p>Contamination due to concrete use</p>	<p>Concrete batching, concrete usage and accidental spillage relating to foundation and building construction will be managed. Measures will include:</p> <ul style="list-style-type: none"> • Wash water from any batching plants will not be discharged to the water environment without the approval of the relevant authority. 	<p>Contractor</p>

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> Where possible, concrete will not be batched on Site and will instead be delivered on an 'as and when' basis in ready mixed lorries. If on-site batching is required these facilities will be located on flat impermeable hardstanding at least 50 m from any water body and with a temporary surface water drainage system that is isolated from general surface water runoff so that no runoff potentially containing cementitious products may enter any natural water body or drain. The delivery and use of concrete and cement will be done with particular care as it is highly corrosive and alkaline. No washing out of delivery vehicles to take place on Site without suitable provision for the washing out water. A suitable location that is lined with a geotextile to prevent infiltration to ground will be used. 	
Damage to below ground services during excavating	Utilities and services will be identified, removed and rerouted where necessary in locations of proposed structures. Haul routes will be created to remove and minimise the potential impact on utilities and services above or below ground.	Contractor
Encounter of unidentified contamination	<p>If, during development, any previously unidentified contamination is encountered, an appropriate investigation to allow sampling and testing of materials and risk assessment will be undertaken. Any actions resulting from the risk assessment will be agreed with the local planning authority along with any remedial measures in consultation with the Environment Agency, where risks to controlled waters are identified.</p> <p>The measures detailed within the Outline Remediation Strategy (ES Volume 3, Appendix 12.4, Application Document Reference number 8.4.12(d)) which will be incorporated into the final Remediation Strategy, will be followed if unidentified contamination is encountered.</p>	Contractor
Discovering of unexploded ordnance (UXO)	<ul style="list-style-type: none"> The following risk mitigation measures are recommended by SafeLane and will be adopted where necessary by the Contractor, to support the proposed works with regard to a medium UXO: <u>Shallow intrusive works (e.g. excavations):</u> <ul style="list-style-type: none"> UXO Safety and Awareness Briefing (Toolbox Brief (TBB)); 	Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> - Site Specific Safety Instruction Training Courses; - Non-Intrusive Magnetometer Survey (in greenfield areas only) followed on by a target investigation; - Search and Clear; and - Explosive Ordnance Disposal (EOD) Engineer Watching Brief for brownfield areas which are unsuitable for non-intrusive magnetometer survey. <p><u>Deep intrusive works (e.g. piling)</u></p> <ul style="list-style-type: none"> - UXO Safety and Awareness Briefing (TBB); - Site Specific Safety Instruction Training Courses; and - Intrusive magnetometer survey of pile/ borehole positions. <ul style="list-style-type: none"> • The following risk mitigation measures are recommended by Zetica UXO and will be adopted by the Contractor, to support the proposed works with regard to a low UXO risk: <ul style="list-style-type: none"> - For excavation activities, Zetica recommend that works can proceed and a formal UXO awareness can be provided if additional comfort is required. - For boreholes and piling activities, it is recommended to proceed with the works. 	

Table 3.4: Air quality

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Construction dust mitigation	<p>A Medium risk of dust impact was identified due to the potential dust emission magnitude identified from the scale of demolition and construction works, and the sensitivity of the area. The list below is based on those recommended by the Institute of Air Quality Management for medium risk sites that are practical for implementation in the context of the IERRT construction site. These recommendations will be adopted by the contractor:</p> <ul style="list-style-type: none"> • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary; 	Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Display the head or regional office contact information; • A comprehensive list of dust control measures will be included within the Contractor’s Detailed Onshore CEMP; • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; • Make the complaints log available to the local authority when asked; • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook; • Undertake daily onsite and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked; • Carry out regular site inspections to monitor compliance with the Onshore CEMP, record inspection results; • Increase the frequency of site inspections by the person accountable for air quality and dust issues onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions; • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible; • Erect solid screens/ barriers or enclose site or specific operations where there is a very high potential for dust production and the site is active for an extensive period; • Avoid site runoff of water or mud; • Keep site fencing, barriers and scaffolding clean using wet methods; • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below; 	

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Cover, seed or fence long-term stockpiles to prevent wind whipping; • Ensure all vehicles switch off engines when stationary – no idling vehicles; • Avoid the use of diesel-powered or petrol-powered generators and use mains electricity or battery powered equipment where practicable; • Impose and signpost maximum-speed-limits on surfaced and unsurfaced haul roads and work areas; • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression technique; • Ensure an adequate water supply on the site for effective dust/ particulate matter suppression/mitigation; • Use enclosed chutes and conveyors and covered skips; • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment if it is fitted; • Ensure equipment is readily available onsite to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods; • Avoid bonfires and burning of waste materials; • Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust); • Ensure effective water suppression is used during demolition operations; • Bag and remove any biological debris or damp down such material before demolition; • Avoid scabbling (roughening of concrete surfaces) if possible; • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out; 	

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site; • Avoid dry sweeping of large areas; • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; • Record all inspections of haul routes and any subsequent action in a site logbook; • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). Ensuring that there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and • Access gates to be located at least 10 m from receptors where possible. 	
<p>Construction emissions (site plant, Non-Road Mobile Machinery (NRMM))</p>	<p>The following measures will be implemented to reduce emissions associated with site plant and NRMM:</p> <ul style="list-style-type: none"> • They will conform to relevant emissions standards; • Operate on an only when required basis, with no engine idling; • Be well maintained and operate in accordance with manufacturer’s instructions; and • Be operated by fully trained and qualified individuals. 	<p>Contractor</p>
<p>Construction road traffic emissions</p>	<p>The following measures will be implemented to reduce emissions associated with road traffic:</p> <ul style="list-style-type: none"> • The emissions standards of the construction vehicle fleet will be a consideration when appointing construction contractors; • Construction vehicle trips will be minimised as much as possible; 	<p>Contractor</p>

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> Construction traffic routes will be planned to avoid areas where air quality is already constrained; and Single car occupancy trips will be discouraged. 	

Table 3.5: Noise and vibration

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Construction noise at specific Noise Sensitive Receptors (NSRs)	In addition to the measures below, the crusher and screening plant required during construction will be located a minimum of 250 m away from the on-port NSRs and temporary acoustic screening will be erected around construction plant operating near the PAM building or around the PAM building when construction works is taking place near the PAM building.	Contractor
Construction noise	<p>For landside construction, working hours will be 07:00 to 19:00 Monday to Friday and Saturday (07:00 to 13:00) with no works taking place on Sundays.</p> <p>It is assumed that some landside works may need to take place outside of the core working hours and would be undertaken providing that they comply with any restrictions agreed with the local authority via a Section 61 application under CoPA. If a Section 61 application is required, the contractor will liaise with NELC regarding the application process and timescales.</p> <p>The Contractor will follow the advice contained within BS 5228:2009+A1:2014 'Code of practice for noise and vibration control on construction and open site' (BSI, 2014). The following measures will also be implemented on site to reduce as far as practicable the potential environmental impacts associated with airborne noise and vibration from onshore construction activities:</p> <ul style="list-style-type: none"> Where reasonably practicable, the contractor will use quieter working methods, the most suitable plant and reasonable standard construction hours of working for noisy operations; Where possible, the items of plant will be located the furthest distance from the nearby NSRs and ecological receptors. Plant known to emit noise strongly in one direction will, when possible, be 	Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>orientated so that the noise is directed away from noise-sensitive areas;</p> <ul style="list-style-type: none"> • Acoustic covers to engines will be kept closed when the engines are in use and idling; • Machines such as cranes that may be in intermittent use will be shut down between work periods or should be throttled down to a minimum. Machines will not be left running unnecessarily; • Materials will be lowered whenever practicable and should not be dropped. Any chutes and skips will be lined with sound attenuating material to reduce impact noise; • No employees, subcontractors and persons employed on the site will cause unnecessary noise from their activities e.g., excessive 'revving' of vehicle engines, shouting and general behaviour etc. No radios or other audio equipment will be allowed on site; • When operating plant, the use of noise-control equipment such as jackets on pneumatic drills, acoustic covers on compressors, shrouds on piling rigs and cranes will be implemented; • All plant machinery permitted to site and used on-site will be maintained to the appropriate standards. Checks for adequate lubrication to reduce squeaks and the tightening of loose nuts and bolts to minimise rattles will form part of a routine maintenance cycle; • Any tannoy system on-site to be used for emergency purposes only; • Where required and achievable, temporary screening between the source and the receiver of noise emissions will be installed; • All plant machinery will conform with relevant standards and directives on permitted noise emissions levels; • The hoods and doors on compressors and cranes will be closed but also be tightly fitting and well-sealed - these doors will be checked on a regular basis; 	

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<ul style="list-style-type: none"> • Electrically powered plant will be used over diesel power generators where possible and feasible; • All pneumatic percussive tools will be provided with effective silencers/ acoustic covers; • Audible warning systems (including reversing alarms) will be switched to the minimum setting required for health and safety; and • All contractor communication devices will be used at a minimum audible level. <p>Regular communication with the local community throughout the construction period will also serve to publicise the works schedule, giving notification to residents regarding periods when higher levels of noise may occur during specific operations, and provide lines of communication through which questions and complaints can be raised and addressed.</p> <p>It will be advised that all external windows and doors of the PAM building, PK Construction Office, Nippon Gas Office and the relocated Malcolm West Office (once operational) that face the construction works are kept closed.</p>	
Construction traffic noise	Refer to Section 2.3: Traffic Management of this Onshore CEMP, which details procedures to be used to manage traffic movements within the works and on the local road network in the vicinity of the closest NSRs. Designated construction traffic routes will be used, which will avoid the use of the busiest roads and residential streets near the site.	Contractor / ABP
Construction vibration	Although the initial vibration assessment indicates that significant effects on nearby buildings or structures due to construction vibration is unlikely, a piling specific community liaison protocol will be developed so that businesses/ occupiers are kept informed of the piling activities, their duration, and their expected impact. Although the vibration may be perceptible, based upon the initial vibration assessment the levels predicted structural and/or cosmetic damage to properties is not expected to occur. Where possible the piling operations adjacent to the PAM building will be undertaken when the building is not occupied, within the construction working hours or with prior notification of the works occurring.	Contractor / ABP

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>Measures to ensure vibration impacts relating to construction activities are reduced include:</p> <ul style="list-style-type: none"> • Where feasible use alternative methods to impact driven piles; • Use vibratory rig to drive piles to refusal; • Once the piling methods and piling rig is confirmed the construction vibration predictions to be verified to ensure that there are no significant effects. • If necessary, the effective energy per blow can be reduced by decreasing the drop height of the hammer. • For construction works in proximity to the PAM building, a maximum pile hammer energy of 63,500 Joules for percussive piling will be adhered to, and where possible, alternative (low vibration) piling techniques such as sheet hydraulic jacking will be utilised. <p>Verification of the construction vibration predications will be undertaken once the piling methods and piling rig are known to confirm that there are no significant effects expected. Monitoring will also be required to ensure the thresholds are not exceeded.</p>	

Table 3.6: Traffic and transport

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Impact on the local traffic network	<p>The National Policy Statement for Ports paragraph 5.4.22 requires consideration of the following mitigation:</p> <ul style="list-style-type: none"> • Control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements; • Make sufficient provision for HGV parking, either on the port estate or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads during normal operating conditions. Developments should be designed with sufficient road capacity and parking provision (whether on- or offsite) to avoid the need for prolonged queuing on approach roads, and 	<p>Contractor</p> <p>ABP</p> <p>ABP</p>

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>particularly for uncontrolled on-street HGV parking on nearby public roads in normal traffic operating conditions, and allowing reasonable estimates for peak traffic patterns and fluctuations during normal operations; and</p> <ul style="list-style-type: none"> Ensure satisfactory arrangements, taking account of the views of road network providers and of the responsible police force(s), for dealing with reasonably foreseeable abnormal disruption. Where such effects are likely to cause queuing on the strategic road network or significant queuing on local roads, the applicant should include the outcome of consultation with the relevant police force(s) as to traffic management measures that will be brought into effect, what the procedures will be for triggering them, and attribution of costs. <p>Construction traffic management measures are set out in Section 2.3 of this Onshore CEMP.</p>	Contractor

Table 3.7: Land use planning

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Harm to works/ people within the Development Proximity Zone (DPZ)	Minimise the numbers who may be present within the DPZ to short periods of time.	ABP/ Contractor

Table 3.8: Climate change

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Climate change effects	<p>To reduce the effects of climate change, the below measures will be adopted:</p> <ul style="list-style-type: none"> Increased frequency in severe weather events (e.g. storms): <ul style="list-style-type: none"> The Drainage Strategy (Annexed to Appendix 11.1 in Volume 3 of ES (Application Document Reference number 8.4.11)) considers the flood risk assessment's findings to ensure that surcharged levels within collector, carrier and receiving systems are appropriately designed and mitigated. The Drainage Strategy 	Contractor/ ABP

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>considers tide-lock scenarios at flapped outfalls.</p> <ul style="list-style-type: none"> • Increased frequency of heavy precipitation events: <ul style="list-style-type: none"> - Using the latest industry guidance, the Drainage Strategy considers the projected increase in peak rainfall intensity allowances. • Increasing average temperatures and increasing frequency of hot days and heatwaves: <ul style="list-style-type: none"> - In adherence with British Design Standards the following mitigation measures are considered: <ul style="list-style-type: none"> ○ Prevention measures and health and safety plans to be developed to prevent worker exhaustion due to heat. ○ Use of materials with superior properties which offer increased tolerance to high temperatures to be considered. ○ Regular maintenance of assets to be undertaken to detect deterioration and fix damage. ○ All new buildings and assets will either be designed for the climatic conditions using appropriate design guidance where available, or adaptive capacity will be built into the designs. 	

Table 3.9: Protected Species

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
Impact to protected and notable species during construction and operation	<p>Badger</p> <p>A precautionary check for badger setts will be undertaken during vegetation clearance works in areas of dense impenetrable scrub that could not be accessed during the Phase 1 habitat survey. This is limited to peripheral areas along the railway line, and a small central area close to the water tower. If active badger setts are uncovered, works will be suspended, and an appropriate course of action determined. This may include applying for a badger licence from Natural England to close/ disturb the sett; if required such works would only be</p>	ABP/ Contractor

Potential Impact	Mitigation/ Enhancement Measure	Responsibility
	<p>undertaken in the licence season which is July to November inclusive.</p> <p>Nesting Little Ringed Plover</p> <p>Site clearance works in the open unvegetated southern and western areas of the site will be commenced prior to the onset of the nesting bird season (March to August inclusive) where possible. If this is not possible, bird scaring measures may be deployed in these areas to discourage nesting little ringed plover (e.g. bird scaring tape or similar).</p> <p>Where the above cannot be accommodated, a pre-construction check for nesting little ringed plover will be undertaken by an ornithologist and an appropriate exclusion zone set up around any active nests. The exclusion zone will be determined by the ornithologist but will need to be sufficiently large to avoid disturbance, since little ringed plover is a Schedule 1 species and is protected against disturbance whilst on/ near the nest (including dependent young) under the Wildlife and Countryside Act 1981 (as amended).</p> <p>Nesting Peregrine</p> <p>A pre-construction check of the water tower for evidence of nesting activity by peregrine (between February and July) will be undertaken by an ornithologist prior to the commencement of site clearance works.</p> <p>Breeding Birds (Non-Schedule 1)</p> <p>Site clearance of vegetation that could support nesting birds (including trees, shrubs and grassland) will be undertaken outside the breeding bird season (March to August inclusive) where possible.</p> <p>Where vegetation removal cannot be accommodated outside the breeding bird season, it will be checked for the presence of nests prior to removal and an appropriate exclusion zone set up around any active nests. No works will be permitted within the exclusion zone until any dependent young have fledged.</p>	

3.2 Checking and corrective action

Monitoring

- 3.2.1 Environmental monitoring of impacts will be undertaken throughout the construction phase. In addition to any monitoring specified in other licences and consents (e.g. under Protected Species Licensing, if required), the requirements of the Onshore CEMP specified in **Tables 3.1 to 3.9** will be closely monitored.
- 3.2.2 As part of the monitoring process, the appointed contractor will allocate a designated Environmental Site Officer(s), who will be present on-site throughout the construction, including when new activities are commencing and ensure the applicable monitoring as detailed in Section 3 is being implemented. The findings of any monitoring will be shared with those persons / organisations identified within the Onshore CEMP. If considered necessary corrective actions will be agreed and implemented under the supervision of the Environmental Site Officer.
- 3.2.3 The Environmental Site Officer will observe site activities and report any deviations from the Onshore CEMP in a log book, along with the action taken and general conditions at the time. The Applicant will be informed of any deviations from the Onshore CEMP as soon as possible following identification of such issues.
- 3.2.4 The Environmental Site Officer will also assist the Applicant with day-to-day contact with North East Lincolnshire Council, and other regulatory agencies such as the Environment Agency.
- 3.2.5 During construction, the Environmental Site Officer will conduct regular walkover surveys to ensure all requirements of the Onshore CEMP are being met. Action from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Foreman for programming requirements and issued weekly for actioning.
- 3.2.6 The Environmental Site Officer will arrange regular formal inspections to ensure the requirements of the Onshore CEMP are being met. After completion of the works, the Environmental Site Officer will conduct a final review.

Records

- 3.2.7 The Environmental Site Officer will retain records of environmental monitoring and implementation of the Onshore CEMP in a log book. This will allow provision of evidence that the Onshore CEMP is being implemented effectively. These records will include:
- An Environmental Action Schedule;
 - Records of licences, permits and approvals;
 - Results of inspections;
 - Other environmental surveys and investigations; and
 - Environmental equipment test records.

3.2.8 As detailed in paragraph 1.1.1, the Principal Contractors Onshore CEMP will be a live document and as such updated regularly, with a full review on at least a quarterly basis throughout construction.

3.3 Management review

3.3.1 The Principal Contractor's Onshore CEMP will be signed off on completion of the construction works. The environmental management of the operational development will fall under the existing management plans for the Port of Immingham.

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Appendix A Outline Construction Workers' Travel Plan (CWTP)

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Workers Travel Plan

Immingham Eastern Ro-Ro
Terminal, Port of Immingham

*Outline Construction Workers Travel
Plan*

December 2023

Prepared by:

SJT/RT/23325-40a Outline Construction Workers
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Figure 1 Road Names Plan

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Workers Travel Plan

1.0 INTRODUCTION

- 1.1 This Outline Construction Worker Travel Plan (CWTP) has been prepared by David Tucker Associates (DTA) on behalf of Associated British Ports (ABP) to support the Development Consent Order application for the proposed roll-on/ roll-off (Ro-Ro) facility within the Port of Immingham, which will be known as the Immingham Eastern Ro-Ro Terminal (IERRT).
- 1.2 This Outline CWTP has been prepared in advance of the adopted CWTP and will guide its preparation. It sets out details of the targets and responsibilities of the Travel Plan. The adopted CWTP will be agreed between North East Lincolnshire Council and ABP, providing a commitment to deliver the travel planning measures.
- 1.3 The primary objective of a CWTP is to reduce the adverse effects of construction workers access to the site. Thus, the most easily identified benefits of a CWTP are those that are directly related to reductions in vehicle use, namely less congestion, noise, air pollution and fewer accidents.
- 1.4 There are also various other benefits associated with the implementation of CWTP initiatives, depending upon the content of such initiatives. These benefits can include:
- Increased productivity – a healthier construction workforce with greater morale can increase productivity;
 - Energy savings – through reduced fossil fuel use;
 - An improved environment for pedestrians and cyclists;
 - Improved organisation image;
 - Cost savings to construction staff as travel becomes more efficient; and
 - Improved quality of life through time savings achieved as a result of less congestion and reduced stress.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Workers Travel Plan

- 1.5 This Outline CWTP sets out objectives and suggests measures to promote and provide for the use of sustainable travel modes. An approach for implementation, target setting, and monitoring is also discussed.

2.0 ACCESSIBILITY OF APPLICATION SITE

2.1 Site Location

2.1.1 The Port of Immingham is located to the north-east of Immingham and approximately 11km north-west of Grimsby. The Port estate is bound by the Humber Estuary to the north-east, Queens Road to the south-east, the A1173 to the south-west and the Phillips 66 gas facility, the CLH site and the AMEP site to the north-west.

2.2 Local Highway Network

2.2.1 A plan of the local road network can be seen on **Figure 1**. This shows the context of the Port of Immingham which has two highway access points, East Gate and West Gate.

2.2.2 Queens Road is a single carriageway road which measures approximately 8.0m in width. The road is subject to a 40mph speed limit. There is a footway along the western side of the carriageway starting some 700m south of the East Gate. Queens Road runs between the East Gate of the Port of Immingham and the A1173 Manby Road via a three-arm roundabout.

