NORTH LINCOLNSHIRE GREEN ENERGY PARK

Planning Act 2008

North Lincolnshire Green Energy Park

Annex 7 - Code of Construction Practice

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CONTENTS

Acronyms and Abbreviations

Name	Description
CDM	Construction (Design and Management)
CEMP	Construction Environmental Management Plan
CoCP	Code of Construction Practice
DEFRA	Department of Environmental, Food and Rural Affairs
DCO	Development Consent Order
DWP	Department for Work & Pensions
EHS	Environment, Health and Safety
EPC	Engineering, Procurement and Construction
ES	Environmental Statement
EU	European Union
FEED	Front-end Engineering Design
HETA	Humberside Engineering Training Association
INNS	Invasive Non-Native Species
LEP	Local Enterprise Partnership
PM	Particulate Matter
SAC	Special Areas of Conservation
SPAs	Special Protection Areas
UK	United Kingdom

1. INTRODUCTION

1.1 Overview

1.1.1.1 This document presents the framework for the Applicant's future policies and procedures for managing safety, health, environmental and social impacts during the delivery of the Project.

1.1.1.2 The Code of Construction Practice (CoCP) is a strategic level document that sets out the framework for effective environmental management during the construction of the Project, to a sufficient level of detail to support the Development Consent Order (DCO) for the Project in terms of the mechanisms for securing the mitigation measures described in the Environmental Statement (ES). The documents and the management plans introduced in the CoCP will be developed into detailed documents, plans and procedures as the Project progresses through the Front-End Engineering and Design (FEED) process and will be adopted and further developed, monitored and maintained by the Engineering Procurement and Construction (EPC) contractor (the EPC contractor).

1.2 North Lincolnshire Green Energy Park Ltd

1.2.1.1 Together with its business partners, North Lincolnshire Green Energy Park Ltd (NLGEPL) will establish a project team dedicated to the delivery of the Project. There will be a dedicated Project Director who will be supported by a team of senior managers with a wealth of experience in design, procurement, project management, safety, health and environment. The project team will ensure that the requirements of the ES and conditions set as part of the DCO are undertaken and any unknown developments are assessed and acted upon in accordance with the NLGEPL management systems.

1.2.1.2 It is fundamental to Health & Safety Management that line managers are responsible for health and safety in their team or business unit. They must also seek to achieve the health and safety objectives, targets or KPI standards set.

1.2.1.3 It is to be emphasised that an honest and open reporting culture is vitally important to the NLGEPL business. Nothing in the setting of the targets or in the company's day-to-day working should be interpreted as intending to discourage people from reporting all injuries, no matter how minor.

1.2.1.4 All senior management staff will be required to have undertaken the NEBOSH International Construction certificate, with more junior managers and supervisors encouraged to undertake the NEBOSH or CITB Construction Certificate.

1.2.1.5 All personnel who work on the site will be required to undertake a site-specific safety induction, with training in the use of personal protective equipment (PPE), focused hazard training, COSHH, CDM and incident investigation, as appropriate.

1.2.1.6 Training needs will be identified when the project team is being engaged and through the Achieving My Potential (AMP) as well as the NLGEPL safety training Matrix and standards.

1.2.1.7 NLGEPL staff will be adequately trained, qualified and experienced to function effectively. Where staff appraisals identify a need for further training or supervision this will be provided.

1.2.1.8 NLGEPL will only appoint contractors to the Project Team who are competent and have adequate resources to undertake the work for which they are appointed. Advice on judging the suitability of potential contractors is given in the Contractor safety engagement standard and process as well as the NLGEPL Safety, Health and Environment manual.

1.3 Safety Health and Environment (SHE) NLGEPL Management Systems

1.3.1.1 The NLGEPL SHE Plan will be developed for the construction phase of the Project and then incorporated into the Site Operation Procedures (SOPs) to support all the objectives set by the NLGEPL Safety Management System.

1.3.1.2 The detailed design, procurement and construction will be carried out by the appointed Principal (EPC) Contractor. In accordance with the Construction (Design and Management) Regulations 2015 (the CDM Regulations) the Principal Contractor will formulate the Engineering, Procurement and Construction (EPC) contract SHE Plan specifically for the construction phase of the works. However, due to the environment of these works in relation to other third-party interfaces, there will be other management systems in place for the other interface contractors.

1.3.1.3 The SHE Plan should be read in conjunction with the Principal Contractor's HS&E Plans, which will set out the contractor's site safety requirements prior to the start of construction on site. The Plan will develop as the project progresses to ensure safety is managed on site throughout the Project and transferred to the operational SOPs.

NLGEPL Health & Safety Commitment:

1.3.1.4 Our SHE commitments for the construction phase will reflect the following principles:

- We expect all employees at every level of our business to lead by example and take personal responsibility for SHE.
- We comply with all applicable SHE laws, company rules and regulations and other requirements in all our activities.
- We committed to preventing injury and ill health of our employees and site contractors.
- We make SHE performance of contractors an evaluation criterion when awarding contracts.

- We include minimum training standards for contractors' staff in our contracts and expect all contractors.
- We maintain the contractual right to remove contractors and/or their employees from our sites due to poor SHE performance.
- We commit to minimise the environmental impact by preventing pollution and by continuously improving the effectiveness of all our operations.
- We actively involve our people, as the experts, and encourage dialogue about SHE to improve safety behaviour.
- We communicate the lessons learned from incidents to prevent recurrence and create a culture of trust.
- We motivate and train all employees and contractors to create a safe and healthy workplace and to protect the environment.
- We systematically review our SHE performance and communicate it internally and externally on a regular basis.
- We continually strive to improve our SHE performance, by setting objectives and targets and committing to delivery of an annual Safety Improvement Plan.

Vision:

- We believe that all injuries and occupational illness can be prevented, and we recognise that excellence in health and safety also drives excellence in business performance.
- Our aim is that NLGEPL will be the strongest health and safety performer it can possibly be. Construction is a relatively high-risk activity, so we must implement the most effective means available to achieve this performance.

1.4 The Main Project Elements

1.4.1.1 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 (CO2) prior to emission into the atmosphere.

1.4.1.2 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.

1.4.1.3 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 (H2) 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 6km 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.

1.4.1.4 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.

1.4.1.5 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.

1.4.1.6 The overarching aim of the Project is to support the UK's 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).

1.5 Construction Sequence

1.5.1.1 The following construction sequence is envisaged, but may be subject to change once an EPC Contractor is appointed.

1.5.1.2 Phase 1: Phase 1 will include the ground preparation contract in parallel with the clearance and preparation of the main construction compound. It will establish key facilities and infrastructure for construction of the ERF and associated development. The works will include:

- Relocation of RMS ports to the northern part of their site ownership and establish their main access from First Avenue
- Undertake any outstanding archaeological investigations.
- Establish main and secondary contractors compounds, including car park, earthworks and construction welfare facility.
- Commence site clearance and demolition work for ERF.
- Establish Dragonby Sidings construction compound and commence railhead construction upgrade.
- Commence junction construction on B1216 and new access road from B1216 to Stather Road (south to north).
- Commence new sub-station and export cable corridor as well as service diversions.
- Construction of internal access road around RHTF and CBMF.
- Construction of visitor centre.
- Construction of attenuation ponds, swales and realignment of ditches and advance planting and ecology works.
- Clearance of existing vegetation and construction of flooding bund around chicken farm south of Stather Road and across First Avenue.

1.5.1.3 Phase 2 will focus on the earthworks and build out of the ERF. The works will include:

- New access road adopted.
- Import fill material.
- Pile foundations.
- Construct ground slab/turbine and boiler blocks.
- Construct access ramp.
- Construct superstructure.
- Fit out and commission.
- Construct electrical switchyard

1.5.1.4 Phase 3 will involve the groundworks and construction of the RHTF. The works will include:

- Clear site for bottom ash and flue gas residue handling and treatment facility.
- Import fill material.
- Pile foundations.
- Construct ground slab.
- Construct superstructure.
- Fit out and commission.

1.5.1.5 Phase 4 will focus on the earthworks and build out of the CBMF and PRF. The works

- will include:
- Establish temporary construction compound for the CBMF and PRF.
- Clear sites for the CBMF and PRF.
- Import fill material.
- Pile foundations.
- Construct ground slab.
- Construct superstructure.
- Fit out and commission.
- Construct elevated walkway.

1.5.1.6 Phase 5 will focus on the earthworks and build out of an EV and hydrogen re-fuelling station and battery storage. The works will include:

- Clear site for an EV and hydrogen refuelling station , a gas AGI, a hydrogen production and storage facility and battery storage.
- Import fill material.
- Pile foundations.
- Construct ground slab.
- Construct superstructure.
- Fit out and commission
- Construct hydrogen and gas AGI.

1.5.1.7 Phase 6 will focus on the creation of temporary construction compounds, clearance and installation of DHPWN and associated infrastructure. The works will include:

- Establish temporary construction compounds.
- Commence site clearance on agreed route (easement).
- Install district heating and private wire network and reinstate.
- Commission.

1.6 Indicative Construction Programme and Working Hours

1.6.1.1 The Indicative Construction Programme is provided in Volume 6 (**Document Reference 6.2.13, Appendix D**).

1.6.1.2 The days and time during which construction activity will normally take place on the Project Site are as follows:

- 07:00 – 19.00 hours Monday – Friday (noting that workforce traffic will arrive at the site during the hours of 06:00 to 07:00);
- 07:00 – 13:00 hours Saturday with work taking place after 13:00 up to 23:00 hours subject to agreement with NLC on the nature of works and associated noise controls to be set out in the CEMP (see also Appendix L - Outline Construction Noise and Vibration Management Plan);
- no working on Sundays, Bank or Public Holidays unless with specific agreement of NLC;
- no working on weekdays between 19:00 and 23:00 and Saturdays between 13:00 and 23:00 unless with specific agreement of NLC and/or in the event of an emergency; and
- no working during night-time hours of 23:00 to 07:00 except with specific agreement of NLC and/or in the event of an emergency.

1.6.1.3 The working hours and procedures for exceptions to them will be formally agreed with NLC and set out in the CEMP.

1.7 Purpose of the Code of Construction Practice

1.7.1.1 The purpose of the CoCP is:

- To provide a mechanism for ensuring that measures to mitigate potentially adverse environmental impacts are implemented.
- To set out how standards of good construction practice will be adopted throughout the Project.
- To provide a framework for mitigating impacts that may be unforeseen or unidentified until construction is underway.
- To provide assurance to third parties that their requirements with respect to environmental performance will be met.
- To provide a framework for compliance auditing and inspection to enable NLGEPL to be assured that its aims with respect to environmental performance during construction are being met by the EPC contractor.

1.7.1.2 This CoCP contains a strategic level of detail. It will provide the basis for a Construction Environmental Management Plan (CEMP) to be developed by the EPC contractor prior to commencement of works. The EPC contractor will have to demonstrate how it will comply with requirements of this CoCP as part of the tendering process.

1.7.1.3 Thereafter the CEMP will be developed for each part of the Project for approval prior to commencing works as the Project proceeds through the detailed design and pre-construction phases, to reflect the results of any discussions with regulators and consultees and to include details of the requirements imposed by other permissions and consents obtained (**Document Reference 5.8**).

1.8 Structure of Document

The CoCP contains the following sections.

- Section 2 sets out the general principles for environmental management during the construction phases and explains how the CoCP will be implemented via the detailed CEMP.
- Section 3 outline relevant company policy and legislation.
- Section 4 outlines the roles and responsibilities of NLGEPL and the construction contractor.
- Section 5 describes how mitigation will be secured via development and implementation of the CEMP.

2. GENERAL PRINCIPLES

2.1 Introduction

2.1.1.1 The CoCP will be implemented via the detailed CEMP and through the designation of key roles and responsibilities for environmental management (Section 4) and a series of issue or topic-specific management plans that include statements of environmental requirements and commitments (Section 5). These will be developed in accordance with the underlying principles of good environmental management set out below and will be further developed in consultation with key stakeholders as required.

2.2 Design and Construction Principles

2.2.1.1 The Project has been designed to date to ensure that its impacts can be minimised, and this approach will continue through the remainder of the design process. This includes mitigation that is embedded into the design of the Project through the use of industry standard methods and procedures. The Project will be managed in line with the following design and construction principles.

- The Project will be constructed with due regard to environmental and social sensitivities within and adjoining the Project site and along access routes.
- Project-related construction installations and equipment will be designed, constructed, procured, operated, and maintained in line with current best practice and to meet all relevant design and safety parameters.
- The Project site will be designed, constructed, and operated to facilitate safe access to all areas that will require environmental monitoring, audit, and inspection.

2.2.1.2 Design Principles have been prepared and used by the Project team. The Design Principles are a set of decision-making reference points based on four main design themes: People; Value; Places; and Climate. Throughout the Project's evolution, interpretation and application of the Design Principles has been through underlying Objectives for the Design Principles. The Design Principles form part of the information to be submitted for the Development Consent Order (DCO) application for the project by NLGEPL.

2.2.1.3 Design Codes have also been prepared as part of the DCO application. The Design Codes transcend both the Project evolution stages to DCO application. The Design Codes are a series of rules to be applied to the on-going design of the Project, and thereby help to steer some aspects of the design detail at the next stages of the development and implementation of the Project. They help provide the next level of detail beyond those set out in the Project Parameters, which reflect Environmental Impact Assessment (EIA) decisions. Applying the Design Codes in the next stages of design will also inform the construction phase of the development.

2.2.1.4 Together, the Design Principles and Design Codes are set out in the Design Principles and Codes Document (**Document Reference 5.12**) and provide a decision-making reference point for on-going detailed design and construction design/implementation of the consented DCO project. Compliance with the Design Codes will ensure the high-quality design and construction outcome is achieved.

2.3 Health and Safety Principles

2.3.1.1 The safe operations and behaviours of the on-site workforce and contractors during construction are a priority for NLGEPL. The key principles that will contribute to a safe Project site are as follows.

- NLGEPL will fulfil its obligations as Client under the Construction (Design and Management) Regulations 2015 (the CDM Regulations).
- Health and Safety awareness training will be mandatory for all on-site workers and contractors.
- The Project SHE Director (or similar) will have authority over the work of all contractors regarding health and safety issues.
- NLGEPL will ensure provision of adequate health and safety facilities for the Project workforce.
- NLGEPL will ensure provision of appropriate signage across the Project site regarding the safe behaviours and procedures required.
- Industry standards for health and safety will be applied across the Project site and NLGEPL will seek continuous improvement in health and safety performance.

2.3.1.2 The CEMP developed by the EPC contractor will set out measures in detail for implementing the above and will also:

- Define ‘set to work’ procedures;
- Define the process of site inductions and how ‘method statements’ are developed; and
- Define how refresher training, learning points, toolbox talks etc are provided.

2.4 Environmental Management Principles

2.4.1.1 Environmental management issues throughout the construction of the Project, including detailed design, will be governed or guided by a number of standards, including:

- Those contained in legislation.
- Those established by industry codes of practice.
- Those required by NLGEPL’s environmental policy.
- Commitments made as part of the DCO application process (Appendix A) and measures and conditions / requirements set out in any associated permissions or consents that are granted.

2.4.1.2 The Project's construction will be managed in line with the following environmental management principles:

- NLGEPL will work and adhere to its Environmental Management System.
- Contractors tendering for construction contracts will be required to provide evidence of a management system that corresponds to the environmental performance requirements of NLGEPL's management system.
- The Project EHS manager (or similar) will have authority over the work of all contractors regarding environmental management issues.

2.5 Community Liaison

2.5.1.1 Ensuring that the local community is appropriately and accurately informed about the Project and its construction activities is a priority for NLGEPL. The key principles that will facilitate good relationships between NLGEPL and the local community are as follows (see also Section 5.3):

- NLGEPL will have a Community Relations Plan (or similar) that will set out mechanisms for notifying and informing local residents of planned works, particularly where works extend beyond normal working hours.
- NLGEPL will proactively inform the community and its representatives of planned activities throughout the consultation period. Through public consultation at the pre-application phase, NLGEPL has developed a list of people interested in updates about the scheme and would use this to issue regular updates.
- Through discussion with North Lincolnshire Council, NLGEPL will consider establishing a Community Liaison Group to act as a forum for communicating with stakeholders and community representatives.
- Information regarding the Project will be available to the general public via the existing NLGEPL website, including information regarding the construction schedule and a helpline telephone number for public use for making enquires.
- NLGEPL will continue to work with education and skills providers in the region to ensure employment and training opportunities created by the construction of the scheme are accessible to local people.
- NLGEPL will have a system for recording and responding to complaints regarding the Project.

3. COMPANY POLICY AND LEGISLATION

3.1 General Considerations

3.1.1.1 NLGEPL and its contractors will conduct their activities in such a way as to give full consideration to the health and safety of their employees and any affected persons, and give due regard to the conservation of the environment, in line with relevant EU Directives, UK legislation, government guidance, industry Codes of Practice, and NLGEPL policy.

3.2 Company Environmental Policy

3.2.1.1 Environmental and climate protection will remain a key focus of NLGEPL. However, the company recognises the need to make as much progress as practicable today toward a low-carbon, green tomorrow: “We want our grandchildren and great-grandchildren to be able to look back with pride at our achievements”. NLGEPL is committed to protecting the environment and the climate and adopting the latest technologies to reduce carbon emissions. This means doing its part to minimise adverse impacts and using its expertise and emerging technologies to help to deliver the NLGEPL vision.

3.2.1.2 NLGEPL is continually looking for ways to reduce its own energy consumption and playing a full part in the environmental management of its projects. NLGEPL’s environmental management is guided by the precautionary principle endorsed by the United Nations, and parent company Solar 21 has supported the UN Global Compact's ten principles since 2005. The company’s vision is for its business activities to cause no environmental damage and to have as little environmental impact as possible. In order to do that, all projects adopt environmental management systems that are certified to internationally recognised standards.

3.3 Legislation, Standards and Codes of Practice

3.3.1.1 This section outlines the European Directives, UK legislation, government guidelines, industry standards and codes of practice relevant to the construction of the Project. The list provided in Table 3.1 is intended to highlight the key considerations and should not be considered as exhaustive. It will be the contractor’s responsibility to put in place measures to comply with all relevant legislation, standards, and codes of practice, as well as with the commitments made in the ES and with DCO requirements that are relevant to construction activities.

Table 3.1: Key Legislation, Standards, and Codes of Practice

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
Air Quality	Environmental Protection Act 1990	Creates the main regulatory controls over 'statutory nuisance' including smoke, fumes, gases, dust, steam, smells, or other effluvia arising on industrial premises so as to be prejudicial to health or a nuisance.
	Clean Air Act 1993	Regulates smoke emissions e.g. from on-site burning of waste.
	Air Quality Standards Regulations 2010	Sets ambient air quality standards for particulate matter (PM_{10}).
	Environment Act 1995 (updated 2021)	Requires local authorities to periodically review and assess air quality and develop Air Quality Management Plans.
	Air Quality Strategy for England, Wales, Scotland and Northern Ireland 2007	Implements the Air Quality Standards Regulations 2010.
	Environment Agency Guidance: Air emissions risk assessment for your environmental permit (2021)	Air Quality Standards Guidelines developed by the Environment Agency
	Institute of Air Quality Management Guidance on the Assessment of Dust from Demolition and Construction (2014)	Guidance for developers, their consultants and environmental health practitioners on how to undertake a construction impact assessment.
	Institute of Air Quality Management Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites (2018)	Best practice recommendations for approaches to monitoring dust.
	Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance (IAQM, 2012)	Best practice recommendations for approaches to construction impacts and significance.
	Institute of Air Quality Management. A guide to the assessment of air quality impacts on designated nature conservation sites (2020)	Guidance for the assessment of the air quality impacts of development on designated nature conservation sites in support of Habitats Regulations Assessments (HRA) and impact on national or local designated nature conservation sites.
	UK Government Clean Air Strategy 2019	This strategy sets out UK government plans for dealing with all sources of air pollution, making UK air healthier to breathe, protecting nature and boosting the economy.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
Noise and Vibration	Noise Policy Statement for England (NPSE), Defra, 2010	The document seeks to clarify the underlying principles and aims in existing policy documents, legislation and guidance that relate to noise. It sets out its aims as being to: • Avoid significant adverse impacts on health and quality of life; • mitigate and minimise adverse impacts on health and quality of life; and • where possible, contribute to the improvement of health and quality of life.
	EU Directive 2002/49/EC relating to the assessment and management of environmental noise	Defines a common approach to avoiding, preventing or reducing harmful effects, including annoyance, from exposure to environmental noise. However, it specifies that 'environmental noise' shall mean unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport, road traffic, rail traffic, air traffic, and from sites of industrial activity. It therefore, is not relevant to construction noise.
	Environmental Noise (England) Regulations 2006 (as amended)	Transposes EU Directive 2002/498/EC into UK law. As noted above the Regulations do not apply to construction noise.
	Control of Pollution Act 1974 (Part III)	Gives local authorities the power to impose requirements on how construction works are carried out, particularly in relation to noise and vibration. Local authorities can use notices under Section 60 of the Control of Pollution Act 1974 (COPA) to deal with noise and vibration from construction sites.
	Environmental Protection Act 1990 (ss.79-82) (as amended by the Noise and Statutory Nuisance Act 1993).	Provides controls over 'statutory nuisance' including noise emitted from premises so as to be prejudicial to health or a nuisance. The amendment through the Noise and Statutory Nuisance Act 1993 applies the controls to nuisances arising from vehicles, machinery, and other equipment. A local authority has a duty to serve an abatement notice under the EPA where a statutory nuisance exists or is likely to occur which may include noise from construction sites.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
	British Standard 5228-1:2009+A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Part 1: Noise (BSI 2014)	Recognised by Statutory Order as the accepted guidance for noise control during construction work.
	British Standard 5228-1:2009+A1:2014: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Part 2: Vibration (BSI 2014)	Recognised by Statutory Order as the accepted guidance for vibration control during construction work.
	Noise Act 1996 (as amended)	Controls night-time noise, giving local authorities the power to prosecute and confiscate any noise-making equipment, but is not relevant to construction noise.
	Guidelines for Environmental Noise Impact Assessment, Institute of Environmental Management and Assessment (2014)	Gives advice on how noise assessments may be undertaken for the assessment of impacts of development proposals.
Water Quality and Flood Risk	EU Directive 2000/60/EC (the Water Framework Directive)	Commits European Union member states to achieve good qualitative and quantitative status of all water bodies by 2015.
	The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003	Transposes the Water Framework Directive into UK law.
	EU Directive 2008/105/EC (the Priority Substances Directive)	Aims to phase out of discharges, emissions and losses of hazardous substances listed in the Directive.
	EU Directive 2007/60/EC on the Assessment and Management of Flood Risks (the Floods Directive)	Requires member states to assess the risk of water courses and coast lines within their territory, map the flood extent as well as assets and the population at risk within these areas, and to take adequate and coordinated measures to reduce this flood risk.
	Water Act 2014	Part 3 of the Water Act 2014 focuses on the environmental permitting regime relating to water abstraction and pollution prevention and control, enabling operators to apply for a single rather than multiple permits.
	Water Resources Act 1991 (as amended) Section 85	Makes it an offence to discharge poisonous, noxious or polluting material, into any 'controlled waters', either deliberately or accidentally. Polluting materials include silt, cement, concrete, oil, petroleum spirit, sewage or other debris and waste materials.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
		'Controlled waters' include all watercourses and water contained in underground strata. Road drains and surface water gullies generally discharge into controlled waters and should be treated as such. It is an offence to discharge trade effluent to the public sewer or to a sewage treatment works without the consent of the Water Authority.
	Environmental Protection Act 1990	It is a statutory nuisance to cause a watercourse to be so foul or obstructed that it is prejudicial to health or a nuisance.
	Flood and Water Management Act 2010	Defines responsibilities and responsible parties to managing flood risk.
	British Standard Code of Practice for Earthworks BS 6031:2009	Detailed methods for controlling drainage from construction sites.
Geology, Hydrogeology and Contamination	EU Directive 2000/60/EC (the Water Framework Directive)	Commits European Union member states to achieve good qualitative and quantitative status of all water bodies including ground waters by 2015. The primary requirement is that groundwater is protected at least to the same level as that required by the Groundwater Directive (see below).
	EU Directive 2006/118/EC (the Groundwater Daughter Directive, which superseded the previous Groundwater Directive 80/68/EEC)	Transposed into UK law through the Environmental Permitting (England and Wales) Regulations 2010; Section 161A WRA 1991 and Anti-Pollution Works Regulations 1999 (works notices); Section 93 WRA 1991 (Water Protection Zones); Part 2A EPA 1990 and associated regulations.
	EU Directive 2007/EC on the assessment and management of flood risks	Establishes flood risk management plans.
	Environmental Permitting Regulations (England and Wales) 2016	Legislation for permitting of activities which have the potential to cause harm to human health or environment.
	BS10175 Investigation of contaminated sites (2017)	Gives recommendations and guidance on the investigation of land that could potentially be affected by contamination which may be required if unexpected finds are encountered during excavation or further investigations are needed.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
	CL:AIRE The definition of waste: Development industry code of practise	Provides guidance on re-use of soils on sites with relation to potential contamination of the water environment, human health and wider environment (including crops/livestock).
	Environmental Protection Act 1990 (Part II)	Provides guidance on contaminated land which may be required if unexpected finds are encountered.
	Environment Agency (EA) online Land Contamination Risk Management guidance (LCRM)	This provides the basis for good practice in dealing with brownfield and industrial land with relation to ground contamination which may be required if unexpected finds are encountered.
	IAQM Guidance on the assessment of dusts from demolition and construction	Includes mitigation measures for dusts during the demolition and construction process.
Public Rights of Way	Countryside and Rights of Way Act, 2000	Makes provision for rights of public access to certain countryside, including public rights of way.
	Highways Act 1980 and related legislation	Governs use and construction of highways, including temporary and permanent closure and diversion of footpaths and bridleways
Waste	EU Directive (2008/98/EC) (the revised Waste Framework Directive)	Defines waste throughout the EU and provides the legislative framework for all aspects of waste handling.
	EC Council Directive 91/689/EEC (the Hazardous Waste Directive)	Commits member states to the controlled management of hazardous wastes as identified by the Directive.
	The Waste (England and Wales) (Amendment) Regulations 2012 (amending the Waste Regulations 2011)	Revised requirements for collection, recovery and transport of waste and requirement of businesses to demonstrate that they have followed the waste hierarchy.
	Special Waste Regulations (Amendment) (Wales) Regulations 2001	Implements the Hazardous Waste Directive into UK law.
	Hazardous Waste (England and Wales) Regulations 2005 (as amended)	Defines hazardous waste and require producers to register annually if quantity is greater than 500 kg/year.
	Environmental Protection Act 1990 (Part II)	Applies to ‘controlled waste’, comprising both hazardous and non-hazardous waste.
	Special Waste Regulations 1996 (as amended)	Defines special waste.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
	The Waste Management (England & Wales) Regulations 2006 (as amended),	Provisions for the controlled management of hazardous waste from the point of production to the final point of disposal or recovery.
	Waste Management Licensing Regulations 1995 (as amended)	Dictates the licensing requirements applicable to the management of waste (directly to the licensing of a site or activity) and its processing and disposal.
	Environmental Protection Act 1990, Section 34.	Sets out duty of care provisions.
	Environmental Protection (Duty of Care) Regulations 1991 (as amended)	Places a duty of care on waste producers to ensure that waste is handled correctly
	Waste Management, the Duty of Care, A Code of Practice as issued by the Defra.	This code of practice is imposed by the Environmental Protection Act 1990. The duty applies to any person who produces, imports, carries, keeps, treats, or disposes of controlled waste and breach of the duty of care is an offence.
	Site Waste Management Plans Regulations 2008	Although revoked in December 2013, these regulations nonetheless provide useful guidance for the development of *Site Waste Management Plan.*
	Control of Pollution (Amendment) Act 1989	Makes it an offence to transport controlled waste unless registered with the Environment Agency.
Archaeology and Cultural Heritage	Ancient Monuments and Archaeological Areas Act 1979	Offers legal protection to designated heritage assets.
	Planning (Listed Buildings & Conservation Areas) Act 1990	Provision for the listing of buildings recognised by English Heritage for their special architectural or historic interest.
	Historic England. The Setting of Heritage Assets. Historic Environment Good Practice Advice in Planning Note 3	Provides good practice guidance for the assessment of impacts on the significance of heritage assets through changes to their setting
	Planning Policy Statement: Planning for the Historic Environment Practice Guide (PPS5), 2012	Sets out government objectives for planning for the historic environment, and provides guidance on the application of policy including the management of heritage assets and significance in planning.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
Landscape and Visual	European Landscape Convention (2000)	Commits member states to implement national policies and measures relating to the consideration of landscape in planning.
	Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment. 3rd Edition.	Provides good practice guidance for the assessment of effects on landscape character and visual amenity
Ecology	EC Council Directive 2009/147/EC on the Conservation of Wild Birds (the 'Birds Directive')	Provides a framework for the conservation and management of wild birds in Europe and provides for the identification and classification of Special Protection Areas (SPAs).
	EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (The 'Habitats Directive')	Promotes biodiversity by requiring member states to designate of Special Areas of Conservation (SAC).
	Conservation of Habitats and Species 2010 (as amended) Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (the Ramsar Convention)	These sites form the UK national site network (aka European Sites). The legislation for the Site of Special Scientific Interest which will underpin each designation also applies. These sites are given protection through policies in the Local Development Plan. A Habitat Regulation Assessment is required before undertaking, or giving consent, permission or other authorisation for a plan or project which is likely to have a significant effect on such a site.
	Conservation of Habitats and Species Regulations 2017 (as amended)	Transposes the Habitats Directive into UK law. Protects bats, great crested newts, otter from loss or damage to individuals or their resting places. Licences for development are issued by Natural England.
	National Parks and Access to the Countryside Act 1949 S.21	LNRs are given protection through policies in the Local Development Plan.
	Wildlife and Countryside Act 1981 (as amended)	Offers protection to specified animals and plants including birds (including Schedule 1 species), great crested newts, reptiles, and water voles.
	The Countryside and Rights of Way Act 2000	Access to Open Country, Public Rights of Way, Nature Conservation and Areas of Outstanding Natural Beauty.
	The Natural Environment and Rural Communities Act 2006	Implements key elements of the Government's Rural Strategy (published July 2004), the UK Biodiversity Action Plans.

