

# KEADBY 3 CARBON CAPTURE POWER STATION

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A collaboration between **SSE Thermal** and **Equinor**

**Document Ref: 5.9**

**Planning Inspectorate Ref: EN010114**

**The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order**

**Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire**

## Statutory Nuisance Statement

**The Planning Act 2008**

**The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(f)**

**Applicant: Keadby Generation Limited**

**Date: May 202~~2~~4**

**REVISION HISTORY FOR VP2.0**

<b>Item</b>	<b>Nature of Revision</b>
<b>1</b>	<u>Updates made to clarify where defences are not sought or required in respect of certain statutory nuisances.</u>
<b>2</b>	<u>Updates to clarify status of Applicant's Change Request application</u>
<b>3</b>	<u>Updates to clarify impact on document as a result of Applicant's Change Request</u>

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**DOCUMENT HISTORY**

<b>Document Ref</b>	5.9/ Statutory Nuisance Statement
<b>Revision</b>	<u>VP2.0 – Change Request</u>
<b>Document Owner</b>	AECOM

**GLOSSARY**

<b>Abbreviation</b>	<b>Description</b>
AGI	Above Ground Installation - installations used to support the safe and efficient operation of a pipeline; above ground installations are needed at the start and end of a cross-country pipeline and at intervals along the route.
BAT	Best Available Techniques - the available techniques which are the best for preventing or minimising emissions and impacts on the environment. BAT is required for operations involving the installation of a facility that carries out industrial processes. Techniques can include both the technology used and the way an installation is designed, built, maintained, operated and decommissioned.
CCGT	Combined Cycle Gas Turbine - a highly efficient form of energy generation technology. An assembly of heat engines work in tandem using the same source of heat to convert it into mechanical energy which drives electrical generators and consequently generates electricity.
CCUS	Carbon Capture, Usage and Storage - group of technologies designed to reduce the amount of carbon dioxide (CO <sub>2</sub> ) released into the atmosphere from coal and gas power stations as well as heavy industry including cement and steel production. Once captured, the CO <sub>2</sub> can be either re-used in various products, such as cement or plastics (utilisation), or stored in geological formations deep underground (storage).

Abbreviation	Description
CCP	Carbon Capture Plant - plant used to capture carbon dioxide (CO <sub>2</sub> ) emissions produced from the use of fossil fuels in electricity generation and industrial processes.
CEMP	Construction Environmental Management Plan - a plan to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.
CHP	Combined Heat and Power - process that captures and utilises the heat that is a by-product of the electricity generation process
CIBSE	Chartered Institution Building Services Engineers - an international association within the building services industry.
DCO	Development Consent Order - made by the relevant Secretary of State pursuant to The Planning Act 2008 to authorise a Nationally Significant Infrastructure Project. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include rights of compulsory acquisition.
DEMP	Decommissioning Environmental Management Plan - a plan to outline how a decommissioning project will avoid, minimise or mitigate effects on the environment and surrounding area.
EIA	Environmental Impact Assessment - a term used for the assessment of environmental consequences (positive or negative) of a plan, policy, program or project prior to the decision to move forward with the proposed action.
EMS	Environment Management System - the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner.
EPA	Environmental Protection Act 1990
IAQM	Institute of Air Quality Management - professional body for air quality air professionals.
IED	Industrial Emissions Directive – European Union Directive committing member states to control and reduce the impact of industrial emissions on the environment.
MW	Megawatt - unit of energy.
NEP	The Northern Endurance Partnership - a partnership between bp, Eni, Equinor, National Grid, Shell and Total to develop infrastructure to transport and store CO <sub>2</sub> emissions.
NLC	North Lincolnshire Council

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Abbreviation	Description
NRMM	Non-Road Mobile Machinery - machinery typically used off the road, such as construction machinery.
NSIP	Nationally Significant Infrastructure Project - defined by the Planning Act 2008 and cover projects relating to energy (including generating stations, electric lines and pipelines); transport (including trunk roads and motorways, airports, harbour facilities, railways and rail freight interchanges); water (dams and reservoirs, and the transfer of water resources); waste water treatment plants and hazardous waste facilities. These projects are only defined as nationally significant if they satisfy a statutory threshold in terms of their scale or effect.
NSR	Noise Sensitive Receptor - locations or areas where dwelling units or other fixed, developed sites of frequent human use occur which may be sensitive to noise impacts.
PRoW	Public Right of Way - a highway where the public has the right to walk. It can be a footpath (used for walking), a bridleway (used for walking, riding a horse and cycling), or a byway that is open to all traffic (including motor vehicles).
SoS	The Secretary of State - title typically held by Cabinet Ministers in charge of Government Departments.
ZCH	Zero Carbon Humber - a consortium of energy and industrial companies and academic institutions with a shared vision to transform the Humber region into the UK's first net-zero carbon cluster by 2040.

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## EXECUTIVE SUMMARY

- 1 Keadby Generation Limited (the 'Applicant') is seeking development consent for the construction, operation and maintenance of a new low carbon Combined Cycle Gas Turbine (CCGT) Generating Station ('the Proposed Development'). The Proposed Development is a new gas fired electricity generating station of up to 910 megawatts (MW) of gross electrical output with state-of-the art carbon capture technology and including cooling water, electrical, gas and utility connections, construction laydown areas and other associated works (the Proposed Development) on land to the west of the existing Keadby 2 Power Station, under construction. The Proposed Development will therefore make a significant contribution toward the UK reaching its Net Zero greenhouse gas emissions target by 2050.
- 2 This Statutory Nuisance Statement identifies the matters set out in Section 79(1) of the Environmental Protection Act 1990 (the 'EPA 1990') in respect of statutory nuisance and considers whether the Proposed Development could cause statutory nuisance. It has been prepared to comply with Regulation 5(2)(f) of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (the 'APFP Regulations') which requires a statement setting out whether a proposed development could cause a statutory nuisance, pursuant to Section 79(1) of the EPA 1990. If such a nuisance could occur the statement must set out how the applicant proposes to mitigate or limit the effects.
- 3 Potential statutory nuisance may include noise, artificial light, odours, insects, smoke, dust arising on premises, fumes, accumulations and keeping of animals. Without appropriate embedded mitigation and controls, various types of potential nuisance could potentially result from the construction, operation, maintenance and eventual decommissioning of the Proposed Development.
- 4 However, through the embedded mitigation in place and the controls provided for, as presented within the Environmental Statement (**Application Document Refs. 6.1 - 6.4**) and secured in the draft Development Consent Order (DCO), it has been demonstrated that the Proposed Development is unlikely to give rise to any statutory nuisance under the EPA 1990. Therefore, it is appropriate to include within the DCO a provision for a defence against claims of statutory nuisance.

