KEADBY 3
CARBON CAPTURE POWER STATION

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

Document Ref: 8.17

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

Initial Draft Statement of Common Ground with Isle of Axholme and North Nottinghamshire Water Level Management Board

The Planning Act 2008

Applicant: Keadby Generation Limited

Date: February 2022

DOCUMENT HISTORY

Document Ref	8.17		
Revision	VP1.0		
Author	AECOM Limited		
Signed	Susan Evans	**Date**	February 2022
Approved By			
Signed	Richard Lowe	**Date**	February 2022
Document Owner	AECOM		

GLOSSARY

Abbreviation	Description
AGI	Above ground installation
AIL	Additional Abnormal Indivisible Load
CCGT	Combined Cycle Gas Turbine
CCP	Carbon dioxide capture plant
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
FRA	Flood Risk Assessment
HP	High pressure
HRSG	Heat Recovery Steam Generator
IDB	Isle of Axholme and North Nottinghamshire Water Level Management Board
LBMEP	Landscape and Biodiversity Management and Enhancement Plan
MW	megawatts
NGCL	National Grid Carbon's Limited
NGG	National Grid Gas's
NLC	North Lincolnshire Council
NSIP	Nationally Significant Infrastructure Project
PCC	Proposed Power and Carbon Capture
PINS	Planning Inspectorate
SoCG	Statement of Common Ground

Abbreviation	Description
SoS	The Secretary of State
WFD	Water Framework Directive

CONTENTS

1.0 Introduction 1
1.1 Overview 1
1.2 The Proposed Development 1
1.3 The Proposed Development Site 4
1.4 The Development Consent Process 5
1.5 The Purpose and Structure of this Document 6
1.6 Status of this version 6
2.0 The Role of the Isle of axholme and north nottinghamshire water level management Board 7
3.0 Summary of Consultation 8
4.0 Matters Agreed 10
5.0 Matters Not Agreed and Next Steps 13
6.0 References 14

TABLES

Table 3.1: Consultation Summary 8
Table 4.1: List of Matters Agreed between the Applicant and the Isle of Axholme and North Nottinghamshire Water Level Management Board 10

1.0 INTRODUCTION

1.1 Overview

1.1.1 This Statement of Common Ground ('SoCG') with the Isle of Axholme and North Nottinghamshire Water Level Management Board ('IDB') (**Application Document Ref. 8.17**) has been prepared on behalf of Keadby Generation Limited ('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 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 National Grid Carbon's Limited (NGCL), for onward transport 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 the 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 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:

- HG gas pipeline to supply the CCGT including a gas compound for National Grid Gas's (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 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.

1.3.5 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 This is a SoCG produced on a voluntary basis which aims to summarise clearly the agreements reached between the Applicant and the IDB ('the Parties') on matters relevant to the examination of the Application and to assist the Examining Authority. It has been prepared with regard to the guidance in 'Planning Act 2008: examination of application for development consent' (Department for Communities and Local Government, March 2015).

1.5.2 This version of the document summarises the agreements reached between the Parties regarding matters listed below:

- draft Development Consent Order and any relevant Protective Provisions;
- consents which may be required for the Proposed Development; and
- the environmental effects on existing IDB assets and any mitigation required.

1.6 Status of this version

1.6.1 This is the first draft of this SoCG.

1.6.2 The document is structured as follows:

- Section 2 – summarises the role of the IDB;
- Section 3 - sets out details of consultation with the IDB to date;
- Section 4 - sets out the matters agreed between the Parties in respect of the Application; and
- Section 5 – sets out any matters that are yet to be agreed and where discussions are on-going between the parties and summarises next steps.

2.0 THE ROLE OF THE ISLE OF AXHOLME AND NORTH NOTTINGHAMSHIRE WATER LEVEL MANAGEMENT BOARD

2.1.1 The IDB manages water levels and carries out a regular programme of maintenance and improvement works within its watercourses and pumping stations. The IDB's geographical remit covers an area running from the Ouse following the west bank of the Trent, moving south west down to Markham Moor. The IDB aims to deliver sustainable, efficient and cost effective water level management for the benefit and protection of people, property, business, land and the environment.