Environmental Topic	Key EU Directives, UK Legislation, Codes of Practice and Guidelines	Relevance to the Project
	Natural Environment & Rural Communities Act 2006 S.40 (which superseded S.74 of the Countryside & Rights of Way Act 2000).	S.40 of the NERC Act 2006 sets out the duty for public authorities to conserve biodiversity in England. Habitats and species of principal importance for the conservation of biodiversity in England (identified by the Secretary of State in consultation with NE) are referred to in S.41 of the NERC Act.
	Protection of Badgers Act 1992	Makes it an offence to kill or injure a badger or to interfere with badgers' setts. Where required, licences for development activities involving sett loss, damage or disturbance are issued by Natural England. Licences are normally not granted from December to June inclusive because cubs may be present within setts.
	Wild Mammals (Protection) Act 1996	It is an offence to intentionally inflict unnecessary suffering to any wild mammal.
	Hedgerow Regulations 1997	Protects 'important' hedgerows in England and Wales from removal and replacement.
	Wildlife and Countryside Act 1981 (as amended) S.14	It is illegal to plant the listed species or otherwise cause them to grow or spread in the wild.
	Nationally Significant Infrastructure Projects and Protected Species Licensing Guidance	A full draft mitigation licence application must be made in advance of the formal submission to the Planning Inspectorate where protected species are identified on site and for which a licence application is considered necessary. Currently a licence is considered necessary for great crested newts which may fall under a District Level scheme. Licences are unlikely to be required for badger and water vole, however this will be kept under consideration via updated surveys in the future.

4. ROLES, RESPONSIBILITIES AND REPORTING

4.1 Environmental Management Role of NLGEPL

4.1.1.1 As the developer of the Project, NLGEPL will have responsibility for:

- Ensuring the dissemination of information to the workforce and contractors regarding required operations and behaviours. Monitoring the performance of contractors and suppliers.
- Development of mechanisms for resolving problems.
- Acting as the point of contact for consultation and feedback with landowners, statutory consultees, the public and other interested parties.
- The overall environmental management and performance of the Project.

4.1.1.2 In order to discharge these responsibilities, NLGEPL will appoint a Safety, Health and Environment (SHE) Director who will be independent of any of the contractors involved in the construction and will be competent to undertake the environmental management of the Project. The SHE Director will be supported by an environmental auditor and a Project ecologist and Project archaeologist who will undertake regular audits of the contractor on behalf of NLGEPL.

4.2 Environmental Management Role of the EPC Contractor

4.2.1.1 It is anticipated that the Project will be constructed under a contract covering engineering, procurement, construction, and commissioning services. In addition to statutory obligations, the EPC contractor will be obliged to prepare the detailed CEMP (and component plans), which will apply to all construction works relating to the Project.

4.2.1.2 All contractors will be responsible for their own contribution to environmental performance and will be responsible for ensuring compliance with:

- All relevant legislation and codes of practice.
- The environmental controls and mitigation measures in the CEMP.
- All consent requirements relating to the Project and associated permissions, permits and licences.
- Any environmental or other codes of conduct required by NLGEPL.

4.2.1.3 Contractors will be required to undertake regular environmental inspections and reporting to enable NLGEPL to monitor and evaluate performance.

4.2.1.4 Contractors will need to demonstrate to NLGEPL's satisfaction how they will ensure that the requirements of the CEMP are being complied with. Contractors will also be required to demonstrate commitment to the CEMP. The performance of contractors in complying with the CEMP will be monitored and audited by NLGEPL.

4.2.1.5 Compliance and non-compliance (established during audits) with the provisions of the CEMP will be recorded by the NLGEPL Project team and records will be held in the site office and available for inspection. The EHS manager will be empowered to stop the works if he or she is of the opinion that the provisions of the CEMP are not being met.

4.3 Public Communications and Community Liaison

4.3.1.1 NLGEPL will be responsible for formal external communications, particularly those with regulators, consultees, and the public. This includes all consultation processes, events and communications, and the provision of adequate complaints and grievance mechanisms. Contractors may be required to attend meetings with regulators, consultees, and the public as appropriate, but always in the presence of a NLGEPL representative.

4.4 Training

4.4.1.1 NLGEPL and the contractors will establish procedures to ensure the awareness of all their employees regarding the following:

- Their roles and responsibilities in achieving compliance with the Environmental Policy and the requirements of the CEMP.
- The potential environmental effects of their work activities and the environmental benefits of improved performance.
- The potential consequences of departure from agreed working procedures.

4.4.1.2 NLGEPL and the contractors will provide appropriate environmental awareness training for all personnel whose work may have a significant effect upon the environment. All personnel performing specific assigned tasks with the potential for significant environmental effects will be required to be qualified on the basis of appropriate education, training, or experience. The categories of staff whose work has a significant effect on the environment will be identified during the CEMP development process. However, all staff will be required to have some basic level of awareness briefing.

4.4.1.3 The CEMP will also set out in detail:

- Defined inductions, training, and capacity-building for those responsible and a roll-out plan of systematic staff and contractor training.
- Provision for the review of training packages and training attendance.
- Provision for recording that all relevant subcontractors and employees have reviewed the CEMP and relevant policies.

4.5 Environmental Monitoring during Construction

4.5.1.1 Monitoring of the environmental effects of construction will enable the effectiveness of environmental mitigation to be evaluated. It will also allow environmental problems to be identified and responded to at an early stage.

4.5.1.2 NLGEPL will ensure that an appropriate programme of environmental monitoring is set out in detail in the CEMP. Thereafter NLGEPL will ensure the programme is implemented and that the Project is built in accordance with the provisions of the CEMP and identify and implement any environmental improvements which contribute to the overall environmental performance.

4.5.1.3 Typical Project activities that will require environmental monitoring during (and in some cases, following) construction will include (but not necessarily be limited to):

- Site clearance, monitoring for potential effects on sensitive habitats or protected species.
- Earthworks and excavations, monitoring for potential contamination to be present in excavated soils.
- Earthworks and general construction activities, monitoring for the generation of airborne dust.
- Dewatering of excavations, monitoring for the quality of water discharges or sediment laden runoff.
- Construction site drainage performance including surface water management and foul drainage provision, monitoring for the quality of water discharges.
- Use of vehicles and plant, monitoring of noise and gaseous emissions to atmosphere.
- Excavation, soil deposition and landscaping, monitoring of the condition and treatment of areas for excavation, spoil deposition and landscaping.
- Traffic movements, monitoring of traffic volumes and flows to and from the site on public highways.
- Waste management, monitoring of correct waste handling, storage, and removal procedures including the correct documentation of waste carriage.
- Site lighting, monitoring to ensure that any required lighting is suitably cowled and not directed onto environmentally sensitive areas.

4.5.1.4 Where the monitoring approach allows quantified values to be measured (e.g. noise, dust deposition), the CEMP will set out action levels and limit levels to be agreed with NLC and other consultees. The general principles will be as follows:

- If an action level is exceeded then measures will be taken to reduce the impact through incident investigation, deployment of additional mitigation, changed working methods etc, but work will be allowed to continue.
- If a limit level is exceeded then work will be required to cease pending the outcome of the incident investigation, application of corrective actions (including further or different mitigation, modified working methods etc) and a demonstration through further monitoring that the corrective actions are effective.

- Exceedances of action levels and limit levels and actions taken will be reported to NLC, and other consultees as required.

4.5.1.5 The action levels, limit levels, monitoring techniques, frequencies and locations will be set out in the relevant topic-specific management plans.

4.6 Inspection and Auditing

4.6.1.1 Contractors will be required to undertake a programme of environmental inspections and audits appropriate to their scope of work, and to demonstrate that their responsibilities under the CEMP are being fulfilled. In addition, NLGEPL will carry out periodic environmental audits of the EPC contractor, as appropriate, to verify compliance with the CEMP.

4.6.1.2 Accidents/incidents will be investigated and reviewed by the EPC Contractor's EHS Manager (or similar) and/or NLGEPL SHE Director (or similar) as appropriate.

4.7 Contingency Planning for Emergencies and Environmental Incidents

4.7.1.1 Procedures to deal with emergencies and incidents will be set out in a specific Site Emergency Response Plan (or similar). Environmental incidents can be defined as unexpected events which lead to, or could in different circumstances have led to, adverse effects on people, property or on environmental resources such as natural habitats or watercourses.

4.7.1.2 Emergency response protocols will be detailed in NLGEPL's site management procedures. All of the works associated with the Project will be conducted in accordance with Project-specific risk assessments and method statements, to be prepared by the contractor, and agreed in advance with NLGEPL.

4.7.1.3 Incidents will be investigated and reviewed by the SHE Director (or similar).

5. SECURING MITIGATION IN THE CEMP

5.1 Overarching Considerations

5.1.1.1 The Environmental Statement (ES) has identified environmental receptors, significant residual effects, and proposed mitigation measures. This information will form the basis of an Environmental Aspects and Impacts Register (or similar) that will be included as an integral part of the CEMP in the course of that document being developed.

5.1.1.2 The CEMP will be the vehicle for the delivery of the construction mitigation measures set out in the ES (and reproduced in Appendix A of this CoCP[1]). Supported where necessary by issue or topic-specific management plans, the CEMP will develop the commitments made in the ES into detailed site-wide environmental management requirements and associated working methods and procedures that will be designed to ensure compliance with the DCO requirements and conditions agreed for the Project.

5.1.1.3 The EPC contractor will be responsible for developing the detailed procedures and methods statements to manage and control all of the aspects and impacts identified. Contractors will be required to demonstrate the use of Best Practicable Means as defined in the Environmental Protection Act 1990, to prevent 'statutory nuisances' from occurring and be required to comply with any additional conditions imposed during the process of obtaining other consents and licences required for the construction of the Project.

5.1.1.4 CEMPs will be produced for each part of the Project where it is necessary to have a focused CEMP rather than one all-encompassing CEMP for the whole Project. A single CEMP will be produced for the Permitted Preliminary Development Works (see Section 5.3).

5.1.1.5 The CEMPs will be periodically reviewed to ensure they are current and fit for purpose. Any material change to a CEMP or one of its component plans will be agreed in advance with NLC and the relevant consultee(s) in accordance with DCO Requirement 4(4).

5.2 Public Communication

5.2.1.1 To mitigate potential effects on human health, a proactive and ongoing programme of engagement and information dissemination will be undertaken, including use of scientific and third-party sources to provide objective information into the public domain. As has been the case during the consultation on the DCO application, NLGEPL will proactively seek to acknowledge and address concerns and issues raised by the local community as well as promoting the benefits of the project.

[1] It should be noted that some measures listed in the table in Appendix A apply to both construction and operation, hence the reference in some instances to an operational phase plan as the securing mechanism.

5.2.1.2 NLGEPL is committed to maintaining good relationships with the local community and stakeholders and being a good neighbour. A proactive and ongoing programme of engagement and communication will be undertaken during construction and operation, ensuring that channels of communication always remain open. During construction and operation there could be activity on site which could cause local disruption. NLGEPL's strategy is a 'no surprises' approach where local residents will be informed in advance of any such activity and provided with contact details to get in touch. The Construction Environmental Management Plan (CEMP) will set out how NLGEPL will minimise disruption during construction. This will be publicised to the local community and stakeholders to provide reassurance.

5.2.1.3 Activity will include:

- **Community liaison group**: A community liaison group will be set up which will meet regularly throughout construction and operation. This will be a useful forum to update local stakeholders during construction and operation and deal with any issues, promoting and encouraging a two-way dialogue with the local community and stakeholders during construction and operation.
- **Community Liaison Officer**: A full time Community Liaison Officer will be employed during construction of the Project to manage relationships with the local community and stakeholders.
- **Community newsletters and e-bulletins**: A quarterly newsletter/e-bulletin will be sent to the local area and stakeholders to update on progress at the site.
- **Neighbour letters**: Letters to neighbours will be used to communicate any construction or operational updates that may impact on local residents and businesses.
- **Website updates**: The website will be regularly updated with news and construction/operational updates.
- **Community contact points**: The community contact points (email and Freephone) will be maintained throughout construction and operation, allowing local people to easily get in touch. An Enquiries and Complaints plan will set out how NLGEPL will manage enquiries from the community.
- **Stakeholder engagement**: Ahead of construction starting NLGEPL will contact all stakeholders and offer an update meeting. Further meetings will then be held as required.
- **Economic & Employment Group**: An Economic & Employment Group has been established to help ensure that the economic benefits of the scheme are maximised locally. The group includes various regional stakeholders, such as North Lincolnshire Council, Department for Work and Pensions (DWP), Hull and Humber Chamber of Commerce, North Lindsey College, CATCH[2], Greater Lincolnshire Local Enterprise

[2] CATCH is an industry led partnership supporting the process, energy, engineering and renewable industries in Yorkshire and Humber.

Partnership (LEP), Humberside Engineering Training Association (HETA) and Lincolnshire Chamber of Commerce. Its objective is to:

- maximise job opportunities for local people;
- maximise supply chain opportunities for local businesses;
- work with local training providers to ensure that local people have the right skills to take advantage of the opportunities the Project presents, including reskilling people that are unemployed; and
- raise awareness of the green jobs offered by the Project and encourage local people, particularly under-represented groups, to consider a career in 'net zero' industries.

- **Open days and visitor centre**: Once operational the local community and stakeholders will be able to visit the Project for presentations and to make use of the visitor centre.
- **Media relations**: News, construction/operational updates and key milestones will be highlighted through local and regional media.

5.2.1.4 Building on the work of the Economic & Employment Group, NLGEPL will develop and Employment and Skills Policy to be included in the CEMP for submission to and approval by NLC. The policy will set out how NLGEPL will seek to maximise local employment and economic benefits in the construction phase and describe the key metrics that will be used to monitor progress. Progress against the agreed metrics will be reported to NLC in an annual report.

5.3 Permitted Preliminary Development Works CEMP

5.3.1.1 Certain works will be required to take place in advance of the construction of the Project phases. These works are anticipated to comprise:

- environmental surveys, including ground conditions and archaeology;
- enclosure of areas of land within the Order Limits;
- installing site notices; and
- site clearance and removal of minor structures.

5.3.1.2 While there is limited scope for impacts from such activities, they are likely to commence in advance of submission and approval of the overall CEMP and its suite of component management plans. It is important therefore to secure the mitigation that will be necessary to avoid, minimise and reduce any impacts from the preliminary works.

5.3.1.3 The construction contractor will prepare a CEMP that covers the Permitted Preliminary Development Works (PPDW-CEMP) and submit it to North Lincolnshire Council for approval in advance of any such works commencing.

5.3.1.4 For each permitted preliminary activity, the proposed construction methods will be reviewed against the requirements of the PPDW-CEMP. For

example, any works that may affect natural habitats will require review by the Ecological Clerk of Works (ECoW).

5.3.1.5 The PPDW-CEMP will address the following matters to the extent they are relevant to an aspect of the Permitted Preliminary Development Works as listed above:

- soil management and storage;
- surface water, drainage management and protection of water courses;
- storage and handling of hazardous materials (e.g. fuel oil) and spill response provisions;
- management of noise and noisy plant/activities;
- dust control measures;
- solid and liquid waste management;
- protection of habitats and protected species (including the role of the ECoW);
- methods and timing of vegetation removal;
- procedures in the event of encountering contaminated soils or material;
- procedures for pre-commencement archaeology that are in accordance with the Written Scheme of Investigation and developed in close coordination with the North Lincolnshire Council County Archaeologist.
- site access and traffic management; and
- community liaison procedures, responding to complaint and reporting.

5.3.1.6 The measures to be contained in the PPDW-CEMP will be advised by the CoCP but will also be proportionate to the nature and scale of the particular aspect of Permitted Preliminary Development Works. The PPDW-CEMP will also set out the roles and responsibilities for all parties involved in the Permitted Preliminary Development Works.

5.4 Archaeology and Cultural Heritage

5.4.1.1 The management of potential impacts on buried archaeology during the construction of the Project requires specific approaches that differ from other impact management topics as outlined in the following text.

5.4.2 Archaeological evaluation, mitigation and groundwork monitoring during construction

5.4.2.1 The mitigation measures summarised in the Overarching Archaeological Mitigation Strategy (OAMS) are based on current understandings of cultural heritage in the Project site. These may be modified following the completion of the further exploratory archaeological investigation (evaluations) secured by Requirement 11(1) of the dDCO (**Document Reference 2.1**) and following further consultation with the Historic Environment Officer for North Lincolnshire.

5.4.2.2 Archaeological mitigation will be carried out in accordance with the measures developed in detail in the Overarching Mitigation Strategy (OAMS) and relevant parts summarised in the Construction Environmental Management Plan (CEMP).

5.4.2.3 The evaluations to be undertaken in accordance with Requirement 11(1) of the DCO (**Document Reference 2.1**) may also identify archaeological features that require full excavation and/or sampling as part of the mitigation measures outlined in the OAMS.

5.4.2.4 In addition to evaluations and archaeological mitigation works, a number of areas will also require archaeological monitoring of construction groundworks, otherwise known as a 'watching brief' [3]. A generic procedure for archaeological monitoring of groundworks across all areas of the authorised development will be described in detail in the OAMS and relevant parts summarised in the CEMP. The procedure will be informed by the results of the trial trench evaluation and geophysical surveys and will ensure that boundaries of known and potential archaeology are well defined in relation to the areas where groundworks are required.

5.4.2.5 The undertaker and their lead contractor will appoint archaeological contractors to produce location-specific Written Schemes of Investigation (WSIs) and Method Statements that will specify the further evaluation, mitigation and ground monitoring works to be carried out in each of the development areas in accordance with the OAMS and the CEMP.

5.4.2.6 The undertaker and their lead contractor will appoint archaeological contractors to carry out the required evaluation and mitigation work in accordance with the OAMS and the CEMP.

5.4.3 Stop work procedure during monitoring of groundworks

5.4.3.1 The archaeological contractor will clearly set out the stop work procedure in the event of unexpected archaeological discoveries within each location-specific WSI and Method Statement, following in accordance with the generic policy detailed below. The following text sets out the procedure for unexpected discoveries during archaeological monitoring of construction groundworks.

5.4.3.2 Should remains of archaeological interest be unexpectedly encountered during the monitoring of construction groundworks, the archaeologist will stop all work in the vicinity and the surrounding area will be secured. The area must be made safe, sufficient for any required archaeological investigation of the remains. An appropriate response will then be prepared in consultation with the Historic Environment Officer for North Lincolnshire.

[3] A watching brief is defined by the Charted Institute for Archaeologists (ClfA 2014) as 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons'. CifA (2014). Standard and guidance for an Archaeological Watching Brief (ClfAS&GWatchingbrief_2.pdf (archaeologists.net)

5.4.3.3 An appropriate response may consist of:

- rapid recording and assessment prior to construction proceeding;
- further investigation and assessment to determine significance (if this cannot be determined from the remains as uncovered);
- assessment of project impacts to inform an appropriate further investigation or mitigation strategy; or
- production of a WSI for further stages of archaeological investigation or mitigation.

5.4.3.4 Should remains of national importance be unexpectedly encountered during the monitoring of construction groundworks, the archaeologist will stop all work in the vicinity and the surrounding area will be secured. The area must be made safe, sufficient for any required archaeological investigation of the remains. The archaeological contractor will consult with the Historic Environment Officer for North Lincolnshire and Historic England and an appropriate mitigation strategy will be agreed and implemented.

5.4.3.5 An appropriate mitigation strategy may consist of:

- the implementation of design changes and conservation measures to preserve the archaeological remains in-situ;
- controlled archaeological excavation or sampling; or
- a combination of design changes and controlled archaeological investigation or sampling.