2.2.3 The A1173 Manby Road is a single carriageway road which measures approximately 8.0m in width. The road is subject to the national speed limit of 60mph. There is a footway along the A1173 which changes between the eastern and western sides of the carriageway between the A1173 Manby Road/ Queens Road Roundabout and the A1173 Manby Road/ Pelham Road Roundabout. Dropped kerbs with tactile paving are provided at all crossing points. The A1173 runs between the A160/ A1173 Manby Road/ Humber Road Roundabout and the A180/ A1173 Manby Road Roundabout.

2.2.4 The A180 is a dual carriageway road which measures approximately 20m in width and is part of the Strategic Road Network (SRN). The road is subject to the national

speed limit of 70mph. The A180 runs between Grimsby and becomes the M180 motorway some 20km south-west of the Port of Immingham.

2.2.5 The M180 motorway runs from Junction 5 of the M18 motorway before becoming the A180 near Immingham.

2.3 Public Transport Provision

Bus Services

2.3.1 The nearest bus stop to the site is located on Queens Road, at the junction with Laporte Road, approximately 250m south of the East Gate into the Port of Immingham. The stop is serviced by the number 5M. This service runs between Immingham and Grimsby every Monday to Friday between 16:19 and 17:49 at a frequency of 30-minutes.

Rail Services

2.3.2 The nearest railway station to the site is Stallingborough Railway Station which is approximately 5.5km south off Station Road. There are four cycle storage spaces located at the station. The services at the station are operated by East Midlands Railway only.

2.3.3 Habrough Railway Station, which is approximately 7.5km southwest of the site off the B1210, is located on the same line as Stallingborough Railway Station but is served by a higher number of services. There are four cycle storage spaces located at the station and 13 car parking spaces. The services at the station are operated by East Midlands Railway, Northern Trains and TransPennine Express. On weekdays, the station is served by an hourly TransPennine Express service between Cleethorpes and Manchester Airport. East Midlands Railway operate a two-hourly service between Grimsby Town and Leicester via Lincoln and Nottingham as well as a two-hourly service between Cleethorpes and Barton-on-Humber. On Saturdays, there are

also three trains per day between Cleethorpes and Sheffield via Brigg which are operated by Northern Trains.

2.3.4 On Sundays, the TransPennine Express service is two-hourly in the morning but increases to hourly in the afternoon. During the summer months, there are three East Midlands Railway services between Nottingham and Cleethorpes and four services to Barton-on-Humber with no services on either of these routes in the winter.

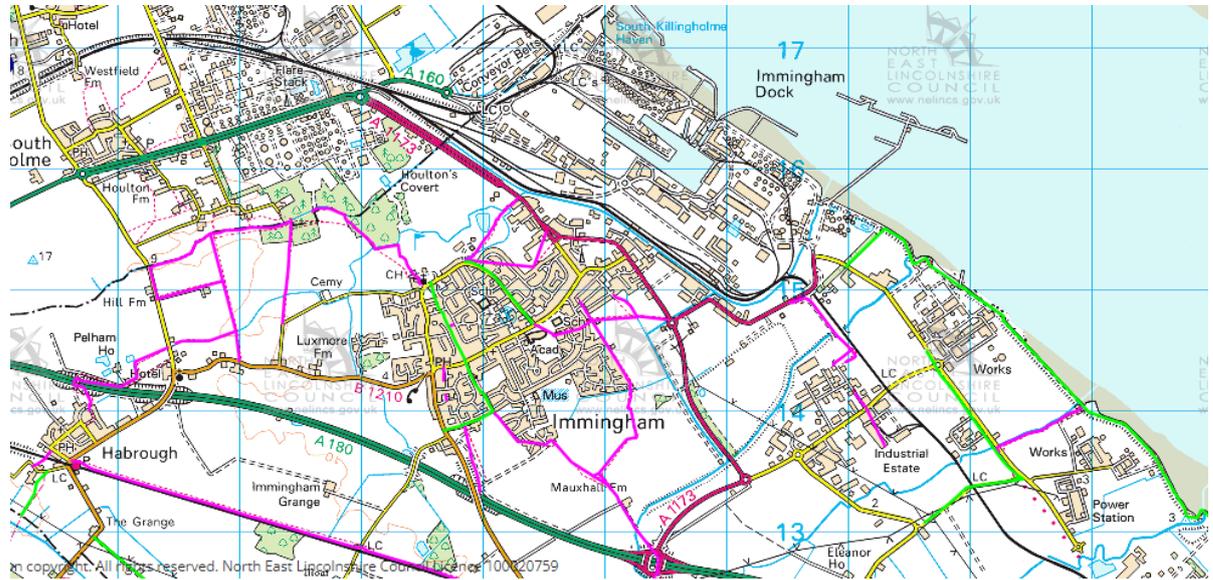
2.4 Walking and Cycling Provision

2.4.1 As well as the footways mentioned in **Section 3.2** above, all the residential roads in and around Immingham have lit footways on both sides of the carriageway. They are also all subject to a 30mph speed limit making them safe routes for both pedestrians and cyclists to use.

2.4.2 ABP are progressing a program to improve pedestrian and cycle facilities within the Port. The completion of this has been delayed due to the Covid-19 pandemic but is ongoing. These footways give pedestrian access to the Port via East Gate.

2.4.3 There are a number of Public Rights of Way (PROWs) in the vicinity of the Port. There is a public footpath off Queens Road and a public Bridleway off Laporte Road, which forms part of the coastal path both of which are approximately 500m from East Gate. All the PROWs near to the Port can be seen in **Figure 1**.

Figure 1 - Public Rights of Way Locations



3.0 TRAVEL PLAN TARGETS AND OBJECTIVES

3.1 Introduction

3.1.1 The overall CWTP objective for the development is to reduce the proportion of staff travelling by single occupancy car and this chapter provides an indication as to the overall impact travel planning could have at reducing car mode share.

3.2 Aims and Objectives

3.2.1 The aim of this outline CWTP is to ensure that construction workers are aware of the sustainable travel modes available for accessing the Port of Immingham and the surrounding area, including public transport and car sharing schemes, in order to minimise single occupancy vehicle trips.

3.2.2 The aim of this Outline CWTP will be achieved through the delivery of a series of key objectives, which the adopted CWTP will build upon:

- Objective 1: Raise awareness of the alternative sustainable travel options available for travel to / from the Port of Immingham;
- Objective 2: Provide each construction staff member with access to travel information;
- Objective 3: Promote the CWTP and associated measures;
- Objective 4: Maintaining a line of communication with construction staff to ensure they have access to relevant travel information;
- Objective 5: Reduce the traffic impact of the construction in terms of the movement of construction staff;
- Objective 6: Promote the use of public transport, car sharing, cycling and walking to work;
- Objective 7: Promote the use of low and zero emission vehicles;
- Objective 8: Discourage the use of single occupancy car travel;

3.3 Base Mode Share

3.3.1 During construction, it is estimated that there will be around 120-150 construction workers on site on a typical day.

3.3.2 2011 Census data has been used to derive a preliminary base mode share for the construction workers. For this, journey to work mode share data for the North East Lincolnshire 001 Middle Super Output Area (MSOA), within which the site is located, was used and is summarised in **Table 1**.

Table 1 - Modal split

Mode of travel	North East Lincolnshire 001
Underground, metro, light rail or tram	0.0%
Train	0.2%
Bus, minibus or coach	2.2%
Taxi	0.3%
Motorcycle, scooter or moped	1.0%
Driving a car or van	79.8%
Passenger in a car or van	6.2%
Bicycle	2.9%
On foot	7.0%
Other method of travel to work	0.4%

3.3.3 Based on the above, it can be expected that with no measures in place, approximately 120 trips (240 two-way movements) would take place in a single occupancy vehicle.

3.4 Targets

3.4.1 The adopted CWTP and measures within it would be in place from the start date of the construction phase, and as such construction staff will be fully aware of its existence upon arrival. They would be provided with this information upon induction / commencement of training. Sustainable forms of travel will be promoted, and construction staff would benefit from the measures and initiatives of the CWTP.

3.4.2 It is important that the CWTP contains a headline target so that its overall performance can be monitored and, if necessary, further measures can be introduced to encourage mode shift towards more sustainable modes of travel.

3.4.3 The initial headline target proposed is:

- No more than 70% of construction staff trips to be via single occupancy vehicle movements.

4.0 TRAVEL PLAN MEASURES, MANAGEMENT AND MONITORING

4.1 Measures

Sustainable Travel Information

4.1.1 All construction staff upon their induction / commencement of training will be made aware of sustainable travel information to travel to and from the Port of Immingham. This will include the following information:

- An introduction to the CWTP, its purpose and highlighting a copy of the CWTP is available to construction staff;
- Information on the health benefits of using active modes of transport;
- A brief of the sustainable travel modes available together with access to information;
- Any Contractor policy related to travel; and
- Details of the car share scheme and alternative modes of transport.

Travel Information

4.1.2 Construction staff will be made aware of all travel choices and will be directed to accurate and up-to-date information as soon as they commence their employment to encourage a culture of sustainable travel, which will be made available in the construction staff welfare area. Accordingly, travel information will include:

- Details of the CWTP measures and its objectives and targets;
- Plans of walking and cycle routes in the area;
- Passenger transport timetable information for services in the vicinity of the Port of Immingham and onward connections, including railway timetables and maps showing nearest stops and routes;
- Contact details for bus / railway / taxi operators and ticket ordering;

- Contact details for the Construction Site Manager;
- Car share information;
- Information on the health benefits of sustainable travel; and
- Details of the websites and telephone advice services to enable staff to obtain details on their individual journey requirements, including the journey planner Traveline ([REDACTED]).

4.1.3 The development of travel information is a crucial stage in the CWTP process. It is essential that it contains the necessary travel information to suitably inform recipients. The Construction Site Manager will be responsible for displaying travel information and keeping it up to date.

Walking and Cycling

4.1.4 The promotion of walking and cycling as a sustainable mode will be made to all construction staff, for all or part of their journey.

4.1.5 Walking and cycling are cheap, offers reliable journey times and is environmentally friendly. CWTPs can offer substantial health benefits to individuals who are motivated to complete more journeys by walking and cycling.

4.1.6 The following measures are proposed in order to promote walking and cycling:

- All construction staff will be made aware of sustainable travel information which will include maps of walking and cycling routes that link to local public transport, through briefings and information provided in the staff areas;
- The Construction Site Manager will be responsible for promoting the health benefits of active modes to staff;
- The Construction Site Manager will be responsible for identifying suitable changing facilities for staff;
- A communal toolbox, to include puncture repair kit, cycle tools, oil, etc; and

- Cycle storage to be provided.

4.1.7 The provision of bicycles for construction staff will be considered to support linked journeys from the local railway station.

Public Transport

4.1.8 The following measures will be implemented to encourage construction staff to travel by bus as a sustainable alternative to the car:

- Details of local bus services will be made available to construction staff, including timetables and maps, through briefings and the staff welfare areas;
- The objectives of this Outline CWTP are to promote more sustainable transport choices for construction staff to access the Port of Immingham, and this can effectively be achieved by the provision and promotion of high-quality public transport sustainable alternatives; and
- The Construction Site Manager will also be responsible for maintaining up to date information on fares for public transport operating within the vicinity of the Port of Immingham and the local area, together with details of multi-journey ticketing options, provided in the staff welfare areas.

Car Sharing

4.1.9 The Construction Site Manager will be responsible for promoting a web-based car share database for construction staff to / from the collection / drop off locations and encourage car sharing during briefings and promoting other web-based databases such as Liftshare ([REDACTED]).

4.1.10 Systems will also be put in place to ensure that in cases of emergency, when a car sharing driver is unavailable their car sharer will have a guaranteed means of getting home. This measure will be in place for all construction staff.

4.1.11 To encourage car sharing, the following will be implemented:

- Provide details of the local and national car share websites such as Liftshare ([REDACTED]);
- Consider providing preferential parking or other incentives for staff that car share; and
- Manage, where possible, the number of contractors on site at any one time to reduce trips generated and promote car sharing.

4.1.12 The use of car sharing is expected to be a realistic sustainable alternative for construction staff and the Construction Site Manager will be responsible for promoting this. It is likely that car sharing will be the most popular form of sustainable travel for construction staff and thus will be encouraged to car share through the utilisation of the travel information.

Car Parking

4.1.13 A temporary car parking area will be provided within the construction site, to accommodate parking on-site. Construction worker parking at the site will be monitored, controlled and recorded to ensure that single occupancy car use is minimised.

4.1.14 The provision of electric vehicle charging points in the car park will be considered.

4.2 **Management**

4.2.1 A CWTP strategy that sets out the measures and their implementation is very important. Elements of an adopted CWTP strategy usually relate to:

- Securing the resources (including time) that are necessary to develop and implement the CWTP; and
- Consulting and educating construction staff.

4.2.2 In the context of the IERRT construction phase, the adopted CWTP will be orientated towards influencing the travel behaviour of construction staff. It will seek to advise on the benefits of using sustainable transport modes and promoting their use.

4.2.3 The Construction Site Manager will be responsible for the overall implementation of the adopted CWTP.

4.3 **Monitoring**

4.3.1 The Construction Site Manager will act as the central point regarding the implementation of the CWTP initiatives and will be responsible for the ongoing monitoring of the CWTP targets.

4.3.2 To enable the success of the CWTP to be established, the Construction Site Manager will monitor the implementation of the measures and review where necessary.

4.3.3 The Construction Site Manager will be responsible for a regular check on car parking, in consideration of the mode share and headline target, and keep a record of its usage.

Appendix B Outline Construction Traffic Management Plan (CTMP)

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

Immingham Eastern Ro-Ro
Terminal, Port of Immingham

*Outline Construction Traffic
Management Plan*

December 2023

SJT/RT/23325-41a Construction Traffic
Management Plan

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Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

1.0 INTRODUCTION

1.1 Overview

1.1.1 This Outline Construction Traffic Management Plan (Outline CTMP) has been prepared by David Tucker Associates (DTA) on behalf of Associated British Ports (ABP) and sets out the principles of how the construction traffic associated with a proposed development of the proposed roll-on/ roll-off (Ro-Ro) facility within the Port of Immingham, which will be known as the Immingham Eastern Ro-Ro Terminal (IERRT) will be managed.

1.1.2 This Outline CTMP considers the routing of construction vehicles during the construction phase as well as mitigation measures to safeguard the immediate highway during the construction phase.

1.1.3 During detailed design and development of the detailed construction methodology, the Contractor will update this document to provide the Construction Traffic Management Plan (CTMP) that will be implemented during the construction phase.

1.2 Aim of the CTMP

1.2.1 The aim of the Outline CTMP is to set out the principles of the construction methodology to be adopted at the Site, based on the information available at the present time.

2.0 EXISTING CONDITIONS

2.1 Site Location and Description

2.1.1 The proposed development is located on the eastern side of the Port of Immingham. The site is bound by existing port operations. The location of the proposed development is shown on **Figure 1**.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

Figure 1 - Site Location



2.2 Surrounding Highway Network

2.2.1 The Site will be accessed from the internal network of Port roads. These are all private single carriageway roads which have 30mph speed limits. There are footways on one side of each carriageway leading to the Site.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

2.2.2 Queens Road is a single carriageway road which measures approximately 8.0m in width. The road is subject to a 40mph speed limit. There is a footway along the western side of the carriageway starting some 700m south of the East Gate. Queens Road runs between the East Gate of the Port of Immingham and the A1173 Manby Road via a three-arm roundabout.

2.2.3 The A1173 Manby Road is a single carriageway road which measures approximately 8.0m in width. The road is subject to the national speed limit of 60mph. There is a footway along the A1173 which changes between the eastern and western sides of the carriageway between the A1173 Manby Road/ Queens Road Roundabout and the A1173 Manby Road/ Pelham Road Roundabout. Dropped kerbs with tactile paving are provided at all crossing points. The A1173 runs between the A160/ A1173 Manby Road/ Humber Road Roundabout and the A180/ A1173 Manby Road Roundabout.

2.2.4 The A180 is a dual carriageway road which measures approximately 20m in width and is part of the Strategic Road Network (SRN). The road is subject to the national speed limit of 70mph. The A180 runs between Grimsby and becomes the M180 motorway some 20km south-west of the Port of Immingham.

2.2.5 The M180 motorway runs from Junction 5 of the M18 motorway before becoming the A180 near Immingham.

3.0 CONSTRUCTION VEHICLE IMPACT, ROUTING AND MANAGEMENT

3.1 Construction Site Layout

3.1.1 The Contractor's main offices, welfare facilities and compound will be situated in the area designated for the Central Storage Yard, between the existing PAM building and the railway line. This will include the main car park for construction workers and visitors. Smaller satellite compounds may be required in the northern yard and southern yard; further details on these will be developed during detailed design.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

3.2 Construction Vehicle Numbers

3.2.1 Overall, it is expected that an average of 100 loads of material will be delivered on a typical daily weekday. This equates to 200 movements per weekday and an AADT of 158 movements. A peak of 280 HGV movements is considered as part of the Transport Assessment.

3.2.2 Based on the above, it can be expected that there will be a peak of around 12 HGVs per hour (24 movements).

3.2.3 Details of the loads may change on a day-to-day basis depending on supply / demand.

3.2.4 Around 120 to 150 construction workers are expected on site on a typical day. The Census 2011 journey to work data for the area within which the site is located shows that around 80% of people drive to work. Applying this to the maximum number of construction staff indicated above equates to 120 trips (240 two-way light vehicle movements). These movements are subject to a separate Construction Workers Travel Plan to be produced by the Contractor during the detailed design stage based on the outline Construction Workers Travel Plan submitted alongside this document.

3.3 Route to Site

3.3.1 The route that construction vehicles will take is illustrated in **Figure 2**.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

Figure 2 – Construction Traffic Route



3.3.2 All inbound vehicles would route from the A180 to the A1173 before turning into Queens Road to access East Gate. This route has been proposed in order to minimise the impact of construction traffic on local traffic and existing port operations. No HGV traffic will be permitted to use West Gate nor port roads to the west of the site access unless it has a destination or origin within the port itself, or in the event of an incident or roadworks on the public road network which prevents access through the East Gate.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

- 3.3.3 No construction traffic will use South Marsh Road (between North Moss Lane and Hobson Way) and South Marsh Road Level Crossing (including in the event that Queens Road Bridge is unavailable for access) as South Marsh Road is not suitable for use by vehicles over 7.5 tonnes.
- 3.3.4 Network Rail will be consulted prior to any proposed use of Kiln Lane Level Crossing by construction traffic and will comply with any reasonable requirements of Network Rail as to the use of Kiln Lane Level Crossing to ensure the safety, security, operation and maintenance of the operational railway. The route will be communicated to contractors, subcontractors and suppliers and a requirement to use the agreed route during construction will be emphasised.
- 3.3.5 Designated means of access and egress will be kept unobstructed at all times. In addition to boundary fencing, further protection may be needed for holes in the ground, excavation, and soil heaps.
- 3.3.6 Prior to the commencement of works, a full survey of existing services within the Site and areas of roads and footpaths in the immediate vicinity of the Site will be undertaken to identify any services that may require protection. The scope of this survey will be agreed with the local highway authority/ utilities providers.
- 3.3.7 Where works traffic has to use public highways, the necessary precautions to prevent damage to roads and footpaths will be taken where possible.
- 3.3.8 Permits and consents required for the movement of Abnormal Indivisible Loads (AIL) will be sought from NELC local highway representatives as necessary once the number and type of AIL movements has been established. The contractor must distribute the HGV routing plan (shown in **Figure 2**) to all HGV drivers when placing orders. It is a condition of contract between the Applicant and the appointed contractor to require that all construction HGV deliveries must use the designated route to access and egress the construction site.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

3.3.9 The contractor will erect temporary signage at the main junctions to appropriately direct all construction related HGV traffic to the proposed development (both accessing and egressing the site) towards the construction compounds. These will be in place for the duration of the construction phase and will be checked regularly to confirm they are visible throughout.

3.3.10 The appointed contractor will be required to maintain all the HGV route signage during the construction period.

3.4 On Site Traffic Management

3.4.1 With regards to vehicle routing, appropriate signage will be erected to instruct construction and delivery vehicles of the direction to take to and from the development Site. All signage related to the construction works will be maintained and regularly inspected.

3.4.2 All construction vehicles will be managed by the Contractor's Traffic Manager who is responsible for developing and implementing each phase of traffic management required. The contact details for the Contractor's Traffic Manager will be provided to North East Lincolnshire Council, Network Rail, all port tenants and other stakeholders as required before construction begins.

3.4.3 All sub-contractors and material suppliers will be provided with details of the proposed vehicle route to and from the development Site, coupled with the location of the holding areas where construction vehicles will be required to wait. They will be expected to conform to these routes.

