Immingham Green Energy Terminal

TR030008

Volume 7

7.2 Schedule of Mitigation and Monitoring (Clean)

Planning Act 2008

Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

Immingham Green Energy Terminal

Development Consent Order 2023

7.2 Schedule of Mitigation

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1 Introduction

1.1 Background

1.1.1 This document identifies the mitigation measures identified through the Environmental Impact Assessment ("EIA") process and which are reported in the Environmental Statement ("ES")) **[TR030008/APP/6. 2]** for the Immingham Green Energy Terminal (the "Project") and indicates how these measures are secured, such that interested parties can be confident in the delivery of these measures. The mitigation measures are presented in a series of tables that include the following columns for each measure and which are explained further below:

a. Reference
b. Source Document
c. Mitigation
d. How the mitigation is secured
e. Phase of Works
f. Is monitoring required?
g. Responsible party
h. Responsible Regulatory Organisation

1.2 Reference

1.2.1 Each measure is prefixed with an identifier to indicate its type, as follows:

a. Embedded = EMB
b. Standard = SRD
c. Additional = ADD

1.2.2 A further reference is then included to identify the environmental topic it relates to. By way of example, EMB-AQ1 means:

a. EMB = the measure, action or commitment constitutes an embedded mitigation measure.
b. AQ = the abbreviation for the topic to which the measure related, in this example Air Quality.
c. 1 = the sequential reference number of the measure within the topic.

1.3 Source Document

1.3.1 The second column in each table identifies the document in which the mitigation is defined. The sources are the individual ES Chapters **[APP-042 to APP-225]**.

1.4 Mitigation

1.4.1 The third column in each table identifies the individual mitigation measures. In some cases, these are summarised, but in all cases, the full measures can be seen by reference to the source document. The Project design development process has been influenced by the EIA assessment findings and the feedback received during the statutory consultation process. The Project includes a range of measures incorporated into the design which serve to avoid or minimise environmental impacts.

1.4.2 The types of mitigation measures are defined in Chapter 5: EIA Approach of the ES **[APP-047]** and comprise the following:

a. **Embedded mitigation measures**: modifications to the location, design or operation of a development which have been developed to reduce its impacts and are an inherent part of the Project and so do not require additional action to be taken.

b. **Standard mitigation measures**: measures comprising management activities and techniques, which would be implemented during construction of the Project to limit impacts through adherence to good site practice and achieving legal compliance. These measures for the construction phase are set out in the **Outline Construction Environmental Management Plan** ("CEMP") **[APP-221]**.

c. **Additional mitigation measures**: these comprise measures over and above any embedded and standard mitigation measures, for which the EIA has identified a requirement to further reduce likely significant environmental effects.

1.5 How the Mitigation is Secured

1.5.1 The fourth column in each table explains how the mitigation measure is secured. The types of securing mechanism vary, but include:

a. A **requirement** listed in Schedule 2 of the **draft Development Consent Order ("DCO") [REP1-016]** which can secure the measure itself or secures a plan which has to be prepared, submitted and approved (typically by North East Lincolnshire Council as planning authority ("NELC") at a later date to discharge the listed measures. The CEMP is an example of the latter, where a final CEMP(s) has to be submitted and approved and which must accord with the **Outline CEMP [APP-221]**. Each of the requirements can be discharged in respect of part of the Project, for example, so as to allow discharge in relation to a phase or an area of the works.

b. A **condition** attached to the Deemed Marine Licence ("DML") in Schedule 3 of the **draft DCO [REP1-016],** which is typically used to secure mitigations in the marine environment. The discharge of conditions is typically approved by the Marine Management Organisation ("MMO").

c. A **further consent**, such as an Environmental Permit issued by the Environment Agency. Many of the operational mitigation measures that relate to environmental controls or health and safety for the hydrogen production facility are secured in this manner.

d. **Regulatory requirements** such as those imposed by the Control of Major Accident Hazards ("COMAH") Regulations 2015. Many of the operational mitigation measures that relate to the safety of the hydrogen production facility are secured in this manner.

e. An **existing procedure,** applicable to the operational Port of Immingham, which will also apply to this Project. Measures relating to navigation or the protocols of ships whilst at berth are typically secured in this manner.

1.5.2 The enforcing authority for the requirements is generally NELC (in consultation with other bodies where applicable), whose jurisdiction extends to the mean low water springs. The enforcing authority for the DML is the MMO, whose jurisdiction extends to mean high water springs. Work No. 1 relates to both jurisdictions and it has been agreed that, so far as the requirements relate to Work No. 1, NELC's approval will be limited to matters above the mean high-water springs (the DML will address matters below the mean high water springs).

1.6 Phase of Works

1.6.1 The fifth column in each table identifies the phases of works, these being construction, operation or decommissioning. Some measures are applicable to more than one phase and in some cases, different securing mechanisms are relevant to different phases. These are detailed as relevant.

1.7 Is monitoring required?

1.7.1 Where possible an indication is given in the sixth column of the table as to whether monitoring is likely to be required. However, in many cases, the need for monitoring will not be clear until a further document has been prepared or a subsequent consent agreed with a consenting body.

1.8 Responsible Party

1.8.1 The seventh column of each table defines the party, the organisation or the individual, within the Project team, including contractors, who would be tasked with delivery of the measures.

1.9 Responsible Regulatory Organisation

1.9.1 The eighth column defines the regulatory body relevant to the measure defined. In most cases this is the body with responsibility for the subsequent consent or the discharge of the relevant requirement or condition.

1.10 Other relevant Documents

1.10.1 This document should be read alongside the following documents:

a. **Works Plans [AS-022]**

i. The Draft Development Consent Order **[REP1-016]**, in particular Schedule 2: Requirements and Schedule 3: Deemed Marine Licence.

ii. The ES, figures and appendices **[TR030008/APP/6.2/6.3/6.4]** with particular regard to the **Outline CEMP [APP-221]**.

1.11 Schedule of Mitigation and Monitoring

Table 1: Air Quality

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Monitoring required? Yes/No/N/A	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-AQ1	**Chapter 6: Air Quality [APP-048]**	The Project has been designed to maintain air quality at sensitive receptors by the location of onsite sources away from air quality sensitive receptors, including the position of the jetty and the docked vessels.	The locations of the onsite emissions sources are restricted within the proposed Order Limits by reference to the definition of the various numbered works, including stacks, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and the locations in which those numbered works can provided as shown on the **Works Plans [AS-022]**.	Construction (Dust) Operation (Emissions from ships, operational hydrogen production facility Decommissioning (Dust)	None (see SRD-AQ 1 below for dust monitoring)	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB-AQ2	**Chapter 6: Air Quality [APP-048]**	The Project will be designed to ensure the safe storage of ammonia and hydrogen including the provision of a leak detection system.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that safe storage is adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	The application for the Environmental Permit will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)
EMB-AQ3	**Chapter 6: Air Quality [APP-048]**	The Project has been designed to include emergency flares which will burn off NH_3 or hydrogen emissions should the need arise and hydrogen flares will also be used in plant start up and shut down.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that safe flare design and operational protocols are adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	The application for the Environmental Permit will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)
EMB-AQ4	**Chapter 6: Air Quality [APP-048]**	The Project has been designed to achieve suitable dispersion of emissions from the hydrogen production facility.	The locations of the onsite emissions sources are restricted within the proposed Order Limits by reference to the definition of the various numbered works, including stacks, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and the locations in which those numbered works can provided as shown on the **Works Plans [AS-022]**.	Operation	The application for the Environmental Permit will define any additional monitoring that may be required for dispersion and once the final design is developed	Air Products	Environment Agency

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Monitoring required? Yes/No/N/A	Responsible party	Responsible Regulatory Organisation
			The stack heights for the hydrogen production facility are defined by reference to **Requirement 4** of the **draft DCO [REP1-016]** and would be a minimum of 37m above finished ground level to ensure adequate dispersion. A stack height of 30.5m was modelled in the **Chapter 6: Air Quality [APP-053]** and the modelling demonstrated that no significant effects are likely to arise. Similarly, the assessment concludes that the significance of the effect does not vary if the stack location moves within the relevant work areas shown on the Work Plans. **Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that adequate dispersion from the operational stacks is appropriately demonstrated.				
EMB-AQ5	**Chapter 6: Air Quality [APP-048]**	The Project has been designed to include direct and indirect control measures to mitigate emissions to air and potential impacts at sensitive locations through the enforcement of relevant emission standards for ships servicing the Terminal, including those set by the International Convention for the Prevention of Pollution from Ships (MARPOL) for Marine Vessels with the Humber Estuary being part of the North Sea Emission Control Area for SO_x and NO_x.	The emissions standards for ships using the Port of Immingham are controlled through existing protocols enforced by the **Maritime and Coastguard Agency*** who have the power to inspect vessels for compliance. [*The **Maritime and Coastguard Agency** is an executive agency of the United Kingdom that is responsible for implementing British and international maritime law and safety policy. It works to prevent the loss of lives at sea and to prevent marine pollution.]	Operation	N/A	ABP	Maritime and Coastguard Agency
Standard Mitigation							
SRD–AQ1	**Chapter 6: Air Quality [APP-048]**	The Contractor will develop and implement a Dust Management Plan in accordance with the Outline Dust Management Plan included within the **Outline CEMP [APP-221].** The Plan will adopt a range of industry standard good practice construction phase dust mitigation and monitoring measures, and general control measures, relating to: • Dust management. • General and Project specific construction activities. • Community liaison and complaints procedure.	**Requirement 6 -** Construction environmental management plan of the **draft DCO [REP1-016]**:	Construction	The **Outline CEMP [APP-221]** (Table 3 - Air Quality) states that '*the [Dust Management] Plan will adopt a range of industry standard good practice construction phase dust mitigation and monitoring measures.'*	Contractor	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Monitoring required? Yes/No/N/A	Responsible party	Responsible Regulatory Organisation
SRD-AQ2	**Chapter 6: Air Quality [APP-048]** **Chapter 11: Traffic and Transport [APP-053]**	The Contractor will develop and implement a Construction Traffic Management Plan ("CTMP") in accordance with the Outline Construction Traffic Management Plan **[REP1-006].** This plan will reduce emissions of dust from construction activities and combustion emissions from traffic movements.	**Requirement 7** - Construction Traffic Management Plan of the **draft DCO [REP1-016]:**	Construction	The need for monitoring of the measures in the CTMP is set out in the **Outline CTMP [REP1-006].**	Contractor	NELC – Highways Department
SRD-AQ3	**Chapter 6: Air Quality [APP-053]** **Chapter 11: Traffic and Transport [APP-053]**	The Contractor will develop and implement a Construction Worker Travel Plan ("CWTP") in accordance with the Outline CWTP **[TR030008/APP/6.8]**. This plan will support and encourage sustainable travel such as car sharing.	**Requirement 7 –** Construction Traffic Management Plan of the **draft DCO [REP1-016].** The CWTP is appended to the CTMP.	Construction	The need for monitoring of the measures in the CWTP is set out in the **Outline CWTP [REP1-006].**	Contractor	NELC – Highways Department
SRD-AQ4	**Chapter 6: Air Quality [APP-048]**	Air Products will implement an Odour Management Plan to mitigate emissions to air during operation.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that an appropriate Odour Management Plan Is in place.	Operation	The Odour Management Plan would set out any required odour monitoring	Air Products	Environment Agency
SRD-AQ5	**Chapter 6: Air Quality [APP-048]**	To mitigate emissions to air, the Applicant and Air Products will implement best practice measures including, but not limited to, the following measures to take steps to: • Prohibit unnecessary vehicle or vessel movements and idling of vehicle and vessel engines; and • Encourage/Promote the use of cleaner engines and fuels.	Construction: **Requirement 6 -** Construction environmental management plan of the **draft DCO [REP1-016]**:	Construction	N/A	Construction: Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD-AQ6	**Chapter 6: Air Quality [APP-048]**	Air Products will implement the requirements as set out within the Environmental Permit.	**Environmental Permit:** The Environmental Permit from the Environment Agency is expected to be issued with its own conditions, some of which can be assumed to relate to operational emissions to air (see also EMB-AQ2, EMB-AQ3, EMB-AQ4 above) and with its own monitoring requirements	Operation	Yes	Air Products	Environment Agency
Additional Mitigation							
No additional mitigation is required for air quality.							

