

**ABLE MARINE ENERGY PARK  
(MATERIAL CHANGE 2 - TR030006)  
UPDATED ENVIRONMENTAL STATEMENT  
CHAPTER 27: SUMMARY OF MITIGATION  
AND MONITORING**

**Able Marine Energy Park, Killingholme, North Lincolnshire**



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## 27.1.0 Introduction

- 27.1.1 This Chapter of the Updated Environmental Statement (UES) draws together a summary of the mitigation and monitoring measures proposed with regard to the proposed development. This includes consideration of mitigation and monitoring recommended within the Environmental Statement submitted in support of the DCO ('the original ES'), those contained within the DCO itself (Schedule 8, 9 and 11), and any additional or alternative mitigation and monitoring identified as a result of this UES when considering the proposed material amendment.
- 27.1.2 Further detailed information pertaining to any additional and alternative mitigation and monitoring measures is provided within the relevant chapters of the UES, whilst the residual effects and conclusions are provided within Chapter 28: Conclusion.

## 27.2.0 Mitigation and Monitoring

### Geology, Hydrogeology and Ground Conditions

#### Original ES & DCO

- 27.2.1 Mitigation and monitoring recommended for Geology, Hydrogeology and Ground Conditions was contained within Chapters 7<sup>1</sup> (Section 7.7) and 31<sup>2</sup> (Section 31.8) of the original ES.
- 27.2.2 Of relevance to this UES, the original ES for the extant DCO details mitigation associated with piling works, the proximity of buildings to the Lindsey Oil refinery and those proposed within the dredging strategy.
- 27.2.3 Schedule 11 paragraph 16 relates to contaminated land, stating:
- '(1) No stage of the authorised development is to commence until a written scheme applicable to that stage, to deal with the contamination of any land, including groundwater and ground gas, within the Order limits which is likely to cause significant harm to persons or pollution of controlled waters or the environment has, after consultation with the Environment Agency, been submitted to and approved by the relevant planning authority.*
- (2) The scheme must include an investigation and assessment report, prepared by a suitably qualified person, to identify the extent of any contamination and the remedial measures to be taken to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.*
- (3) Remediation must be carried out in accordance with the approved scheme and the management plan.'*

#### Additional Mitigation and Monitoring

- 27.2.4 This environmental topic was scoped out of the UES and no alternate or additional mitigation is required beyond that contained within the original ES.
- 27.2.5 As confirmed within Chapter 9 (Water and Sediment Quality), the MMO has agreed that the contaminant concentrations in the dredged material are not sufficiently high to prevent disposal of the dredged material in the Humber at disposal sites HU080, HU081 or HU082.

### Hydrodynamics and Sediment Quality

- 27.2.6 This chapter defines the predicted changes to the hydrodynamic and sedimentary regime of the Humber Estuary resulting from the AMEP.
- 27.2.7 The implications of the predicted changes to the hydrodynamic and sedimentary regime are

<sup>1</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000316-07%20-%20Geology%20Hydrogeology%20and%20Ground%20Conditions.pdf>

<sup>2</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000336-31%20-%20Geology%20Hydrogeology%20and%20Ground%20Conditions.pdf>

assessed in terms of the significance of the potential impacts on various environmental parameters (e.g. aquatic ecology, water quality, commercial fisheries, etc.) in the relevant chapters of this UES. Similarly, any measures that may be required in order to mitigate a potential impact on a receptor arising from a predicted effect on the hydrodynamic and sedimentary regime of the estuary are described in the relevant chapters.

- 27.2.8 On this basis there is no mitigation or monitoring to directly reference with regard to this Chapter of the UES.

## Water and Sediment Quality

### Original ES & DCO

- 27.2.9 Mitigation and monitoring recommended for Water and Sediment Quality was contained within Chapters 9<sup>3</sup> (Section 9.7) and 33<sup>4</sup> (Section 33.8) of the original ES.
- 27.2.10 A dredge plume assessment was conducted and presented as part of the DCO application. This addressed the potential for dredging operations to affect the marine environment (see Chapter 8 of original ES<sup>5</sup>). Based on this assessment mitigation measures to control potential adverse effects were agreed by the conditions in Schedule 8.
- 27.2.11 Additional studies were also carried out to quantify the impact of the scheme on intakes of the (former) Centrica and E.ON (now Uniper) power plants. These were included as Annex 9.2<sup>6</sup>, Annex 9.3<sup>7</sup> and Annex 8.3<sup>8</sup> of the original ES. Based on these studies a commitment was made for ongoing maintenance dredging to be carried out at discrete intervals to prevent sedimentation at the former E.ON and Centrica intakes.
- 27.2.12 Schedule 11 Requirement 22 requires a Code of Construction Practice to be approved by the Local Planning Authority for each stage of the works. This will set out the measures that will be implemented during construction to minimise pollution of the estuarine environment.
- 27.2.13 Schedule 8 Requirement Condition 31 requires detailed method statements to be approved by the MMO for all works before the level of MHWS. This provides further controls to be secured to minimise the risk of pollution of the estuarine environment.
- 27.2.14 Under DCO Schedule 8, Condition 39, an active monitoring scheme to measure marine

<sup>3</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000313-09%20-%20Water%20and%20Sediment%20Quality.pdf>

<sup>4</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000338-33%20-%20Water%20and%20Sediment%20Quality.pdf>

<sup>5</sup> AMEP, Environmental Statement Chapter 8: Hydrodynamic and Sedimentary Regime, 2012 <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000312-08%20-%20Hydrodynamic%20and%20Sedimentary%20Regime.pdf>

<sup>6</sup> Annex 9.2, Assessment of proposed reclamation impact on recirculation at Centrica intake/outlet, November 2011, <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000376-9.2%20-%20Assessment%20of%20proposed%20reclamation%20impact%20on%20Centrica%20intake-outfall.pdf>

<sup>7</sup> Annex 9.3, Assessment of proposed reclamation impact on recirculation at E-ON intake/outlet, November 2011, <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000377-9.3%20-%20Assessment%20of%20proposed%20reclamation%20impact%20on%20EON%20intake-outfall.pdf>

<sup>8</sup> Annex 8.3, Assessment of the Effects of a Proposed Development on the South Bank of the Humber Estuary on Fine Sediments, December 2011 <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000373-8.3%20-%20Assessment%20of%20the%20Effects%20of%20Development%20on%20Fine%20Sediments.pdf>

environmental parameters during the project has been agreed and implemented. Full details of the monitoring arrangements and location are provided in Appendix UES9-2 with preliminary baseline results discussed in Appendix UES9-3.

