



# Immingham Green Energy Terminal

TR030008 Volume 6 Environmental Statement Table of Contents

Planning Act 2008

Regulation 5(2)(a)

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

October 2023



#### Infrastructure Planning

#### Planning Act 2008

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

# Immingham Green Energy Terminal

# **Development Consent Order 2023**

## **Environmental Statement**

## **Table of Contents**

Regulation Reference	APFP Regulation 5(2)(a)
Planning Inspectorate Case Reference	TR030008
Application Document Reference	TR030008/APP/6.0
Author	Associated British Ports
	Air Products BR

Version	Date	Status of Version
Revision 1	30 October 2023	DCO Application



#### Table of contents

Chapter	Pages
Volume 1: Non-Technical Summary	1
Volume 2: Environmental Statement	2
Volume 3: Figures	4
Volume 4: Appendices	9



### Volume 1: Non-Technical Summary

Document Reference	Document Name
TR030008/APP/6.1	Non-Technical Summary





#### Volume 2: Environmental Statement

Chapter Number (TR030008/APP/6.2)	Chapter Title
Chapter 1	Introduction
Chapter 2	The Project
Chapter 3	Need and Alternatives
Chapter 4	Legislative and Consenting Framework
Chapter 5	EIA Process
Chapter 6	Air Quality
Chapter 7	Noise and Vibration
Chapter 8	Nature Conservation (Terrestrial Ecology)
Chapter 9	Nature Conservation (Marine Ecology)
Chapter 10	Ornithology
Chapter 11	Traffic and Transport
Chapter 12	Marine Transport and Navigation
Chapter 13	Landscape and Visual Impact
Chapter 14	Historic Environment (Terrestrial)
Chapter 15	Historic Environment (Marine)
Chapter 16	Physical Processes
Chapter 17	Marine Water and Sediment Quality
Chapter 18	Water Use, Water Quality, Coastal Protection, Flood Risk and Drainage
Chapter 19	Climate Change
Chapter 20	Materials and Waste
Chapter 21	Ground Conditions and Land Quality
Chapter 22	Major Accidents and Disasters
Chapter 23	Socio-Economics
Chapter 24	Human Health and Wellbeing



Chapter Number (TR030008/APP/6.2)	Chapter Title
Chapter 25	Cumulative and In-Combination Effects
Chapter 26	Summary of Likely Significant Effects





### Volume 3: Figures

Figure Number (TR030008/APP/6.3)	Figure Title
Figure 1.1	Site Location Plan
Figure 2.1	Site and Surrounding Environment Key Plan
Figure 2.2	Site Boundary and Administrative Context
Figure 2.3	Works Areas
Figure 2.4	Site Boundary Changes between EIA Scoping Report (August 2022) and the Application (September 2023) Key Plan
Figure 2.5	Illustrative Project Layout
Figure 2.6	Indicative Project Phasing Plan
Figure 2.7	Indicative Area of Capital Dredge
Figure 3.1	Water Depths of 7m Below Chart Datum
Figure 6.1	Air Quality Study Area
Figure 6.2	Construction Phase Air Quality Assessment
Figure 6.3A1	A1: Operational Phase Air Quality Assessment Concentrations and Deposition Rates (MARPOL Tier III)
Figure 6.3A2	A2: Operational Phase Air Quality Assessment Impacts (MARPOL Tier III)
Figure 6.3B1	B1: Operational Phase Air Quality Assessment Concentrations and Deposition Rates (MARPOL Tier II)
Figure 6.3B2	B2: Operational Phase Air Quality Assessment Impacts (MARPOL Tier II)
Figure 7.1	Sound Monitoring Locations
Figure 9.1	Project Subtidal Benthic Sampling Stations
Figure 9.2	Internationally and Nationally Designated Conservation Sites
Figure 9.3	Spawning and Nursery Grounds of Commercial Fish Species
Figure 9.4	TrAC Fish Monitoring Stations in the Vicinity of the Project
Figure 9.5	Annual Grey Seal Pup Counts at Donna Nook
Figure 9.6	Aerial Counts of Grey Seals at Donna Nook



