NORTH LINCOLNSHIRE GREEN ENERGY PARK

Planning Act 2008

Infrastructure Planning (Applications Prescribed Forms and Procedure) Regulations 2009

APFP Regulation 5(2)(a)

Infrastructure (Environmental Impact Assessment) Regulations 2017

North Lincolnshire Green Energy Park

Volume 6

6.3.8 Annex 8 – Operational Environmental Management Plan

PINS reference: EN010116

April 2023

Revision number: ~~1~~ 2

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Acronyms and Abbreviations

Name	Description
AGI	Above Ground Installations
CBMF	Concrete Block Manufacturing Facility
CCUS	Carbon Capture, Utilisation And Storage
CO_2	Carbon Dioxide
DCO	Development Consent Order
DHPWN	District Heating and Private Wire Network
EA	Environment Agency
EMS	Environmental Management System
EP	Environmental Permit
ES	Environmental Statement
ERF	Energy Recovery Facility
EV	Electric Vehicle
H_2	Hydrogen
NLC	North Lincolnshire Council
NLGEP	North Lincolnshire Green Energy Park
NLGEPL	North Lincolnshire Green Energy Park Limited
NSIP	Nationally Significant Infrastructure Project
OEMP	Operational Environmental Management Plan

PRF	Plastic Recycling Facility
RHTF	Residue Handling and Treatment Facility
SuDS	Sustainable Drainage Systems
UK	United Kingdom

1. INTRODUCTION

1.1 Project Overview

1.1.1.1 The North Lincolnshire Green Energy Park (NLGEP) (the Project), located at Flixborough, North Lincolnshire, is a Nationally Significant Infrastructure Project (NSIP) with an Energy Recovery Facility (ERF) capable of converting up to 760,000 tonnes of non-recyclable waste into 95 MW of electricity at its heart and a carbon capture, utilisation and storage (CCUS) facility which will treat the excess gasses released from the ERF to remove and store carbon dioxide (CO_2) prior to emission into the atmosphere.

1.1.1.2 The NSIP incorporates a switchyard, to ensure that the power created can be exported to the National Grid or to local businesses, and a water treatment facility, to take water from the mains supply or recycled process water to remove impurities and make it suitable for use in the boilers, the CCUS facility, concrete block manufacture, hydrogen production and the maintenance of the water levels in the wetland area.

1.1.1.3 The Project will include the following Associated Development to support the operation of the NSIP:

- a bottom ash and flue gas residue handling and treatment facility (RHTF)
- a concrete block manufacturing facility (CBMF)
- a plastic recycling facility (PRF)
- a hydrogen production and storage facility
- an electric vehicle (EV) and hydrogen (H_2) refuelling station
- battery storage
- a hydrogen and natural gas above ground installations (AGI)
- a new access road and parking
- a gatehouse and visitor centre with elevated walkway
- railway reinstatement works including, sidings at Dragonby, reinstatement and safety improvements to the 6 km private railway spur, and the construction of a new railhead with sidings south of Flixborough Wharf
- a northern and southern district heating and private wire network (DHPWN)
- habitat creation, landscaping and ecological mitigation, including green infrastructure and 65-acre wetland area
- new public rights of way and cycle ways including footbridges
- Sustainable Drainage Systems (SuDS) and flood defence; and
- utility constructions and diversions.

1.1.1.4 The Project will also include development in connection with the above works such as security gates, fencing, boundary treatment, lighting, hard and soft landscaping, surface and foul water treatment and drainage systems and CCTV.

1.1.1.5 The Project also includes temporary facilities required during the course of construction, including site establishment and preparation works, temporary construction laydown areas, contractor facilities, materials and plant storage, generators, concrete batching facilities, vehicle and cycle parking facilities, offices, staff welfare facilities, security fencing and gates, external lighting, roadways and haul routes, wheel wash facilities, and signage.

1.1.1.6 The overarching aim of the Project is to support the United Kingdom's (UK) transition to a low carbon economy as outlined in the Sixth Carbon Budget (December 2020), the national Ten Point Plan for a Green Industrial Revolution (November 2020) and the North Lincolnshire prospectus for a Green Future. It will do this by enabling circular resource strategies and low-carbon infrastructure to be deployed as an integral part of the design (for example by reprocessing ash, wastewater and carbon dioxide to manufacture concrete blocks and capturing and utilising waste-heat to supply local homes and businesses with heat via a district heating network).

1.2 Purpose of this Document

1.2.1.1 This document outlines the context, scope, and content of a future Operational Environmental Management Plan (OEMP). The OEMP, or relevant parts thereof, will be prepared by NLGEPL and submitted to North Lincolnshire Council (NLC) for approval in advance of any operations commencing in any part of the Energy Park phase of the Project.

2. CONTEXT FOR THE OEMP

2.1.1.1 An Environmental Permit (the EP) will be required under the Environmental Permitting (England and Wales) Regulations 2016 to operate the ERF and related aspects of the Project such as the carbon capture plant. The EP will have its own management and monitoring requirements set by the Environment Agency (EA) and will require an Environmental Management System (EMS) to be in place (most likely to ISO14001 equivalent, if not actually certified). The EP would require a 'Technically Competent' person to be appointed to oversee the permit. Most environmental mitigation relating to specific aspects of operation will therefore be secured through the EP. The EMS will include as necessary:

- an Odour Management Plan;
- a Noise Management Plan; and
- a Pest Management Plan.

2.1.1.2 In accordance with paragraph 4.11.5 of the National Policy Statement EN-1, the Applicant has not sought to duplicate the controls secured by the environmental permitting regime. However, there are other aspects of operating the Energy Park with potential for environmental impacts that fall outside the remit of the EP. Therefore, additional management, monitoring and reporting measures will be required, together with a means for their delivery: the OEMP.

2.1.1.3 Some typical examples of matters that will not fall within the scope of the EP EMS, but which will need to be addressed by the OEMP are:

- maintenance of surface run-off and drainage infrastructure;
- water use;
- disposal of aqueous effluents;
- delivery, handling, and storage of hazardous materials (e.g. fuel oil) on site;
- spill prevention and response;
- vehicle access to, within and from the site;
- noise controls, especially during offloading of trains at the rail head and vessels at the wharf; and
- solid waste management.

2.1.1.4 It should be noted that there will be other operational management plans associated with flood risk (Evacuation Route Plan and Flood Resilience Implementation Plan), traffic (Travel Plan) and landscape and biodiversity (Landscape and Biodiversity Management and Monitoring Plan), which are secured by other Requirements in the Development Consent Order (DCO) (**Document Reference 2.1**).

3. SCOPE AND CONTENT OF THE OEMP

3.1.1.1 The OEMP will provide an overview of potential environmental impacts of the Energy Park during its operational phase, describe the management and mitigation measures required to protect the environment and sensitive receivers, both on and off site, and measures to minimise potential adverse impacts on people and the environment.