5.4.4 Stop work procedure during other construction work

5.4.4.1 The implementation of a phased iterative process of archaeological investigation and the archaeological monitoring procedure described above, minimises the risk of unexpected discoveries during construction work. If however, archaeological remains are encountered when no archaeologist is present, the following procedure will apply.

5.4.4.2 Should remains of potential archaeological interest be unexpectedly encountered during construction, work will cease in the vicinity and the surrounding area will be secured. The lead contractor's project manager will be contacted immediately and specialist archaeological advice will be acquired. The area must be made safe, sufficient for any required archaeological investigation of the remains. An appropriate response will then be prepared by the lead contractor in consultation with the Historic Environment Officer for North Lincolnshire.

5.4.4.3 An appropriate response may consist of:

- rapid recording and assessment prior to construction proceeding;
- further investigation and assessment to determine significance (if this cannot be determined from the remains as uncovered);

- assessment of project impacts to inform an appropriate further investigation or mitigation strategy; and
- production of a WSI for further stages of archaeological investigation or mitigation.

5.4.4.4 Should remains of national importance be unexpectedly encountered when no archaeologist is present, work will cease in the vicinity and the finds and the surrounding area will be secured. The area must be made safe, sufficient for any required archaeological investigation of the remains. The lead contractor's project manager will be contacted immediately and specialist archaeological advice will be acquired. The lead contractor will consult with the Historic Environment Officer for North Lincolnshire and Historic England and an appropriate mitigation strategy will be agreed and implemented.

5.4.4.5 An appropriate mitigation strategy may consist of:

- the implementation of design changes and conservation measures to preserve the archaeological remains in-situ;
- controlled archaeological excavation or sampling; or
- a combination of design changes and controlled archaeological investigation or sampling.

5.4.5 Human remains

5.4.5.1 The archaeological contractor will clearly set out the procedure in the event of the discovery of human remains within each location-specific WSI and Method Statement, in accordance with the policy as detailed below.

5.4.5.2 Should human remains be uncovered during any construction works, all work will cease, and H.M. Coroner and the local police will be contacted. Any human remains will be left in situ, covered and protected until the police are satisfied they are not of recent origin. If it is necessary to remove any human remains, a licence will be obtained from the Ministry of Justice in accordance with the Burial Act 1857. The archaeological contractor will be responsible for obtaining all necessary permits.

5.4.6 Other Construction Activity

5.4.6.1 Controls will be implemented as part of the CEMP to manage the movement of construction vehicles and machinery in areas of cultural heritage interest.

5.4.6.2 Potential effects on cultural heritage features from piling will be considered as part of the Foundation Works Risk Assessment (see Appendix K).

5.5 Issue/Topic Specific Management Plans

5.5.1.1 The CEMP will include (but not be limited to) the following issue or topic-specific management plans.

Design and construction management plans:

- General Site Operation Plan.
- Contractor Management Plan.

5.5.1.2 The above plans will be prepared by the EPC contractor in collaboration with NLGEPL.

Health and safety management plans:

- Health and Safety Plan.
- Site Emergency Response Plan.

5.5.1.3 The above plans will be prepared by the EPC contractor in collaboration with NLGEPL.

Environmental management plans:

- Dust Management Plan.
- Remediation Strategy.
- Spill Response Plan.
- Asbestos Management Plan.
- Construction Flood Management Plan.
- Waste Management Plan.
- Protected Species Management Plan.
- Invasive Non-Native Species (INNS) Management Plan.
- Soil Management Plan.
- Construction Noise and Vibration Management Plan.
- Piling and Foundation Works Management Plan.
- Construction Ornithology Management Plan.

5.5.1.4 The above plans will be prepared by the EPC contractor in collaboration with NLGEPL.

5.5.1.5 Traffic related matters are addressed separately from the CoCP (and CEMP) in the outline Construction Logistics Plan (**Document Reference 6.2.13, Appendix D**) which will be developed in detail by the EPC contractor to include a Construction Traffic Management Plan and Construction Workers Travel Plan.

5.6 Key Elements of the Topic-specific Management Plans

5.6.1.1 Each topic-specific management plan will generally include the following elements to the extent they are relevant to the particular plan:

- Scope of the plan.
- Background context.

- Definition of roles and responsibilities.
- Description of activity-based triggers for implementation of mitigation and the mitigation measures to be applied for the activities.
- Clear monitoring, inspection and auditing actions including the designation of person(s) responsible.
- Evidence of implementation and maintenance of the plan such as the reporting of monitoring results (as applicable) compared to relevant standards.
- Description of measurable performance indicators (including action levels and limit levels) against which monitoring results can be compared.
- Provision for plan to be maintained up to date and relevant.

5.7 Current Status of Topic-specific Management Plans

5.7.1.1 As noted in Section 5.1, development of the detailed CEMP, including the topic-specific management plans, will be the responsibility of the EPC Contractor. These documents will be developed in accordance with the pre-construction milestones as stipulated in the DCO and submitted to North Lincolnshire Council (and other statutory bodies where required) for review and approval.

5.7.1.2 For some EIA topics demonstrating the means of securing mitigation is particularly important and therefore outline topic-specific management plans are provided as appendices to this CoCP.

5.7.1.3 The following outline plans are provided as appendices to this CoCP:

- Appendix B: Outline Dust Management Plan.
- Appendix C: Outline Remediation Strategy.
- Appendix D: Outline Spill Response Plan.
- Appendix E: Outline Asbestos Management Plan.
- Appendix F: Outline Construction Flood Management Plan.
- Appendix G: Outline Waste Management Plan.
- Appendix H: Outline Protected Species Management Plan.
- Appendix I: Outline Invasive Non-Native Species (INNS) Management Plan.
- Appendix J: Outline Soil Management Plan.
- Appendix K: Outline Piling and Foundation Works Management Plan.
- Appendix L: Outline Construction Noise and Vibration Management Plan.
- Appendix M: Outline Construction Ornithology Management Plan.

APPENDIX A: SUMMARY OF MITIGATION MEASURES AND SECURING MECHANISMS DURING CONSTRUCTION

January 2023

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Chapter 5 – Air Quality					
Section 7.3, Paragraph 7.3.1.1	Construction dust	Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Display the head or regional office contact information.	Construction Contractor	CEMP (DMP), CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Develop and implement a DMP, which may include measures to control other emissions, for approval by the NLC. The level of detail will depend on the risk and will include as a minimum the highly recommended measures. The measures will be appropriate for the site. The DMP will include monitoring of dust deposition, dust flux, real time PM_{10} continuous monitoring and/or visual inspections.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Make the complaints log available to NLC when asked.	Construction Contractor	CEMP (CRP, also see CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust and other emissions	Record any exceptional incidents that cause dust and/or gaseous emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to	Construction Contractor	CEMP (DMP), (see also CoCP)	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		NLC when asked. This will include regular dust soiling checks of surfaces such as street furniture, cars, and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.		DCO Requirement 4	
Section 7.3, Paragraph 7.3.1.1	Construction dust	Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to NLC when asked.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust and other emissions	Increase the frequency of site inspections by the person accountable for air quality and dust issues onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.	Construction Contractor	CEMP (DMP), (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust and other emissions	Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Keep site fencing, barriers and scaffolding clean using wet methods.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.	Construction Contractor	CEMP (DMP), see also CoCP	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				DCO Requirement 4	
Section 7.3, Paragraph 7.3.1.1	Construction dust	Cover, seed, or fence stockpiles to prevent wind whipping.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Other construction emissions	Ensure all vehicles switch off engines when stationary - no idling vehicles.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Other construction emissions	Avoid the use of diesel- or petrol-powered generators and use mains electricity, hydrogen or battery powered equipment where practicable.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Dust and other construction emissions	Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of NLC, where appropriate).	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.1	Construction dust	Use enclosed chutes and conveyors and covered skips.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure equipment is readily available onsite to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Other construction emissions	Avoid bonfires and burning of waste materials.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure effective water suppression is used during demolition operations. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Dust and other construction emissions	Avoid explosive blasting, using appropriate manual or mechanical alternatives.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.1	Dust and other construction emissions	Bag and remove any biological debris or damp down such material before demolition.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.	Construction Contractor	CEMP (DMP, SMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.	Construction Contractor	CEMP (DMP, SMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Only remove the cover in small areas during work and not all at once.	Construction Contractor	CEMP (DMP, SMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Avoid scabbling (roughening of concrete surfaces) if possible.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.1	Construction dust	For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Avoid dry sweeping of large areas.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust	Record all inspections of haul routes and any subsequent action in a site logbook.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust and dirt track out	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.3, Paragraph 7.3.1.1	Construction dust and dirt track out	Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.3, Paragraph 7.3.1.1	Construction dust and dirt track out	Access gates to be located at least 10 m from receptors where possible.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Chapter 7 – Noise					
Section 7.2, Paragraph 7.2.1.1	Construction noise pollution and vibration	Best Practicable Means as defined by the Control of Pollution Act 1974 (CoPA) and Environmental Protection Act 1990 (EPA), will be applied during construction activities to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors.	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.1	Construction noise pollution and vibration	As part of Best Practicable Means, mitigation measures will be applied in the following order: noise and vibration control at source: for example, the selection of quiet and low vibration equipment, review of construction methodology to consider quieter methods, location of equipment on-site, control of working hours, the provision of acoustic enclosures and the use of less intrusive alarms, such as broadband vehicle reversing warnings; screening: for example, local screening of equipment or perimeter hoarding or the use of temporary stockpiles; and where, despite the implementation of BPM, the noise exposure exceeds the criteria defined in the CEMP, options for suitable receptor-based mitigation will be reviewed and offered at qualifying properties.	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.2	Construction noise pollution and vibration	Lead contractors will develop and submit a CEMP for agreement with the local planning authority. The CEMP will set out Best Practicable Means measures to minimise construction noise and vibration, including control of working hours, and provide a further assessment of	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		construction noise and vibration. The approved measures will be set out in detail by the Contractor in the CEMP.			
Section 7.2, Paragraph 7.2.1.3	Construction noise pollution	Contractors will undertake and report monitoring as is necessary to assure and demonstrate compliance with all noise and vibration commitments. Monitoring data will be provided regularly to, and be reviewed by the Applicant and made available to NLC.	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Section 7.2.1.6	Traffic noise	Construction traffic routes will be chosen to avoid routing lorries through villages and past NSRs on minor roads as far as possible.	Construction Contractor	Traffic Management Plan (see also Outline CLP) DCO Requirement 10	6.2.13 Appendix D / 2.1
Chapter 8 – Ground Conditions, Contamination and Hydrogeology					
Section 7.2, Paragraph 7.2.1.1	Environmental pollution (soil and water)	Prevent potential pollution of the environment occurring through disturbance of land contamination or through the introduction of potential contaminative materials during construction.	Construction Contractor	CEMP (Remediation Strategy) (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.2	Environmental pollution (ground water)	When piling, avoid creating flow paths between potentially contaminated soils and/or groundwater in underlying strata.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.3	Workforce safety	Compliance with CDM Regulations and other H&S legislation will apply throughout any works on side, including any pre-development works.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2. Paragraph 7.2.1.3	Environmental contamination	If contamination occurs on site that had not previously been identified, suitable mitigation measures will be put in place	Construction Contractor	CEMP (Remediation	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		i.e., additional site investigation, regulatory dialogue, and remediation measures,		Strategy) (see also CoCP) DCO Requirement 4	
Section 7.2, Paragraph 7.2.1.3	Construction dust	Any impacted material, if stored onsite, will be covered to prevent mobilisation of contamination due to infiltration, and to prevent the release of windborne particles or vapour.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
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.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.3	Environmental pollution (soil and water)	A spill response plan will be in place to minimise impacts to soils, groundwater, or surface water from accidental spills/releases.	Construction Contractor	CEMP (SRP) (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.3	Water quality	The water environment will be protected through the management of earthworks and materials arising, particularly in areas of potential contamination	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.6	Soil resource use and waste management	Maximum management of waste disposal, including surplus soil, will be used to maximise environmental and development benefits by using surplus material and reduce effects of disposal.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7 / 2.1
Section 7.2, Paragraph 7.2.1.7	Workforce and public health and safety	An asbestos management plan will be produced to inform appropriate precautions to be taken if materials containing asbestos are encountered.	Construction Contractor	CEMP (Asbestos Management Plan), see also CoCP	6.3.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				DCO Requirement 4	
Section 7.3, Paragraph 7.3.1.5	Ground gas risk to buildings	Ground gas monitoring is currently ongoing and will continue to the construction phase since the first round of ground gas monitoring indicated that the area MW1 is classified as Characteristic Scenario 3 and may require protective measures in the design of any buildings in the area. Site evaluation and risk assessment processes and the development of protective measures would be in accordance with BS8485:2015+A1:2019.	NLGEPL, Construction Contractor	CEMP, see also CoCP DCO Requirement 4	5.12 / 2.1
Chapter 9 – Water Resources					
Section 8, Paragraph 8.2.1.10	Flood risk to workforce and construction assets	A flood management plan will be prepared by the contractor and agreed with the Environment Agency. The flood management plan will be designed to reduce the potential consequence from a flood occurring during the construction phase.	Construction Contractor	CEMP (Flood Management Plan, see also CoCP) DCO Requirement 4	6.3.7 / 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.	Construction Contractor	DPCD, CEMP (see also CoCP) DCO Requirements 3 and 4	6.3.7 / 2.1
Section 7, Paragraph 7.1.1.1	Water quality	Lining materials, good housekeeping techniques, and by the control of draining and construction materials to prevent groundwater contamination. Site personnel will be aware of potential impact on ground and surface water associated with certain aspects of construction works to further reduce accidental impacts.	Construction Contractor	CEMP, see also CoCP, Indicative Surface Water Drainage Plan DCO Requirements 4 and 8	6.3.7 / 6.3.5/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1	Water quality	Designated area for refuelling of construction vehicles and equipment with properly designed fuel tanks and bunds and suitable operating procedures.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1	Water quality	Construction machinery maintenance on-site will be forbidden outside suitably kerbed or bunded areas to prevent accidental leakage of lubricating or hydraulic fluids.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1	Water quality	Material stockpiles will be sited a minimum distance from watercourses to avoid pollution runoff. Best practice working procedures will be followed to avoid spillages near watercourses.	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7/ 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.	Construction Contractor	CEMP (see also CoCP), Indicative Surface Water Drainage Plan DCO Requirements 4 and 8	6.3.7 / 6.3.5/ 2.1
Section 7, Paragraph 7.1.1.1	Water quality	All relevant works will adhere to The British Standard Code of Practice for Earthworks BS 6031:2009 for the general control of drainage on construction sites. Further advice within the British Standard Code of Practice for Foundations BS 804:1986, CIRIA C649 and C648 Control of Water Pollution from Linear Construction projects.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Chapter 10 – Ecology and Nature Conservation					
Section 7.1, Paragraph 7.1.1.3	Habitat loss	The working footprint will be kept to a minimum with impacts on key receptors avoided wherever possible.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.1, Paragraph 7.1.1.6	Species disturbance	Minimising disturbance through noise and lighting during construction.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.1, Paragraph 7.1.1.6	Habitat degradation and pollution	The adoption of best practices and development of management plans to prevent pollution from dust, chemicals, and excess sediment.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.1, Paragraph 7.1.1.6	Habitat loss and degradation	Appropriate soil stripping and storage, adhering to Defra (2009).	Construction Contractor	CEMP (SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.1, Paragraph 7.1.1.6	Habitat loss and degradation	The protection of existing trees and vegetation to be retained prior to any materials or machinery being brought on site. Protective fencing will be installed in line with BS 5837:2012.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.1, Paragraph 7.1.1.6	Invasive species	The implementation of control measures to prevent the introduction or spread of non-native species.	Construction Contractor	CEMP (INNS Management Plan, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.1, Paragraph 7.1.1.6	Habitat loss and species disturbance	Ensuring all site workers are aware of ecological issues.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Habitat degradation and pollution	Measures in the CEMP (outlined in the CoCP) to limit dust pollution and fuel/chemical spillage will be strictly adhered to in the vicinity of national and regional wildlife sites.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.4	Habitat loss and degradation	Any felled/pruned trees and shrubs will be retained and stacked to create deadwood habitat piles where possible.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.145	Habitat loss and degradation	Stripped turves and soil will be stored separately and carefully replaced to allow the ground vegetation to recover where possible.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.4	Habitat loss and degradation	Native replacement trees and shrubs matching those that are removed will be planted in an irregular pattern at a spacing of around 1.5-2 m.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.4	Habitat loss and degradation	To aid establishment, where necessary transplants will be protected by stock-proof fencing, rabbit-proof fencing and/or protective guards (preferably made of bio-degradable material).	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.4	Habitat loss and degradation	An ECoW will provide specific instructions on all habitat restoration measures.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.6	Habitat loss and degradation	Machinery and workers will be instructed to disturb the minimum area of ground near to the Local Nature Reserve (LNR) boundary.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.6	Habitat loss and degradation	Access routes to working areas will be shared with and approved by the project ecologist prior to works commencement to avoid damage to habitats within the LNR.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.6	Habitat loss and degradation	Selected felled/pruned trees and shrubs will be retained and stacked to create deadwood habitat piles suitable for amphibians and reptiles.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraphs 7.2.1.6, 7.2.1.10 to 7.2.1.12	Habitat loss and degradation	Compensation for removed trees and scrub will be achieved through woodland creation and natural regeneration within the planned landscape area.	Construction Contractor	ILBP, CEMP (see also CoCP) DCO Requirements 4 and 6	4.10 / 6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.8	Habitat degradation and pollution	Measures in the CEMP will mitigate possible effects from dust pollution and fuel/chemical spillage.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.10	Habitat loss and degradation	To the south, the Local Wildlife Site supports semi-improved neutral grassland located adjacent to the proposed access track. The construction phase will enforce a suitable speed limit and take measures to ensure vehicles and construction machinery stay within the confines of the track do not affect adjacent habitat.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.11	Habitat loss and degradation	Targeted scrub removal outside of the 5 m buffer will be carried out to enhance and increase the existing areas of Lowland Calcareous Grassland. All scrub removal will be undertaken using handheld machinery, outside of the nesting bird season and under the direction of a supervising ecologist.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.13	Habitat loss and degradation	Suitable mitigation for secondary impacts outlined within the CoCP (and to be developed in detail in the CEMP) will be adhered to.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.14	Habitat loss and degradation	Where possible, removed sections of hedgerow will be promptly reinstated following completion of construction within affected areas.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.14	Habitat loss and degradation	Topsoil from beneath the hedgerows will be stripped and stored separately, with soil storage areas clearly signed and demarcated to prevent any mixing with other soils.	Construction Contractor	CEMP (SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.14	Habitat loss and degradation	Topsoil will be replaced after works and any banks reformed to similar profiles as before.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.14	Habitat loss and degradation	Replacement and compensatory hedgerow planting based on native shrub species of local origin. All new and replacement hedgerows will be species-rich, supporting over five woody species within each 30 m length.	Construction Contractor	ILBP, CEMP (see also CoCP) DCO Requirements 4 and 6	4.10 / 6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.14	Habitat loss and degradation	To aid establishment, where necessary transplants will be protected by stock-proof fencing, rabbit-proof fencing and/or protective guards (preferably made of bio-degradable material).	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.15	Habitat loss and degradation	The root zones of retained hedgerows in proximity to construction activities will be safeguarded by Root Protection Areas (as defined in British Standard: BS: 5837:2012), as specified within the CoCP.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.16	Habitat loss and degradation	Mitigation of Lowland Calcareous Grassland includes the establishment of exclusion zones with appropriate signage and pollution prevention measures. Compensation for unavoidable habitat loss will include the expansion of this	Construction Contractor	ILBP, CEMP (see also CoCP)	4.10 / 6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		habitat where scrub and/or trees will be permanently lost, and around the perimeter of proposed woodland planting to the west of the railway. Habitat creation will use translocated turfs where appropriate.		DCO Requirements 4 and 6	
Section 7.2, Paragraph 7.2.2.2	Habitat loss and degradation	The creation of Lowland Meadow grassland habitat within the Energy Park Land will provide compensation for the loss of 62 ha of arable farmland, including associated grassland field margins and areas of species-poor set-aside grassland.	Construction Contractor	ILBP, CEMP (see also CoCP) DCO Requirements 4 and 6	4.10 / 6.3.7/ 2.1
Section 7.2, Paragraph 7.2.2.3	Habitat loss and degradation	Where individual patches of scrub cannot be retained, they will be reinstated at the same location or compensated for by planting as part of the proposed landscaping area at a ratio of at least 2:1. Minor loss of species-poor tall ruderal and bracken vegetation will also occur; these will be compensated for by the planned habitat creation.	Construction Contractor	ILBP, CEMP (see also CoCP) DCO Requirements 4 and 6	4.10 / 6.3.7/ 2.1
Section 7.2, Paragraph 7.2.2.4	Habitat loss, degradation, and pollution	CEMP measures will be implemented to protect retained trees from root damage and compaction and to limit impacts affecting retained woodland, caused by dust and pollutants.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.2.4	Habitat loss and degradation	Material from felled/pruned trees and shrubs will be retained and stacked in nearby habitats to create deadwood habitat piles to benefit amphibians, reptiles, and invertebrates.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
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.	Construction Contractor / NLGEPL	ILBP, Outline LBMMP DCO Requirements 6 and 7	4.10 / 5.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.2.5	Habitat loss and degradation	The CEMP will include pollution prevention measures and measures to prevent unplanned physical damage to banks which will be strictly adhered to when working near to watercourses and standing waters.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.2.6	Water quality	All ditches will be retained where possible and culverted or diverted only where necessary. Water course crossings will be established using ducts. In all circumstances, working within a wet channel will be avoided, minimising the potential for pollution. Once ducts are installed, ditches will be fully reinstated to their original condition and allowed to flow naturally.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 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, Construction Contractor	PP, CEMP (see also CoCP) ILBP DCO Requirements 4 and 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, Construction Contractor	ILBP DCO Requirement 6	4.10/ 2.1
Section 7.2, Paragraph 7.2.3.3	Invasive species	The INNS management plan will be finalised as part of the CEMP and will include detailed measures for the removal of invasive species and biosecurity measures to prevent the import or spread of invasive species. The LBMMP will include details of the ongoing monitoring regime of the Project during operation. This will allow for early identification and treatment of invasive species should they colonise.	Construction Contractor	CEMP (INNS Management Plan), see also CoCP Outline LBMMP DCO Requirements 4 and 7	6.3.7/ 5.7 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.5	Species harm	A licence from Natural England will be sought for works considered likely to affect GCN; district level licensing will be considered as a potential option. (Note that this licensing will be applied for outwith the DCO and is secured by separate legislation). Where required for licensing, repeated eDNA surveys of ponds will be undertaken during the survey season prior to works commencement. No works that could affect suitable GCN terrestrial habitat will begin until the necessary licence has been obtained.	Construction Contractor	CEMP (PSMP, see also CoCP) (see also Consents and Licence Document) DCO Requirement 3	6.3.7 / 5.8/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss	Reasonable avoidance measures will be included within a method statement outlining mitigation and compensation measures for GCN. Measures will be implemented by contractors undertaking railway reinstatement works within 0.25 km of GCN ponds.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss and harm to species	Timing of works for the clearance of suitable amphibian refuge habitat within 0.25 km of GCN breeding ponds will take place during the GCN breeding season (mid-March to end of June), when most of the population will be located within the breeding pond. If this is not possible the works will be undertaken between April and October.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss and harm to species	Guidance on the use of access routes, vehicles, plant, and tools will be provided by a suitably qualified ecologist when specifying the construction methodology.	Construction Contractor	CEMP, see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss and species harm	Before clearance works commence, all contractors will receive a 'tool-box' talk or site induction from a suitably qualified ecologist to make them aware of the potential for GCN, legislative context and procedure if GCN are encountered during works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.6	Species harm	Vegetation clearance will involve strimming using handheld machinery to a height of 150 mm (and arisings removed), a minimum of 48 hours before strimming to ground level, to encourage individuals to move out of the immediate area. Strimming will be carried out under ecological supervision.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss and species harm	Prior to any disturbance/destruction of amphibian refuge habitat, suitable compensatory habitat in the form of hibernacula, in a nearby location will be installed. The careful dismantling of log/brash piles will be carried out by hand and reassembled outside of the working area. Railway sleepers will be carefully lifted, and the underside inspected by the supervising ecologist before being taken off site or repositioned.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Species harm	Hand searching will be undertaken after strimming and prior to the commencement of construction within 0.25 km of a GCN pond, by a suitably experienced ecologist.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Species harm	Any trenches or other excavations will be backfilled, covered over, or a means of escape provided at the end of each day in order to prevent amphibians becoming stranded within trenches. Trenches will be carefully inspected in the morning prior to commencement of works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Habitat loss and degradation	All stockpiling of materials or storage of machinery within 0.25 km of GCN ponds must be contained within sub-optimal habitat.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.6	Species harm	All excavated material will be stored in such a way that does not create habitat for GCN.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.6	Species harm	In the event that GCN are encountered, works in that location must cease immediately and the scheme ecologist contacted. GCN will be moved by a suitably licensed ecologist or agent to a suitable location outside the working area. Common amphibians will be carefully relocated in the same way by site operatives.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.7	Species harm	Mitigation for potential impacts on common amphibians includes phased strimming during vegetation clearance (leaving 48 hours between strimming to 150 mm and ground level); anti-entrapment measures for trenches and other excavations; compact stockpiling of materials over hardstanding or open ground; and ensuring contractors are aware of amphibians and a suitable area they may be relocated to. ECoW supervision will also be required for the draining down of ponds and removal/diversion of ditches within the Energy Park Land, in order to oversee amphibian welfare and support the relocation of any amphibians to an undisturbed ditch outside of the working area.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.8	Habitat loss	Wherever possible, trees will be retained, and their root systems will be protected from disturbance through the implementation of Root Protection Areas.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.8	Species harm	If felling or pruning is necessary, pre-commencement checks, involving an aerial assessment of potential roosting features, will be undertaken immediately prior to works affecting these trees.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.8	Species harm	Bat boxes will be repositioned on a suitable tree nearby and replaced if found to be broken or damaged.	Construction Contractor	CEMP (PSMP, see also CoCP) Outline LBMMP DCO Requirements 4 and 7	6.3.7/ 5.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.8	Species harm	Two additional Schwegler 2F bat boxes will be installed on a nearby suitable tree to compensate for the loss of any natural roosting features.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.9	Species harm	Checks for potential bat roosting features in both buildings and trees will form part of the pre-clearance ecology walkovers that will be incorporated in the CEMP. If roosting bats or potential bat roosts are identified an appropriate mitigation strategy will be developed.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 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.	Construction Contractor NLGEPL	CEMP (see also CoCP) Indicative Lighting Strategy DCO Requirements 4 and 5	6.3.7 / 6.3.4/ 2.1
Section 7.2, Paragraph 7.2.3.12	Habitat loss and species harm/disturbance	Where possible, the clearance of nesting habitats will be undertaken outside the breeding bird season (March to August inclusive). Any clearance of suitable habitats for tree/scrub nesting birds that is carried out within the bird breeding season, will be subject to pre-clearance bird surveys carried out by a suitably experienced ecologist.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.12	Species harm/disturbance	No works will be carried out within a nesting buffer zone determined by the ECoW, until the young have fledged and are no longer returning to the nest site. Works will only be undertaken once a suitably qualified ECoW has declared the nest is no longer in use.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.12	Species harm/disturbance	Where pre-clearance checks identify Cetti's warbler, measures to avoid disturbance to this species will involve establishing a minimum 25 m exclusion zone depending on the level of surrounding construction noise.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Wet scrub and swamp/marginal vegetation creation for loss of Cetti's warbler breeding habitat; key species to feature in the habitat creation scheme will include common reed and willow	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of scrub, woodland, or hedgerows, which provides suitable breeding habitat for blackcap/dunnock/song thrush/bullfinch/tree sparrow will be compensated for by woodland, scrub, and hedgerow creation.	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of arable fields which are suitable for grey partridge will be compensated for with the provision and maintenance of long, tussocky grassland.	Construction Contractor	DPCD ILBP, Outline LBMMP DCO Requirements 3 and 6	5.12 / 4.10 / 5.7/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of breeding habitat will include the provision of tall marginal vegetation dominated by grasses and wetland habitats.	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of arable cropland which provides significant habitat for breeding skylark, will be mitigated with new habitat creation including lowland meadow and or bringing existing areas of grassland into a management regime.	Construction Contractor	DPCD ILBP, Outline LBMMP DCO Requirements 3 and 6	5.12 / 4.10 / 5.7/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of suitable habitat for willow warbler will be mitigated for by the creation of dense scrub, comprising native species.	Construction Contractor	DPCD ILBP	5.12 / 4.10 / 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				DCO Requirements 3 and 6	
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Hedgerow creation will be incorporated into the landscape design of the Energy Park Land, with management regimes that avoid cutting during the nesting bird season.	Construction Contractor	DPCD ILBP, Outline LBMMP DCO Requirements 3 and 6	5.12 / 4.10 / 5.7/ 2.1
Section 7.2, Paragraph 7.2.3.13	Habitat loss	Any loss of arable farmland will require mitigation for yellow wagtail in the provision of lowland meadow, dense marginal/tall ruderal, 'weedy' vegetation, and wetland features.	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10 / 2.1
Section 7.2, Paragraph 7.2.3.15	Habitat loss	Any loss of habitats will require mitigation for wintering birds including grassland creation, scrub/hedgerow planting with berry/fruit bearing native trees and shrubs and provision of marginal and tall ruderal vegetation within wet features.	Construction Contractor	CEMP see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Species loss	Prior to the commencement of works, all contractors will receive a 'tool-box' talk from a suitably qualified ecologist to make them aware of the potential for encountering common lizards and procedure if reptiles are found during works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Habitat loss	Phased working areas will be clearly defined to limit potential disturbance of habitats.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Habitat loss	An ecological walkover prior to each phase of works will confirm a method of vegetation clearance, likely to involve	Construction Contractor	CEMP (PSMP, see also CoCP)	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		a combination of approaches including the hibernation habitat for reptiles.		DCO Requirement 4	
Section 7.2, Paragraph 7.2.3.16	Species harm	Following strimming to 50 mm, any potential hibernation or refuge habitat (such as rock piles, tree roots or wood/brash piles) present within the working area will be dismantled and removed carefully under supervision of the ecologist.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Habitat loss	Immediately after vegetation clearance, arisings will be removed from the working area to avoid creating suitable habitat for reptiles. For example woody material can be used to create habitat in unaffected areas of the site, under direction from a suitably qualified ecologist.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Species harm	Post-clearance and during earthworks, all vegetation will be kept short until completion of works in a given area.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Species harm	All stored materials, which may provide reptiles with suitable refugia, will be raised off the ground, on pallets stored over bare ground.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Species harm	All excavated material will be stored in such a way that does not create habitat for reptiles (i.e. well compacted with no voids).	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.16	Species harm	Any trenches or other excavations required within the site will be backfilled before nightfall, or a ramp left to prevent reptiles becoming trapped. Trenches will be carefully inspected in the morning prior to commencement of works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.17	Species harm	Compensatory habitats will be created for the loss of habitats used by common lizards, including areas of woodland and calcareous grassland within the Railway Reinstatement Land. Logs from felled trees will be used to	Construction Contractor	CEMP (PSMP, see also CoCP)	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		create suitable refugia and basking locations along the south-facing embankment of the railway.		DCO Requirement 4	
Section 7.2, Paragraph 7.2.3.18	Species harm	Pre-construction walkovers and monitoring for badgers a maximum of two months prior to each phase of works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	Installation (or integration with construction site fencing) of suitable fencing to discourage badgers from entering the construction site whilst providing a safe route to accessible foraging habitats.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	There will be a phased construction where a main sett is nearby, to avoid isolation / fragmentation of badgers from foraging and commuting habitat.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	No construction works will be undertaken within 30 m of an active sett not subject to temporary closure, and clear marks will be used to delineate the boundaries of the working areas.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	Heavy machinery and site access will be planned to avoid coming near badger setts.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	Fire or chemicals will not be used within 20 m of a sett entrance.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	Any trees that need to be felled will be felled in such a way that they fall away from active setts, and any felled trees will be cleared from badger paths and sett entrances.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.18	Species harm	Loud noises and vibrations will be avoided as much as possible near active setts.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
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.	Construction Contractor 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 7.2.3.18	Species harm	Any excavations will be covered at night, or a means of escape provided for wildlife.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	A watching brief will be maintained for badgers and if any are seen or suspected works will be stopped immediately, and a suitably qualified ecologist contacted.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.18	Species harm	Contractors will be vigilant during the works, and should a tunnel be breached and impacts on a badger, or any other animal be suspected, then the works will stop immediately, and a suitably qualified ecologist contacted.	Construction Contractor	CEMP (see also CoCP) PSMP DCO Requirement 4	6.3.7/ 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, Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.21	Species harm	Works within 30 m of the sett in close vicinity to the Railway Reinstatement Land will be avoided within the badger breeding season (July to November inclusive).	Construction Contractor	CEMP (PSMP, see DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				also CoCP)	
Section 7.2, Paragraph 7.2.3.21	Species harm	No excavations will be dug within 30 m of the sett.	Construction Contractor	Embedded Works Plans	4.4
Section 7.2, Paragraph 7.2.3.21	Species harm	Prior to commencement, all contractors must be made aware of the potential for badger to be encountered during works.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.21	Species harm	Vegetation clearance required within 10 m of the sett will be carried out under ecological supervision and using hand tools only.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.21	Species harm	Contractors will not store materials within 10 m of the sett and noise levels will be kept to a minimum.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.21	Species harm	Machinery will not track within 10 m of the sett.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.24	Species harm	All contractors will be made aware of the potential presence of otter and water vole.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.24	Species harm	Wherever possible, night-time working near watercourses will be avoided or else minimised.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.24	Species harm	There will be no direct illumination of watercourses.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.24	Species harm	Obstructions to otter movement along watercourses will, wherever possible, be temporarily removed, beached, or bridged at night.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.24	Species harm	Any excavations/trenches/open pipe systems will be backfilled or capped at the end of each working day. Where this is not practical, an escape ramp will be provided to allow egress for any animals which become trapped in excavations.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.25	Species harm	Mitigation for water vole will comprise pre-commencement surveys of all ditches within the working area undertaken within the appropriate survey period (two visits April to September). If signs are observed displacement will be undertaken under a class licence.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.26	Habitat degradation	Any debris from works will not be left within the Application Land.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.26	Species harm	Any excavations associated with works will be covered overnight or fitted with egress boards to prevent animals becoming trapped.	Construction Contractor	CEMP (PSMP, see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.26	Species harm	Any small mammals found within the works area during construction will be carefully relocated to sheltered and undisturbed locations with plenty of vegetation cover.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.3.27	Water quality and species harm	Pollution mitigation measures will minimise the possibility of dust pollution and fuel/chemical spillage affecting the River Trent during the construction and operational phases.	Construction Contractor	CEMP (DMP, SRP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.3.28	Habitat loss	Three ponds and part of the ditch network will be removed/modified within the Energy Park Land. ECoW supervision will be in place for draining down and to oversee fish welfare and support relocation.	Construction Contractor NLGEPL	DPCD CEMP (see also CoCP) DCO Requirements 3 and 4	5.12 / 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.	Construction Contractor 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. Blocks of woodland around the Energy Park development will be delivered to complement nearby and adjoining areas of new scrub and grassland habitat.	Construction Contractor 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	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.	Construction Contractor NLGEPL	DPCD ILBP Outline LBMMP	5.12 / 4.10 / 5.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				DCO Requirements 3, 6 and 7	
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).	Construction Contractor 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.	Construction Contractor 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 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.	Construction Contractor NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7.3, Paragraph 7.3.1.11	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.	Construction Contractor NLGEPL	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Chapter 11 – Landscape and Visual Impact					