2.1.2 The IDB has a role to play in providing feedback in advising developer's on the acceptability of proposals that interact with IDB assets and agreeing mitigation measures that may be required for application documents.

3.0 SUMMARY OF CONSULTATION

3.1.1 Consultation and technical engagement has been undertaken with the IDB since formal stage II consultation for the Proposed Development (January 2021). Consultation comments received from the IDB for the Proposed Development are presented in Table 3.1 below.

Table 3.1: Consultation Summary

Date	Details
January 2021 (technical engagement through video conference)	A meeting took place on 6 January 2021 to discuss the Proposed Development, potential effects on IDB assets and the approach to the Environmental Impact Assessment (EIA). The Applicant outlined its conceptual drainage proposals to discharge surface water runoff into an IDB drain 'Glew Drain', north of Keadby Common and also to provide an access route over this drain for emergency vehicle access required during the operational phase of the Proposed Development. The IDB agreed that the access route over Glew Drain would be acceptable in principle with any loss in biodiversity requiring compensation. The IDB noted that discharge meeting the agricultural runoff rate of 1.4 l/s/ha would be desirable but was not always required in all cases.
January 2021 (formal Stage 2 Consultation/response)	The IDB provided comment in relation to potential consents required for the Proposed Development and noted that the proposed surface water discharge is in excess of that usually permitted by the Board, noting a potential impact upon the receiving watercourse and capacity at off-site pumping stations, if permitted, that would require consideration. The IDB outlined that any planting undertaken at the Proposed Development Site must be carried out in such a way to ensure that it does not encroach within 9m of any Board maintained watercourse when fully matured. The IDB explained that they are keen to progress the proposals presented by Keadby 2 Power

Date	Details
	Station to improve water vole habitat and to potentially extend habitat improvements to other areas.
March 2021 (Pre-Application) Technical Engagement	The IDB was contacted in regard to seeking agreement in respect of matters discussed during technical engagement, including those set out in the IDB's formal consultation response. No response was received from the IDB.
May 2021 (Pre-Application Technical Engagement)	The IDB was contacted prior to submission of the Application and provided with the Applicant's drainage strategy and emergency access bridge design for comment. No response was received.
November 2021 (Post Submission Technical Engagement)	The IDB suggested providing an SoCG on a voluntary basis on a limited range of matters of interest to the Examining Authority.

4.0 MATTERS AGREED

4.1.1 The below Table 4.1 contains a list of 'matters agreed' along with a concise commentary of what the item refers to and how it came to be agreed between the two parties.

Table 4.2: List of Matters Agreed between the Applicant and the Isle of Axholme and North Nottinghamshire Water Level Management Board

Matter Agreed	Commentary
Consultation	A summary of pre-application consultation is contained in the Consultation Report (**Application Document Ref. 5.1**), an ES Volume I (**Application Document Ref. 6.2**) and in Section 2 of this SoCG. It is agreed that the consultation summary in Section 3 of this SoCG provides an accurate record of consultation with the IDB on matters to date.
Consents that may be required for the Proposed Development	The Parties agree that the Schedule of Other Consents and Licences (**Application Document Ref. 5.4**) Row 15, 31, 32, 33, 34, 35 and 36 cover the range of consents that may be required from the IDB for the Proposed Development.
Environmental Effects	**Chapter 11:** Biodiversity and Nature Conservation of ES Volume I (**APP-054**) includes an assessment of the potential effects of the Proposed Development on ecology and is supported by technical Appendices 11A to 11H of the ES Volume II (**APP-076 – APP-083)**) and accompanying Figures 11.1 and 11.2 (**APP-121** and **APP-122**). It is agreed between the Parties that the relevant ecological aspects of the Proposed Development that fall within the remit of the IDB have been adequately assessed in **Chapter 11**: Biodiversity and Nature Conservation (**APP-054**) in relation to habitats and species present within sections of Glew Drain and that these effects from the Proposed Development are minor adverse (not significant) as a result of the control and mitigation measures proposed. In relation to species, the Parties agree that low levels of water vole activity are present within Glew Drain and that the effect of the Proposed