Table 2: Noise and Vibration

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-NV1	**Chapter 7: Noise and Vibration [APP-049]**	The Project has been designed, as far as possible, to avoid and minimise noise and vibration impacts and effects by the consideration of noise attenuation in the layout.	The locations of onsite plant and equipment within the proposed Order Limits is restricted within the proposed Order Limits by reference to the definition of the various numbered works within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and the locations in which those numbered works can provided as shown on the **Works Plans [AS-022]**.	Operation	No	N/A	**[**Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB-NV2	**Chapter 7: Noise and Vibration [APP-049]**	**Operational Noise** For the operational phase, embedded mitigation includes (but is not limited to) items on site that are required for the operation of the site but are not explicitly used for acoustic attenuation. Examples include concrete fire walls which will provide a level of screening of plant noise from different areas on site, such as from hydrogen production units, liquefier and utility areas. [The noise assessment undertaken in **Chapter 7: Noise and Vibration [APP-049]** considers a 'realistic worst case' in which the layout, notably of Work No. 7 ('West Site'), is configured such that the noisiest possible configuration of hydrogen production units and hydrogen liquefiers has been assessed. This means that in future a different configuration can be brought forward and the noise effects at the NSRs on the Eastern edge of Immingham would be no worse than that assessed in the ES.]	**Operational Noise** Noise during operation would be controlled by: **Requirement 17 –** Control of noise during operational use of the **draft DCO [REP1-016.** This requires approval of a scheme for operational noise management for Work No. 3, Work No. 5 and Work No. 7 **Environmental Permit** The Environmental Permit will be granted only once the Environment Agency is confident that appropriate operational plant has been selected to achieve BAT to minimise noise to the required levels.	Operation	Operation The application for the Environmental Permit will define any monitoring that may be required for operational noise.	ABP Air Products	NELC (discharge of Requirement 17) Environment Agency (application of BAT through the Environmental permit)
EMB-NV3	**Chapter 7: Noise and Vibration [APP-049]**	Air Products will select appropriate plant, building cladding, louvres and silences/attenuators for the operation of the hydrogen production facility.	As for EMB-NV2 above as relevant to operation	Operation	The application for the Environmental Permit will define any monitoring that may be required for operational noise.	Air Products	Environment Agency NELC (discharge of Requirement 17)
Standard Mitigation							

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD–NV1	**Chapter 7: Noise and Vibration [APP-049]**	The Contractor will develop the measures included in the **Outline CEMP [APP-221].** These measures, which are defined more fully in the Outline CEMP, will include, but are not limited to, the following: • All pneumatic percussive tools will be provided with effective silencers/acoustic covers; • Hydraulic techniques for breaking ground to be used where practical, instead of percussive techniques; • All plant and equipment being used for the works to be maintained, silenced where appropriate, operated to prevent excessive noise and vibration and switched off when not in use; and • Noisiest items of plant to be located the furthest distance from the nearly Noise Sensitive Receptors("NSRs")., where practicable	Noise during construction would be controlled by adherence to the construction working hours and the measures defined in the CEMP, as secured by: **Requirement 9** - **Construction hours** and **Requirement 6 Construction Environmental Management Plan** of the **draft DCO [REP1-016].**	Construction	No	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD–NV2	**Chapter 7: Noise and Vibration [APP-049]**	The Contractor will undertake regular communication with the local community and will publicise the works schedule, give advance notification to residents regarding the period of higher levels of noise and vibration and lines of communication where complaints can be addressed.	**Requirement 6 Construction Environmental Management Plan** of the **draft DCO [REP1-016].** Table 3.2 of the OCEMP states that '*Mitigation to be included in the Final CEMP will include but not be limited to:* *…* *u) Provision of information to NELC and local residents to advise of potential noisy works that are due to take place; and* *v) Monitoring of noise and vibration complaints and reporting to the contractor for immediate investigation.'*	Construction	No	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD–NV3	**Chapter 7: Noise and Vibration [APP-049]**	The Project will comply with the terms of Requirement 9 as to working hours during construction.	**Requirement 9** - **Construction hours** of the **draft DCO [REP1-016]**.	Construction	No	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD–NV4	**Chapter 7: Noise and Vibration [APP-049]**	The Contractor will develop and implement a Construction Traffic Management Plan in accordance with the Outline Construction Traffic Management	**Requirement 7** - Construction Traffic Management Plan of the **draft DCO [REP1-016]**:	Construction	The need for to monitoring of the measures in the CTMP is set out in	Contractor	NELC – Highways Department

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
	Chapter 11: Traffic and Transport [APP-049] **Chapter 6: Air Quality [APP-048]**	Plan **[REP1-006].** This plan is intended to help manage traffic movements and therefore the associated noise levels			the **Outline CTMP [REP1-006].**		
SRD–NV5	**Chapter 7: Noise and Vibration [APP-049]**	The Project will be operated in accordance with an Environmental Permit. Noise from the hydrogen production facility will be controlled through the use of Best Available Techniques.	**Requirement 17** – Control of noise during operational use of the **draft DCO [REP1-016]**. This requires approval of a scheme for operational noise management for **Work No. 3**, **Work No. 5** and **Work No. 7**. Environmental Permit: The Environmental Permit will be granted only once the Environment Agency is confident that appropriate operational plant has been selected to achieve BAT to minimise noise to the required levels.	Operation	The application for the Environmental Permit will define any monitoring that may be required for operational noise.		NELC (in relation to Requirement 17) Environment Agency (Environmental Permit)
Additional Mitigation							
ADD-NV1	**Chapter 7: Noise and Vibration [APP-049]**	**Construction Noise** Standard impact avoidance construction noise and vibration mitigation measures. Additional specific measures where possible during site clearance works on Saturday afternoons, e.g. use of noise-control equipment such as jackets on pneumatic drills, acoustic covers on compressors, shrouds on and cranes, temporary acoustic barriers and screens.	**Construction Noise:** Noise during construction would be controlled by adherence to the construction working hours and the measures defined in the CEMP, as secured by: **Requirement 9** - **Construction hours** and **Requirement 6 Construction Environmental Management Plan** of the **draft DCO [REP1-016].** See also SRD-NV1 above.	Construction	To be determined; this would be defined through any monitoring deemed necessary in the Final CEMP(s)	Contractor	NELC MMO for marine aspects
ADD-NV2	**Chapter 7: Noise and Vibration [APP-049]**	Mitigation measures will be implemented to achieve operational daytime and night-time LOAEL criterion of a rating level no greater than +5 dB above the defined representative background sound level at each Noise Sensitive Receptor. These measures include but are not limited to: • Reducing Flare Stack outlet noise emissions by the addition of silencers or sound proofing panels • Screening or enclosing the compressors or other equipment.	**Requirement 17 -** Control of noise during operational use of the **draft DCO [REP1-016]**.	Operation	No	Contractor	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		• Reducing the breakout noise from plant through the use of enhanced enclosures					