## 1.0 INTRODUCTION

### 1.1 Overview

- 1.1.1 This Statutory Nuisance Statement (**Application Document Ref. 5.9**) has been prepared by AECOM on behalf of Keadby Generation Ltd (the 'Applicant') which is a wholly owned subsidiary of SSE plc. It forms part of the application (the 'Application') for a Development Consent Order (a 'DCO') that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy, under section 37 of 'The Planning Act 2008' (the '2008 Act').
- 1.1.2 The Applicant is seeking development consent for the construction, operation and maintenance of a new low carbon Combined Cycle Gas Turbine (CCGT) Generating Station ('the Proposed Development') on land at, and in the vicinity of, the existing Keadby Power Station, Trentside, Keadby, Scunthorpe DN17 3EF (the 'Proposed Development Site').
- 1.1.3 The Proposed Development is a new gas fired electricity generating station of up to 910 megawatts (MW) of gross electrical output with state-of-the art carbon capture technology and including cooling water, electrical, gas and utility connections, construction laydown areas and other associated works on land to the west of the existing Keadby 2 Power Station, under construction. It is described in **Chapter 4: The Proposed Development of the Environmental Statement (ES)** (ES Volume I - **Application Document Ref. 6.2**).
- 1.1.4 The Proposed Development falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the 2008 Act, as it is an onshore generating station in England that would have a generating capacity greater than 50MW electrical output (50MWe). As such, a DCO application is required to authorise the Proposed Development in accordance with Section 31 of the 2008 Act.
- 1.1.5 The DCO, if made by the SoS, would be known as 'The Keadby 3 Carbon Capture Equipped Gas Fired Generating Power Station Order' (the Order).

### 1.2 The Applicant

- 1.2.1 The Applicant, Keadby Generation Limited, is the freehold owner of a large part of the Proposed Development Site and is a wholly owned subsidiary of the FTSE 100-listed SSE plc, one of the UK's largest and broadest-based energy companies, and the country's leading developer of renewable energy generation. Over the last 20 years, SSE plc has invested over £20bn to deliver industry-leading offshore wind, onshore wind, CCGT, energy from waste, biomass, energy networks and gas storage projects. The Applicant owns and operates the adjacent Keadby 1 Power Station and is in the process of constructing Keadby 2 Power Station. SSE operates the Keadby Windfarm which lies to the north and south of the Proposed Development Site and generates renewable energy from 34 turbines, with a total installed generation capacity of 68MW.

- 1.2.2 SSE has produced a 'Greenprint' document (SSE plc, 2020a) that sets out a clear commitment to investment in low carbon power infrastructure, working with government and other stakeholders to create a net zero power system by 2040. This includes investment in flexible sources of electricity generation and storage for times of low renewable output which will complement other renewable generating sources, using low carbon fuels and/ or capturing and storing carbon emissions. SSE is working with leading organisations across the UK to accelerate the development of carbon capture, usage and storage ('CCUS') clusters, including Equinor and National Grid Carbon.
- 1.2.3 The design of the Proposed Development demonstrates this commitment. The Proposed Development will be built with a clear route to decarbonisation, being equipped with post-combustion carbon capture technology, consistent with SSE's commitment to reduce the carbon intensity of electricity generated by 60% by 2030, compared to 2018 levels (SSE plc, 2020b). It is intended that the Proposed Development will connect to infrastructure that will be delivered by the Zero Carbon Humber (ZCH) Partnership<sup>1</sup> and Northern Endurance Partnership (NEP)<sup>2</sup> for the transport and offshore geological storage of carbon dioxide.

### 1.3 What is Carbon Capture, Usage and Storage?

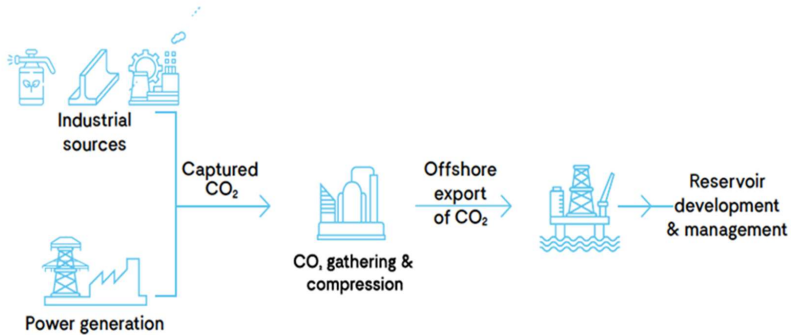
- 1.3.1 CCUS is a process that removes carbon dioxide emissions at source, for example emissions from a power station or industrial installation, and then compresses the carbon dioxide so that it can be safely transported to secure underground geological storage sites. It is then injected into layers of solid rock filled with interconnected pores where the carbon dioxide becomes trapped and locked in place, preventing it from being released into the atmosphere. Plate 1 shows what is involved in the process.

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**Plate 1: Illustration of the Carbon Capture, Usage and Storage**

- 1.3.2 The technologies used in CCUS are proven and have been used safely across the world for many years. Storage sites are located several kilometres underground and are subject to stringent tests to ensure that they are geologically suitable. In the UK, it is expected that the storage sites will be located offshore, in areas such as the North Sea. The NEP has been formed to develop the offshore infrastructure to transport and store carbon dioxide emissions in the North Sea.
- 1.3.3 CCUS is crucial to reducing carbon dioxide emissions and combatting global warming. The UK Government has committed to achieving Net Zero in terms of greenhouse gas emissions by 2050. This is a legally binding target. UK Government policy further states that the *'deployment of power CCUS projects will play a key role in the decarbonisation of the electricity system at low cost'* (HM Government, 2020a, page 47).
- 1.3.4 The Proposed Development will provide up to 910MWe (gross) of dispatchable capacity and capture some 2 million tonnes of carbon dioxide per annum, dependent upon the turbine equipment chosen and the running hours of the plant. The Proposed Development could be up and running by the mid-2020s and will facilitate the timely development of a major CCUS cluster in the Humber region, making an important contribution towards the achievement of Net Zero by 2050.

#### 1.4 The Proposed Development

- 1.4.1 The Proposed Development will work by capturing carbon dioxide emissions from the gas-fired power station and connecting into the ZCH Partnership export pipeline and gathering network for onward transport to the Endurance saline aquifer under the North Sea.
- 1.4.2 The Proposed Development would comprise a low carbon gas fired power station with a gross electrical output capacity of up to 910MWe and associated

buildings, structures and plant and other associated development defined in the Schedule 1 of the draft DCO (**Application Document Ref. 2.1**) as **Work No. 1 – 11** and shown on the Works Plans (**Application Document Ref. 4.3**).

1.4.3 At this stage, the final technology selection cannot yet be made as it will be determined by various technical and economic considerations and will be influenced by future UK Government policy and regulation. The design of the Proposed Development therefore incorporates a necessary degree of flexibility to allow for the future selection of the preferred technology in the light of prevailing policy, regulatory and market conditions once a DCO is made.