3.4.4 Certificated Banksman wearing high visibility jackets or vests will direct vehicle manoeuvres at the development Site. The Banksman will wait at the proposed Site access, where they will direct the delivery vehicles in and out of the Site. They will use hand signals and will communicate to the drivers through the vehicle mirrors, while watching the driver's blind spot.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

3.5 Management of Vehicle Access/Egress

- 3.5.1 From the Port roads, construction vehicles will turn left into the Site in forward gear, manoeuvre within the Site, and then exit the Site back onto the Port roads in a forward gear and therefore there will be no requirement for excessive manoeuvring within the Port estate.
- 3.5.2 Improvements or access arrangements at the Robinson Road / East Dock Road junction will be put in place prior to closing East Riverside.
- 3.5.3 During the works, particularly including the works to the East Gate, at least one lane for access/ egress through East Gate will be maintained, although some infrequent night time closures may be required.

3.6 Delivery scheduling

- 3.6.1 A Delivery Management System (DMS) will be adopted to ensure that the flow of vehicles to and from Site is controlled, promoting the safe and efficient use of the loading/ unloading area.
- 3.6.2 The DMS will look to avoid arrival times to site that conflict with Peak Hours (0700-0800 and 1600-1700) on the A1173 and A180 (Strategic Road Network).
- 3.6.3 Delivery of materials will be pre-arranged where possible to ensure that off-loading is controlled by a competent signaller (banksman) and drivers will be required to phone ahead to book a delivery slot and 20 minutes before arriving to ensure there is availability to load/unload.
- 3.6.4 Unless there is capacity to accommodate within the specified loading area, unplanned deliveries will be turned away and advised to return to the Site at a pre-arranged delivery time. Unplanned deliveries will not be permitted to wait at any location on the local highway network in the vicinity of the Site.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

Outline Construction Traffic Management Plan

4.0 GENERAL SITE MANAGEMENT

4.1 Hours of Operation

- 4.1.1 For landside construction, working hours will be 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 on Saturdays, with no works taking place on Sundays, unless otherwise agreed with the local planning authority.
- 4.1.2 Construction vehicles will not be permitted to access the Site outside of these hours unless otherwise agreed with the local planning authority.
- 4.1.3 Any proposed changes to these working hours will need to be agreed in advance with North East Lincolnshire Council.

4.2 Wheel Wash Facility

- 4.2.1 In the interests of highway safety, wheel cleaning facilities will be installed at the site from the start of the construction phase. All HGV will be required to use the wheel wash prior to exiting the site. The wheel wash facility will be located at least 200m from the public highway and there is therefore an adequate length of hard surfaced road between the wheel wash facility and the site exit.
- 4.2.2 The contractor will manage the risk of any road contamination by regular monitoring. Should the road become contaminated any debris will be removed by a Road Sweeper wagon.

4.3 Management of Dirt & Dust

- 4.3.1 If dust emissions are generated in dry period, the contractor will use water spray to wet the material and suppress the dust.

Immingham Eastern Ro-Ro Terminal, Port of Immingham

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- 4.3.2 The Site manager will take account of weather conditions and prevailing wind direction when organising operations to prevent and minimise dust nuisance to neighbouring properties.
- 4.3.3 The access road is to be stoned to provide a good, clean working platform and prevent road contamination.
- 4.3.4 In the event of a complaint from a neighbouring property in respect of dust, their concerns will be considered, and action taken to prevent future occurrence.
- 4.3.5 All Site staff will have appropriate PPE to protect them from the effects of dust.

4.4 Noise Control

- 4.4.1 Whilst working on Site the contractor will adhere to the recommendations of BS 5228-1, clause 9.3 to minimise noise levels during the execution of the Works.
- 4.4.2 The measures outlined in the CEMP will be implemented on site to reduce as far as practicable the potential environmental impacts associated with noise and vibration from construction activities.

4.5 Pedestrian Control

- 4.5.1 The Site Banksmen will be on-Site during all stages of construction to supervise / manage all truck entry and exit manoeuvres to the Site, ensuring all manoeuvres are undertaken in a forward direction. The proposed arrangements will ensure that pedestrian safety is maintained at all times with pedestrian walkways segregated from traffic where possible.

5.0 IMPLEMENTING, MONITORING AND UPDATING

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- 5.1.1 The CTMP will be a live working document and will be updated during the course of Site development and is therefore subject to amendments. Any future revisions of the CTMP shall be approved by North East Lincolnshire Council.
- 5.1.2 The day-to-day responsibility for implementing the CTMP lies with the Contractor's Traffic Manager - the details for whom will be provided to the local highway authority prior to the commencement of works.

Appendix C Outline Flood Emergency Response Plan (FERP)

Immingham Eastern Ro-Ro Terminal

Outline Flood Emergency Response Plan

December 2023

Quality information

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1. Introduction

1.1 Overview

- 1.1.1 This outline Flood Emergency Response Plan (FERP) has been prepared to inform and assist site users/ occupants of the Proposed Immingham Eastern Ro-Ro Terminal (IERRT) in the administrative area of North East Lincolnshire Council (NELC) on the actions to take to manage risk from flooding and emergency evacuation in the event of a flood occurring from the Humber Estuary (River Humber).
- 1.1.2 The outline plan is prepared with residual flood risk from a breach and/ or overtopping of the tidal flood defences in mind as this is the main source of flooding identified in the site specific Flood Risk Assessment (FRA) for the development (Appendix 11.1 of Volume 3 of the Environmental Statement (ES) [APP-093]). However, many of the principles identified would equally apply to other sources of flooding.
- 1.1.3 Various documents in relation to emergency planning for flood and other types of emergencies have been reviewed while preparing this outline FERP. Specific reference has been made in this regard to the Environment Agency (EA) publication “A guide to preparing your business in flooding”, the East Riding of Yorkshire Council (ERYC) Developer’s Flood Emergency/ Evacuation Plan Self-Assessment Checklist Tool¹ and Associated British Ports (ABP) Ports of Immingham and Grimsby Emergency Plan². This outline FERP has been guided by and is aligned to all three documents.
- 1.1.4 This outline management plan will be further developed and refined by the appointed contractor and included within the detailed Construction Environmental Management Plan (CEMP).

1.2 Location of Site and Current Use

- 1.2.1 The IERRT project site (‘the Site’) is located within the Port of Immingham approximately 850 m north-west of the main Port and approximately 3 km north of the town of Immingham at Ordnance Survey National Grid Reference (OS NGR) 517626 418464 in North Lincolnshire. The site occupies a waterside location, and currently comprises agricultural land.
- 1.2.2 The Port of Immingham lies immediately adjacent to the Humber Estuary’s main deep-water shipping channel. The Port comprises a number of discrete operational areas, with bulk commodities such as liquid fuels, solid fuels and ores, as well as roll-on/roll-off (ro-ro) freight, being handled from in-river jetties. These include the Eastern and Western Jetties, the Immingham Oil Terminal (IOT), the Immingham Gas Terminal, Immingham Outer Harbour (IOH) and the Humber International Terminal (HIT).
- 1.2.3 Table 1-1 summarises the key features and current land uses of the area surrounding the site.

Table 1-1: Key features surrounding the Site

Direction	Summary
North	The majority of the Port of Immingham lies directly to the west and north-west of the IERRT project site. There are a number of industrial and operational land uses located within this area including electrical sub stations, freight shipping companies, biofuels company, heating oil supplier and several warehouses and tanks. The proposed marine works are located within the Humber Estuary. To the north-east/ east of the

¹ East Riding of Yorkshire Council (unknown) *Developer’s Flood Emergency / Evacuation Plan Self-Assessment Checklist Tool v.1*

² Associated British Ports (2010) *Ports Emergency Plan*

proposed marine works lies an existing jetty with associated bulk liquid pipelines and mooring equipment. Beyond this the Humber Estuary continues for approximately 2.5 km

East	Habrough Marsh Drain is located along the south-eastern IERRT project site boundary and beyond this is the land side tank farm that forms part of the Associated Petroleum Terminals (Immingham) Ltd. (APT) facility. Further east of the site, the land use comprises industrial use, agricultural fields and the Humber Estuary.
South	Railway sidings are located along the south-western border of the IERRT project site boundary, running from north-west to south-east. Beyond the railway sidings lies Habrough Marsh Drain and several industries located further to the south of the site. These include shipping companies, waste management companies, manufacturing plants, power plants and electrical sub stations. The area south of this is predominantly dominated by agricultural fields. The nearest residential properties are on Queens Road, approximately 200 m south of the site. The A180 road lies approximately 2.3 km south.
West	Railway lines are located to the south/ south-west of the IERRT project site beyond which lies the Habrough Marsh Drain and various industrial and commercial sites. The town of Immingham is located approximately 500 m west/ south-west of the site. The land beyond the town predominantly consists of agricultural fields.

1.3 Topography

- 1.3.1 The topography of the Site is generally flat, with ground elevation between 4.6 and 5.5 m AOD. Levels tend to be higher in the north and west of the site falling away to the south and east.

1.4 Proposed Development

- 1.4.1 The IERRT project comprises a ro-ro facility within the Port of Immingham. The facility will be designed for the embarkation and disembarkation of principally commercial cargo carried either by accompanied trailer or by lorry or on unaccompanied trailers which will be collected at the port of disembarkation. Further details are provided below and fully described in Chapter 2: Proposed Development of the Environmental Statement (ES) [APP-060].

Marine works

- 1.4.2 The proposed marine works are summarised below. Further details can be found Chapter 2: Proposed Development [APP-038].
- An open piled approach jetty, approximately 290 m in length and 10 m wide;
 - A single linkspan bridge to link the approach jetty to the floating pontoons, approximately 90 m in length and 10 m wide;
 - Two floating pontoons approximately 40 m x 90 m with a depth of 9.35 m, linked by a linking bridge approximately 20 m in length, and secured by two piled restraint dolphins (12 m long x 8 m wide);
 - Two open piled finger piers with concrete decks, approximately 270 m in length and 6 m wide;
 - Vessel impact protection measures if required, to protect the adjacent Immingham Oil Terminal (IOT) jetty; and
 - A berthing area with side slopes.

Capital dredge

- 1.4.3 The new berth area would require a capital dredge. The maximum spatial extent of the dredge is estimated to be approximately 70,000 m². The berth area would be dredged with the appropriate side slopes to a maximum of 9 m below Chart Datum (CD), including an allowance for over dredge.

- 1.4.4 It is estimated that approximately 190,000 m³ of material would be removed, which is likely to constitute approximately 40,000 m³ of boulder clay, and 150,000 m³ of sand/ silt (alluvium) *in situ*.
- 1.4.5 The final capital dredge methodology would be determined in collaboration with the dredging contractor. It is currently anticipated, however, that the majority or all of the material will be removed with a tug assisted backhoe dredger, the size of which will be determined by the specialist dredging contractor. Some material may also be removed by trailer suction hopper dredger (TSHD) depending on the sediment conditions and the availability of TSHD dredgers.

Disposal of dredge material

- 1.4.6 It is not considered that the dredge material (being predominantly silt and clay) is of a quality suitable for alternative beneficial use, such as for the purpose of construction/ reclamation infill, by reason of its low potential bearing capacity either on land or within the marine environment. In addition, no infill material will be required for the project nor, as far as ABP are aware, for any other project in the locality.
- 1.4.7 In light of the above, disposal within the estuary is the best available option (subject to the material being deemed suitable for sea disposal by the Marine Management Organisation (MMO) and the Centre for Environment, Fisheries and Aquaculture Science (Cefas)).
- 1.4.8 A sediment contamination survey was undertaken in October 2021 to characterise the dredge material and to support the application to dispose of the dredge material at an existing licensed disposal site. This was undertaken in accordance with the MMO sample plan (SAM/2021/00053) which confirmed the suite of contaminants, number of samples, sample locations, replicates and sampling depth required, taking account of available guidelines for the management of dredge material to be disposed at sea (OSPAR Commission, 2014).
- 1.4.9 Contaminant concentrations in sediment samples have been compared to Centre for Environment, Fisheries and Aquaculture Science (Cefas) Guideline Action Levels (ALs) to determine their suitability for disposal at sea. The majority of contaminants in the sediments of the proposed dredge area are at relatively low concentrations, mostly below, or marginally exceeding, Cefas AL1. There were no exceedances of AL2 in any sediment samples analysed and it is considered that the dredge material is suitable for disposal at sea.
- 1.4.10 The sediment contamination analysis results are presented in the MMO results template at Application Document Reference number 9.5. This will allow the MMO, in consultation with Cefas, to consider the suitability of the material for disposal at sea. Further, more detailed information, can also be found in the Chapter 8: Water and Sediment Quality [APP-044].
- 1.4.11 The disposal site HU056 (Holme Channel) will be used to dispose of inerodible clay material, and HU060 (Clay Huts) will be used to dispose of sand/ silt (alluvium) material. This is based on the proximity, suitability and capacity of those disposal sites.

Landside works

- 1.4.12 Landside works are primarily required to improve the site's surface so as to provide suitable areas to accommodate wheeled cargo, containers and heavy goods vehicles (HGVs) either awaiting embarkation or collection, together with essential storage. These will be known as the Northern Storage Area, Central Storage Area, Southern Storage Area and Western Storage Area as shown on Figure 1.3 in Volume 2 of the ES [APP-059].
- 1.4.13 The proposed landside works are summarised below. Further details can be found in ES Volume 1, Chapter 2: Proposed Development [APP-039].
- Simple upgrade of the vast majority of landside areas through provision of new pavements and associated infrastructure (some peripheral parts of the areas which will be used for waiting vehicles/ cargo trailers are likely to require additional ground works);

- A new substation (approximately 15 m x 10 m) in the Northern Storage Area to provide shore power to the berths and power for closed-circuit television (CCTV) and lighting for the yard;
- A small workshop with fuel station in the Central Storage Area;
- A new level crossing will be created across an ABP controlled railway between the Southern Storage Area and the Central Storage Area;
- A terminal building, approximately 40 m x 15 m in size and limited to two storeys in height in the Southern Storage Area, together with ancillary buildings (in and out gates, a welfare building for HGV drivers and passengers awaited embarkation, and administrative and inspection buildings and infrastructure for the UK Border Force);
- In and out gates in the Western Storage Area;
- A two lane bridge to ensure contiguous terminal operations between the currently separate Northern and Central Storage Areas, approximately 120 m long and 12 m wide, spanning Robinson Road (an existing dock road) and an ABP controlled railway line;
- Demolition of four existing buildings to the south of the Northern Storage Area;
- Improvements to the East Gate entrance to the Port including demolition of the existing gatehouse, widening of the existing entrance road, construction of a new gatehouse, new warning signals and line markings at the junction of Robinson Road and the IOT access road, repositioning of a bus stop, removal of an existing layby, and provision of a new footway between East Gate and the bus stop;
- Highway improvements and new footways within the Port;
- Remotely operated barriers for access into the IERRT;
- Fencing around the IERRT to comply with International Ship and Port Facility Security (ISPS) Code criteria;
- Lighting and security provision; and
- Appropriate drainage and services infrastructure.

1.5 Surface Waterbodies

- 1.5.1 Figure 11.1 [APP-067] of ES shows the location and names of various watercourses present within proximity of the scheme. These include:
- The Humber Estuary (a tidal waterbody);
 - Stallingborough North Beck (fluvial waterbody);
 - Habrough Marsh Drain; and
 - Numerous small drains beyond the Port Estate.
- 1.5.2 The Humber Estuary, a deep water, intertidal estuary is located directly adjacent to the north-east of the site with the marine side area of the IERRT located within the estuary.
- 1.5.3 The Humber Estuary begins at Trent Falls near Faxfleet in East Yorkshire, the site of the confluence of the two tidal rivers the River Trent and the River Ouse, and flows in an easterly direction towards its outer limits between Humberston in Lincolnshire and Spurn Head in East Yorkshire and then out into the North Sea. The Humber Estuary drains a catchment area of approximately 24,472 km², around 20% of the total land surface of England.
- 1.5.4 The Stallingborough North Beck is located approximately 0.9 km to the south-east of the IERRT project and is designated as an Environment Agency 'Main River'. The Beck is an embanked upland river which receives

pumped surface water runoff from south, central, and east Immingham as well as land drainage run off from West Lindsey. The Beck discharges by gravity, via a sluice gate, into the Humber Estuary.

- 1.5.5 The Habrough Marsh Drain is designated as an 'Ordinary Watercourse' and falls under the jurisdiction of the North East Lindsey IDB. The Drain skirts the south-western and south-eastern perimeters of the IERRT project site, flowing from west to east along the southern IERRT project site boundary and discharges partly to the Humber Estuary and partly to the Stallingborough North Beck through the Immingham Pumping Station.
- 1.5.6 In addition, there are numerous drains and small watercourses beyond the port estate that form part of the North East Lindsey IDB land drainage system for the low-lying coastal area.

1.6 Flood Zone

- 1.6.1 The Environment Agency Flood Map for Planning (FMfP) available online (see Figure 11.1 of the ES [APP-067]), shows the site is located in Flood Zone 3a. The Environment Agency FMfP does not differentiate between Flood Zone 3a and Flood Zone 3b, however the presence of flood defences along the Port of Immingham and estuary frontage negates the presence of Flood Zone 3b.

1.7 Access

- 1.7.1 The site benefits from two entry points – the East and West Gates – both of which are easily accessible from the A180 (via the A160 for the West Gate, and via A1173 and Queens Road for the East Gate). The A180 becomes the M180 Motorway at Barnetby Top. The M180 in turn provides good access to the M1 or the A1 via the M18 to the south, and the M62, also via the M18, to the north.

1.8 Hazards Associated with Flooding

- 1.8.1 Floodwaters are hazardous and interaction with them should be avoided wherever possible. Some of the hazards associated with floods include:
- fast flowing water with possible under currents, capable of knocking people off their feet or drawing them under the water surface;
 - debris suspended in the fast moving water, which may be moving with any flow. This material may be of significant size and may be capable of knocking people off their feet and/ or causing impact injuries and damage to buildings causing building instability. For example, cars can become suspended in flood waters;
 - the incorporation of pollutants into floodwater, such as sewage, oil and petrol and other contaminants. These pollutants could be hazardous to the short term and long term health of individuals, and may not be visible; and
 - the concealing of obstacles and hazards as flood water is likely to be opaque. Obstacles and hazards include blown manhole covers that people could fall into and become trapped, tripping hazards and relocated debris *etc.*
- 1.8.2 Each of these has the potential to cause adverse health effects, severe injury or death. For these reasons site users and visitors to the site **should not enter the floodwater.**

1.9 Aims and Objectives

- 1.9.1 The overall aim of this outline FERP is to make users of the Site aware of the flood risks so that they can be adequately prepared and remain safe should a flood occur.

- 1.9.2 This outline FERP provides information on flooding and guidance to site users on how to prepare for floods and what they should do before, during and after a flood event. It is intended updated and revised by the appointed contractor and then to be circulated to and visible to all users once it has been fully developed.
- 1.9.3 In the first instance this will be achieved by explaining how flood warnings can be set up to allow time for site evacuation if necessary. In exceptional circumstances when the Site is occupied during a flood, the FERP also provides guidance to its occupants.
- 1.9.4 In summary, the objectives of this outline FERP are to provide:
- a summary of tidal risks across the Site – based on the 2013 FRA for the proposed development³ and Strategic Flood Risk Assessment⁴ (SFRA) for the NELC administrative area.
 - Identify the need for an emergency route plan and safe refuge areas within the Site to be produced by the appointed contractor during detailed design – showing possible escape routes in appropriate circumstances. Safe refuge areas (*i.e.* areas that are not affected by flooding within a building or a site where users and occupants can gather and wait to be evacuated in the event of an assisted evacuation being required) need to be confirmed for the detailed plan;
 - Outline the emergency procedures and practical flood advice – lists of provisions and suggested response before and during a flood event will be recommended;
 - Outline practical guidance for site personnel – increase awareness regarding the risk of flooding and provision of advice on signage and dissemination of flood warnings to occupants and users;
 - information on local flood warning services - linking the development to the EA Flood Warning Service; and
 - suggested roles and responsibilities during a flood event - the FERP suggests roles and responsibilities to facilitate the provision and dissemination of flood warnings and other tasks required to prepare for flood events and coordinate activities during a flood event. The roles and responsibilities suggested in this FERP should be discussed with NELC and the EA, and if necessary, they should be refined to bring them in line with legal requirements, Health and Safety and evacuation procedures within the NELC administrative area. The roles and responsibilities outlined in this report (in Section 8) are suggestions for the site users and the people responsible for the management of the Site. They do not replace any legal ownership of responsibilities that may be in place in law or otherwise.

2. Flood Risk

2.1 Summary of Flood Risk Sources

- 2.1.1 The main source of flooding to the Site, as identified in the FRA, is tidal flooding from the Humber Estuary (River Humber). The FRA concluded that the risk of flooding from other sources, including flooding from fluvial sources, surface water flow and sewer flooding, is low, and groundwater flooding is medium. These levels of risk do not require a FERP and are therefore not considered further. The risk of flooding from the Humber Estuary is discussed below.

