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Immingham Green Energy Terminal

TR030008

Volume 6

6.2 Environmental Statement

Chapter 26: Summary of Likely Significant Effects
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Planning Act 2008

Regulation 5(2)(a)

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

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26 Summary of Likely Significant Effects

26.1 Introduction

26.1.1 **Chapters 6 to 25** of this Environmental Statement (“ES”) [~~APP-043 to APP-068~~] have considered the potential environmental impacts and effects of the Project. This chapter provides a summary of those adverse and beneficial environmental effects that are considered to be likely significant effects (i.e. moderate and major effects).

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26.2 Significant Environmental Effects and Proposed Mitigation Measures

26.2.1 **Table 26-1** summarises the likely significant environmental effects of the Project that have been identified by the preliminary assessment, following the implementation of embedded mitigation and/or impact avoidance measures included in the design of the Project (as detailed in **Chapters 6 to 25** [~~APP-043 to APP-068~~] where relevant). **Table 26-1** also summarises any additional mitigation measures that have been identified in the technical assessments contained in the ES.

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26.2.2 For each topic, the reasonable worst-case scenario has been assessed, including the construction programme scenario and design parameters. Further details on the reasonable worst case (or ‘the Rochdale Envelope’) are set out in **Chapter 5: EIA Process** [~~APP-047~~]. The specific worst-case for each assessment is described in **Chapters 6 to 25** [~~APP-043 to APP-068~~] as appropriate. Effects have been assessed for the Project construction, operation (including maintenance) and decommissioning scenarios (where the assessment has included the decommissioning phase of the Project).

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26.2.3 The ongoing work on the detailed design of the Project may further reduce likely significant adverse environmental effects.

26.2.4 As outlined in **Chapter 5: EIA Process** [~~APP-047~~], for the purposes of this Environmental Impact Assessment (“EIA”), an effect is considered to be ‘significant’ if it is assessed to be moderate (adverse or beneficial) or major (adverse or beneficial). Minor and negligible effects are only referenced in this chapter where a ‘significant’ (moderate or major) effect has been reduced to a ‘not significant’ effect following additional mitigation. Some technical chapters deviate from the generic methodology outlined in **Chapter 5: EIA Process** [~~APP-047~~] and follow more specific methodology applicable to their respective assessments, or use different terminology to describe the magnitude of effect identified, for example **Chapter 25: Cumulative and In-combination Effects** [~~APP-067~~]. Where this is the case, this is outlined in the methodology section of each technical chapter of this ES [~~APP-043 to APP-068~~].

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26.2.5 To provide further clarification on the nature of the effects, each effect has been identified for the purposes of this summary as:

- a. Short term (“St”) – effects occurring only over a short period of time e.g. An effect that only lasts for the duration of the construction period, or one that lasts for only part of the operational phase.



- b. Medium term (“Mt”) – effects occurring for the duration of the Project’s operation, but which cease when operations cease.
- c. Long term (“Lt”) – effects occurring beyond the operation of the Project, for example the permanent loss of a habitat due to the Project.
- d. Temporary (“T”) – effects that are not permanent because the effect would no longer occur if the impact was removed within the relevant timescale (for example the visual amenity impact of construction structures would be described as St, T as the impact goes when the structures are removed).
- e. Permanent (“P”) – effects that are permanent and cannot be readily reversed within the relevant timescale (for example an environmental feature that is lost and cannot be replaced until after decommissioning would be Mt, P. In the event that it could not be replaced at all, this would be Lt, P).
- f. Direct (“D”) – effects that result from a direct impact, for example, the loss of an ecological habitat.
- g. Indirect (“In”) – also known as secondary effects, effects that result indirectly, for example, increased traffic could indirectly impact on air quality.

Table 26-1: Summary of Likely Significant Residual Effects

Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/M/St and P/T and D/In)
Chapter 6: Air Quality					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				
Chapter 7: Noise and Vibration					
Construction	Construction noise from landside works for residential Noise Sensitive Receptors ("NSRs") on Queens Road (NSR 1 and NSR 2)	Potentially up to moderate adverse (significant) (daytime) Potentially up to major adverse (significant) (Saturday afternoons)	Additional specific measures where possible (use of noise-control equipment such as jackets on pneumatic drills, acoustic covers on compressors, shrouds on piling rigs and cranes), temporary acoustic barriers and screens. <u>No driven piling activities are to be undertaken on Saturday afternoons (between 13:00-19:00) in Work No. 7 near to NSRs 1 and 2 (if NSRs 1 or 2 remain in residential use at the relevant time)</u>	Minor adverse (not significant)	St/T/D