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.5	Landscape and visual	Introduction of pockets and strips of woodland planting, including both formal and natural planting, at strategic locations at the parameter of proposed buildings to soften the impact of the Project and to integrate built form into the landscape.	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10 / 2.1
Section 7, Paragraph 7.1.1.5	Landscape and visual	Extension of the distinctive linear woodland (Burton Wood) located on the scarp slope to provide a wider connection and strategic belt of green infrastructure, linking with the corridor provided by the railway reinstatement land, and screening views from Flixborough.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape and visual	Extension of this woodland west along the railway line, to form an enhanced green link around the north edge of Flixborough Industrial Estate and to provide visual screening to the ERF.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7 Paragraph 7.1.1.5	Landscape and visual (and ecology)	Creation of a wetland area extending north to south along the west side of the Project, to enhance local landscape quality and recreational opportunities.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape (and ecology)	Creation of areas of grassland to the east of the battery storage and west of the above ground installation (AGI), to enhance local landscape quality and biodiversity.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.5	Visual	Introduction of pockets of vegetation along the corridors of the A1077 to filter views of the Project, whilst allowing some long-distance views across the low-lying landscape.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape (and ecology)	Reinstatement of hedgerow along Ferry Road West and planting around the Site entrance, to create a landscape gateway and provide links between new woodland areas.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape and visual	Creation of more formal landscape planting along the spine road, around the buildings, and along the railway terminal to assist integration of the buildings into the arable landscape pattern.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape and visual	Introduction of public access and green links through the Site, connecting the river and the Local Nature Reserve to increase recreational value.	Construction Contractor	DPCD ILBP Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1
Section 7, Paragraph 7.1.1.5	Landscape and visual	Planting of woodland strips parallel to the railway reinstatement land to replace cleared vegetation, retaining the perception of a continuously wooded corridor, providing linkage between existing woodlands, and reinforcing visual screening along Stather Road at Flixborough village.	Construction Contractor	DPCD ILBP, Outline LBMMP DCO Requirements 3, 6 and 7	5.12 / 4.10 / 5.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Chapter 12 – Archaeology and Cultural Heritage (reference should be made to the Section 6.6 of Chapter 12 for an explanation of the 'Impact Areas'					
Section 7, Paragraph 7.1.1.2 to 7.1.1.4	Loss of or damage to buried archaeology	Impact Area 1 The excavation of the fuel bunker shaft will be conducted with an archaeological watching brief, which allows for regular access to the shaft for recording of the alluvial sequence (site 134). Special provision will be made for an excavated face of the sequence to be made available during excavation (between shuttering) to enable a continuous archaeological section to be drawn and appropriate environmental samples to be taken. The watching brief will include provision for mechanical excavation to be suspended, enabling controlled archaeological excavation should traces of archaeological material be encountered. The buried remains of the medieval/post-medieval settlement at Flixborough Staithe (site 7) will be recorded by a controlled archaeological excavation down to proposed impact levels. The surviving historic fabric of Flixborough Ferry (site 132), on the foreshore immediately west of the Order Limits, will be recorded at low water to form a permanent record of their form and current condition.	Construction Contractor	CEMP (see also CoCP DCO Requirements 4 and 11	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.5 to 7.1.1.6	Loss of or damage to buried archaeology	Impact Area 2 An archaeological watching brief will be undertaken during the excavations of the foundations for the plastic recycling facility and concrete block manufacturing facility, where they impact on deeply buried organic sequences. Depending on the results of this watching brief and the purposive geoarchaeological evaluation outlined in Appendix E, which includes borehole transects through Area 2, a strip map and sample strategy may also be undertaken in this location, targeting the edge of the peat deposit where waterlogged archaeological remains have a higher likelihood of surviving.	Construction Contractor	CEMP (see also CoCP) DCO Requirements 4 and 11	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		The area where a former brick kiln is known to have been located, to the east of the road south of Flixborough Staithe (site 124) will be subject to a comprehensive watching brief.			
Section 7, Paragraph 7.1.1.7 to 7.1.1.8	Loss of built heritage	Impact Area 3 A watching brief will be carried out in the area of the Second World War searchlight battery that formerly existed to the north of the B1216 (site 10). The watching brief will include provision for mechanical excavation to be suspended, enabling controlled archaeological excavation should traces of archaeological material be encountered. Following trial trench investigation of the features identified during geophysical survey (Appendix F), there will be controlled archaeological excavation (strip, map and sample) of areas where archaeological remains are identified.	Construction Contractor	CEMP (see also CoCP) DCO Requirements 4 and 11	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.9 to 7.1.1.10	Loss of or damage to buried archaeology	Impact Area 4 Following additional geoarchaeological and trial trenching evaluation (Appendix E and F, respectively) archaeological excavation of the site of the substation and Gas AGI plant will take place (site 133). Geophysical survey has identified anomalies in this area which suggest former Roman and, in all probability, prehistoric settlement. Previous investigations further east along the same slope have demonstrated both the high archaeological potential of this area, and the tendency of the wind-blown sands to cover old land surfaces. Controlled archaeological excavations down to formation level will be conducted across this area. Those portions of Area 4 which fall outside the substation/AGI development area, will be subject to woodland landscaping as part of the Project. An archaeological watching brief will be conducted of any activities involving ground disturbance in this area, given the potential for archaeological material indicated by	Construction Contractor	CEMP (see also CoCP) DCO Requirements 4 and 11	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		geophysical surveys as well as past discoveries on the wind-blown sands of the valley slopes. The watching brief will include provision for mechanical excavation to be suspended, enabling controlled archaeological excavation should traces of archaeological material be encountered.			
Section 7, Paragraph 7.1.1.11	Loss of or damage to buried archaeology	Impact Area 5 An archaeological watching brief will be conducted during stripping of the easement for the DHPWN given the known potential for prehistoric and later archaeology on the wind-blown slopes of the valley side. The watching brief will include provision for mechanical excavation to be suspended, enabling controlled archaeological excavation should traces of archaeological material be encountered.	Construction Contractor	CEMP (see also CoCP) DCO Requirements 4 and 11	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.12 to 7.1.1.13	Loss of or damage to buried archaeology	Impact Area 6 An archaeological watching brief will be conducted during stripping of the topsoil ahead of the construction of the bund in this area given the proximity of the potential Iron Age/Roman cropmark site (site 9). The watching brief will include provision for mechanical excavation to be suspended, enabling controlled archaeological excavation should traces of archaeological material be encountered. There are few options in terms of direct mitigation of the impacts of the Project on the setting of the Scheduled remains of 'Flixborough Nunnery'. Screen planting would block views across the Trent Valley and the Isle Of Axeholme, which are integral to the site's sense of place.	Construction Contractor	CEMP (see also CoCP) DCO Requirements 4 and 11	6.3.7/ 2.1
Chapter 13 – Traffic and Transport					
Section 7.2, Paragraph 7.2.1.2	Traffic disruption	A Construction Traffic Management Plan (CTMP) will be developed prior to the commencement of construction, which will define the hours during which deliveries can be made to and from the site and also the routes that vehicles will take. Deliveries will be timed to avoid the peak times for pedestrian movement (such as school start and finish	Construction Contractor	DPCD, CLP (see outline CLP) DCO Requirement 10	5.12 / 6.2.13 Appendix D/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		times) as far as possible so as to limit the impact of the additional HGV movements on pedestrian /cycle delay and amenity.			
Section 7.2, Paragraph 7.2.1.3	Traffic disruption	.All construction vehicle operators will be required to be accredited in line with FORS (Freight Operator Recognition Scheme) to demonstrate their commitment to using clean, safe vehicles with good levels of direct vision, safety bars and advisory signage (as stipulated in the outline CLP) unless a specific exception is agreed with NLC prior to that haulier or supplier visiting site. This will seek to minimise the risk of collisions between vehicles and vulnerable road users, such as cyclists and pedestrians.	Construction Contractor	DPCD, CLP (see outline CLP) DCO Requirement 10	5.12 / 6.2.13 Appendix D/ 2.1
Section 7.2, Paragraph 7.2.1.4	Traffic disruption	In terms of construction workforce, whilst the majority of travel is expected to fall outside the highway peak hours, there is a commitment in the outline CLP to implement a number of measures to help reduce the impact of workforce traffic as set out below: Provision of a shuttle bus service/park and ride facility during peak construction periods to transport workforce from a car parking location off-site; Construction Workers Travel Plan to encourage the use of non-car modes; and Staggered arrival/departure times wherever possible to help minimise any impacts on the local highway network during highway peak periods.	Construction Contractor	DPCD, CLP (see outline CLP) DCO Requirement 10	5.12 / 6.2.13 Appendix D/ 2.1
Section 7.2, Paragraph 7.2.1.3	Traffic disruption	New Access Road for the Project will be constructed at the start of the construction phase, to be used by construction vehicles during peak construction (thus avoiding use of Stather Road).	Construction Contractor	DPCD, CLP (see outline CLP) DCO Requirement 10	5.12 / 6.2.13 Appendix D/ 2.1
Chapter 14 – Economic, Community and Land Use Impacts					

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.3	Community disturbance	Avoiding all settlements, where practicable.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community disturbance	Avoiding areas, where practicable, of known built development, outside of Flixborough Wharf, and permanent active uses including sport, leisure and recreational facilities, commercial and industrial uses (including retail), residential, healthcare, education, public institutions, and open space.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community disturbance	Use of best practice methods.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community disturbance	Implementation of a CEMP, which it is envisaged will be secured by a DCO requirement.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Economy	Local suppliers will be informed of the proposed construction works and participation of local and regional companies in the tendering process will be encouraged.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Economy	Specific provision of employment and education opportunities for the local community will be made, including apprenticeship schemes, post-graduate training programmes, funded research placements and contributions to educational and vocational training.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Economy	Preparation of an Employment and Skills Policy to maximise use of local suppliers and local employment opportunities	NLGEPL	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.3	Business	Operators of nearby sensitive facilities will be informed of construction activities that may affect their usual operations and activities, such as access, opening hours, and planned events.	Construction Contractor	CEMP (CRP or similar) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Economy	Provision of employment and education opportunities for the local community with apprenticeship schemes, post-graduate training programmes, funded research placements and contributions to educational and vocational training.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Dust nuisance	The adoption of measures to control the deposition of dust on adjacent open space, adjacent business premises, PRoWs, and agricultural land.	Construction Contractor	CEMP (DMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Land use / soil protection	All soil handling, placing, compaction and management will be undertaken in accordance with best practice (DEFRA, 2009); a Soil Management Plan (SMP) will be prepared in advance of construction to ensure protection, conservation and reinstatement of soil material, its physical and chemical properties and functional capacity for agricultural and ecological/habitat reinstatement.	Construction Contractor	CEMP (SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Land use / Environmental pollution / Traffic control	Plant and traffic movements within the site will be confined to designated routes (e.g. haul routes and vehicle access routes) to minimise the potential for soil disturbance, compaction, and indirect contamination.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Land use	Reinstatement of land and soils after completion of works, in line with the principles of the Land Reinstatement Policy, unless otherwise agreed with the landowner.	Construction Contractor	CEMP (SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Land use	The reinstatement of agricultural land, which is used temporarily during construction to agriculture, in line with	Construction Contractor	CEMP (SMP, see also CoCP)	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		the principles of the Soil Management Plan, where this is the agreed end use.		DCO Requirement 4	
Section 7.2, Paragraph 7.2.1.3	Land use	Arrangements for the maintenance of farm and field accesses, land drainage and water supply where these are affected by construction.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Land use	The protection of agricultural land within the Order Limits, where adjacent to construction sites, including the provision and maintenance of appropriate stock-proof fencing.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community access	The reinstatement of open space which is used temporarily during construction.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community access	Creation of temporary footpath diversions for affected PRoW during construction, where required.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Community access	PRoW diversions/closures will be communicated to NLC and other relevant organisations, including Parish Councils. Information will include the duration of the proposed closures.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.3	Social	The areas identified for future mitigation and an area of wetlands created beside the River Trent will allow for public access and this will result in a net increase in open space provision.	Construction Contractor	DPCD ILBP DCO Requirements 3 and 6	5.12 / 4.10/ 2.1
Chapter 15 – Waste					