1.4.4 The Proposed Development will include:

- a carbon capture equipped electricity generating station including a CCGT plant (**Work No. 1A**) with integrated cooling infrastructure (**Work No. 1B**), and carbon dioxide capture plant (CCP) including conditioning and compression equipment, carbon dioxide absorption unit(s) and stack(s) (**Work No. 1C**), natural gas receiving facility (**Work No. 1D**), supporting uses including control room, workshops, stores, raw and demineralised water tanks and permanent laydown area (**Work No. 1E**), and associated utilities, various pipework, water treatment plant, wastewater treatment, firefighting equipment, emergency diesel generator, gatehouse, chemical storage facilities, other minor infrastructure and auxiliaries/ services (all located in the area referred to as the 'Proposed Power and Carbon Capture (PCC) Site' and which together form **Work No. 1**);
- natural gas pipeline from the existing National Grid Gas high pressure (HP) gas pipeline within the Proposed Development Site to supply the Proposed PCC Site including an above ground installation (AGI) for National Grid Gas's apparatus (**Work No. 2A**) and the Applicant's apparatus (**Work No. 2B**) (the 'Gas Connection Corridor');
- electrical connection works to and from the existing National Grid 400kV Substation for the export of electricity (**Work No. 3A**) (the 'Electrical Connection Area to National Grid 400kV Substation');
- electrical connection works to and from the existing Northern Powergrid 132kV Substation for the supply of electricity at up to 132kV to the Proposed PCC Site, and associated plant and equipment (**Work No. 3B**) (the 'Potential Electrical Connection to Northern Powergrid 132kV Substation');
- Water Connection Corridors to provide cooling and make-up water including:
  - underground and/ or overground water supply pipeline(s) and intake structures within the Stainforth and Keadby Canal, including temporary cofferdam (**Work No. 4A**) (the 'Canal Water Abstraction Option');
  - in the event that the canal abstraction option is not available, works to the existing Keadby 1 power station cooling water supply pipelines and intake structures within the River Trent, including temporary cofferdam (**Work No. 4B**) (the 'River Water Abstraction Option');

- works to and use of an existing outfall and associated pipework for the discharge of return cooling water and treated wastewater to the River Trent (**Work No. 5**) (the ‘Water Discharge Corridor’);
- towns water connection pipeline from existing water supply within the Keadby Power Station to provide potable water (**Work No. 6**);
- above ground carbon dioxide compression and export infrastructure comprising an above ground installation (AGI) for the undertaker’s apparatus including deoxygenation, dehydration, staged compression facilities, outlet metering, and electrical connection (**Work No. 7A**) and an above ground installation (AGI) for National Grid Carbon’s apparatus (**Work No. 7B**);
- new permanent access from A18, comprising the maintenance and improvement of an existing private access road from the junction with the A18 including the western private bridge crossing of the Hatfield Waste Drain (**Work No. 8A**) and installation of a layby and gatehouse (**Work No. 8B**), and an emergency vehicle and pedestrian access road comprising the maintenance and improvement of an existing private track running between the Proposed PCC Site and Chapel Lane, Keadby and including new private bridge (**Work No. 8C**);
- temporary construction and laydown areas including contractor facilities and parking (**Work No. 9A**), and access to these using the existing private roads from the A18 and the existing private bridge crossings, including the replacement of the western existing private bridge crossing known as ‘Mabey Bridge’ over Hatfield Waste Drain (**Work No. 9B**) and a temporary construction laydown area associated with that bridge replacement (**Work No. 9C**);
- temporary retention, improvement and subsequent removal of an existing Additional Abnormal Indivisible Load Haulage Route (**Work No. 10A**) and temporary use, maintenance, and [temporary](#) placement of mobile crane(s) at the existing Railway Wharf jetty for a Waterborne Transport Offloading Area (**Work No. 10B**). [In addition, inclusion of land within the River Trent \(Work No. 10C\) which will be required for the mooring of vessels at the Waterborne Transport Offloading Area \(Work No. 10B\)](#);
- landscaping and biodiversity enhancement measures (**Work No. 11A**) and security fencing and boundary treatments (**Work No. 11B**); and
- associated development including: surface water drainage systems; pipeline and cable connections between parts of the Proposed Development Site; hard standings and hard landscaping; soft landscaping, including bunds and embankments; external lighting, including lighting columns; gatehouses and weighbridges; closed circuit television cameras and columns and other security measures; site preparation works including clearance, demolition, earthworks, works to protect buildings and land, and utility connections; accesses, roads, roadways and vehicle and cycle parking; pedestrian and cycle routes; and temporary works associated with the maintenance of the authorised development.

- 1.4.5 The Applicant will be responsible for the construction, operation (including maintenance) and eventual decommissioning of the Proposed Development, with the exception of the National Grid Gas compound works (**Work No. 2A**), the works within the National Grid Electricity Transmission 400kV substation (part of **Work No. 3A**), the works within the Northern Powergrid 132kV substation (part of **Work No. 3B**), and the National Grid Carbon compound works (**Work No. 7B**), which will be the responsibility of those named beneficiaries.
- 1.4.6 The Proposed Development includes the equipment required for the capture and compression of carbon dioxide emissions from the generating station so that it is capable of being transported off-site. ZCH Partnership will be responsible for the construction, operation and decommissioning of the carbon dioxide gathering network linking onshore power and industrial facilities including the Proposed Development in the Humber Region. The carbon dioxide export pipeline does not, therefore, form part of the Proposed Development and is not included in the Application but will be the subject of separate consent applications by third parties, such as the Humber Low Carbon Pipeline DCO Project by National Grid Carbon<sup>3</sup>.
- 1.4.7 The Proposed Development will be capable of operating 24 hours per day, 7 days per week with plant operation dispatchable to meet electricity demand and with programmed offline periods for maintenance. It is anticipated that in the event of CCP maintenance outages, for example, it will be necessary to operate the Proposed Development without carbon capture, with exhaust gases from the CCGT being routed via the Heat Recovery Steam Generator (HRSG) stack.
- 1.4.8 Various types of associated and ancillary development further required in connection with and subsidiary to the above works are detailed in Schedule 1 'Authorised Development' of the draft DCO (**Application Document Ref. 2.1**). This along with **Chapter 4: The Proposed Development** in the ES Volume I (**Application Document Ref. 6.2**) provides further description of the Proposed Development. The areas within which each numbered Work (component) of the Proposed Development are to be built are defined by the coloured and hatched areas on the Works Plans (**Application Document Ref. 4.3**).

## 1.5 The Proposed Development Site

- 1.5.1 The Proposed Development Site (the 'Order Limits') is located within and near to the existing Keadby Power Station site near Scunthorpe, Lincolnshire and lies within the administrative boundary of North Lincolnshire Council (NLC). The majority of land is within the ownership or control of the Applicant (or SSE associated companies) and is centred on national grid reference 482351, 411796.