3.1.1.2 The OEMP will therefore provide the following.

- *An overview of the Project operations*: the overview will distinguish between operations according to their purpose and location within the Order Limits, acknowledging that different activities have different potential impacts and can affect different receptors.
- *Regulatory requirements*: the OEMP will set out the relevant environmental legislation and NLGEP policies for the operational phase of the Energy Park, with reference also to the relevant DCO Requirements, the requirements stemming from other Consents and Licences (**Document Reference 5.8**), and commitments made in the Environmental Statement (ES) and other DCO documentation.
- *Implementation of mitigation*: the OEMP will describe in detail the means of implementing the mitigation measures for key environmental issues. This may involve the development of supplementary Environmental Management Plans (e.g. waste management plan, noise management plan).
- *Roles and responsibilities*: the OEMP will define the roles and responsibilities of the NLGEPL operational team.
- *Plan interfaces*: the OEMP will describe how it aligns and interfaces with other operational plans such as the EP, EMS and the Landscape and Biodiversity Management and Monitoring Plan (LBMMP).
- *Regulator and stakeholder liaison*: the OEMP will set out the procedures for the interaction with relevant local and national government authorities, other relevant stakeholders (including neighbouring businesses), and the local communities during the operational phase of the Project.
- *Monitoring and reporting*: the OEMP will detail the basis for monitoring (including monitoring programmes and methods), reporting, and demonstrating compliance with relevant environmental legislation, NLGEP policies, the relevant DCO Requirements, the requirements contained in other Consents and Licences, and commitments made in the ES and other DCO documentation.
- *Audit and inspection*: the OEMP will set out a programme of audits and inspections, including periodic independent reviews.
- *Plan review and continuous improvement*: The OEMP will be a living document and it will set out how the overarching OEMP and its supplementary Environmental Management Plans will be reviewed and updated, where necessary, to reflect changes introduced by the

NLGEP operational team, site-specific outcomes, changes in operational procedures, non-conformances and recommendations arising out of inspections, meetings, and audits.

4. OPERATIONAL COMMITMENTS

4.1.1.1 The following table sets out a record of the environmental commitments that have been deemed necessary pursuant to the Environmental Statement (**Document Reference 6.1**) and that relate to the operation of the Project, which must be incorporated into the OEMP. It should be noted that some measures listed in the following table apply to both construction and operation, hence the reference in some instances to a construction phase plan as the securing mechanism.

Table 1: Summary of Mitigation Measures and Securing Mechanisms During Operation

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Chapter 5 – Air Quality					
Section 7.2, Paragraph 7.2.1.1	Air quality	The ERF is designed with Best Available Technique abatement systems for reducing emissions to air.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7.2, Paragraph 7.2.1.1	Air quality combustion products	The stack heights for the ERF, backup generator and boilers are designed to disperse emissions sufficiently to avoid unacceptable impacts on air quality at sensitive human and ecological receptors.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	No outdoor storage of waste.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	Rail: Deliveries of waste will be in sealed containers. Upon delivery, the containers will be taken to the tipping hall and emptied. During this process, full containers will not be stored on site.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	Ship: Deliveries of waste will be in sealed containers. Upon delivery, the containers will be taken to the tipping hall and emptied. During this process, full containers will not be stored on site.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	Road: Baled waste will be delivered in curtain sided trucks. Waste will be tipped directly in the tipping hall and will not be stored on site.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	The tipping hall will be kept under negative pressure and air will be drawn through the process thereby destroying odours.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	Refuse Derived Fuel (RDF) deliveries will be containerised, wrapped or baled, minimising odour during handling.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	RDF will be stored under cover under negative pressure, minimising odour generation and escape.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	At any one time, only one line of three will be off-line for maintenance, meaning that RDF will not be stored for long periods on site.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - odour	An odour management plan will be produced as part of the Environment Permit. The function will be to maintain a record of any issues or complaints arising with odour and, if required, monitoring and reporting.	NLGEPL	DPCD, EP/OEMP	5.12 / 6.3.8 / 2.1
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - dust	The handling of bottom ash and production of concrete will be undertaken in an enclosed environment with the buildings under negative pressure, minimising dust generation and escape.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.1	Fugitive emissions - dust	Flue Gas Residue will be handled in an enclosed process minimising the opportunity for dust generation and escape.	NLGEPL	DPCD, EP/OEMP DCO Requirements 3 And 4	5.12 / 6.3.8 / 2.1
Section 7, Paragraph 7.1.1.1	Energy efficiency	An efficient combined heat and power design for the ERF to recover electricity and heat from the combustion of the RDF. This greatly increases the overall efficiency of energy recovery from the ERF and maximises the displacement of energy produced from fossil fuels.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7, Paragraph 7.1.1.1	Greenhouse gas (GHG) emissions	Recovery of ferrous and non-ferrous metals from the bottom ash will avoid GHG emissions from the extraction and production of virgin metals.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7, Paragraph 7.1.1.1	GHG emissions	Materials recovered from the bottom ash and FGTr as substitutes for virgin aggregates will be used to produce concrete blocks, avoiding the GHG emissions from the extraction of virgin aggregates.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7, Paragraph 7.1.1.1	GHG emissions	Carbon capture technology will be used on the Project to capture and utilise up to 7.5% of CO_2 from the ERF flue gases. Subsequently, this will either be mineralised as carbonates within aggregates or sent for utilisation off-site. This captured CO_2 represents a reduction in the total net GHG emissions from the Project. The Department for Business, Energy and Industrial Strategy (BEIS) award to the East Coast Cluster for carbon storage could increase the carbon capture up to 90% of the emitted CO_2 once the pipeline is consented and commissioned. The proposed pipeline passes within the redline boundary of the Project.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1	GHG emissions	The development and use of rail and ship transportation to bring RDF, transport captured CO_2 and other materials to and from the site offers the potential for reductions in GHG emissions compared to transport by road.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Chapter 7 – Noise					
Section 7.3, Section 7.3.1.1	Operational noise pollution	Requirement 22 in Schedule 2 of the draft DCO (Document Reference 2.1) sets limits in relation to operational noise emissions.	NLGEPL	DCO Requirement 22	2.1
Section 7.3, Section 7.3.1.1	Operational noise pollution	A noise management plan will include measures to demonstrate that noise from the operation of the Project, including noise from loading and unloading activities, is minimised as far as reasonably practicable.~~be formulated in order to keep delivery noise (e.g. use of tonal reversing alarms, doors opening/closing, use of at-source mitigation such as exhaust silencers and enclosed engine compartments) to an acceptable minimum.~~ .	NLGEPL	OEMP DCO Requirement 4	6.3.8 / 2.1
Section 7.3, Section 7.3.1.1	Operational noise pollution	Design details will include measures to demonstrate that noise from the operation of the Project, including noise from loading and unloading activities, is minimised as far as reasonably practicable.	NLGEPL	OEMP DCO Requirement 3	6.3.8 / 2.1
Applicant's Responses to the Second Written Questions (ExQ2) REP6-032	Operational noise pollution	There will be no loading or unloading activities by the Project at the wharf or railhead during night-time hours (11:00 pm to 07:00 am).	NLGEPL	OEMP DCO Requirement 4	6.3.8 / 2.1
~~9.2.1.3~~	~~Operational noise pollution~~	~~A noise management plan will be developed and agreed with NLC, and will be implemented before the development becomes operational. The purpose of the plan will be to demonstrate~~	~~NLGEPL~~	~~OEMP and EP DCO Requirement 4~~	~~6.3.8 / 2.1~~