27.2.15 Schedule 8 Condition 54 requires the licence holder to employ methods to minimise resuspension of sediment during the construction and dredging operations.

27.2.16 Within the DCO, trigger levels for key water quality parameters were specified or required to be agreed. These trigger levels have been confirmed with the MMO following the baseline monitoring programme and will be used during construction to confirm that adverse impacts are not occurring and, if ever required (i.e., if exceedances are observed), for working methods to be modified to achieve compliance.

### Additional Mitigation and Monitoring

27.2.17 It is concluded that no further mitigation is required, over and above that committed to as part of the DCO application. This will be sufficient to control adverse effects to Water and Sediment Quality relating to the proposed scheme.

## Aquatic Ecology

### Original ES & DCO

27.2.18 Mitigation and monitoring recommended for Aquatic Ecology was contained within Chapters 10<sup>9</sup> (Section 10.7) and 34<sup>10</sup> (Section 34.8) of the original ES.

27.2.19 Mitigation and monitoring requirements contained within the original ES of relevance to the consideration of the proposed material amendment included (but are not limited to):

- provisions for compensatory habitat identified in the Compensation Environmental Management and Monitoring Plan (CEMMP), including spatial extent values for different habitats (with associated functional attributes) to be created at the Cherry Cobb Sands compensation site in order to address losses in the intertidal and subtidal habitat and function in and around the AMEP quay;
- provisions under the Marine Environmental Management and Monitoring Plan (MEMMP) to ensure functional aspects of the Humber Estuary SAC are maintained, including constraints on aspects of works timing to avoid barrier effects to fishes from underwater noise and vibration from piling work, provision of a Marine Mammal Observer (MMOb) to ensure no impacts to marine mammals present in the vicinity of the construction works; and
- controls on marine piling including timing restrictions, soft start and the provision of a MMOb, all of which are set out in Schedule 8 of the DCO.

27.2.20 Schedule 11, Regulation 19 relates to 'Environmental Management and Monitoring Plans' and

<sup>9</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000314-10%20-%20Aquatic%20Ecology.pdf>

<sup>10</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000339-34%20-%20Aquatic%20Ecology.pdf>

Regulation 31 relates to 'European Protected Species'.

### Additional Mitigation and Monitoring

- 27.2.21 No additional mitigation is required for impacts to the Aquatic Ecology as there are no changes in the effects on the aquatic ecological components to those identified in the original ES and provided within the extant DCO.

## Ecology and Nature Conservation

### Original ES & DCO

- 27.2.22 Mitigation and monitoring recommended for Ecology and Nature Conservation was contained within Chapters 11<sup>11</sup> (Section 11.7) and 35<sup>12</sup> (Section 35.9) of the original ES.

- 27.2.23 The mitigation and compensation measures identified as part of the DCO remain suitable and fit for purpose without requirement for modification. These include:

- provisions for mitigatory and compensatory habitat, including habitats (with associated functional attributes) to be created at the Cherry Cobb Sands compensation site in order to address losses in the intertidal and subtidal habitat and function in and around the AMEP quay. The Cherry Cobb Sands compensation includes creation of wet grassland and a wet roost adjacent to the compensation site as a measure agreed by the Secretary of State.
- provisions under Schedule 8 of the DCO to ensure functional aspects of the Humber Estuary SAC are maintained, including constraints on aspects of works timing to avoid reduce impacts from underwater noise and vibration from piling work, provision of a MMOb to ensure no impacts to marine mammals present in the vicinity of the construction works, and reduce noise and lighting impacts to birds.
- provisions to provide greenfield terrestrial foraging and roosting habitat for birds from the SPA assemblage (predominantly curlew), to replace that lost to AMEP and to reduce noise and lighting impacts to birds. This was originally to be delivered in Mitigation Area A but has been agreed to be relocated at Halton Marshes Wet Grassland Mitigation Area and has now been implemented.

- 27.2.24 Further detail on the agreed mitigation measures pertaining to the development are provided in the original Terrestrial Ecology and Nature Conservation ES chapter and the original DCO (Appendix UES1-1). Measures will be secured through the approval of various plans and method statements as specified in Schedule 8 and 11 of the extant DCO.

### Additional Mitigation and Monitoring

- 27.2.25 It is concluded that no further mitigation is required, over and above that committed to as part of the DCO application. This will be sufficient to control adverse effects to Terrestrial Ecology and

<sup>11</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000315-11%20-%20Ecology%20and%20Nature%20Conservation.pdf>

<sup>12</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000340-35%20-%20Ecology%20and%20Nature%20Conservation.pdf>



Nature Conservation relating to the proposed scheme.

## Commercial Fisheries

### Original ES & DCO

27.2.26 Mitigation and monitoring recommended for Commercial Fisheries was contained within Chapter 12<sup>13</sup> (Section 12.7) of the original ES.

27.2.27 Mitigation and monitoring identified within the original ES include (but are not limited to):

- piling restrictions included in the extant DCO (Schedule 8, paragraphs 37 *et seq*)
- the provision of compensatory habitat at Cherry Cobb Sands as provided for within the extant DCO. These compensatory habitats provide function for fishes, including nursery areas for commercially exploitable species.

### Additional Mitigation and Monitoring

27.2.28 No additional mitigation is required for impacts to the commercial and recreational fisheries components as there are no significant changes to those identified in the original ES for the DCO.

## Drainage and Flood Risk

### Original ES & DCO

27.2.29 Mitigation and monitoring recommended for Drainage and Flood Risk was contained within Chapters 13<sup>14</sup> (Section 13.7) and 36<sup>15</sup> (Section 36.8) of the original ES.

27.2.30 Key mitigation proposed for the construction phase as part of the DCO involves adherence to good construction methodology as set out in Environment Agency Pollution Prevention Guidance [now Pollution Prevention for Business]. Much of this is secured under requirements of Schedule 11.