³ URS (2013) *Associated British Ports Immingham Western Deepwater Jetty Flood Risk Assessment*

⁴ North East and North Lincolnshire Councils (2011) *North and North East Lincolnshire Strategic Flood Risk Assessment*

2.2 Flood Risk from the Humber Estuary

- 2.2.1 The Site is located on the south bank of the Humber Estuary and works will be required within the Humber Estuary. The most northern section of the Site is located marine side within the Humber Estuary where the proposed terminal jetty will be positioned. The landside area of the Site lies adjacent to the Humber Estuary.
- 2.2.2 There are raised tidal flood defences in place along the entire south bank of the Humber Estuary. The existing defences at the Site are manmade and consist of an earth embankment topped by a concrete wave return wall. The EA inspects these defences regularly to ensure that they remain fit for purpose (see Figure 2.1 below).



Figure 2-1: Photograph of the typical tidal flood defences in the Humber region

- 2.2.3 The flood defences adjacent to the Site are maintained to a crest level of 6.1 m AOD.
- 2.2.4 The flood defences are maintained by the EA. No structural survey has been undertaken as part of the site-specific FRA or during the preparation of this FERP to confirm the structural integrity of the defences. Irrespective of the condition of the flood defences there is a residual risk of flooding which may occur should they fail.
- 2.2.5 The flood risks that would result from the defences failing (either due to structural failure or overtopping) has been assessed by the EA.

2.3 Probability of Flooding – Flood Zone

2.3.1 According to the EA Flood Map and the SFRA flood outlines⁵, the Site lies within Flood Zone 3a of the Humber Estuary. Flood Zone 3 is classified as high risk with a 0.5% or greater annual probability of tidal flooding (see Table 1 of the Technical Guidance to the National Planning Policy Framework (NPPF)⁶).

2.4 Flood Depths and Hazard

2.4.1 The EA has classified the flood hazards for the area of the Site based on flood inundation rates, depth and velocity. The hazard classification methodology is based on Guidance on Flood Risk Assessment for New Development, also known as FD2320/TR2⁷.

2.4.2 Table 2-1 summarises the hazard classifications based on FD2320/TR2 used within the SFRA.

Table 2-1: Hazard Classifications used in the SFRA

Flood Hazard		Essential Infrastructure
	Low	Caution - Flood zone with shallow flowing water or deep standing water
	Moderate	Dangerous for some (<i>i.e.</i> Children) – Danger: Flood zone with deep or fast flowing water
	Significant	Dangerous for most people – Danger: Flood zone with deep fast flowing water
	Extreme	Dangerous for all – Extreme Danger: Flood zone with deep fast flowing water

Breach of the Defences

2.4.3 Due to the continued condition assessments undertaken by the Environment Agency and the commitment of both the Environment Agency and ABP to maintain the defences under their jurisdiction, the residual flood risk at the Site due to the breaching of the tidal flood defences is not likely to increase due to climate change. However, if a breach event did occur climate change would result in an increase in the depth of floodwater, flow velocity and hazard classification at the Site.

2.4.4 Environment Agency breach mapping for the Year 2115 (presented in Annex A to the FRA) shows:

- For the 2115 0.5% and 0.1% AEP breach event the whole Site, with the exception of small, isolated areas, is located within the breach flood extent;
- The north-east of the Site, directly adjacent to the Humber Estuary is predominantly located in a hazard area classified as 'Danger to Most', however, the area directly behind the flood defences is now classified as 'Danger to All'. Maximum water levels have increased to 1-1.6+ m whilst maximum water velocity remains the same as the baseline flood risk scenario;
- Land to the south and west is located in a hazard area classified as 'Danger to Most' for both the 0.5% and 0.1% AEP breach events with a maximum water velocity of 0-1 m/s for the 0.5% AEP event and 1-

⁵ The Environment Agency Flood Zone Map and the SFRA flood outline maps are identical

⁶ DCLG (2012) *Technical Guidance to the National Planning Policy Framework*.

⁷ Defra (2005) *Flood Risk Guidance for New Development R & D Technical Report FD2320/TR2*

1.5 m/s for the 0.1% AEP flood event. Maximum water depth increases from 0.5-1 m (0.5% AEP flood event) to a depth of 0.5-1.6 m (0.1% AEP flood event);

- Environment Agency breach flood water levels for the 0.1% AEP flood event in 2115 indicate an average water level across the Site of 6 m AOD. Water levels are lowest to the southern area of the Site at 5 m AOD.

2.4.5 Over the next 100 years, should a breach in the flood defences occur, the hazard, depth and velocity of floodwater would increase above the current baseline. However, although a breach of flood defences would represent an extreme hazard, the likelihood of a breach occurring remains low.

Overtopping of the Defences

2.4.6 Though overtopping of the flood defences would represent a significant hazard, given that both the 0.5% AEP and 0.1% AEP extreme tidal water levels are below the crest height of the tidal flood defences, the likelihood of overtopping is low.

2.4.7 The extreme tidal water levels for the year 2115 scenario are in general higher than the current flood defence crest levels. These still water levels do not include an allowance for wave height. When wave height is taken into account, the defences would be insufficient to defend the land behind them from these higher return period events in the future. On this basis, the flood risk at the Site due to overtopping of the tidal flood defences will increase with climate change.

2.4.8 Information provided by the EA and summarised in the site-specific FRA (Appendix 11B of Volume II of the ES) concludes:

- For both the 0.5% and 0.1% AEP events in 2115 the flood hazard maps show the Site is located in an area classified as '**Danger for All**' hazard area with a maximum water depth of 1.6+ m and a maximum flood velocity of 0.3 to 1.0 m/s.

2.4.9 On the basis of EA modelling results, the likelihood of overtopping is considered to not increase above the existing scenario.

2.5 Climate Change

2.4.10 Climate change is projected to increase flood water levels in the Humber Estuary at Immingham by approximately 0.96 m - 1.3 m in all probabilities of occurrence by 2125, as described in the FRA Section 5.2 [APP-093].

2.4.11 The extreme tidal water levels for the year 2115 scenario are in general higher than the current flood defence crest levels. These still water levels do not include an allowance for wave height. When wave height is taken into account, the defences would be insufficient to defend the land behind them from these higher return period events in the future. On this basis, the flood risk at the Site due to overtopping of the tidal flood defences will increase with climate change.

2.4.12 The residual flood risk of the Site flooding due to the breaching of the tidal flood defences is not likely to increase due to climate change. However, if a breach event did occur climate change would result in an increase in the depth of floodwater at the Site.

2.4.13 Though the residual risk is set to increase, the Humber Flood Risk Management Strategy⁸ (HFRMS) outlines the flood risk management plan for the Humber Estuary for the next 25 years and beyond. The HFRMS indicates that the Site is located on the boundary of two Flood Areas; Flood Area 23 Halton and Killingholme Marshes and Flood Area 24 Immingham to River Freshney and states:

⁸ Environment Agency (2008), *Planning for Rising Tides. The Humber Flood Risk Management Strategy*

“The proposed management approach in both of these areas is to continue to protect the area and improve the defences that protect existing development”.

- 2.4.14 The Grimsby and Ancholme Catchment Flood Management Plan⁹ (CFMP) indicates that the Site area falls within Sub-Area 4 Immingham, Grimsby and Buck Beck where the preferred policy option for future flood risk management is:

“Policy Option 4: Areas of low, moderate or high flood risk where the Environment Agency are already managing the flood risk effectively but where the Environment Agency may need to take further action to keep pace with climate change”.

- 2.4.15 It is considered that the existing defences will be maintained to an appropriate standard to keep providing protection to the area and therefore the risk of flooding to the Site will not increase above the existing scenario.

⁹ Environment Agency (2009) *Grimsby and Ancholme Catchment Flood Management Plan, Summary Report.*

3. Flood Risk Mitigation

3.1 Introduction

3.1.1 On the basis of EA modelling, the FRA and Section 2 of this report, the flood risk at the Site ranges from low to extreme hazards depending on circumstances, and therefore it is the responsibility of ABP and the site operator to ensure that the Site is signed up for flood warnings and prepared should flooding of the Site occur.

3.2 Environment Agency Flood Warning Service

3.2.1 The Port of Immingham is covered by the EA's Flood Warning Direct Service and the following Flood Alerts Areas:

- tidal flooding of low-lying areas from New Holland to the Port of Immingham;
- tidal Flooding of Areas near the South Humber Bank; and
- far Extent of Tidal Flooding on the South Humber Bank.

3.2.2 The EA also issue flood warnings online 24 hours a day on their website and this is updated every 15 minutes. The website address is: <http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx>.

3.2.3 The EA aims to issue fluvial Flood Warnings at least 2 hours prior to the onset of flooding mainly based upon actual river level rise. Tidal flood warnings are issued based on forecast information, and therefore the lead time provided is longer. The EA aims to issue tidal Flood Warnings a minimum of 6 hours in advance, but depending on confidence in the forecast they could be issued 24 or even 36 hours in advance.

3.2.4 The EA flood warning service provides an early warning against storm surge type events that could lead to overtopping of flood defences, but will not provide warning of a breach of a flood defence. This means that the EA flood warning service alone will not sufficiently prepare users and occupants of the Site to act in the event of a breach of the flood defence occurring.

3.2.5 However, given that the likelihood of a breach of the flood defence occurring is greatest during significant storm surge events and storm surges can be forecasted with a good degree of accuracy, the consequences of a breach scenario can effectively be minimised by bringing occupants and users of the development, and the emergency services, to a higher level of alert through flood warning.

3.3 Site Planning

3.3.1 Finished floor levels for the IEERT buildings will be raised 300 mm above the surrounding ground level but will remain below the 2115 0.5% AEP breach water level. In line with EA guidance flood resistant and resilient measures such as those outlined below will be incorporated into the building design. The first floor of the terminal building will provide an area of safe refuge, should an extreme flood event occur. Raising the floor levels for the development will protect against localised flooding from surface water runoff, potential surcharging of the drainage system in the event of a storm greater than a 0.5% AEP flood and the residual flood risk from fluvial sources if an extreme event were to occur.

3.3.2 The flood resistant and resilience measures that may be included in the construction of the IERRT project include:

- Office and Welfare Facilities - solid floor construction e.g. continuous concrete ground floor slab minimum of 150 mm thick reinforced with mesh on lapped and tapped 1200 gauge visqueen damp proof membrane;

- If technically feasible, electricity supply cables will enter buildings from roof level and wired downwards; electrical sockets to be positioned at least 600 mm above floor level;
- Anti-flood valves will be installed on internal building drainage; and
- Watertight external door construction will be considered, where reasonably practical.

3.4 Environment Agency Flood Warning Codes

3.4.1 The EA flood warning codes and advice on actions to be taken for each code are shown in Figure 3.1 below. The flood warning codes and the actions recommended for each warning level were devised by the EA, and can be used to advise site users of the EA's flood warning services and the actions they should take to reduce the risk to life and property, should flood risk be considered to be an imminent possibility and these should be followed by all site users.

How do I access the Flood Warning Service?

- The flood warnings and flood alerts are disseminated through a variety of media, including but not limited to:
- the EA website which is updated every 15 minutes:
<http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx>;
- The **EA Floodline 0845 988 1188**. Information relating to the Port of Immingham can be accessed by selecting Option 1 and entering the **Quickdial number 113010**. These Quickdial numbers should speed up access to area specific information regarding flooding in times of need;
- social media (flood risk applications, Facebook, Twitter *etc.*);
- local TV channels;
- local radio stations;
- suitably trained Flood Coordinators.

How do I receive Automatic Flood Warnings?

3.4.2 The Site owner and Port Authority is ABP. ABP's marine department is registered with the EA's flood warning service and so receives the automated flood warnings. This is a free service that will send a direct message when a flood warning is in place. The marine department will inform the Environmental Officer for the Site.

Figure 3.1: Environment Agency Flood Warning Codes (amended to take account of distance from site to area unlikely too flood)

Code	What it Means?	When it is used?	What to do?
<p>NONE Monitor three-day forecast</p>	<p>Be aware. Think ahead. Keep an eye on the weather situation.</p>	<p>In normal circumstances.</p>	<p>Check daily forecast of flood risk on the EA website.</p>
	<p>Flood Alert: Flooding is possible. Be prepared.</p>	<p>Two hours to two days in advance of flooding.</p>	<p>Be prepared to act on your flood plan. Prepare a flood kit of essential items.</p> <p>Monitor local water levels and the flood forecast on the EA website.</p>
	<p>Flood Warning: Flooding is expected. Immediate action required.</p>	<p>Half an hour to one day in advance of flooding.</p>	<p>Move family, pets and valuables to a safe place. Turn off gas, electricity and water supplies if safe to do so. Put flood protection equipment in place.</p>
	<p>Severe Flood Warning: Severe flooding is expected. There is extreme danger to life and property. Act now!</p>	<p>When flooding poses a significant threat to life.</p>	<p>Stay in a safe place with a means of escape. Be ready should you need to evacuate from your home or business. Co-operate with the emergency services. Call 999 if you are in immediate danger.</p>
<p>WARNING NO LONGER IN FORCE</p>	<p>Warning no longer in force: No further flooding is currently expected in your area.</p>	<p>When river or sea conditions begin to return to normal.</p>	<p>Be careful. Flood water may still be around for several days. If you've been flooded, ring your insurance company as soon as possible.</p>

4. Emergency Route and Safe Refuge

- 4.1.1 There are two methods of evacuation from the Site in response to a flood warning or during a flood event. These are a) self-evacuation and b) assisted evacuation. The choice of method will depend on the timing of the flood forecasting information and hazard at time of evacuation. In the first instance, the EA's flood warning codes discussed above should be used as a guide to alert site users of the possibility of flooding and to prepare for possible evacuation. The different methods are discussed further below with advice given on the response actions appropriate in each case.

4.1 Self-Evacuation

- 4.1.2 A key consideration in drawing up a flood evacuation plan is availability of safe access and egress to the Site. The breach and overtopping models show that flood depths greater than 2.0 m can occur at the Site in the event of a breach or overtopping of the tidal flood defences.
- 4.1.3 In the event of a breach or overtopping, site users should evacuate the Site immediately if it is safe to do so. A safe access/ egress route for the Site for events with an AEP of 0.5% will be identified by the appointed contractor and included within the detailed CEMP. Broadly, the route will be chosen only if its entire length remains dry. Due to the hazards associated with floodwaters use of this route is not recommended should any part of it be flooded.
- 4.1.4 During a flood event it will be difficult to ascertain whether the entire route is dry or not without starting the evacuation process. A reliable means of checking should be developed to help site users decide on which evacuation method to use. Should a breach or overtopping of the tidal flood defences lead to flooding of the area before occupants are evacuated, then site users must contact the emergency services for assisted evacuation. This is the default method and should be used if there is any doubt that self-evacuation may not be safe.

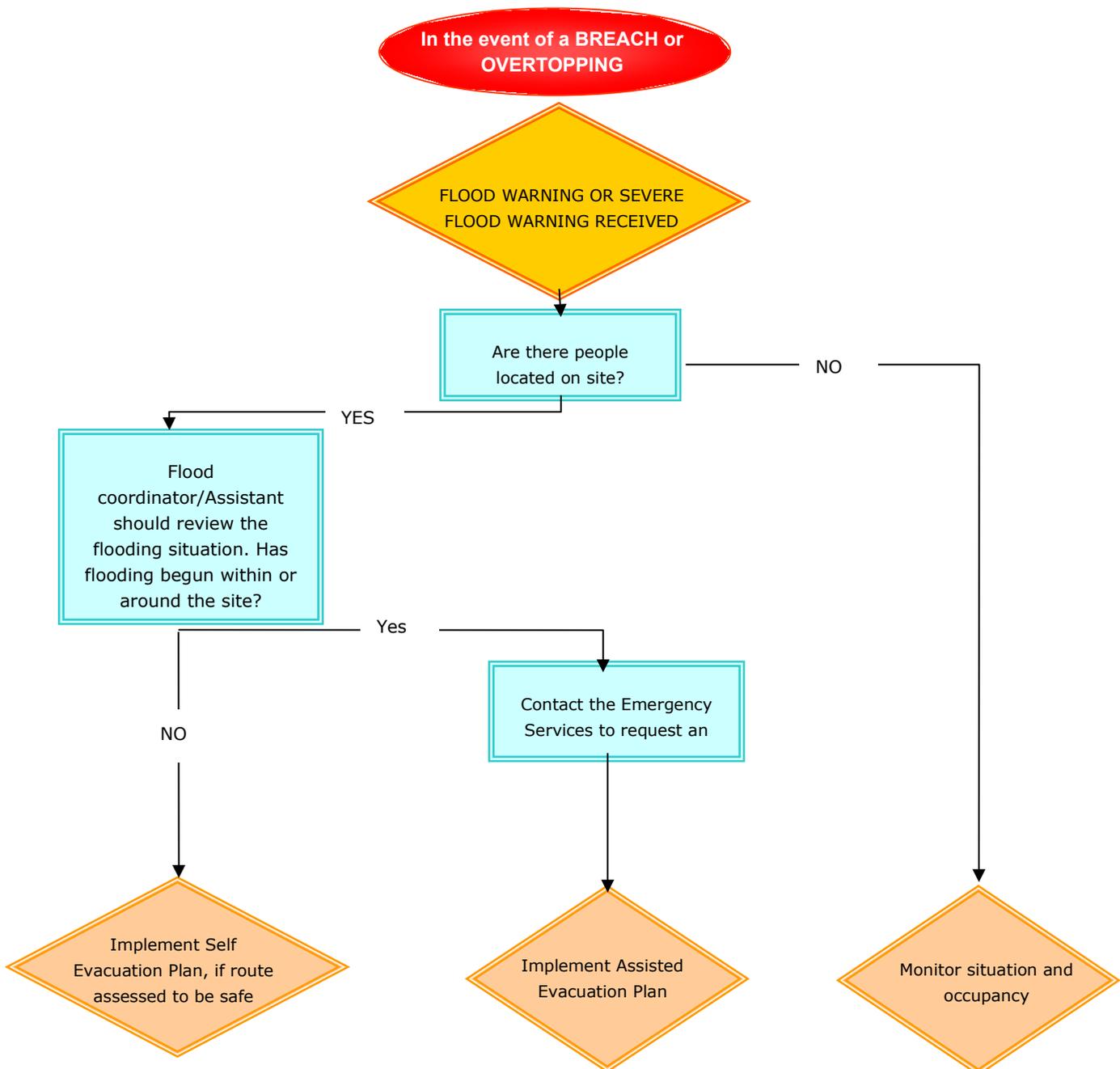
4.2 Areas of Safe Refuge

- 4.2.1 As shown in Figure 11.1 of the ES [APP-067] the entire Site falls within Flood Zone 3a. If a flood warning is issued, and evacuation of the Site is not possible, areas of safe refuge become an important element in ensuring staff safety. The main Flood Coordinator will have clearly identified areas of the Site that can be used in such as emergency. These details will be communicated to all site users *via* the Main and Assistant Flood Coordinators.
- 4.2.2 To help site users better prepare for flooding, will identify and display the evacuation route.
- 4.2.3 In the event that flooding occurs with such speed that personnel on the Site are not able to evacuate, safe refuge will be provided within the IERRT terminal building to the south of the Site. This will allow any individuals on the Site to wait safely until the flooding subsides or rescue can be affected.
- 4.2.4 In agreement with the Environment Agency, the safe refuge area(s) will be located above 6.25 m AOD i.e. the flood level corresponding to the 0.1% AEP breach flood event with climate change allowance. Provision for disabled persons to reach these areas should also be considered as part of the design.

5. Responding to a Flood Warning

5.1.1 In the event of a flood warning or severe flood warning and a breach in the local flood defences, Figure 5.1 should be followed to establish the most suitable course of action.