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<sup>3</sup> <https://infrastructure.planninginspectorate.gov.uk/projects/yorkshire-and-the-humber/humber-low-carbon-pipelines/>

- 1.5.2 The existing Keadby Power Station site currently encompasses the operational Keadby 1 and (under construction) Keadby 2 Power Station sites, including the Keadby 2 Power Station Carbon Capture and Readiness reserve space.
- 1.5.3 The Proposed Development Site [including the Proposed Development Changes and related order limit changes](#) encompasses an area of approximately 69.74 hectares (ha). This includes an area of approximately 18.7ha to the west of Keadby 2 Power Station in which the generating station (CCGT plant, cooling infrastructure and CCP) and gas connection will be developed (the Proposed PCC Site).
- 1.5.4 The Proposed Development Site includes other areas including:
- land within the Keadby Power Station site for the purposes of facilitating connections to the Proposed Development for natural gas supply, and other necessary infrastructure;
  - the National Grid 400kV Substation located directly adjacent to the Proposed PCC Site, that will be used for the purposes of facilitating connections to the Proposed Development for electricity export;
  - Emergency Vehicle Access Road and Potential Electrical Connection to Northern Powergrid Substation, the route of which utilise an existing farm access track towards Chapel Lane and land within the existing Northern Powergrid substation on Chapel Lane;
  - Water Connection Corridors including:
    - Canal Water Abstraction Option which includes land within the existing Keadby Power Station site with an intake adjacent to the Keadby 2 Power Station intake and pumping station and interconnecting pipework; and
    - River Water Abstraction Option which includes a corridor that spans Trent Road and encompasses the existing Keadby Power Station pumping station and below ground cooling water pipework, extending into the River Trent to allow for a cofferdam to be installed, should this be required;
    - a Water Discharge Corridor which includes an existing discharge pipeline and outfall to the River Trent and follows a route of an existing easement for Keadby 1 Power Station;
  - an existing river wharf at Railway Wharf (the Waterborne Transport Offloading Area) and existing temporary haul road into the into the existing Keadby 1 Power Station Site (the 'Additional Abnormal Indivisible Load (AIL) Route');
  - a number of temporary Construction Laydown Areas on previously developed land and adjoining agricultural land; and
  - land at the A18 Junction and an existing site access road, including two existing private bridge crossing of the Hatfield Waste Drain lying west of Pilfrey Farm (the western of which is known as Mabey Bridge, to be

replaced, and the eastern of which is termed Skew Bridge) and an existing temporary gatehouse, to be replaced in permanent form.

1.5.5 In the vicinity of the Proposed Development Site the River Trent is tidal, therefore parts of the Proposed Development Site are within the UK marine area. No harbour works are proposed.

1.5.6 Further description of the Proposed Development Site and its surroundings is provided in **Chapter 3: The Site and Surrounding Area** in ES Volume 1 (**Application Document Ref. 6.2**).

1.5.1 The Applicant has submitted a request (the 'Change Request') for the following changes to the Proposed Development, together known as 'the Proposed Development Changes'.

1.5.2 The Proposed Development Changes have resulted from design contractor involvement, which has continued to refine the detail of this 'First of a Kind' Project implementation.

- Change No. 1 - Inclusion of riverbed within the Waterborne Transport Offloading Area (Railway Wharf) to be numbered in Schedule 1 of the DCO as **Work 10C**.
- Change No. 2 – not used<sup>[1]</sup>.
- Change No. 3 - Increase to the maximum heights of the carbon dioxide absorbers/ stacks, if two are installed.
- Change No. 4 - Increase to the maximum heights of the carbon dioxide stripper column.
- Change No. 5 - Increase in proposed soil import volumes to create a suitable development platform.

1.5.3 With the Proposed Development Changes, the Proposed Development Site would cover an area of 69.7 hectares (ha) (a minor increase of 0.3ha in the amount of the Applicant's land required).

1.5.4 At the time of writing the Examining Authority is minded to accept the Change Request (as submitted at Deadline 5 and modified at Deadline 6) as stated in a letter dated 29 April 2022 (**PD-019**) but has requested in the same letter that all documents and plans comprising the Change Request are submitted, and/or resubmitted, by the Applicant in a single package at Deadline 6a.

1.5.5 It is anticipated that following receipt of this single package the ExA will exercise discretion to accept the Change Request and from this point the Proposed

<sup>[1]</sup> The Applicant previously consulted on and, at Deadline 5, proposed another change ("Change No. 2 - Changes to the Additional Abnormal Indivisible Load Route largely within SSE land and all within existing Order Limits". This was subsequently withdrawn by the Applicant by letter dated 26 April 2022 (REP6-018) and forms no part of the DCO examination.

[Development Changes would form part of the Proposed Development for the remainder of the DCO examination.](#)

## 1.6 The Development Consent Process

- 1.6.1 As a NSIP project, the Applicant is required to obtain a DCO to construct, operate and maintain the generating station, under Section 31 of the 2008 Act. Sections 42 to 48 of the 2008 Act govern the consultation that the promoter must carry out before submitting an application for a DCO and Section 37 of the 2008 Act governs the form, content and accompanying documents that are required as part of a DCO application. These requirements are implemented through the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) ('APFP Regulations') which state that an application must be accompanied by an ES, where a development is considered to be 'EIA development' under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).
- 1.6.2 An application for development consent for the Proposed Development has been submitted to the Planning Inspectorate (PINS) acting on behalf of the Secretary of State. ~~The Subject to the~~ Application ~~has been~~ [being accepted \(which will be decided within a period of 28 days following receipt of the Application\); for examination and is being examined by](#) PINS ~~who~~ will then ~~examine it and~~ make a recommendation to the Secretary of State, who will then decide whether to make (grant) the DCO.

## 1.7 The Purpose and Structure of this Document

- 1.7.1 The purpose of this document is to meet the requirements of Regulation 5(2)(f) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP Regulations), which states that any application for development consent should be accompanied by a statement setting out whether the development proposal could cause a statutory nuisance pursuant to Section 79(1) of the Environmental Protection Act 1990 (the 'EPA 1990'). If such a nuisance could occur, the statement must set out how the applicant proposes to mitigate or limit the effects.
- 1.7.2 The document is structured as follows:
- Section 2 describes the legislative context for the identification of matters which constitute statutory nuisance and the methodology for assessment of these;
  - Section 3 provides a summary of the assessment of the statutory nuisances, using information from the ES (**Application Document Refs. 6.1 - 6.4**), including any relevant mitigation measures and residual effects, whether embedded within the design of the Proposed Development or additional mitigation secured through requirements within the DCO; and
  - Section 4 presents the conclusions of this statement.