Figure Number (TR030008/APP/6.3)	Figure Title
Figure 9.7	Harbour Porpoise Sightings in the Humber Estuary Since 2000
Figure 10.1	Monitoring Locations of Coastal Waterbird Surveys in the Vicinity of the Project
Figure 10.2	Humber Estuary Nature Conservation Designations
Figure 10.3	The 5-year Mean Peak Number of Birds in Sector C During Different Months
Figure 10.4	The Broad Distribution of Coastal Waterbirds in Sector C
Figure 10.5	Predicted Noise Levels During Marine Piling
Figure 10.6	Potential Disturbance Buffer Applied to the Approach Jetty
Figure 11.1	Site Location Plan
Figure 11.2	Local Highway Network Plan
Figure 11.3	Public Rights of Way (PRoW) Network
Figure 11.4	Traffic Accident Locations
Figure 11.5	HGV Routeing to Site
Figure 12.1	Project Overview
Figure 12.2	Detailed View (Port of Immingham)
Figure 12.3	AIS Data Tracks by Type (May 2022)
Figure 12.4	AIS Data Tracks – Recreational Activity (12 Months)
Figure 12.5	AIS Vessel Density (12 Months)
Figure 13.1	Project Location and Study Area
Figure 13.2	Zone of Theoretical Visibility – Bare Earth
Figure 13.3	Zone of Theoretical Visibility – Visual Screening
Figure 13.4	Landscape Character Areas – National and Regional
Figure 13.5	Landscape Character Areas - Local
Figure 13.6	Designations
Figure 13.7	Viewpoint Locations
Figure 13.8.1 to 13.8.13	Representative Photo-view (Summer)





Figure Number (TR030008/APP/6.3)	Figure Title
Figure 13.9.1 to 13.9.13	Representative Photo-view (Winter)
Figure 13.10.1 to 13.10.6	Photomontage
Figure 14.1	Location of Designated Assets
Figure 14.2	Non-Designated Heritage Assets
Figure 14.3	Historic Landscape Character
Figure 15.1	Site Location and Study Area
Figure 15.2	Palaeogeographic Features of Archaeological Potential
Figure 15.3	Palaeogeographic Feature Data Example – 7502
Figure 15.4	Seabed Features of Archaeological Potential
Figure 15.5	Data Examples of Seabed Features
Figure 16.1	Regional Setting within Wider Humber
Figure 16.2	Bathymetric Data across Project Site
Figure 16.3	Current and Wave Rose for the Site from the Project Survey Data
Figure 16.4	Particle Size Distribution (PSD) across Project Site and Disposal Grounds
Figure 16.5	Project Scheme Elements
Figure 16.6	Maximum Excess SSC (top) and Sedimentation (bottom) Resulting From the Full Proposed Capital Dredge Works
Figure 16.7	Excess SSC (top) and Sedimentation (bottom) at Locations Up- (left) and Down-Estuary (right); Tide for Context
Figure 16.8	Instantaneous Excess SSC (top) and Sedimentation (bottom) Following Discrete Disposal Events
Figure 16.9	Baseline (top) and Predicted Change (bottom) in Peak Ebb (left) and Flood (right) Spring Tide
Figure 16.10	Timeseries of Predicted Change to Current Speed, Direction and Bed Shear Stress for Points P1, P2, P3 and P4
Figure 16.11	Timeseries of Predicted Change to Current Speed, Direction and Bed Shear Stress for Points P5, P7, P8 and P9
Figure 16.12	Timeseries of Predicted Change to Current Speed, Direction and Bed Shear Stress for Points P6, P10, P11 and P12



Figure Number (TR030008/APP/6.3)	Figure Title
Figure 16.13	Baseline (top) and Predicted Change (bottom) in Peak Ebb (Left) and Flood (right) Spring Tide with Vessel On-Berth
Figure 16.14	Predicted Difference (to baseline) in Bed Thickness Change Over a Mean Spring Neap Cycle
Figure 16.15	Predicted Change to 0.5-yr Hs from Northeast (top) and East (bottom)
Figure 16.16	Predicted Change to 0.5-yr Hs from Southeast (top) and to 50-yr Hs from Northeast (bottom)
Figure 16.17	Predicted Change to 50-yr Hs for 50-yr Wave Event from East (top) and Southeast (bottom)
Figure 17.1	Water Framework Directive (WFD) Water Bodies
Figure 17.2	Water Framework Directive (WFD) Protected Areas
Figure 17.3	Water Sampling Location
Figure 18.1	Site Location Plan
Figure 18.2	Environment Agency Flood Map for Planning
Figure 18.3	Environment Agency Surface Water Flooding
Figure 18.4	Water Framework Directive Waterbodies within the Zone of Influence
Figure 18.5	WFD Baseline Screening Sampling Locations
Figure 21.1	Superficial Geology and Artificial Ground
Figure 21.2	Bedrock Geology
Figure 21.3	Groundwater Features
Figure 21.4	West Site Constraints Plan
Figure 21.5	East Site Constraints Plan
Figure 21.6	Source Protection Zones
Figure 21.7	Agricultural Land Classification
Figure 21.8	Previous Ground Investigations
Figure 23.1	Socio-Economic Receptors within the Site Boundary
Figure 23.2	Socio-Economic Receptors within 500m of the Site Boundary



