Immingham Green Energy Terminal

9.89 Applicant's Response to the Report on the Implications for European Sites (RIES)

Infrastructure Planning (Examination Procedure) Rules 2010

Volume 9

August 2024

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1 Introduction

Overview

1.1 This document has been prepared to accompany an application made to the Secretary of State for Transport (the Application") under section 37 of the Planning Act 2008 ("PA 2008") for a development consent order ("DCO") to authorise the construction and operation of the proposed Immingham Green Energy Terminal ("the Project").

1.2 The Application is submitted by Associated British Ports ("the Applicant"). The Applicant was established in 1981 following the privatisation of the British Transport Docks Board. **The Funding Statement [APP-010]** provides further information.

1.3 The Project as proposed by the Applicant falls within the definition of a Nationally Significant Infrastructure Project ("NSIP") as set out in Sections 14(1)(j), 24(2) and 24(3)(c) of the PA 2008.

The Project

1.4 The Applicant is seeking to construct, operate and maintain the Project comprising a new multi-user liquid bulk green energy terminal located on the eastern side of the Port of Immingham (the "Port").

1.5 The Project includes the construction and operation of a green hydrogen production facility, which would be delivered and operated by Air Products (BR) Limited ("Air Products"). Air Products will be the first customer of the new terminal, whereby green ammonia will be imported via the jetty and converted on-site into green hydrogen, making a positive contribution to the UK's net zero agenda by helping to decarbonise the United Kingdom's (UK) industrial activities and in particular the heavy transport sector.

1.6 A detailed description of the Project is included in of the **Environmental Statement ("ES") Chapter 2: The Project [AS-069]**.

Purpose and Structure of this Document

1.7 This document contains the Applicant's responses to the **Report on the Implications for European Sites (RIES) [PD-018]**

1.8 Responses are ordered ascendingly by reference number, replicating the structure of the **RIES [PD-018]**

1.9 Responses are provided in a table. The text of the question appears on the lefthand side, with the Applicant's answer to its right.

1.10 Further materials pertinent to the Applicant's response are included at the end of the document as appendices where necessary.

2 Applicant's Response to the RIES

Responses to RIES	
3.21	
Question	**Response**
Construction Paragraph 4.10.31 [REP4- 014] states that restriction distances will be controlled through a digital Global Positioning System (GPS) boundary to monitor compliance. The Applicant is requested to signpost to where this is secured in the dDML?	The use of a digital GPS system to control restriction distances is specified in Table 7 of the **Outline Construction Environmental Management Plan** ("CEMP") being submitted at Deadline 6 **[TR030008/APP/6.5 (7)]**. Compliance with a final approved CEMP (which must be in accordance with the Outline CEMP, unless otherwise approved by the Marine Management Organisation ("MMO") pursuant to condition 8 of the draft Deemed Marine Licence ("DML")) is secured under condition 15 of the DML.

3.23	
Question	**Response**
Construction The Applicant [REP5-050] confirmed that the cold weather construction restriction would be based on records from a local weather station. How is this to be secured?	The use of records from a local weather station in respect of the cold weather construction restriction is specified in Table 7 of the **Outline CEMP** being submitted at Deadline 6 **[TR030008/APP/6.5 (7)]**. Compliance with a final approved CEMP (which must be in accordance with the Outline CEMP, unless otherwise approved by the MMO pursuant to condition 8 of the draft DML) is secured under condition 15 of the DML.

3.24	
Question	**Response**
Construction The sHRA confirms that a suitably qualified Ecological Clerk of Works will be present on site during the construction period. The Applicant is requested to signpost to where this is secured in the dDML?	The use of a suitably qualified Ecological Clerk of Works during the overwintering period is specified in Table 7 of the **Outline CEMP [TR030008/APP/6.5(7)]**. Compliance with a final approved CEMP (which must be in accordance with the Outline CEMP, unless otherwise approved by the MMO pursuant to condition 8 of the draft DML) is secured under condition 15 of the DML.
3.32	
Question	**Response**
Construction The Applicant [REP1- 012][REP5-050] proposed to provide Natural England with a Technical Note to set out the source apportionment of site and vessel emissions to Project pollutant contributions. The Applicant is requested to submit this to the Examination.	This Technical Note has been shared with Natural England and the Applicant is awaiting comments from Natural England's air quality specialist. The shared note is provided at Appendix 1.