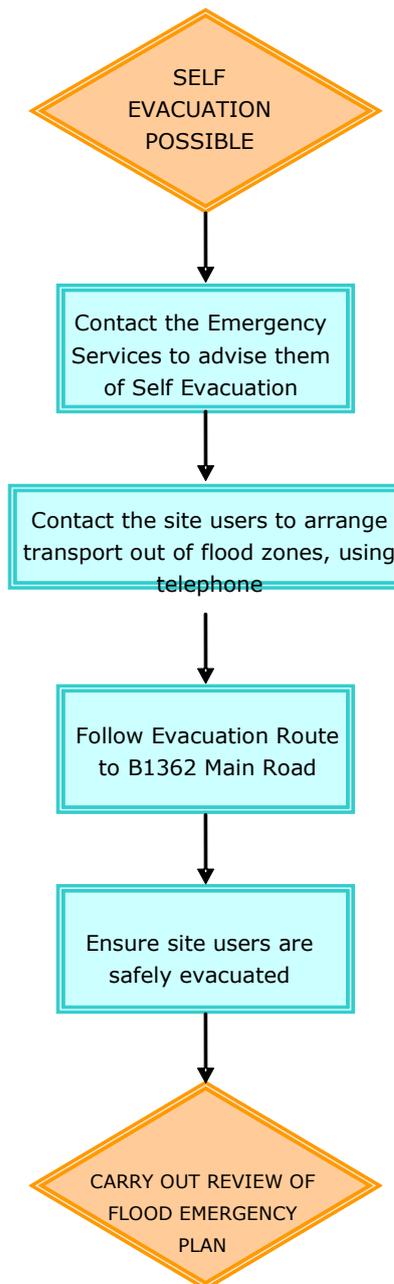
Figure 5.1: Response to Flood Warning



6. Self Evacuation Plan

6.1.1 The Self Evacuation Plan should be followed if, after following Figure 5.1, it is believed a safe Self Evacuation can take place. This should be possible without the assistance of the Emergency Services. The ultimate aim in a self-evacuation is to travel to the designated location in Flood Zone 1, where the risk of flooding is low. Users of the Site should assemble at a designated location, which should be agreed with NELC and follow the advice in their Generic Emergency Plan. The contractor will identify an evacuation route to Flood Zone 1 and display this within the site and include it within the site safety briefing.

Figure 6.1: Self-Evacuation Plan



7. Assisted Evacuation Plan

7.1.1 The Assisted Evacuation Plan should be followed if, after following Figure 7.1, it is believed that a safe Self Evacuation cannot take place without the assistance of the Emergency Services and an Assisted Evacuation is necessary.

Figure 7.1: Assisted Evacuation Plan



8. Roles and Responsibilities

- 8.1.1 The safe and effective implementation of the FERP will depend in part on the adoption of certain roles and responsibilities by the appointed contractor. This would ensure messages are delivered clearly and that the users of the Site remain aware of the flood risks and how to respond in the event of a flood.
- 8.1.2 The roles described below are suggested for the management of flood emergency situations for the proposed Development. These should be discussed with NELC and the Emergency Services and updated, if necessary.

8.1 Flood Coordinator

- 8.1.3 The Flood Coordinator should be appointed by the site operator and they should be a regular user of the Site who will be tasked with the following roles and responsibilities:

On a Regular Basis, or as Required

- ensure the Site is registered with the EA flood warning service;
- ensure that the FERP is updated regularly and engage with the EA and NELC to have their views reflected properly in the plan;
- install a flood gauge board¹⁰ at an appropriate location where it can be easily read without entering the floodwaters, in the event of flood occurring within and in the vicinity of the Site;
- familiarisation with the position of the flood gauge board, how to read it and its maintenance;
- identify safe refuge areas within the Site;
- if there are site users who may require assistance during an assisted evacuation the coordinator shall inform NELC and the Emergency Services;
- ensure new site users and visitors of the Site are informed of the flood risk to the area and the FERP (this will be included with site inductions, and a copy of the FERP made available within all buildings on the Site);
- maintain an up-to-date list of contacts (such as the local emergency services and Environment Agency). This will ensure that the correct people can be contacted to advise them that the Site should not be visited because of flooding or to advise that evacuation is necessary;
- produce a list of emergency telephone numbers and contact details, and carry out checks on the telephone numbers and emergency contact details to ensure they are up-to-date;
- produce and distribute a summary of the FERP information and actions in the form of a poster (Flood Response Summary Information Poster) for the purpose of reminding and notifying all users of the development of the existing flood risk and the FERP; and
- ensure the Flood Response Summary Information poster is prominently displayed and all site occupants and users are familiar with it.

Prior to a Flood Event

- disseminate flood warning information to all users of the development; and
- site users will be responsible for ensuring they know who is on site to enable the undertaking of a roll call in the event of an evacuation being required.

¹⁰ A staff gauge is used to record water level heights by visual observations on a vertical graduated board.

During a Flood Event Requiring Self-Evacuation

- read the flood gauge board, without entering the floodwaters or endangering other people, to establish the depth of flooding;
- contact the Emergency Services to seek advice on whether it is safe, in their view, to undertake self-evacuation;
- contact the Emergency Services to inform them that a self-evacuation will be undertaken and confirm the number and destination of flood evacuees;
- use the telephone emergency contacts of site users to arrange for them to be transported off the Site;
- coordinate evacuation from the Site to the designated safe area in Flood Zone 1, following advice from the emergency services; and
- ensure all of the occupants of the buildings are transported safely off-site.

During a Flood Event Requiring Assisted-Evacuation

- coordinate the congregation of all site occupants in the safe-refuge areas;
- read the flood gauge board to establish the depth of flooding and inform the Emergency Services; confirming that assisted-evacuation is needed as the floodwater is impassable;
- turn the radio on for regular updates;
- if safe, switch off all services (electricity and water) in accordance with Health and Safety procedures in place and EA guidance for preparing a business flood plan, as appropriate and if safe to do so;
- maintain contact with the Emergency Services using an appropriate means of communication, e.g. a two-way radio or mobile phone; and
- on arrival of the Emergency Services assist the evacuation under their instructions.

8.2 Flood Coordinator Assistant

- 8.1.4 It is suggested that there should be an appointed Flood Coordinator Assistant (or number of assistants), who will assist the Flood Coordinator to discharge their duties and responsibilities and to whom the Flood Coordinator can delegate responsibilities. The Assistant Flood Coordinator(s) should be fully aware of the roles and responsibilities of the Flood Coordinator and capable of undertaking these in the absence of the Flood Coordinator. They shall also take instructions from the Flood Coordinator regardless of the line management structure that may be in place under normal working conditions. In other words level of seniority in normal working life should not interfere with the command structure in an emergency situation; therefore the Assistant Flood Coordinator should follow instructions from the Flood Coordinator and act in line with the arrangements in place in the FERP.

8.3 Joint Emergency Management Service

- 8.1.5 Emergency Planning in Lincolnshire is carried out by the Joint Emergency Management Service (JEMS) which is located at Lincolnshire Fire and Rescue Headquarters in Lincoln. The JEMS Team is made up of emergency planners from Lincolnshire County Council, Lincolnshire Police, NHS Lincolnshire, Lincolnshire Fire and Rescue Service and the EA.

8.4 Lincolnshire Resilience Forum

- 8.1.6 Emergency Planning in Lincolnshire is coordinated by the Lincolnshire Resilience Forum (LRF). The Forum covers the Lincolnshire Police Force area, and includes the emergency services, local authorities, the EA and health agencies along with voluntary and private agencies. One of their main roles is to produce the Major Incident Plan which identifies the roles and responsibilities of responding organisations.

8.5 The Environment Agency

- 8.1.7 The role of the EA is to provide adequate flood forecasting and flood warning service for the area and to maintain river channels and flood defence structures.

8.6 Lincolnshire County Council/ North Lincolnshire Council

- 8.1.8 Lincolnshire County Council and North Lincolnshire Council are responsible for ensuring the maintenance of essential services and coordinating efforts to restore those services that have been adversely affected as soon as practicable.

8.7 Police, Fire and Other Rescue Services

- 8.1.9 The police are responsible for the coordination of rescue and evacuation following flooding events and the protection of life and property.

Appendix D Outline Materials Management Plan (MMP)

Immingham Eastern Ro-Ro Terminal

Outline Materials Management Plan

December 2023

Quality information

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1. Introduction

1.1 Overview

- 1.1.1 This outline Materials Management Plan has been prepared to inform and assist site users/ occupants of the Proposed Immingham Eastern Ro-Ro Terminal (IERRT) in the administrative area of North East Lincolnshire Council (NELC)) on the actions to take to manage the sustainable use of land and soil resources.
- 1.1.2 This Outline Management Plan (OMP) sets out the proforma that will be used by the appointed contractor to be implemented to manage materials during construction of the Proposed Development, which can affect residential occupants, businesses and commercial facilities, users of the road and pedestrianised networks, and sensitive ecological sites and habitats.
- 1.1.3 Under the voluntary CL:AIRE: The Definition of Waste: Development Industry Code of Practice¹, a MMP must be produced for the Proposed Development, together with a declaration from a registered Qualified Person (QP).
- 1.1.4 This outline Materials Management Plan will be updated by the appointed contractor into a final Materials Management Plan, as appropriate and necessary, prior to commencement of works in accordance with the Requirements of the draft Development Consent Order (DCO) and must incorporate the requirements as a minimum the Outline Construction Environmental Management Plan (CEMP).

1.2 Proposed Development

- 1.2.1 The IERRT project comprises a ro-ro facility within the Port of Immingham. The facility will be designed for the embarkation and disembarkation of principally commercial cargo carried either by accompanied trailer or by lorry or on unaccompanied trailers which will be collected at the port of disembarkation. Further details are provided below and fully described in Chapter 2: Proposed Development of the Environmental Statement (ES) [APP-060].

Landside works

- 1.2.2 Landside works are primarily required to improve the site's surface so as to provide suitable areas to accommodate wheeled cargo, containers and heavy goods vehicles (HGVs) either awaiting embarkation or collection, together with essential storage. These will be known as the Northern Storage Area, Central Storage Area, Southern Storage Area and Western Storage Area as shown on Figure 1.3 in Volume 2 of the ES [APP-059].
- 1.2.3 The proposed landside works are summarised below. Further details can be found in ES Volume 1, Chapter 2: Proposed Development [APP-039].
- Simple upgrade of the vast majority of landside areas through provision of new pavements and associated infrastructure (some peripheral parts of the areas which will be used for waiting vehicles/ cargo trailers are likely to require additional ground works);
 - A new substation (approximately 15 m x 10 m) in the Northern Storage Area to provide shore power to the berths and power for closed-circuit television (CCTV) and lighting for the yard;
 - A small workshop with fuel station in the Central Storage Area;
 - A new level crossing will be created across an ABP controlled railway between the Southern Storage Area and the Central Storage Area;

¹ The Definition of Waste: Development Industry Code of Practice – Version 2. Contaminated Land: Applications in Real Environments (2011)

- A terminal building, approximately 40 m x 15 m in size and limited to two storeys in height in the Southern Storage Area, together with ancillary buildings (in and out gates, a welfare building for HGV drivers and passengers awaited embarkation, and administrative and inspection buildings and infrastructure for the UK Border Force);
- In and out gates in the Western Storage Area;
- A two lane bridge to ensure contiguous terminal operations between the currently separate Northern and Central Storage Areas, approximately 120 m long and 12 m wide, spanning Robinson Road (an existing dock road) and an ABP controlled railway line;
- Demolition of four existing buildings to the south of the Northern Storage Area;
- Improvements to the East Gate entrance to the Port including demolition of the existing gatehouse, widening of the existing entrance road, construction of a new gatehouse, new warning signals and line markings at the junction of Robinson Road and the IOT access road, repositioning of a bus stop, removal of an existing layby, and provision of a new footway between East Gate and the bus stop;
- Highway improvements and new footways within the Port;
- Remotely operated barriers for access into the IERRT;
- Fencing around the IERRT to comply with International Ship and Port Facility Security (ISPS) Code criteria;
- Lighting and security provision; and
- Appropriate drainage and services infrastructure.

1.3 Responsibilities

- 1.2.1 In relation to the control and management of materials, the appointed contractor shall establish the appropriate roles and responsibilities for site staff in accordance with the roles and responsibilities set out in outline CEMP. The guidance stipulates that this must include a QP. The MMP must be reviewed and signed by a QP, who is a chartered professional with relevant experience and competence in waste management.

1.4 Outline Materials Management Proforma

- 1.2.2 As noted within Section 1.1 under the CL:AIRE: The Definition of Waste: Development Industry Code of Practice, the following proforma will be completed by the appointed contractor. It contains sections for describing the project details, the materials involved, the testing and treatment methods, the environmental risk assessment, the quality assurance and control measures, and the QP details. The proforma document is presented in Appendix A.

Appendix A - CL: AIRE Materials Management Plan Proforma

Materials Management Plan (MMP) Form

This form should be completed once the lines of evidence have been marshalled in relation to suitability for use, certainty of use and quantity required.

The answers to the questions posed within this form, together with the supporting information will constitute the MMP and must be provided to the Qualified Person.

A Qualified Person may comment on draft versions of this MMP, but will not complete the Declaration until all the relevant documents, demonstrating lines of evidence have been provided for each site.

The person / organisation who will pay the Declaration fee should confirm that they have read and understand the Terms and Conditions relating to the payment of the Declaration fee to CL:AIRE. These can be found on the CL:AIRE website.

The person / organisation agreeing to pay the Declaration Fee - Name, organisation and contact details inc. email address -	
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I confirm I have read and understood the Terms & Conditions.

Each question must be answered. If the question is not applicable please state this and provide a brief explanation.

1. Specify the scenario to which this MMP relates, as described in the Definition of Waste: Development Industry Code of Practice (DoW CoP) (1, 2, 3 or 4):

1. Reuse on the Site of Origin
 2. Direct Transfer of clean naturally occurring soil / mineral materials
 3. Cluster Project
 4. Combination of any of the above

In the case of a combination of reuse scenarios, please describe it below (e.g. (i) Reuse on Site of Origin and Direct Transfer of clean naturally occurring unpolluted soils, (ii) Reuse on the Site of Origin with Direct Transfer of clean naturally occurring soil to x number of development sites etc:

(NB: A Declaration is required for reuse on the Site of Origin and for any 2 site arrangement i.e. there is no facility for a combination Declaration)

2. Organisation and name of person preparing this MMP	(Full address and contact details)
---	------------------------------------

Document Control

Date issued	
Revision date	
Summary of revision 1	
Summary of revision 2	

Insert additional lines to the table above for any subsequent revisions.

Note - revisions to the MMP do not trigger an additional Declaration by a Qualified Person, unless an additional site is added to the project.

Revisions to the MMP must be recorded and summarised in the Document Control box above.

Site Details

3. Site / Project name(s)	
Reuse / receiving site name :	
Donor site name (if Direct Transfer)	

Landowners

4a. Name of Landowner(s) (full address and contact details) – where excavated materials are to be reused	
4b. Name of Landowner(s) (full address and contact details) – where excavated materials are arising from	

Summary and objectives

5a. Provide a brief description of the planned project and how excavated materials are to be reused.	
--	--

General Plans and Schematics

6. Attach a location plan for the site(s) and a plan of the site(s) which identifies where different materials are to be excavated from, stockpile locations (if applicable), where materials are to be treated (if applicable) and where materials are to be reused.	Plan Document Reference(s):
7. Attach a schematic of proposed materials movement. Where there is only one source area and one placement area briefly describe it. For all other projects a schematic is required.	Description & Schematic Document Reference:

Parties Involved and Consultation – if more than one party please provide additional details for them and identify the location that they will be working e.g. where a site is zoned

8a. Main earthworks contractor(s) (full address and contact details) – Where excavated materials are to be reused	
8b. Main earthworks contractor(s) (full address and contact details) - Where excavated materials are arising from	
9. Treatment contractor(s) (full address and contact details) – for treatment on site of origin, or at a Hub site within a fixed STF / Cluster Project	
10. Where wastes and materials are to be transported between sites, provide details of the transport contractor(s) (full address, contact details and waste carriers registration details (if applicable))	
11. Provide Local Authority contact details (full address and named contacts) where excavated materials are to be reused	
12a. For the site where materials are to be reused and for Hub Site locations provide Environment Agency contact details (full address and named contacts):	
For all Cluster Projects:	EA references:

<p>12b. Attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection to the proposals (see 3.37 of DoW CoP)</p> <p>If the EA has not been consulted please explain why (see paragraph 3.39 of the DoW CoP).</p>	
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Lines of Evidence

There is no one single factor that can be used to decide that a substance or object is waste, or when it is, at what point it ceases to be waste; as complete a picture as possible has to be created.

The following sections require completion to ensure the correct decision is made.

If a requested item is not relevant it is important to clearly state why this is so (e.g. no planning permission required because permitted development status exists).

Suitable for use criteria

<p>13. Please describe or provide copies of the required specification(s) for the materials to be reused on each site.</p>	<p>Document Reference(s):</p>
<p>Where contamination is suspected or known to be present</p> <p>14a. Please provide copies of or relevant extracts from the risk assessment(s) that has been used to determine the specification for use on the site. This must relate to the place where materials are to be used. This must be in terms of (i) human health (ii) controlled waters and (iii) any other relevant receptors. If a risk assessment is not relevant for a particular receptor given the site setting please explain why below:</p>	<p>Document Reference(s):</p>
<p>14b. Please attach any relevant documentation from the LA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)</p>	<p>LA Document references:</p>
<p>14c. Please attach any relevant documentation from the EA relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 and Table 2 of the CoP)</p>	<p>EA Document references:</p>
<p>14d. Please attach any relevant documentation from any other</p>	<p>Document Reference(s):</p>

regulators (if relevant) relating to the excavation and reuse of the materials to demonstrate no objection (see 3.37 of the CoP)	
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Where contamination is not suspected	Document Reference(s)
15a. Please attach copies or relevant extracts from the Desk Top Study that demonstrates that there is no suspicion of contamination.	
15b. Please attach copies of or relevant extracts from the site investigation/testing reports that adequately characterise the clean materials to be used (if appropriate).	Document Reference(s)
15c. Please attach copies of any other relevant information (if available) confirming that land contamination is not an issue.	Document Reference(s)

NB: It is your responsibility to assess the nature of the material to be used and that it fits within the limitations of the scenario under which it is to be used

Certainty of use

Various lines of evidence are required to demonstrate that the materials are certain to be used. This includes:

- The production of this MMP
- An appropriate planning permission (or conditions that link with the reuse of the said materials)
- An agreed Remediation Strategy(ies)
- An agreed Design Statement(s)
- Details of the contractual arrangements

Please identify in the following sections what lines of evidence relate to the site(s) **where the materials are to be used.**

16a. Planning Permission(s) relating to the site where materials are to be reused Please provide a copy of the relevant planning permission	Document Reference:
16b. Explain how the reuse of the excavated materials fits within the planning permission(s) for each site.	
16c. If planning permission is not required for any one site please explain why below e.g. permitted development, clean up of a chemical spill, surrender of an Environmental Permit, re-contouring within the existing permission.	

<p>Where contamination is suspected or is known to be present</p> <p>17. Please provide a copy of any Remediation Strategy(ies) that have been agreed with relevant regulators.</p>	<p>Document Reference(s):</p>
--	-------------------------------

<p>Where contamination is not suspected</p> <p>18. Please provide a copy of any Design Statement(s) that have been agreed (e.g. with the planning authority or in the case of permitted developments the client).</p>	<p>Document Reference(s):</p>
--	-------------------------------

Quantity of Use

<p>19. Please provide a breakdown of the excavated materials for each site and how much will be placed at each site or sub area of each site.</p> <p>Where this is not specific to a single readily identifiable source refer to an annotated plan, schematic or attach a tabulated summary.</p>	<p>Document Reference(s):</p>
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<p>20a. How has consolidation/compaction being considered in the above mass balance calculations?</p>	
<p>20b. How has loss due to treatment being considered in the above mass balance calculations (if applicable)?</p>	
<p>20c. How has the addition of treatment materials being considered in the above mass balance calculations (if applicable)?</p> <p>Note - An exact figure is not required but one that is reasonable in the circumstances and can be justified if challenged.</p>	

Contingency arrangements

Explain what is to happen in the following situations and **identify the appropriate clauses** in the contract(s) (Such clauses must be provided to the Qualified Person, preferably as a summary document): or

<p>21a. What is to happen to, and who is to pay for out of specification materials?</p>	<p>Reference:</p>
<p>21b. What is to happen to, and who is to pay for any excess materials?</p>	<p>Reference:</p>

21c. What happens if the project programme slips in relation to excavated materials or materials under -going treatment?	Reference:
21d. Other identified risk scenarios for the project (relating to excavated materials)?	Reference:

The Tracking System

Where contamination is suspected or known to be present, state the procedures put in place to:

22a. For all sites please describe the tracking system to be employed to monitor materials movements.	
Where contamination is suspected or known to be present, state the procedures put in place to: 22b. Prevent contaminants not suitable for the treatment process being accepted	
Where contamination is suspected or known to be present, state the procedures put in place to: 22c. Prevent cross contamination of materials not in need of treatment, wastes awaiting treatment and treated materials	
Where contamination is suspected or known to be present, state the procedures put in place to: 22d. Demonstrate that materials that do not require treatment and successfully treated materials reach their specific destination	
Where contamination is suspected or known to be present, state the procedures put in place to: 22e. Ensure that waste for off-site disposal or treatment is properly characterised and goes to the correct facility	
23. Please attach a copy of the tracking forms / control sheets that are to be used to monitor materials movements. To include transfer of loads on site into stockpiles prior to treatment (if applicable), stockpiled after treatment	Document reference(s)

(if applicable), stockpiled awaiting use (as appropriate) and final placement.	
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<p>For Hub Sites within Cluster Projects & where materials need treatment before reuse</p> <p>24. Please attach a copy of the Environmental Permit covering the treatment process.</p> <p>Alternatively if the treatment is covered by a Mobile Plant Permit and associated Deployment Form, attach a copy of the EA agreement to the Deployment Form.</p>	<p>Permit reference / EA letter reference:</p>
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Records

<p>25. Where, and in what form, are records to be kept?</p> <p>Note – records e.g. transfer notes, delivery tickets, Desk Top Study, Site Investigation, Risk Assessment(s), Verification Report(s) need to be kept for at least 2 years after the completion of the works and production of the Verification Report</p>	
--	--

Verification Plan

<p>26. Provide or explain the Verification Plan which sets out how you will record the placement of materials and prove that excavated materials have been reused in the correct location and in the correct quantities within the development works (see 3.4 of the DoW CoP).</p>	<p>Document Reference</p>
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Appendix E Outline Stakeholder Management Plan (SMP)

Immingham Eastern Ro-Ro Terminal

Outline Stakeholder Management Plan

December 2023

Quality information

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1. Introduction

- 1.1.1 This outline Stakeholder Management Plan ('the Plan') provides a framework for the detailed stakeholder management and communications plan for the IERRT Project. The Plan outlines how the Project will ensure that all internal and external stakeholders are informed of relevant project information and that the development of the proposed development meets the needs of residents, businesses, workers, and visitors.
- 1.1.2 This outline Stakeholder Management Plan will be further developed by the appointed contractor during the detailed design stage when information relating to known staff, contact details and further knowledge on working approaches are known.
- 1.1.3 The document contains the following:
- Project Overview (Section 2): brief description of the IERRT project.
 - Roles and Responsibilities (Section 3): responsible individuals from each party and their role in stakeholder management.
 - Stakeholders (Section 4): an outline of the relevant stakeholders to be engaged with.
 - Consultation Plan (Section 5): details of the consultation programme and process.
 - Consultation Methods (Section 6): setting out the methods of communications and engagement.
 - Complaints Process (Section 7): setting out how complaints will be dealt with and managed.
- 1.1.4 This plan provides a framework for communication and engagement activities throughout the project to ensure:
- Accurate and timely communications are provided, to provide the community with advance warning of works that may impact them; and
 - Stakeholder expectations can be managed. Effective communication is key to the success of the project.