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.4	Waste management	Spoil arising from the works that is classed as 'acceptable fill' will be used in construction works wherever practicable (dependent upon compliance with existing waste management legislation). The CL:AIRE Definition of Waste: Development Industry Code of Practice (DoW CoP) will be employed, allowing the reuse of excavated materials.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.5	Waste management	The disposal of waste, including any surplus spoil, will be minimised so far as is reasonably practicable. The environmental and development benefits from the use of surplus material will be maximised in order to reduce pressure on existing disposal facilities. The DoW CoP will be employed, allowing the movement and reuse of excavated materials between different parts of the site.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.6	Waste management	The WMP along with best practice measures for the minimisation and management of waste will be developed and will include an audit programme	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.8	Waste management	Construction waste will be segregated into different labelled bunkers or segregated spoil heaps on site to facilitate reuse, appropriate disposal and to avoid contamination.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.9	Waste management / Safety	If encountered, hazardous waste requiring special measures will be segregated from non-hazardous material, clearly labelled, stored temporarily, and handled in accordance with relevant regulations and transported by licensed waste carriers to be treated at a licensed waste facility. Where remediation is not practicable, material will be removed.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7.2, Paragraph 7.2.1.10	Waste management	Material that is considered reusable in the construction of the Project or associated works will be stockpiled in accordance with a Soil Management Plan (SMP) to be drafted and included in the CEMP.	Construction Contractor	CEMP (SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph 7.2.1.11	Waste management	The proximity principle will be applied, whereby construction waste material unsuitable for reuse that is exported off-site will be treated or disposed of as close to the point of generation as reasonably practicable.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph, 7.2.1.12	Waste management	Appropriate analysis of material that is considered reusable in the construction of the Project will be carried out to establish if it is suitable for the proposed use, does not contain material that can cause harm to human health or the environment and does not require further treatment prior to use.	Construction Contractor	CEMP (Construction WMP, SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph, 7.2.1.13	Waste management	Concrete and demolition rubble will be assessed to establish if it can be crushed, screened, and used as recycled aggregate for backfill. Such processing may be done on or off-site by a suitable contractor.	Construction Contractor	CEMP (Construction WMP, SMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7.2, Paragraph, 7.2.1.14	Waste management	Biodegradable waste from vegetation clearance and tree removal will be sent for local composting or anaerobic digestion.	Construction Contractor	CEMP (Construction WMP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
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	Construction Contractor and NLGEPL	CEMP (Construction WMP), see also	6.3.7/ 5.12/ 6.3.8/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
		specific construction and operational waste management measures.		CoCP, DPCD, OEMP DCO Requirement 4	
Chapter 16 – Major Accidents and Hazards					
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Storage of diesel during the construction phase will be carefully managed to meet secondary containment requirements.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Prior to commencement of the construction phase, a plan will be developed for management/recovery of spilt materials.	Construction Contractor	CEMP (SRP), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Utilisation of construction industry methods to assess the likelihood and mitigate against ground instability (e.g. areas where subsidence/ground collapse would be a concern) on the construction site.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Flood risk	The Flood Risk Assessment and construction industry methods will be utilised to assess the likelihood and mitigate against flood risk on the construction site.	Construction Contractor	CEMP (Construction Flood Management Plan), see also CoCP. DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Consult with the civil aviation authority to verify the low density of commercial air traffic in the area.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Consult with local RAF site to verify the density of military air traffic in the area.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Adherence to industry standard demolition techniques.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Security	Adherence to CDM regulations and appropriate security measures e.g. site security presence and fencing to prevent trespassers.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Establish Construction Traffic Management Plan (CTMP) and a Construction Workers Travel Plan (CWTP) for the development with the local authority.	Construction Contractor	CEMP (Construction Traffic Management Plan), see also CoCP DCO Requirements 4 and 10	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Establish a plan to determine the risk to personnel working on the Energy Park site from nearby site Jotun Paints.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 7, Paragraph 7.1.1.1, Table 3	Safety	A philosophy for the storage/stock piling/control of all materials used in the construction phase will need to be developed to adhere to best environmental practice.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
Section 7, Paragraph 7.1.1.1, Table 3	Safety	Carry out detailed survey of disused buildings and the site in general for the presence of asbestos contamination. If identified, risk to be managed according to the requirements of the Control of Asbestos Regulations 2012.	Construction Contractor	CEMP (Asbestos Management Plan), see also CoCP DCO Requirement 4	6.3.7/ 2.1
Chapter 17 – Health (*1)					
Section 5.1.2, Paragraph 5.1.2.11	Health and Safety	Adherence to relevant restrictions and guidance in relation to Covid management and prevention will be integrated into the CEMP and will also be communicated to the public to mitigate potential anxiety in relation to this issue	Construction Contractor	CEMP (see also CoCP) CEMP (CRP or similar) DCO Requirement 4	6.3.7/ 2.1
Section 5.1.2, Paragraph 5.1.2.15	Health and Safety	To mitigate effects on human health, a proactive and ongoing programme of engagement and information dissemination will be undertaken, including use of scientific and third-party sources to provide objective information into the public domain.	NLGEPL	CEMP (CRP or similar) DCO Requirement 4	6.3.7/ 2.1
Section 5.1.3, Paragraph 5.1.3.29	Health and Safety	Engagement and ongoing communication with local communities will be an important mitigation measure to reduce anxiety associated with construction activity. The engagement will include the establishment of a hotline or contact point for residents to report noise disturbance (or any other construction-related issues).	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 5.1.4, Paragraph 5.1.4.2	Health and Safety	Acknowledging and proactively addressing public perceptions, will mitigate negative perceptions of the area and impacts on social capital.	Construction Contractor	CEMP (see also CoCP) DCO Requirement 4	6.3.7/ 2.1
Section 5.1.4, Paragraph 5.1.4.3	Health and Safety	Advance communication of proposed construction works, and liaison with local communities during construction activity.	Construction Contractor	CEMP (see also CoCP)	6.3.7/ 2.1

ES Paragraph Reference	Type of Impact	Mitigation Measure	Responsibility	Securing Mechanism	DCO Document Reference
				DCO Requirement 4	
Section 5.1.5, Paragraph 5.1.5.2	Health and Safety	Loss of jobs will be mitigated by early engagement with the relevant businesses and relocation costs being covered by the compensation code n.	NLGEPL	CEMP (see also CoCP) DCO Requirement 4 Compensation code	6.3.7/ 2.1
Section 5.1.6, Paragraph 5.1.6.4	Health and Safety	The deployment of a Community Liaison Officer (or similar), publication of the CEMP, the adoption of a hotline or alternative contact mechanisms for residents and advance notification of proposed construction works, amongst other measures.	Construction Contractor	CEMP (see also CoCP) (CRP or similar) DCO Requirement 4	6.3.7/ 2.1

APPENDIX B: OUTLINE DUST MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
CEMP	Construction Environmental Management Plan
DMP	Dust Management Plan
IAQM	Institute of Air Quality Management
NLC	North Lincolnshire Green Energy Park

1. SCOPE OF THE PLAN

1.1.1.1 The detailed Dust Management Plan (DMP) to be prepared by the Construction Contractor as part of the Construction Environmental Management Plan (CEMP) will set out a series of measures for the control and minimisation of releases of dust. The remit of the Dust Management Plan will cover all site preparation, excavated material storage, movement and disposal, waste removal and all related engineering and construction activities that are likely to generate dust at levels that could cause offsite impacts, and which are under the responsibility of North Lincolnshire Green Energy Park Limited (NLGEPL). The measures to be included in the detailed plan will relate directly to sensitive receptors in the vicinity of the Project works. As such the plan is likely to be organised by Project phase or have a subset of plans for each phase.

2. BACKGROUND

2.1.1.1 Dust will mainly occur as airborne particles of soil, occurring as particulate matter of a specified range, typically between 1-75 µm in diameter. Dust may be suspended in air and / or deposited from air. In this case, as the dust is generated from the movements of soil and spoil, the dust will arise mainly in the size range of 10-30 µm in diameter. At this size range, dust is not associated with health effects, as it is arrested in the upper airways, but is associated with nuisance issues due to soiling of surfaces. Cement particle sizes can be smaller and cement dust management requires specific measures. In addition, through construction traffic movements and the nature of the site, soil can potentially be carried out onto local roads. A number of processes during the construction of the Project can therefore potentially release dust and appropriate management will be required. Smoke and odour are also other potential 'nuisance' emissions that may arise on a construction site.

2.1.1.2 The main sources of dust emissions on the Project site are likely to be:

- haulage vehicles, both on-site and road licensed;
- construction plant;
- demolition of underground redundant infrastructure;
- excavation and handling of soils;
- stockpiles (including un-seeded stripped topsoil and subsoil mounds) and areas of excavated or stripped and exposed soils;
- loading of haulage vehicles; and
- cement batching (if used).

2.1.1.3 In the absence of effective mitigation these sources can result in the generation of elevated quantities of air-borne dust, especially in periods of prolonged dry weather and under windy conditions.

2.1.1.4 The content of the detailed plan will be informed by accepted good industry practice (with appropriate sources of guidance referenced therein) together with the commitments made in the Environmental Statement for the Project.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed Dust Management Plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases).

3.1.1.2 However, it is expected that all parties on the Project site will have a duty to ensure that neighbours and passers-by are not inconvenienced by construction activities, including dust, and this requirement will be set out in the detailed plan.

4. CONSTRUCTION DUST MANAGEMENT MEASURES

4.1.1.1 The Air Quality Impact assessment [Add ref] concluded that construction activities for the ERF and new road are classified as 'high risk' of causing dust nuisance due to demolition, earthworks, construction and track out. Therefore, the detailed dust management plan will set out mitigation measures applicable to 'high risk' sites. Outline measures derived from Institute of Air Quality Management (IAQM) guidance are set out in Table B1 and will be developed in detail by the Construction Contractor in terms of where and when they will apply. Other aspects of construction of the Project are of less risk and the detailed dust management plan will present suitable measures based on a risk assessment that considers the nature and location of activities and the proximity of sensitive receptors (including ecological receptors).

Table B1: Construction Dust Mitigation for 'High Risk' Activities

Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
Display the head or regional office contact information.
The Dust Management Plan (DMP) will include measures to control other emissions, for approval by the North Lincolnshire Council. The level of detail will depend on the risk and will include as a minimum the highly recommended measures in this document. The desirable measures will be included as appropriate for the site. The DMP will include monitoring of dust deposition, dust flux, real time PM10 continuous monitoring and/or visual inspections.
Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
Make the complaints log available to North Lincolnshire Council when asked.
Record any exceptional incidents that cause dust and/or gaseous emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to North Lincolnshire Council when asked. This will include regular dust soiling checks of surfaces such as street furniture, cars, and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.
Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to North Lincolnshire Council when asked.
Increase the frequency of site inspections by the person accountable for air quality and dust issues onsite when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
Keep site fencing, barriers and scaffolding clean using wet methods.
Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
Cover, seed, or fence stockpiles to prevent wind whipping.
Ensure all vehicles switch off engines when stationary - no idling vehicles.
Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of North Lincolnshire Council, where appropriate).
Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
Use enclosed chutes and conveyors and covered skips.
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
Ensure equipment is readily available onsite to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Avoid bonfires and burning of waste materials.
Demolition
Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).
Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to

where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
Avoid explosive blasting, using appropriate manual or mechanical alternatives.
Bag and remove any biological debris or damp down such material before demolition.
Earthworks
Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
Only remove the cover in small areas during work and not all at once.
Construction
Avoid scabbling (roughening of concrete surfaces) if possible.
Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.
Track out
Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
Avoid dry sweeping of large areas.
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
Record all inspections of haul routes and any subsequent action in a site logbook.
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
Access gates to be located at least 10 m from receptors where possible.

Asbestos has been detected in made ground soils on the Project site during ground investigations; this is addressed in a separate outline Asbestos Management Plan.

The detailed plan will make provision for cessation or pausing of works where dust prevention measures prove inadequate.

5. MONITORING, INSPECTION, AND AUDITING

5.1 General Considerations

5.1.1.1 The detailed plan will set out air quality monitoring measures and make provision for these to commence at least two weeks before any construction activity on the Project site.

5.1.1.2 The monitoring plans will include provisions for the following.

- Monitoring and recording of weather forecasts on a daily basis to predict weather conditions such as prolonged dry, hot spells or significantly strong winds which may generate elevated levels of dust, which in turn would entail mobilising the necessary precautionary measures or even suspension of certain activities.
- Installation of an air quality monitoring system to be operated and maintained around the site to measure deposition and airborne dust concentrations and to:
  - check that construction activities do not give rise to exceedances of recognised threshold criteria for dust deposition/soiling;
  - check the effectiveness of measures being used to control dust;
  - to provide an 'early warning' system with regard to increased emissions of dust, and a trigger for cessation of site works or application of additional controls;
  - provide evidence to support the likely contribution of the site works in the event of complaints; and
  - to help to attribute any high levels of dust to specific activities on site in order that appropriate action or continuous improvement may be taken.

5.1.1.3 The air quality monitoring system will be designed in accordance with the IAQM Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites[4] and the "Suggested Guidelines for Deposited Ambient Dust"[5].

5.2 Dust Deposition Monitoring Systems

5.2.1.1 For dust deposition the monitoring system will include the following elements commensurate with the level of risk identified through risk assessment.

5.2.1.2 Visual (Qualitative) Air Quality Monitoring, such as recording the weather conditions (rainfall, wind speed and wind direction) and the nature of construction activity that day, as well as any observations of any effects, such as dust deposition or other emissions observed (including smoke and

[4] S Moorcroft / Institute of Air Quality Management (IAQM) (2012) Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites

[5] H W Vallack & D E Shillito (1998) Suggested Guidelines for Deposited Ambient Dust. Atmos. Environ., 32, 2737-2744.

odours). Instructions to implement additional mitigation controls or reported nuisance incidents would be appropriately recorded along with any remedial action taken.

5.2.1.3 Frisbee Gauges to Measure Dust Deposition, in order to provide supporting information on the performance of on-site mitigation measures and to demonstrate that dust deposition levels are below those which could cause nuisance or impinge upon amenity at nearby properties. The detailed plan will provide a map of the monitoring stations.

5.2.1.4 Use dust deposition gauges and supporting techniques (as described in the Environment Agency's Technical Guidance Document (monitoring) M17) in the vicinity of sensitive receptors.

5.2.1.5 Total mass deposition rates for dust will be measured using Frisbee gauges to determine potential annoyance due to larger dust particles.

5.3 Dust Deposition Action Levels

5.3.1.1 Statutory or official air quality criterion for dust annoyance have not been set at a UK, European or international level. However, in England and Wales, a 'custom and practice' limit of 200 mg/m^2/day (mass per unit area per unit time) is used for measurements made with dust deposition gauges.

5.3.1.2 The GLA Best Practice Guide suggests using the following values to determine where dust complaints are possible:

- Open Areas less than 100 mg/m^2/day
- Residential areas less than 150 mg/m^2/day
- Urban areas less than 200 mg/m^2/day

5.4 Measurement of Atmospheric Dust

5.4.1.1 The detailed plan will also make provision for the measurement of dust moving through the air for example through the use of 'sticky-tape' type directional dust gauges. Typically, these would be located in close proximity to the Frisbee gauges at the site boundary and be analysed on a monthly basis for comparison with the baseline conditions.

5.4.1.2 Suitable action level criteria would be agreed with NLC.

6. AUDIT AND INSPECTION

6.1.1.1 In addition to the air quality monitoring equipment, the detailed plan will make provision for regular inspections and periodic audits at defined frequencies. The primary aim of these will be to ensure that the mitigation measures set out in the pan are being implemented as intended.

7. REPORTING

7.1.1.1 The detailed Dust Management Plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

7.1.1.2 It will make provision for air quality monitoring results to be communicated to the Contractor's management and to NLGEPL, within specified times following completion of the monitoring.

7.1.1.3 It will also make provision for periodic monitoring (e.g. monthly) to NLC of:

- the results of laboratory analyses and daily field observations and confirmation that construction activities are within the specified limits;
- details of monitoring equipment used, including field calibration details;
- details of the prevailing weather conditions; and
- details of any incidents or exceedances along with the remedial actions taken.

8. PLAN REVIEW AND UPDATE

8.1.1.1 The detailed Dust Management Plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant.

APPENDIX C: OUTLINE REMEDIATION STRATEGY

Acronyms and Abbreviations

Name	Description
AMP	Asbestos Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
NLC	North Lincolnshire Council
NLGEPL	North Lincolnshire Green Energy Park Limited
SMP	Soil Management Plan
WMP	Waste Management Plan

1. SCOPE OF THE STRATEGY

1.1.1.1 Land contamination has been investigated during the Environmental Impact Assessment (EIA) as reported in Chapter 8 of the Environmental Statement (ES). Relatively little contaminated land was apparent during the site survey and analyses of samples. However, contamination can occur in patches and therefore no site investigation can fully characterise a site, and so there remains a possibility that areas of contamination may remain. The possibility of encountering pollutant materials that could be a hazard to the environment to human health cannot therefore be discounted.

1.1.1.2 The detailed Soil Management Plan (SMP), detailed Asbestos Management Plan (AMP) and detailed Waste Management Plan (WMP) will contain provisions for dealing with any contaminated materials encountered during the construction of the Project. This outline remediation strategy is focused on what will be required to identify and manage any potential contaminated land.

2. BACKGROUND

2.1.1.1 Several elements of the Project will be constructed on land with a history of industrial use and therefore the potential for contamination to be present. Since much of the industrial areas were under hard standing during the site investigation, the amount of sampling (see Chapter 8 of the ES) was restricted. Construction works are likely to involve breaking and removal of areas of hard standing and made ground and this could potentially reveal areas of contamination.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed Remediation Strategy will set out the roles and responsibilities of North Lincolnshire Green Energy Park Limited (NLGEPL), the construction contractor and sub-contractors in implementing the strategy.

4. KEY ELEMENTS OF THE STRATEGY

4.1 Risk Assessment

4.1.1.1 The detailed Remediation Strategy will set out a risk assessment approach to be taken as the initial basis for the strategy. The risk assessment will be informed by a detailed programme of construction that considers such matters as working methods, locations of excavations and other intrusive activities. The assessment should build on work done for the EIA (see Chapter 8) and be informed by any subsequent pre-construction investigation work.

4.1.1.2 Where unacceptable contamination risks are identified the detailed strategy will set out remediation or mitigation options as required. An options

appraisal is typically completed to look at the most feasible options to mitigate the potential risks to environmental receptors and people (including the workforce). Remediation may comprise treatment on site and or disposal off-site at a suitable licensed facility. Once a preferred solution has been assessed and decided upon, a remediation scheme would be designed, submitted to North Lincolnshire Council (NLC) for approval, and implemented. A remediation scheme should include a verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation scheme are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance, and arrangements for contingency action.

4.2 Watching Brief

4.2.1.1 The detailed strategy will make provision for a watching brief to address the possibility of contamination not previously identified being present. The detailed strategy will set out procedures to be adopted in the event of such occurrences that consider such matters as:

- Cessation of work on specific parts of the Project site;
- Developing a remediation scheme (see above) or other mitigation options (e.g. removal as waste);
- Agreement on actions with NLC; and
- Reporting (see below).

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 The detailed strategy will set out relevant monitoring, inspection, and auditing actions. This is likely to be limited to the 'watching brief' procedures and monitoring the effectiveness of any remediations schemes that are implemented. The detailed strategy will designate the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed strategy will set out reporting requirements. These are likely to be limited to the following:

- Provision to NLC of a verification report on completion of any remediation scheme;
- Reporting the results of any long-term monitoring to NLC.

7. STRATEGY REVIEW AND UPDATE

7.1.1.1 The detailed strategy will set out the internal and external triggers for the strategy to be maintained up to date and relevant.

APPENDIX D: OUTLINE SPILL RESPONSE PLAN

Acronyms and Abbreviations

Name	Description
CEMP	Construction Environmental Management Plan
NLGEPL	North Lincolnshire Green Energy Park Limited
SMP	Spill Management Plan
SRP	Spill Response Plan

1. SCOPE OF THE PLAN

1.1.1.1 The detailed Spill Response Plan (SRP) to be prepared by the Construction Contractor as part of the Construction Environmental Management Plan (CEMP) will set out a series of measures for the prevention, containment, and clean-up of leaks and spillages of harmful materials on site. The remit of the SRP will cover all site preparation activities, movement, handling and storage of harmful materials, and all related engineering and construction activities that are likely to constitute the source of an accidental spill or leak, and which are under the responsibility of North Lincolnshire Green Energy Park Limited (NLGEPL). The detailed SRP is likely to be organised by Project phase or have a subset of plans for each phase.

1.1.1.2 The detailed SRP will be developed in accordance with the recognised guidance such as Working at construction and demolition sites: PPG6 Pollution Prevention.

1.1.1.3 The detailed SRP will also consider interfaces with other management plans (notably the Construction Waste Management Plan and the Soil Management Plan).

2. BACKGROUND

2.1.1.1 A variety of activities will take place within the Order Limits that involve the reception, storage, handling, and use of potentially hazardous materials, especially fuel and lubricant oils. Working areas will be close to water bodies including the River Trent and its important sites protected for nature conservation. The soil environment within the Order Limits has and will have a variety of uses including for agriculture, nature conservation, landscaping for the project and provision of nature conservations enhancements.

2.1.1.2 The overall approach will be to plan and manage activities to avoid any harm to people and the environment from the use of potentially harmful materials. However, the possibility of accidental spills and leaks exists and therefore preparedness and contingency measures will also be required.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed SRP will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases). The detailed SRP will identify the person(s) responsible for managing activities and risks on site such as deliveries, oil and chemical storage and dealing with emergencies.

4. SPILL MANAGEMENT MEASURES

4.1 Risk Assessment

4.1.1.1 The detailed SRP will be based on a risk assessment to be undertaken by the Construction Contractor. This assessment will address such matters as:

- the material the Project will require for distinct phases of construction;
- how and where the materials will be delivered, stored, transferred, and used within the Order Limits;
- the nature of activities that will use the materials; and
- the nature and location of receptors that are vulnerable to leaks and spills.

4.1.1.2 The results of the risk assessment will provide the basis for planning and prioritising protection and contingency measures.

4.2 Protection Measures

4.2.1.1 Once the sources of potential spills and leaks and the resources at potential risk have been identified, the detailed SRP will set out specific protective and management measures for the different sources. These measures will specify such matter as:

- specifications for reception and storage facilities (e.g. tank size, base material, bunding capacity, secondary containment);
- procedures for use of potentially hazardous materials (e.g. plant refuelling locations and procedures);
- separation distances between hazards and vulnerable receptors;
- procedures for working near vulnerable receptors when this cannot be avoided;
- training of personnel; and
- other good practice measures as required.

4.3 Containment and Clean-up Measures

4.3.1.1 Based on the risk assessment the detailed SRP will identify the most likely leak and spill scenarios, together with the procedures to be adopted in each case and the equipment and materials required on-site to facilitate the response. This will address such matters as:

- training of personnel;
- communicating and reporting incidents;
- use of vehicular spill kits;
- inventories for larger spill stations and their locations; and
- the response procedures.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 The detailed SRP will set out relevant monitoring, inspection and auditing actions relating to spill response, and for providing assurance to NLGEP of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed SRP will set out procedures for providing evidence of implementation and maintenance of the SRP such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

6.1.1.2 The detailed SRP will also set out incident internal and external reporting protocols.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed SRP will set out the internal and external triggers and process for the plan to be maintained up to date and relevant, for example lessons-learned procedures in the event of an incident.

APPENDIX E: OUTLINE ASBESTOS MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
ACM	Asbestos Containing Materials
AMP	Asbestos Management Plan
CEMP	Construction Environmental Management Plan
DHPWN	District Heat and Private Wire Network
ERM	Environmental Resources Management
ES	Environmental Statement
NLGEPL	North Lincolnshire Green Energy Park Limited
PPE	Personal Protective Equipment
RPE	Respiratory Protective Equipment
SI	Site Investigation
SMP	Soil Management Plan
WMP	Waste Management Plan

1. SCOPE OF PLAN

1.1.1.1 The detailed Asbestos Management Plan (AMP) to be prepared by the Construction Contractor as part of the Construction Environmental Management Plan (CEMP) will set out a series of measures for the control of asbestos contaminated material and protection of the workforce and public from exposure. The remit of the Asbestos Management Plan will cover all site preparation, excavated material storage, movement and disposal, waste removal and all related engineering and construction activities in areas where asbestos is known to be present or could potentially be present, and which are under the responsibility of North Lincolnshire Green Energy Park Limited (NLGEPL). The measures to be included in the detailed plan will relate directly to the location of the Project works that involve ground-breaking or disturbance. As such the plan is likely to be organised by Project phase or have a subset of plans for each phase or may be limited to one phase.

2. BACKGROUND

2.1.1.1 A Tier 2 General Quantitative Risk Assessment, including site investigation (SI), was undertaken in August/September 2021 on the NLGEP land and Southern District Heat and Private Wire Network (DHPWN) land. The details of the SI are presented in Appendix E of Chapter 8 (Ground Conditions, Contamination, and Hydrogeology) of the ES.

2.1.1.2 Asbestos was identified in two soil samples, comprising Anthophyllite in fibre bundles and chrysotile in fibre bundles. Quantification analysis was completed on each of the asbestos containing samples, the results of which identified that asbestos was present at concentrations less that <0.001%, equivalent to the method detection limit. The concentrations were below the method detection limits and whilst a positive result was returned in the screening exercise, the quantification returned results that are not considered to pose a potential risk to human health, particularly as the samples were taken from below hardstanding. However, the potential for asbestos to be encountered during excavation works in the Made Ground of this area cannot however be discounted and a watching brief for suspected Asbestos Containing Materials (ACM) will be required during construction works in the general area of the wharf, together with targeted investigations.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed Asbestos Management Plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases).

4. ASBESTOS RISK MANAGEMENT MEASURES

4.1.1.1 The detailed Asbestos Management Plan will set out the approaches to be used during pre-construction and early stages of construction in regard to the following.

4.1.1.2 The wharf area should be categorised in terms of future uses (for example):

- ***Category A:*** areas where no ground disturbance is required, and the future layout identifies no pathway between future site users and soils e.g. areas covered by hard standing;
- ***Category B:*** areas where excavation is required during construction; to include areas of foundations, trenches, service corridors and any below ground infrastructure which will then be covered;
- ***Category C:*** areas where ground disturbance may be as a result of plant and machinery movement during construction potentially disturbing or spreading ACM; and
- ***Category D:*** areas which will remain undisturbed / unexcavated and are to be proposed future soft landscaping/unsurfaced ground as part of the future development.