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
Construction	<u>Construction vibration for Noise Sensitive Receptors ("NSRs") on Queens Road (NSR 1 and NSR 2)</u>	<u>Potentially up to moderate adverse (significant) (a significant effect could only arise if driven piling (in place of other forms of piling) were proposed to be used on Work No. 7 whilst either NSR 1 or NSR 2 remain in residential use)</u>	<u>Standard impact avoidance construction vibration mitigation measures.</u> <u>Use of non-vibratory rollers.</u> <u>Additional specific measures during driven piling operations in Work No. 7 whilst either NSR1 or NSR2 remain in residential use e.g. zones in proximity to Queens Road where driven piling is not permitted.</u>	Negligible-Minor adverse (not significant)	St/T/D
Construction	Construction noise from landside works for residential NSRs on eastern edge of Immingham (NSR 3 and NSR 4)	Potentially up to moderate adverse (significant) (Saturday afternoons)	Standard impact avoidance construction noise and vibration mitigation measures. Additional specific measures where possible during site clearance works on Saturday afternoon 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.	Negligible-Minor adverse (not significant)	St/T/D

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
Operation	On-site plant noise and operations on residential NSRs on eastern edge of Immingham	Up to moderate/major adverse (significant) (daytime) and up to major adverse (significant) (night-time)	Limits on noise emissions from plant and equipment at source. Acoustic barriers/screens or earth bunds to reduce transmission of noise from the Site to NSRs.	Minor adverse (not significant)	Mt/P/D
Decommissioning	Decommissioning effects are expected to be as per construction phase effects.				
Chapter 8: Terrestrial Ecology					
Construction	Pipe-rack and jetty access road construction resulting in loss of/ damage to mature deciduous woodland habitat	Moderate adverse (significant)	Woodland Compensation Strategy	Moderate adverse (significant)	Lt/P/D
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				

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Chapter 9: Marine Ecology					
Construction	Fish - underwater noise disturbance and vibration during marine piling, capital dredging and dredge disposal	Minor (not significant) to moderate adverse (significant) (migratory fish during marine piling)	Apply soft start procedures during piling. Use vibro piling where possible. Seasonal piling restrictions. Night time working restriction.	Insignificant adverse	St/T/D
Construction	Marine mammals - underwater noise disturbance and vibration during piling, capital dredging and dredge disposal	Minor (not significant) to moderate adverse (significant) (marine piling)	Apply soft start procedures during piling. Use vibro marine piling where possible. Marine Mammal Observer will follow JNCC protocol to minimise the risk of injury to marine mammals during percussive marine piling	Minor adverse (not significant)	St/T/D
Operation	No significant effects are predicted to occur.				
Decommissioning	Decommissioning not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				

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Chapter 10: Ornithology					
Construction	Airborne noise and visual disturbance to coastal waterbirds using intertidal habitats	Minor (not significant) to moderate adverse (significant)	Winter marine construction restriction on approach jetty for works within 200m of exposed foreshore (1 October to 31 March) Noise suppression system for marine piling Acoustic barrier/visual screen on approach jetty from 1 October to 31 March Apply soft start procedures during marine piling Cold weather construction restriction (all construction activity)	Minor adverse (not significant)	St/T/In
Construction	Permanent loss of woodland habitat within Long Strip affecting breeding birds (non-SPA/ Ramsar)	Moderate adverse (significant)	Compensation for loss of woodland to be agreed; like-for-like replacement would take longer to establish than the lifetime of this Project (which is anticipated to be 25 years for the operation of the terrestrial elements of the Project).	Moderate adverse (significant)	
Operation	No significant effects are predicted to occur.				

Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/Mt/St and P/T and D/In)
Decommissioning	Decommissioning not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				
Chapter 11: Traffic and Transport					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	Decommissioning not included within the scope of assessment as significant traffic and transportation effects are unlikely.				
Chapter 12: Marine Transport					
Construction	All risk events identified during the construction phase of the Project have been reduced to As Low As Reasonably Practicable ("ALARP").				
Operation	All risk events identified during the operational phase of the Project have been reduced to ALARP.				
Decommissioning	Decommissioning not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				
Chapter 13: Landscape and Visual					
Construction	Impact on landscape character to the Site and its immediate setting	Moderate adverse (significant)	None	Moderate adverse (significant)	St/T/D

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Construction	Impact on recreational users at viewpoint 2 Public Rights of Way ("PRoW") and proposed England Coast Path Route	Major adverse (significant)	None	Major adverse (significant)	St/T/D
Construction	Impact on recreational users at viewpoint 3 bridleway/PRoW and proposed England Coast Path Route	Major adverse (significant)	None	Major adverse (significant)	St/T/D
Construction	Impact on residential receptors located on Queens Road at viewpoint 11	Major adverse (significant)	None	Major adverse (significant)	St/T/D
Operation	Impact on recreational users at viewpoint 2 PRoW and proposed England Coast Path Route	Moderate adverse (significant)	None	Moderate adverse (significant)	Lt/T/D

Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
Operation	Impact on recreational users at viewpoint 3 bridleway/PRoW and proposed England Coast Path Route	Moderate adverse (significant)	None	Moderate adverse (significant)	Lt/T/D
Decommissioning	It is considered that the effects identified associated with Project construction are also applicable to the Project decommissioning phase for the landside infrastructure associated with the Project.				
Chapter 14: Historic Environment Terrestrial					
Construction	Long Strip (MNL 1797) – Partial or complete, permanent truncation/ removal of below ground remains.	Moderate adverse (significant)	The work already being undertaken by the ecological/environmental teams will also act as a mitigation measure for the impact upon the historical nature of the woodland. Accordingly, no additional work is required in relation to this impact.	Minor adverse (not significant)	Lt/P/D
Construction	Peat deposits and organic alluvial deposits identified by Geoarchaeological evaluation - partial or complete, permanent truncation/removal of	Major adverse (significant)	Further analysis of the peat and organic alluvium samples obtained by the evaluation and report produced detailing the results of this work. Such work will provide useful information that would otherwise never been gained.	Minor adverse (not significant)	Lt/P/D

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	below ground remains within the West Site				
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				
Chapter 15: Historic Environment Marine					
Construction	Direct impacts on known and potential marine cultural heritage receptors and deposits of archaeological importance as a result of construction and capital dredging	Major adverse (significant)	Geophysical and geoarchaeological assessment of project survey data. Then, avoidance of known and potential receptors, implementation of archaeological exclusion zones ("AEZs") where deemed appropriate and reduction via a protocol for archaeological discoveries ("PAD") and specific measures agreed within a WSI for A2 anomalies within the construction footprint.	Negligible positive (not significant) (as long as geotechnical data are retained, analysed and reported on by qualified geoarchaeologist)	Lt/P/D
Operation	No significant effects are predicted to occur.				
Decommissioning	Decommissioning not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				

Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/M/St and P/T and D/In)
Chapter 16: Physical Processes					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	Decommissioning is not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				
Chapter 17: Marine Water and Sediment Quality					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	Decommissioning is not included within the scope of assessment as the marine infrastructure would, once constructed, become part of the fabric of the Immingham port estate.				
Chapter 18: Water Quality					
Construction	Direct spillage into North Beck Habrough Marsh Drain and local drains: Contamination from suspended solids or other chemical contaminants that may find their way into site	Moderate/Major adverse (significant)	Bunded operations and spill kits to be used on Site (to be specified in the Outline Construction Environmental Management Plan ("CEMP") [TR030008/APP/6.5(5)].	Negligible/Minor adverse (not significant)	St/T/D

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	runoff, infiltrate to ground, or be spilt directly into waterbodies when there are works within or adjacent to them.				
Construction	Runoff contamination into North Beck, Habrough Marsh drain and local drains: the effects of diffuse urban pollutants in surface water runoff (that may contain metals, hydrocarbons, and inert solids etc.).	Minor/Moderate adverse (significant)	Bunded operations for all chemicals and fuels needed on Site (to be specified in the CEMP)	Negligible/Minor adverse (not significant)	St/T/D
Construction	Alteration in fluvial and overland flow paths, and potential increase in flood risk, as a result of storing construction materials in the floodplain – for North Beck, Habrough Marsh drain and local drains	Minor/Moderate adverse (significant)	Areas for storage of construction materials to be carefully considered (to be specified in the CEMP)	Negligible/Minor adverse (not significant)	St/T/D