Table 3: Nature conservation (Terrestrial Ecology)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-NC1	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	The Project has been designed, as far as possible, to avoid and minimise impacts and effects to terrestrial ecology.	The location of the Project is restricted within the proposed Order Limits by reference to the definition of the various numbered works within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and the locations in which those numbered works can provided as shown on the **Works Plans [AS-022]**.	Construction Operation Decommissioning	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB-NC2	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	The total area of land within the Site Boundary has been limited to that required to construct, operate and maintain the Project.	The location of the Project is restricted within the proposed Order Limits by reference to the definition of the various numbered works within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and the locations in which those numbered works can provided as shown on the **Works Plans [AS-022]**.	Construction Operation Decommissioning	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB-NC3	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	Impacts on woodland within Long Strip have been minimised as far as possible in the design of **Work No. 1 and Work No. 2** (the jetty access road, pipe-rack and associated buildings and plant).	The location of the **Work No.1** and **Work No. 2** which is the part of the Project which requires the loss of woodland from the Long Strip TPO woodland is limited by the definition of these works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022].** The extent to which trees can be removed from the Long Strip is also limited to that shown on **Plan 4.9: Potentially Affected Hedgerows and Trees Subject to TPOs [AS-013]** This mitigation is further secured by Article 54 of the **draft DCO [REP1-016]**	Construction	N/A	Contractor ABP	N/A
EMB-NC4	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	The Project seeks to minimise lighting impacts beyond the Site Boundary by directing lighting away from adjacent habitats.	**Construction:** **Requirement 6** - **Construction Environmental Management Plan** of the **draft DCO [REP1-016].** (The oCEMP states that '*Construction temporary lighting will be arranged so that glare is minimised outside the construction site. Lighting will be designed so as not to cause a nuisance outside of the Site in relation to views from*	Construction Operation	N/A	Construction Contractor Operation: ABP Air Products	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
			residential receptors or light disturbance to ecological receptors.') **Operation:** **Requirement 16 – External lighting** of the **draft DCO [REP1-016]**				
EMB-NC5	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	The Project's operational design seeks to attenuate surface water discharges to green field run off rates as set out in the **Drainage Strategy [APP-210].**	**Requirement 12 – Surface water drainage** of the **draft DCO [REP1-016]**	Operation	N/A	Contractor	North-east Lindsey Drainage Board NELC (as Lead Local Flood Authority)
EMB-NC6	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	Mitigation for protected species will be adhered to in accordance with the appropriate licence requirements **[TR030008/APP/6.4]**	**Natural England European Protected Species Licence** (for any relevant species)	Construction	Yes **(**as set out in the conditions of the relevant licence**)**	Contractor **(**and their Ecological Clerk of Works**)**	Natural England
Standard Mitigation							
SRD–NC1	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	The Contractor will prepare a CEMP setting out mitigation measures included in the **Outline CEMP [APP-221]** which will include, but not be limited to the following: • Presence of an Environmental or Ecological Clerk of Works ("ECoW") as appropriate during construction. • Precautionary working methods would be adopted to manage any residual risk of protected species being encountered e.g. reptiles and badger, and a Precautionary Working Method Statement ("PWMS") will be prepared as part of the CEMP. • Precautionary measures will be implemented to prevent trapping wildlife in construction excavations, in order to ensure compliance with animal welfare legislation. • Construction temporary lighting will be arranged so that glare would be minimised outside the construction site.	**Requirement 6 – Construction environmental management plan** of the **draft DCO [REP1-016]**	Construction	Yes	Contractor	NELC Natural England (so far as any PWMS as specified left)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD–NC2	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	Mitigation for impacts to bat roosts will be completed in accordance with a Natural England European Protected Species ("EPS") Mitigation Licence	**Natural England European Protected Species Licence**	Construction	TBC (As defined by the conditions of the licence)	Contractor (and their Ecological Clerk of Works)	Natural England
SRD–NC3	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]**	Vegetation clearance, which is confirmed to support water voles, would be undertaken under the supervision of a Water Vole Class Licensed ecologist with appropriate seasonal timing of works.	**Natural England European Protected Species Licence**	Construction	TBC (As defined by the conditions of the licence)	Contractor (and their Ecological Clerk of Works)	Natural England
SRD-NC4	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]** **Chapter 13: Landscape and Visual Impact [APP-055]**	The Contractor will prepare details of landscape and ecology enhancements for the operational layout based on the Outline **Landscape and Ecology Management Plan** ("LEMP") **[APP-225]**.	**Requirement 10 – Landscape and ecology management plan** of the **draft DCO [REP1-016]**	Operation	Yes The outline LEMP **[APP-225]** includes a Section on monitoring which states that '*Monitoring is required in order to determine that the functions documented within this Outline LEMP are being achieved and whether any remedial management action may be required.'*	Air Products ABP	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation and/or Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Additional Mitigation							
ADD-NC1	**Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]** **Chapter 13: Landscape and Visual [APP-055]** **Chapter 10: Ornithology [APP-052]**	Compensation measures for the loss of woodland within the Long Strip Woodland include: • Off-site woodland creation and management within a specified location • Enhancement of retained parts of the Long Strip TPO woodland north of Laporte Road. • Agreement of a woodland compensation strategy with the local planning authority.	**Requirement 11 – woodland compensation plan** of the **draft DCO [REP1-016]** states that no clearance of woodland within Long Strip can occur until a woodland compensation plan has been approved by NELC in consultation with Natural England. The plan must accord with the outline **Woodland Compensation Strategy** ("WCS") **[APP-224]**. .	Operation	Yes Monitoring of the establishment of the woodland planting is defined in the WCS	ABP	NELC

Table 4: Nature Conservation (Marine Ecology)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-ME1	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	The Project has been designed to reduce the footprint of direct and indirect habitat loss by the reduction to the Site Boundary, the number and layout of the piles and the alignment of the jetty.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles are further controlled by a series of parameters which are defined for Work No. 1a in the **Outline CEMP [APP-221]** and secured by conditions 8 and 14 on the draft Deemed Marine Licence requiring delivery of the Project in accordance with a detailed CEMP approved by the MMO.	Operation	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**. MMO
EMB-ME2	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	The Project seeks to minimise lighting impacts beyond the Site Boundary by directing lighting away from adjacent habitats.	**Construction:** **Conditions 8 and 14 on draft deemed marine licence** requiring delivery of development in accordance with a final CEMP**.** (The **Outline CEMP [APP-221]** states that "The jetty/pier decking will be designed to avoid any unnecessary light-spill on the water to avoid disruption or blocking of migratory routes for fish.")	Construction Operation	N/A	Construction: Contractor Operation: ABP Air Products	MMO
Standard Mitigation							
SRD–ME1	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	The Contractor will develop and implement a Construction Environmental Management Plan based on the **Outline CEMP [APP-221]** which will include, but not be limited to the following: • Biosecurity management procedures; and • Relevant legislation and best practice guidance.	Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. (**The Outline CEMP [APP-221]** identifies a requirement to specify biosecurity measures in the final CEMP(s). See also SRD-ME3 below)	Construction	N/A	Marine Contractor	MMO
SRD–ME2	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	The Contractor will dispose of capital dredge arisings evenly by targeting disposal loads in the central/deeper area of the disposal sites to reduce depth reductions. This will minimise the initial	Capital dredge arisings would be disposed of at existing licenced disposal sites [HU056, HU060] as secured to the Deemed Marine Licence.	Construction Operation	N/A	Construction: Marine Contractor Operation:	MMO

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		reduction in water depth and any environmental changes at the disposal sites. Maintenance dredge arisings (if any) will be disposed of at HU060.	Maintenance dredge arisings would be disposed of under an existing marine licence or any subsequent variation or successor.			ABP	
SRD–ME3	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	Biosecurity control measures will be followed during construction, and the Applicant's existing biosecurity management procedures will be followed during operation.	Construction: Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. Table 6 of the **Outline CEMP [APP-221]** includes commitments to ensuing biosecurity during construction. Operation: The existing biosecurity measures applicable to the Port of Immingham would also be applicable to the new Terminal.	Construction Operation	N/A	Construction: Marine Contractor Operation: ABP	MMO
Additional Mitigation							
ADD-ME1	**Chapter 9: Nature Conservation (Marine Ecology) [APP-051]**	To reduce the level of impact associated with underwater noise and vibration on fish and marine mammals during construction, the Contractor will implement the following measures during marine piling: Soft start Gradual increase of piling power incrementally until full operational power is achieved. Vibro marine piling Use of vibro marine piling where possible. Seasonal restrictions No percussive marine piling to take place within the waterbody between 1 April and 31 May inclusive in any calendar year. Duration of percussive marine piling restricted within the waterbody from 1 June to 30 June and 1 August to 31 October. Night time marine piling restrictions	Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the draft DCO activities to be undertaken in accordance with a detailed CEMP as approved by the MMO **[REP1-016]**. Marine piling restrictions secured by condition 15 on the draft Deemed Marine Licence, Table 6 of the **Outline CEMP [APP-221]** provides greater detail on the measures summarised to the left.	Construction	N/A	Marine Contractor	MMO

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		During periods 1 March to 31 March, 1 June to 30 June and 1 August to 31 October piling will be restricted at night. Specifically, no piling will be undertaken from 7 pm to 7 am in March, September and October and between sunset and sunrise in June and August. <u>Use of a marine mammal observer</u> Marine mammal observer to undertake visual searches within a defined mitigation zone. <u>Piling reporting protocol</u> All marine piling operations will comply with a piling reporting protocol agreed with the MMO and secured under Condition 15 of the Deemed Marine Licence.					