2. Project Overview

- 2.1.1 The IERRT project consists of a new roll-on roll-off (Ro-Ro) facility (the 'IERRT project') within the existing Port of Immingham, Lincolnshire ('the site'). The Port of Immingham is one of the UK's busiest ports, operating 24 hours a day, 365 days a year. The IERRT project comprises marine and landside infrastructure.
- 2.1.2 The facility will be designed for the embarkation and disembarkation of principally commercial cargo carried either by accompanied trailer or by lorry or on unaccompanied trailers which will be collected at the port of disembarkation.

3. Roles and Responsibilities

3.1.1 The following section sets out the roles and responsibilities of the various parties involved in the delivery of the IERRT project, with respect to stakeholder management and communications during construction.

Organisation	Role	Nominated lead
ABP (Client) Project Manager	<p>Project delivery lead.</p> <p>The PM will provide details of other programmed projects and / or maintenance works at adjacent sites and sites that may affect access for deliveries, etc.</p> <p>Project Manager is to seek to engage with stakeholders on a regular basis to ensure they are kept informed about progress on the development. The Project Manager coordinates all such engagement and consults with the Contractor to obtain relevant information, which the Contractor provides within 48 hours.</p>	TBC
Contractor	<p>The contractor is to appoint a Stakeholder and Communications Manager.</p> <p>The contractor is expected to operate as a 'good neighbour', regarding noise, inconvenience and / or requirements for port operations in line with the port's General Requirements.</p>	TBC
Stakeholder and Communications Manager	<p>Act as a single point of contact between the Client and the Contractor for all matters relating to adjacent tenants and customers, to be available to be contacted during all operational hours, including nighttime working if applicable.</p> <p>To prepare and submit for acceptance a stakeholder management and communications strategy to the Project Manager within 2 weeks of the starting date.</p>	TBC

3.1.2 The contractor will appoint a Stakeholder and Communications Manager who will have the below attributes:

- Experience creating, implementing, and managing a stakeholder management plan.
- Effective communication skills.
- Work with key supply chain to understand opportunities available for new jobs, apprentices and training.
- Lead the Site team in achieving a high Considerate Constructors' Score.
- Ability to hold effective site meetings with stakeholders and third parties as required.
- Degree and / or post grad - engineering, or construction related field is desired.

3.1.3 The Stakeholder and Communications Manager will undertake the following activities for the duration of the construction works:

- Produce newsletters and arrange for distribution / delivery at appropriate times.
- Responding to any concerns or complaints raised by the public in relation to the works.
- Liaising with the Project Manager (PM) and Environmental Manager (EM) on landowner and business concerns relating to the works and act as the main interface with these stakeholders, alongside any presence from ABP or local authority where required.

- Maintain a log of complaints relating to the environment.
- Ensuring that the PM and the EM are informed of any complaints relating to the environment.
- Keeping the public informed of project progress and any construction activities that may cause inconvenience to their operations or activities.

4. Stakeholders

4.1 Overview

4.1.1 A number of key stakeholders that will need to be engaged with during the construction of the IERRT project. These stakeholders have been separated into a number of categories, which are listed below:

- Internal stakeholders.
- Statutory/key stakeholders.
- Local businesses.
- Residents.

4.2 Engagement to date

4.2.1 The engagement to date is detailed within the Consultation Report [APP-021]. Any existing communication as captured within this Report must be considered for any future communication with interested parties.

5. Consultation Plan

5.1 Overview

5.1.1 Given the scale of the project and the range of stakeholders involved, it is vital that there is a clear approach to engagement is outlined. The frequency and type of engagement is listed below in Table 6-1. The appointed contractor will at a minimum adhere to the frequency of engagement proposed in Table 6.1.

5.2 Traffic Management

5.2.1 Traffic management methods are outlined within the Outline Construction Worker Travel Plan and the Outline Construction Traffic Management Plan (Appendix A and Appendix B of the Outline Onshore CEMP). These will be further developed and implemented by the appointed contractor.

5.2.2 Parties that ABP considers are likely to be affected by traffic management measures implemented during construction will be notified in advance of any relevant road diversions and/or closures.

5.3 Piling

5.3.1 So that businesses are kept informed of the piling activities, their duration and their expected impact, a piling specific community liaison protocol will be established by the appointed contractor with input from specialist piling contractor(s) during the detailed designed stage.

6. Consultation Methods

6.1.1 The way in which each stakeholder group is engaged will vary depending on their needs, level of interest, and level of influence on the project. There will be frequent meetings of the core project team and working group (project advice and scrutiny). The frequency of meetings will vary between groups and according to the project stage. Table 6-1 below sets out the methods that will be used to promote the consultation and consult on the Proposed Development.

Table 6-1: Outline methods of engagement

Method	Detail	Distribution/ frequency of engagement
Project / ABP website	A summary of the scheme, consultation dates, event information and copies of the consultation materials that can be downloaded will be made available on the website.	As required
Stakeholder meetings	The Stakeholder and Communications Manager will offer a meeting with relevant stakeholders, where the interfaces between port operations and project activities are discussed.	Monthly
Consultation methods	As well as the scheme website, the following will be produced: <ul style="list-style-type: none"> • Email address – a monitored email address has been set up for the project: TBC. • Telephone – a monitored telephone line has been set up for the project: TBC. 	Monitored daily
Line of Communication	<ul style="list-style-type: none"> • Stakeholder email – an email will be issued to all identified stakeholders, notifying them of key project updates. 	Monthly

5.4 Engagement Tracker

6.1.2 A detailed log of engagement activity will be managed and held by the appointed contractor. This document will be considered a live document and will be reviewed and updated after engagement with third parties has occurred. The log of engagement can be made available to the local authority upon request.

7. Complaints Process

7.1.1 A telephone number (TBC) and email contact (TBC), managed by ABP, will continue to provide information, signpost and respond to public queries about the proposed development and its construction.

7.1.2 During working office hours, the telephone and email will be monitored, and where possible, the use of FAQs will be used to respond to queries about the construction works. Any enquires not captures on the FAQs, or complaints received, will be forwarded to the relevant party, depending on the nature of the query.

- 7.1.3 The contractor once appointed, and any other deliver partners will feed their own complaints and enquiries process into a detailed Stakeholder Management Plan.
- 7.1.4 The Contractors contact details are to be displayed on signage at the Site for management of complaints.
- 7.1.5 In the event that a complaint is raised the appointed contractor through the Stakeholder communications manager will undertake the following process:
- Speak to the affected party / parties directly at the earliest opportunity following the initial complaint being raised.
 - Log the complaint in the complaints in the complaints log.
 - Raise and discuss the complaint with the site manager within 24 hours of the complaint being raised.
 - If necessary, identify corrective actions and / or plan(s) to address complaint.
 - Implement corrective actions and / or plan(s) with the support of the site manager.
 - The appointed contractor will endeavor to implement any corrective actions within 5 working days of the complaint being raised.
- 7.1.6 The Stakeholder and Communications Manager will log the outcomes and capture these within the weekly reporting requirements of the Project.

Appendix F Outline Site Waste Management Plan (SWMP)

Immingham Eastern Ro-Ro Terminal

Outline Site Waste Management Plan

December 2023

Quality information

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1. Introduction

1.1 Overview

- 1.1.1 This SWMP sets out the generic measures that will be implemented by the Principal Contractor to manage waste generated by the construction of the IERRT project.
- 1.1.2 A Contractors SWMP will be produced by the Contractor which will form part of the Contractors CEMP. The Contractor may refine working practices during detailed design due to material quantities changing and or increasing / decreasing and supply chain input. Any changes to quantities and calculations of materials used and waste generated will be included within the site waste management plan in consultation with NELC.
- 1.1.3 Key terminology in relation to this SWMP is detailed in Table B1.

Table B1: Key Terminology

Terminology	Definition
The Considerate Constructors Scheme (CCS)	The CCS – a non-profit making, independent organisation founded in 1997 by the construction industry to raise standards in the construction industry.
C&D waste	Construction and demolition waste
CD&E waste	Construction, demolition and excavation waste
CIRIA	Construction Industry Research and Information Association – a member-based research and information organisation dedicated to improvement in all aspects of the construction industry.
Controlled waste	Household, industrial and commercial waste (not agricultural waste, waste from mines or quarries and most radioactive waste).
DMRB	Design Manual for Roads and Bridges. Contains information about current standards relating to the design, assessment and operation of motorway and all-purpose trunk roads in the United Kingdom
Duty of Care	Legal responsibility for anyone who produces, imports, keeps, stores, transports, treats or disposes of waste to take all reasonable steps to ensure that the waste is managed properly.
Duty of Care checks	Checks to ensure that only authorised persons transfer waste, and that the waste is managed legitimately, including checks on: <ul style="list-style-type: none"> • The waste carrier's registration certificate. • The waste broker's registration certificate (if used). • The Environmental Permits for waste management facilities or proof of exemptions from permitting.
Environment Agency	The main environmental regulatory body in England.
European Waste Catalogue (EWC) code	A six-digit number used to classify a particular waste stream.
Exempt activities	Activities not requiring an Environmental Permit (an exemption will require registration).
Flood Zone 3	The area of the floodplain where there is a high risk of flooding.
Hazardous Waste Consignment Note (HWCN)	A document that accompanies the movement of any hazardous waste from production (cradle) to disposal (grave).

Terminology	Definition
Hazardous waste	Waste with any hazardous properties as listed in Annex III of The Hazardous Waste (England and Wales) Regulations 2005 (as amended).
Non-hazardous waste	Waste which does not display any of the hazardous properties listed in Annex III of The Hazardous Waste (England and Wales) Regulations 2005 (as amended).
Principal Contractor	Contractor appointed to coordinate the construction phase of a project where it involves more than one contractor.
Registered Waste Carrier	A person who holds a registration certificate from the Environment Agency to transport waste.
Site Waste Management Plan	Sets out how material resources and waste will be managed and controlled at all stages during a construction project.

1.2 Purpose and benefits

- 1.1.4 SWMPs are used as a good practice measure on construction projects and to support planning and consenting applications.
- 1.1.5 This SWMP has been developed to act as a guide for site staff on how to manage material assets (construction materials) and waste, in accordance with both legal and best practice requirements. The Principal Contractor will use this SWMP throughout the duration of the IERRT project construction phase.
- 1.1.6 The Principal Contractor will take all reasonable steps to ensure that:
- All waste from the site is dealt with in accordance with the waste duty of care (defined in section 34 of the Environmental Protection Act 1990 (The Stationary Office, 1990) and The Waste (England and Wales) Regulations 2011 (as amended) (The Stationary Office, 2011); and
 - Materials are handled efficiently, and waste managed appropriately.

1.3 Scope

- 1.1.7 This SWMP includes:
- An overview of applicable legislation;
 - Details of the IERRT project;
 - Management arrangements, including roles and responsibilities, training, key performance indicators (KPIs) and best practice measures;
 - Estimates of construction material use and waste arising and how they will be managed;
 - Design decisions;
 - Materials and waste management on-site; and
 - Opportunities for waste minimisation, reuse, recycling and recovery in line with the requirements of the waste hierarchy.

2. Waste management legislation

- 2.1.1 This section summarises the key legal requirements with regards to waste management and control within England.

2.1 Definition of waste

- 2.1.2 Waste is defined by Article 1(a) of the European Waste Framework Directive (EWFD) (The European Parliament and the Council of the European Union, 2008) as “any substance or object (in the categories set out in Annex I) which the holder discards or intends to discard or is required to discard”.
- 2.1.3 The legal definition of waste also covers substances or objects, which fall outside of the commercial cycle or out of the chain of utility. In particular, most items that are sold or taken off-site for recycling are wastes, as they require treatment before they can be resold or reused.
- 2.1.4 In practical terms, wastes include surplus earthworks materials and soil, scrap, unwanted surplus materials, packaging, recovered spills, office waste, and damaged, worn-out, contaminated or otherwise spoiled plant, equipment and materials.

2.2 Duty of care

- 2.1.5 The duty of care for waste management is set out under section 34 of the Environmental Protection Act 1990 (The Stationary Office, 1990) and The Waste (England and Wales) Regulations 2011 (as amended) (The Stationary Office, 2011). It requires anyone who produces, imports, keeps, stores, transports, treats or disposes of waste to take all reasonable steps to ensure that the waste is managed properly. Anyone in possession of waste must take all reasonable steps to:
- Prevent unauthorised or harmful deposit, treatment or disposal of waste;
 - Prevent a breach (failure) by any other person to meet the requirement to have an environmental permit, or a breach of a permit condition;
 - Prevent the escape of waste;
 - Ensure that waste is transferred to an authorised person; and
 - Provide an accurate description of the waste when it is transferred to another person, by using a compulsory system of Waste Transfer Notes (WTN) that control the transfer of waste between parties.
- 2.1.6 Failure to comply with the duty of care requirements is a criminal offence and could lead to prosecution.

2.3 Apply the waste hierarchy

- 2.1.7 The Waste (England and Wales) Regulations 2011 (as amended) (The Stationary Office, 2011) transpose the requirements of the EWFD (The European Parliament and the Council of the European Union, 2008), and require:
- Those undertaking waste management activities, such as the import, production, collection, transportation, recovery and/ or disposal of waste, to take all reasonable measures to apply the waste hierarchy, in priority order, as follows:
 - Prevention;
 - Preparation for reuse;
 - Recycling;
 - Other recovery, such as energy recovery; and
 - Disposal.
 - Those producing waste to confirm that they have applied the waste hierarchy when transferring waste and to include a declaration on their WTN or consignment note.

2.4 Hazardous waste

- 2.1.8 The Hazardous Waste (England and Wales) Regulations 2005 (as amended) (The Stationary Office, 2005) require that a consignment note be used to document the transfer and management of all hazardous waste.

2.5 Registration of waste carriers

- 2.1.9 Under the Control of Pollution (Amendment) Act 1989 (The Stationary Office, 1989) it is a criminal offence for anyone not registered as a waste carrier to transport controlled waste. The Waste (England and Wales) Regulations 2011 (as amended) (The Stationary Office, 2011) updated the system for the registration of waste carriers, including brokers and dealers.
- 2.1.10 Anyone undertaking any of the following activities as part of their business must register as a waste carrier, broker or dealer:
- Transporting their own waste;
 - Transporting waste for someone else;
 - Buying or selling waste; and
 - Acting as a waste broker (arranging for someone to handle waste produced by someone else).
- 2.1.11 Details of all appointed waste carriers, brokers and contractors must be included in the Principal Contractor's SWMP, as part of the Principal Contractors CEMP, including copies of appropriate waste carrier licences/ registrations. The register of waste carriers, brokers and dealers can be checked using the Environment Agency's Public Registers (at: environment.data.gov.uk/public-register/view/search-waste-carriers-brokers).

2.6 Environmental permits and exemptions

- 2.1.12 The Environmental Permitting (England and Wales) Regulations 2016 (as amended) (The Stationary Office, 2006) require sites where waste is processed, treated or disposed of to hold a valid Environmental Permit issued by the Environment Agency.
- 2.1.13 The Regulations also include a schedule of activities that are exempt from the requirements of permitting. However, to comply with these Regulations, an exempt activity must generally be registered with the Environment Agency before commencing.
- 2.1.14 A permit is not usually required where waste is temporarily stored on the site where it is produced prior to management or disposal. Depending upon the types and quantities of waste to be stored, the duration and place of storage and compliance with other defined conditions:
- A non-waste framework directive exemption may apply, which does not need to be registered.
 - An exemption may need to be registered with the Environment Agency.
- 2.1.15 The Principal Contractor will be responsible for obtaining the necessary permits and exemptions, where required.

3. Details of the proposed development

- 3.1.1 The Principal Contractor will complete Table B2 prior to commencement of construction. Further details of the IERRT project can be found in Section 1.3 of this CEMP.

Table B1 Details of the scheme

Project title		Immingham Eastern Ro-Ro Terminal
Project location	Address	Immingham Dock
	Town	Immingham, Lincolnshire
	Postcode	DN40 2RQ
Client	Name	ABP
	Address	
	Contact	
	Phone	
Principal Contractor	Name	
	Address	
	Phone	
SWMP Drafter	Name	
	Address	
	Phone	
Construction cost (estimated)		
Site area (gross area)		
Construction programme:		
Start date		
Completion date		
Waste Management Champion		
Person responsible for SWMP		
Document Controller/ Secretary		
Location of SWMP		

4. Management arrangements

4.1 Roles and responsibilities

- 4.1.1 The main contract personnel responsible for producing the Principal Contractor SWMP are shown in Table B3. The Principal Contractor will complete Table B3 prior to the commencement of the construction phase.

Table B1 Roles and responsibilities

Position	Name	Contact details	SWMP responsibility
Main Contract personnel			
Client Project Manager			Monitor the Principal Contractor's performance against the contract including any environmental commitments and targets agreed for the IERRT project.
Project Manager (Principal Contractor (PC PM))			Approval of the SWMP for the relevant phase of works. Ensure that all controls specified within the SWMP are implemented by employees and sub-contractors.
Environment Manager (Principal Contractor PC EM))			Undertake site inspections to monitor compliance with the environmental licences/consents for the works and the measures within the SWMP. Ensure that the IERRT project complies with all environmental legislation, consents, objectives, targets and other environmental commitments, including those arising from the ES throughout the relevant project phase.
Site Materials and Waste Manager (Principal Contractor)			Prepare the SWMP. Implement the SWMP throughout the construction of the IERRT project and ensure that waste is disposed of legally, economically and safely in line with the SWMP and all relevant legislation. Provide appropriate professional and practical advice to contractors, consultants and project team members associated with materials and waste issues.
Sub-contractor details, if applicable			
Individual Sub-contractor(s), as appointed			Read through, familiarise and understand the requirements of the SWMP. Produce waste documentation and a Management Plan. Comply with the requirements set out in the SWMP.

4.2 Instruction and training

- 4.1.2 The Principal Contractor will also incorporate any additional SWMP requirements they follow, above those already listed within the CEMP and SWMP into the site induction and training procedures and must provide on-site instruction of appropriate construction materials and waste separation, handling, recycling, reuse and return methods to be used by all parties at all appropriate stages of the IERRT project construction.
- 4.1.3 The Principal Contractor must ensure that all personnel working on the site, including sub-contractors, are inducted and appropriately trained.

4.3 Key performance indicators (KPIs)

4.1.4 The environmental assessment of the IERRT project is based on the IERRT project achieving certain performance standards with respect to the recovery of construction and demolition waste.

