

KEADBY 3 **CARBON CAPTURE POWER STATION**

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

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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**

**Statement of Common Ground with
Keadby with Althorpe Parish Council**

The Planning Act 2008

Applicant: Keadby Generation Limited

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GLOSSARY

Abbreviation	Description
ADMS	Atmospheric Dispersion Modelling System
AGI	Above ground installation
AIL	Additional Abnormal Indivisible Load
AQMAU	Air Quality Modelling and Assessment Unit
BAT	Best available techniques
CCGT	Combined Cycle Gas Turbine
CCP	Carbon dioxide capture plant
CEMP	Construction Environmental Management Plan
CHP	Combined heat and power
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
FFL	Finished floor level
FRA	Flood Risk Assessment
HP	High pressure
HRSG	Heat Recovery Steam Generator
LBMEP	Landscaping and Biodiversity Management and Enhancement Plan
MW	megawatts
NLC	North Lincolnshire Council
NSIP	Nationally Significant Infrastructure Project
PCC	Proposed Power and Carbon Capture
PINS	Planning Inspectorate, The
SoCG	Statement of Common Ground
WFD	Water Framework Directive

Abbreviation	Description
ZCH	Zero Carbon Humber

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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Statement of Common Ground ('SoCG') (**Application Document Ref. 8.14**) has been prepared on behalf of Keadby Generation Limited ('the Applicant') which is a wholly owned subsidiary of SSE plc and Keadby with Althorpe Parish Council ('The Parish Council'). 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 electricity generating station of up to 910 megawatts (MW) gross electrical output, equipped with carbon capture and compression plant and fuelled by natural gas, on land to the west of Keadby 1 Power Station and the (under commissioning) Keadby 2 Power Station, including connections for cooling water, electrical, gas and utilities, construction laydown areas and other associated development. It is described in Chapter 4: The Proposed Development of the Environmental Statement (ES) (ES Volume I – APP-047).
- 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 Station) Order' ('the Order').

1.2 The Proposed Development

- 1.2.1 The Proposed Development will work by capturing carbon dioxide emissions from the gas-fired power station and connecting into the Humber Low Carbon Pipelines project pipeline network, being promoted by NGCL, for onward transportation to the Endurance storage site under the North Sea.
- 1.2.2 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

Schedule 1 of the draft DCO (APP-005) as Work No. 1 – 11 and shown on the Works Plans (APP-012).

1.2.3 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 light of prevailing policy, regulatory and market conditions once a DCO is made.

1.2.4 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 (National Grid Electricity Transmission) 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 Water 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'); and
 - 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 for 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 AGI for NGCL apparatus (**Work No. 7B**);
 - new permanent access from the 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 placement of mobile crane(s) at the existing Railway Wharf jetty for a 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
 - minor associated development.
- 1.2.5 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. NGCL will be responsible for the development of the carbon dioxide pipeline 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 application(s) to be taken forward by NGCL.

- 1.2.6 The Proposed Development is designed to be capable of operating 24 hours per day, 7 days a 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 could 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.
- 1.2.7 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 (APP-005). This, along with Chapter 4: The Proposed Development in the ES Volume I (APP-047), 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 (APP-012).

1.3 The Proposed Development Site

- 1.3.1 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.
- 1.3.2 The existing Keadby Power Station site currently encompasses the operational Keadby 1 and Keadby 2 Power Station (under commissioning) sites, including the Keadby 2 Power Station Carbon Capture and Readiness reserve space.
- 1.3.3 The Proposed Development Site encompasses an area of approximately 69.4 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).
- 1.3.4 The Proposed Development Site includes other areas including:
- a high pressure gas pipeline to supply the CCGT including a gas compound for NGG apparatus and a gas compound for the Applicant's apparatus;
 - the National Grid 400kV Substation located directly adjacent to the Proposed PCC Site, through which electricity generated by the Proposed Development will be exported;
 - Emergency Vehicle Access Road and Potential Electrical Connection to Northern Powergrid Substation;

- Water Connection Corridors:
 - 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;
 - River Water Abstraction Option which includes a corridor that spans Trent Road and encompasses the existing Keadby Power Station pumping station, below ground cooling water pipework, and infrastructure within the River Trent; and
 - 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 crossings 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.

1.3.5 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.

1.3.6 Further description of the Proposed Development Site and its surroundings is provided in **Chapter 3: The Site and Surrounding Area** in ES Volume I (**APP-046**).

1.4 The Development Consent Process

1.4.1 As a NSIP project, the Applicant is required to seek 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.

1.4.2 An application for development consent for the Proposed Development has been submitted to and accepted for examination by the Planning Inspectorate (PINS) acting on behalf of the SoS. PINS is now examining the Application and

will make a recommendation to the SoS, who will then decide whether to make (grant) the DCO.