Table 5: Ornithology

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible Party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-O1	**Chapter 10: Ornithology [APP-052]**	The Project has been designed to reduce the footprint of direct and indirect habitat loss by the reduction to the Site Boundary, the number and layout of the piles and the alignment of the jetty.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles are further controlled by a series of parameters which are defined for Work No. 1a in the **Outline CEMP [APP-221]** and secured by conditions 8 and 14 on the draft Deemed Marine Licence requiring delivery of the Project in accordance with a detailed CEMP approved by the MMO.	Construction Operation Decommissioning	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**. MMO
Standard Mitigation							
SRD–O1	**Chapter 10: Ornithology [APP-052]**	Vegetation clearance will be undertaken outside of the nesting bird season where possible, and clearance works will be avoided in the period March to August inclusive. Where this is not possible, pre-clearance checks of vegetation would be undertaken by an ecologist to identify any nesting species. If occupied nests are identified, an appropriate buffer zone (at least 2m) would be established around the nest to ensure it is protected from damage/ destruction during construction. No clearance of vegetation within the buffer zone would be undertaken until any young had fledged and the nest was confirmed to be unoccupied.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]** Table 7 Ornithology of the **Outline CEMP [APP-221]** includes the wording provided left.	Construction	No	Contractor Ecological Clerk of Works	Natural England
Additional Mitigation							
ADD–O1	**Chapter 10: Ornithology [APP-052]**	To reduce the level of impact from noise and visual disturbance, the Contractor will implement measures including, but not limited to, the following: • A restriction on marine construction in winter between 1 October and 31 March until an acoustic barrier/visual	Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the draft DCO activities to be undertaken in accordance with a detailed CEMP as approved by the MMO **[REP1-016]**. Table 7 Ornithology of the **Outline CEMP [APP-221]** includes the measures which are summarised to the left and conditions to limit noise and visual	Construction	No	Marine Contractor	MMO

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible Party	Responsible Regulatory Organisation
		screen has been installed on both sides of the approach jetty; • Use of a noise suppression system during all percussive piling activities associated with the approach jetty; • Acoustic barriers / visual screening placed on the side of the approach jetty during construction; • Using soft starts to allow birds to become more tolerant to piling noise; and • A restriction on construction during cold weather when coastal waterbirds are particularly vulnerable.	disturbance to birds are secured by condition 15 on the Deemed Marine Licence.				
ADD-O2	**Chapter 10: Ornithology [APP-052]** **Chapter 8: Nature Conservation (Terrestrial) [APP-050]** **Chapter 13: Landscape and Visual Impact [APP-055]**	Compensation measures for the loss of woodland within the Long Strip Woodland include: • Off-site woodland creation and management within a specified location • Enhancement of retained parts of the Long Strip TPO woodland north of Laporte Road. • Agreement of a woodland compensation strategy with the local planning authority.	**Offsite woodland compensation: Requirement 11 – Offsite woodland compensation** of the **draft DCO [REP1-016]** states that no clearance of woodland within Long Strip can occur until an '*offsite woodland compensation strategy has been submitted to and approved by the relevant planning authority, following consultation with Natural England.*.'.	Operation	Yes Monitoring of the establishment of the woodland planting is defined in the WCS	ABP	NELC – Tree Officer

Table 6: Traffic and Transport

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-TT1	**Chapter 11: Traffic and Transport [APP-053]**	The Project construction phase has been designed to minimise waste and materials as far as is possible in order to minimise the need for traffic trips to the Site. The construction of the marine elements and large pre-assembled parts of the hydrogen production facility of the Project will be brought in by ship to the Port of Immingham.	**Requirement 6** – Construction Environmental Management Plan of the **draft DCO [REP1-016]**: Table 3.6 of the oCEMP includes the following commitment: ' *Where practicable, the Project would use modularisation to reduce on-site works and maximise the works completed in specialised fabrication facilities off-site. This would require the use of delivery by sea to the Port of Immingham of large pre-fabricated elements of operational plant and then the use of large HGVs to transport abnormal loads from the Port to the relevant parts of the Site.'*	Construction	N/A	Contractor	N/A
EMB-TT2	**Chapter 11: Traffic and Transport [APP-053]**	All permanent access points that require the creation of a junction bell-mouth will be designed based on the relevant standard from Design Manual for Road and Bridges ("DMRB") CD 123 "*Geometric Design of at Grade Priority and Signal-Controlled Junctions*" and in consultation with the local highway authority.	**Requirement 8** – Highways works of the **draft DCO [REP1-016]** requires that for permanent accesses from the highway (i.e. for Works 2, 3, 5 and 7), '*written details of the design and layout must be submitted to and approved by the planning authority following consultation with the highway authority.*	Operation	N/A	Contractor	NELC – Highways Department
Standard Mitigation							
SRD–TT1	**Chapter 11: Traffic and Transport [APP-053]** **Chapter 6: Air Quality [APP-0548** **Chapter 7: Noise and Vibration [APP-049]**	The Contractor will prepare a Construction Traffic Management Plan setting out mitigation measures included in the **Outline CTMP [REP1-006]** which sets out measures and controls to limit the number of trips on the network in the peak hours, and as such would limit the traffic impact of the construction phase as far as possible.	**Requirement 7** – CTMP of the **draft DCO [REP1-016]** The CTMP which must be prepared to discharge this requirement must be in accordance with the **Outline CTMP [REP1-006].**	Construction	The need for monitoring of the measures in the CTMP is set out in the **Outline CTMP [REP1-006]**.	Contractor	NELC – Highways Department

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD–TT2	**Chapter 11: Traffic and Transport [APP-053]** **Chapter 6: Air Quality [APP-048]** **Chapter 7: Noise and Vibration [APP-049]**	The Contractor will prepare a Construction Worker Travel Plan setting out mitigation measures included in an **Outline CWTP [TR030008/APP/6.8]**. The Construction Worker Travel Plan will control the trips made by the construction workers (including encouraging car sharing) and thus reduce the impact of the workforce upon the highway network.	Requirement 7 – CTMP of the **draft DCO [REP1-016]** The CTMP which must be prepared to discharge this requirement must be in accordance with the **Outline CTMP [REP1-006]**. Since an outline Construction Worker Travel Plan is appended to the outline CTMP, a Construction Worker Travel Plan must therefore be appended to the CTMP by the contractor.	Construction	The need for monitoring of the measures in the CWTP is set out in the **Outline Construction Worker Travel Plan [REP1-006]**.	Contractor	NELC – Highways Department
OSRD-TT3	**Outline Operational Travel Plan [REP1-067**]	The Contractor will prepare an Operational Travel Plan (OTP) setting out mitigation measures included in an **Outline OTP [REP1-067]** which sets out measures and controls to minimise the traffic impact of the operational phase as far as possible.	A draft requirement will be introduced into the **draft DCO [REP1-016]** at a suitable deadline to secure the Operational Travel Plan.	Operation	The need for monitoring of the measures in the OTP is set out in the **Outline OTP [REP1-067**]	ABP	NELC – Highways Department
Additional Mitigation							
None identified for traffic and transport.							