4.1.1.3 For areas (primarily in the wharf area where made ground or hard standing is present) falling under B to C above, and where no investigation work has been carried out, and ground disturbing activities are planned, then trial pit investigations should be provided for in advance of the works in order to inform the approach required to mitigate the risk from ACM contamination.

4.1.1.4 The detailed Asbestos Management Plan should then set out the procedures to be adopted for each category in the event of contamination being encountered, noting any variations in procedures stemming from different thresholds of contamination.

4.1.1.5 The detailed Asbestos Management Plan should also set out the methodologies to be adopted for all excavations works addressing such matters as:

- area-specific plans of work and risk assessments;
- segregation of materials that will be reused (noting also the requirements of the Soil Management Plan (SMP));
- training and supervision; and
- visual inspection/watching brief procedures.

4.1.1.6 Where asbestos is found to be present and the option of removing asbestos to reduce its concentration in soils is included in the detailed plan, then procedures for the separation and removal of asbestos should be established in accordance with the Control of Asbestos Regulations 2012 (noting also the requirements of the Construction Waste Management Plan).

4.1.1.7 The detailed Asbestos Management Plan should set out the control measures that will be employed at all times during the works in all the category A to D areas. Examples are provided in Table E1, but site-specific ones should be developed in the detailed plan and also include other Personal Protective Equipment (PPE) that will be required under the site rule.

Table E1: Control measures to be employed during the Works

Control Measure	Details
Designated Work Area	Suitable signage and barriers should indicate the active work area. The active work area should be *out of bounds* for all personnel not involvedin the works. Personnel involved in the works that will require periodic access should be kept to a minimum and will include: ■ excavator driver, ■ material separating personnel; ■ dumper driver, ■ banksman asbestos awareness trained ■ dust suppressor (if required); ■ asbestos removal contractor (hand picking); and ■ environmental consultant.
Dust Suppression	A water supply capable of providing a spray/mist for the purposes of dust suppression during excavations and to damp down surfaces of the stockpile will be available (if soils not already damp)
Respiratory Protective Equipment (RPE)	All personnel (excluding the excavator driver when in the excavator cabin with windows closed) will be required to have FP3 RPE (Respiratory Protective Equipment) (EN:149, FFP3) available on standby; Provided the material is wet / damp then air monitoring should show <0.01f/cm3 and therefore RPE is not required; however RPE must be available and should be worn if unexpected higher risk friable ACMs (i.e.. lagging) are encountered.
Plastic sheeting	Any stockpiles of suspected ACM identified during the works should be cordoned off and kept damp. If the ACM is unbound (friable) Visqueen- type plastic sheeting should be used to cover the material.
Asbestos & Dust Monitoring	Asbestos and dust monitoring to the perimeter of the designated work area at suitable locations (down prevailing wind and one up prevailing wind) to provide reassurance that both dust and fibre levels are below appropriate control limits. In addition, it is recommended that the asbestos pickers and the excavator driver should be provided with personal asbestos monitors. Fibre release levels should be negligible in accordance with previous ERM air monitoring. (On-site airborne fibre monitoring cannot differentiate between synthetic mineral fibre and asbestos fibre).

Note - Additional control measures and PPE may be required if hand picking operations are adopted to separate asbestos form soils. These should be defined by a specialist asbestos subcontractor.

4.1.1.8 The detailed Asbestos Management Plan should also set out the procedures relating to off-site disposal of material excavated and stockpiled which cannot meet the criteria for reuse on site.

4.1.1.9 Lastly the detailed plan should include a protocol for unexpected ACM. The protocol would be expected to address the following if significant quantities of ACMs are identified during the works.

- cessation of work and site workers leaving the area;
- damping down procedures by a machine located up wind of the area;
- use of Respiratory Protective Equipment (RPE);
- temporarily cordoning off the area;
- additional soil sampling;
- review and assessment of the materials in question by a specialist licensed asbestos contractor; followed by appropriate actions (e.g. separation, removal);
- recording the area of remediation and the volume of materials removed from the site; and
- Maintaining waste consignment notes for all material disposed of off-site.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 The detailed Asbestos Management Plan will set out relevant monitoring, inspection and auditing actions relating to the presence of and potential encounters with asbestos contamination and for providing assurance to the workforce and (NLGEPL) of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed Asbestos Management Plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

6.1.1.2 The detailed plan will also make provision on completion of works, to prepare a 'completion report' detailing areas where ACMs were identified, the works undertaken (if any), survey drawings including depths/details of clean cover, any ACMs and non-hazardous waste disposed of off-site, air/dust monitoring results, waste disposal certificates and a photographic log of the works undertaken.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed Asbestos Management Plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant.

APPENDIX F: OUTLINE CONSTRUCTION FLOOD MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
FMP	Flood Management Plan
NLC	North Lincolnshire Council
NLGEPL	North Lincolnshire Green Energy Park Limited

1. SCOPE OF THE PLAN

1.1.1.1 The detailed construction Flood Management Plan (FMP) will set out the elements of the Project's construction phase to be covered by the plan. This is likely to focus on the project phases and also be directed by spatial aspects in terms of those project phases that will require construction activity in areas of differing flood risk.

2. ROLES AND RESPONSIBILITIES

2.1.1.1 The detailed construction flood management plan will set out the roles and responsibilities of North Lincolnshire Green Energy Park Limited (NLGEPL), the construction contractor and sub-contractors in implementing the plan (including how this may differ between phases).

3. CONSTRUCTION FLOOD MANAGEMENT MEASURES

3.1.1.1 The detailed construction flood management plan will describe the specific construction activities, working methods (noting differences between Project phases) that are pertinent in the context of managing flood related risks to the workforce, construction assets and third parties. These descriptions will clearly set out the activity-based triggers for implementation of mitigation and the mitigation measures to be applied for specific activities.

3.1.1.2 Matters that will be covered will include, but not necessarily be limited to, the following:

- Identification of sources and anticipated impact of flood risk;
- Phasing of works (spatially and temporally) and demonstration of how each phase will not temporarily increase flood risk offsite;
- Details of any temporary features that may cross existing watercourses/drainage ditches and any impacts of blocking overland flood routes;
- Location plan of stockpiling of material (especially contaminative materials) in areas at low risk from flooding;
- Measures for inspection of existing flood defences to be undertaken to inform of any potential breach hazards during the construction programme;
- Details of site flood warning system;
- Details of any additional gauge data required to inform flood warning trigger levels;
- Details of how flood warning information will be disseminated across the site;

- Identification of safe evacuation routes from different parts of the site in the event of a flood and how the information will be disseminated; and
- Consultation with the North Lincolnshire Council (NLC) Emergency Planning team and Environment Agency to agree strategy and ensure this fits in with management of flood risk across the wider area.

4. MONITORING, INSPECTION, AND AUDITING

4.1.1.1 The detailed construction flood management plan will set out relevant monitoring, inspection and auditing actions relating to flood risk and for providing assurance to North Lincolnshire Council (and NLGEPL) of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

5. REPORTING

5.1.1.1 The detailed construction flood management plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

6. PLAN REVIEW AND UPDATE

6.1.1.1 The detailed construction flood management plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant.

APPENDIX G: OUTLINE WASTE MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
CEMP	Construction Management Plan
ES	Environmental Statement
KPIs	Key Performance Indicators
NLGEPL	North Lincolnshire Green Energy Park Limited
WMP	Waste Management Plan

1. SCOPE OF THE PLAN

1.1.1.1 The detailed Construction Waste Management Plan (WMP) to be prepared by the Construction Contractor as part of the CEMP will set out a series of measures for considering likely waste arising from construction-based activities such as site preparation, demolition, excavations and earthworks, and address how it will be managed through reduction, separation, control, and disposal. The remit of the WMP will cover all site preparation, demolition,excavated material storage, movement, and all related engineering and construction activities that are likely to generate wastes, and which are under the responsibility of NLGEPL. The detailed WMP is likely to be organised by Project phase or have a subset of plans for each phase.

1.1.1.2 The detailed WMP will be developed considering relevant regulatory requirements including:

- Control of Pollution (Amendment) Act 1989;
- Waste (England and Wales) Regulations 2011;
- Controlled Waste (England and Wales) Regulations 2012;
- Environment Act 1995;
- The Hazardous Waste (England and Wales) Regulations 2005;
- Environmental Permitting (England and Wales) Regulations 2010; and
- Environmental Damage (Prevention and Remediation) (England) Regulations 2015.

1.1.1.3 The detailed WMP will also consider interfaces with other management plans (notably the Soil Management Plan, Remediation Strategy, and the Spill Response Plan).

2. BACKGROUND

2.1.1.1 NLGEPL's overarching approach to waste management will be founded on three main principles as follows.

- All construction wastes arising will be properly managed, both on Site and off-site.
- The waste from the Project will be dealt with appropriately by the waste infrastructure which is, or is likely to be, available such that waste arising from the Project will not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area.
- Adequate steps will be taken in accordance with the 'waste hierarchy' (see Figure 1) to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed WMP will set out how personnel at all levels will have a role in managing materials and waste correctly. By way of example, typical roles and responsibilities that may be defined as part of the detailed WMP are summarised below.

Site Manager:

- Responsible for ensuring a system is implemented that identifies and manages the waste being produced.
- Implements a waste plan as a 'live' document, identifying an appropriate strategy and KPIs.
- Co-ordinates waste management on Site.

Site Waste Management Representative:

- Co-ordinates the identification of materials for re-use or recycling and identify opportunities for waste reduction.
- Co-ordinates staff training.
- Ensures that all waste storage containers are accurately labelled to show all site workers where to deposit specific materials.
- Liaises with the management team to ensure the appropriate management of incoming materials, the establishing of waste management contracts, and the provision of receptacles.

All Site Personnel:

- Ensuring no over-ordering of materials to reduce the amount of waste produced.
- Correct handling and storage of materials to prevent damage and wastage.
- Co-ordinate with the site team the reuse or recycling of materials for alternative usage where possible.
- Correct handling of waste materials by containment, separation, and storage.
- Labelling of waste storage containers to show where to deposit specific materials.
- Ensure containers are stored safely and securely.
- Disposal of waste to appropriately licensed site with correct documentation completed.

3.1.1.2 The detailed WMP will clearly define and assign the responsibilities of personnel at the Project site.

4. WASTE MANAGEMENT MEASURES

4.1 Overarching Considerations

4.1.1.1 NLGEPL is committed to delivering a Project that is sustainable in regard to matters relating to waste management and will comply with the relevant statutory requirements. This requirement will be passed onto the Construction contractor.

4.1.1.2 Waste elimination will start as early as possible, and the contractor will work in conjunction to design and plan waste minimisation at various stages of the Project.

4.1.1.3 The construction WMP will identify, formalise, and communicate waste management good site practice and responsibilities during the construction phase for the Project.

4.1.1.4 The detailed WMP will identify the types and quantities of waste anticipated to be generated, along with the definition of suitable disposal routes. The plan will also include details as to how material reuse and recycling options will be maximised. The plan will be a live document to be updated and monitored by the contractor, in order to demonstrate compliance with the Waste Duty of Care and other relevant regulations.

4.1.1.5 The detailed WMP will be compiled around the well-established principles of the waste hierarchy (see Figure 1).

4.2 Waste Types and Actions

4.2.1.1 The general waste types and volumes which are anticipated to be generated during construction of the Project are detailed in Chapter 15 of the ES. Actions pertaining to waste minimisation which will be considered for implementation during the construction of the Project are also described. Both of the aforementioned will be confirmed in the detailed WMP. Where individual waste types have not been identified, these will be assessed at the appropriate stage.

4.3 Waste Minimisation Actions and Mitigation

4.3.1.1 During the construction phase of the Project the contractor will be required to develop and implement a construction phase WMP, incorporating the requirements within this outline WMP and cognisant of commitments made in the ES. Waste minimisation actions relating to Project-generated waste that are anticipated to be implemented during the construction phase include, but are not limited to:

- agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme;
- to the extent practicable, implementation of a ‘just-in-time’ material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste;

- attention to material quantity requirements to avoid over-ordering and generation of waste materials;
- re-use of materials wherever feasible, especially soils in landscaping for example;
- segregation of waste at source where practical; and
- re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re-use or re-processing).

4.3.1.2 The detailed WMP will set out in detail how such measures and others will be applied, noting possible difference requirements across the Project phases.

4.4 Additional Actions for Dealing with Waste

4.4.1.1 In addition to the waste management measures outlined above, other actions will be included as part of the construction WMP to contribute to the general reduction of waste generation at the Project Site. These may include:

- the clear role of the 'Site Waste Management Representative' to hold overall responsibility for waste management, co-ordinating all waste-related issues on Site from waste data to identifying training needs (sites with such personnel tend to perform better in managing waste;
- accurate record keeping of waste types, volumes and disposal routes and destinations;
- staff awareness training to ensure all personnel know the correct procedures on the Project site for waste segregation, disposal, and the identity of the 'Site Waste Management Representative';
- active promotion of recycling through clear signage;
- setting of targets/ Key Performance Indicators (KPIs) for waste recycling and reduction; and
- establishing a good management structure which allows prompt decision making relating to improvements in waste management and recycling initiatives.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 To be most effective it is important that the detailed WMP is a live document, which is regularly reviewed and updated.

5.1.1.2 The detailed WMP will therefore describe how waste will be monitored routinely, to ensure that waste minimisation obligations and other obligations detailed within the WMP are being met and help to identify opportunities for improvements and potential cost reductions.

5.1.1.3 The following is not an exhaustive list and represents examples of typical monitoring, inspection, and auditing activities undertaken at each stage and which will be considered in the detailed WMP.

5.2 Waste Monitoring

- Update of the WMP at regular intervals throughout the construction programme to reflect changes in the Project such as waste types, volumes, sub-contractors, and changes in personnel and to drive continual improvement in promoting management of wastes as high up the waste hierarchy (see Figure 1) as possible.
- Completion of logs detailing the volume of material brought onto the Project site and the volume of waste generated including the type and the route of disposal/ recovery.
- Collation of data into a report detailing all waste movements for submission to the site manager to be utilised during the annual waste audit and waste review.

5.3 Waste Audit

- Ensure all legislation and regulations are being complied with and that the WMP is being implemented appropriately, monitored through regular site inspections.
- Collate / review baseline information. This will include, for example reviews of:
  - operations/ staffing levels, composition, waste monitoring reports and quantity of waste generated;
  - current waste management procedures;
  - existing activities including, for example, key roles and responsibilities; and
  - an estimation of waste volumes including a comparison from previous and projected years (where appropriate).
- The results of the waste audit will be used to inform the waste review.

5.4 Waste Review

5.4.1.1 The detailed plan will make provision for a waste review to be undertaken following the completion of a waste audit and the completion of regular waste monitoring. The aim of the review would be to provide an opportunity to consider the suitability of the waste management activities that are being undertaken in relation to relevant regulations and best practice procedures, and identify areas for improvement, lessons to be learnt and potential improved cost savings and sustainability.

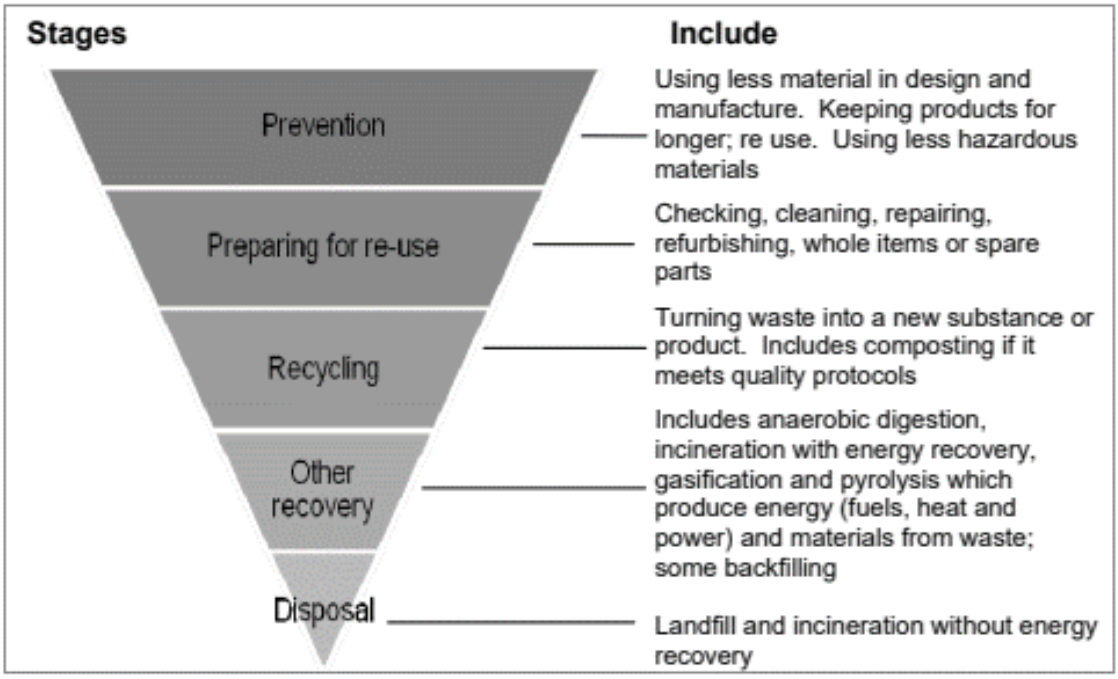
6. REPORTING

6.1.1.1 The detailed WMP will set out procedures for providing evidence of implementation and maintenance of the WMP such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed WMP will set out the internal and external triggers and process for the plan to be maintained up to date and relevant, for example incorporating lessons-learned from waste reviews.

Figure G1: Waste Hierarchy (Source: DEFRA Guidance on Waste Hierarchy)



APPENDIX H: OUTLINE PROTECTED SPECIES MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
CEMP	Construction Environmental Management Plan
CoCP	Code of Construction Practice
COMP	Construction Ornithological Monitoring Plan
DCO	Development Consent Order
DHPWN	District Heat and Private Wire Network
ECoW	Ecological Clerk of Works
ES	Environmental Statement
GCN	Great Crested Newts
JNCC	Joint Nature Conservation Committee
NE	Natural England
NLGEP	North Lincolnshire Green Energy Park
UK	United Kingdom

1. SCOPE OF THE PLAN

1.1.1.1 This outline Protected Species Plan comprises an appendix to the outline Code of Construction Practice (CoCP), informing the Development Consent Order (DCO) application for North Lincolnshire Green Energy Park (NLGEP). A suite of ecological surveys has been undertaken to inform the development proposals, the results of which are presented in full within the Ecology and Nature Conservation chapter of the Environmental Statement (ES) (Bowland Ecology, 2021).

2. BACKGROUND

2.1.1.1 Surveys identified several protected species within the site, comprising badger (*Meles meles*), bats, birds, otter (*Lutra lutra*), common lizard (*Zootoca vivipara*) and water vole (*Amphibius arvicola*). This protected species plan sets out the mitigation requirements, and where necessary the licensing requirements, in respect of protected species during the construction phase of the Project. Mitigation will be secured via a Construction Environmental Management Plan (CEMP).

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases). The detailed plan will identify the suitably qualified person(s) responsible for supervising implementation of the plan.

4. PROTECTED SPECIES MANAGEMENT MEASURES

4.1.1.1 This section outlines the general mitigation principals and measures for protected species, which will be developed further in the detailed plan for adoption during the construction phase. In line with the mitigation hierarchy, the avoidance of impacts will be prioritised where possible. Where potential impacts are unavoidable, appropriate mitigation measures will be implemented.

4.2 Avoidance

4.2.1.1 Avoidance measures will be implemented to prevent unnecessary impacts on protected species, with consideration also given to habitats and other non-protected species. Prior to the commencement of works, a suitably experienced ecologist will be engaged to undertake any necessary repeat surveys for protected species, as outlined in Table 1 below. The project ecologist will also advise on the proposed locations of haul roads, pedestrian routes, construction compounds, welfare facilities and protective fencing/exclusion barriers. On site, works in sensitive areas will not commence until a suitably experienced Ecological Clerk of Works (ECoW) has carried out the appropriate pre-works checks and established any

protected species exclusion zones (e.g. for active bird's nests). Exclusion zones will be clearly marked on site using hazard tape or suitable fencing. Site rules will ensure all contractors understand the purpose of exclusion zones and that they are not to enter or disturb marked-off areas until declared clear by the ECoW.

4.3 Minimising Impacts

4.3.1.1 Where the likelihood of impacts on protected species cannot be discounted through avoidance measures, appropriate mitigation will be implemented. Mitigation measures will broadly fall into the following categories:

- General site rules: Site rules relating to ecology will apply to all contractors. Inductions and information posters within cabins will be provided so that contractors can recognise the relevant protected species and know what action to take if any species are encountered during works. An ECoW will be employed to ensure that mitigation measures are implemented. Other site rules will minimise potential disturbance and harm to protected species. These will include adopting safe traffic management and speed limits; minimising construction lighting at night; capping pipework overnight; checking trenches and providing escape ramps; the appropriate storage of materials; surface water management; and pollution prevention measures (many of which will be covered in other detailed management plans as part of the CEMP).
- Careful timing of works: Timing of works is important to avoid impacts on certain protected species. Vegetation clearance, including ground cover, scrub and trees, will generally be undertaken outside of the bird breeding season (March to August inclusive), except for those areas considered to have potential for hibernating common lizard and/or great crested newts, as outlined in Table 1.
- Preparation, review and implementation of method statements: All construction method statements will be prepared by contractors in line with the CEMP. Where planned works are located within close proximity to protected species, all method statements will be reviewed by the ECoW and ecological toolbox takes, site supervision and guidance will be provided.
- Protected species licensing: Where works pose a greater risk of directly affecting protected species, a licence may be required from Natural England. Based on current survey data, licences may be required for badger, great crested newts and water vole; however this is subject to the results of further pre-commencement surveys. Several outlier badger setts are located within close proximity to works within the NLGEP Land and Railway Reinstatement Land; any necessary closure of an active sett would require a licence. Great crested newts are present within ponds and ditches close to the Railway Reinstatement Land; a district level licence or traditional licence will be sought prior to construction in this area. Baseline surveys did not identify water vole presence within any sections of ditches to be affected by construction activities; however if repeat surveys confirm presence, in-channel works and works within 5 m of

watercourse banking will be carried out under a class licence, held by an ecologist.

4.4 Species-specific Measures

4.4.1.1 Table H1 below outlines each protected species present, requirements for further survey and the species-specific mitigation measures required.

Table H1: Protected species and survey/mitigation requirements

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
Roosting and foraging bats	No roosting bats were confirmed present within the site. A total of three trees offer suitable roosting features; two located south and west of the Railway Reinstatement Land, and one located within the block of semi-natural habitat mosaic to the east of the NLGEP Land. Areas of scrub, hedgerow, woodland, grassland and ditches provide suitable foraging habitat for a range of bat species.	If felling or pruning of trees supporting potential bat roosting features is necessary, pre-commencement checks will be led by a suitably licensed and experienced ECoW. Pre-commencement checks can be undertaken **year-round**.	Felling of trees with bat roost potential will only proceed following pre-works checks by ECoW. If a bat roost is identified, felling works will proceed under a bat licence or in line with a method statement outlining precautionary working methods, such as section felling. Disturbance to foraging and commuting bats throughout working areas will be minimised by avoiding night work and ensuring any external lighting is switched off between sunset and sunrise during the bat active season (April – October inclusive).
Badger	All working areas supporting arable land, grassland, scrub and woodland have potential to support foraging/commuting badger. Badgers may create new setts at any time in areas with vegetation cover and suitable substrate. Areas with known badger setts include the NLGEP Land, where a main sett and several outliers are located along ditches in the southern section of the site. A large main	Walkover surveys are required up to two months prior to clearance works, **all year round.**	Exclusion zones extending to 30 m (and 100 m for high noise/vibration activities during the badger breeding season which runs from December to June) will be established for badger setts close to working areas, in line with general mitigation outlined above. Where works are required within an exclusion zone, they will be licensable (see below), or will adhere to a badger method statement detailing appropriate Reasonable Avoidance Measures (RAMS), including, but not restricted to, the following: ■ All works within 30 m of a badger sett are to be undertaken under ECoW direction and supervision to ensure no damage to the sett or associated tunnels. ■ No excavations, heavy machinery or stored of materials will be permitted within the exclusion zone and all working methods will be agreed with the ECoW and set out in the method statement.