Matter Agreed	Commentary
	Development during construction on water vole is minor adverse (not significant). The Parties agree that loss of small sections of bank at channel crossings of Glew Drain is likely to have a negligible (not significant) effect on aquatic invertebrate assemblages, which are of up to county value. It is agreed that the Applicant has adequately consulted the IDB in respect of the design of the emergency access bridge and sought to comply with IDB Bylaws in it's design (Figure 4.17: Emergency Access Bridge General Arrangement and Sections – **APP-026**). In doing so, it is agreed that Applicant cannot avoid the minor adverse effects resulting from loss of bank habitat and that the planting and enhancement outlined in the Landscape and Biodiversity Management and Enhancement Plan (LBMEP) (**APP-039**) provides adequate compensation for the minor losses.
Effects on surface water and flood risk	An assessment has been undertaken which considers the potential effects of the Proposed Development on the water environment, presented in **Chapter 12:** Water Environment and Flood Risk (**APP-055**) supported by an assessment of the potential impacts on the Water Framework Directive (WFD) status of waterbodies that may be affected as detailed in Appendix 12B: Water Framework Directive Assessment (ES Volume II – **APP-085**). It is agreed that the IDB is satisfied with the approach used within these assessments. The Parties agree that the revised Flood Risk Assessment (FRA) (**AS-010**) provides satisfactory proposals to adequately manage surface water from the Proposed Development Site, presents the potential flood risks and demonstrates that the proposed mitigation measures are adequate to minimise flood risk. In particular, it is agreed that the Applicant's preferred method and rate of discharge (greenfield runoff rate) for surface water runoff can be

Matter Agreed	Commentary
	appropriately accommodated either within the IDB network, (subject to confirmation by the IDB that a discharge rate higher than agricultural runoff rate (1.4l/s/ha) is acceptable), or alternatively, or as a hybrid solution in combination with the preferred solution, discharging excess surface water via the Water Discharge Corridor at the greenfield runoff rate, as indicated on Figure 4.9 (**APP-018**). It is agreed that the mitigation, management and enhancement measures outlined within these documents include the necessary principal controls to ensure compliance with IDB bylaws, and appropriately acknowledge where consent of the IDB would need to be sought.
Planting and Habitat Enhancement	The Board outlined within the Stage 2 Consultation that any planting undertaken at the site must be carried out in such a way to ensure that the planting does not encroach within nine metres of any Board maintained watercourse when fully matured. It is agreed that the proposals for planting related to drain bank habitat compensation and enhancement set out in Section 5 (Keadby Common Drains and Proposed PCC Site – Grassland Enhancement) of the LBMEP (**APP-039**) are sufficiently far from the watercourse and will not be detrimental to the flow or stability of IDB watercourses/ or inhibit the Board's machinery to access watercourses for annual maintenance, periodic improvement and emergency works.
Draft Development Consent Order and any relevant Protective Provisions	It is agreed between the Parties that the design and impact avoidance and mitigation measures identified and specified by control measures within Requirements 12 (Surface Water Drainage) and Requirement 14 (Flood Risk Mitigation) of the draft DCO (**APP-005**) are appropriate and that the IDB wish to be named in relation to these requirements.

5.0 MATTERS NOT AGREED AND NEXT STEPS

5.1.1 This SoCG sets out the agreements that have been reached between the Parties to date in respect of the matters relating to the Proposed Development requested by the ExA outlined in Section 1.7 of this SoCG.

5.1.2 Further clarification has been sought by the IDB regarding the following matters:

- Agreement will be required at the detailed design stage on the exact cable routing and depth proposed for the 132kV cable to cross either Keadby Common Drain and Glew Drain or to cross the Power Station Drain.;
- Agreement on the management of– potential conflicts between the use of the temporary laydown area adjacent to Glew Drain and the IDB maintenance operations on the Drain from the north side of the watercourse;
- Agreeing the approach to management of surface water discharge into Glew Drain in accordance with IDB Policy; and
- Ensuring that fencing and boundary treatments (including planting) respect the 9m byelaw distance from the drainage network.

5.1.3 The Parties are both committed to taking forward discussions on the matters above as necessary, and both Parties hope to conclude discussions in the near future.

6.0 REFERENCES

HM Government (2020a) *Energy White Paper, Powering our Net Zero Future*.

SSE (2020) *A Greenprint for Building a Cleaner More Resilient Economy*.

SSE plc (2020b) *Our Strategy*.