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ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		~~noise from the operation of the Project is no higher than reported in the ES and where practicable to reduce noise levels below those that have been predicted.~~ ~~The noise management plan will focus on: fixed plant and machinery in buildings; loading and unloading operations at the wharf and railhead; and ongoing monitoring and management measures.~~			
9.2.1.3	Operational noise pollution	**Fixed Plant Detailed Design (**Detailed design and commissioning stage) Noise from the fixed plant in combination with predicted noise from other activities on-site will achieve the noise limits set out in requirement 22 in Schedule 2 of the draft DCO (Document Reference 2.1) and will be reduced to as low as reasonably practicable. ~~will not exceed the noise limit set out in Table A and where practicable will be below these levels.~~ This will be achieved through the following measures which will be carried out during detailed design and commissioning. • Detailed noise modelling will be carried out of the final design to confirm that the fixed plant in combination with predicted noise from other activities on-site is predicted to achieve the noise limits set out in requirement 22 in Schedule 2 of the draft DCO~~Table A~~. • This will be used to inform the process of equipment procurement. During procurement, test data for fixed equipment and building elements will be reviewed to confirm that the level of noise from each item of significant noise emitting equipment is either no higher than the level included in the noise model or, taken in combination, would not lead to predicted exceedances of the noise limits set out in Table A and where practicable would be below these levels. • A process to identify equipment with potentially distinctive noise characteristics will be carried out based on test data and	NLGEPL	OEMP and EP DCO Requirement 4	6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		commissioning measurements and alternatives/mitigation considered if necessary. • During commissioning, noise measurements will be carried out to confirm that the level of noise from each item of significant noise emitting equipment is either no higher than the level included in the noise model or, taken in combination (including with predicted noise from other activities on-site), would not lead to predicted exceedances of the noise limits set out in requirement 22 in Schedule 2 of the draft DCO ~~Table A~~ and where practicable would be below these levels. • A commissioning survey will be carried out in accordance with BS 4142, to demonstrate that noise from the fixed plant in combination with predicted noise from other activities on-site would ~~does~~ not exceed the noise limits set out in requirement 22 in Schedule 2 of the draft DCO~~Table A~~. Noise measurements will be carried out at positions representative of the receptors set out ~~in Table A~~the noise assessment. Following the guidance in BS 4142, if significant sources of extraneous noise are present, further noise measurements may be necessary to minimise the influence of extraneous noise, e.g. measurements carried out at night or monitoring close to equipment followed by predicting noise at receptors. If ~~noise levels are higher than the noise limits set out in Table A~~ necessary, mitigation measures will be adopted to ensure these levels are met. • A fixed plant noise performance report will be provided to the relevant authority for approval in writing. The report will set out the method and the results of the detailed noise modelling, review of equipment noise data and the results of the noise monitoring to demonstrate compliance with the noise limits. ~~Table A: Noise Limits for Fixed Plant (These noise levels are lower than those presented in Table 19 of ES Chapter 7 largely because they do not include noise from a vessel berthed at the wharf).~~ ~~Receptor~~ | ~~Charmaine~~ | ~~Inglenook~~ | ~~Neap House~~			

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		~~Item~~ / ~~Activity~~ / ~~Period~~ / ~~Noise Limit, LAr,Tr dB, in accordance with BS 4142:2014~~ ~~1~~ / ~~Fixed plant only (1)~~ / ~~Night~~ / ~~41~~ / ~~38~~ / ~~38~~			

	Operational noise pollution	**Noise Management Plan to Control Noise from Loading and Unloading Activities (**Procurement (pre-commissioning stage)
		Measurements of candidate unloading equipment will be carried out during procurement to demonstrate that, in combination with noise from the fixed plant, the noise limits set out in requirement 22 in Schedule 2 of the draft DCO~~the sound power levels assumed in Tables 8 to 11 in Appendix C of ES Chapter 7~~ are not exceeded. Measurements during loading/unloading cycles will be included to provide robust, realistic results.
		
		Further mitigation measures (i.e. beyond those assumed in this ES noise assessment) will be explored, to minimise noise during unloading events as far as practicable. Examples (not exhaustive) of the measures which may be feasible / practicable and which will be explored are listed below:
		• Tugmaster (used to move waste between quay/railhead and tipping hall)
		  ○ Electric options are available.
		• Reach stacker
		  ○ Hybrid or fully electric options are available.
		  ○ Soft landing systems. Software/sensor based systems to minimise impact noise by automatically slowing the lowering speed close to a container.
		• Crawler crane
		  ○ Management measures – e.g. reduce speed of putting down a container, driver training.
		• All above unloading equipment
		  ○ Additional shielding around drive train (often stripped down at ports).
			NLGEPL	OEMP and EP
				DCO Requirement 4
					6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		○ Exhaust silencers. ○ Driver training (low noise (eco) driving). • Container ship ○ Management measures e.g. avoid use of loud speaker. ○ Investigate use of shore power. Infrastructure could be implemented at quay to enable shore power. However, benefits would depend on 3rd party vessels being able to take advantage of it which is understood not to be widespread at present. Upon completion, a report detailing the results of the measurements and comparing them to noise limits set out in requirement 22 in Schedule 2 of the draft DCO, in combination with noise from the fixed plant ~~the sound power levels assumed in Tables 8 to 11 in Appendix C of this ES Chapter 7~~ will be submitted to the relevant authority for approval in writing.			
9.2.1.3	Operational noise pollution	**Ongoing monitoring and management measures** Once operational, noise from the site, including from the fixed plant and from loading and unloading operations will be monitored to ensure they comply with the noise limits set out in ~~Table B~~requirement 22 in Schedule 2 of the draft DCO. The following monitoring and management measures will ensure that noise from the operation of the Project is minimised and as a minimum, exceedances of the predicted levels set out in Table B are identified and addressed in a timely fashion. • Regular (twice a year) noise monitoring in Amcotts to identify any activities which result in noise levels above the noise limits set out in requirement 22 in Schedule 2 of the draft DCO~~Table B~~, including attended noise measurements where it is necessary to identify the contribution of certain activities such as loading and unloading noise levels. Following the guidance in BS 4142, if significant sources of extraneous noise are present, further noise measurements may be necessary to minimise the influence of	NLGEPL	OEMP and EP DCO Requirement 4	6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		extraneous noise or monitoring close to equipment followed by prediction of noise at receptors.; • Investigation of noise complaints and monitoring as required to identify potential causes and solutions; and. • Regular visual monitoring/audit of equipment to ensure noise control equipment (covers/enclosed engine compartments/louvres/exhaust silencers/non-tonal reversing alarms etc) are maintained in good condition. The results of the monitoring and management measures will be reported to the relevant authority annually.			
		~~Table B: Activity Noise Limits from the Proposed Development (1)~~			

