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 United Kingdom Health Security Agency (formerly Public Health England)

The Planning Act 2008

Applicant: Keadby Generation Limited

Date: May 2022

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GLOSSARY

Abbreviation	Description
AGI	Above ground installation
AIL	Abnormal Indivisible Load
AQMA	Air Quality Management Areas
CCGT	Combined Cycle Gas Turbine
CCP	Carbon dioxide capture plant
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
EMF	Electromagnetic Fields
ES	Environmental Statement
HRSG	Heat Recovery Steam Generator
HP	High pressure
LCRM	Land Contamination: Risk Management
MW	megawatts
NGG	National Grid Gas
NLC	North Lincolnshire Council
NRMM	Non-Road Mobile Machinery
NSIP	Nationally Significant Infrastructure Project
PAH	Polycyclic Aromatic Hydrocarbons
PCC	Proposed Power and Carbon Capture
PINS	Planning Inspectorate
PM	Particulate Matter

Abbreviation	Description
SoCG	Statement of Common Ground
SoS	The Secretary of State
UKHSA	UK Health Security Agency
ZCH	Zero Carbon Humber

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TABLES

1.0 INTRODUCTION

1.1 Overview

1.1.1 This Statement of Common Ground ('SoCG') with the UK Health Security Agency (formerly Public Health England) (**Application Document Ref. 8.13**) 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 Zero Carbon Humber (ZCH) Partnership export pipeline and gathering network for onward transport to the Endurance saline aquifer 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 the 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 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 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 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 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. 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 Ventures.

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:

- high pressure 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 Secretary of State. PINS is now examining the

Application and will make a recommendation to the Secretary of State, 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 clearly the agreements reached between the Applicant and UK Health Security Agency (formerly Public Health England) ('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:

- Cumulative impacts from emissions, especially Particulate Matter (PM) (Including PM_{10} and $PM_{2.5}$);
- Draft DCO, Requirements and Protective Provisions;
- Dust and land contamination impacts;
- Impacts of construction, operational and decommissioning phases, including emissions and cumulative impacts, especially in relation amine products and which amine product(s) is/ are likely to emitted;
- Monitoring and mitigation; and
- Transport and traffic, including frequency of AILs and Heavy Goods Vehicle (HGV) movements.

1.6 Status of this version

1.6.1 This is the final version draft of this SoCG.

1.6.2 The document is structured as follows:

- Section 2 – summarises the role of UK Health Security Agency (formerly Public Health England);
- Section 3 - sets out details of consultation with the UK Health Security Agency 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 UK HEALTH SECURITY AGENCY

2.1.1 The UK Health Security Agency is an executive government agency sponsored by the Department of Health and Social Care that commenced operation on 1 October 2021, taking over the responsibilities of Public Health England whose remit was to protect and improve the nation's health and wellbeing and reduce health inequalities.

2.1.2 The UK Health Security Agency is a consultee under the 2008 Act, meaning applicants must consult with the agency in the process of applying for development consent.

3.0 SUMMARY OF CONSULTATION

3.1.1 Consultation and technical engagement has been ongoing with Public Health England (prior to it becoming part of the UK Health Security Agency) since the scoping stage for the Proposed Development (June 2020). Consultation comments received from the UK Health Security Agency for the Proposed Development are presented in Table 3.1 below.

Table 3.1: Consultation Summary

Date	Details
June 2020 (consultation on Environmental Impact Assessment (EIA) Scoping)	The UK Health Security Agency (as Public Health England) was consulted by the Applicant and formally by PINS in respect of a request made by the Applicant for an EIA Scoping Opinion for the Proposed Development. A response was provided to PINS from the UK Health Security Agency on 12th June 2020.
January 2021 (formal Stage 2 Consultation/response)	The UK Health Security Agency (as Public Health England) raised points in relation to Environmental Public Health and Health and Wellbeing. Environmental Public Health recommendations comprised the need for further assessment and clarity of cumulative and combined emissions and impacts, works across different phases and receptor locations. Further details regarding the water connection, discharge corridors, abnormal indivisible load route and public health impacts from wastes were also recommended. Specific feedback was provided for air quality construction and operational impacts, (including emissions from the carbon capture process and equipment, process emissions, stack height, confirmation that potential Polycyclic Aromatic Hydrocarbons (PAH) emissions have been adequately