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Construction	Increased risk of blockage of drains as a result of increased material (sands, gravels etc.) transported in runoff from Site - North Beck, Habrough Marsh drain and local drains	Minor/Moderate adverse	Surface water runoff to be managed on site (to be specified in the CEMP)	Negligible/Minor adverse (not significant)	St/T/D
Construction	Increase in risk of fluvial/surface water flooding due to changes in surface water runoff rates/volumes due to compaction of soil, increases in impermeable area, disruption/alteration of existing surface water flow paths, works/structures within watercourses – for North Beck Drain, Habrough Marsh Drain, Immingham Pump Drain and Local land drainage ditches	Moderate adverse	Temporary drainage facilities (swales etc) provided during the construction phase to control discharge of surface water run-off.	Minor Adverse (not significant) for North Beck Drain, Habrough Marsh Drain and Immingham Pump Drain Negligible (not significant) for Local land drainage ditches	St/T/D

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Construction	Human Health (Construction workers and operatives) - exposure to floodwater via flooding from predominantly tidal sources e.g. overtopping, such as surge events or breach of defences	Large adverse (significant)	Construction works would be carried out in accordance with the CEMP, including the Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. Site will be registered with the Environment Agency Flood Warnings Direct Service. No visitors or access during periods of inclement weather. No work onsite during a flood warning period.	Minor Adverse (not significant)	St/T/D
Construction	Human Health (Site Visitors) -exposure to floodwater via flooding from predominantly tidal sources e.g. overtopping, such as surge events or breach of defences	Very large adverse (significant)	Construction works would be carried out in accordance with the CEMP, including the Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. Site will be registered with the Environment Agency Flood Warnings Direct Service. No visitors or access during periods of inclement weather. No work onsite during a flood warning period.	Minor Adverse (not significant)	St/T/D

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Operation	Impacts upon North Beck, Habrough Marsh Drain and local drains – potential operational pollution of surface watercourses from accidental spillages.	Minor/Moderate adverse (significant)	Containment areas and bunded operations and spill kits to be used on Site.	Negligible/Minor adverse (not significant)	St/T/D
Operation	Impacts upon North Beck Drain, Habrough Marsh Drain and local drains – potential run off of hazardous firefighting chemicals to surface water course	Major adverse (significant)	Containment areas and bunded operational area with spill kits to be used and treatment/removal of liquids	Negligible/Minor adverse (not significant)	St/T/D
Operation	Increase in risk of fluvial/surface water flooding due to changes in surface water runoff rates/volumes due to increases in impermeable area, disruption/alteration of existing surface water flow paths – for North Beck Drain, Habrough Marsh Drain,	Moderate adverse (significant)	Site/surrounding area registered with the Environment Agency Flood Warnings Direct Service. Provision of a drainage strategy to manage surface water run-off up to and including the 1% AEP plus 40% climate change allowance. Surface water is stored and retained within the Site. Provision of a drainage strategy to manage surface water run-off up to	Minor beneficial (not significant)	Mt/T/D

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	Immingham Pump Drain and Local land drainage ditches		and including the 1% AEP plus 40% climate change allowance. Surface water is stored and retained within the Project boundary.		
Operation	Human Health (Site operatives and future workforce) – exposure to floodwater via flooding from predominantly tidal sources e.g. overtopping, such as surge events or breach of defences.	Large adverse (significant)	Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. Site registered with the Environment Agency Flood Warnings Direct Service. No work or visitors onsite during a flood warning period.	Minor adverse (not significant)	Mt/T/D
Operation	Human Health (Site Visitors)	Very large adverse (significant)	Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. Site registered with the Environment Agency Flood Warnings Direct Service. No work or visitors onsite during a flood warning period.	Minor adverse (not significant)	Mt/T/D
Decommissioning	Direct spillage into North Beck, Habrough Marsh drain and local drains: Contamination	Moderate/Major adverse (significant)	Bunded operations and spill kits to be used on site (to be specified in the Decommissioning Environmental Management Plan (“DEMP”)).	Negligible/Minor adverse (not significant)	St/T/D

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	from suspended solids or other chemical contaminants that may find their way into site runoff, infiltrate to ground, or be spilt directly into waterbodies when there are works within or adjacent to them.				
Decommissioning	Runoff contamination of North Beck, Habrough Marsh drain and local drains: the effects of diffuse urban pollutants in surface water runoff (that may contain metals, hydrocarbons, and inert solids etc.).	Minor/Moderate adverse (significant)	Bunded operations for all chemicals and fuels needed on Site (to be specified in the DEMP).	Negligible/Minor adverse (not significant)	St/T/D
Decommissioning	Increase in risk of fluvial/surface water flooding due disruption/alteration of existing surface water flow paths, works/structures within	Moderate adverse (significant)	Overland flow paths maintained and surface water drainage system to remain in-situ.	Minor adverse (not significant) (for North Beck Drain, Habrough Marsh Drain and Immingham Pump Drain)	St/T/D