4.1.5 In order to achieve these performance standards, the Principal Contractor will adopt the following KPI for the IERRT project and will record the necessary data to confirm compliance with this KPI:

- Recovery of at least 70% (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring materials with European Waste Catalogue Code 17 05 04), with the aim to achieve recovery of 90% (by weight).

4.4 Best practice measures

4.1.6 To reduce the potential impacts from materials and waste, and to achieve high levels of sustainability in the IERRT project as a whole, the Principal Contractor will apply the principles of the waste hierarchy and adopt best practice measures (BPM) which go beyond statutory compliance.

4.1.7 This may include BPMs set out in construction industry guidance for example, guidance from the CCS, Waste & Resources Action Programme (WRAP) and CIRIA.

4.1.8 The following approaches will be implemented, where practicable, to minimise the quantity of waste arising and requiring disposal:

- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme.
- Implementation of a 'just-in-time' material delivery system where possible to avoid materials being stockpiled, which can increase the risk of damage and subsequent disposal as waste.
- Attention to material quantity requirements to avoid over-ordering and the generation of waste materials due to surplus.
- Reuse of materials on-site wherever feasible.
- Off-site prefabrication, where practical, including the use of prefabricated structural elements.
- Segregation of waste at source, where practical, to facilitate a high proportion and high-quality recycling.
- Off-site reuse, recycling and recovery of materials and waste where reuse on-site is not practical, e.g. through use of an off-site waste segregation or treatment facility or for direct reuse or reprocessing off-site.

4.1.9 The Principal Contractor will implement the following waste management measures in order to minimise the likelihood of any localised impacts from pollution or nuisance from waste on the surrounding environment:

- Damping down of surfaces during spells of dry weather and brushing/ water spraying of heavily used hard surfaces/ access points across the site as required.
- Burning of waste or unwanted materials will not be permitted on-site.
- All hazardous materials including fuels, chemicals, cleaning agents, solvents and solvent containing products to be properly sealed in containers at the end of each day prior to storage in appropriately protected and bunded storage areas.
- All demolition and construction workers will be required to use appropriate personal protective equipment whilst performing activities on-site.
- Any waste effluent will be tested and, where necessary, disposed of at a correctly licensed facility by a licensed specialist contractor(s).

- Materials requiring removal from the site will be transported using licensed carriers and records will be kept detailing the types and quantities of waste moved, and the destinations of this waste, in accordance with the relevant regulations.

5. Estimate of construction material use and waste arisings

5.1 Introduction

5.1.1 This SWMP provides estimates of:

- The types and quantities of materials required for the construction of the IERRT project.
- The types and quantities of earthworks materials arising during construction of the IERRT project and the likely cut and fill balance and material management routes.
- The types and quantities of waste arising during the IERRT project demolition and construction works and the likely management routes and resulting recovery rate.

5.1.2 Full details of the methodology for estimating types and quantities of construction materials and waste, potential recycled content and recovery rates is described in Appendix G: Construction Materials and Waste Management Assessment.

5.1.3 The Principal Contractor will review, update and monitor these estimates throughout the design and construction of the IERRT project, and incorporate these updates in the SWMP to ensure delivery of the IERRT project KPIs.

5.1.4 The Principal Contractor must ensure that the SWMP is updated to reflect current legal requirements and the waste management practices of the IERRT project as necessary, both prior to and during the construction works. The Principal Contractor must ensure all required authorisations are obtained.

5.2 Material use

5.1.5 The estimated main types and quantities of aggregate required for the construction of the IERRT project have been obtained from estimated waste quantities for the IERRT project (ES Volume 1 Chapter 3, Application Document Reference number 8.2.3) and are shown in Table B4.

5.1.6 The Principal Contractor must ensure that reused, recycled and secondary aggregates (alterative materials) imported to site comply with all relevant technical and regulatory requirements.

Table B1 Estimated main types and quantities of materials to be used during IERRT project construction and wastage rate

Material	Material density	Quantity (tonnes)	Quantity (m ³)	Wastage rate (%)	Quantity (tonnes)	Quantity (m ³)
Steel piles	7.85	7,700	981	2	154	20
Concrete - ready mixed	2.4	72,000	30,000	8	5,760	2,400
Concrete - precast	2.4	18,000	7,500	5	900	375
Reinforcement	7.85	25,000	3,185	5	1,250	159
Steel for buildings	7.85	6,000	764	2	120	15
Aggregates	1.9	114,000	60,000	10	11,400	6,000
Asphalt	2.4	81,000	33,750	8	6,480	2,700
Cement stabilised subgrade and sands	2.4	360,000	150,000	8	28,800	12,000
Total material construction waste					54,864	23,669

- 5.1.7 The estimated wastage rates for each material have been provided in ES Volume 1 Chapter 3, Application Document Reference number 8.2.3.

5.3 Excavated materials

- 5.1.8 The IERRT project design is being progressed to optimise the requirements for cut and fill and, where possible, this will be minimised to reduce the import and export of materials and waste. The IERRT project design team aim is to achieve a cut-fill balance, however, predicted cut and fill for the IERRT project is likely to be imbalanced and export of material required. The IERRT project cost estimates list 47,000 m³ of excavated material for disposal. It is currently assumed that this material is non-hazardous.
- 5.1.9 It is anticipated that the use of site-won excavated materials (excluding dredged material) within the IERRT project will be undertaken in accordance with a Materials Management Plan (MMP) prepared under the CL:AIRE Definition of Waste: Code of Practice (CL:AIRE, 2011) and these materials will not be classified as waste.
- 5.1.10 The Principal Contractor will be responsible for the management of any surplus excavated materials and must apply the waste hierarchy in determining the most suitable options.

5.4 Waste

- 5.1.11 The main types and quantities of construction and demolition waste (including clearance) estimated to arise during construction of the IERRT project are based on information in Chapter 3 Details of Project Construction and Operation of the ES (Volume 1), Application Document Reference number 8.2.3. Wastage rates have been applied to the main construction materials and the resulting estimated waste quantities are outlined in Table B5. The management routes and recovery rates are based on industry good practice approaches, with high levels of forecast diversion from landfill.
- 5.1.12 Construction site operations will also generate waste streams from offices, welfare facilities, material packaging and construction plant maintenance. The quantities are anticipated to be small compared to the main demolition and construction wastes summarised in Table B5. Estimated types and quantities of construction site operational wastes and procedures for the storage and management of these wastes will be set out in the Principal Contractor's SWMP, once appointed.
- 5.1.13 The Principal Contractor will be responsible for the management of waste and must apply the waste hierarchy in determining the most suitable options.
- 5.1.14 Where waste is reused, recycled or recovered for use within the IERRT project, the Principal Contractor must ensure compliance with all relevant technical and regulatory requirements.

Table B2 Estimated main types and quantities of construction and demolition waste arising during the construction of the IERRT project including potential management routes and recovery rates

Activity and waste	Management route	Good practice recovery rate (%)
Construction (wastage from construction materials)	Recycling or recovery offsite	95%
Demolition	Recycling or recovery offsite	95%

Excavated material	Offsite management, to be confirmed	n/a applicable
--------------------	-------------------------------------	----------------

5.1.15 At this stage there no estimate of hazardous waste has been undertaken. All construction and demolition waste is assumed to be inert or non-hazardous waste. The quantities of hazardous waste e.g. oils, batteries, aerosol cans etc are anticipated to be small compared to the main construction and demolition wastes. Procedures for the storage and management of these wastes are set out in this SWMP and will be further detailed in the Principal Contractor's SWMP.

5.1.16 The quantity of waste estimated to arise from vegetation clearance is not yet known (in volume or weight), however the clearance will include trimming of existing trees and shrubs and removal of dense hedgerow, shrubs and trees. It is expected that the volume of vegetation removal will be minimal due to the existing site being run as an operational port. It is assumed that this waste would have a high waste recovery rate and is likely recovered due to some potential economic value rather than sent to landfill.

5.5 Design decisions

5.1.17 Decisions made at the detailed design stage of the IERRT project will impact on the quantity and types of materials used, the quantity and types of waste arising and the management of materials and waste.

5.1.18 The IERRT project design development will apply the WRAP principles of Designing out Waste (DoW). The DoW principles include:

- Design for reuse and recovery;
- Design for off-site construction;
- Design for materials optimisation;
- Design for waste efficient procurement; and
- Design for deconstruction and flexibility.

5.1.19 In general, the following measures will be implemented during the design and construction phases of the IERRT project, where technically, economically and environmentally practicable:

- Manage waste in accordance with the waste hierarchy;
- Design-out and prevent waste arising;
- Reuse excavated earthworks materials within the IERRT project;
- Recycle demolition materials arising from IERRT project within the construction of the IERRT project;
- Divert waste from landfill through off-site recycling and recovery; and
- Use recycled and secondary aggregates (alternative materials) in the construction of the IERRT project.

5.1.20 Prior to construction, the Principal Contractor must record all actions to be implemented to reduce waste or material use on the IERRT project, and the resulting benefits. Table B6 will be populated by the Principal Contractor during the detailed design of the IERRT project.

Table B3 Waste minimisation actions

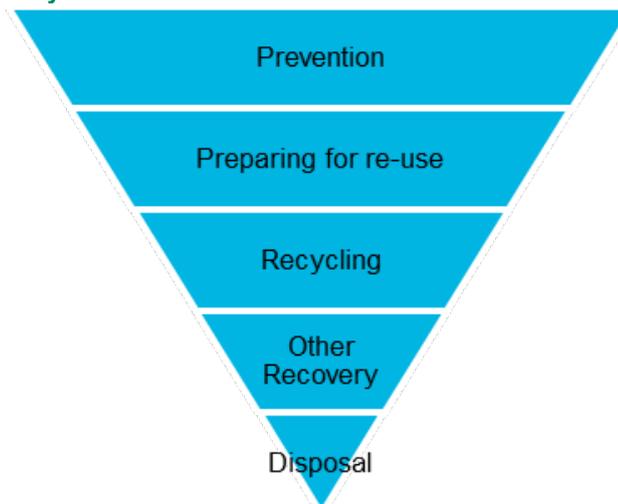
Material or waste	Estimated reduction in waste arising (tonnes/ m ³)	Approach by which reduction achieved	Will additional planning permissions/ authorisations be required?	Estimated cost saving (£)	Persons responsible for completing action

6. Construction and materials and waste management on-site

6.1 Waste management routes

6.1.1 The waste hierarchy sets out the priority order that should be considered when managing wastes. A basic representation of the waste hierarchy is provided in Plate B1. The Principal Contractor will use the hierarchy as a guide to encourage the prevention of waste and to define waste management options.

Plate B1 Waste hierarchy



6.1.2 When considering waste management options for the IERRT project, the Principal Contractor will take account of the site's location, natural environment and available infrastructure. The Principal Contractor will consider the following options when determining the preferred waste management option for each waste stream.

6.2 Preparing for reuse

- 6.1.3 The aim is to provide design features on the IERRT project to use materials in their current state and form. Reuse can be undertaken either on-site or off-site.
- 6.1.4 Where possible, excavated earthworks materials and soils arising from the IERRT project will be stockpiled on-site and reused within the IERRT project.

6.3 Recycling

- 6.1.5 The aim is to reuse materials won on-site by recycling them into an alternative form that can be used for construction purposes (for example crushing concrete, brick or other inert wastes to produce aggregate material). By recycling on-site, as far as practicable, the quantity of waste requiring off-site management is reduced and carbon emissions associated with transportation are eliminated.
- 6.1.6 Recycling may also be achieved by utilising materials with a recycled content, such as recycled aggregates produced off-site.

6.4 Recovery

- 6.1.7 This generally aims to recover energy from waste which cannot otherwise be reused or recycled. This may include waste materials such as hazardous liquids or solids that can be sent to energy from waste facilities.
- 6.1.8 Recovery may also include the beneficial use of materials on land for restoration (deposit for recovery).

6.5 Disposal

- 6.1.9 The least preferred option in the waste hierarchy is a final disposal route such as landfill. Some waste streams will inevitably end up with such a solution.
- 6.1.10 When placing waste disposal contracts, the Principal Contractor will consider the implications of long-distance travel in terms of health and safety risk, commercial terms and increased emissions from vehicles.
- 6.1.11 The Principal Contractor will ensure the pre-treatment of all hazardous and non-hazardous wastes prior to disposal to landfill. The methods of pre-treatment will enable the waste to meet the 'three-point test':
- It must be a physical, thermal, chemical or biological process including sorting.
 - It must change the characteristics of the waste.
 - It must do so in order to:
 - Reduce its volume;
 - Reduce its hazardous nature;
 - Facilitate its handling; or
 - Enhance its recovery.
- 6.1.12 Source segregation can be a pre-treatment option and as such can be applied to waste generation on-site including general waste and arisings and will take place on the IERRT project.
- 6.1.13 The Principal Contractor will ensure that a declaration stating the pre-treatment method applied to the waste is appended to any WTN for non-hazardous waste being sent for disposal.

6.6 Materials and waste storage and segregation options

- 6.1.14 The Principal Contractor will store excavated soils and earthworks materials on-site in stockpiles until required for use.
- 6.1.15 Demolition materials that are to be recycled for use on-site must be separated at source and stored separately both before and after the treatment process.
- 6.1.16 Construction materials that are stored on-site must be in designated areas that are flat, accessible and secure in order to avoid damage or loss. Materials must be stored in appropriate conditions to avoid damage through, for example, water ingress or vermin. Materials must be retained in their original packaging to protect them from damage.
- 6.1.17 The Principal Contractor must ensure that the construction site compounds incorporate designated waste storage areas for skips or similar suitable waste receptacles. The Principal Contractor must ensure that these areas are surfaced with an impermeable barrier, such as hardstanding/ tarmac or using impermeable membranes and the location of any existing drainage will be noted.
- 6.1.18 At the waste storage areas, the Principal Contractor must segregate waste into the following types as a minimum: inert; wood; metals; packaging; general waste; hazardous solid wastes; hazardous liquid wastes.
- 6.1.19 The Principal Contractor will implement the following waste management procedures:
- All waste containers must be secure and ensure that no waste is allowed to escape.
 - All waste containers must be clearly labelled using a colour coding system so that users know what wastes can be placed in each container. Waste containers must be appropriately colour coded using generic colour codes, an example is shown in Plate B2 below.
 - Lockable storage will be provided for all hazardous waste.
 - All waste containers must be sited at least 10m away from watercourses, ditches and other areas of environmental sensitivity.
 - Liquid wastes must be stored in enclosed/ lidded containers and stored within a suitable bunded area, or otherwise provided with secondary containment.
 - Separate containers must be provided for each type of hazardous waste.
 - Each type of hazardous waste must not be mixed with any other hazardous or non-hazardous waste.
 - Sewage from the site offices/ compounds will drain to septic tank and be collected by a suitable specialist waste contractor.
 - Portable toilet facilities on-site (portaloos etc.) must be emptied by the facility provider as per their service agreement.

Plate B2 Waste container colour codes

Grey: Inert		Green: Wood	
Black: Mixed		Brown: Packaging	
Blue: Metal		Orange: Hazardous	
White: Gypsum			

6.7 Waste carriers and facilities

- 6.1.20 The Principal Contractor will manage all waste generated on the IERRT project in accordance with legal requirements. The Principal Contractor must record details of the proposed waste carrier for each waste stream in the registration table (see Annex 1: Waste carriers to this SWMP), with Waste Carriers Licence details appended to the SWMP.
- 6.1.21 The Principal Contractor will ensure that the following information is recorded for all waste facilities used:
- Contractors name;
 - Date(s) of waste removal;
 - Type(s) of waste removed (i.e. non-hazardous waste, hazardous waste, inert (specify));
 - Method of treatment, recovery or disposal (i.e. reuse, recycling, incineration, landfill etc.);
 - Volume or weight of waste removed;
 - Recovery rate achieved; and
 - Costs associated with waste removal, transport and treatment, including Landfill Tax charges where applicable.

6.8 Waste Transfer Notes (WTN)

- 6.1.22 The Principal Contractor must ensure that all movements of waste from site are accompanied by a WTN, which will detail specific information. The Principal Contractor's Site Materials and Waste Manager or other competent person will check that each WTN contains the following:
- The name of the person receiving the waste and what they are authorised to do with that waste as a Registered Waste Carrier can only transport waste;
 - Type of waste;
 - The Standard Industrial Classification (SIC) code;
 - The six-digit EWC code;
 - Address of the producing site and details of the waste producer;
 - Waste carrier's details including registration number;
 - Quantity of waste;
 - How it is contained (e.g. 8 cubic yard skip);
 - Address of the receiving site (e.g. Landfill) and the Environmental Permit or Exemption No. Associated with the receiving site;
 - The date to which the WTN applies;
 - If the material is non-hazardous waste and it is destined for disposal directly to landfill, pre-treatment must have been applied and a declaration detailing the treatment applied appended to the WTN; and
 - A declaration that the waste has been treated in line with the requirements of the waste hierarchy.
- 6.1.23 The site representative signing the WTN must ensure all WTNs are placed in the Site Waste Management File and kept for a minimum period of two years (for non-hazardous waste).
- 6.1.24 By signing a WTN the site representative is confirming that all the details are correct and that the material is to be sent by a licensed waste carrier to a suitably licensed receiving site, permitted to receive that type of waste. The signature is binding of this fact and completes the WTN as a legal document.
- 6.1.25 The Site Materials and Waste Manager or other competent person signing the WTN must additionally ensure that the Waste Carrier is using a suitable vehicle with adequate, covered containment for the waste.

6.9 Waste consignment notes (hazardous waste)

6.1.26 The Principal Contractor must ensure that a Hazardous Waste Consignment Note (HWCN) is completed for every movement of hazardous waste. The HWCN must be prepared before the waste is moved. Prior to signing, the Site Materials and Waste Manager or another competent person must ensure that the HWCN includes:

- Hazardous Waste Premises Code;
- Consignment note code;
- SIC Code;
- Name and address of the site from which the waste is being moved;
- Date of removal;
- Type of waste produced, including the quantity and the EWC code;
- The name of the person who is receiving the waste and what they are authorised to do with that waste e.g. registered waste carrier can only transport waste;
- The final disposal site that is authorised to accept the waste; and
- Retention period for hazardous waste.

6.1.27 The Principal Contractor must retain a copy of the HWCN for a minimum of three years.

6.10 Waste documentation

6.1.28 The Principal Contractor must retain all waste documentation at the main site compound and, following completion of the IERRT project, at the Principal Contractor 's head office. This includes:

- The SWMP (two years after end of construction of the IERRT project);
- Waste transfer documentation (two years for WTNs and three years for HWCNs from date of issue);
- Copies of any exemptions or permits; and
- Copies of waste carrier and treatment/ disposal site licences or permits.

6.11 Fly-tipping

6.1.29 Fly-tipping of waste on or adjacent to ongoing construction projects can be a significant issue.

6.1.30 A site assessment of pre-existing fly tipping hotspots must be undertaken and, where appropriate, security measures to prevent access to such areas will be implemented.

6.1.31 If waste is fly-tipped on the site, the Principal Contractor will have a duty of care to ensure it is dealt with safely and disposed of correctly, even if not the producer of the waste. The Principal Contractor must report any instance of fly-tipping on site to the local authority.

6.12 Fuels, oils and Control of Substances Hazardous to Health (COSHH) materials

6.1.32 The Principal Contractor must establish appropriate control and management measures for the storage, dispensing, containment and use of all fuels, oils and COSHH materials and wastes that will be required during construction of the IERRT project.