	scoped out) and land, water, incidents/accidents and electromagnetic field (EMF) assessments. A full copy of the formal Stage 2 correspondence is included in Appendix 4 for reference.
March 2021 (additional technical engagement following Stage II Consultation)	Public Health England (now the UK Health Security Agency) was consulted in March 2021 following Stage II Consultation. The UK Health Security Agency responded on 18th April 2021 confirming thar the submitted information had been reviewed and that they had no additional comments to those provided in their response dated 19th January 2021.
August 2021	The Applicant wrote to Public Health England (now the UK Health Security Agency) to offer assistance in signposting relevant parts of the DCO Application and additional environmental information on waste submitted following the Application (OD-003). The UK Health Security Agency confirmed that they were in the process of assessing the documentation and would contact the Applicant if they felt a discussion would be beneficial.
UK Health Security Agency Relevant Representation dated 02 September 2021 (RR-013)	Public Health England (now the UK Health Security Agency) submitted a relevant representation to PINS in September 2021. In summary, the following comments were made: • Comments related to amine products which will be emitted by the Proposed Development and the request for further information on the specific amine products to be emitted through the environmental permitting process once a licensor is selected and

	additional modelling is undertaken. • The request for risk assessment for human health receptors up to 250m from the Proposed Development to assess the effectiveness of mitigation measures in relation to ground gas risks given the presence/ number of historical landfills on-site and adjacent to it. • Additional detail recommended related to cumulative impacts from emissions of PM_{10} and $PM_{2.5}$ from non-road mobile machinery (NRMM) and use of any generators on baseline emissions and the impact on the nearest air quality management area (AQMA). • Clarification sought on dust impacts described in Chapter 8: Air Quality (**APP-051**) and Appendix 8A (**APP-069**) and a recommendation to update mitigation, if required and within the dust monitoring strategy, include receptors to the north of the AIL route and south of the water connection corridor, including impacts of decommissioning of the AIL route. • Clarification on receptors within 200m of affected roads and query why Roe Farm and Vazon Bridge were not included as receptors. • A number of clarifications, justifications and mitigation

	measure recommendations for land contamination.
December 2021	Draft SoCG provided by AECOM and the Parties agreed to submit a SoCG at Deadline 2.
January 2022 – March 2022	Comments on draft SOCG provided by UK Health Security Agency (refer to Appendix 1). UKHSA also received a 'Non-Statutory Consultation on the Proposed Changes to the Previously Submitted Environmental Statement'. A response was provided back to the Applicant 18th March 2022.
April 2022	Comments on version 2 draft SOCG provided by UK Health Security Agency (refer to Appendix 2) following publication of a Rule 17 letter by the ExA.
10 May 2022	UKHSA noted that the Applicant's updated Air Quality Assessment Reports would need to be reviewed and that they had not received formal consultation requests to review these updated documents to date. UKHSA also noted that a number of documents were due to be resubmitted by 10 May 2022 (Deadline 6a) as part of a change request (letter from PINS dated 29 April 2022 – Request for Further information) and that they would need to see any final versions. The Applicant confirmed to the UKHSA on 10 May 2022 that the additional submissions at Deadline 6a would only formalise (and not change) what was previously submitted for the change request at Deadline 5.

12 May 2022	The UKHSA proposed a date of 31 May 2022 at the latest for review of information submitted. The Applicant noted that the air quality assessment for the Proposed Development Changes was published and notified to all Interested Parties on 8 April 2022. Furthermore, as the ExA is under an obligation to complete the examination by 7 June 2022, and SoCGs are intended to assist the ExA, the Applicant welcomed comments sooner than 31 May 2022, with a view to finalising a signed SoCG to submit into examination on 24 May 2022 (Deadline 7).
19 May 2022	The UKHSA provided a copy of a response sent directly to the Planning Inspectorate (refer to Appendix 2). The response noted that recommendations provided in the consultation response by the UKHSA (22 April 2022) have been considered in the VP3.0 SoCG received from the Applicant (26 April 2022) with changes to the SoCG made following recommendations provided in references 2 and 8 (part 1 of UKHSA recommendation only) of Appendix 1 (dated 22nd April 2022). However, there remain several areas that the UKHSA cannot agree to, namely due to the lack of information included in the air quality assessment. The Applicant has updated this final SoCG to take into consideration the additional comments provided and included a new Appendix 3, to provide additional data with a view to resolving the outstanding matters raised by the UKHSA. An updated VP4.0 draft version of the SoCG was provided to UKHSA for review on 20 May 2022 with a request to

	resolve outstanding matters and submit a final signed SoCG by Deadline 7 (24 May 2022), as requested by the ExA in a Rule 17 letter (12 May 2022).
23rd – 24th May 2022	Additional communications were held between the Applicant and UKHSA and an updated SoCG was sent to UKHSA (dated May 2022, reference 8.13, VP4.0) on 23rd May 2022 A copy of a final response letter from the UKHSA as well as a tracked changed SoCG was sent to the Applicant on 24th May. A copy of the letter can be found in Appendix 4.