~~Receptor~~			~~Charmaine~~	~~Inglenook~~	~~Neap House~~
~~Item~~	~~Activity~~	~~Period~~	~~Noise Limit, $L_{Ar,Tr}$, dB, in accordance with BS 4142:2014~~		
~~1~~	~~Fixed plant only~~	~~Night~~	~~41~~	~~38~~	~~38~~
~~2~~	~~Situation without unloading (as per paragraph 8.5.1.7)~~	~~Day / Night~~	~~42~~	~~39~~	~~38~~
~~3~~	~~Unloading (2) RDF at wharf (including other activity on-site as per paragraph 8.5.1.3)~~	~~Day~~	~~54 (2)~~	~~43~~	~~40~~
~~4~~	~~Unloading (2) RDF plant at the wharf in isolation~~	~~Day~~	~~51~~	~~39~~	~~35~~
~~5~~	~~Unloading aggregate at the wharf (including other activity on-site as per paragraph 8.5.1.4)~~	~~Day~~	~~52 (2)~~	~~42~~	~~40~~
~~6~~	~~Unloading (2) aggregate plant at the wharf in isolation~~	~~Day~~	~~48~~	~~38~~	~~33~~

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		~~7 | Unloading (2) RDF at railhead (including other activity on-site as per paragraph 8.5.1.5) | Day | 48 | 49 (3) | 43~~ ~~8 | Unloading (2) RDF plant at the railhead in isolation | Day | 45 | 45 | 40~~ ~~9 | Unloading (2) aggregate at the railhead (including other activity on-site as per paragraph 8.5.1.6) | Day | 49 | 46 | 43~~ ~~10 | Unloading (2) aggregate plant at the railhead in isolation | Day | 47 | 44 | 41~~ ~~1) It is anticipated that different activities within the proposed development could fall within the remit of different regulatory bodies. Therefore, predicted receptor noise levels from the development for different activities are provided using the noise model developed for the ES.~~ ~~2) Unloading limits would also apply to any loading activities.~~ ~~3) An acoustic feature correction of 3 dB has been included to take account of the unlikely outcome that impulsive noise is audible at the receptor amongst the various equipment and activities that would take place during unloading. A correction of 3 dB(A) has been used on the assumption that is audible, but not clearly perceptible. If the correction is not required, then the limit would be lowered by 3dB(A).~~			
Chapter 8 – Ground Conditions, Contamination and Hydrogeology					
Section 7.2, Paragraph 7.2.1.3 & Paragraph 7.3.1.1	Environmental pollution (soil and water)	Materials used, including chemicals, fuels, and oils, will be stored using secondary containment appropriate to the level of risk, to prevent accidental spills/releases to ground.	NLGEPL	OEMP DCO Requirement 4	6.3.8 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.2	Environmental contamination (soil and water)	The design of the Project includes measures to contain and control any releases of contaminants to ground and surface and foul drainage network.	NLGEPL	Indicative Surface Water Drainage Plan DCO Requirements 8 and 9	6.3.5 / 2.1
Section 7.3, Paragraph 7.3.1.4	Environmental contamination	Maintenance and operation of the Project will be in accordance with environmental legislation and good practice.	NLGEPL	DPCD, EP DCO Requirement 3	5.12 / 2.1
Section 7.3, Paragraph 7.3.1.5	Ground gas risk to buildings	In the event that ground gas protective measures are required in the design of any buildings, operational monitoring of ground gas would be required as part of system verification.	NLGEPL	OEMP DCO Requirement 4	5.12 / 2.1
Chapter 9 – Water Resources					
Section 7, Paragraph 7.1.1.1	Flood risk	The layout of the Project has been driven by hydraulic modelling to identify the best position to displace flood water, tidal surge and flood defence breach water flows to other areas as much as reasonably possible. The new access road forms an integral part of flood control using the newly established wetland area for flood retention.	NLGEPL	DPCD, PP, Embedded Works Plans	5.12 / 4.18 / 4.4
Section 7, Paragraph 7.1.1.1	Flood risk	Flood bunds or flood walls included within the Project to prevent the displacement of flood water to adjacent sites.	NLGEPL	DPCD, PP, Embedded Works Plans	5.12 / 4.18 / 4.4
SoCG with EA	Flood Risk	Detailed hydraulic flood modelling to be undertaken to confirm development finished floor levels, secondary flood defence levels and culvert sizing.	NLGEPL	DCO Requirement 12	2.1
SoCG with EA	Flood Risk	Maintenance of flood risk mitigation measures to be confirmed before authorised development commences.	NLGEPL	DCO Requirement 12	2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
SoCG with EA	Flood Risk	To ensure safety of users of the site, a Flood Management Plan and flood resilience implementation plan will be completed.	NLGEPL	DCO Requirement 12	2.1
SoCG with Scunthorpe and Gainsborough Water Management Board	Water Resource / Drainage /Flood Risk	The proposed surface water drainage strategy, and the flood mitigation measures have been designed to include Scunthorpe & Gainsborough Water Management Board's requirements.	NLGEPL	DCO Requirement 8	2.1
SoCG with Scunthorpe and Gainsborough Water Management Board	Water Resource / Drainage /Flood Risk	Under the Land Drainage Act 1991, Section 23 and 66 consents will be applied for. The strategy is to discharge to ordinary watercourses across the site. Restricted to rates of 1.4l/s/ha.	NLGEPL	Land Drainage Act 1991	N/A
Section 7, Paragraph 7.1.1.1 and 8.2.4.9	Water quality	No abstractions or discharges to or from the River Trent. All operational water will be sourced from the mains. The water treatment network has been designed to split up trade effluent and domestic effluent. The trade effluent will be treated and reused in the various processes on site. An effluent treatment plant facility will be located in the ERF building. This will mean that there is no trade effluent discharge to the public sewer or to the wetland areas. The domestic effluent will discharge to the public sewer as agreed with Severn Trent Water.	NLGEPL	DPCD DCO Requirement 3	5.12 / 2.1
Section 7, Paragraph 7.1.1.1	Water quality	Industry best practices will be followed during design and construction of water course crossings to ensure reduced interaction with watercourses.	NLGEPL, Construction Contractor	DPCD, CEMP (see also CoCP) DCO Requirements 3 and 4	6.3.7 / 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1	Water quality	Use of oil interceptors within surface water drainage provisions to ensure any surface water contaminated by hydrocarbons will be treated prior to discharge.	NLGEPL	Indicative Surface Water Drainage Plan DCO Requirement 8	6.3.5 / 2.1
Section 7, Paragraph 7.1.1.1	Water quality	Measures taken to reduce leachate, or any surface water potentially contaminated, to enter, directly or indirectly, any watercourse, underground strata or adjoining land.	NLGEPL	Indicative Surface Water Drainage Plan DCO Requirement 8	6.3.5 / 2.1
SoCG with Severn Trent Water	Effluent control	The existing sewer network can accept the 0.35l/s of domestic flow based on the removal of the previously discharged trade flow. Trade effluent flow will be reused on site and will not require a discharge to the STW network.	NLGEPL	DCO Requirement 3	2.1
Section 7, Paragraph 7.1.1.1	Water quality	All oil and chemical storage tanks and areas where drums are stored will be surrounded by an impermeable bund. Single tanks will be within bunds sized to contain 110% of capacity and multiple tanks or drums will be within bunds sized to contain the greater of 110% of the capacity of the largest tank or 25% of the total tanks' contents.	NLGEPL	OEMP Indicative Surface Water Drainage Plan DCO Requirements 4 and 8	6.3.7 / 6.3.5/ 2.1
Chapter 10 – Ecology and Nature Conservation					
Section 7.1, Paragraph 7.1.1.7	Habitat loss and degradation	Wherever possible, habitats will be carefully reinstated; if this is not possible, compensatory habitat will be created elsewhere at least equal in area to that lost.	NLGEPL	DPCD, ILBP, LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.2.4	Habitat loss	Compensatory woodland creation will include planting of a 15 m wide band extending 1 km along the northern side of the railway, to the south and south-east of the town of Flixborough. To aid establishment, where necessary transplants will be protected by stock-proof fencing, rabbit-proof fencing and/or protective guards.	NLGEPL	ILBP, Outline LBMMP DCO Requirements 6 and 7	4.10 / 5.7/ 2.1
Section 7.2, Paragraph 7.2.2.7	Habitat loss	Approximately 600 m of field drains require removal or diversion/culverting to facilitate the development. Habitat loss will be offset through the creation of new swales and ditches within the proposed wetland area.	NLGEPL,	PP, ILBP DCO Requirement 6	4.18 / 6.3.7 / 4.10/ 2.1
Section 7.2, Paragraph 7.2.2.8	Habitat loss	Two surface-water drainage ponds and a large area of pooling water requires removal to facilitate the development. The proposals for wetland creation and SuDS will provide sufficient compensation for the loss of these features.	NLGEPL,	ILBP DCO Requirement 6	4.10/ 2.1
Section 7.2, Paragraph 7.2.3.10	Habitat loss	Habitat clearance will be preserved where possible by minimising working areas. Planned habitat creation and landscape screening, outlined in the indicative Landscape and Biodiversity plan, includes broadleaved woodland, hedgerows, scrub, grassland, and wetland areas. These measures will provide suitable compensation.	NLGEPL	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10/ 2.1
Section 7.2, Paragraph 7.2.3.11	Species disturbance	Proposed external artificial lighting, including temporary construction lighting (if works are required at night) and permanent security, operational and road lighting installed within the development will be designed to avoid light spill onto existing commuting corridors and created habitats.	NLGEPL	CEMP (see also CoCP) Indicative Lighting Strategy DCO Requirements 4 and 5	6.3.7 / 6.3.4/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.18	Species disturbance	Temporary construction and permanent artificial lighting will avoid excess spillage onto adjacent habitats and badger commuting routes leading from setts to badger tunnels and beyond, with new scrub and tree planting offering additional screening.	NLGEPL	CEMP (PSMP, see also CoCP) Indicative Lighting Strategy DCO Requirements 4 and 5	6.3.7/ 6.3.4/ 2.1
Section 7.2, Paragraph 7.2.3.20	Species harm	Installing a minimum of one suitable badger tunnel beneath the access road and associated commuting routes to mitigate the reduction and fragmentation of foraging habitat.	NLGEPL	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.28	Water quality / Fugitive emissions	Pollution mitigation measures will minimise the possibility of dust pollution and fuel/chemical spillage affecting the River Trent during the construction and operational phases.	NLGEPL	OEMP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.29	Habitat loss	A targeted series of species-specific mitigation measures will be incorporated as part of habitat creation including provision of a mosaic of habitats along the railway line which feature open, sunny areas, bare ground, disturbed ground and grassland and promotion of food plants, including viper's bugloss and common rock rose, for key species identified in the invertebrate survey.	NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.3, Paragraph 7.3.1.3	Habitat loss	Extensive areas (14 ha) of new native woodland will be created on arable farmland within the Railway Reinstatement Land. It will be planted prior to the construction phase, allowing the habitat to begin establishing in advance of initial impacts on habitats and species.	NLGEPL	DPCD ILBP Outline LBMMP	5.12 / 4.10 / 5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		Blocks of woodland around the Energy Park development will be delivered to complement nearby and adjoining areas of new scrub and grassland habitat.		DCO Requirements 3, 6 and 7	