Table 7: Marine Transport and Navigation

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-MT1	**Chapter 12: Marine Transport and Navigation [APP-054]**	The Project has been designed, as far as possible, to avoid and minimise impacts and effects to marine transport and navigation through the process of design development, and by embedding mitigation measures into the design, such as minimising the dredge requirements as far as possible.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles are further controlled by a series of parameters which are defined for Work No. 1a in the **Outline CEMP [APP-221]** and secured by conditions 8 and 14 on the draft Deemed Marine Licence requiring delivery of the Project in accordance with a detailed CEMP approved by the MMO.	Construction Operation	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]** MMO
EMB-MT2	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Updated port controls, plans and procedures: Existing port documents, including the Port Marine Safety Management System (“MSMS”), Humber Passage Plan (“HPP”), and Humber Emergency Plan (“HEP”), will be updated to take into account the Project.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the Port of Immingham has as the Statutory Harbour Authority.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
EMB-MT3	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Updated Admiralty publications: Information about the Project will be provided to the UK Hydrographic Office (“UKHO”) in a timely manner to allow Charts, Sailing Directions, and List of Radio Signal (“ALRS”) to be updated.	This forms part of the legal obligations that the Port of Immingham has as the Statutory Harbour Authority.	Operation	No	Construction: Marine Contractor Operation: ABP	Harbour Authority
EMB-MT4	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Towage: Towage support in terms of the number and power of tugs appropriate to the size of the gas carrier and weather conditions will be provided by tugs from the Sunk Spit Buoy for passage to the berth, as well as assisting departure. General availability of towage will also help provide assistance in the event of a mooring breakout.	This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including Humber Passage Plan (“HPP”), and Humber Emergency Plan (“HEP”).	Operation	No	ABP	Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
EMB-MT5	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Aids to Navigation ("AtoNs"): The marine works shall be appropriately lit as soon as there are items which pose a hazard to navigation. Once operational, aids to navigation shall be provided and maintained so that the structure and berth can be identified. The safe navigation of all vessels in the Humber is aided by numerous existing AtoNs.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including Port MSMS and HPP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
EMB-MT6	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Circulation of Information: Information will be circulated about the Project to users of the Humber via Notices to Mariners and river warnings broadcast by the VTS every two hours (or more frequently if required), which consist of maritime safety information, and designated no-go zones. Temporary construction information not on Admiralty charts could be marked by other means, e.g. Portable Pilot Unit ("PPU").	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT7	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Stakeholder liaison: Stakeholder engagement and liaison will be held with recreational and fishing representatives to make them aware of the Project and related vessel activities during constructions.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT8	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Communications between Project/Port: Discussion of upcoming activities shall take place with the personnel at Immingham, HES and where relevant, the Pilots and IOT.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT9	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Hydrographic surveys: The current programme of surveying at the Port of Immingham shall be updated to include the Project. The results of the survey shall be provided to the UKHO for use in navigational charts and compared with previous surveys to inform potential requirements for maintenance dredging.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
EMB-MT10	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Weather limits: The maximum weather limits for operations shall be assessed and set for all activities. These shall be monitored against real time and forecasted weather conditions throughout the construction process. In addition, operational weather limits shall also be considered for vessels using the terminal during the operational phase.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
EMB-MT11	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Weather monitoring: Weather forecasting and monitoring shall be carried out and compared with the allowable weather limits for reliable planning and assessment of risk regarding the weather operating limits, which will vary between phases and activities, e.g., construction vs. normal operation.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
EMB-MT12	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Tidal limits: Tidal limits will apply to certain activities (analogous to weather limits).	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
EMB-MT-13	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Speed limits: A maximum speed limit of 5 knots will apply to vessels passing the Project berth when a vessel is mooring, moored or unmooring (the same as at IOT). VTS will monitor for unsafe speeds, including during construction work. Sanctions may be used against repeat offenders, e.g., removal of PEC.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. The 5 knot speed limit is imposed on all movements around jetties through byelaw 14(3) (Navigation and Speed of Vessels) of the Humber Navigation Byelaws. This forms part of the legal obligations that the Harbour Master Humber (HMH) has in exercising the duties of the Statutory Harbour Authority (SHA) and would be contained within SHA operational documentation used by both the Applicant as SHA for the Port of Immingham and HMH in exercising duties of the SHA for the	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
			wider Humber Estuary including the Port MSMS, HPP and HEP...				
EMB-MT-14	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Berth design: The Project berth will be aligned with IOT (including the exclusion zone) to maintain the width of the channel to the north (noting most vessels already avoid the planned exclusion zone).	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The alignment of the jetty head, which aligns with the IOT jetty, is controlled by a series of parameters which are defined for Work No. 1a in the o**CEMP** and secured by conditions 8 and 14 on the draft Deemed Marine Licence requiring delivery of the Project in accordance with a detailed CEMP approved by the MMO.	Operation	No	N/A	N/A MMO
EMB-MT-15	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Simulations: A real-time ship navigation simulation study has been carried out to demonstrate vessels can navigate safely to/from the Project facility, and that adverse effects are not imposed on other Port users. Further simulations to be carried out, if identified to be necessary, to inform detailed operational requirements.	This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Operation	No	ABP	Harbour Authority
EMB-MT-16	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Safety zone: A minimum 150m exclusion zone will apply to passing vessels from the berth line. A suitable construction safety zone will also be designated.	This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	Harbour Authority
EMB-MT-17	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Standard best practise in design and operations to include: • Shoreside maintenance; • Load monitoring; and • CCTV	During operation these would be standard procedures undertaken by the Port.	Operation	No	ABP	Harbour Authority
EMB-MT-18	**Navigational Risk Assessment [APP-191]**	Mooring study and plans: A mooring study shall be completed for the proposed mooring arrangements at the berth to confirm that there are appropriate	This forms part of the legal obligations that the port has as the Statutory Harbour Authority and	Operation	No	ABP	Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
	Chapter 12: Marine Transport and Navigation [APP-054]	moorings available to moor vessels for the operational wind limits and the expected tidal flows.	would be contained within Port documents including the Port MSMS, HPP, and HEP.				
EMB-MT-19	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Minimising personnel exposure: Measures to minimise exposure in the event of release of a toxic substance, e.g., ammonia, will be considered, e.g., remote jetty operations and toxic refuges.	Schedule 1 (Authorised development) of the **draft DCO [REP1-016]** includes the provision of toxic refuge rooms' on the jetty.	Operation	No	ABP	MMO Harbour Authority
EMB-MT-20	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Emergency plans, exercises and response resources: These will be in place, as appropriate, for each phase. For example, construction contractors shall have tier 1 oil spill response equipment to ensure any pollution events can be contained.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-21	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Approval of tidal works: This approval is required before any construction activity can commence. This will follow on from a contractor approval process.	Referred to in the CEMP secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. Consent required from Statutory Harbour Authority before works can commence.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-22	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Contractors shall have Risk Assessment Method Statement ("RAMS") and Safety Management System ("SMS") covering all of the construction activities which shall be reviewed by the Harbour Authority prior to the commencement of activities.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-23	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Standard Operating Procedures ("SOP"): Suitable procedures will be in place during construction work.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
EMB-MT-24	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Vessel Checks: Checks will be carried out to make sure construction vessels are fit for purpose.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the draft DCO **[REP1-016]**.	Construction	No	Marine Contractor	Maritime and Coastguard Agency MMO
EMB-MT-25	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Non-Routine Towage ("NRT") Assessments: These will be carried out when necessary to assess the risks and establish requirements, e.g., if pilotage is required, number of tugs, radius of towage, tidal restrictions, etc. Covered in HES Towage Guidelines.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-26	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Designated Point of Contact ("PoC"): During construction activities, there will be a designated PoC to provide appropriate information and respond to emergency situations. This role shall be the main line of communication between the works and the Statutory Harbour Authority ("SHA").	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-27	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Safety Vessel: A safety vessel will be ready and on standby during construction activities. The availability of a safety vessel in the area of the marine works shall provide for rapid response to emergency situations and an overview of the activity being conducted; during Construction.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the draft DCO **[REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
EMB-MT-28	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Dropped Object Procedure: A dropped object procedure will be in place to report and respond to any drop incidents.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. Secured by condition 21 of the Deemed Marine Licence which forms Schedule 3 of the **draft DCO [REP1-016]**	Construction	No	Marine Contractor	Harbour Authority MMO

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
EMB-MT-29	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Construction Surveys: Pre & post-construction surveys will be carried out to confirm that under keel clearances remain unchanged (in case of unreported incidents).	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO
EMB-MT-30	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Loading / unloading plan: Equipment and materials being delivered by barge shall have plans specifying the order and method of loading and unloading at the marine works site.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO Harbour Authority
Standard Mitigation							
SRD-MT1	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Pilotage / Pilotage Exemption Certificate ("PEC"): Gas carriers to the Project will be subject to Humber Estuary Services' ("HES") pilotage requirements. A significant proportion of vessels passing the Project will also be subject to Pilotage requirements or have PEC holders onboard.	This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Operation	No	ABP	Harbour Authority
SRD-MT2	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Vessel Traffic Services: Adherence of vessels to Humber Vessel Traffic Services ("VTS") requirements and instructions. Humber VTS will help control vessel movements and avoid dangerous encounter situations, e.g. involving construction vessels.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. This forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	ABP	MMO Harbour Authority
SRD-MT3	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Passage Planning: Project vessels will have appropriate passage plans in place as well as adhering to the Humber Passage Plan when applicable.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. During operation this forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	<u>Construction</u>: Marine Contractor <u>Operation</u>: ABP	MMO Harbour Authority

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD-MT4	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Traffic Management: Vessels will be sequenced as per the Humber Passage Plan to help avoid encounters and prevent overtaking, e.g. an Immingham Oil Terminal ("IOT") vessel will be brought in ahead of a Project	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. During operation this forms part of the legal obligations that the port has as the Statutory Harbour Authority and would be contained within Port documents including the Port MSMS, HPP, and HEP.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
SRD-MT5	**Navigational Risk Assessment [APP-191]**	Vessels will adhere to the Convention on the International Regulations for Preventing Collisions at Sea, 1972 ("COLREGS")	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. During operation this forms part of the legal obligations under the International Regulations for Preventing Collisions at Sea, 1972 ("COLREGS")	Construction Operation	No	Construction: Marine Contractor Operation: ABP	Maritime and Coastguard Agency MMO
SRD-MT6	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	Standard port operations to include: • Availability of secondary channel; and • Gas carrier design standards and industry guidance	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**. During operation these would be standard procedures undertaken by the Port.	Construction Operation	No	Construction: Marine Contractor Operation: ABP	MMO Harbour Authority
SRD-MT7	**Navigational Risk Assessment [APP-191]** **Chapter 12: Marine Transport and Navigation [APP-054]**	The Construction (Design and Management) Regulations 2015 ("CDM Regulations") will be adhered to, to help protect employee health during construction projects.	CEMP Secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the **draft DCO [REP1-016]**.	Construction	No	Marine Contractor	MMO
Additional Mitigation							
None identified for Marine Transport and Navigation.							

Table 8: Landscape and Visual Impact

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-LV1	**Chapter 13: Landscape and Visual Impact [APP-055]**	The Project has been designed to protect and retain valued trees, woodland, existing vegetation and other landscape features, where possible.	The location of Work No.1 and Work No. 2 which include the part of the Project which requires the loss of woodland from the Long Strip TPO woodland is limited to the extent of these works as shown on the **Works Plans [AS-022].** The extent to which trees can be removed from the Long Strip is limited to that shown on **Plan 4.9: Trees Subject to TPOs [AS-013].** This mitigation is further secured by Article 54 of the **draft DCO [REP1-016]**	Construction	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB-LV2	**Chapter 13: Landscape and Visual Impact [APP-055]**	During construction trees will be clearly fenced or marked so that site operatives know which trees are to be kept and protected.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]:** Table 3.8 of the Outline CEMP states that: '*During construction trees would be clearly fenced or marked so that site operatives are in no doubt as to which ones are to be kept and protected.'*	Construction	N/A	Contractor	NELC – Tree Officer
EMB-LV3	**Chapter 13: Landscape and Visual Impact [APP-055]**	The design minimises tree loss in the Long Strip woodland.	The location of Work No.1 and Work No. 2 which include the part of the Project which requires the loss of woodland from the Long Strip TPO woodland is limited to the extent of these works as shown on the **Works Plans [AS-022].** The extent to which trees can be removed from the Long Strip is also limited to that shown on **Plan 4.9: Trees Subject to TPOs [AS-013].** This mitigation is further secured by Article 54 of the **draft DCO [REP1-016]**	Construction	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**.
EMB–LV4	**Chapter 13: Landscape and Visual Impact [APP-055]**	The Project design seeks to minimise lighting impacts beyond the Site Boundary by directing lighting away from adjacent habitats. A Lighting Assessment **(Appendix 2.B [APP-173])** has been prepared and outlines the lighting requirements during the operational stage of the Project to reduce lighting impacts.	**Construction:** **Requirement 6** - **Construction Environmental Management Plan** of the **draft DCO [REP1-016].** [The oCEMP states that '*Construction temporary lighting will be arranged so that glare is minimised outside the construction site. Lighting will be designed so as not to cause a nuisance outside of the Site in relation to views from*	Construction Operation	N/A	<u>Construction</u>: Contractor <u>Operation</u>: ABP Air Products	NELC MMO (for marine aspects)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
			residential receptors or light disturbance to ecological receptors.'] **Operation:** **Requirement 16 – External lighting** of the **draft DCO [REP1-016]** provides that no part of Work Nos 2, 3, 5 and 7 is to be brought into operational use until a written scheme of the proposed operational external lighting for that part has been submitted and approved.				
Standard Mitigation							
SRD–LV1	**Chapter 13: Landscape and Visual Impact [APP-055]**	Use of appropriate materials on buildings to minimise adverse impact on visual amenity.	Requirement 4 – Detailed approval of the **draft DCO [REP1-016]**: This states that the external materials for the security building within Work No. 2, control building within Work No. 5 and control room and workshop building, security and visitor building, contractor building and warehouses will be subject to approval. The external paint finish of the ammonia storage tank within Work No 3a is also subject to approval.	Operation	N/A	ABP Air Products	NELC
SRD–LV2	**Chapter 13: Landscape and Visual Impact [APP-055]**	The Contractor will prepare details of landscape and ecology enhancements for the operational layout based on the **Outline Landscape and Ecology Management Plan [APP-225]**.	**Requirement 10 – Landscape and ecology Management Plan** of the **draft DCO [REP1-016]**	Operation	N/A	ABP Air Products	NELC
Additional Mitigation							
ADD-LV1	**Chapter 13: Landscape and Visual [APP-055]** **Chapter 8: Nature Conservation (Terrestrial Ecology) [APP-050]** **Chapter 10: Ornithology [APP-052]**	Compensation measures for the loss of woodland within the Long Strip Woodland include: • Off-site woodland creation and management within a specified location • Enhancement of retained parts of the Long Strip TPO woodland north of Laporte Road. • Agreement of a woodland compensation strategy with the local planning authority.	**Requirement 11 – Offsite woodland compensation** of the **draft DCO [REP1-016]** states that no clearance of woodland within Long Strip can occur until an '*offsite woodland compensation strategy has been submitted to and approved by the relevant planning authority, following consultation with Natural England.*.'.	Operation	Yes Monitoring of the establishment of the woodland planting is defined in the Woodland Compensation Srategy.	ABP	NELC – Tree Officer