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 4.1: List of Matters Agreed between the Applicant and the UK Health Security Agency

Matter Agreed	Commentary
Consultation	Whilst a summary of pre-application consultation available to the Applicant is contained in the Consultation Report (**APP-030)** and Appendix 16A: Population and Health Signposting (**APP-096**) in ES Volume II, itis agreed that the consultation summary in Section 3 of this SoCG provides an accurate record of consultation with the UK Health Security Agency/ Public Health England on application matters to date.
Air Quality and cumulative impacts from emissions (during construction and operation. Consideration of amine products likely to be emitted during operation.	The assessment of effects of the Proposed Development in terms of air quality is set out in Chapter 8: Air Quality (**APP-051**) of ES Volume I and appendices 8A, 8B and 8C (**APP-069** to **APP-071**) of ES Volume II. The Applicant notes that additional detail was requested in relation to cumulative impacts from other air pollution sources including emissions of PM_{10} and $PM_{2.5}$ from non-road mobile machinery (NRMM) and use of any generators on baseline emissions and the impact on the nearest AQMA. The approach to the assessment of cumulative impacts due to emissions of NRMM during construction is detailed in section 8.3 of Chapter 8 and follows relevant guidance produced by the Institute of Air Quality Management (IAQM, 2014) and the principles of Design Manual for Roads and Bridges (DMRB) NRMM assessment. It is considered that based on distance, there is no plausible pathway for such emissions to affect the nearest AQMA, as it is located approximately 6.2km to the east of the Proposed Development Site in Scunthorpe. The cumulative emissions that may arise over the course of the construction and operation of the Proposed Development have been assessed and are considered negligible. Emissions from construction generators would be regulated through an environmental permit from the

Matter Agreed	Commentary
	Environment Agency, to meet the requirements either of the Medium Combustion Plant Directive or the Industrial Emissions Directive, depending on the aggregated output capacity of the generators used. Emissions of particulate matter that may have arisen during construction of Keadby 2 are already considered in the baseline assessment presented in the Chapter, which uses the available background ambient air monitoring data. Construction dust emissions from Keadby 2 Power Station will have ceased well before the start of construction of the Proposed Development since Keadby 2 Power Station is already in commissioning. The operational Keadby 2 Power Station is fuelled by natural gas so operational particulate emissions will be negligible. In relation to the clarification sought on dust impacts, the Applicant confirms that Section 8.6.2 of Chapter 8: Air Quality should read '*The assessment has considered risks from demolition/ site clearance works, earthworks, construction and trackout (of mud to the road) and, based on the potential scale of activities and the sensitivity of the receptor area, (as defined in Appendix 8A: Air Quality - Construction Phase (ES Volume II – Application Document Ref. 6.3)) unmitigated dust impacts are considered to be 'low risk' for human health receptors, and medium risk for ecological receptors. Therefore, mitigation measures appropriate to the scale of perceived risk would be applied as part of the CEMP.'* Based on the above, it is considered that there is no requirement to update mitigation measures in either Chapter 8, or Appendix 8A, as these are based on the level of risk which has already been stated as 'high risk'. The Applicant notes that the UK Health Security Agency has made further comments in relation to the choice of receptors for modelling of traffic including HGV movements during construction. It is noted that there is no requirement to consider all receptors within 200m of affected roads. Receptors such as TR5-9 are adjacent to modelled roads, and therefore the impacts at these receptors will be higher than at receptors such as Roe Farm and Vazon Bridge