Section 7.3, Paragraph 7.3.1.4	Habitat loss	Planting native tree and shrub species characteristic of lowland mixed deciduous woodland, including a rich mix of understorey and canopy species, and using transplants of local provenance.	NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.3, Paragraph 7.3.1.4	Habitat loss	The condition of new woodland will be maximised by: Using varied planting patterns and spacings to encourage structural diversity and areas of open space. Featuring wide scrubby margins. Protecting newly planted trees and shrubs from browsing damage; where necessary transplants will be protected by stock-proof fencing, rabbit-proof fencing and/or protective guards (preferably made of bio-degradable material).	NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.3, Paragraph 7.3.1.6	Habitat loss	A large area of wetland is to be created to the west of the new access road within the Energy Park Land to encourage the greatest diversity of plants, invertebrates, amphibians, and mammals and to provide a buffer against pollution or the invasion of non-native species. The habitat creation principles will be set out in the LBMMP.	NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.3, Paragraph 7.3.1.8	Habitat loss	Grassland creation will compensate for the loss of: (i) arable land and associated areas of species-poor grassland and field margins; and (ii) areas of calcareous grassland along the track	NLGEPL	DPCD ILBP Outline LBMMP	5.12 / 4.10 / 5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		bed when the railway is reinstated. It will significantly add to the overall extent of semi-natural grassland in the area and provide a habitat that is a national priority for nature conservation.		DCO Requirements 3, 6 and 7	
Section 7.3, Paragraph 7.3.1.11	Habitat loss	Stands of mixed native-species scrub will be created in the Energy Park Land, including below pylons and as scattered scrub within fields to the west and east of the proposed access road close to Neap House.	NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.4, Paragraph 7.4.2.1	Air quality and species harm	Measures to limit emissions to air, including the use of appropriate stack heights to optimise dispersion of pollutants, and emissions monitoring to demonstrate compliance with emission limit values (ELV) determined by the Environment Agency. The process to remove CO_2 will further reduce emissions.	NLGEPL	EP	N/A
Section 7.4, Paragraph 7.4.2.1	Noise and species disturbance	Measures to limit noise pollution, the primary sources of which will be loading and unloading operations, operational traffic movements around the site, the air-cooled condensers, turbine hall and compressors.	NLGEPL	OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.2.1	Light and species disturbance	Measures to limit light pollution, which includes a sensitive lighting scheme around the Energy Park Land that will implement operational lighting meeting the minimum requirements.	NLGEPL	Indicative Lighting Strategy DCO Requirement 5	6.3.4/ 2.1
Section 7.4, Paragraph 7.4.3.2	Species protection	The badger tunnel beneath the access road will be checked regularly, particularly during the first two years, to ensure that the feature is functioning properly and to confirm that badgers are using it (through setting out trail cameras or clay mats). Any	NLGEPL	Outline LBMMP DCO Requirement 7	5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		badger fencing established in this area will be monitored to ensure it remains effective.			
Section 7.4, Paragraph 7.4.3.3	Species protection	Maintenance works along the reinstated railway will require occasional pruning of overhanging trees and scrub. These maintenance works will be carried out outside of the breeding bird season. Brash will be piled in suitably undisturbed areas of the railway corridor to provide refugia for amphibians, reptiles and small mammals.	NLGEPL	Outline LBMMP DCO Requirement 7	5.7/ 2.1
Section 7.4, Paragraph 7.4.3.4	Species protection	Any future requirements for in-channel maintenance works to ditches in the Energy Park Land (e.g. dredging/ desilting) will be subject to established statutory regulatory procedures to limit impacts on fish, amphibians and other aquatic biodiversity.	NLGEPL	Outline LBMMP DCO Requirement 7	5.7/ 2.1
Section 7.4, Paragraph 7.4.4.1	Habitat degradation	A range of on-going management measures will be used to ensure that the biodiversity value of both newly created habitats and retained habitats is secured for a minimum of 30 years. These are outlined below. Detailed management and monitoring prescriptions will be set out in the LBMMP. These will need to be adapted to take account of the success of planned measures (e.g. grassland wildflower seeding, tree planting, bracken control, pond creation) and most appropriate responses (e.g. grazing of grassland).	NLGEPL	Outline LBMMP DCO Requirement 7	5.7/ 2.1
Section 7.4, Paragraph 7.4.4.2	Habitat loss/degradation	Woodland management will be applied to the extensive areas of new native woodland within the Railway Reinstatement Land, the tree planting areas within the Energy Park Land, and where wet woodland is established as part of the wetland habitat complex to the west of the new access road within the Energy Park Land. This will be guided by the advice set out by the Forestry Commission and guidance on management for invertebrates. It will focus on ensuring that an adequate density	NLGEPL	Outline LBMMP DCO Requirement 7	5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		of transplanted trees and shrubs is established, fences are maintained, protective tree guards are removed when no longer needed, and potential issues are monitored and responded to in an appropriate manner (including excessive deer browsing, grey squirrel debarking, and invasive non-native species). Opportunities to create a varied canopy structure will be identified, including periodic coppicing/mowing/strimming of woodland edges and glades/rides to ensure areas of young-growth, open and sinuous edge habitats are maintained. Minimum intervention is likely to be most appropriate for areas of wet woodland. Options to enhance the ground flora will be considered once the woodland as established.			
Section 7.4, Paragraph 7.4.4.3	Habitat loss/degradation	The creation of reedbed areas is proposed within the wetland habitat complex west of the new Energy Parkaccess road. These areas will be manged to enhance their value based on the advice set out by the RSPB and on management for invertebrates. This will focus on ensuring that areas of new reed become established and appropriate ground water levels are maintained. Other small-scale management measures that might be required occasionally include dredging of accumulated litter and silt; targeted removal of vegetation and root systems to restore open water; cutting of reeds; and removal of invading willow scrub.	NLGEPL	ILBP Outline LBMMP DCO Requirements 6 and 7	4.10 / 5.7/ 2.1
Section 7.4, Paragraph 7.4.4.4	Habitat loss/degradation	New areas of grassland will be created in various locations, together with other areas of retained grassland that will be enhanced. This includes areas of lowland meadow/neutral grassland within and surrounding the Energy Park Land; calcareous grassland within the Railway Reinstatement Land; and damper areas of grassland within the wetland habitat	NLGEPL	ILBP Outline LBMMP DCO Requirements 6 and 7	4.10 / 5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		complex west of the new Energy Park access road. These grasslands will be managed to maximise the species-richness of the sward and provide a range of conditions suitable for ground nesting and foraging birds, brown hare, amphibians and reptiles, and a variety of invertebrates. Management will be guided by the Lowland Grassland Management Handbook and advice on management for invertebrates. It will aim will be to create grasslands in fairly good to good condition (based on criteria in the Defra Biodiversity Metric 3.0). Regular assessment of the sward will be undertaken to inform ongoing management needs, including cutting and grazing regimes, introductions of wildflowers, control of invasive non-native and other undesirable species, and reductions of bracken and scrub. Measures to improve and potentially expand existing areas of Lowland Calcareous Grassland HPI will be a priority.			
Section 7.4, Paragraph 7.4.4.5	Habitat loss/degradation	Management of areas of new, replacement and retained scrub will broadly follow that of woodlands (see above). The overall aim will be to create stands of scrub in moderate to good condition (based on criteria in the Defra Biodiversity Metric 3.0). The focus for new and replacement stands of scrub will be to ensure that an adequate density of transplanted shrubs establish, protective guards are removed when no longer needed, and potential issues are monitored and responded to (e.g. invasive non-native species). Action will be taken to create a varied canopy structure, including periodic coppicing and mowing/strimming of edges and glades. This will ensure that young-growth habitat and glades are maintained, as well as sinuous edge habitats that grade into grassland, tall herb and	NLGEPL	ILBP Outline LBMMP DCO Requirements 6 and 7	4.10 / 5.7/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		other communities. Options to enhance the ground flora will be considered (Worrell et al., 2021).			
Chapter ***11 – Landscape and Visual Impact***					
Section 7, Paragraph 7.1.1.2	Landscape	Direct impacts on landscape features have been avoided through the siting of the Project within an area that is partly brownfield land, with few trees, hedgerows, or other valued landscape features to be affected.	NLGEPL	DPCD DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.2	Visual Impact	Buildings within the Project have been grouped so that they relate primarily to the existing commercial and industrial land uses at Flixborough Industrial Estate.	NLGEPL	DPCD DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.2	Landscape and visual	The railway replacement will take place entirely within the existing footprint of the existing railway line, reducing the impact on the landscape.	NLGEPL	DPCD DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.2	Visual Impact	Parameters of buildings and structures have been designed to be the minimum size reasonable to ensure that construction of the Project is feasible.	NLGEPL	DPCD DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.2	Visual Impact	The Indicative Lighting Strategy (Document Reference 6.3.4) has been developed to minimise impacts on night-time views from the surrounding landscape.	NLGEPL	Indicative Lighting Strategy DCO Requirement 5	6.3.4 / 2.1
Section 7, Paragraph 7.1.1.8	Landscape and visual	Further consideration of the architectural design will be required at detail design stage, to reduce the effects of the Project at Viewpoint 1. In particular, the following steps will assist: Using variation in roof heights and massing to visually break up the bulk of the ERF building;	NLGEPL	DPCD DCO Requirement 3	5.1/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		Use of colour, for example a light colour on the roof or upper storey, with darker colours restricted to the lower storeys (although application of distinct 'banding' is unlikely to be effective at this distance, and may simply draw more attention to the building); Limit the extent of exposed building infrastructure (pipes, external tanks etc.) by integrating these elements, or alternatively by screening or wrapping of larger external cylinders to ensure a more ordered appearance and reduce visibility of any external lighting; and A substantive visual barrier installed along the railhead edge or along the development platform of the ERF would provide screening of ground level storage and activity such as loading bays and vehicle movements. This would need to be a visually impermeable barrier of at least 3m in height and could be coloured or textured to reflect the river edge.			
Section 7, Paragraph 7.1.1.9	Landscape and visual	More generally, the following measures will assist in further reducing the effects of the Project on landscape and visual amenity: Consideration of the architectural response to ensure the detail of the Project, including form, material, colour and finishes, is integrated within the landscape to reduce landscape and visual effects; and Limiting the overall height and dimensions of the buildings and the stack, where feasible to do so, to reduce their impact on the landscape and views compared to the maximum scenario assessed in the LVIA.	NLGEPL	DPCD DCO Requirement 3	5.12 / 2.1
Chapter 12 – Archaeology and Cultural Heritage					