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	watercourses – for North Beck Drain, Habrough Marsh Drain, Immingham Pump Drain and Local land drainage ditches.			Negligible adverse (not significant) (for Local land drainage ditches)	
Decommissioning	Human health (construction workers and operatives) - exposure to floodwater via flooding from predominantly tidal sources e.g. overtopping, such as surge events or breach of defences.	Large adverse (significant)	Construction works would be carried out in accordance with the CEMP, including the Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. No visitors or access during periods of inclement weather Site will be registered with the Environment Agency Flood Warnings Direct Service. No work onsite during a flood warning period	Minor adverse (not significant)	St/T/D
Decommissioning	Human health (site visitors) - exposure to floodwater via flooding from predominantly tidal sources e.g. overtopping, such as surge events or breach of defences.	Very large adverse (significant)	Construction works would be carried out in accordance with the CEMP, including the Flood Response Plan. Site induction, including evacuation routes, safe refuge, access, and egress. No visitors or access during periods of inclement weather Site will be registered with the Environment Agency Flood Warnings Direct	Minor adverse (not significant)	St/T/D

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			Service. No work onsite during a flood warning period		
Chapter 19: Climate Change					
Construction	No significant effects are predicted to occur.				
Operation	Impact resulting from operational greenhouse gas emissions	Significant beneficial	None required.	Significant beneficial	Lt/P/D
Operation	Increased frequency and severity of extreme weather potentially causing damage to structures and infrastructure.	Significant adverse	All new structures to either be designed for the climatic conditions using appropriate design guidance where available, or adaptive capacity would be built into the designs.	Not Significant	Lt/P/D
Operation	Sea level rise potentially causing damage to structures and infrastructure.	Significant adverse	All new structures would either be designed for the climatic conditions using appropriate design guidance where available, or adaptive capacity would be built into the designs. Additional design measures to cope with flood/high water level conditions on Site would be implemented (see	Not Significant	Lt/P/D

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			Section 19.6 of Chapter 19: Climate Change [APP-061].		
Operation	Increased frequency and severity of extreme weather events (e.g. flooding, snow and ice, storms) causing potential damage to land-based infrastructure and disruption to power and water services which may impact the operation of the Project.	Significant adverse	<p>All new assets and buildings would either be designed for the climatic conditions using appropriate design guidance where available, or adaptive capacity would be built into the designs.</p> <p>Storm-proof infrastructure would be incorporated where possible (e.g. underground power supplies).</p> <p>Addition of wind protection defenses (e.g. storm pin and tie-down procedures, crane buffers) across the Site. Specific measures to ensure safe storage of larger infrastructure (e.g. quay cranes).</p> <p>Regular maintenance of assets to be undertaken to detect deterioration and damage.</p>	Not Significant	Lt/P/D
Operation	Increased temperatures causing a risk of destabilising chemicals /substances stored on site during operation.	Significant adverse	Storage and transfer of chemicals/ substances in line with safety regulations.	Not significant	Lt/P/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/M/St and P/T and D/In)
Decommissioning	<p>Decommissioning not included within the scope of assessment for marine infrastructure as the development would, once constructed, become part of the fabric of the Immingham port estate.</p> <p>While it is likely that some Greenhouse Gas (“GHG”) emissions would arise as part of the decommissioning of the landside hydrogen production facilities process, it is not possible to say with any certainty what they are likely to be due to the timeframe involved. Methods of deconstruction and disposal are not known at this time. It should also be noted that by the time the hydrogen production facilities are decommissioned, the UK has committed to achieving net zero emissions and therefore any impacts are unlikely to be significant.</p>				
Chapter 20: Materials and Waste					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				
Chapter 21: Ground Conditions and Land Quality					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				
Chapter 22: Major Accidents and Disasters					
Construction	All risk events identified during the construction phase of the Project have been reduced to ALARP.				

Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
Operation	All risk events identified during the operational phase of the Project have been reduced to ALARP.				
Decommissioning	All risk events identified during the decommissioning phase of the Project have been reduced to ALARP.				
Chapter 23: Socio-economics					
Construction	North East Lincolnshire's economy: employment generation during the construction phase	Temporary major beneficial (significant)	None required.	Major beneficial (Significant)	St/T/D
Construction	North East Lincolnshire's economy: Gross Value Added ("GVA") generation during the construction phase	Temporary moderate beneficial (significant)	None required.	Moderate beneficial (significant)	St/T/D
Construction	Loss of residential properties on Queens Road	Permanent moderate adverse (significant)	None required.	Moderate adverse (significant)	Lt/P/D

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/Mt/St and P/T and D/In)
Operation	North East Lincolnshire's economy: employment generation during the operational phase	Permanent moderate beneficial (significant)	None proposed.	Moderate beneficial (significant)	Mt/T/D
Decommissioning	No significant effects are predicted to occur.				
Chapter 24: Human Health and Wellbeing					
Construction	No significant effects are predicted to occur.				
Operation	No significant effects are predicted to occur.				
Decommissioning	No significant effects are predicted to occur.				
Chapter 25: Cumulative and In-Combination Effects					
Construction	31 Queens Road and other residential properties along Queens Road, at the eastern end: in-combination effect as a result of construction dust, noise (landside construction and construction traffic),	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	St/T/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
	vibration, visual effects, traffic and transport and increases in flood risk				
Construction	1 Queens Road and other residential properties along Queens Road, at the western end: in-combination effect as a result of construction dust, noise (landside construction and construction traffic), vibration, visual effects, traffic and transport and increases in flood risk	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	St/T/In
Construction	Commercial receptors along Queens Road: in-combination effect as a result of visual effects increases in flood risk.	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	St/T
Construction	Bridleway 36 and the proposed England Coastal Path: in-combination effect as a	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	ST/T/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
	result of visual and socio-economic effects.				
Construction	'Long Strip' Woodland: in-combination effect as a result of the loss of woodland habitat, combined with the effect on the setting of the asset from a historic environment perspective.	Moderate adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Moderate adverse (Significant)	Lt/P/D
Construction	Cumulative socio-economic effects due to construction of the Project along with ten other developments (ID13, ID18, ID22, ID25, ID29, ID35, ID37, ID94, ID102 and ID115) due to increases in employment opportunities during the construction phases.	Large beneficial (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large beneficial (Significant)	St/T/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/Mt/St and P/T and D/In)
Construction	Cumulative landscape effects on the Site and its immediate setting due to construction of the Project together with ID5 and ID 115.	Moderate adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Moderate adverse (Significant)	St/T/In
Construction	Cumulative visual effects on Viewpoint 2 as a result of construction of the Project together with ID13, ID18 and ID115.	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (significant)	ST/T/In
Construction	Cumulative visual effects on Viewpoint 3 as a result of the construction of the Project and ID21, ID37, ID115 and ID116	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	ST/T/In
Construction	Cumulative visual effects on viewpoint 11 as a result of construction of the Project and ID13, ID18 and ID116.	Large adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Large adverse (Significant)	ST/T/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (Lt/Mt/St and P/T and D/In)
Operation	Cumulative socio-economic effects due to operation of the Project along with other developments (ID22 and ID116) due to increases in employment opportunities during the operational phases.	Moderate beneficial (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Moderate beneficial (Significant)	Lt/P/In
Operation	Cumulative visual effects will occur on Viewpoint 2 as a result of the visibility of characteristic built structures slightly intensifying due to the operation of the Project cumulatively with three other developments (ID13, ID18 and ID115).	Moderate adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Moderate adverse (Significant)	Lt/P/In
Operation	Cumulative visual effects on Viewpoint 3 as a result of the visibility of characteristic built	Moderate adverse (Significant)	No worse effect than the effects in isolation, therefore no additional mitigation is proposed.	Moderate adverse (Significant)	Lt/P/In

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Project stage	Environmental effect (following development design and impact avoidance measures (Embedded Mitigation))	Classification of effect prior to mitigation	Additional Mitigation/enhancement (if identified)	Classification of residual effect after mitigation	Nature of effect(s) (L/Mt/St and P/T and D/In)
	structures slightly intensifying due to both the operation of the Project together with other developments (ID21, ID37, ID115 and ID116) due to the presence of the stacks associated with the identified cumulative developments slightly intensifying the visibility of characteristic built structures from this location.				