Matter Agreed	Commentary
	which are not adjacent to any modelled roads. For this reason, although not reported, the impacts due to construction traffic will be less at Roe Farm and Vazon Bridge than at other reported receptors which are closer to the modelled roads and at which no significant air quality effects have been identified. Emissions of amine products would be managed through an Environmental Permit issued by the Environment Agency. It has been agreed between the Applicant and the Environment Agency that a variation to the existing Keadby power station environmental permit would be sought to include the Proposed Development. The permit variation application was submitted to the Environment Agency in July 2021 and included an appraisal of BAT and assessment of air impacts based on the current design understanding. The assessment of air impacts included an appraisal of amine emissions and formation of amine degradation products, following protocols agreed with the Environment Agency and using conservative assumptions. It has been agreed with the Environment Agency that a subsequent permit update may be required following completion of the detailed design to address any specific design measures to be applied and provide further detail on air quality impacts, including updated modelling, where appropriate. The assessment of amines took into account a number of worst case assumptions in order to provide a conservative assessment of the impact of amines from the information available at pre-FEED stage. Once more information is available post FEED, the assessment will be reviewed and if appropriate revised, in order to ensure that the assessment remains valid and conservative. This will be dealt with through the Environmental Permitting process. UKHSA outlined that further air quality assessment may be beneficial in order provide further clarity on the process contribution to the overall EAL (Environmental Assessment Level) once the final licensor has been selected. A reappraisal of such operational effects would be undertaken post consent once the licensor is selected, and detailed design is completed. A subsequent permit update

Matter Agreed	Commentary
	may be required following completion of the detailed design to be specific to the design measures to be applied and provide further detail on plant commissioning and start-up and air and water discharges as appropriate. It is agreed that the UK Health Security Agency will be consulted at the relevant time by the Environment Agency on the detail of the environmental permit application in accordance with consultation guidance on environmental permits. The Proposed Changes to the DCO include an increase in the height of the twin absorbers if they are to be used for the Proposed Development. The changes have been assessed in Chapter 8 and Appendix 8B of the ES Addendum (**REP5-047**) including consideration of air quality effects. The revised air quality impact assessment shows that the increased stack heights for the twin absorbers slightly reduces the potential air quality effects on human health receptors although there is no change in the significance of predicted effects which remains negligible. Based on the above clarifications, it is agreed by both Parties that the issues raised by the UK Health Security Agency in their Relevant Representation have been appropriately addressed.
Electro-magnetic fields	Risks associated with electromagnetic fields (EMF) have been considered in Appendix 16A: Population and Health Signposting (**APP-096**) of ES Volume II. It is agreed that no further comments were received from the UK Health Security Agency on EMF effects.
Monitoring and mitigation	Mitigation and monitoring measures proposed during the construction of the Proposed Development are provided in the Framework Construction Environmental Management Plan (CEMP) (**APP-160**). It is agreed that the mitigation and monitoring measures outlined within the Framework CEMP include the necessary principal controls to adequately manage risks to human health.

Matter Agreed	Commentary
	The CEMP is controlled by Requirement 17 of the Draft DCO (**APP-005**) which must be prepared in accordance with the Framework CEMP (**APP-160**). During the plant operation, emissions to air from the stack including amines would be monitored in accordance with the Environmental Permit issued by the Environment Agency. The UK Health Security Agency has advised that the dust monitoring and recording strategy should include properties north of the abnormal load route and south of the water connection corridor. The scheme to control any emissions to air and for environmental monitoring will form part of the final CEMP, secured by Requirement 17(2b) and (2f). The Applicant confirms it will be happy to add representative receptors from these groups to the Framework CEMP, which the final CEMP must take account of. The UK Health Security Agency has requested that consideration be given to impacts of any decommissioning of the abnormal load route. The Applicant confirms that Appendix C of the Framework CEMP (**APP-160**) comprises Haul Road Ecology Protection Measures relevant to the restoration of the Additional Abnormal Indivisible Load (AIL); and Appendix D comprises the Haul Road Construction Environmental Management Plan; which includes consideration of restoration of the AIL. The final CEMP, secured by Requirement of the draft DCO (**APP-005**) must be prepared in accordance with the Framework CEMP (**APP-160**).
Traffic and Transport	The Parties are agreed that the Traffic and Transport Chapter (**APP-053**) and Transport Assessment (**APP-074**) in ES Volumes I and II provide a satisfactory assessment of the Proposed Development effects in relation to traffic and transport, including frequency of AIL and HGV movements.
Waste Arisings	It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management and compliance is not part of the UK Health Security Agency remit.