## 2.0 IDENTIFICATION AND ASSESSMENT OF STATUTORY NUISANCE

### 2.1 Legislative Framework

2.1.1 Section 79(1) of the EPA 1990 identifies the matters which are considered to be statutory nuisance as follows:

- (a) any premises in such a state as to be prejudicial to health or a nuisance;*
- (b) smoke emitted from premises so as to be prejudicial to health or a nuisance;*
- (c) fumes or gases emitted from premises so as to be prejudicial to health or a nuisance;*
- (d) any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance;*
- (e) any accumulation or deposit which is prejudicial to health or a nuisance;*
- (f) any animal kept in such a place or manner as to be prejudicial to health or a nuisance;*
- (fa) any insects emanating from relevant industrial, trade or business premises and being prejudicial to health or a nuisance;*
- (fb) artificial light emitted from premises so as to be prejudicial to health or a nuisance;*
- (g) noise emitted from premises so as to be prejudicial to health or a nuisance;*
- (ga) noise that is prejudicial to health or a nuisance and is emitted from or caused by a vehicle, machinery or equipment in a street [or in Scotland, road]; and*
- (h) any other matter declared by any enactment to be statutory nuisance.'*

### 2.2 Statutory Nuisance and Nationally Significant Infrastructure Projects

2.2.1 Paragraph 4.14.1 of the 'Overarching National Policy Statement for Energy EN-1' (Department for Energy and Climate Change, 2011) states:

*'Section 158 of the Planning Act 2008 confers statutory authority for carrying out development or doing anything else authorised by a DCO. Such authority is conferred only for the purpose of providing a defence in any civil or criminal proceedings for nuisance. This would include defence for proceedings for nuisance under Part III of the EPA 1990 (statutory nuisance) ... but only to the extent that the nuisance is the inevitable consequence of what has been authorised. The defence does not extinguish the local authority's duties under Part III of the EPA to inspect its area and take reasonable steps to investigate complaints of statutory nuisance and to serve abatement notice where satisfied to its existence, likely occurrence or recurrence. The defence is not intended to*



*extend to proceedings where the matter is 'prejudicial to health' and not a nuisance.'*

- 2.2.2 Paragraph 4.14.2 goes on to state that it is very important that at the application stage, the Secretary of State considers sources of nuisance under Section 79(1) of the EPA 1990 and how these may be mitigated or limited, so that appropriate 'requirements' can be included in any DCO that is granted.
- 2.2.3 Whilst, as this document demonstrates, it is not expected that the construction, operation (including maintenance) and decommissioning of the Proposed Development would cause a statutory nuisance, Article 41 of the draft DCO (**Application Document Ref. 2.1**) contains a provision that would provide a defence to proceedings in respect of statutory nuisance (Section 79 (1) c – h) should they be initiated against the Applicant or any future operators of the Proposed Development (in respect of Section 79(1) of the EPA 1990 (statutory nuisances and inspections thereof)), subject to certain criteria.

### 2.3 Assessment of Significance

- 2.3.1 The ES (**Application Document Ref. 6.1 - 6.4**) [in conjunction with the ES Addendum submitted to accompany the Change Request \(Application Document Ref. 10.7 – 10.9\) at Deadline 6a](#) for the Proposed Development addresses the likelihood of significant effects arising that could constitute a statutory nuisance, as identified in Section 79(1) of the EPA.
- 2.3.2 **Chapter 4:** The Proposed Development (ES Volume I - **Application Document Ref. 6.2**) and the Framework Construction Environmental Management Plan (CEMP) (**Application Document Ref. 7.1**) describe impact avoidance measures embedded to the proposed design and methods of construction.
- 2.3.3 **Chapter 8:** Air Quality, **Chapter 9:** Noise and Vibration, **Chapter 10:** Traffic and Transport and **Chapter 14:** Landscape and Visual Amenity (ES Volume I - **Application Document Ref. 6.2**) and their associated appendices (ES Volume II – **Application Document Ref. 6.3**), where relevant, provide detailed assessments of these potential statutory nuisances and identify mitigation measures where necessary.
- 2.3.4 The ES [in conjunction with the ES Addendum submitted to accompany the Change Request \(Application Document Ref. 10.7 – 10.9\)](#) provides an assessment of the potential effects on receptors as negligible, minor, moderate or major. Moderate and major effects are considered to be significant for the purposes of the Environmental Impact Assessment (EIA).
- 2.3.5 Unless otherwise stated, decommissioning effects are considered to be comparable to or less than those associated with construction of the Proposed Development for the reasons set out in the ES. Specific impact assessments undertaken for the Proposed Development, including those for air quality, noise and vibration, surface water and hydrology and landscape, conclude that relevant best practice mitigation measures would be in place during any

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decommissioning works, and no additional mitigation has been identified as necessary for the decommissioning phase of the Proposed Development.

- 2.3.6 Potential nuisance aspects have been considered in Section 3 below and through embedded mitigation, no statutory nuisance effects are considered likely to occur.

### 3.0 POTENTIAL NUISANCE IMPACTS

3.1.1 This section discusses the nuisance impacts set out in the EPA 1990 in relation to the Proposed Development and summarises the embedded and additional mitigation measures that will be applied to prevent these.

#### 3.2 EPA 1990 Section 79(1) a) Any Premises in Such a State as to be Prejudicial to Health or a Nuisance

3.2.1 A defence is not sought or required in respect of this type of nuisance. Nevertheless, it is considered that:

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3.2.1.1 The EPA describes a potential statutory nuisance to be caused by ‘any premises in such a state as to be prejudicial to health or a nuisance’.

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3.2.2 Statutory nuisance as a result of poor housekeeping or maintenance could only occur if poor levels of housekeeping or maintenance are in place for example; and:

3.2.3 To minimise the risk of any such statutory nuisance from occurring through poor maintenance or housekeeping, operational and management controls will be put in place, such as the establishment of a preventative maintenance plan, regular housekeeping inspections, waste management procedures and compliance with the requirements of the Environmental Management System (EMS) and Environmental Permit for the Proposed Development. These measures are described in **Chapter 4: The Proposed Development (ES Volume I - Application Document Ref. 6.2)**.

#### 3.3 EPA 1990 Section 79(1) b) Smoke Emitted from Premises so as to be Prejudicial to Health or a Nuisance, c) Fumes or Gases Emitted from Premises so as to be Prejudicial to Health or a Nuisance

3.3.1 No smoke is expected to be generated from the Proposed Development during normal operation. Fumes and gases that may be relevant are considered in the following sections.

##### Construction Phase

3.3.2 Construction air emissions are considered in **Appendix 8A: Air Quality – Construction Phase (ES Volume II – Application Document Ref. 6.3)** and reported in **Chapter 8: Air Quality (ES Volume I - Application Document Ref. 6.2)**. The study area for Non-Road Mobile Machinery (NRMM) emissions has been applied, in line with IAQM guidance (2014), extending up to 350m beyond the Proposed Development Site boundary and 50m from the construction traffic route (up to 500m from the Proposed Development Site entrances), for human health receptors.

3.3.3 Receptors potentially affected by the exhaust emissions associated with construction phase vehicle movements are those located within 200m of a public road used by construction traffic to access the Proposed Development

Site. The effect of construction traffic emissions on human health is considered to be negligible.

- 3.3.4 The potential for NRMM emissions within the Proposed Development Site to result in air quality impacts on local human health is also considered negligible.
- 3.3.5 The effects of abnormal loads (waterborne transport) have been considered. Due to the limited number of AIL deliveries (around 35 - 40 over a 12 month period), short-term duration of activities and the intermittent hours that the routes will be used, it is considered that the impact on human health receptors is likely to be negligible, and not significant.