6.1.33 The storage, dispensing, containment and use of fuels, oils and COSHH materials have the potential to cause significant damage to the environment. Causes of environmental incidents linked to fuel, oil and COSHH materials on construction sites include:

- Delivery and use of materials;
- Overfilling of storage containers;

- Plant or equipment failure;
 - Containment failure;
 - Accidents and vandalism; and
 - Mixing of inappropriate materials and wastes.
- 6.1.34 Environmental incidents could affect:
- Drainage systems, surface waters, groundwater and soil;
 - Air quality, by producing fumes, vapours and airborne pollutants; or
 - Land quality by contamination through spillages.
- 6.1.35 The storage, dispensing, containment and use of all fuels, oils and COSHH materials and wastes shall be undertaken in accordance with regulatory and good practice guidance, the key points of which are set out below.
- 6.1.36 For COSHH materials and waste, relevant control and management measures may include:
- Storage must be in a secure, bunded and sheltered area.
 - Waste must be segregated.
 - COSHH liquids must not be stored in areas within Flood Zone 3.
 - Areas must be supervised, and records of materials and waste stored and removed from the area recorded.
 - The handling, storage and disposal must be undertaken as described in the COSHH Assessment and any Material Safety Data Sheet (MSDS).
- 6.1.37 Fuel and oil (including mould oil) shall be stored in accordance with The Control of Pollution (Oil Storage) (England) Regulations 2001(HMSO, 2001), with fuels and oil handled in such a way that risk of pollution is minimised. Specifically:
- Fuel and oil storage tanks must comply with The Control of Pollution (Oil Storage) (England) Regulations 2001 (HMSO, 2001) and must be locked outside working hours.
 - Storage areas must not be located within 20 m of watercourses, ponds, site drainage or within any areas of Flood Zone 3 or on a gradient.
 - Refuelling must not be permitted within 20 m of a watercourse/ pond, within 20 m of a highway drainage gully/ site drainage, or within areas of Flood Zone 3.
 - Mobile bowsers must be bunded/double skinned and must comply with The Control of Pollution (Oil Storage) (England) Regulations (HMSO, 2001) and must be secured outside working hours.
 - Trained operatives must carry out refuelling of plant and equipment.
 - Plant nappies must be used during refuelling.
 - Drums must be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is the greater. Where possible, these bunds must be fitted with roofs to prevent the collection of rainwater. Individual drums in use shall be stored on a drip tray sufficient to contain 25% of the full capacity of the drum.
 - Storage tanks and drums must be maintained in a good condition, fitted with lids and labelled to indicate the contents.
 - Static combustion engine plant (e.g. compressors, lighting sets) must be integrally bunded or placed on plant nappies.
 - Bunds, tanks pipework and plant must be regularly checked for signs of damage or leaks and must be regularly maintained.
 - Spill kits must be provided within close proximity to fuel and oil storage areas, with plant that is operating in isolated areas, and in welfare facilities. Drivers, operators and stores personnel will be trained in security and the use and safe disposal of spill kits.

- Drums must be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is the greater. Where possible, these bunds will be fitted with roofs to prevent the collection of rainwater. Individual drums in use must be stored on a drip tray sufficient to contain 25% of the full capacity of the drum.

6.13 Key responsibilities

Reporting and auditing

- 6.1.38 The effectiveness of the Principal Contractors SWMP will depend upon the enforcement of its requirements on-site by the nominated Site Materials and Waste Manager and Site Manager. Responsibility for the formal recording of waste movements lies with the Site Materials and Waste Manager or Project Manager.
- 6.1.39 The Principal Contractor must maintain a record of all materials that come on to site. The quantity of reused, recycled and secondary aggregate must be recorded, alongside details of the supplier, the producing facility and records that demonstrate that the material meets all relevant technical and regulatory requirements.
- 6.1.40 The Principal Contractor must maintain a record of all wastes that are removed from the site and their management route. Each waste management contractor must provide details of the types and quantities of waste removed from the site, the receiving waste management facility and the associated recycling, recovery and disposal rates for each waste stream (see Annex 2 Waste Management to this SWMP).
- 6.1.41 The Principal Contractor must monitor, and record details of the wastes placed in all waste receptacles to ensure that contamination has not occurred.
- 6.1.42 The Principal Contractor must continually review the types of surplus materials and waste being produced and change the site set up to minimise wastage rates and maximise reuse or recycling.
- 6.1.43 ABP or its representatives may carry out 'spot checks' in relation to the completeness of any WTNs and any HWCNs.

Review of the Site Waste Management Plan

- 6.1.44 The Principal Contractor must review the Principal Contractor SWMP at least once every six months during the lifetime of the IERRT project to ensure that targets are being achieved and that realistic solutions are provided for unplanned events or abnormal wastes. The Principal Contractor must also review the final WMP if there is any significant change in the IERRT project. These reviews will involve the completion and submission of a monitoring report to ABP (or its representative) in an agreed format.

Additional duty of care checks

- 6.1.45 The Principal Contractor must periodically, at intervals to be determined by the contractor and ABP, follow waste loads to confirm that the waste has been transferred to the place stated on the WTN, with any irregularities investigated immediately, and reported as an environmental incident. Action may involve termination of contract and/ or notification to the Environment Agency.

Site inspections

- 6.1.46 The Site Materials and Waste Manager or nominated deputy must undertake a daily inspection of the construction areas including all areas used for waste management. Any issues shall be recorded in the daily log along with any corrective action taken.

Closure reporting

- 6.1.47 Within three months of the completion of works under a contract, the Principal Contractor must submit a Waste Management Closure Report to ABP (or its representative) to demonstrate the effective implementation, management and monitoring of construction materials and waste during the construction lifetime of the IERRT project.

7. References

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Annex 2 Waste management

Client Name:	KPI: Recover (through reuse, recycling or recovery) of at least 70% (by weight) of non-hazardous construction and demolition waste (excluding naturally occurring materials with European Waste Catalogue Code 17 05 04), with the aim to achieve recovery of 90% (by weight).
Project:	
Contractor:	

Waste type and quantity			Management route (% or quantity)						Waste carrier	Off-site waste management facility
Waste	EWC	Quantity	On-site		Off-site					
			Reused on-site	Recycled for use on-site	Reused off-site	Recycled off-site	Recovered off-site	Disposal		

Appendix G The Project's Construction materials and waste management assessment

Immingham Eastern Ro-Ro Terminal

The Project's Construction Materials and Waste Management
Assessment

December 2023

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1. Introduction

- 1.1.1 This Appendix reports the findings of an assessment of the likely significant effects in relation materials and waste as a result of the IERRT project.
- 1.1.2 This Appendix follows the methodology set out in the Institute of Environmental Management and Assessment (IEMA) Guide to: Materials and Waste in Environment Assessment, Guidance for a Proportionate Approach (referred from herein as the 'IEMA Guidance', IEMA, 2020).
- 1.1.3 For the purpose of this assessment, materials and waste comprise:
- The consumption of materials (key construction materials only); and
 - The generation and management of construction waste.
- 1.1.4 Materials are defined in the IEMA Guidance materials as "physical resources that are used across the lifecycle of a development. Examples include key construction materials such as concrete, aggregate, asphalt and steel."
- 1.1.5 Other material assets considered include built assets such as landfill void capacity and allocated/safeguarded mineral and waste sites.
- 1.1.6 Waste is defined as per the Waste Framework Directive (Waste FD, European Commission, 2008) as "any substance or object which the holder discards or intends or is required to discard".
- 1.1.7 This assessment has been undertaken taking into account relevant legislation, and national, regional and local planning policy and guidance.

2. Scope

- 2.1.1 This assessment considers construction only. The following matters are not considered in this assessment:
- Waste arising from operation. Operational waste will comprise general waste from the Terminal building, the welfare building, the operations team on the ground, the workshop and the UK Border Force building and gatehouse. Operational waste estimates are not yet available, however, forecast effects are (using professional judgement) considered negligible in relation to the scale and nature of the IERRT project. It is unlikely that the annual quantities of waste would be >1% of the non-hazardous waste landfill capacity in the East Midlands and Yorkshire and the Humber Region (798,930 m³). The IEMA guidance "does not consider waste processing and recovery facilities as sensitive receptors, rather: they are part of a system that has the potential to reduce the magnitude of adverse impacts associated with waste generation and disposal. Waste processing and recovery facilities are, hence, different to landfills, in that the latter are finite resources." Therefore assessment of the impact of operational waste arising from the IERRT project on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation is not required.
 - Waste arising from dredging, it is assumed this will be managed within the estuary and the effects associated with this activity are considered in the ES.
 - Waste arising from extraction, processing and manufacture of construction components and products. This is based on the assumption that these products and materials are being developed in a manufacturing environment with their own waste management plans, facilities, and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this study. Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.

- Other environmental impacts associated with the management of waste from the IERRT project e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant chapters of ES.
- Impacts on allocated mineral sites.
- Impacts on allocated waste sites.
- Impacts on Mineral Safeguarding Areas (MSAs)
- Effects on the availability of materials during operation: forecast effects are (using professional judgement) considered negligible in relation to the scale and nature of the IERRT project; and,
- Effects associated with decommissioning as the IERRT project has a long design life and such it is not considered possible to reliably forecast decommissioning requirements and infrastructure far in the future.

3. Assessment Methodology

3.1.1 This section outlines the methodology that has been employed for assessing the likely significant effects associated with materials and waste. The IEMA Guidance offers two methods for the assessment of waste. Method W1 - void capacity has been selected as this is a more detailed methodology and is appropriate for larger and more complex projects.

3.1.2 The assessment of materials and waste, considers the following:

- Waste producers have a legal duty of care to manage their waste in accordance with regulations and to ensure that any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal;
- Facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a license, and impacts arising from the operation of waste management facilities are considered as part of the planning and permitting process for these facilities themselves;
- As part of their planning function, Waste Planning Authorities (WPAs) are required to ensure that sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA area, or through export to suitable facilities in other areas; and
- Minerals Planning Authorities (MPAs) are similarly required to ensure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.

Sensitivity

3.1.3 The sensitive receptors for this assessment are:

- Landfill void capacity in the expansive study areas - as defined in the IEMA guidance "*landfill is a finite resource, and hence - through the ongoing disposal of waste - there is a continued need to expand existing and develop new facilities. This requires the depletion of natural and other resources which, in turn, adversely impacts the environment*"; and
- Materials, national consumption of key construction materials - as outlined in the IEMA guidance "*materials are, in their own right, sensitive receptors. Consuming materials impacts upon their immediate and (in the case of primary material) long-term availability; this results in the depletion of natural resources and adversely impacts the environment.*"

3.1.4 The sensitivity of receptors and magnitude of impacts materials and waste for construction have been assessed through the following:

Materials

- Establishing the baseline for national consumption of key construction materials by weight;

- Assessing the sensitivity of materials as related to the availability and types of materials to be consumed by the IERRT project in construction;
- Establishing the quantities of key construction materials required for the construction of the IERRT project; and
- Comparing the total quantities of key construction materials with the most recent national demand (utilising a percentage approach).

Waste

- Establishing the baseline landfill void capacity in the expansive study area;
 - Assessing the sensitivity of landfill void capacity;
 - Establishing the quantities of construction, demolition and excavation waste to be generated during the construction of the IERRT project; and
 - Comparing the total waste arising from the construction of the IERRT project against the landfill void capacity (utilising a percentage approach).
- 3.1.5 Material receptor sensitivity is determined as low. On balance, the key materials required for the construction of the IERRT project are forecast to be generally free from known issues regarding supply and stock. Key materials required for the construction and operation are likely to be available comprising a high proportion of sustainable features and benefits (e.g. recycled content).
- 3.1.6 Information on future hazardous and non-hazardous waste landfill void capacity is not available so a worst-case scenario is taken and receptor sensitivity is determined to be very high.
- 3.1.7 The magnitude of impact describes the degree of variation from the baseline conditions as result of the IERRT project.
- 3.1.8 The methodology for assessing the magnitude of impact from materials comprises a percentage-based approach that determines the influence of construction materials use on the baseline national consumption from the construction of the IERRT project. The criteria used to assess the magnitude of impact for materials are provided in the IEMA Guidance (page 33).
- 3.1.9 The methodology for assessing the magnitude of impact for waste comprises a percentage-based approach that determines the influence of waste generation from the construction IERRT project on the baseline landfill capacity. The criteria used to assess the magnitude of impact for resources and waste are provided in the IEMA Guidance (page 35).
- 3.1.10 Effect thresholds and significance of effects are provided in the IEMA Guidance (page 39 and 40).

4. Study Areas

- 4.1.1 The IERRT project study area for construction waste generation and use of construction materials (key construction materials only) comprises the IERRT project site boundary. The study area is deemed to include the footprint of the proposed works, together with any temporary land requirements during the construction. This may include temporary offices, compounds and storage areas.
- 4.1.2 The expansive study area for non-hazardous and hazardous waste management is defined based on professional judgement and informed by consideration of the proximity principle and value for money.
- 4.1.3 The expansive study area for non-hazardous and hazardous waste management comprises the East Midlands and Yorkshire and the Humber regions, within which waste management infrastructure (specifically landfill capacity) is located. Both regions are included in the baseline since the IERRT project is close to the northern extent of the East Midlands region.
- 4.1.4 The expansive study area for availability of key construction materials (aggregates, asphalt, concrete and steel) is the UK or Great Britain (GB) dependent on baseline information availability.

5. Baseline

1.1 Construction materials

5.1.1 UK and GB data has been used to establish a quantitative baseline of the consumption (and likely demand) for key constructional materials. Table A1 summarises consumption in 2018 for aggregates, asphalt, concrete and steel (the most recent years for which data is available), which are the key construction materials expected to be used during the construction of the IERRT project. There is no publicly available information on any potential changes to this consumption by the time of the construction of the IERRT project.

Table A1: National consumption for key construction materials

Material	National consumption (million tonnes, year)	Baseline data year	Data description
Steel	17	2018	UK total consumption (MPA, 2020)
Aggregates of which:	251	2018	Minerals and mineral products sales in Great Britain (MPA, 2020)
Crushed rock	117.3		
Sand and gravel - land won	48.9		
Sand and gravel - marine	13.7		
Recycled and secondary	71		
Asphalt	25.4		
Concrete of which:	86.2		
Ready-mixed concrete	54.2		
Concrete products	32		

Waste

5.1.2 Remaining landfill capacity at the end of 2021 as outlined on the Environment Agency's 2021 Waste Summary Tables for England – Version 1 for the non-hazardous and inert waste expansive study area (East Midlands and Yorkshire and the Humber) and the hazardous waste study area (England) is shown in Table A2.

5.1.3 Merchant landfills are operated for commercial purposes accepting waste from construction projects. Restricted landfills are sites that deal with their own produced waste (i.e. not operating for commercial purposes) and therefore excluded from the baseline. Some non-hazardous landfill have a Stable Non-Reactive Hazardous Waste Cell (SNHRW) e.g. for asbestos.

Table A2: Landfill Capacity (2020) in East Midlands, Yorkshire and The Humber, and England

Landfill Type	East Midlands Capacity ('000s m ³)	Yorkshire and the Humber Capacity ('000s m ³)	Total in East Midlands and Yorkshire and the Humber Capacity ('000s m ³)	England Capacity ('000s m ³)
Hazardous merchant	800	700	1,500	12,107
Non-hazardous with SNRHW cell	15,884	1,243	17,127	52,006
Non-hazardous	17,570	45,196	62,766	162,369
Inert	21,574	21,574	46,857	129,078

- 5.1.4 There is no publicly available information on any potential changes to this landfill capacity by the time of the construction of the IERRT project. Due the cyclic nature of landfill capacity, it is not realistic forecast future landfill capacity since this may result in an increase in landfill capacity. Therefore, landfill capacity is assumed to remain the same as the current baseline.

6. Assessment of Effects and Significance

Construction materials

- 6.1.1 The estimated main types and quantities of materials anticipated to be used during construction of the IERRT project have been obtained from the design team for the IERRT project, as presented in Table A3. Cement stabilised subgrade and sands are included in the overall aggregates total. For construction no individual construction material is equal or greater than 1% by weight of the baseline consumption (UK/GB) (steel 0.23%, ready mixed concrete 0.13%, precast concrete 0.06%, aggregates 0.4% and asphalt 0.32%). The sensitivity of the receptor is classified as 'low' and the magnitude of impact is considered to be 'negligible', this is assessed to result in a neutral/slight adverse (not significant) effect.

Table A3: Estimated construction material quantities

Material	Material density	Quantity (tonnes)	Quantity (m ³)	Wastage rate (%)	Quantity (tonnes)	Quantity (m ³)
Steel piles	7.85	7,700	981	2	154	20
Concrete - ready mixed	2.4	72,000	30,000	8	5,760	2,400
Concrete - precast	2.4	18,000	7,500	5	900	375
Reinforcement	7.85	25,000	3,185	5	1,250	159
Steel for buildings	7.85	6,000	764	2	120	15
Aggregates	1.9	114,000	60,000	10	11,400	6,000
Asphalt	2.4	81,000	33,750	8	6,480	2,700
Cement stabilised	2.4	360,000	150,000	8	28,800	12,000

Material	Material density	Quantity (tonnes)	Quantity (m ³)	Wastage rate (%)	Quantity (tonnes)	Quantity (m ³)
subgrade and sands						
Total material construction waste					54,864	23,669

Waste

- 6.1.2 Construction waste has been estimated by applying a wastage rate to the construction materials listed in Table A3. Total estimated construction waste is 23,669 m³.
- 6.1.3 Demolition and removal of existing buildings within the IERRT project boundary will be required. It is anticipated that 7,000 m³ of waste will be generated during demolition with 25% being recycled onsite and 75% (5,250 m³) being recycled offsite.
- 6.1.4 Excavation will generate 94,000 m³ of material with 50% being reused on site and 50% (47,000 m³) being managed offsite.
- 6.1.5 Total construction waste (construction material wastage, demolition waste and excavated material) is 75,919 m³. A worst-case scenario where all waste is disposed of to landfill has been applied. This equates to 0.06% of the 127 million m³ of inert and non-hazardous landfill capacity within the waste management study area (East Midlands and Yorkshire and the Humber regions).
- 6.1.6 In practice a large proportion of non-hazardous and inert waste from the IERRT project is likely to be recovered rather than disposed of to landfill, further reducing the overall quantities of waste for disposal. With a recovery rate of 70% the percentage of landfill capacity required would reduce to 0.02% with a recovery rate of 90% the percentage of landfill capacity required would reduce to 0.006%.
- 6.1.7 Based on the above, construction of the IERRT project would result in less than a 1% reduction of landfill capacity within the waste management study area.
- 6.1.8 Accordingly, for non-hazardous waste the sensitivity of the receptor is classified as 'very high' and the magnitude of impact is considered to be 'negligible', this is assessed to result in a slight adverse (not significant) effect.
- 6.1.9 At this stage no estimate of hazardous waste has been undertaken. All construction waste is assumed to be inert or non-hazardous waste. The quantities of hazardous waste e.g. oils, batteries, aerosol cans etc. are anticipated to be small compared to the overall construction waste arisings and not included in the assessment. Many hazardous waste types have well defined waste management routes including recovery and are unlikely to be sent directly to landfill. Procedures for the storage and management of these wastes are set out in the Outline Site Waste Management Plan (SWMP) (Appendix F of the Outline Onshore CEMP).
- 6.1.10 Construction site operations will also generate waste streams from temporary offices, welfare facilities, material packaging and construction plant maintenance. The quantities are anticipated to be small compared to the main construction wastes and are not included in the assessment. Procedures for the storage and management of these wastes are set out in the Outline SWMP (Appendix F of the Outline Onshore CEMP).

7. Summary

- 7.1.1 In summary, no significant effects in relation to materials or waste have been identified for construction, therefore no further mitigation is proposed.

Acronyms

Acronyms	Definition
ABP	Associated British Ports
AEP	Annual Exceedance Probability
AEZ	Archaeological Exclusion Zones
AIL	Abnormal Indivisible Loads
APFP	Applications: Prescribed Forms and Procedure
BPM	Best practice measures
CCS	Considerate Constructors Scheme
CD	Chart Datum
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Association
CoCP	Code of Construction Practice
COSHH	Control of Substances Hazardous to Health
CTMP	Construction Traffic Management Plan
CWTP	Construction Workers' Travel Plan
dDCO	Draft Development Consent Order
DCO	Development Consent Order
DMP	Dust Management Plan
DoW	Designing out Waste
DPZ	Development Proximity Zone
EA	The Environment Agency
EIA	Environmental Impact Assessment
ES	Environmental Statement
EWFD	European Waste Framework Directive
FERP	Flood Emergency Response Plan
FRA	Flood Risk Activity
GB	Great Britain
GI	Ground Investigation
GPP	Guidance for Pollution Prevention
ha	Hectare
HES	Humber Estuary Services

Acronyms	Definition
HGVs	Heavy Goods Vehicle
HWCN	Hazardous Waste Consignment Note
IEMA	Institute of Environmental Management and Assessment
IERRT	Immingham Eastern Ro-Ro Terminal
KPIs	Key performance indicators
m ³	Meters cubed
MMP	Materials Management Plan
MPAs	Minerals Planning Authorities
MSAs	Mineral Safeguarding Areas
MSDS	Material Safety Data Sheet
NELC	North East Lincolnshire Council
NH	National Highways
NRMM	Non-Road Mobile Machinery
NSIP	Nationally Significant Infrastructure Project
NSRs	Noise Sensitive Receptors
PAD	Protocol for Archaeological Discoveries
PC	Principal Contractor
PINS	Planning Inspectorate
Pol	Port of Immingham
PPG	Pollution Prevention Guidance
RAMS	Risk assessment method statement
SIC	Standard Industrial Classification
SNHRW	Stable Non-Reactive Hazardous Waste Cell
SoS	Secretary of State
SWMP	Site Waste Management Plan
UXO	Unexploded Ordnance
WAC	Waste Acceptance Criteria
WFD	Waste Framework Directive
WPA	Waste Planning Authorities
WRAP	Waste & Resources Action Programme
WTNs	Waste Transfer Notes

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