Figure Number (TR030008/APP/6.3)	Figure Title
Figure 23.3	Socio-Economic Receptors within 5km of the Site Boundary (Primary Healthcare)
Figure 23.4	Lower Super Output Areas - North East Lincolnshire 001A & North East Lincolnshire 007A
Figure 23.5	North East Lincolnshire Local Authority Area
Figure 23.6	Access to the Sea Wall
Figure 25.1	Cumulative Assessment Long List
Figure 25.2	Cumulative Assessment Short List





#### Volume 4: Appendices

Appendix Number (TR030008/APP/6.4)	Appendix Title
Appendix 1.A	Scoping Report
Appendix 1.B	Scoping Opinion
Appendix 1.C	Matters Addressed in Scoping Opinion
Appendix 1.D	Statement of Competence
Appendix 1.E	Abbreviations and Glossary
Appendix 2.A	Waste Hierarchy Assessment
Appendix 2.B	Lighting Strategy
Appendix 2.C	Hydrogen Production Process
Appendix 6.A	Construction Dust Assessment Method
Appendix 6.B	Dispersion Modelling Assessment Method
Appendix 7.A	Baseline Monitoring Information
Appendix 7.B	Construction Sound Data and Assumptions
Appendix 7.C	Operational Noise Modelling Information
Appendix 8.A	Ecological Impact Assessment Method
Appendix 8.B	Preliminary Ecological Appraisal Report
Appendix 8.C	Bat Survey Report
Appendix 8.D	Otter and Water Vole Survey Report
Appendix 8.E	Great Crested Newt Survey Report
Appendix 8.F	Arboricultural Impact Assessment
Appendix 9.A	Benthic Survey Report
Appendix 9.B	Underwater Noise Assessment
Appendix 10.A	Baseline Ornithology Data
Appendix 11.A	Traffic Collision Data
Appendix 11.B	Traffic and Transport Cumulative Effects Assessment
Appendix 12.A	Navigational Risk Assessment



Appendix Number (TR030008/APP/6.4)	Appendix Title
Appendix 12.B	Navigational Simulation Survey
Appendix 13.A	Landscape and Visual Assessment Methodology
Appendix 13.B	Landscape Character Baseline
Appendix 14.A	Historic Environment Events Register
Appendix 14.B	Heritage Assets Register
Appendix 14.C	Archaeology and Cultural Heritage Desk-based Assessment
Appendix 14.D	Heritage Standards and Guidance
Appendix 14.E	Written Scheme of Investigation for GI Watching Brief, Geoarchaeological Boreholes, Geophysical Survey and Archaeological Trial Trenching
Appendix 14.F	Report on Trial Trench Evaluation
Appendix 14.G	Report on Geoarchaeological Survey and Monitoring of Geotechnical Investigations
Appendix 14.H	Report on Geophysical Survey
Appendix 15.A	Marine Archaeology Technical Report
Appendix 15.B	Outline Marine Archaeological Written Scheme of Investigation
Appendix 16.A	Numerical Model Calibration
Appendix 16.B	Geophysical Survey Report
Appendix 16.C	AWAC Deployment: Hydrodynamic Study
Appendix 17.A	Water Framework Directive Compliance Assessment
Appendix 18.A	Flood Risk Assessment
Appendix 18.B	Drainage Strategy
Appendix 18.C	Water Quality Sampling 2023
Appendix 19.A	Greenhouse Gas Assessment
Appendix 19.B	Climate Change Resilience (CCR) Assessment
Appendix 19.C	In-Combination Climate Change Impact (ICCI) Assessment
Appendix 21.A	Agricultural Land Classification Survey Report
Appendix 21.B	Phase II Ground Investigation Interpretive Report



Appendix Number (TR030008/APP/6.4)	Appendix Title
Appendix 21.C	Outline Remediation Strategy
Appendix 25.A	Cumulative Effects Assessment Long List
Appendix 25.B	Cumulative Effects Assessment Short List
Appendix 25.C	Assessment of Cumulative Effects