27.2.31 This will include:

- minimising pollution risk through the use of good construction practices including use of drip trays on mechanical equipment such as pumps and generators and fail-safe bunded storage of fuel and cement and other materials to prevent spillage to groundwater, watercourses or the sea;
- over-pumping around works in watercourse channels will be carried out with a suitably-sized pump, in order that excessive flows are not generated and disturbance of the bed material is

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<sup>13</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000317-12%20-%20Commercial%20Fisheries.pdf>

<sup>14</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000318-13%20-%20Drainage%20and%20Flood%20Risk.pdf>

<sup>15</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000341-36%20-%20Drainage%20and%20Flood%20Risk.pdf>

minimised;

- watercourse bank reinstatement works will be carried out by vehicles operating from the bank rather than the watercourse channel;
- for work on, over or adjacent to the watercourses, a maximum of one third of the watercourse will be bunded at any time, and the bunds will have a minimal height above normal water level, and should either wash out or create minimal obstruction during flood conditions.
- construction materials will be prevented from entering watercourses or the sea and blocking either the channels or culverts and bridges; and
- care will be taken with all works involving concrete and cement. Suitable provision will be made for the washing-out of concrete mixing plant or ready-mix concrete lorries, and such washings will not be allowed to flow into watercourses or the sea.

27.2.32 Key mitigation proposed for the operational phase as part of the DCO, will also include adherence to Environment Agency Pollution Prevention Guidance [now Pollution Prevention for Business]. In addition, the following additional mitigation measures are proposed:

- fail-safe bunded storage of fuel and other substances to prevent spillage to groundwater, watercourses and the sea;
- provision of oil interceptors in paved areas;
- installation of penstocks on outfalls to watercourses and the sea to contain any pollution incidents (where there is an identified risk); and
- the implementation of a robust Flood Warning and Evacuation Plan for the site with its key objective being to evacuate the site before flooding occurs. Any people on the site will make their way off site (if safe to do so) or to the safe refuges on the upper floors of the buildings and await rescue by the emergency services. The Flood Warning and Evacuation Plan will not have any particular environmental impacts.

### Additional Mitigation and Monitoring

27.2.33 It is concluded that no further mitigation is required, over and above that secured through the DCO including Schedule 1 Requirement 13 (Surface Water Drainage) and 14 (Foul Water Drainage). This will be sufficient to control adverse effects to Flood Risk and Drainage relating to the proposed scheme.

## Commercial and Recreational Navigation

### Original ES & DCO

27.2.34 Mitigation and monitoring recommended for Commercial and Recreational Navigation was contained within Chapter 14<sup>16</sup> (Section 14.8) of the original ES.

<sup>16</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000319-14%20->

27.2.35 A range of existing embedded mitigation measures, those that have an impact upon navigation risk, and are already in place or required by the port authority as part of the DCO. These are outlined within Table 27-1 below.

**Table 27-1: Navigation Embedded Mitigation Measures**

ID	Risk Measure	Control	Phase	Description
1	Lighting marking	and	General	To reduce the risk of vessels colliding with AMEP structures during the construction and operational phases, the upstream and downstream extents of the quay and the upstream extent of the swinging area will be identified with navigation marks and lights. Refer to Articles 26-28 of the DCO
2	Traffic Management and Harbour Authority consultation		General	Traffic management procedures will be required to ensure that large vessels operating to/from the proposed AMEP development do not adversely impact on the passage of other vessels on the Humber. This will be achieved via consultation with the Harbour Authority when required. Schedule 8 paragraph 16 requires a Vessel Movement And Management Plan for construction to be approved by MMO. Schedule 9 paragraph 3(b) requires pre-submission of the Plan to the Harbourmaster
3	Provision of Fire Tugs		General	Able will consult with fire tug providers to establish the requirement and practicalities of providing fire tug assistance at the AMEP. Provision of a fire tug provider will help to mitigate the effects of a fire on a vessel whilst it is in the vicinity of the proposed AMEP development.
4	Pollution Response		General	To reduce the severity of pollution incidents, Able will arrange for pollution response equipment to be available. Schedule 9 paragraph 24 requires an Oil Spillage Plan consistent with 'Humber Clean' or similar.
5	Maintain Hazard Log		General	Able will maintain the hazard log to ensure that it reflects any changes to the likelihood and severity of risk. If any additional hazards are identified then these will be assessed and included in the hazard log.
6	Consider Project Lighting Levels		General	Due to the effects that port lighting can have on the night vision of mariners operating in the vicinity, Able will consider the AMEP lighting requirements with regard to the guidance on port lighting levels.
4	Maintain an MSMS		General	Able will establish a Safety Management System that aims to meet the requirements of the PMSC. Refer to Schedule 9 paragraph 19(6).
5	Traffic Routing		General	Although out of direct control of Able, encouraging vessels to reroute along a more northerly course will increase the available space for vessels departing from both the proposed development and adjacent port facilities.
6	Berth Manager (Dockmaster)		Construction	During the construction phase, Able will investigate the viability of establishing a "Berth Manager" or Marine Control Centre. The Berth Manager will have responsibility for managing construction vessel movements and liaising with Humber VTS. The duties of the Dockmaster are set out at various points within the DCO.

[%20Navigation.pdf](#)

ID	Risk Measure	Control	Phase	Description
7	Temporary Mooring Location and Removal		Construction	In order to minimise the disruption to traffic on the Humber Estuary, any temporary moorings required for construction of the quay will not extend any further out from the shore than the footprint of an operational vessel berthed at the completed quay. In addition, any pilings or mooring dolphins associated with construction of AMEP will be fully extracted once the construction phase is complete.
8	Traffic Broadcasts		Construction	VTS Humber provides a general information broadcast giving weather reports, tidal information and navigational warnings on Channel 12, 14 and 15 every 2 hours. Consideration is to be given to include in this broadcast times of high vessel activity associated with AMEP construction work.
9	Marine Centre	Control	Operational	Able will investigate the requirement for a Marine Control Centre to be established at AMEP, with a dedicated dockside marine manager.
10	Review Humber Passage Plan		Operational	Should Humber Passage Plan vessels berth at AMEP in future, a full review of the Humber Passage Plan will be conducted, in conjunction with Harbour Authority, to include passage abort procedures.
11	Emergency Planning		Operational	Emergency procedures will be developed to cover situations such as fires and mooring line failures. Involvement in the Humber Serious Incident Emergency Plan will commence.

27.2.36 It is noted that improvements have been introduced to the ABP Humber MSMS over the 10-years since the 2011 Navigational Risk Assessment (NRA), resulting in the implementation of further embedded mitigations.

27.2.37 The further embedded mitigation measures having an impact upon the reduction of navigation risk that are already in place or required by the port authority, but which were not specifically considered in the original ES are outlined in Table 27-2.

**Table 27-2: Navigation Further Embedded Mitigation Measures**

ID	Risk Measure	Control	Phase	Description	Status
1	VTS Organisation Service	Traffic	C/O	Humber VTS is well established and covers the entire project area.	Assumed embedded Mitigation Carried forward from 2011 NRA.
2	Adherence to International regulations		C/O	For example, COLREGs, ISM, ISPS etc.	New Embedded Mitigation.
3	Adherence to local regulations/procedures		C/O	For example, byelaws, general directions, Humber Passage Plan etc.	New Embedded Mitigation.