Table 9: Historic Environment (Terrestrial)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-HT1	**Chapter 14: Historic Environment (Terrestrial) [APP-056]**	The Site Boundary has been refined to minimise land take.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**.	Construction Operation Decommissioning	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]**
EMB-HT2	**Chapter 14: Historic Environment (Terrestrial) [APP-056]**	The Project will employ construction methods which will 'do no harm', specifically deep Horizonal Directional Drilling ("HDD") associated with installation of the main pipeline in the Pipeline Corridor (Work No. 6) and no impact methodologies within the Temporary Construction Area (Work No. 9).	**Requirement 6 - Construction Environmental Management Plan** of the **draft DCO [REP1-016]**: Table 11 of the **Outline CEMP** states that construction methods which will "do no harm" will be employed at two locations within the Site Boundary	Construction	N/A	Contractor	NELC
Standard Mitigation							
SRD–HT1	**Chapter 14: Historic Environment (Terrestrial) [APP-056]**	The Contractor will develop and implement a CEMP Plan based on the **Outline CEMP [APP-221]**.	**Requirement 6 - Construction Environmental Management Plan** of the **draft DCO [REP1-016]** The Outline CEMP includes the following: *"If remains which are deemed to be significant in nature are encountered during construction works, the relevant part of the works will be halted and NELC Heritage officer consulted in order to understand if further works are required in relation to the asset in order to characterise, record and understand it*"	Construction	Yes Monitoring of any fieldwork if required and report production following completion of that fieldwork	Contractor	NELC
Additional Mitigation							
ADD–HT1	**Chapter 14: Historic Environment (Terrestrial) [APP-056]**	Further analysis of the peat and organic alluvium samples recovered during the evaluation in order to provide more data on the paleo-environmental nature of the Site. This would mitigate the loss of the buried, physical deposits during the construction phase of the Project.	**Requirement 6** - **Construction Environmental Management Plan** of the **draft DCO [REP1-016]** The Outline CEMP states in Table 3-9 that *there is a requirement to undertake further analysis of the retained peat and organic alluvial deposits as recommended in the geoarchaeological evaluation report* **[TR030008/APP/6.4]**	N/A – field work is not required, simply further laboratory work. There is no link between this work and the Phase of Works	Yes Reporting would be subsequently provided once further laboratory work is completed.	Contractor	NELC

Table 10: Historic Environment (Marine)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-HM1	**Chapter 15: Historic Environment (Marine) [APP-057]**	The Project has been designed to reduce impacts to potential marine archaeological receptors by the reduction in the number of berths from two to one.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles is defined by a series of parameters in the oCEMP and the dredging extent by a series of coordinates, both secured by the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction Operation	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]** MMO
Standard Mitigation							
SRD–HM1	**Chapter 15: Historic Environment (Marine) [APP-057]**	The Contractor will prepare a Written Scheme of Investigation based on an Outline Written Scheme of Investigation **[APP-204]** including, but not limited to, the following measures: • Avoidance of known marine cultural heritage receptors, such as Archaeological Exclusion Zones (“AEZ”); • Geoarchaeological and geophysical date assessment for baseline enhancement; and • Establishing a protocol for archaeological discoveries (“PAD”) which will reduce the impact on unexpected archaeological discoveries.	The requirement for a Written Scheme of Investigation is secured by condition 13 on the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction	The WSI would specify any required monitoring of any AEZ receptors to ensure there is no disturbance	Marine Contractor	MMO
Additional Mitigation							
ADD-HM1	**Chapter 15: Historic Environment (Marine) [APP-057]**	Where damage to archaeological receptors is impossible, a more extensive study, excavation or survey of the receptor will be undertaken by a specific method statement which will be approved by Historic England.	Contained within the Written Scheme of Investigation which is secured by condition 13 on the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction	N/A	Marine Contractor	MMO

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
ADD-HM2	**Chapter 15: Historic Environment (Marine) [APP-057]**	A geoarchaeological assessment will be undertaken on any future marine borehole logs with respect to areas that contain organic deposits.	Contained within the Written Scheme of Investigation which is secured by the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction	N/A	Marine Contractor	Historic England

Table 11: Physical Processes

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-PP1	**Chapter 16: Physical Processes [APP-058]**	The Project has been designed, as far as possible, to avoid and minimise impacts and effects on physical processes through the process of design development, such as minimising the dredge requirements as far as possible.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles is defined by a series of parameters in the oCEMP and the dredging extent by a series of coordinates, both secured by the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction Operation	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]** MMO
Standard Mitigation							
SRD–PP1	**Chapter 16: Physical Processes [APP-058]**	The Contractor will dispose of capital dredge arisings evenly by targeting disposal loads in the central/deeper area of the disposal sites to reduce depth reductions. This will minimise the initial reduction in water depth and any environmental changes at the disposal sites. Maintenance dredge arisings (if any) will be disposed of at HU060.	Capital dredge arisings would be disposed of at existing licenced disposal sites [HU056, HU060] as secured by condition 20 on the Deemed Marine Licence. Maintenance dredge arisings would be disposed of under an existing marine licence or any subsequent variation or successor.	Construction Operation	N/A	Construction: Marine Contractor Operation: ABP	MMO
Additional Mitigation							
No additional mitigation for Physical Processes							

Table 12: Marine Water and Sediment Quality

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction Operation Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-MS1	**Chapter 17: Marine Water and Sediment Quality [APP-059]**	The Project has been designed, as far as possible, to avoid and minimise impacts and effects on marine water and sediment quality through the process of design development, and by embedding mitigation measures into the design, such as minimising the dredge requirements as far as possible.	The location of Project is limited by the definition of the various works, within the description of the authorised development contained in Schedule 1 of the **draft DCO [REP1-016]** and with the locations defined in the **Works Plans [AS-022]**. The number and layout of the piles is defined by a series of parameters in the OCEMP and the dredging extent by a series of coordinates, both secured by the Deemed Marine Licence in Schedule 3 of the **draft DCO [REP1-016]**	Construction Operation	N/A	N/A	Location of development is determined by the Schedule 1 of the **draft DCO [REP1-016]** and the **Works Plans [AS-022]** MMO
Standard Mitigation							
SRD–MS1	**Chapter 17: Marine Water and Sediment Quality [APP-059]**	The Contractor will prepare a Construction Environmental Management Plan based on the **Outline CEMP [APP-221]** that will adopt a number of good practice measures including: • All wastes generated on site will be removed in a timely manner and any materials and containers giving rise to possible spills or contamination of the surrounding environment will be taken from site to be processed at a licensed facility. • Liquid oils/chemicals required for use during construction will be stored 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. • Plant will also be maintained regularly, and spill kits will be available for use in the event of a	**Requirement 6 - CEMP** of the **draft DCO [REP1-016]:** CEMP secured in the marine environment by conditions 8 and 14 on the Deemed Marine Licence, Schedule 3 of the draft DCO **[REP1-016]**. Table 3.13 of the **oCEMP [TR030008/APP.6.5]** incudes each of the measures listed left.	Construction	The need for monitoring would be defined in the Final CEMP(s) for the relevant works	Marine Contractor	NELC (landside) MMO (marine)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction Operation Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		spill onsite. Refuelling will be in designated areas to limit the potential for spillages. Fuel will be stored in the Site compound overnight, limiting the potential for fuel theft and vandalism which could cause pollution. Should any pollution incidents occur, they will be reported immediately to the relevant authorities. The workforce will be trained in preventing and dealing with pollution incidents.					
Additional Mitigation							
No additional mitigation for Marine Water and Sediment Quality							