3 Appendix 1: IGET Air Quality Source Contributions

Memo
Immingham Green Energy Terminal

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Leeds LS11 9AR
United Kingdom

T: +44 (0)113 301 8400
aecom.com

Project name:
IGET

Project ref:
[redacted]

To: [redacted]

CC: [redacted]

[redacted]

Date:
July 2024

Air Quality Technical Note

Subject: IGET – Source Apportionment of Contributions to Air Quality Impacts

Introduction

In their Relevant Representation, Natural England have requested that the applicant provide the air quality impacts reported in Chapter 6 of the IGET ES **[APP-048]** broken down by site emissions sources and vessel emissions sources. This note provides Natural England with that information.

Source Apportionment

Table 1 shows the contribution of site emissions and vessel emissions assuming all vessels calling at the facility will comply with MARPOL Regulation 13 Tier II NOx Emissions Standards. **Table 2** shows the contribution of site emissions and vessel emissions assuming all vessels calling at the facility will comply with MARPOL Regulation 13 Tier III NOx Emissions Standards.

Table 1: Contribution to Air Quality Impacts by Source – MARPOL Regulation 13 Tier II NOx Emissions Standards

	Percentage of the Project's Process Contribution split by source group						Project's Process Contribution split by source group					
	Contribution to site-wide PC from Site Emissions (%)			Contribution to site-wide PC from NH_3 Vessels and other vessel emissions (292/year) (%)			Contribution to site-wide PC from Site Emissions (ug/m^3)			Contribution to site-wide PC from NH_3 Vessels and other vessel emissions (292/year) (ug/m^3)		
Receptor	**Annual Mean NOx PC**	**Annual mean NH_3 PC**	**N Dep Rate PC**	**Annual Mean NOx PC**	**Annual mean NH_3 PC**	**N Dep Rate PC**	**Annual Mean NOx PC**	**Annual mean NH_3 PC**	**N Dep Rate PC**	**Annual Mean NOx PC**	**Annual mean NH_3 PC**	**N Dep Rate PC**
O_E1	11%	100%	26%	89%	0%	74%	0.16	0.01	0.05	1.3	<0.01	0.13
O_E2	9%	100%	22%	91%	0%	78%	0.15	0.01	0.04	1.49	<0.01	0.15
O_E3	14%	100%	32%	86%	0%	68%	0.08	<0.01	0.02	0.49	<0.01	0.05
O_E4	16%	100%	36%	84%	0%	64%	0.07	<0.01	0.02	0.35	<0.01	0.03
O_E5	20%	100%	42%	80%	0%	58%	0.05	<0.01	0.02	0.22	<0.01	0.02
O_E6	20%	100%	43%	80%	0%	57%	0.04	<0.01	0.01	0.17	<0.01	0.02
O_E7	18%	100%	39%	82%	0%	61%	0.05	<0.01	0.01	0.23	<0.01	0.02
O_E8	23%	100%	47%	77%	0%	53%	0.02	<0.01	0.01	0.08	<0.01	0.01
O_E9	23%	100%	47%	77%	0%	53%	0.02	<0.01	0.01	0.07	<0.01	0.01
O_E10	24%	100%	48%	76%	0%	52%	0.02	<0.01	0.01	0.06	<0.01	0.01
O_E11	19%	100%	41%	81%	0%	59%	0.02	<0.01	0.01	0.09	<0.01	0.01
O_E12	19%	100%	40%	81%	0%	60%	0.02	<0.01	0.01	0.07	<0.01	0.01
O_E13	28%	100%	53%	72%	0%	47%	0.03	<0.01	0.01	0.09	<0.01	0.01
O_E14	20%	100%	42%	80%	0%	58%	0.01	<0.01	<0.01	0.04	<0.01	<0.01
O_E15	20%	100%	42%	80%	0%	58%	0.01	<0.01	<0.01	0.04	<0.01	<0.01
O_E16	37%	100%	63%	63%	0%	37%	0.54	0.02	0.16	0.91	<0.01	0.09
O_E17	29%	100%	54%	71%	0%	46%	0.08	<0.01	0.02	0.20	<0.01	0.02
O_E18	18%	100%	40%	82%	0%	60%	0.06	<0.01	0.02	0.28	<0.01	0.03
O_E19	20%	100%	4%	80%	0%	96%	0.05	<0.01	0.01	0.19	<0.01	0.02

Table 2: Contribution to Air Quality Impacts by Source – MARPOL Regulation 13 Tier III NOx Emissions Standards