ID	Risk Measure	Control	Phase	Description	Status
4	Training and authorisation of pilots		C/O	Humber Estuary Services provides a pilotage service for the project area. Training and authorisation of Pilots and PEC holders is well documented and compliant with legislation and guidance.	Assumed embedded Mitigation Carried forward from 2011 NRA.
5	Pilotage exemption certificates		C/O	HES issues PEC's to suitably qualified candidates.	Assumed embedded Mitigation Carried forward from 2011 NRA.
6	Guidance for small craft		C/O	HES provides and promulgates guidance for small craft ( <a href="http://www.humber.com/Yachting_and_Leisure/Pleasure_Craft_Navigation/">www.humber.com/Yachting_and_Leisure/Pleasure_Craft_Navigation/</a> )	2011 NRA possible additional mitigation measure now embedded.
7	Promulgation of Information including Notice to Mariners		C/O	Promulgation of information and warnings through notices to mariners and other appropriate maritime safety information (MSI) is achieved by HES through <a href="http://www.humber.com">www.humber.com</a> , mailing lists and stakeholder engagement.	2011 NRA possible additional mitigation measure now embedded.
8	Update Navigation Charts		O	Final drawings should be submitted to the UKHO and HES, and navigation charts should be updated.	New Embedded Mitigation.
9	Protective Provisions		C/O	Adherence to terms of Protective Provisions, for example, maintaining existing depths of adjacent third-party berths.	New Embedded Mitigation.
10	Suitably Qualified Marine Personnel		C/O	Ensure marine personnel (vessel crew, marine managers) are suitably qualified with local knowledge.	New Embedded Mitigation.

### Additional Mitigation and Monitoring

27.2.38 It is noted that many of the possible additional risk controls proposed within the 2011 NRA have now been embedded into the project design (Table 27-2) or HES procedures and, as such, the proposed possible additional mitigation measures show a reduced effectiveness on the majority of hazards.

27.2.39 A number of alternate or additional risk control measures have been identified, informed by stakeholder consultation, aimed at further reducing the residual risk during the construction and operation phases of the Project. These are identified within Table 27-3 below.

**Table 27-3: Navigation Possible Alternate or Additional Risk Control Measures**

ID	Risk Measure	Control	Phase	Description	Status
1	Additional Surveys of Study Area		C / O	Additional surveys to monitor sedimentation within and in vicinity of the AMEP berths to ensure adequate water depth is maintained.	New recommended possible additional mitigation measure. HES / PMSC compliance requirement.
2	Up-to date Weather Forecasting		C / O	The project marine manager should have access to up-to-date site-specific weather forecasts.	New recommended possible additional mitigation measure.
3	Availability of Towing.		O	Review Towing requirements, e.g: <ul style="list-style-type: none"> <li>▪ Use of additional towing for high-air draught vessels / vessels carrying large cargoes navigating to and from berthing pocket.</li> </ul> Guidance to be determined by the Harbour Authority(s).	New recommended possible additional mitigation measure.
4	Restrict Simultaneous movements		C / O	Consider procedure to prevent simultaneous vessel movements with adjacent facilities	New recommended possible additional mitigation measure.
5	Management of Pilot Allocation		C / O	Pilot allocation should be managed to ensure adequate capacity and avoid disruption to other river users during operational, and especially, construction phases.	New recommended possible additional mitigation measure.

## Traffic and Transport

### Original ES & DCO

27.2.40 Mitigation and monitoring recommended for Traffic and Transport was contained within Chapter 15<sup>17</sup> (Section 15.8) of the original ES.

27.2.41 The following mitigation measures were included within the original ES.

### Construction Phase

#### TRAFFIC

27.2.42 Since there is no predicted significant traffic impact, the original ES Transport Chapter concluded that no mitigation is required during the construction phase.

#### RAIL

27.2.43 In terms of mitigating the potential for HGV movements across the railway line during construction,

<sup>17</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000320-15%20-%20Traffic%20and%20Transport.pdf>

the original ES Transport Chapter stated that level crossings should be constructed as required.

#### PROW

- 27.2.44 The DCO requires (Requirement 9 of Schedule 11) that *“no stage of the authorised development shall commence that would affect North Lincolnshire Footpath 50 or East Riding of Yorkshire Paull Footpath 6 until a written implementation plan and specification for the making up of an alternative right of way has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority”*.

#### Operational Phase

- 27.2.45 The following mitigation measures for the operational phase were included within the original ES Transport Chapter:

#### TRAFFIC

- 27.2.46 Mitigation measures in the form of junction improvements were proposed at the following junctions:

- Rosper Road / Humber Road;
- Humber Road / A160 / A1173 (Manby Road Roundabout); and
- A1173 / North Moss Lane / Kiln Lane.

- 27.2.47 The junction improvements include minor road widening, kerb realignments and increased number of junction approach lanes.

- 27.2.48 In addition to the above, the DCO at Schedule 9 Protective Provisions Part 3 - 31 reinforces the requirements for highway works stating that:

*‘For the protection of the Highways Agency, no part of the authorised development is to be occupied until improvements to the following junctions (or alternatives approved in writing by the local planning authority in consultation with the Highways Agency) have been implemented in accordance with details approved by the local planning authority in consultation with the Highways Agency:*

*(a) A160/A1173/Humber Road (Manby Road Roundabout);*

*(b) A160/Top Road/Habrough Road;*

*(c) A160/A1077 Ulceby Road;*

*(d) A160/Eastfield Road (signalised junction), and*

*(e) A180/A160 Merge/Diverge (Brocklesby Interchange)’.  
’*

#### RAIL

- 27.2.49 Appropriate safety measures would be in place at the rail crossings to minimise the potential for any collisions between vehicles on the site and trains to as low as reasonably practicable.