Matter Agreed	Commentary
Land Contamination	The Application includes a Phase I Desk Based Assessment in Appendix 13A of ES Volume II (**APP-087**) and additional supporting appendices 13B (**APP-088**) and 13C (**APP-089**). The UK Health Security Agency notes that construction significance has been assigned 'neutral' whereas temporary effects are described as minor adverse in Table 13.14 of Chapter 13 (**APP-087**). The Applicant confirms that it has applied *a risk-based approach in accordance with* LCRM guidance (2021) which uses the principle, (as explained in paragraph 13.6.13 of Chapter 13) where there is no predicted change between the main baseline risk and the main construction risk, the construction effect significance is assessed as a neutral effect. The majority of effects in Table 13.14 are classified as neutral to minor adverse, with three as neutral. Where minor adverse is defined this is due to an increase in contamination risk of 1 risk level between baseline and construction CSM in the risk matrix. For example, land that has a low contamination risk in the baseline becomes a moderate/ low risk' in construction (refer to Table 13.6). In each case the effect is classified as not significant. It is noted that appropriate risk assessment is required for assessing effects at human health receptors up to 250m from the Proposed Development to determine the effectiveness of mitigation measures in relation to ground gas risks given the presence/ number of historical landfills on-site and adjacent to it. The Applicant has assessed the risk of ground gases which may be generated within the Proposed Development Site in Table 16: Preliminary Risk Assessment (Linkage L11: Ground gas) due to the extent of Made Ground expected as a result of the former landfills and assigned a risk rating of moderate/ low (common for brownfield sites) (**APP-087**). The Applicant is committed to further assessing contaminative risks of ground gases through intrusive ground investigation and risk assessment at the detailed design stage. Should this further stage of evaluation, which is secured by Requirement 15 (Contaminated Land and Groundwater), determine that there is potential for ground gas to migrate off-site and

Matter Agreed	Commentary
	affect nearby properties, remedial measures would be taken to prevent gas escape to nearby properties and render the land fit for its intended purpose. The scheme secured by Requirement would set out long-term measures with respect to any contaminants, including ground gases, remaining on the site. It is agreed that the wording of Requirement 15(3) is appropriate, without further changes in relation to ground gas risk for off-site receptors. It is agreed between the Parties that the ES provides a satisfactory assessment of the potential pollution risks during construction and operation of the Proposed Development and that the impact avoidance and mitigation measures identified and specified by control measures within Requirement 15 (Contaminated land and groundwater) of the draft DCO (**APP-005**) are appropriate.
Draft DCO, requirements and protective provisions	It is agreed that no changes are sought by the UK Health Security Agency to the draft DCO (**APP-005**), including requirements and protective provisions.

5.0 MATTERS NOT AGREED AND NEXT STEPS

5.1.1 This SoCG sets out the agreements that have been reached between the Parties during the course of examination 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 There are no matters not agreed between the Parties.

Signed:

Please refer to the letter at the end of appendix 4

Signed On behalf of the UK Health Security Agency

Date: 24/05/22

Signed:

[redacted]

Richard Lowe, AECOM

Signed On behalf of Keadby Generation Ltd

Date: 24/05/2022

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*.

APPENDIX 1 – UK HEALTH SECURITY AGENCY COMMENTS ON DRAFT STATEMENT OF COMMON GROUND

UK Health Security Agency

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
Seaton House
City Link
London Road
Nottingham NG2 4LA

nsipconsultations@phe.gov.uk

Your Ref: EN010114
Our Ref: CIRIS 57068

Ms Susan Evans
Principal EIA Practitioner
AECOM
2 City Walk
Leeds
LS11 9AR

11th January 2022

Dear Susan

Nationally Significant Infrastructure Project
Keadby 3 Low Carbon Gas Power Station, DCO, Statement of Common Ground,
PINS Reference EN010114

UK Health Security Agency (UKHSA) received a Statement of Common Ground (SOCG) from yourselves on 10 December 2021. UKHSA does not typically add tracked changes to a draft SOCG prepared by the applicant, instead we provide our comments in the form of a letter. This has always been acceptable to the Planning Inspectorate (PINS).

We have reviewed your comments against our recommendations provided at the Registration of Interest stage as detailed in Appendix 1.

Yours sincerely

On behalf of UK Health Security Agency
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

UK Health Security Agency

Appendix 1. Statement of Common Ground, Position of Parties

Ref.	Relevant Rep. Matter	SSE Thermal's Position	UKHSA's Position	Further Action Required
1	It is noted that further modelling has been undertaken with respects to operational amine emissions. However, as the final licensor still hasn't been selected, it remains unknown which amine products specifically will be emitted. Once more is known, it would be beneficial to potentially re-model in order to get a more realistic impression of what the process contribution to the overall EAL is likely to be. It is noted that further work is planned with respect to this as well details regarding emissions from start-up and shut down, which will be appraised through the Environmental Permitting processes, at which stage PHE will be consulted.	Emissions of amine products would be managed through an Environmental Permit issued by the Environment Agency. It has been agreed between the Applicant and the Environment Agency that the environmental permit variation for the Proposed Development has been submitted following the two-stage permitting approach, given that the final selection of licensor had not been made at the time of this application; this stage being an application for a Permit-in Principle. The permit variation application was submitted to the Environment Agency in July 2021 and included an appraisal of BAT and assessment of air impacts based on the current design understanding. The assessment of air impacts included an appraisal of amine emissions and formation of amine degradation products, following protocols agreed with the Environment Agency and using conservative assumptions.	No further comments at this time.	