1.5 The Purpose and Structure of this Document

1.5.1 The purpose of this document is to summarise agreements reached between the Applicant and Keadby with Althorpe Parish Council.

1.5.2 The document is structured as follows:

- Section 2 – Summary of Consultation;
- Section 3 – Matters Agreed; and
- Section 4 – Matters Not Agreed and Next Steps.

2.0 SUMMARY OF CORRESPONDENCE

2.1.1 The table below contains a record of key correspondence between the Applicant and Keadby with Althorpe Parish Council relating to the Proposed Development prior to the Council's Relevant Representation.

Table 2.1: Summary of Correspondence

Date	Correspondence
24/11/2020	<p>Stage 2 Public Consultation.</p> <p>A copy of the letter template sent for the Section 42 consultation can be found at pages 336 – 342 of the Consultation Report (Application Document Ref. 5.1) (Examination Library Ref. APP-030).</p>
26/11/2020	<p>A webinar explaining the Stage 2 Public Consultation was run by the project team for members of the parish council.</p> <p>This is referred to at paragraph 11.6.2 of the Consultation Report (Application Document Ref. 5.1) (Examination Library Ref. APP-030).</p>
19/01/2021	<p>Section 42 Consultation response from Keadby with Althorpe Parish Council, outlining concerns relating to water abstraction and flood risk.</p> <p>A copy of the consultation response can be found at page 409 of the Consultation Report (Application Document Ref. 5.1) (Examination Library Ref. APP-030).</p>
30/03/2021	<p>Stage 2.1 Public Re-Consultation.</p> <p>A copy of the letter template sent for the Section 42 consultation can be found at pages 550 – 557 of the Consultation Report (Application Document Ref. 5.1) (Examination Library Ref. APP-030).</p>
30/06/2021	<p>SSE's stakeholder manager provides an informal e-mail notification to local parish councils advising of the Planning Inspectorate's (PINS) acceptance decision.</p>

Date	Correspondence
21/07/2021	SSE's stakeholder manager attended the full meeting of the parish council.
28/07/2021	<p>Letter Notifying the Acceptance of the Application.</p> <p>A copy of the letter template sent for the Section 56 Notice can be found at Examination Library Ref. OD-005.</p>
15/09/2021	<p>Presentation delivered by the Keadby 3 project team to a full meeting of the parish council. The presentation covered all topics identified in the relevant representation, as well as the DCO examination and determination process and timescales and provided links to a range of PINS resources online and PINS contact details. The project team included the air quality and flood risk leads from AECOM, environmental advisors to the Applicant. The Applicant suggested potential working arrangements between the Applicant and the parish council for consideration.</p>
14/12/2021	<p>First meeting of the Statement of Common Ground Working Group for Keadby 3 DCO Application. Attended by several representatives from both the Applicant's project team and Keadby with Althorpe Parish Council.</p>

3.0 MATTERS AGREED

3.1.1 The below sets out the topics raised in the Keadby with Althorpe Parish Council relevant rep and the related, agreed matters between them and the Applicant.

3.2 Water Environment and Flood Risk

3.2.1 It is agreed that the Applicant is currently considering two options for water abstraction, namely the canal water abstraction option and the river water abstraction option. The canal water abstraction option is currently preferred by the Applicant.

3.2.2 The Canal and River Trust, which maintains normal water levels for navigational purposes, is proposing modifications to the Keadby Lock to make better use of the significant losses of water via spillages over the lock gates, into the River Trent.

3.2.3 Separate to the Canal and River Trust, local drainage boards manage water levels during periods of heavy rainfall through the use of drains. The Applicant has set out that the canal system does not form any part of the flood alleviation system and that there is therefore no expectation that flooding effects will be altered by proposed water abstraction from the canal. The Council is in agreement.

3.3 Landscape and Visual Impact of a third power station in the area

3.3.1 It is agreed that there are open views in the north-west and east towards the Proposed Development Site but more restricted views generally from the south and south-west due to existing buildings/topography.

3.3.2 It is agreed that photomontages prepared by the Applicant have provided an example of how the Proposed Development may look using maximum proposed heights.

3.3.3 It is agreed that there are three receptors where effects would be moderate adverse/ significant due to larger structures against the skyline, although the majority of the Proposed Development would not be visible. These receptors are known as Chapel Lane West, Keadby (Viewpoint 1), Gate Keepers Residence, Vazon Bridge, Keadby (Viewpoint 2), and Public Rights of Way KEAD9 and KEAD10 (Viewpoint 4).