### **DCO Specified Mitigation**

27.2.50 In addition to the above, the DCO at Schedule 9 Part 13 provides protective provisions relating to Royal Mail Group Ltd. It states at item 109 that:

*'(1) For the protection of Royal Mail Group Ltd ('Royal Mail') the following provisions, unless otherwise agreed in writing between the undertaker and Royal Mail, have effect.*

*(2) No part of the authorised development is to be occupied until improvements to the A1173 / Pelham Road junction (or alternative mitigation measures to be approved in writing by the relevant planning authority, following consultation with Royal Mail), have been implemented in accordance with details approved by the relevant planning authority in consultation with Royal Mail.*

*(3) Such improvements must mitigate the effects of the proposed development on the operation of this junction and must be designed in accordance with normal standards.*

*(4) The undertaker must have due regard to any consultation response received from Royal Mail.'*

27.2.51 The Development Consent Order at Schedule 11 also lists the following transport related requirements:

#### *'Highway Access – Item 10*

*1) No stage of the authorised development is to commence until for that stage, written details of the siting, design and layout of any new permanent or temporary means of access to a public highway to be used by vehicular traffic, or any alteration to an existing means of access to a public highway used by vehicular traffic, has, after consultation with the relevant highway authority, Royal Mail Group Ltd and Centrica plc, been submitted to and approved by the relevant planning authority.*

*(2) The undertaker must have regard to any consultation responses received.*

*(3) The public highway accesses must be constructed, or, as the case may be, altered, in accordance with the approved details.*

*(4) No stage of the authorised development is to commence until for that stage, a written scheme (the "Access Management Scheme") has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.*

*(5) The Access Management Scheme must be carried out in accordance with the approved details.*

#### *Public rights of way – Item 11*

*(1) No stage of the authorised development is to commence that would affect North Lincolnshire Footpath 50 or East Riding of Yorkshire Paull Footpath 6 until a written implementation plan and specification for the making up of an alternative right of way has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.*

*(2) The alternative Footpath 50 and Paull Footpath 6 must be implemented in accordance with the relevant approved plan and specification.*

#### *Construction traffic – Item 25*



*(1) No stage of the authorised development is to commence until a written transport statement, including any road condition survey, temporary speed limits, lay-bys and details of the preferred route for that stage to be used by construction traffic on public highways, after consultation with the highway authority, Royal Mail Group Ltd and Centrica plc, has been submitted to and approved by the relevant planning authority.*

*(2) The undertaker must have regard to any consultation responses received.*

*(3) Notices must be erected and maintained throughout the period of construction at every construction site exit to a public highway, indicating to drivers the route agreed by the relevant planning authority for traffic entering and leaving the site.'*

### Additional Mitigation and Monitoring

27.2.52 All the junction works necessary to mitigate for the impact of AMEP have been completed and this environmental topic was 'scoped out' of the UES.

27.2.53 On this basis, there is no requirement for additional mitigation other than those secured through the DCO which includes Schedule 11 Requirements 10 (Highway Access), 11 (Public Rights of Way), 25 (Construction Traffic), 29 (Travel Plan) and 30 (Traffic Management Plan). The change to the agreed diversion route for Footpath 50 would be incorporated into the written implementation plan and specification as required under Requirement 9.

### Noise and Vibration

#### Original ES & DCO

27.2.54 Mitigation and monitoring recommended for noise and vibration was contained within Chapters 16<sup>18</sup> (Section 16.7) and 38 (Section 38.8) of the original ES.

27.2.55 The original ES included suitable mitigation measures to ensure that potential noise and vibration effects are managed and controlled to acceptable levels where practicable. This included (but is not limited to) recommendations associated with:

- Piling shrouds and soft starts;
- Implementation of Best Available Technology Economically Achievable (BATEA) and Best Management Practice (BMP) by all contractors;
- Proper use and maintenance of plant;
- All vehicles and mechanical plant should be fitted with exhaust silencers;
- Selection of inherently quiet plant where appropriate;
- Plant in intermittent use to be shut down or throttled to minimum when not in use;

<sup>18</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000321-16%20-%20Noise%20and%20Vibration.pdf>

- All ancillary plant should be positioned to minimise noise disturbance. If necessary, acoustic enclosures/screening should be provided; and
- Construction contractors would be obliged to adhere to the codes of practice construction working and piling, given in BS5228.

27.2.56 These measures are effectively transcribed into the extant DCO through Schedule 8 paragraphs 37-43 and Schedule 11 Requirement 37 which control piling methods, and by Schedule 11 Requirements 22 (Code of Construction Practice), 26 (Control of Noise During Construction) and 27 (Control of Noise during Operation) which all require plans to be approved by the Local Planning Authority. Noise levels at the boundary of North Killingholme Haven Pits are further controlled by virtue of Schedule 11, Requirements 42(3) – (4)

### Additional Mitigation and Monitoring

27.2.57 The mitigation measures identified within the original ES and to be implemented as part of the DCO are considered entirely appropriate. No alternate or additional mitigation measures beyond that contained within the original ES are required.

## Air Quality

### Original ES & DCO

27.2.58 Mitigation and monitoring recommended for Air Quality was contained within Chapters 17<sup>19</sup> (Section 17.7) and 39<sup>20</sup> (Section 39.8) of the original ES.

27.2.59 This mitigation includes the following measures for construction dust, which are taken from the relevant good practice guidance documents available at the time:

- where possible dust generation activities will be undertaken away from the site boundary, particularly those locations adjacent to sensitive receptors;
- stockpiles of debris and overburden will be kept watered or sheeted as required, and for long term stockpiles the use of surface bonding materials or vegetating will be implemented if practicable;
- disturbance of stockpiles will be minimised;
- open surfaces and working areas will be watered as required to minimise dust, and surfaces will be converted to permanent hardstanding as soon as possible, or sealed or vegetated is practicable;
- wind breaks and barriers will be erected where possible to minimise wind blow across open areas of the site;

<sup>19</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000322-17%20-%20Air%20Quality.pdf>

<sup>20</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000344-39%20-%20Air%20Quality.pdf>

- drop heights will be minimised where possible;
- vehicles will be washed to remove any dusty materials or mud on a regular basis;
- vehicles will be washed to remove any dusty materials from the body and wheels immediately before leaving the construction site;
- the construction access routes will be kept clear of dusty materials with the use of streetcleaners or sprayed with water to maintain the entire road surface wet;
- the speed of vehicles will be limited on unpaved surfaces; and
- containers and trucks will be sheeted to prevent escape of dust during transfer to or from site.

27.2.60 The above measures are still considered relevant and applicable and are effectively secured by Requirements 22 and 28 of Schedule 11 of the extant DCO.

### Additional Mitigation and Monitoring

27.2.61 No additional mitigation measures are considered to be required beyond those proposed within the original ES. However, the IAQM Construction Dust Guidance (Ref 5) details up to date mitigation measures which should be considered in undertaking the development.

## Marine Archaeology

### Original ES & DCO

27.2.62 Mitigation and monitoring recommended for Historic Environment was contained within Chapters 18<sup>21</sup> (Section 18.7) and 40<sup>22</sup> (Section 40.7) of the original ES.