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
	badger sett (approximately 10 entrances) is located beyond the Order Limits of the Railway Reinstatement Land.		■ No light machinery will be permitted within 20 m of a badger sett. ■ Any trees that need to be felled will be felled in such a way that they fall away from active setts, and any felled trees will be cleared from badger paths and sett entrances. ■ Any vegetation clearance required within 10 m of the sett will be carried out under ecological supervision and using hand tools only. Where direct impacts (i.e. damage to tunnel systems) or excessive disturbance (i.e. works occurring within the badger breeding season close to a main sett) cannot be avoided or mitigated for through RAMS, a badger licence will be required. Licences require an appropriate method statement to be prepared and works to be undertaken outside of the breeding season (July – November) under strict ECoW supervision. Mitigation for disturbance to foraging and commuting badger will comprise: ■ Installation of suitable fencing to discourage badgers from entering the construction site whilst providing a safe route to accessible foraging habitats. ■ Installation of a suitable badger access tunnel beneath the new access road and south of the Lysaght's Drain. ■ Light spillage or night working will be avoided close to an active badger sett. ■ Covering all excavations at night or a means of escape (e.g. earth ramp) provided. ■ Capping of all exposed pipes at the end of each working day. ■ Retaining or re-establishing badger commuting routes on completion of the works.
Birds	All working areas have potential to support breeding, migratory and wintering birds. Suitable habitats include ditches, hedgerows, woodland, scrub, ground vegetation, open arable, bare	ECoW surveys for nesting birds are required for all clearance undertaken **March – August inclusive.** Repeat surveys may be needed for new nests or	All vegetation which cannot be retained should be removed from working areas prior to the bird nesting season (March to August inclusive). This includes trees, woody shrubs and tall grasses. If ECoW checks during the breeding season confirm presence of nesting birds, no works will be carried out within proximity (determined by ECoW; a minimum of 5 m for common species and 25 m for Schedule 1 Cetti's warbler) to an

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
	unsealed surfaces and buildings.	monitoring of existing nests. Due to the mobility of birds, checks are valid for 5 days. Outside of the breeding bird season, pre-works surveys may be required for migratory and wintering birds, in line with a Construction Ornithological Monitoring Plan (COMP).	identified nest, until the young have fledged and are no longer returning to the nest site. Mitigation to reduce impacts on wintering birds will be incorporated into the CEMP and associated COMP. Measures will be adopted to minimise noise, light and disturbance on identified areas, such as visual screening (e.g., opaque fencing), where necessary. Construction activities would be monitored by an ECoW or suitably qualified ornithologist, who would determine whether any further mitigation measures are required to avoid disturbance.
Great crested newts (GCN)	Small and medium populations of great crested newts are located adjacent to the Railway Reinstatement Land and likely use suitable terrestrial habitats within the Order Limits, including woodland, scrub, grassland and trackbed materials. Individual great crested newts were also recorded in ponds to the east of the NLGEP Land, within the block of semi-natural habitat mosaic.	Great crested newt survey data will be kept up to date where licensing is required, including environmental DNA surveys of ponds between **April and June inclusive**. Pre-works checks within 250 m of confirmed great crested newt ponds would be timed prior to vegetation clearance (**April to October**)	An appropriate licence from Natural England will be sought for works considered likely to affect great crested newts within the Railway Reinstatement Land; district level licensing will be considered as a potentially suitable option. The following precautionary working methods will be implemented along the railway reinstatement: ■ Within 250 m of great crested newt ponds, supervised vegetation clearance will comprise strimming using handheld machinery to a height of 150 mm (and arisings removed), a minimum of 48 hours before strimming to ground level, to encourage individuals to move out of the immediate area. ■ Vegetation will be kept short until completion of works in a given area. ■ The careful dismantling of log/brash piles and other habitats potential suitable for hibernating newts will be carried out by hand during April to October. Railway sleepers will be carefully lifted and the underside inspected by the supervising ecologist before being taken off site or repositioned. ■ All stored materials, which may provide suitable refugia, should be raised off the ground, on pallets stored over habitat of low value such as areas of bare ground.

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
			■ All excavated material will be stored in such a way that does not create habitat (i.e. well compacted with no voids). ■ Any trenches or other excavations required within the site will be backfilled before nightfall, or a ramp left to prevent animals becoming trapped. Trenches should be carefully inspected in the morning prior to commencement of works. ■ In the event that GCN are encountered, works in that location must cease immediately and the scheme ecologist contacted. GCN will be moved by a suitably licensed ecologist or agent to a suitable location outside the working area. Common amphibians will be carefully relocated in the same way by site operatives. Within the habitat mosaic to the east of the NLGEP Land, habitat management activities will be undertaken sensitively with respect to the probable presence of great crested newts, including carrying out works to aquatic and wetland habitats in September to November inclusive and removing vegetation and silt with hand tools; and terrestrial habitats in May to June inclusive, in accordance with the Great Crested Newt Conservation Handbook (Langton et al., 2001).
Otter	Ditches within the NLGEP and Southern DHPWN have potential to support foraging and commuting otter. Otters may create new resting places at any time in suitable habitats. A single otter was sighted during surveys, along a ditch in the eastern section of the NLGEP Land, however no confirmed holt or resting places have been identified.	Pre-commencement surveys of watercourses undertaken by ECoW are required up to two months prior to clearance works, **all year round.**	If otter holts or couches are identified during pre-works surveys, an appropriate mitigation strategy will be agreed with Natural England (NE). Mitigation for commuting/foraging otters applies to **all watercourses** within and adjacent to working areas and will comprise: ■ Night-time working near watercourses will be avoided or else minimised; ■ No direct illumination of watercourses; ■ Obstructions to otter movement along watercourses would, wherever possible, be temporarily removed, beached or bridged at night (to the extent that otters could use either bank or the bed of the ditch); and ■ Any excavations/trenches/open pipe systems will be backfilled or capped at the end of each working day. Where this is not practical, an escape ramp (45˚) will be provided to allow egress for any animals which become trapped in excavations.

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
			■ Best practice pollution prevention measures for working within and close to watercourses will be implemented, complying with the CEMP.
Reptiles	A walkover to confirm the best methods of clearance for common lizard will be undertaken prior to works along the Railway Reinstatement Land. No pre-works checks will be required for sparse woodland/scattered and grassland that is not considered to offer hibernation potential. Areas offering hibernation habitat will be subject to hand searching (and nesting bird checks) and will be cleared in stages under supervision from an ecologist. The ecologist will carefully dismantle any refugia or hibernation habitats present (i.e., rock piles, tree roots, log/brash piles). Vegetation will be kept short throughout duration of works in that area.	Areas with no hibernation potential will be cleared between **September and March** to avoid breeding bird season. Areas with hibernation potential will be cleared between **mid-April** and **mid-October**, preferably avoiding the core nesting bird season.	The following precautionary working methods will be implemented along the railway reinstatement land: ■ All vegetation will be strimmed in stages and kept short until completion of works in a given area. ■ The careful dismantling of log/brash piles and other habitats potential suitable for hibernating common lizard will be carried out by hand during April to October. Railway sleepers will be carefully lifted and the underside inspected by the supervising ecologist before being taken off site or repositioned. ■ All stored materials, which may provide suitable refugia, should be raised off the ground, on pallets stored over habitat of low value such as areas of bare ground. ■ All excavated material will be stored in such a way that does not create habitat (i.e. well compacted with no voids). ■ Any trenches or other excavations required within the site will be backfilled before nightfall, or a ramp left to prevent animals becoming trapped. Trenches should be carefully inspected in the morning prior to commencement of works. ■ Any common lizards found during the works should be allowed to disperse or carefully moved to a safe location away from the works.
Water vole	Baseline surveys found no evidence of water vole in any ditches that will be directly impacted. However, low water vole activity was recorded in the NLGEP Land and	Repeat surveys will be undertaken at all ditches within the working area, undertaken within the appropriate survey period (**two visits April to**	If water vole are found to be present within working areas, the displacement of water voles will be undertaken under a class licence. A method statement will be prepared, including the marking and monitoring of water vole burrows, strimming vegetation to ground level and careful excavation of burrows using hand tools.

Species	Location and details	Timing of pre-works surveys and works	Required mitigation
	moderate activity was recorded within the Railway Reinstatement Land to the north of Flixborough Industrial Estate.	**September**). Pre-works checks for water vole may be completed **year-round**.	For watercourses that do not support water vole populations and will be directly impacted by the NLGEP construction works, vegetation control will be undertaken to dissuade water voles from colonising the working area. Following a pre-works check for water vole field signs, the ditch banks, marginal vegetation and up to 5 m from the toe of the bank will be strimmed. Cleared areas will be periodically inspected for evidence of water voles and vegetation re-growth. Any re-growth will be cut down to ground level. Mitigation for disturbance outlined above in relation to foraging/commuting otter also applies to water vole.

4.5 Supporting Legal Information

Species	Legislation	Offences	Notes on licensing procedures and further advice
Species that are protected by European[6] and national legislation			
Badger	Protection of Badgers Act 1992	Wilfully kill, injure or take a badger; Intentionally or recklessly damage, destroy or obstruct access to a badger sett; Disturb a badger in its sett. It is not illegal to carry out disturbance activities in the vicinity of setts that are not	Where required, licences for development activities involving sett loss, damage or disturbance are issued by Natural England (NE). Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process. Licences are normally not granted from December to June inclusive because cubs may be present within setts. https://www.gov.uk/badgers-protection-surveys-and-licences

[6] The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the 2017 Regulations so that they continue to operate effectively with respect to 'European species', following the UK's departure from the European Union. Most of these changes involved transferring functions from the European Commission to the appropriate authorities in England and Wales. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.
https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017

Species	Legislation	Offences	Notes on licensing procedures and further advice
		occupied.	
Bats *European protected species*	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately[1] capture, injure or kill a bat; Deliberate disturbance[2] of bats; Damage or destroy a breeding site or resting place used by a bat. The protection of bat roosts is considered to apply regardless of whether bats are present.	A Natural England (NE) licence in respect of development is required in England. https://www.gov.uk/bats-protection-surveys-and-licences *European Protected Species: Mitigation Licensing- How to get a licence* (NE 2010) *Bat Mitigation Guidelines* (English Nature 2004) *Bat Workers Manual* (JNCC 2004) *BS8596:2015 Surveying for bats in trees and woodland* (BSI, 2015)
	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally or recklessly[3] obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Birds	Conservation of Habitats and Species (Amendment) Regulations 2012	N/A	Authorities are required to take steps to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom (UK), including by means of the upkeep, management and creation of such habitat. This includes activities in relation to town and country planning functions.
	Wildlife and Countryside Act 1981 (as amended)[4] S.1	Intentionally kill, injure or take any wild bird; Intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; Intentionally take or destroy the nest or eggs of any wild bird. **Schedule 1 species** Special penalties are liable for these offences involving	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. https://www.gov.uk/wild-birds-protection-surveys-and-licences https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business

Species	Legislation	Offences	Notes on licensing procedures and further advice
		birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover). Intentionally or recklessly[3] disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	
Great crested newt *European protected species*	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately[1] capture, injure or kill a great crested newt; Deliberate disturbance[2] of a great crested newt; Deliberately take or destroy its eggs; Damage or destroy a breeding site or resting place used by a great crested newt.	Licences issued for development by NE. https://www.gov.uk/great-crested-newts-protection-surveys-and-licences *European Protected Species: Mitigation Licensing - How to get a licence* (NE 2010) *Great Crested Newt Mitigation Guidelines* (English Nature 2001)
	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally or recklessly[3] obstruct access to any structure or place used for shelter or protection or disturb a great crested newt in such a place.	Licences issued for science (survey), education and conservation by NE.
Otter *European protected species*	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately[1] capture, injure or kill an otter; Deliberate disturbance[2] of otters; Damage or destroy a breeding site or resting place	Licences issued for development by NE. https://www.gov.uk/otters-protection-surveys-and-licences *European Protected Species: Mitigation Licensing- How to get a licence* (NE 2010)

Species	Legislation	Offences	Notes on licensing procedures and further advice
		used by an otter.	
	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally or recklessly[3] obstruct access to any structure or place used for shelter or protection or disturb an otter in such a place.	No licence is required for survey in England. However, a licence would be required if the survey methodology involved disturbance.
Reptiles (species that are not European protected): Adder Common lizard Grass snake Slow worm	Wildlife and Countryside Act 1981 (as amended)[4] S.9(1) (part); S.9(5)	Intentionally kill or injure any common reptile species.	No licence is required in England. However an assessment for the potential of a site to support reptiles should be undertaken prior to any development works which have potential to affect these animals. https://www.gov.uk/reptiles-protection-surveys-and-licences
Water vole	Wildlife and Countryside Act 1981 (as amended)[4] S.9	Intentionally kill, injure or take water voles; Intentionally or recklessly[3] damage, destroy or obstruct access to any structure or place used for shelter or protection; Disturb a water vole in such a place.	No licence is required for survey in England, unless you are likely to commit an action that is otherwise illegal. There are currently no licensing purposes that explicitly cover development activities or activities associated with the improvement or maintenance of waterways. However when a proposed lawful activity has no opportunity to retain water voles within a development site and their translocation would result in a conservation benefit then a licence from NE may be obtained. *The Water Vole Conservation Handbook* (R. Strachan, T. Moorhouse & M. Gelling, Wildlife Conservation Research Unit (WildCRU), 3rd Edition 2011). https://www.gov.uk/water-voles-protection-surveys-and-licences Water voles and development licensing policy -NE Technical Information Note TIN042 2008
Other species			

Species	Legislation	Offences	Notes on licensing procedures and further advice
Rabbits, foxes and other wild mammals For BAP species and Species of Principal Importance, see below	Wild Mammals (Protection) Act 1996	Intentionally inflict unnecessary suffering to any wild mammal.	Natural England provides guidance in relation to rabbits (Technical Information note TIN003, Rabbits- management options for preventing damage, July 2007) and foxes (which are also protected under the Wildlife and Countryside Act 1981 from live baits and decoys, see Species Information notes SIN003 (2011), *Urban foxes* and SIN004 (2011) *The red fox in rural areas* as well as other wild mammals. Lawful and humane pest control of these species is permitted.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 Responsibility for complying with agreed ecological mitigation and management measures, and any legal consents and planning conditions relating to nature conservation will remain with NLGEPL.

5.1.1.2 The detailed plan will set out relevant monitoring, inspection and auditing actions relating to protected species management, and for providing assurance to NLGEPL of proper implementation of the plan by the construction contractor. This will include clearly designating the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant.

APPENDIX I: OUTLINE INVASIVE NON-NATIVE SPECIES (INNS) MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
DHPWN	District Heat and Private Wire Network
INNS	Invasive Non-Native Species
oLBMMP	Outline Landscape and Biodiversity Management and Monitoring Plan
NLGEP	North Lincolnshire Green Energy Park

1. SCOPE OF THE PLAN

1.1.1.1 This outline Invasive Non-Native Species (INNS) Management Plan sets out the measures to be addressed in the detailed plan by the construction contractor for the control of Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*) and cotoneaster (*Cotoneaster* sp.) within the North Lincolnshire Green Energy Park (NLGEP) Order Limits. It covers relevant legislation, identifies the records of these species on site, and provides a strategy for their control in line with current guidance.

2. BACKGROUND AND LEGISLATION

2.1.1.1 Himalayan balsam, Japanese knotweed and cotoneaster are listed under Section 14, Part 2 and Schedule 9 of the Wildlife and Countryside Act (1981) (as amended). As such, it is an offence to plant or otherwise allow these species to grow in the wild. This can include moving contaminated soil or plant cuttings. Material containing these species should be treated as 'controlled waste' under the Environmental Protection Act (1990) and Environmental Protection Act (Duty of Care) Regulations (1991); disposal of such material should not cause pollution of the environment or harm to human health; and it should be transferred to a licensed landfill site, by an authorised person and accompanied by appropriate Waste Transfer documentation. Sections 23 to 25 of the Infrastructure Act (2015) provide powers to environmental authorities to enter into control agreements and orders with landowners to ensure action is taken to control invasive non-native species on their land. Failure to manage and dispose of these species in accordance with the relevant legislation can result in prosecution.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases). The detailed plan will identify the suitably qualified person(s) responsible for additional surveys and supervising remedial works.

4. MANAGEMENT MEASURES

4.1.1.1 The detailed plan will set out the management measures for invasive non-native species in accordance with the following considerations.

4.2 Himalayan Balsam

4.2.1 Ecology

4.2.1.1 Himalayan balsam is an invasive non-native annual plant that can form dense monoculture stands. It is commonly found along watercourses and other areas of wet or damp ground. The plant is spread predominantly by

the dispersal of seeds, but may also regrow from cut stems. Pink flowers, present between June and October, develop exploding seed pods which scatter seeds up to seven metres from the parent plant. Seeds are further dispersed by water and can remain dormant in the soil for 18 to 24 months. Plants may be spread by any movement of soil contaminated by seeds. This includes transferring soil on boots, clothes and machinery, moving soil during landscaping works and transporting soils from one site to another.

4.2.2 Occurrence

4.2.2.1 Himalayan balsam has been identified at a single location within the Railway Reinstatement Land, growing amongst tall ruderal vegetation on a raised earth bund beside a building on the north-west side of the Flixborough industrial estate (Figure I1). Surveys also noted additional areas of Himalayan balsam along the River Trent, however these are outside of the Order Limits.

Figure I1: Location and photograph of Himalayan balsam within Order Limits

4.2.3 Control measures

4.2.3.1 The following control measures will be implemented to prevent the spread of Himalayan balsam to areas off site:

- A pre-construction survey will be undertaken to confirm the extent of Himalayan balsam plants. This will also include a search for other occurrences in the vicinity. The survey will be undertaken between April and September by a suitably qualified ecologist;
- Areas containing Himalayan balsam will be fenced off including a 7 m buffer zone using hi-visibility fencing to create 'exclusion zones'. Signage will be installed, informing all personnel of the reason for these exclusion zones. If necessary, an ecologist will attend to assist with the identification of suspected plants;
- Measures to prevent the natural spread of Himalayan balsam will be undertaken in liaison with the project ecologists. Control measures should be undertaken in spring, before flowering and seed dispersal and should ensure plants are periodically removed before they flower. Himalayan balsam will be controlled by annually hand pulling or cutting plants

between May and before the end of June. Hand pulling plants offers the most effective method to prevent regrowth on easily accessible land, as plants can re-grow and flower if not strimmed to ground level (or below the lowest node).

- Uprooted plants should be left in a suitable exposed place, preferably on hard ground, where they can dry out and degrade naturally. Signage should alert others on site to not move the plant matter.
- Personnel will check tools, footwear and machinery prior to leaving the site and clean them to avoid inadvertently spreading Himalayan balsam.
- Checks will be made to ensure that any landscaping materials brought onto site from elsewhere are not contaminated by Himalayan balsam or other invasive species.

4.2.4 Monitoring

4.2.4.1 Walkover surveys to check for the presence of any regenerating Himalayan balsam plants will be undertaken as part of the monitoring surveys outlined within the Outline Landscape and Biodiversity Management and Monitoring Plan (oLBMMP). Any regenerating plants will be controlled by hand pulling, as outlined above.

4.3 Japanese knotweed

4.3.1 Ecology

4.3.1.1 Japanese knotweed is a highly invasive and persistent perennial plant that spreads solely by vegetative means. It is easily spread to new areas in contaminated soil, with even very small rhizome fragments being capable of regenerating into new plants. Once established, it is extremely vigorous and difficult to eradicate. The vigorous growth can out compete native flora and grow through tarmac and concrete causing damage to buildings and roads. It can be particularly difficult to control once established underneath or around built areas. Roots and rhizomes can grow to 3 m depth and 7 m out from parent plants.

4.3.2 Occurrence

4.3.2.1 A sizeable stand of Japanese knotweed is present at a single location within the Northern District Heat and Private Wire Network (DHPWN) Land (TN7). This is located adjacent to an electric substation and east of Normanby Road. It is well-established and growing vigorously. Rhizomes are likely extensive and have spread into the adjacent amenity grassland.

Figure I2: Location (TN7) and photograph of Japanese knotweed within Order Limits

4.3.3 Control measures

4.3.3.1 It is likely that the Northern DHPWN works route will include areas with soils that are potentially contaminated with Japanese knotweed rhizomes. The following control measures will be implemented to prevent the spread of Japanese knotweed to areas off site:

- Pre-construction surveys will be undertaken by a suitably qualified ecologist to identify the location of Japanese knotweed stands and mark out all peripheral shoots.
- Areas containing Japanese knotweed will be fenced off including a 7 m buffer zone using hi-visibility fencing to create control an 'exclusion zone'. Signage will be installed to inform all personnel of the reason for this zone. Any additional areas of Japanese knotweed identified by site operatives will be treated in the same manner. If necessary, an ecologist will attend to assist with the identification of suspected plants.
- Works within this exclusion area will be strictly controlled to avoid spreading any Japanese knotweed rhizomes which may be present with soils. Where considered necessary, this will be overseen by a specialist contractor. Disturbance of the ground surface will be strictly minimised. Access by personal and machinery will be controlled and kept to a minimum.
- All vegetation and soil that is disturbed or excavated within working trenches will be disposed of as controlled waste. Care will be taken to ensure that all material is carefully loaded and correctly disposed of.
- Machinery, tools and footwear will be checked prior to leaving the site and cleaned to avoid inadvertently moving rhizomes. Care will be taken to also ensure that any residues from washings are carefully loaded and correctly disposed of.

- Checks will be made to ensure that any landscaping materials brought onto site from elsewhere are not contaminated by Japanese knotweed or other invasive species.

4.3.4 Monitoring

4.3.4.1 Japanese knotweed is not located within any areas of proposed landscaping requiring ongoing management. However, if eradication of the INNS is desired, this should be undertaken by a specialist contractor, repeatedly treating the area until no regrowth occurs.

4.4 Cotoneaster

4.4.1 Ecology

4.4.1.1 Cotoneasters are a group of non-native green shrubs and small trees, some deciduous and some evergreen. All cotoneaster species are without thorns and generally have shiny leaves, which are hairless on the upper surface and slightly hairy below. The flowers are small and white or pink and are followed by clusters of red/orange berries in the autumn. Once established, cotoneaster can dominate areas, outcompeting native flora and creating dense thickets. When plants spread, they are particularly problematic on pavements.

4.4.2 Occurrence

4.4.2.1 Cotoneaster has been recorded occasionally in ornamental planting along the eastern part of the Northern DHPWN route and within scrub and woodland edges bordering Phoenix Parkway.

4.4.3 Control measures

4.4.3.1 Working areas along the Northern DHPWN are at some distance of known occurrences of cotoneaster and are unlikely to be impacted by works. To confirm this, pre-construction surveys will be undertaken by a suitably qualified ecologist to map cotoneaster along the Northern DHPWN route. Where necessary, the following control measures will be implemented:

- Plants within working areas will be marked using hi-visibility fencing to create temporary ‘exclusion zones’. Signage will be installed to inform personnel of the reason for these zones. Any additional areas of cotoneaster identified by site operatives will be treated in the same manner. If necessary, an ecologist will attend to assist with the identification of suspected plants.
- Prior to any construction works, cotoneaster plants with these exclusion zones will be carefully excavated (including their root systems) and disposed of as controlled waste. Care will be taken to ensure that all material is carefully loaded and correctly disposed of.

- Checks will be made to ensure that any landscaping materials brought onto site from elsewhere are not contaminated by cotoneaster or other invasive species.

4.4.4 Monitoring

4.4.4.1 Cotoneaster is not located within any areas of proposed landscaping requiring ongoing management. However, if eradication of the INNS is desired, any regenerating plants will be controlled by hand pulling or excavation as appropriate.

5. REPORTING AND PLAN UPDATE

5.1.1.1 The outcome of control works and monitoring will be reported to NLGEPL, the landowners and neighbours (as appropriate) and North Lincolnshire Council.

5.1.1.2 The detailed plan will be updated to reflect any other invasive non-native species being encountered or those known to be present being discovered at additional locations.

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APPENDIX J: OUTLINE SOIL MANAGEMENT PLAN

Acronyms and Abbreviations

Name	Description
CEMP	Construction Environmental Management Plan
DoWDICoP	The Definition of Waste: Development Industry Code of Practice
LBMMP	Landscape and Biodiversity Management and Monitoring Plan
NLGEPL	North Lincolnshire Green Energy Park Limited
SMP	Soil Management Plan
WMP	Waste Management Plan

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1. SCOPE OF THE PLAN

1.1.1.1 The detailed Soil Management Plan (SMP) to be prepared by the Construction Contractor as part of the Construction Environmental Management Plan (CEMP) will set out a series of measures for the protection, conservation, reinstatement and reuse of soils on site throughout the construction phase. The remit of the Soil Management Plan will cover all site preparation, demolition, excavated material storage, movement, and all related engineering and construction activities that are likely to affect soil resources (including landscaping and habitat creation), and which are under the responsibility of North Lincolnshire Green Energy Park Limited (NLGEPL). The detailed SMP should be organised by Project phase or have a subset of plans for each phase.

1.1.1.2 The detailed plan will also address the process of classifying soil as a waste (e.g. in the event of contamination that cannot be remedied on site) and its disposal. In addition, for the purposes of the plan, inert reusable spoil (e.g. from demolition works) will be treated in the same way as soils in its stockpiling, movement etc.