Table 13: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-WQ1	**Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	The Project design includes the following flood resilience measures to minimise the amount of damage and reduce recovery time in the unlikely case of the site becoming inundated: • 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.	**Requirement 13 – Flood Risk Assessment** of the **draft DCO [REP1-016]**	Operation	N/A	ABP Air Products	NELC
Standard Mitigation							
SRD-WQ1	**Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	A Drainage Strategy has been prepared and forms **Appendix 18.B [APP-210]**. The Drainage Strategy includes the following measures: • Use of sustainable drainage systems; and • Designed to be inherently safe to protect the environment from urban diffuse pollutants.	**Requirement 12 – Surface water drainage** of the **draft DCO [REP1-016]**	Operation	N/A	Contractor	North-east Lindsey Drainage Board NELC (as Lead Local Flood Authority)
SRD-WQ2	**Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	The Flood Risk Assessment, set out in **Appendix 18.A [APP-209]** sets out measures to protect the Project from the residual risk of flooding in the event that the existing tidal defences fail in the vicinity of the Site, or in the event of heavy rainfall that could result in surface water flooding at the Site if the design capacity of the drainage network is exceeded. An appropriate flood warning and evacuation plan will need to be submitted to and approved by the NELC	**Requirement 13 – Flood Risk Assessment** of the **draft DCO [REP1-016]**	Operation	N/A	Air Products	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		These measures include: • In the event of extreme weather, the operator will shut the hydrogen production facility down, make equipment safe and relocate road tankers present on the site elsewhere; • Flood resistant and resilient design measures such as pipelines and storage tanks being designed to withstand the water pressures associated with high return period event flooding, tanks and equipment remaining secure in the event of flooding and consideration of pollution control to prevent/ reduce the chance of any fuel/material stored on site leaking; • Raising external floor levels; and • Elevating critical equipment above the estimated peak flow level, for their protection.					
SRD-WQ3	**Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	Management of hazardous substances on Site including a Site Emergency Response Plan for addressing emergency situations involving the loss of containment of hazardous substances.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that safe storage and containment are adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place. (Control of Substances Hazardous to Health Regulations (COSHH (2002) also includes control measures that would be relevant)	Operation	The application for the Environmental Permit will define the monitoring proposed to ensure safe operation of the ammonia storage and hydrogen storage and production facilities.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)
SRD–WQ4	**Chapter 18: Water Use, Water Quality, Coastal Protection,**	The Contractor will prepare a Water Management Plan as part of the preparation of a Construction Environmental Management Plan based	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**:	Construction Decommissioning	The need for monitoring would be defined in the Final CEMP(s) and DEMP(s)	Contractor	NELC MMO (for marine aspects of Work No. 1)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
	Flood Risk and Drainage [APP-060]	on the **Outline CEMP [APP-221]** that will adopt a number of good practice measures including: • Management of construction site run-off to manage fine sediment in surface water runoff as a result of construction activities; • Management of construction spillage risk to manage the risk of accidental spillages on site and potential conveyance to nearby waterbodies via surface runoff or land drains; • Management of flood risk at temporary construction areas by provision of suitable fencing; and • Preparation of a de-watering scheme should groundwater be encountered during below ground construction.	The **Outline CEMP [APP-221]** and **Outline Decommissioning Environmental Management Plan** ("DEMP") **[APP-222]** identifies that a Water Management Plan would be produced to include measures necessary to avoid, prevent and reduce adverse effects where possible upon the local surface water environment. This would be produced as part of the final CEMPs.		and any appended plans for the relevant works		
SRD-WQ5	**Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	Appropriate best practice mitigation measures will be applied during decommissioning works for the hydrogen production facility and documented in a DEMP.	**Requirement 18 – Scheme of decommissioning** of the **draft DCO [REP1-016]** The **Outline DEMP [APP-222]** identifies that a Water Management Plan would be produced as part of the final DEMP.	Decommissioning	Any required monitoring of water related discharges or aquatic receptors would be defined in the DEMP at the relevant time	Contractor	NELC
Additional Mitigation							
No additional mitigation for Water Use, Wate**r** Quality, Coastal Protection, Drainage and Flood Risk.							

Table 14: Climate Change

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-CC1	**Chapter 19: Climate Change [APP-061]**	The Project has been and will be designed, to avoid and minimise impacts and effects to climate through the adoption of, but not limited to the following: • Plant advanced control and optimisation; • Use of insulation and superinsulation to minimise heat leak into the system; • Predictive maintenance systems to ensure optimal compressor and equipment running; • All plant at the installation to be subject to the preventative maintenance programme which ensures that operational efficiency is maintained; • High integrity plan to minimise fugitive emissions; • High plant reliability for optimal plant performance reducing start up and shut down; and • Use of energy efficient lighting.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that the plant is design is accordance with BAT. **Requirement 16 – External Lighting** would further secure the use of energy efficient lighting.	Operation	N/A	ABP Air Products	Environment Agency NELC
EMB-CC2	**Chapter 19: Climate Change [APP-061]** **Chapter 18: Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage [APP-060]**	The Project has been designed, to avoid and minimise impacts and effects to climate through the adoption of, but not limited to the following: • Flood resistant/ resilient design; • Raising external ground levels; and • Elevating critical plant equipment and/or internal finished floor levels above the peak flood inundation level	**Requirement 13 – Flood risk assessment** of the **draft DCO [REP1-016]** **Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that appropriate flood risk measures, such as those listed left, are adequately demonstrated for the final design of the hydrogen production facility.	Operation	N/A	Air Products	Environment Agency NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Standard Mitigation							
SRD–CC1	Chapter 19: Climate Change **[APP-061]**	The Contractor will undertake risk assessments of severe weather impacts and take into account climate change projects as part of the preparation of a CEMP based on the **Outline CEMP [APP-221]**.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	N/A	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD-CC2	**Chapter 19: Climate Change [APP-061]**	The contractor will implement and maintain an 'Environmental Management System ("EMS"), which will consider all measures deemed necessary and appropriate to manage severe weather events, as part of the Construction Environmental Management Plan. These would include: • Use of storm defences (e.g. walls, riprap); • Designing the Project with refuges and storm-resilient materials and form; and • Ensuring appropriate storage of plant and materials.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	No	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD-CC3	**Chapter 19: Climate Change [APP-061]**	Regular preventative maintenance of assets will be undertaken to detect deterioration and damage during operation.	COMAH Regulations: The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place. During operation these would be standard procedures undertaken by the Port	Operation	No	Air Products ABP	Health and Safety Executive Environment Agency Harbour Authority
Additional Mitigation							
No additional mitigation for Climate Change.							

Table 15: Materials and Waste

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-MW1	**Chapter 20: Materials and Waste [APP-062]**	The Project design has sought to prioritise waste prevention, followed by preparing for re-use, recycling and recovery and lastly waste disposal to landfill as per the waste hierarchy.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	N/A	Contractor	NELC MMO (for marine aspects of Work No. 1)
Standard Mitigation							
SRD–MW1	**Chapter 20: Materials and Waste [APP-062]**	The Contractor will prepare a CEMP based on the **Outline CEMP [APP-221]**. This will adopt a number of good practice measures including, but not limited to the following: • Management arrangements, including roles and responsibilities, training, targets and best practice measures; • Estimates of construction material use and waste arising and how they will be managed; • Materials and waste management on-site; and • Opportunities for waste minimisation, reuse, recycling and recovery in line with the requirements of the waste hierarchy.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	Any monitoring of materials and waste would be defined in the Final CEMP(s) and any appended plans (see SRD-MW2)	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD-MW2	**Chapter 20: Materials and Waste [APP-062]**	The Contractor will prepare a Site Waste Management Plan based on the outline Site Waste Management Plan, which will include, but not limited to the following: • Identify and use materials that already exist on site or can be sourced from other projects; • Maximise the use of pre-fabricated structures and components, encouraging a process or assembly rather than construction;	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**. The Site Waste Management Plan will be appended to the final CEMP.	Construction	Any monitoring of materials and waste would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC MMO (for marine aspects of Work No. 1)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		• Identify and specify materials that can be acquired responsibly; and • Targets for waste recovery and recycled content.					
SRD-MW3	**Chapter 20: Materials and Waste [APP-062]**	The Contractor will develop a Materials Management Plan based on the information contained in the **Outline CEMP [APP-221]**. This will be appended to the final CEMP. The Materials Management Plan will support the reuse of excavated material, minimise off-site disposal and provide the necessary lines of evidence to support the reuse/offsite disposal of materials and to ensure compliance with regulatory guidance.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	Any monitoring of materials and waste would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC
Additional Mitigation							
No additional mitigation for materials and waste.							

Table 16: Ground Conditions and Land Quality

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-GC1	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Project has been designed to minimise effects and associated impact on land quality, such as, but not limited to the incorporation of impermeable surfacing and bunding.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that appropriate surfaces and bunding are included as required for the final design of the hydrogen production facility.	Operation	No	Air Products	Environment Agency
EMB-GC1	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Project has been designed to account for any potential aggressive ground conditions, including the incorporation of ground gas mitigation measures within buildings and in accordance with BS8485: 2015+A1:2019 'Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings'.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that appropriate ground gas and ground condition protective measures are adequately demonstrated for the final design of the hydrogen production facility.	Operation	The application for the Environmental Permit will define whether any monitoring is required	Air Products	Environment Agency
EMB-GC2	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Contractor will prepare a Remediation Strategy in broad accordance with the Outline Remediation Strategy in **Appendix 21.C [APP-217],** in which the potential for re-use of surplus materials on Site, and the potential for disposal or onward management will be considered to ensure appropriate re-use of materials off Site.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]** **Requirement 15 – Contaminated land** of the **draft DCO [REP1-016]**	Construction	The Remediation Strategy would define any requirements for monitoring	Contractor	NELC
EMB-GC3	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	An Asbestos Management Plan ("AMP") has been prepared to manage this risk during the construction phase to manage the risk of asbestos presence.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	The updated Asbestos Management Plan, would define any requirements for monitoring	Contractor	NELC
EMB-GC4	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	A Materials Management Plan ("MMP") will be produced for the Project and incorporated into the Final CEMP. This will accord with the provisions of the CL:AIRE Definition of Waste Code of Practice ("DoW CoP") and demonstrate that material has been deposited in an	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	Any monitoring of would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
		appropriate manner and will not pose an unacceptable risk to human health or the environment.					
Standard Mitigation							
SRD–GC1	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Contractor will prepare a final CEMP based on the **Outline CEMP [APP-221]**. This will describe the measures identified to limit the dispersal and accidental release of soil-derived dusts, uncontrolled run-off and accidental releases of potential contaminants. Measures include, but are not limited to the following: • Best practice guidance and mitigation measures will be adhered to during construction, to prevent or minimise spillage risks and impacts during the construction phase; • To minimise the potential for run-off from material stockpiles to surface water bodies, any stockpiled material stored on the Site will be stored at a suitable distance from watercourses; • To further prevent the potential for surface run-off and mobilisation of potential contaminants, any washing of vehicles and equipment will be undertaken in controlled areas only; • The movement of traffic will be confined to designated haul routes to reduce the amount of heavy machinery going over soil materials which could cause compaction of soil materials.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]** **Requirement 15 – Contaminated land** of the **draft DCO [REP1-016]**	Construction	Any monitoring of would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC
SRD–GC4	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Contractor will produce a Soil Resource Plan which will form an appendix to the final CEMP, detailing the areas and type of topsoil/subsoil to be stripped, stripping method, haul routes and the management of the soil stockpiles.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	Any monitoring would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD–GC6	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Project will operate in accordance with and comply with relevant legislation and regulations, and the hydrogen production facility will be regulated by the Environment Agency through an Environmental Permit.	Environmental Permit	Operation	The application for the Environmental Permit will define whether any monitoring is proposed	Air Products	Environment Agency
SRD-GC7	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The storage of hazardous substances during the operational phase will be approved by NELC through a Hazardous Substances Consent and regulated by the Health and Safety Executive (as the competent authority) and the Environment Agency through COMAH.	Hazardous substance consent **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	Yes	Contractor	Environment Agency NELC Health and Safety Executive
SRD–GC8	**Chapter 21: Ground Conditions and Land Quality [APP-063]**	The Contractor will produce a Decommissioning Environmental Management Plan based on the outline **DEMP [APP-222].** A Materials Management Plan would be appended to the final DEMP outlining measures for managing waste produced during decommissioning works and suitable measures for the sustainable use of resources and waste management that will be implemented during decommissioning.	**Requirement 18 – Scheme of decommissioning** of the **draft DCO [REP1-016]**	Decommissioning	Any monitoring would be defined in the Final DEMP(s) and any appended plans.	Contractor	NELC
Additional Mitigation							
No additional mitigation from Ground Conditions and Land Quality							