27.2.63 Proposed mitigation measures for AMEP were originally set out in the original ES (ES Section 18.7), and the 2012 WSI (Wessex Archaeology 2012a).

27.2.64 The original ES set out mitigation measure relevant to the marine historic environment in works relating to new quay and the berthing pocket, approach channel and turning area. For the new quay it stated:

*'Detailed mitigation measures to accompany construction of the new quay are being set out in a Written Scheme of Investigation (WSI) for marine and intertidal archaeology that has been drafted to accompany this Environmental Statement. The WSI provides for a further phase of investigations to enable detailed design of mitigation measures, as well as an outline of the mitigation measures that will be provided. The mitigation measures set out in the WSI will include monitoring by NLC/English Heritage and make provision for post-investigation assessment, material conservation, archaeological analysis, interpretation and publication of significant results, and preparation and deposition of a publicly-accessible archive. The WSI is subject to the agreement of NLC and English*

<sup>21</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000323-18%20-%20Historic%20Environment.pdf>

<sup>22</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000345-40%20-%20Historic%20Environment.pdf>

*Heritage. It is anticipated that implementation of the WSI will be secured through a condition' (original ES para. 18.7.4).*

27.2.65 For the berthing pocket, approach channel and turning area it stated:

*'Detailed mitigation measures to accompany dredging of the berthing pocket, approach channel and turning area are being set out in the Written Scheme of Investigation (WSI) for marine and intertidal archaeology referred to above' (original ES para. 18.7.5).*

27.2.66 The 2012 WSI set out possible measures that could be carried out during the design phase to supplement archaeological information identified by studies carried out prior to submission of the licence application (Wessex Archaeology 2012a, Section 5.1). These could inform the detailed design of the archaeological mitigation to take place during and after construction of the Marine Energy Park and Compensation Site, to be set out in an updated WSI. The investigations suggested were:

- Review of existing geophysical data;
- Acquisition and interpretation of additional geophysical data;
- Geoarchaeological investigation, including the development of a deposit model taking account of previous work;
- Additional documentary research notably into the brick and tile yards and historic shipping records relating to the anchorage of Whitebooth Roads (off Killingholme);
- Investigation of unidentified foreshore sites;
- Diver-based investigations of geophysical anomalies;
- Development of dredge reporting protocol.

27.2.67 The 2012 WSI also set out measures that will be carried out during the construction phase, as well as further possible measures (Wessex Archaeology 2012a, Section 5.2). The measures that were stated will happen were:

- implementation of Dredge Reporting Protocol; and
- investigations in response to discoveries arising from Dredge Reporting Protocol.

27.2.68 Other possible measures included archaeological excavation and recording and recovery of archaeologically important material pre-construction, and intertidal watching briefs, marine-based watching briefs, and investigations in response to discoveries arising from watching briefs during construction.

### **Additional Mitigation and Monitoring**

27.2.69 No alternate or additional mitigation is required beyond that set out in the 2012 WSI (Wessex Archaeology 2012a, Appendix UES14-1).

## Light

### Original ES & DCO

- 27.2.70 Mitigation and monitoring recommended for Light was contained within Chapter 19<sup>23</sup> (Section 19.7) of the original ES.
- 27.2.71 The following mitigation measures were proposed as part of the Lighting Assessment for the DCO Application:
- Light towers will be fitted within directional luminaires to limit light spill outside of the working areas;
  - Downlights will be fitted outside buildings to provide localised lighting for safe access to buildings;
  - For aviation safety, Humberside Airport request that all external lighting shall be flat glass, full cut off design with horizontal mountings to avoid light spill above the horizontal in the interest of aviation safety, which is also in line with best practice with the Institute of Lighting Engineers;
  - Final details of the lighting proposals are to take cognisance of the requirements of BS 5489 Part 8 with regard to lighting and railways; and
  - Planting of tree belts and woodland areas.
- 27.2.72 Approval of the detailed design of the lighting both during construction and operation is secured through Schedule 11 Requirement 24 (External Lighting).

### Additional Mitigation and Monitoring

- 27.2.73 This environmental topic was ‘scoped out’ of the UES and no additional mitigation is required to that secured through the DCO.

## Landscape and Visual Impact

### Original ES & DCO

- 27.2.74 Mitigation and monitoring recommended for Landscape and Visual was contained within Chapters 20<sup>24</sup> (Section 20.7) and 41<sup>25</sup> (Section 41.8) of the original ES.
- 27.2.75 Measures identified within the original ES include (but are not limited to) the following:
- Construction Phase – phasing of works, lighting hours restrictions, maintenance of a tidy and

<sup>23</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000324-19%20-%20Light.pdf>

<sup>24</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000325-20%20-%20Landscape%20and%20Visual%20Impact.pdf>

<sup>25</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000346-41%20-%20Landscape%20and%20Visual%20Context.pdf>

contained site compound, topsoiling and replacement turf/seeding;

- Operational Phase – Building colour finish, orientation of buildings, adherence to the landscape masterplan, and use of a landscape and ecology mitigation strategy; and
- Implementation and management of Cherry Cobb Sands.

### Additional Mitigation and Monitoring

27.2.76 This environmental topic was ‘scoped out’ of the UES and no additional mitigation is required to that secured through the DCO.

## Socio-Economics

### Original ES & DCO

27.2.77 Mitigation and monitoring recommended for Socio-Economics was contained within Chapters 21<sup>26</sup> (Section 21.7) and 42<sup>27</sup> (Section 42.8) of the original ES.

27.2.78 A range of ‘possible’ mitigation measures were identified within Chapter 21 of the original ES. These include (but are not limited to) the following:

- Informing North Lincolnshire Council and North East Lincolnshire Council of the timeline for implementation of the AMEP scheme;
- Publicising the project and its scale to ensure local and regional businesses are aware of the increase in operations and employees in this area;
- Use of a procurement strategy for the construction phase of the project; and
- Engaging with manufacturers, tenants, MEPs, LEPs, key stakeholders to promote local suppliers, training, research and promotion of the area as a place to live and work.

27.2.79 The DCO requires (Requirement 9 of Schedule 11) that *“no stage of the authorised development shall commence that would affect North Lincolnshire Footpath 50 or East Riding of Yorkshire Paull Footpath 6 until a written implementation plan and specification for the making up of an alternative right of way has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority”*.