#### Operational Phase

3.3.6 The pollutants considered within the assessment of air emissions for the main stacks in ES Volume I **Chapter 8: Air Quality (Application Document Ref. 6.2)**, **Chapter 8: Air Quality and Appendix 8B: Air Quality Operational Phase of the ES Addendum submitted to accompany the Change Request (Application Document Ref. 10.7 – 10.9) at Deadline 6a** are primarily those prescribed within the Industrial Emissions Directive (IED). These are:

- oxides of nitrogen (NO<sub>x</sub>), expressed as nitrogen dioxide (chemical formula NO<sub>2</sub>);
- carbon monoxide (chemical formula CO); and
- ammonia (chemical formula NH<sub>3</sub>).

3.3.7 Emissions of the following pollutants not included within the IED are also considered:

- amines and their potential degradation products, including:
  - acetaldehyde;
  - formaldehyde;
  - nitrosamines and nitramines (collectively referred to as N-amines).

3.3.8 Of the pollutants listed above, the primary pollutants of interest in relation to the impacts due to emissions from the Proposed Development and associated road traffic are nitrogen dioxide and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub> size fractions).

3.3.9 The study area for the operational development point source emissions extends up to 15km from the Proposed PCC Site, in order to assess the potential impacts on sensitive human health and ecological receptors, in line with the Environment Agency risk assessment methodology (Department for Environment, Food and Rural Affairs and Environment Agency, 2016). In terms of human health receptors, the predicted impacts from the operational Proposed Development become negligible well within 2km and therefore sensitive receptors for the human health impacts only are concentrated within a 2km study area.

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- 3.3.10 The Proposed Development will be designed and operated to meet the large combustion plant requirements of the IED, and its operations will be strictly regulated by the Environment Agency under an Environmental Permit. It will be operated and maintained in accordance with a preventative maintenance programme.
- 3.3.11 The impacts of all pollutant species released from the operational Proposed Development are predicted to result in negligible adverse effects at all human health receptors within the study area. Impacts of NO<sub>2</sub>, CO, NH<sub>3</sub>, amines, acetaldehyde and formaldehyde can therefore be considered to be not significant at all human health receptors.
- 3.3.12 Exhaust emissions will be monitored by a continuous emissions monitoring system (CEMS) and typically discharged to atmosphere through a stack, situated above the absorber building. In the event that the CCP is not operational (e.g. during a CCP outage), flue gas will be discharged via a secondary stack on the HRSG, which would also include a CEMS. The exhaust emissions will comply with the required BAT-AELs (where specified). As required by the Large Combustion Plants BAT Reference Document (BRef) (European Commission, 2017), the emissions from the CCGT plant will be monitored continuously via CEMS, with emissions being compliant with the applicable BAT-AELs. It is likely that some emissions from the CCP will be monitored periodically, which will be determined once the anticipated species are identified; the installation will therefore potentially require inclusion of non-continuous sampling points in addition to CEMS.
- 3.3.13 The CEMS sampling points and non-continuous sampling points will be located according to the requirements of the IED and the Environment Agency Technical Guidance Note M1 'Sampling Requirements for stack emission monitoring' (Environment Agency, 2017), in so far as reasonably practicable, and 'Monitoring of stack emissions: techniques and standards for periodic monitoring' (Environment Agency, 2021).
- 3.3.14 No detailed assessment of operational traffic emissions has been made, as the numbers of additional vehicles associated with the operational phase of the Proposed Development are below the Design Manual for Roads and Bridges (Highways England, 2019) and Institute of Air Quality Management (IAQM, 2014) screening criteria for requiring such assessment.

#### **3.4 EPA 1990 Section 79(1) d) Any Dust, Steam, Smell or Other Effluvia Arising on Industrial, Trade or Business Premises and Being Prejudicial to Health or a Nuisance, and e) Any Accumulation or Deposit which is Prejudicial to Health or a Nuisance**

##### Dust, Accumulations and Deposits

- 3.4.1 The scale and nature of the Proposed Development and activities associated with construction and operation have the potential to produce dust. 'Dust' is defined in British Standard 6069-2:1994 (British Standards Institute, 1994) as particulate matter in the size range 1µm – 75µm (microns) in diameter and is

primarily composed of mineral materials and soil particles. If emitted at high concentrations this could theoretically be transported to local receptors.

- 3.4.2 Anticipated dust, accumulations and deposits from construction, operations (including maintenance works) and decommissioning activities at the Proposed Development are described below.

#### Construction Phase

- 3.4.3 During the earthworks and construction phase, based on IAQM guidance (2014), unmitigated dust impacts were concluded in **Chapter 8: Air Quality** (ES Volume I - **Application Document Ref. 6.2**) to have 'low risk' for human health receptors. Therefore, mitigation measures appropriate to the scale of perceived risk would be applied as part of the CEMP. A Framework CEMP has been prepared (**Application Document Ref. 7.1**). A detailed CEMP will be prepared in accordance with the Framework CEMP.
- 3.4.4 Emissions of dust and particulates from the construction phase of the Proposed Development will be controlled in accordance with industry best practice, through incorporation of appropriate control measures according to the risks posed by the activities undertaken, as determined through this assessment process. The management of dust and particulates and application of adequate mitigation measures will be enforced through the CEMP (a framework of which is included as **Application Document Ref. 7.1**)).
- 3.4.5 The management of construction phase emissions, including dust and particulates, and the application of adequate mitigation measures will be enforced through the CEMP, and through the application of appropriate mitigation according to the risk of dust emissions from Proposed Development Site activities.
- 3.4.6 Appropriate standard and best practice control measures will be included in the detailed CEMP, but not be limited to application of the following best practicable means as far as reasonably practicable, which may include:
- [avoid mechanical roughening or grinding of concrete surfaces, where appropriate;](#)
  - [no burning of waste on Site;](#)
  - store sand and aggregates in bunded areas and store cement powder and fine materials in silos, where appropriate;
  - use water suppression and regular cleaning to minimise mud on roads, and control dust during earth moving activities;
  - cover vehicles leaving the construction site that are carrying waste materials or spoil;
  - employ wheel wash systems at site exits;
  - restrict, where practicable, the use of unmade road accesses;

- minimise duration of storage of topsoil or spoil during pipeline construction;
- [covering or seeding of soil stockpile if left for extended periods](#);
- prohibit open fires on site;
- minimise vehicle and plant idling;
- where reasonably practicable, locate static plant away from sensitive boundaries or receptors; and
- minimise operating time outside of core working hours/ daylight hours.

#### Operational Phase

- 3.4.7 The operation of the Proposed Development in accordance with the IED and Environmental Permit, the activities of the operation and maintenance teams, the implementation of formal operating procedures and the installation and operation of automated controls, will minimise the potential for statutory nuisance from atmospheric emissions.
- 3.4.8 For the operational assessment, the impact of point source emissions at human health receptors has been determined from isopleth figures of pollutant dispersion and maximum model output at discrete receptor locations.
- 3.4.9 The assessment concludes that plant design (i.e. appropriate stack height and location) and emission control measures (e.g. acid wash) will provide sufficient embedded mitigation to avoid any significant effects. As such, additional mitigation measures are not required for the Proposed Development. No significant effects were identified within the assessment.