		It has been agreed with the Environment Agency that a subsequent permit update may be required following completion of the detailed design to address any specific design measures to be applied and provide further detail on air quality impacts, including updated modelling, where appropriate. It is agreed that the UK Health Security Agency will be consulted at the relevant time by the Environment Agency on the detail of the environmental permit application in accordance with prevalent consultation guidance on environmental permits. During the plant operation, emissions to air from the stack including amines would be monitored in accordance with the Environmental Permit issued by the Environment Agency.		
2	Limited details are available regarding the monitoring to be undertaken to assess emissions from the site and the effectiveness of mitigation measures. In view of the number of landfills within the site boundary and adjacent, we would recommend that public health assessments include human health receptors up to 250m from these including potential ground gas risks.	It is noted that monitoring at human health receptors up to 250m from the Proposed Development to assess the effectiveness of mitigation measures in relation to ground gas risks is considered appropriate by the UK Health Security Agency given the presence/ number of historical landfills on-site and adjacent to it. The Applicant has assessed the risk of ground gases which may be generated within the Proposed Development Site in Table 16: Preliminary Risk Assessment (Linkage L11: Ground gas) due to the extent of Made Ground expected as a result of the former landfills and assigned a risk rating of moderate/ low (common for brownfield sites) (**APP-087**). The Applicant is committed to further assessing contaminative risks of ground gases through intrusive ground investigation and risk assessment at the	UKHSA's recommendation related to ensuring appropriate public health risk assessments were undertaken as opposed to detailing monitoring requirements. No further comments in view of the information provided.	Please defer to the Local Authority.

		detailed design stage. Should this further stage of evaluation, which is secured by Requirement 15 (Contaminated Land and Groundwater), determine that there is potential for ground gas to migrate off-site and affect nearby properties, remedial measures would be taken to prevent gas escape to nearby properties and render the land fit for its intended purpose. The scheme secured by Requirement would set out long-term measures with respect to any contaminants, including ground gases, remaining on the site.		
3	With reference to Appendix 13 C, further clarifications, justifications and where necessary, mitigation measures, are recommended as to: • The consideration of human health receptor being limited to 50m only; particularly when looking at potential public health impacts from ground gas. • Construction significance has been assigned 'neutral' whereas temporary effects are described as minor adverse in Table 13.14 (Chapter 13).	See above. The UK Health Security Agency notes that construction significance has been assigned 'neutral' whereas temporary effects are described as minor adverse in Table 13.14 of Chapter 13 (**APP-087**). The Applicant confirms that it has applied *a risk based approach in accordance with* LCRM guidance (2021) which uses the principle, (as explained in paragraph 13.6.13 of Chapter 13) where there is no predicted change between the main baseline risk and the main construction risk, the construction effect significance is assessed as a neutral effect. The majority of effects in Table 13.14 are classified as neutral to minor adverse, with three as neutral. Where minor adverse is defined this is due to an increase in contamination risk of 1 risk level between baseline and construction CSM in the risk matrix. For example, land that has a low contamination risk in the baseline becomes a moderate/ low risk' in construction (refer to	No further comments.	

		Table 13.6). In each case the effect is classified as not significant.		
4	The assessment of cumulative impacts is welcomed. However, additional detail is recommended regarding cumulative impacts from emissions of particulate matter, including both PM10 and PM2.5 from NRMM and the use of any generators on baseline assessments and the potential impact on the AQMA. These should include other air pollution sources, for example Keadby 2	The approach to the assessment of cumulative impacts due to emissions of NRMM during construction is detailed in section 8.3 of Chapter 8 and follows relevant guidance produced by the Institute of Air Quality Management (IAQM, 2014) and the principles of Design Manual for Roads and Bridges (DMRB) NRMM assessment. It is considered that based on distance, there is no plausible pathway for such emissions to affect the nearest AQMA, as it is located approximately 6.2km to the east of the Proposed Development Site in Scunthorpe. The cumulative emissions that may arise over the course of the construction of the Proposed Development have been assessed and are considered negligible. Emissions from construction generators would be regulated through an environmental permit from the Environment Agency, to meet the requirements either of the Medium Combustion Plant Directive or the Industrial Emissions Directive, depending on the aggregated output capacity of the generators used. Emissions of particulate matter that may have arisen during construction of Keadby 2 are already considered in the baseline assessment presented in the Chapter, which uses the available background ambient air monitoring data. The operational Keadby 2 Power Station is fuelled by natural gas so particulate emissions will be negligible.	No further comments.	