1.1.1.3 The detailed SMP will be developed in accordance with the 'Construction Code of Practice for the Sustainable Use of Soils on Construction Sites' (Defra, 2009) and other relevant guidance (see Section 4.3).

1.1.1.4 The detailed SMP will be submitted to North Lincolnshire Council and Natural England for review and approval.

1.1.1.5 The detailed SMP will also consider interfaces with other management plans (notably the Construction Waste Management Plan (WMP) and the Landscape and Biodiversity Management and Monitoring Plan (LBMMP)).

2. BACKGROUND

2.1.1.1 Soil is a considered a finite resource, such that its loss and degradation is not recoverable within a human lifespan. Soil plays an essential role within sustainable ecosystems, supporting a range of ecosystem services, including storage of carbon, the infiltration and transport of water, nutrient cycling, and provision of food.

2.1.1.2 The soils within the Order Limits have a variety of functions, including supporting natural habitats, agriculture and to some extent flood alleviation. Given the industrial history and current land uses of part of the area there is also the potential for soil contamination.

2.1.1.3 The permanent built infrastructure of the Project will displace topsoil over an area of approximately 10 ha. The Project will require quantities of topsoil for landscaping including on the development platform (part of which is currently brown field land), planted flood protection bunds, on embankments along either side of the new access road and elsewhere.

2.1.1.4 During demolition works, spoil arising will be assessed for reuse during construction to reduce the need for imported fill. Unsuitable material will be

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managed in accordance with the Construction Waste Management Plan (see also Appendix G).

2.1.1.5 During detailed design, landscaping and habitat creation (as described in DCO Requirement 6) will be advised by the soil resource assessment to allow these features to be optimised to the soil resource present.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed SMP will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan (noting this may differ between phases). The detailed SMP will identify the person(s) responsible for supervising soil management. This will include an appropriately experienced soil specialist to advise on, and supervise, soil handling, including identifying when soils are dry enough to be handled and how to make the best use of the different soils on site.

4. SOIL MANAGEMENT MEASURES

4.1 Soil Resource Assessment

4.1.1.1 A Soil Resource Assessment (inclusive of Agricultural Land Classification Survey) will be undertaken by a soil specialist on behalf of NLGEPL and the Construction Contractor. The Soil Resource Assessment will cover all areas of the Application Land that will be occupied permanently during occupation and temporarily during construction. The detailed scope of the assessment will be agreed in advance with NE. A detailed ALC survey will be conducted for areas that currently have only a provisional grading and verification will be conducted across those areas that have Post 1988 ALC designations. The soil survey will include soil sampling for soil organic matter (SOM), pH, and macronutrients to inform appropriate soil re-use as set out in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. The assessment will feed into both the detailed SMP and the detailed design of the landscaping and habitat creation measures; the survey and analyses will be programmed accordingly. Habitat creation plans will be tailored to the soil resource present on site, using site specific data. This will include the peat resource. To the extent practicable the landscaping and habitat creation to be located on agricultural land will be designed so that proposed soil profiles reflect current profiles. To the extent practicable buried peat deposits will be left undisturbed and in place.

4.1.1.2 The assessment will identify and map where re-usable reserves of topsoil (and subsoil where appropriate) are present, their quantities (depths) and chemical characteristics. A soil balance will be prepared to identify the surplus of different soils across the Project site and identify opportunities for the sustainable re-use of these resources on site. The extent of soil movement, storage and reuse across the site during construction will be quantified based on the soil resource assessment.

4.1.1.3 The Soil Resource Assessment will feed into the detailed SMP in regard to such matters as:

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- maps showing topsoil and subsoil types, and the areas to be stripped and left in-situ;
- location of soil stockpiles and content (e.g. 'topsoil type A', 'subsoil type B');
- schedules of volumes for each material;
- soil balances in terms of volumes of each type of soil displaced and the volumes required for different uses elsewhere within the Application Land;
- expected after-use for each soil, e.g. topsoil to be used on site, subsoil to be retained for landscape areas, topsoil reinstated for agricultural use, subsoil used as structural fill or for topsoil manufacture.

4.2 Classification as Waste

4.2.1.1 Essential to the reuse of soil from construction sites is the initial determination of whether the material in question is regarded as waste within the legal definition of the term. Demolition spoil and other materials that have been identified by the site investigations (see Chapter 8 - Ground Conditions, Contamination and Hydrogeology, Document Reference 6.2.8), together with soils that are contaminated or potentially contaminated may need disposal or consideration for remediation.

4.2.1.2 The Definition of Waste: Development Industry Code of Practice (DoWDICoP) is a voluntary Code launched in September 2008 (applicable to England and Wales) that was initiated to provide a clear and concise process to determine whether excavated materials on a development site constitute waste in the first instance, and to identify the point when treated waste can no longer be considered as waste.

4.2.1.3 The detailed SMP will set out the process for implementing DoWDICoP.

4.3 Soil Protection Measures

4.3.1.1 Once the soil resources have been identified the detailed SMP will set out specific protective and management measures for the handling, storage and reinstatement/reuse of different soils. These measures will be developed in accordance with:

- DEFRA (2009) Code of Practice for the Sustainable Use of Soils on Construction Sites (note that Defra consulted on a review of this document in 2022 so it may be superseded by an update);
- The Institute of Quarrying (2021) Good Practice Guide for Handling Soils in Mineral Workings , which updates and supersedes the MAFF Good Practice guide for Handling Soils (2000);
- British Society of Soil Science (2022) Benefitting from Soil Management in Development and Construction;
- IEMA Assessing Land and Soils for Environmental Impact Assessments (2022) . In particular Annex E – Soil Handling for Peat and Peaty Soils, Annex F – Soil Handling for Restoration to Agriculture, Ecology and Landscape design, Annex J – Process for the Sustainable Use of Soil Resources and Other Excavated Materials; and Annex K – Soil Handling Guidance for Site Agents and Contractors; and
- any specific landowner requirements, especially in relation to the reinstatement of agricultural soils.

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4.3.1.2 Specifically for land that will be reinstated to high agricultural quality after the construction works are completed (e.g. temporary construction compounds, the working width for the buried district heating and private wire infrastructure) the detailed SMP will set out best practice for soil handling using the excavator-dump truck combination in conjunction with the sequential 'strip' method (Sheets A – D), Institute for Quarrying 2021 Soils Guidance (quarrying.org). The detailed SMP will include the restoration criteria for all land to be returned to agricultural use, including the ALC grade and soil properties.

4.3.1.3 At a general level the detailed measures will consider and address the following.

- Determining a method or methods of stripping the topsoil and subsoil to reduce the potential for damage to the soil structure and generate soil stripping method statements and procedures.
- Soil stripping depths will be clearly set out for all temporary and permanent infrastructure, reflecting the soil horizon depths identified from the soil resource assessment.
- Specific consideration will be given to the soil handling and mitigation measures potentially required for the buried peat soils.
- Conditions will be set out under which soils should be handled (i.e. in a dry and friable condition), and how it is expected that soil handling will be confined to the drier summer period to the extent practicable to minimise risk of soil damage. Soil handling methods should normally be as specified in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (including accompanying Toolbox Talks).
- Determine a method or methods of stockpiling the soils based on their physical and chemical characteristics. The objective will be methods that maintain soil quality and minimise damage to the soil's physical (structural) condition so that it can be easily reinstated once respread. In addition, the method statements will set out measures for stockpiling soils so as not to cause soil erosion, pollution to watercourses or increase flooding risk to the surrounding area.
- Designing a soil placement scheme for reinstatement or reuse elsewhere on the Project site that provides a structured, uncompacted, and well-aerated soil profile for the successful establishment and subsequent growth of agricultural crops, plants and grass.

4.3.1.4 In the first instance, all clean topsoil will be retained for use by the Project in recognition of its value as a finite resource. In the event there is any surplus then an alternative beneficial use will be found for it.

4.3.1.5 Within the project design all soils will remain on site for reuse in landscaping, visual bund creation or biodiversity.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 The detailed SMP will set out relevant monitoring, inspection (including up to five years of post-reinstatement surveys) and auditing actions relating to soil protection and management, and for providing assurance to NLC and NE,

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landowners (and NLGEPL) of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed SMP will set out procedures for providing evidence of implementation and maintenance of the SMP such as the reporting of monitoring, inspection, auditing activities, and post reinstatement surveys, and the format and frequency of reporting.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed SMP will set out the internal and external triggers and process for the plan to be maintained up to date and relevant, including for example corrective actions that may be employed in the event that reinstatement of agricultural soils does not achieve the target land quality.

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APPENDIX K: OUTLINE PILING AND FOUNDATION WORKS MANAGEMENT PLAN

1. SCOPE OF THE PLAN

1.1.1.1 As a part of the Project there is the requirement for the installation of piled foundations and other ground penetrative works to support the built structures.

1.1.1.2 As part of the Project, any onsite contamination that poses a plausible risk to soils, surface and groundwaters will need to be mitigated or remediated. Construction methods will need to be adopted that prevent potential pollution of the environment occurring, either through disturbance of land contamination or through the introduction of potential contaminative materials during construction. For any structures that require piling (and similar considerations apply to deep excavations), there will be a requirement to avoid creating flow paths between potentially contaminated soils and/or groundwater in the underlying strata, both during construction and operation.

1.1.1.3 In addition to potential contamination pathways, noise and vibration from piling (although not anticipated to be a serious issue based on the piling methods proposed and assessed in the EIA, see also paragraph 4.1.1.6 below) could disturb people in properties near to such activities and interest species in the Humber protected sites adjacent to the Project site. Vibration could also have potential adverse effects on heritage assets in sufficient proximity to the piling activity.

1.1.1.4 The management of risks to the environment during piling and other ground penetrative works will involve two main steps:

- a risk assessment; and
- developing appropriate method statements on the basis of the risk assessment findings.

1.1.1.5 The Construction Contractor as part of the CEMP will undertake the risk assessments and prepare the method statements for the approval of NLC, in consultation with the Environment Agency (EA), Natural England (NE) and Historic England (HE).

1.1.1.6 The method statement will also consider interfaces with other management plans (notably the Remediation Strategy, Construction Waste Management Plan, the Soil Management Plan, the Construction Noise and Vibration Management Plan and the Construction Ornithology Management Plan).

2. BACKGROUND

2.1.1.1 Land contamination has been investigated during the EIA as reported in Chapter 8 of the ES. Relatively little contaminated land was apparent during the site surveys and analyses of samples. However, several elements of the Project will be constructed on land with a history of industrial use and therefore the potential for contamination to be present. Since much of the industrial areas were under hard standing during the site investigation, the

amount of sampling (see Chapter 8 of the ES) was restricted in some places, including where piling and other ground penetrative works are planned. So while there is a good understanding from a structural piling perspective of physical ground conditions below these hardstanding areas the risk of encountering contaminated soils remains. Further site investigation work is planned in the pre-construction phase, which, together with existing data, will feed into the risk assessment.

2.1.1.2 Some piling works will be required in relative proximity to occupied premises (commercial and residential (see Appendix L: Outline Construction Noise and Vibration Management Plan) and also close to the Humber protected sites (see Appendix M: Outline Construction Ornithology Management Plan). There are also heritage assets present that could be potentially vulnerable to vibration effects from certain types of piling.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The construction contractor will undertake the Risk Assessment and prepare the Foundation Design Method Statement to be submitted to NLC and the EA. The method statement will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the works and identify the person(s) responsible for supervising the works.

4. RISK ASSESSMENT

4.1.1.1 Where piling is required on potentially contaminated sites and/or sites overlying an aquifer, the piling method selected will be advised by a "Foundation Works Risk Assessment Report" (or similar). The risk assessment will detail the pollution scenarios that may occur using the selected construction techniques, thus advising the mitigation and monitoring measures to be adopted (see also: Westcott et al. Environment Agency (2001) Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention. NC/99/73).

4.1.1.2 Further site investigation works are planned as part of the Permitted Preliminary Development Works (see Section 5.3). The Construction Contractor will undertake a risk assessment of the piling and foundations works based on the findings of these site investigations (together with existing data).

4.1.1.3 The risk assessment will include but not necessarily be limited to the following:

- a description of the site setting, especially its soils, hydrology, geology, and hydrogeology;
- the results of site investigations;
- the presence of specific sensitivities such as aquifers, abstractions, and protected areas;

- a description of the types of piling and other ground penetration works proposed for various parts of the Project site;
- assessment of site-specific risks using e.g. a Source – Pathway – Receptor (SPR) linkage approach.

4.1.1.4 The Construction Contractor will identify the plausible scenarios that can occur during piling operations that have the potential to cause pollution and agree these with the EA before completing the risk assessment.

4.1.1.5 The Applicant has undertaken geoarchaeological borehole investigations in order to evaluate the potential of the site to contain significant archaeological remains and to produce a report inclusive of a deposit model. Although not the primary purpose of the exercise, the investigations also established the depth to the Mudstone bedrock. Based on a review of the borehole information available CFA (continuous flight auger) or bored piles will be suitable based on what is known about the ground conditions at the Project site. 'Silent piling' systems will be suitable for the installation of any sheet piles where this type of piling is required (e.g. to support excavation work). The aforementioned non-impact piling methods provide the basis for the noise and vibration assessment undertaken for the EIA. Impact piling was not assessed in detail for the reasons set out in paragraph 4.1.1.6 below.

4.1.1.6 Paragraph 5.2.2.3 of ES Chapter 7 Noise [APP-055] states that for daytime, the widely used threshold of 75 dB LAeq being exceeded for one month was taken as the Significant Observed Adverse Effect Level (SOAEL) for construction noise. Table 5 and Table 6 of APP-055 elaborate further on the application of criteria for assessing the effects of construction noise, which are aligned with BS 5228-1 (Section E3.3) whereby an impact magnitude is described as:

- Major: more than 5dB above the BS5228 criteria; and
- Moderate: above the BS5228 criteria by up to 5dB.

Section E.3.3 of BS 5228-1 suggests that a significant effect will occur for the above major and moderate impacts lasting for a duration of '1 month or more'.

In the rare event that during the construction period contingency impact piling was required for installing sheet piles for part of their length a single event would last for a matter of hours. This activity was considered against the above criteria when producing the ES, but due to the infrequent occurrence and short duration it was not considered to result in likely significant effects and was therefore not assessed in detail.

4.1.1.7 The need for and use of driven techniques (i.e. techniques that could potentially result in noise and vibration levels at source above those assessed in the EIA) is not anticipated but may possibly be required in the exceptional circumstances that a sheet pile met an obstacle that needed to be cleared. As noted in paragraph 6.9.1.1 of ES Chapter 3 [APP-051], for the purposes of constructing the fuel bunker: "The sheet pile construction will act as permanent formwork, and the area within the piled structure will

be excavated to a depth of approximately 10 metres." The foundations will be circa 7.4 m below ground level so a 10 m depth for sheet piling is anticipated to be sufficient, and this will be confirmed during detailed piling and foundation design. The geoarchaeological investigations indicate that the bedrock at this location is in the order of 20 to 21 m below ground level. Therefore the likelihood of encountering bedrock while installing the sheet piles is very low. Consequently, the likelihood of needing to use impact piling as a contingency in the event of encountering an obstacle to the sheet piling is also very low and, in the event it was needed, the duration of the activity would be brief (i.e. in the order of a few hours to one working day).

4.1.1.8 To cover the event that driven piling may be required as a rare contingency, the scope of the risk assessment will pay especial attention to noise and vibration effects of contingency driven piling on people, interest species and heritage assets within the impact zones of where sheet piling is planned.

4.1.1.9 The CEMP will set out suitable procedures and restrictions to be applied in the unlikely event that contingency driven piling is required such as:

- in the first instance investigate alternatives;
- acoustic screening of the activity;
- restrictions on the duration of the activity; and
- restrictions on the hours of the day and days of the week in which the activity could take place.

These measures and procedures would be incorporated into the CEMP approved by NLC, with input as necessary from EA, NE and HE.

5. FOUNDATION DESIGN METHOD STATEMENT

5.1.1.1 The results of the risk assessment will then be used by the Construction Contractor to develop a Foundation Design Method Statement as part of the CEMP. The method statement will set out a series of measures for the protection of soils and water resources that are specific to location on site and to the piling or ground penetration method involved at that location. The method statement and the risk assessment will be submitted to NLC and the EA for review and approval.

5.1.1.2 All piling and penetrative foundation works will be carried out in accordance with the approved method statement.

6. MONITORING, INSPECTION, AND AUDITING

6.1.1.1 The method statement will set out relevant monitoring, inspection and auditing actions relating to the works, including monitoring of groundwater, and for providing assurance to NLGEPL, NLC and the EA of proper undertaking of the works. This will include clearly designating the person(s) responsible for these activities.

6.1.1.2 To the extent practicable monitoring will be undertaken against thresholds agreed with NLC and the EA in terms of, for example:

- 'action levels', which indicate that more frequent monitoring and inspection is required and/or a working method needs to be modified; and
- 'limit levels', which indicate that work should pause while an incident is investigated and remedial actions are taken.

6.1.1.3 In the unlikely event that percussive or impact piling is required and has been approved by NLC, monitoring requirements as set out in the Construction Noise and Vibration Management Plan and Construction Ornithology Management Plan will also be employed in the event that piling of this nature is necessary.

7. REPORTING

7.1.1.1 The method statement will set out procedures for providing evidence of implementation and maintenance of the agreed methods for the works such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

8. REVIEW AND UPDATE

8.1.1.1 The method statement will set out the internal and external triggers and process for any amendments and updates.

APPENDIX L: OUTLINE CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN

1. SCOPE OF THE PLAN

1.1.1.1 The detailed Construction Noise and Vibration Management Plan to be prepared by the Construction Contractor as part of the CEMP will set out a series of measures to control and limit noise impacts and vibration levels at residential areas and other sensitive receptors in the vicinity of the construction works.

1.1.1.2 The Construction Contractor will discuss and agree with NLC whether to seek the council's formal consent in accordance with Section 61 of the Control of Pollution Act 1974. Regardless of this, the Construction Contractor will discuss in detail and agree the proposed noise and vibration mitigation measures with NLC in the process of preparing the detailed plan for NLC's approval.

2. BACKGROUND

2.1.1.1 Construction of the Project will necessitate the use of a variety of construction techniques. The works will also occur at different centres of activity including on existing industrial land, existing open farmland, a railway, and public roads. As a result, noise sensitive receptors, by virtue of their locations in relation to activities on the Project site, may be exposed to different types, levels, and durations of noise impacts. In turn this will entail approaches to noise control that are specific to combinations of: noise-generating activity; location on the site; and distance to receptors. Similar considerations will apply to vibration, but effects will be quite spatially limited and generally at sufficient distance from sensitive receptors as to avoid impacts.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan. The detailed plan will identify the person(s) responsible for supervising specific noise control measures.

4. NOISE AND VIBRATION MANAGEMENT MEASURES

4.1.1.1 The detailed plan will set out how Best Practicable Means (BPM)[7] of noise and vibration control will be applied during the construction of the Project in consideration of the general principles set out below.

- Control at source:
  - noise emission limits for equipment brought to the site;

[7] Best Practicable Means are described in section 72 of the Control of Pollution Act 1974 and section 79 of the Environmental Protection Act 1990 as measures which are "reasonably practicable having regard to among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications."

- review of construction methods to allow selection of inherently quieter equipment.
- direct control of noisy equipment, e.g. retrofitting controls to plant and machinery, regular inspection, and maintenance of equipment to ensure noise control measures are in good working order;
- use rubber linings in, for example, chutes and dumpers to reduce impact noise; and
- careful operation of machinery and equipment along with toolbox talks for the workforce.

- Control across the site:
  - screening or enclosure of stationary plant and machinery;
  - control of working hours;
  - other administrative controls;
  - control of delivery areas and times;
  - choice and design of temporary construction compound locations; and
  - noise monitoring to check compliance with limits and work cessation procedures.

4.1.1.2 The detailed plan will set out in detail how, to which activities (including contingency percussive piling, see Appendix K), where and when noise and vibration control measures will be applied. The detailed plan will also set out procedures for agreeing with NLC suitable noise management and monitoring for any proposed 'out of hours' works.

5. MONITORING, INSPECTION, AND AUDITING

5.1.1.1 The detailed plan will set out relevant monitoring, inspection and auditing actions relating to noise and vibration control, and for providing assurance to NLC (and NLGEPL) of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

5.1.1.2 In regard to noise monitoring, the plan will identify the methods to be used, where they will be applied (i.e. sensitive receptor locations) and the frequency of measurements. The detailed plan will also set out 'action levels' and 'limit levels' at noise sensitive receptors. Exceedance of action levels would be responded to in terms of identifying the contributing activity, and seeking improved controls or additional mitigation, but with work allowed to continue. Exceedance of limit levels would entail a similar response but with work ceasing until the additional controls were put in place and then demonstrated to be effective.

6. REPORTING

6.1.1.1 The detailed plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting of monitoring, inspection, and auditing activities, and the format and frequency of reporting.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant.

APPENDIX M: OUTLINE CONSTRUCTION ORNITHOLOGY MANAGEMENT PLAN

1. SCOPE OF THE PLAN

1.1.1.1 The detailed Construction Ornithology Management Plan to be prepared by the Construction Contractor as part of the CEMP will set out a series of measures to monitor for potential disturbance effects on wintering bird species forming part of the conservation interest of the following Humber protected sites:

- the Humber Estuary Ramsar Site – includes the tidal River Trent, which is located immediately adjacent to the Project. The Ramsar is designated for its estuarine and coastal habitats, internationally important populations of breeding, wintering and passage birds, and populations of sea lamprey, river lamprey and grey seal;
- the Humber Estuary Special Protection Area (SPA) – located 5.8 km north of the Order Limits, comprises extensive wetland and coastal habitats including reedbeds, mature and developing saltmarsh, sand dunes, marshy slacks, and brackish pools. The SPA supports important numbers of waterbirds (especially geese, ducks, and waders) during the migration periods and in winter; and
- the Humber Estuary Site of Special Scientific Interest (SSSI), designated for its estuarine and
- coastal habitats, assemblages of wintering and breeding birds, breeding grey seal colonies, populations of river lamprey and sea lamprey, and assemblages of vascular plants and invertebrates.

1.1.1.2 The Construction Contractor will discuss and agree with NLC and Natural England the monitoring methods and the management interventions needed, in the event that significance disturbance effects are observed.

2. BACKGROUND

2.1.1.1 Construction of some elements of the Project will involve heavy plant and machinery and members of the workforce working in close proximity to the protected sites and functionally linked land used by wintering species of birds. When wintering birds are disturbed, it results in loss of feeding opportunity and unnecessary expenditure of energy which together can threaten their survival, especially in severe weather conditions.

3. ROLES AND RESPONSIBILITIES

3.1.1.1 The detailed plan will set out the roles and responsibilities of NLGEPL, the construction contractor and sub-contractors in implementing the plan. The detailed plan will identify the person(s) (and Ecological Clerk of Works (ECoW) or similar) responsible for undertaking monitoring and supervising specific management/intervention measures.

4. MONITORING AND MANAGEMENT MEASURES

4.1.1.1 Weekly vantage point monitoring surveys will be undertaken by an experienced ornithologist/ECoW between October and March, with survey effort concentrated principally on the banks of the River Trent and adjacent arable land. Other locations will be targeted if higher levels of disturbance are expected; the ornithologist/ECoW will be kept updated on works locations and timing during the monitoring period. Monitoring visits will keep a record of tide times and weather conditions as well as bird species and activity levels. During periods of significant disturbance, monitoring will be increased up to daily, subject to the numbers and sensitivity of bird species recorded.

4.1.1.2 The detailed plan will set out triggers in terms of what constitutes significant levels of disturbance such that management intervention is required.

4.1.1.3 The detailed plan will also set out the types of management interventions that would be deployed under various defined conditions of significant disturbance. Management interventions will need to be ones that can practicable be adopted on a dynamic construction site and could include approaches such as:

- notifying contractors in advance and avoiding working or certain types of work at particular locations at particular times and/or under particular conditions;
- working at reduced intensity or less noisily;
- ceasing work at a particular location and/or moving plant and machinery to other work areas that are less sensitive.

4.1.1.4 The monitoring approaches to be adopted, the 'triggers' for action and the types of management interventions will be agreed with NLC and Natural England.

5. INSPECTION, AND AUDITING

5.1.1.1 The detailed plan will set out relevant inspection and auditing actions relating to the proper and effective implementation of the plan, and for providing assurance to NLC and NE (and NLGEPL) of proper implementation of the plan. This will include clearly designating the person(s) responsible for these activities.

6. REPORTING

6.1.1.1 The detailed plan will set out procedures for providing evidence of implementation and maintenance of the plan such as the reporting the results of bird monitoring, inspection, and auditing activities, and the format and frequency of reporting.

7. PLAN REVIEW AND UPDATE

7.1.1.1 The detailed plan will set out the internal and external triggers and process for the plan to be maintained up to date and relevant. The frequency of monitoring visits will be under constant review and adjusted in line with bird activity recorded on site, reducing and/or increasing visits as necessary.