#### Visual Plume (Steam)

- 3.4.10 It is envisaged that there will not be any visible plumes (steam) during the construction and decommissioning phases. The likelihood and mitigation measures for visible atmospheric emissions of steam during the operational phase of the Proposed Development are discussed below.
- 3.4.11 The visibility of an atmospheric plume is due to the relative humidity of the exit gas and is the visual condensation of water vapour. Despite not being suggestive of atmospheric pollutant levels, it can be perceived as being linked by some individuals. It also increases the Proposed Development's visual footprint on the skyline.
- 3.4.12 **Chapter 8: Air Quality (ES Volume I - Application Document Ref. 6.2)** provides an assessment of the frequency of visual plume. The assumed release temperature of the absorber stack is 60°C. An average plume length of less than 4m for a 60°C release is predicted to be visible for up to 3% of the time reducing to approximately 1% of the time for a plume over 632m in length (refer to Annex B, **Appendix 8B: Air Quality - Operational Phase** in ES Volume II - **Application Document Ref. 6.3**).

**3.4.13** In addition to the potential for visible plumes to occur from the absorber stack, there is also potential for visible plumes to occur from the hybrid cooling towers (22 cooling cells) recognising that these are plume abated to reduce the potential for visible plumes to form. Plumes will be present for up to 26% of the time with a visible plume of on average under 1m. Two of the five years of meteorological data used in the assessment resulted in plumes greater than 1m.

**3.4.13** **3.4.14** [Chapter 14: Landscape and Visual Amenity of the ES Addendum notes that the visibility of the plumes for the twin absorbers columns/ stacks is anticipated to be similar to the single plume assessed within Chapter 14: Landscape and Visual Amenity of ES Volume I \(Application Document Ref. 6.2.14\) \[APP-057\] with reference to Appendix 8B: Air Quality Operational Phase of ES Volume II \(Application Document Ref. 6.3.6\) \[APP-070\]. An average plume length of less than 4m would be predicted to be visible for up to 3% of the time. Occasional longer plumes are predicted \(up to 632m\) predicted to occur for less than 1% of the time.](#)

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**3.4.14** **3.4.15** At the baseline assessment scenario, prior to the Proposed Development commencing operation, it is anticipated that Keadby 1 and Keadby 2 Power Stations when operating will emit plumes. For the future operation scenario, the impact of the Proposed Development is set in the context of Keadby 2 Power Station only, which will emit plumes similar or greater in visibility than the Proposed Development. The plume visibility implications have been considered as part of the BAT assessment for the Proposed Development and concluded to not have a significant effect.

#### Smells

**3.4.15** **3.4.16** It is envisaged that there will not be any odour emissions during the construction, operation and decommissioning phases of the Proposed Development.

**3.4.16** **3.4.17** Odour sources and mitigation measures to be implemented during the operational phase of the Proposed Development are discussed below.

**3.4.17** **3.4.18** Several potential odour release sources have been identified; predominantly around storage and handling of some of the process residues, chemicals and reagents which are required to mitigate operational stack emissions if experienced at high concentrations.

**3.4.18** **3.4.19** Odour could potentially be generated through the receipt and handling of ammonia/ urea and amines at the Proposed Development, however it is considered that appropriate storage and handling procedures will be implemented to mitigate odour releases that could have the potential to result in odour nuisance. It is further considered that the largely industrial setting of the Proposed PCC Site will also support a lower impact on the nearby receptors. An Odour Management Plan is therefore not considered to be required.



~~3.4.19~~3.4.20 Odour levels around the plant will be regularly monitored by site management to assess the effectiveness of the installed odour control measures.

**3.5 EPA 1990 Section 79(1) f) Any Animal Kept in Such a Place or Manner as to be Prejudicial to Health or a Nuisance**

3.5.1 A defence is not sought or required in respect of this type of nuisance.

~~3.5.1~~ No animals will be kept at the Site.

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**3.6 EPA 1990 Section 79(1) fa) Any Insects Emanating from Premises so as to be Prejudicial to Health or a Nuisance**

3.6.1 A defence is not sought or required in respect of this type of nuisance. Nevertheless, it is considered that:

~~3.6.1~~ Due to the operational nature of the Proposed Development, it is not considered to be a suitable habitat for vermin based on experience of other similar developments;

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~~3.6.2~~ Litter on site has the potential to attract vermin or be blown into neighbouring properties. Regular inspections of the Proposed Development Site, boundary fence, gates and access road in the immediate vicinity of the facility entrance will be carried out. Staff will be encouraged to correctly dispose of litter as part of the site rules and site induction;

~~3.6.3~~ Pests and vermin are therefore not expected to create a statutory nuisance; and-

~~3.6.4~~ Due to the nature of the process, no insects are expected to emanate from the Proposed Development or be attracted to it.

**3.7 EPA 1990 Section 79(1) fb) Artificial Light Emitted from Premises so as to be Prejudicial to Health or a Nuisance**

3.7.1 An Indicative Lighting Strategy has been prepared setting out the principles of construction and operational lighting (**Application Document Ref. 5.11**). Details of construction and operational lighting schemes for construction and operation will be submitted to NLC for approval prior to construction and commissioning, respectively. The external lighting scheme will be designed in accordance with relevant standards, such as the Guidance Notes for the Reduction of Obtrusive Light published by the Institute of Lighting Professionals (2020) and/ or Chartered Institution Building Services Engineers (CIBSE) requirements – as appropriate.

3.7.2 The external lighting scheme will be designed to provide safe working conditions in all areas of the Proposed Development Site whilst reducing light pollution and the visual impact on the local environment. This is likely to be achieved by the use of luminaires that eliminate the upward escape of light.

- 3.7.3 The lighting required during the construction and operation stages of the Proposed Development will be designed to reduce unnecessary light spill outside of the Proposed Development Site boundary.
- 3.7.4 Construction temporary site lighting is proposed to enable safe working on the construction site in hours of darkness. Construction temporary lighting will be arranged so that glare is minimised outside the construction site.
- 3.7.5 Artificial light is not expected to cause a statutory nuisance.

**3.8 EPA 1990 Section 79(1) g) Noise Emitted from Premises so as to be Prejudicial to Health or a Nuisance, and h) Noise that is Prejudicial to Health or a Nuisance and is Emitted from or Caused by a Vehicle, Machinery or Equipment in a Street**

3.8.1 Through noise prediction modelling undertaken, the **Chapter 9: Noise and Vibration (ES Volume I - Application Document Ref. 6.2)** concludes there would be minor adverse or negligible adverse residual effects (not significant) relating to the following activities of the Proposed Development:

- daytime construction noise effects;
- potential vibration levels from piling during construction;
- construction traffic noise;
- daytime and night-time noise during operation;
- operational traffic noise; and
- decommissioning.

3.8.2 [Chapter 9: Noise and Vibration of the ES Addendum, supported by Appendix 9B: Operational Noise Assessment Methodology confirms that the Proposed Development Change 3 - Increase to the maximum parameters \(height\) for up to two absorbers/ stacks, results in no new or different significant noise or vibration effects from those reported in the ES.](#) Best practice methods will be applied during construction, operation (including maintenance) and decommissioning to minimise noise.