Table 17: Major Accidents and Disasters

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-MAD1	**Chapter 22: Major Accidents and Disasters [APP-064]**	Preparation of a Major Accident Prevention Plan ("MAPP") to support the notification to the Health and Safety Executive of the hydrogen production facility as a COMAH establishment.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	The final COMAH Safety Report will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Health and Safety Executive and Environment Agency **(**joint Competent Authorities for COMAH)
EMB-MAD2	**Chapter 22: Major Accidents and Disasters [APP-064]**	The ammonia storage tank incorporates safety systems to prevent the release of ammonia in the event of a failure within the primary containment area.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that safe storage is adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	The application for the Environmental Permit will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency **(**joint Competent Authorities for COMAH**)**
EMB-MAD3	**Chapter 22: Major Accidents and Disasters [APP-064]**	Hydrogen processing and storage facilities will be designed in accordance with guidance published by the European Industrial Gases Association.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that the safe operation of the production facilities and storage are adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	The application for the Environmental Permit and the COMAH Safety Report will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)
EMB-MAD4	**Chapter 22: Major Accidents and Disasters [APP-064]**	All emergency pressure relief systems for refrigerated storage tanks will be designed in accordance with relevant industry standards.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that safe storage is adequately demonstrated. **COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent	Operation	The application for the Environmental Permit and the COMAH Safety Report will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit) Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
			Authority once they are confident that any required safety systems are in place.				
EMB-MAD5	**Chapter 22: Major Accidents and Disasters [APP-064]**	The ammonia storage tank will be the subject of a Best Available Technology ("BAT") assessment, being carried out by a specialist to determine the most appropriate design.	**Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that BAT is adequately demonstrated for the ammonia storage tank.	Operation	The application for the Environmental Permit will define the monitoring proposed to ensure safe operation of the ammonia and hydrogen storage.	Air Products	Environment Agency (Environmental Permit)
EMB-MAD6	**Chapter 22: Major Accidents and Disasters [APP-064]**	The design of the Project has followed the Construction Design Manual Regulations, including the preparation of a risk register.	The construction phase plan for the Construction design and Management regulations **Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction Operation	N/A	ABP Air Products Contractor	Health and Safety Executive NELC
Standard Mitigation							
SRD–MAD1	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Contractor will develop a Construction Phase Plan in accordance with the CDM Regulations.	he CDM construction phase plan for the Construction design and Management regulations **Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	As defined in the CDM plan Any monitoring would be defined in the Final CEMP(s) and any appended plans	Contractor Air Products	Health and Safety Executive NELC MMO (for marine aspects of Work No. 1)
SRD–MAD2	**Chapter 22: Major Accidents and Disasters [APP-064]**	The operator will follow guidance set out in the COMAH Safety Report, considering, but not limited to the following risk events: • Contact with high voltage electricity; • Contact with underground gas main or UXO; • A construction incident such as structural collapse; • Fire; • Explosion/ energy release; • Release of toxic gas; • Incident(s) associated with jetty and marine operations; • Storms, flooding and climate change.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place. Safety precautions and risk assessment in compliance with Health and safety at work act	Operation	N/A	Air Products	Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
SRD–MAD3	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Contractor will produce a CEMP based on the **Outline CEMP [APP-221]** which will set out how construction measures and activities will be managed and controlled.	**Requirement 6 – Construction Environmental Management Plan** of the **draft DCO [REP1-016]**	Construction	Any monitoring would be defined in the Final CEMP(s) and any appended plans	Contractor	NELC MMO (for marine aspects of Work No. 1)
SRD-MAD4	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Contractor will use protocols to develop Safety Systems of Works for activities undertaken in the vicinity of high-pressure gas transmission and high voltage electricity transmission systems.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Construction	Any monitoring defined in risk assessment or CDM construction plan	Contractor	Health and Safety Executive and Environment Agency [joint Competent Authorities for COMAH]
SRD-MAD5	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Operator will follow the requirements contained in the Hazardous Substance Consent, the COMAH Safety Report, the Environmental Permit and the pipeline MAPD.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place. **Environmental Permit:** The Environmental Permit will be granted only once the Environment Agency is confident that appropriate safe systems are in place. Hazardous Substance Consent	Operation	Any monitoring would be defined in the environmental permit or hazardous substance consent	Air Products	Health and Safety Executive and Environment Agency [joint Competent Authorities for COMAH] Environment Agency (Environmental permit) NELC (Hazardous Substance Consent)
SRD-MAD6	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Contractor will develop a DEMP based on the **Outline DEMP [APP-222]** to minimise or avoid potential impacts associated with the decommissioning of green hydrogen production facility. Formal process safety studies and risk assessments would be carried out to identify potential hazards prior to decommissioning and demolition of the hydrogen production facility. This would be detailed in the final DEMP.	**Requirement 18 – Scheme of decommissioning** of the **draft DCO [REP1-016]**	Decommissioning	Any monitoring would be defined in the Final DEMP(s) and any appended plans	Air Products	NELC Environment Agency (Environmental permit)

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Additional Mitigation							
ADD-MAD1	**Chapter 22: Major Accidents and Disasters [APP-064]**	The Contractor will comply with the measures in the COMAH Safety Report.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems are in place.	Operation	N/A	Contractor Air Products	Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)

Table 18: Socio-economics

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible party	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-SE1	**Chapter 23: Socio-economics [APP-065]**	Provision of a temporary diversion for public bridleway 36 maintaining access during the first phase of construction.	The diversion bridleway is secured by Article 13 of the **draft DCO [REP1-016]**	Construction	N/A	Contractor	NELC
EMB-SE2	**Chapter 23: Socio-economics [APP-065]**	Residents along Kings Road would be notified via a letter drop of the timings, duration and details of any works to utilities along Kings Road.	Requirement 6 – Construction Environmental Management Plan of the **draft DCO [REP1-016]**	Construction	N/A	Contractor	NELC
EMB-SE3	**Chapter 23: Socio-economics [APP-065]**	Discussions with any likely affected businesses regarding any implications for the safety planning of their operations.	**COMAH Regulations:** The COMAH Safety Report would only be approved by the Competent Authority once they are confident that any required safety systems can be put in place.	Operation	N/A	Air Products	Health and Safety Executive and Environment Agency (joint Competent Authorities for COMAH)
EMB-SE4	**Chapter 23: Socio-economics [APP-065]**	Permanent cessation of residential use of the residential properties on Queens Road within the Site Boundary.	The power to acquire the residential properties is sought by Article 22 of the **draft DCO [REP1-016]**. However, Air Products is in active discussions with all of the affected owners to acquire the properties on a voluntary basis. Requirement 14 would secure the permanent cessation of residential use.	Operation	N/A	Air Products	NELC
Standard Mitigation							
There are no standard mitigation measures for Socio-economics.							
Additional Mitigation							
There are no additional mitigation measures for Socio-economics.							

Table 19: Human Health and Wellbeing

Reference	Source document	Mitigation	How the mitigation is secured	Phase of Works Construction, Operation or/and Decommissioning	Is monitoring required? Yes/No/N/A Form of Monitoring	Responsible person(s)	Responsible Regulatory Organisation
Embedded Mitigation							
EMB-HH1	**Chapter 24: Human health and wellbeing [APP-066]**	Relevant design and mitigation measures have been identified in the relevant related ES chapters (**Chapter 6: Air Quality, Chapter 7: Noise and Vibration, Chapter 11: Traffic and Transport, Chapter 19: Climate Change, and Chapter 23: Socio-economics [TR030008/APP/6.2]**) No further design and mitigation measures have been identified which are solely related to health and wellbeing.	The measures for the individual topics defined left are secured by the mechanisms described in the relevant Tables above.	No	N/A	N/A	N/A
Standard Mitigation							
Relevant design, mitigation and enhancement measures have been identified in the relevant related chapters (**Chapter 6: Air Quality, Chapter 7: Noise and Vibration, Chapter 11: Traffic and Transport, Chapter 19: Climate Change, and Chapter 23: Socio-economics).** No further design, mitigation and enhancement measures have been identified which are solely related to health and wellbeing.							
Additional Mitigation							
No additional mitigation for Human Health and Well Being.							