	Percentage of the Project's Process Contribution split by source group						Project's Process Contribution split by source group					
	Contribution to site-wide PC from Site Emissions (%)			Contribution to site-wide PC from NH_3 Vessels and other vessel emissions (292/year) (%)			Contribution to site-wide PC from Site Emissions (ug/m^3)			Contribution to site-wide PC from NH_3 Vessels and other vessel emissions (292/year) (ug/m^3)		
Receptor	Annual Mean NOx PC	Annual mean NH_3 PC	N Dep Rate PC	Annual Mean NOx PC	Annual mean NH_3 PC	N Dep Rate PC	Annual Mean NOx PC	Annual mean NH_3 PC	N Dep Rate PC	Annual Mean NOx PC	Annual mean NH_3 PC	N Dep Rate PC
O_E1	32%	56%	45%	68%	44%	55%	0.16	0.01	0.05	0.33	<0.01	0.05
O_E2	28%	50%	39%	72%	50%	61%	0.15	0.01	0.04	0.38	0.01	0.06
O_E3	38%	62%	51%	62%	38%	49%	0.08	<0.01	0.02	0.13	<0.01	0.03
O_E4	42%	66%	55%	58%	34%	45%	0.07	<0.01	0.02	0.09	<0.01	0.01
O_E5	49%	72%	62%	51%	28%	38%	0.05	<0.01	0.02	0.05	<0.01	0.01
O_E6	50%	73%	63%	50%	27%	37%	0.04	<0.01	0.01	0.04	<0.01	0.01
O_E7	46%	70%	59%	54%	30%	41%	0.05	<0.01	0.01	0.06	<0.01	0.01
O_E8	54%	76%	66%	46%	24%	34%	0.02	<0.01	0.01	0.02	<0.01	<0.01
O_E9	54%	76%	66%	46%	24%	34%	0.02	<0.01	0.01	0.02	<0.01	<0.01
O_E10	55%	76%	67%	45%	24%	33%	0.02	<0.01	0.01	0.02	<0.01	<0.01
O_E11	47%	71%	61%	53%	29%	39%	0.02	<0.01	0.01	0.02	<0.01	<0.01
O_E12	47%	71%	60%	53%	29%	40%	0.02	<0.01	0.01	0.02	<0.01	<0.01
O_E13	59%	80%	71%	41%	20%	29%	0.03	<0.01	0.01	0.02	<0.01	<0.01
O_E14	48%	72%	61%	52%	28%	39%	0.01	<0.01	0.00	0.01	<0.01	<0.01
O_E15	48%	72%	62%	52%	28%	38%	0.01	<0.01	0.00	0.01	<0.01	<0.01
O_E16	70%	86%	80%	30%	14%	20%	0.54	0.02	0.16	0.24	<0.01	0.04
O_E17	61%	81%	73%	39%	19%	27%	0.08	<0.01	0.02	0.05	<0.01	0.01
O_E18	47%	70%	60%	53%	30%	40%	0.06	<0.01	0.02	0.06	<0.01	0.01
O_E19	50%	73%	63%	50%	27%	37%	0.05	<0.01	0.01	0.06	<0.01	0.01

Discussion

MARPOL Regulation 13 Tier II

Table 1 demonstrates that the majority of the IGET impact to annual mean NO_X concentrations is from the vessel emissions at all receptors. MARPOL Regulation 13 Tier II compliant vessels do not require Selective Catalytic Reduction (SCR) technology to limit their NO_X emissions, and therefore all the IGET impact to annual mean NH_3 concentrations is from the site emissions alone. At the majority of locations, a greater proportion of the IGET impact to N deposition rates is from the vessel emissions.

MARPOL Regulation 13 Tier III

Table 2 demonstrates that the IGET impact to annual mean NO_X concentrations is more evenly distributed between vessel source and site source emissions but noting that at the two worst affected receptors (O_E1 and O_E2) vessel emissions remain the predominant contributor. The reduction in contribution from the vessels source is because MARPOL Regulation 13 Tier III compliant vessels do require SCR technology to limit NO_X emissions. The use of SCR does introduce a vessel source contribution to annual mean NH_3 concentrations, although the site emissions remain the main contributor to that pollutant. Due to the reduction in NOx emissions under MARPOL Regulation 13 Tier III, which offsets the NH_3 emissions introduced, site emissions are the main contributor to N deposition at the majority of locations.