### Additional Mitigation and Monitoring

27.2.80 As no significant adverse effects have been identified pursuant to the proposed change, there is no requirement for additional mitigation. The change to the agreed diversion route would be incorporated into the written implementation plan and specification as required under Requirement 9.

<sup>26</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000326-21%20-%20Socio-Economic.pdf>

<sup>27</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000347-42%20-%20Socio-Economics.pdf>

## Aviation

### Original ES & DCO

27.2.81 Mitigation and monitoring recommended for Aviation was contained within Chapter 22 (Section 22.7) of the original ES.

27.2.82 Key mitigation proposed as part of the DCO was as follows:

- The main impacts are potential for increased bird strike hazard and increased hazard to aviation due to tall structures.
- It is judged unlikely there will be an increased bird strike hazard since birds are likely to be displaced further away from the runway extended centreline. Therefore, mitigation measures for bird strike hazard are unlikely to be required.
- The hazard to aviation presented by tall structures will be mitigated by provision of aviation obstacle warning lighting.
- For structures on the AMEP site less than 45 m above ground level, aviation obstacle warning lighting is not specifically required.
- For structures on the AMEP site between 45-150 m above ground level, deemed to present a hazard to aviation, medium intensity red steady obstacle warning lighting should be provided.
- The DCO noted that there is a pylon of height just under 80 m above mean sea level locate close to Humberside Airport's main runway extended centreline which is not lit. On this basis, it was judged unlikely that structures <80 m AMSL would be deemed hazards to aviation. Accordingly, it was concluded that AMEP structures up to 55 m above ground level would not require aviation warning lights.
- For structures 150 m or more above ground level, medium intensity (2000 candelas) steady red obstacle lights should be provided, positioned as close as possible to the top of the obstacle and at intermediate levels spaced so far as practicable equally between the top lights and ground level with an interval of not more than 52 m.

### Additional Mitigation and Monitoring

27.2.83 It is concluded that further mitigation will be required, over and above that committed to as part of the DCO application, in relation to the potential for 200 m maximum height quay-side cranes. Full details of the proposed mitigation are set out in Chapter 22 of this UES.

27.2.84 Since the time of the DCO application, specific guidance in relation to cranes is available:

- Civil Aviation Authority (CAA) CAP 738 Safeguarding of Aerodromes (Ed.3, October 2020) contains a new Appendix B devoted to cranes that is aligned with the new CAP 1096 guidance note.
- Civil Aviation Authority (CAA) CAP 1096 Guidance to Crane Users (Ed.2.2, April 2021) is the new guidance note specifically addressing potential impacts of cranes on aviation in recognition of their distinctive character. The following is of note:

- Any crane erected without a positive response from the CAA and/or a relevant aerodrome operator may be considered a hazard to air navigation.
- The guidance note provides a “Notification Form” (CAP 1096, Annex A) for the purpose of identification of potential hazards associated with the operation of a crane and associated mitigation.
- The lighting recommendations contained in this new guidance note are aligned with ICAO Annex 14.

27.2.85 With reference to CAP 738 and CAP 1096, the following mitigation is indicated for the amended proposal quay-side cranes:

- The cranes should be provided with Medium-Intensity Steady-Red Lights (minimum luminous intensity of 2,000 Candelas). The lighting configuration should make the cranes visible at night-time from a full range of angles.
- Night-time is defined as half-hour after sunset and half-hour before sunrise.
- Use of crane lighting. Xenon-based lamps are typically used (thanks to their brightness), although LED lighting is increasingly being adopted because of its associated reduced power consumption and longer operating life.
- For a crane of height 200 m, four levels of lighting are recommended: medium intensity (Type B) at the top, low or medium intensity (Type B) at the first intermediate level, medium intensity (Type B) at the second intermediate level and low or medium (Type B) intensity again at the lowest intermediate level.
- Consultation should be undertaken with relevant stakeholders (namely CAA and Humberside Airport) as to whether the newly proposed cranes should also be supplied with daytime (white) lighting (medium intensity Type A, high intensity Types A/B).
- This should follow the submission of the new CAP 1096 Annex A “Notification Form” to CAA to initiate a formal hazard assessment and stakeholder consultation.

## Waste

### Original ES & DCO

27.2.86 Mitigation and monitoring recommended for Waste was contained within Chapters 23<sup>28</sup> (Section 23.7) and 43<sup>29</sup> (Section 43.8) of the original ES.

27.2.87 The mitigation measures proposed in the original ES for the construction phase are:

*“23.7.1 The overall goal during the construction phase, consistent with the waste hierarchy, is to*

<sup>28</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000328-23%20-%20Waste.pdf>

<sup>29</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000348-43%20-%20Waste.pdf>



*reduce the amount of waste produced to a minimum by the appropriate specification of materials brought to site, the utilisation of site won materials wherever possible and the separation of materials to facilitate recycling. This will be set out in detail, along with targets for reuse, recycling and disposal in the SWMP and in accordance with the CL:AIRE Code of Practice. The SWMP will be a working document and will be updated at regular intervals throughout the construction phase. It will identify and prioritise options for minimisation, reuse and recycling of construction wastes where practicable, and allow any unforeseen changes to the construction of the AMEP to be taken into account.*

*23.7.2 Spoil and hardcore generated on site will be stockpiled for use in the construction works, thereby reducing the need for imported aggregate. As such, these materials will not be classed as wastes, although an exemption from Environmental Permitting may be required if these materials require processing prior to use. Stockpiles may impact the environment through wind-blown dust and rain run-off, and therefore will be managed to avoid consequent nuisance and environmental impact.*

*23.7.3 Construction wastes and materials unsuitable for on-site use will require disposal as controlled waste in line with the Duty of Care. This includes general construction wastes, waste wood metals, waste electrical and electronic equipment wastes (WEEE), paints and aerosols, oils and oily rags. It is anticipated that these arisings will average 120 tonnes per month. Assuming an average payload of 4-5 tonnes, this implies between one and two additional HGV movements per day. This additional traffic will not add materially to the traffic impacts of the development.*

*23.7.4 All construction waste will be segregated on site before being removed. Segregation will include skips for at least general construction wastes, wood, metal, plastic, paper/cardboard and glass to facilitate their recycling. Contracts will also be placed for the separate collection using specialist containers of hazardous wastes such as oils, fluorescent tubes, WEEE, aerosols and paint cans, which also may be recycled or sent on for specialist treatment. All skips and containers will be labelled with the range of materials suitable for each and placed on designated hard standings, to be identified in the SWMP, designed to minimise potential impacts of wind, rain and run-off."*