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
SoCG with NLC	Loss of or damage to buried archaeology	The Applicant is committed to producing a standalone Overarching Archaeological Mitigation Strategy.	NLGEPL	DCO Requirement 11	2.1
Chapter 13 – Traffic and Transport					
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	New access road to serve Flixborough Industrial Estate and Port area as well as the Project. Suitable for use of two-way heavy goods vehicles. Further prevents traffic build up on Stather Road via Neap House.	NLGEPL	DPCD, CLP (see outline CLP) DCO Requirement 10	5.12 / 6.2.13 Appendix D/ 2.1
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	Stopping up the section of highway on Stather Road between Flixborough Industrial Estate and the existing surface water pumping station situated 160 metres north of Neap House.	NLGEPL	Rights of Way and Access Plans and DCO Article 13	4.3/ 2.1
Section 7.3, Paragraph 7.3.1.1	Safety	A new 3m wide pedestrian/cycle footway along the eastern side of the carriageway of the New Access Road.	NLGEPL	DPCD, Framework Travel Plan	5.12 / 6.2.13 Appendix C
Section 7.3, Paragraph 7.3.1.1	Safety	A new 3m wide shared pedestrian/cycle footway along the northern side of the B1216 Ferry Road West.	NLGEPL	DPCD, Framework Travel Plan	5.12 / 6.2.13 Appendix C/ 2.1
Section 7.3, Paragraph 7.3.1.1	Safety	A new toucan crossing facility at the A1077/B1216 Ferry Road West signal junction to enable pedestrians and cyclists to cross the A1077.	NLGEPL	Rights of Way and Access Plans Framework Travel Plan DCO Requirement 13	4.3/ 6.2.13 Appendix C/ 2.1
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	Provision of on-site parking facilities in accordance with NLC's Parking Provision Guidelines. Including disabled parking and electric vehicle charging infrastructure.	NLGEPL	Travel Plan (see also Framework Travel Plan) DCO Requirement 13	6.2.13 Appendix C/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	A new pedestrian / cycle public right of way will be created orientated west – east, which will run from Stather Road to the New Access Road, continuing to the open land at Foxhills Plantation / Atkinson's Warren, providing a new circular walking route and connectivity between the River Trent and the northern edge of Scunthorpe.	NLGEPL	Travel Plan (see also Framework Travel Plan) DCO Requirement 13	6.2.13 Appendix C/ 2.1
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	A new public right of way will be provided to the east of Flixborough Industrial Estate, connecting footpath FLIX/175 and FLIX/304, providing a new link that avoids the need for walking along Stather Road.	NLGEPL	Travel Plan (see also Framework Travel Plan) DCO Requirement 13	6.2.13 Appendix C/ 2.1
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	Reinstatement of the existing 6km Dragonby to Flixborough branch line and provision of continued amenity access across the branch line. This will include the provision of an upgrade to the existing at grade infrastructure for the footpath (FLIX175) crossing to the south west of Flixborough and re-establishment of the footpath (FLIX178) crossing to the south east of Flixborough through the provision of a pedestrian bridge. These measures are required to ensure that the crossings meet the appropriate safety standards and to reduce the risk of the public crossing the rail line once it has been re-commissioned.	NLGEPL	Travel Plan (see also Framework Travel Plan) DCO Requirement 13	6.2.13 Appendix C/ 2.1
Section 7.3, Paragraph 7.3.1.1	Traffic disruption	The construction and operation of a new railhead to the south of Flixborough Wharf, with the primary purpose of facilitating the delivery and export of materials to and from the NLGEP to reduce the need for road vehicle movements. This will also increase the capacity for trains to stand down to allow commercial trains to operate on the main lines and therefore will help to minimise rail movements overnight at the ERF.	NLGEPL	Travel Plan (see also Framework Travel Plan) DCO Requirement 13	6.2.13 Appendix C/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.3	Economy	Provision of a visitor centre including community and educational facilities.	NLGEPL	Embedded Works Plans	4.4
Section 7.2, Paragraph 7.2.1.3	Community access	Creation of a new footpaths and cycleways providing improved public access in the area.	NLGEPL	Embedded Rights of Way and Access Plans	4.4
Section 7.2, Paragraph 7.2.1.3	Community access	Re-opening and reinstatement of PRoWs post construction and provision of new pedestrian crossing points (including a footbridge) at the existing ground level crossings across the railway.	NLGEPL	DPCD, Framework Travel Plan DCO Requirement 13	5.12 / 6.2.13 Appendix C/ 2.1
REP4-013, Para 1.3.2	Navigation	A full Navigation Risk Assessment will be undertaken capturing the relevant updates and refinement to the design (in terms of operational procedures) and finalised post DCO application. This will be undertaken in accordance with the principles described in REP4-013. Finalisation of the NRA will be undertaken in consultation with ABP, RMS Ports, stakeholders and future contractors/operators.	NLGEPL, vessel operator	Compliance with the requirements of Associated British Ports Ltd (ABP) as the Statutory Harbour Authority for the Humber Estuary,	6.3.6
REP4-013, Section 3.4	Navigation	All vessels operating out of the Flixborough Wharf for the Project will be piloted.	NLGEPL, vessel operator	Compliance with the requirements of Associated British Ports Ltd (ABP) as the Statutory Harbour Authority for the Humber Estuary,	6.3.6
REP4-013, Section 3.4	Navigation	All vessels operating out of the Flixborough Wharf for the Project will follow existing communication and navigation procedures in transit and at the wharf.	NLGEPL, vessel operator	Compliance with the requirements of Associated British Ports Ltd (ABP) as the Statutory	6.3.6