		Construction dust emissions from Keadby 2 Power Station will have ceased well before the start of construction of the Proposed Development since Keadby 2 Power Station is already in commissioning.		
5	Section 8.6.2 of Chapter 8 Air Quality describes unmitigated dust impacts as medium to high risk for human health receptors, whereas Section 3.2.12 of Appendix 8A describes a low risk. This should be clarified, and mitigation measures updated accordingly. We agree with the recommendations in the CEMP to develop a dust monitoring and recording strategy in agreement with North Lincolnshire County Council. We would recommend that this include properties north of the AIL route and south of the water connection corridor and also take into account impacts of any decommissioning of the AIL.	In relation to the clarification sought on dust impacts, the Applicant confirms that Section 8.6.2 of Chapter 8: Air Quality should read '*The assessment has considered risks from demolition/ site clearance works, earthworks, construction and trackout (of mud to the road) and, based on the potential scale of activities and the sensitivity of the receptor area, (as defined in Appendix 8A: Air Quality - Construction Phase (ES Volume II – Application Document Ref. 6.3)) unmitigated dust impacts are considered to be 'low risk' for human health receptors, and medium risk for ecological receptors. Therefore, mitigation measures appropriate to the scale of perceived risk would be applied as part of the CEMP.'* Based on the above, it is considered that there is no requirement to update mitigation measures in either Chapter 8, or Appendix 8A, as these are based on the level of risk which has already been stated as 'high risk'. The UK Health Security Agency has advised that the dust monitoring and recording strategy should include properties north of the abnormal load route and south of the water connection corridor. The scheme to control any emissions to air and for environmental monitoring will form part of the final CEMP, secured by Requirement 17(2b) and (2f). The Applicant confirms it will be	No further comments.	Please defer to the Local Authority.

		happy to add representative receptors from these groups to the Framework CEMP, which the final CEMP must take account of. The UK Health Security Agency has requested that consideration be given to impacts of any decommissioning of the abnormal load route. The Applicant confirms that Appendix C of the Framework CEMP (**APP-160**) comprises Haul Road Ecology Protection Measures relevant to the restoration of the Additional Abnormal Indivisible Load AIL); and Appendix D comprises the Haul Road Construction Environmental Management Plan; which includes consideration of restoration of the AIL. The final CEMP, secured by Requirement of the draft DCO (APP-005) must be prepared in accordance with the Framework CEMP (**APP-160**).		
6	In view of the screening criteria (within 200m of affected roads), it would be helpful to clarify why properties Roe Farm and Vazon Bridge have not been included as receptors as these are within 100m to the south of the main road used to access the site. Further details regarding short- and long-term impacts at these receptors is recommended.	The Applicant notes that the UK Health Security Agency has made further comments in relation to the choice of receptors for modelling of traffic including HGV movements during construction. It is noted that there is no requirement to consider all receptors within 200m of affected roads. Receptors such as TR5-9 are adjacent to modelled roads, and therefore the impacts at these receptors will be higher than at receptors such as Roe Farm and Vazon Bridge which are not adjacent to any modelled roads. For this reason, although not reported, the impacts due to construction traffic will be less at Roe Farm and Vazon Bridge than at other reported receptors which are closer to the modelled roads and	No further comments.	

		at which no significant air quality effects have been identified.		

APPENDIX 2 – UK HEALTH SECURITY AGENCY FURTHER COMMENTS ON DRAFT VP3.0 STATEMENT OF COMMON GROUND

UK Health Security Agency

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
Seaton House
City Link
London Road
Nottingham NG2 4LA

nsipconsultations@phe.gov.uk

Your Ref: EN010114
Our Ref: CIRIS 58602

Dr Richard Lowe
Director, E&GE Energy Sector Lead
AECOM
2 City Walk
Leeds
LS11 9AR

22nd April 2022

Dear Dr Lowe,

Nationally Significant Infrastructure Project
Keadby 3 Low Carbon Gas Power Station, DCO, Statement of Common Ground,
PINS Reference EN010114

Thank you for your consultation regarding the above development. Please note that the UK Health Security Agency (UKHSA) request views from the Office for Health Improvement and Disparities (OHID); and this response is sent on behalf of both UKHSA and OHID.