27.2.88 The mitigation measures proposed in the original ES for the operation phase are:

*"23.7.5 The operation of the site will be as a manufacturing unit with ancillary support facilities and offices accommodation. Wastes will be managed in accordance with the waste hierarchy through the adoption of best practice to ensure wastes are minimised through the appropriate specification of goods and services, and adherence to segregation regimes at all levels of operation to maximise the recycling potential of wastes arising. Preference will be given to the disposal of residual waste through incineration with energy recovery, with landfill being the disposal option of last resort.*

*23.7.6 The achievement of best practice will depend to a significant extent on individual behaviour and adherence to the management system(s) in place. These will be designed in accordance with the international standard ISO 14001 (Environmental Management Systems) and supported through the ISO 14001 audit programme, and include as a minimum:*

- *identifying waste, highlighting potential for waste minimisation, reuse and recycling at the design stage;*
- *establishing and communicating targets for material consumption;*
- *providing clearly labelled, appropriate containers for segregated collection of materials*

*(including in office accommodation);*

- *providing appropriate collection and storage facilities for segregated materials and wastes;*
- *ensuring the appropriate labelling of wastes to facilitate recycling and appropriate disposal;*
- *audit of chosen contractors to ensure the appropriateness of downstream management facilities;*
- *regular review and updating of the management system; and*
- *staff training in the above.*

*23.7.7 Transportation impacts associated with the management of wastes have been shown to be not significant. However, transport requirements will be minimised by ensuring that skips and containers are optimally sized, that only complete loads are transported from the site and that waste is covered to reduce potential for wind blow dust and debris. On-site compaction and pre-treatment of specific wastes will be considered (eg for cardboard and plastic sheeting) where this can further optimise payloads or reduce potential impacts in downstream handling.”*

### **Additional Mitigation and Monitoring**

- 27.2.89 There is no alternate or additional mitigation needed as a consequence of the proposed material amendment beyond that contained in the original ES.

## **Health**

### **Original ES & DCO**

- 27.2.90 Mitigation and monitoring recommended for Health was contained within Chapter 24<sup>30</sup> (Section 24.7) of the original ES.
- 27.2.91 The DCO is accompanied by a schedule of requirements (Schedule 11) that set out required mitigation measures. The requirements cover a wide range of topics, some which relate to issues that may have an impact on human health. Key requirements relevant to potential health effects addressed in the Original ES include the following:
- Requirement 5 – provision of landscaping
  - Requirement 6 – implementation of landscaping
  - Requirement 18 - Code of Construction Practice
  - Requirement 20 - external lighting
  - Requirement 21 – construction traffic

<sup>30</sup><https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR030001/TR030001-000329-24%20-%20Health.pdf>

- Requirement 22 – control of noise during construction
- Requirement 23 – control of noise during operation
- Requirement 24 – control of emissions
- Requirement 25 – travel plan
- Requirement 26 – traffic management plan.

27.2.92 The above measures are comprehensive and are considered to adequately address the potential adverse health issues.

### **Additional Mitigation and Monitoring**

27.2.93 This environmental topic was ‘scoped out’ of the UES and there is no alternate or additional mitigation needed as a consequence of the proposed material amendment beyond that contained in the original ES.

## 27.3.0 Summary of Additional Mitigation or Monitoring

27.3.1 Table 27-1 below provides a summary of the additional mitigation or monitoring proposed as a result of the proposed material amendment.

**Table 27-4: Summary of Additional Mitigation and Monitoring**

UES Chapter	Topic	Additional Mitigation or Monitoring
7	Geology, Hydrogeology & Ground Conditions	<b>This topic was ‘scoped out’ and there is no requirement for additional mitigation.</b>
8	Hydrodynamic and Sedimentary Regime	<b>Not Applicable.</b>
9	Water and Sediment Quality	It is concluded that <b>no further mitigation is required</b> , over and above that committed to as part of the DCO application. This will be sufficient to control adverse effects to Water and Sediment Quality relating to the proposed scheme.
10	Aquatic Ecology	<b>No additional mitigation is required</b> for impacts to the Aquatic Ecology as there are no changes in the effects on the ecological components to those identified in the original ES and provided from within the extant DCO.
11	Ecology and Nature Conservation	<b>No further mitigation is required</b> , over and above that committed to as part of the DCO application. This will be sufficient to control adverse effects to Terrestrial Ecology and Nature Conservation relating to the proposed scheme.  Notwithstanding, a proposal for a non-material change to the DCO has been submitted to move Mitigation Area A to an alternative location at Halton Marshes, which is currently being considered by the Secretary of State.
12	Commercial Fisheries	<b>No additional mitigation is required</b> for impacts to the commercial and recreational fisheries components as there are no significant changes to those identified in the original ES for the DCO.
13	Drainage and Flood Risk	It is concluded that <b>no further mitigation is required</b> , over and above that committed to as part of the DCO application. This will be sufficient to control adverse effects to Flood Risk and Drainage relating to the proposed scheme.
14	Navigation	<b>A number of alternate or additional risk control measures have been identified, informed by stakeholder consultation, aimed at further reducing the residual risk during the construction and operation phases of the Project.</b> These have been included within the NRA and considered within the Commercial and Recreational Navigation ES Chapter.
15	Traffic and Transport	<b>This topic was ‘scoped out’ and there is no requirement for additional mitigation.</b>
16	Noise and Vibration	Mitigation measures to be implemented are appropriate and <b>no alternate or additional mitigation beyond that contained within the original ES is required.</b>
17	Air Quality	<b>No additional mitigation measures are considered to be required</b> beyond those within the extant DCO.
18	Marine Archaeology	<b>No additional mitigation measures are considered to be required</b> beyond those contained within the 2012 WSI.
19	Light	<b>This topic was ‘scoped out’ and there is no requirement for additional mitigation.</b>
20	Landscape and Visual	<b>This topic was ‘scoped out’ and there is no requirement for additional mitigation.</b>
21	Socio-Economic	<b>There is no requirement for additional mitigation.</b> The change to the agreed diversion route would be incorporated into the written implementation plan and specification as required under Requirement 9 of the DCO.

UES Chapter	Topic	Additional Mitigation or Monitoring
22	Aviation	It is concluded that <b>further mitigation will be required</b> , over and above that committed to as part of the DCO application, in relation to the potential for 200 m maximum height quay-side cranes.
23	Waste	<b>There is no alternate or additional mitigation needed as a consequence of the proposed Material Amendments beyond that contained in the original ES.</b>
24	Health	<b>This topic was 'scoped out' and there is no requirement for additional mitigation.</b>

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