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				Harbour Authority for the Humber Estuary,	
REP4-013, Section 3.5	Navigation	All vessels operating out of the Flixborough Wharf for the Project will follow existing safety management procedures in transit and at the wharf.	NLGEPL, vessel operator	The Department of Marine Transport, Port Marine Safety Code	6.3.6
Chapter 15 – Waste					
Section 7.4, Paragraph 7.4.1.1	Waste management	Best practice measures are required to minimise waste, improve reuse, recovery, and recycling, and to facilitate high standards of waste management. This is in addition to specific construction and operational waste management measures.	NLGEPL	DPCD, OEMP DCO Requirement 4	6.3.7/ 5.12/ 6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.2	Waste management	The waste hierarchy will be applied to reduce waste, reuse, recycle or recover materials to reduce the effects of waste generation and treatment.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.3	Waste management	The waste producer has a duty of care and legal responsibility to ensure that waste products are managed safely and in compliance with applicable regulations.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Store waste in a secure place.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Use suitable containers that will stop waste escaping.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.4, Paragraph 7.4.1.4	Safety	Keep liquid hazardous waste in a dedicated area, preferably inside a building with an impermeable bund or barrier to contain spills and leaks.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Classify waste appropriately as per the European Waste Catalogue (EWC).	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Safety	Label containers clearly with the type of waste they contain.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Environmental pollution	Use covers to reduce rainwater contamination, waste blowing away or contamination that will reduce the opportunity for the waste to be reused.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Contamination	Store different types of waste separately, so that they do not contaminate each other so that they can be reused more easily, and the site's operator can complete the waste transfer note correctly.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Contamination	Prohibit the mixing of hazardous and non-hazardous waste.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Environmental pollution	Maintain intact impermeable floors so that any spillage (solids or liquids) cannot escape and cause land or groundwater contamination, or further deterioration of floors.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.4, Paragraph 7.4.1.4	Waste management	Have sufficient space and storage systems to enable products to be segregated.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Abide by the maximum periods and volumes of wastes that can be temporarily stored on site prior to collection.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Maintain waste records for a minimum of three years including the quantity, nature, origin and, where relevant, the destination, frequency of collection, mode of transport and treatment method of the waste.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Section 7.4, Paragraph 7.4.1.4	Waste management	Only use waste vendors with the appropriate permits to collect, handle, and transport and treat the waste in accordance with applicable regulations.	NLGEPL	EP/OEMP DCO Requirement 4	6.3.8/ 2.1
Chapter 16 – Major Accidents and Hazards					
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Ensure Energy Park is designed to relevant standards to maintain containment (including firewalls around the Hydrogen storage area).	NLGEPL	DPCD Document DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Process Design will include provision for members of the public to be kept at a safe distance from inventories of dangerous substances.	NLGEPL	DPCD Document DCO Requirement 3	5.12/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Design layout of the NLGEP to keep members of the public as far away as possible from potential flammable gas (or other gas) leak points.	NLGEPL	DPCD Document DCO Requirement 3	5.12/ 2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Within the COMAH pre-construction safety report (if required), identify listed buildings in the area that could be damaged by a loss of containment (LoC) event. Design can be modified to move the location of the flammable gas inventory or protect the listed building if a problem is identified. (Note that Pre-construction Safety Report is outwith the DCO and is secured by separate legislation, namely the Control Of Major Accident Hazards Regulations 2015 (COMAH), with approval by the Health and Safety Executive as the COMAH Competent Authority).	NLGEPL	Pre-construction Safety Report (if required) approved by HSE	N/A
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Within the COMAH pre-construction safety report (if required) identify environmental receptors (ecological sites/watercourses) that could be impacted by a LoC event. (Note that Pre-construction Safety Report is outwith the DCO and is secured by separate legislation, namely the Control Of Major Accident Hazards Regulations 2015 (COMAH), with approval by the Health and Safety Executive as the COMAH Competent Authority).	NLGEPL	Pre-construction Safety Report (if required) approved by HSE	N/A
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Emergency plans for identified MAH scenarios to be developed as part of the COMAH pre-construction safety report (if required) and updated for the operational phase. Any concerns around emergency evacuation plans and emergency services access to the Jotun Paints site will be assessed in consultation with Jotun Paints.	NLGEPL	Pre-construction Safety Report (if required) approved by HSE	N/A
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Produce a detailed engineering design incorporating a demonstration of adoption of accepted good engineering practices for hazardous systems including formal hazard identification.	NLGEPL	Pre-construction Safety Report (if required) approved by HSE as the COMAH	N/A