3.3.4 It is agreed that the opportunity for mitigation of visual amenity effects is limited due to the size and scale of the Proposed Development.

3.3.5 It is agreed that the Landscape and Biodiversity Management and Enhancement Plan includes proposals for planting but would not reduce the significance of visual impact from these locations.

3.4 Possible impacts on Air Quality

- 3.4.1 It is agreed that during the operation of the Proposed Development impacts could arise due to emissions and that the application has assessed the impacts on air quality using 'worst-case' scenarios in line with Rochdale Envelope principles. For example, the location of stack(s) has not been finalised as detailed design of the Proposed Development has yet to be completed. Therefore, four assessment scenarios have been modelled, with the absorber building(s) and stack(s) separately assessed as being located at four corners of the proposed area within which the carbon capture plant would be developed (Work No. 1C on the Work Plans (APP-012)). The modelled results at all human health receptors within 2km are assessed as negligible adverse/not significant.
- 3.4.2 The Applicant has also considered the effects of amine degradation products and applied conservative assumptions. It is agreed that the effects of amine degradation products are well below the Environment Agency environmental assessment levels for N-amines.

4.0 MATTERS NOT AGREED AND NEXT STEPS

4.1.1 Matters not yet agreed:

- Requirements in the draft Development Consent Order. The matters set out in the table below.

Table 4.2: Summary of Matters Not Yet Agreed

KWAPC Position	Applicant's Position
<p>The Applicant should guarantee that there will be no adverse impact to the community.</p>	<p>NPS policy recognises that NSIPs may, after such mitigation and other controls are applied, have a degree of unavoidable local impacts and this recognised in the decision-making process and the Local Impact Report prepared by the relevant planning authority (REP1-022).</p> <p>The Draft DCO includes a wide range of reasonable controls (e.g. requirements in Schedule 2 of the draft DCO) to avoid, mitigate, minimise or otherwise address potential effects identified through comprehensive environmental assessment and consultation. Through the proposed controls, design and use of requirements, no significant adverse effects on the community are predicted with the exception of three viewpoints (Viewpoints 1, 2 and 4) from which the Proposed Development will be visible; due to the scale of the plant this visibility cannot be mitigated or screened.</p> <p>We understand from previous engagement that the parish council do not oppose the project in principle.</p> <p>The Environmental Permit required for the operation of the plant will control emissions to air and water, regulate maintenance activities and specify operating and monitoring procedures to be followed.</p>
<p>Confirmation that any planting scheme will be agreed with the Keadby</p>	<p>The Applicant is willing to consult the parish council on the draft planting scheme for areas visible from or in proximity to public land/rights of way/viewpoints. It is the Applicant's understanding this could be achieved by bringing proposals before</p>

KWAPC Position	Applicant's Position
<p>with Althorpe Parish Council.</p>	<p>the full meeting of the parish council, which are held most months of the year.</p> <p>We propose to work with the parish council to agree timescales for a consultation method, for inclusion in the draft DCO.</p>
<p>Any levels that exceed 'negligible/not significant' threshold would trigger an immediate cessation of operation. Levels, with the 2km zone, should be monitored</p>	<p>We interpret this as relating to air quality and noise emissions and set out a summary of the position agreed in the Statement of Common Ground with North Lincolnshire Council, REP1-007):</p> <ul style="list-style-type: none"> • Chapter 8: Air Quality (ES Volume I – Application Document Ref. 6.2) (Examination Library Ref. APP-043) considers potential impacts and effects from the Proposed Development on both human health and ecological receptors. Ground level concentrations of relevant air pollutants have been assessed and effects upon human receptors are assessed as non significant. Emissions to air from the Proposed Development during operation will be carefully controlled and monitored by the operators and regulated by the Environment Agency through the Environmental Permit and in accordance with the use of Best Available Techniques (BAT). The Permit will specify the monitoring arrangements that must be employed including continuous monitoring of various parameters during plant operation. The permit must be granted by the Environment Agency prior to operation of the Proposed Development and only when they are satisfied that the plant will be adequately and safely controlled, monitored and operated. • Noise emissions are assessed as not significant after the application of mitigation, and an operational noise control scheme is proposed to be used, secured by

KWAPC Position	Applicant's Position
	<p>requirement in the draft DCO to demonstrate that noise effects are acceptable.</p> <p>We understand from previous engagement that the parish council do not oppose the project in principle.</p>

4.1.2 Regarding next steps the Applicant and Keadby with Althorpe Parish Council will continue to engage constructively and frequently. The Applicant intends to discuss the controls in the DCO and what they would achieve, the findings of the NLC Local Impact Report, and the role of the Environmental Permit, further with the parish council. The Applicant will keep the Examining Authority updated at relevant deadlines on the above matters.