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Construction Phase

3.8.3 In the absence of mitigation, during construction (sheet piling for cofferdam installation if the River Water Abstraction Option is selected), up to moderate/major adverse noise effects on residential Noise Sensitive Receptor 4 (NSR) group could occur during daytime construction activities. This effect would be localised and short-term. Additional mitigation will be applied, which may include, but not be limited to, use of a temporary acoustic barrier alongside the River Trent, use of a partial enclosure around the hammer, and the use of a non-metallic dolly between the hammer and the driving helmet (for driven piling) to prevent metal on metal impact sound.

- 3.8.4 If construction works were to take place continuously over night-time periods, assuming the same intensity of working as for the daytime, up to moderate/major adverse noise effects on residential NSR (NSR 1, NSR 1A, NSR 2, NSR 3, NSR 7, NSR 8, NSR 10) could occur, in the absence of mitigation during construction on the Proposed PCC Site.
- 3.8.5 Applying the same worst-case assumptions regarding continuous working and intensity, during topsoil stripping for laying the electrical connection cable to the existing Northern Powergrid 132kV Substation Option, there would be the potential for adverse noise effects on all NSR, with the exception of NSR 9 (night-time) and at NSR2 (evening) in the absence of mitigation.
- 3.8.6 Again, applying worst-case assumptions regarding continuous working and intensity during continuous flight auger piling for Mabey Bridge replacement, up to major adverse noise effects on NSR11 (evening/ night-time) are predicted in the absence of mitigation.
- 3.8.7 Construction activities taking place outside core working hours will be planned, managed and controlled appropriately so they do not exceed the significant observed adverse effect level (SOAEL) threshold values or relevant limit agreed with NLC.
- 3.8.8 It is proposed that this would be secured by a Requirement in the draft DCO (**Application Document Ref. 2.1**). Construction noise mitigation will be controlled by the CEMP which will be secured through a Requirement of the draft DCO. A Framework CEMP is included as **Application Document Ref. 7.1**.
- 3.8.9 No effects greater than minor adverse (not significant) are predicted after the proposed mitigation is applied.
- 3.8.10 During construction, the construction contractor will follow Best Practicable Means to reduce noise and vibration impacts. Best Practicable Means include the following (where practicable):
- abiding by agreed construction noise limits at locations to be agreed with NLC;
  - ensuring that processes are in place to minimise noise before works begin and ensuring that best practicable means (BPM) are being achieved throughout the construction programme, including the use of localised screening around significant noise producing plant and activities;
  - ensuring that modern plant is used, complying with applicable UK noise emission requirements, and selection of inherently quiet plant where possible;
  - hydraulic techniques for breaking to be used, where breaking is required, in preference to percussive techniques where reasonably practicable;
  - use of lower noise piling (e.g. rotary bored or hydraulic jacking) rather than driven piling techniques, where reasonably practicable;

- off-site pre-fabrication for components of the Proposed Development, where reasonably practicable;
- a soft-start or slow ramp-up of piling hammer power will be employed at the commencement of any impact piling activity or after a break of more than 10 minutes;
- all plant and equipment being used for the works to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use;
- all contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2) (BSI, 2014a and 2014b), which should form a prerequisite of their appointment;
- loading and unloading of vehicles, dismantling of site equipment such as scaffolding or moving equipment or materials within the Proposed Development Site to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable;
- appropriate routing of construction traffic on public roads and along access tracks, to reduce construction traffic noise, as far as reasonably practicable;
- provision of information to NLC and local residents to advise of potential noisy works that are due to take place;
- monitoring of noise complaints and reporting to the Applicant for immediate investigation.
- construction activities taking place outside core working hours will need to be planned, managed and controlled appropriately so they do not exceed the SOAEL threshold values.

#### Operational Phase

- 3.8.11 During operation, in the absence of mitigation, effects would range from negligible/ minor adverse (not significant) to up to major adverse (significant) on residential NSR. Mitigation will reduce all operation effects to negligible/ minor adverse.
- 3.8.12 During operation, application of practical sound mitigation to reduce relevant noises at source (which could include the CCP compressors, absorber stack, absorber stack exhaust, HRSG walls and roof, all pumps, hybrid cooling towers and turbine intake) would be used to control noise and its effects. During detailed design, an operational noise control scheme (including agreed noise limits) will be prepared, secured by a Requirement of the draft DCO (**Application Document Ref 2.1**), which would demonstrate use of Best Available Techniques (BAT) for the control of noise for the Environmental Permit.
- 3.8.13 With mitigation, noise emissions from the Proposed Development can meet the NLC criterion (no greater than +3 dB excess of rating level over the background sound level) which is below the Lowest Observed Adverse Effect Level (LOAEL)

(no greater than +5 dB excess of rating level over the background sound level). Such levels would not be classified as significant and will not represent a statutory nuisance.

#### Decommissioning Phase

- 3.8.14 The effects of eventual decommissioning are considered to be comparable to, or less than, those assessed for construction activities.
- 3.8.15 Decommissioning would require submission of a Decommissioning Environmental Management Plan (DEMP) to the relevant planning authority for its approval, secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). Appropriate best practice mitigation measures will be applied during any decommissioning works and documented in a DEMP; no additional mitigation for decommissioning of the Proposed Development beyond such best practice specified in BS 5228 is considered necessary to specify at this stage.

### **3.9 EPA 1990 Section 79(1) h) Any Other Matter Declared by any Enactment to be a Statutory Nuisance**

#### Traffic and Abnormal Loads

- 3.9.1 Traffic and the effect of abnormal loads during construction, operation (including maintenance) and decommissioning of the Proposed Development have been assessed and is reported in ES Volume I **Chapter 10: Traffic and Transport (Application Document Ref. 6.2)**.
- 3.9.2 A Framework Construction Traffic Management Plan has been developed for the Proposed Development to detail how traffic will be managed (**Application Document Ref. 7.2**).
- 3.9.3 No significant adverse effects on other road users have been identified.

## 4.0 CONCLUSIONS

### 4.1 Potential for Nuisance

- 4.1.1 This Statement has identified the matters set out in Section 79(1) of the EPA 1990 in respect of statutory nuisance and considers whether the Proposed Development could cause a statutory nuisance.
- 4.1.2 Potential nuisance aspects have been considered in Section [Error! Reference source not found.3](#) of this Statement and through embedded mitigation no statutory nuisance effects are considered likely to occur.
- 4.1.3 The operation of the Proposed Development would be regulated by the Environment Agency through an Environmental Permit and would undergo regular monitoring and reporting. Embedded mitigation and appropriate controls will be secured by appropriate DCO requirements. As a result, it is not expected that the construction, operation, maintenance or decommissioning of the Proposed Development would engage Section 79(1) and give rise to any statutory nuisance under the EPA 1990. It is therefore appropriate to include a defence against statutory nuisance proceedings within the Order.

## 5.0 REFERENCES

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British Standards Institute (2014a) *BS 5228-1:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites. Part 1: Noise*

British Standards Institute (2014b) *BS 5228-2:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration*

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