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				Competent Authority	
Section 7, Paragraph 7.1.1.1, Table 3	Flood risk	Flood mitigation startegy to be developed (Detailed hydraulic flood modelling to be undertaken to confirm development finished floor levels, secondary flood defence levels and culvert sizing).	NLGEPL	DCO Requirement 12	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Adherence to appropriate security measures e.g. site security presence and fencing to prevent trespassers.	NLGEPL	DPCD DCO Requirement 3	5.12 / 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Design will avoid having gas pipework/equipment close to railway lines.	NLGEPL	DPCD DCO Requirement 3	5.1/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Establish a plan during detailed design to determine the risk to personnel working on the NLGEP site from nearby site Jotun Paints.	NLGEPL	Pre-construction Safety Report (if required) approved by HSE as the COMAH Competent Authority	N/A
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Storage of materials with the potential to have an adverse effect on the environment will need to be carefully controlled during the operational phase.	NLGEPL	DPCD DCO Requirement 3	5.12/ 2.1
AB Agri SoCG	Biosecurity management	Vehicles carrying RDF will not use First Avenue	NLGEPL	OEMP, DCO Requirement 4	6.3.8/2.1
AB Agri SoCG	Biosecurity management	Where the transport and handling of RDF are concerned, NLGEPL will require its suppliers and hauliers to operate in	NLGEPL	OEMP, DCO Requirement 4	6.3.8/2.1

ES or other Document Paragraph or Section Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		accordance with the Refuse Derived Fuel - Code of Practice (RDF CoP) (Version 1, October 2017)			
AB Agri SoCG	Biosecurity management	The ERF will be designed and built with measures incorporated to prevent or discourage pests, which may include such matters as: • smooth external surfaces where required to prevent rats scaling walls; • elimination of gaps around pipes etc; and • spikes to discourage bird roosting.	NLGEPL	DPCD, DCO Requirement 3	6.3.8/2.1
AB Agri SoCG	Biosecurity management	A detailed biosecurity risk assessment will be undertaken in the course of applying for an Environmental Permit from the EA. Subject to the findings of the assessment and the requirements of the EA, further measures may be incorporated and implemented and monitored through a Pest Management Plan.	NLGEPL	EP, (and OEMP and DCO Requirement 4 where appropriate)	6.3.8/2.1