With regards to the Statement of Common Ground (SoCG) (revision VP2.0, dated March 2022, received 8th April 2022), we note that we have replied to earlier consultations as listed below following receipt of an initial draft from yourselves on 10th December 2021 (VP1.0, dated December 2021).

- 11th January 2022
- 10th February 2022
- 24th March 2022

We have reviewed the updated SoCG (revision VP2.0, dated March 2022, received 8th April 2022) against our recommendations provided in the consultation responses (as detailed above) and also at the Registration of Interest stage. Please note, there are outstanding areas which the UKHSA cannot currently agree until the provision of further information. In addition, we are aware that the Examining Authority confirmed it was seeking views from all Interested Parties on whether the advice contained in the consultation responses from the UKHSA and/ or the Ministry of Defence would have had any bearing on the approach or findings of the Environmental Statement submitted with the application, in light of a clerical error (please letter from Planning Inspectorate dated 7th

March 2022- Rule 17, Request for further information), which may lead to further consultations with the UKHSA.

Please see detailed comments which are detailed in Appendix 1.

Yours sincerely,

On behalf of UK Health Security Agency
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

UK Health Security Agency

Appendix 1. Statement of Common Ground, Position of Parties

Ref.	Relevant Rep. Matter	SSE Thermal and Equinor's Position	UKHSA's Position	Further Action Required
1	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary; Details described in row 'January 2021 (formal Stage 2 Consultation/response)'.	The SoCG states the following: 'The UK Health Security Agency provided advice on construction impacts, cumulative impacts during construction and operation, impact and risk assessments, Air Quality Standards, amine product emissions and modelling, the proximity of residential properties to the water connection, discharge corridors, abnormal indivisible load route and permanent emergency access via Chapel Road and the assessment of potential impacts on these, asbestos risk and water assessments. The UK Health Security Agency sought clarity regarding works across different phases, receptor locations, the carbon capture process and equipment, process emissions, stack height, confirmation that potential Polycyclic Aromatic Hydrocarbons (PAH) emissions have been adequately scoped out if required and assessment years.	The UK Health Security Agency (as Public Health England) raised points in relation to Environmental Public Health and Health and Wellbeing. Environmental Public Health recommendations comprised the need for further assessment and clarity of cumulative and combined emissions and impacts, works across different phases and receptor locations. Further details regarding the water connection, discharge corridors, abnormal indivisible load route and public health impacts from wastes were also recommended. Specific feedback was provided for Air Quality Construction and Operational Impacts (including emissions from the carbon capture process and equipment, process emissions, stack height, confirmation that potential polycyclic aromatic hydrocarbons (PAH) emissions have been adequately scoped out); and land, water, incidents/accidents and electromagnetic field (EMF) assessments.	SoCG to be updated.

		The UK Health Security Agency recommended providing clearer and more accurate identification, reference and justification for selection of the human health receptors in the assessments. It was stated that emissions of particulate matter from all potential sources do not appear to have been assessed and clarification is needed in light of the potential for unabated emissions from the CCGT plant.'		
2	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary; Details described in rows dated March 2021, August 2021, 02 September.	SSE Thermal and Equinor have described consultation responses as being from the UK Health Security Agency.	Consultation responses would have been provided by Public Health England, as the UKHSA became operational in October 2021.	SoCG to be updated.
3	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary.	UKHSA notes that January 2022 is described as being the date of the last correspondence between SSE Thermal and Equinor; with the UKHSA.	Since January 2022, UKHSA has commented on a number of draft SoCGs and also received a 'Non-Statutory Consultation on the Proposed Changes to the Previously Submitted Environmental Statement', where the UKHSA provided a response on the 18th March 2022.	SoCG to be updated.
4	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Consultation'.	The SoCG states the following: 'A summary of pre-application consultation is contained in the Consultation Report (APP-030) and Appendix 16A: Population and Health Signposting (APP-096) in ES Volume II. It is agreed that the consultation summary in Section 3 of this SoCG provides an accurate record of consultation with the UK Health Security Agency/ Public Health England on application matters to date.'	UKHSA cannot agree to this statement. Please see information provided in references (rows) 1 -3 of this table	SoCG to be updated.
5	Section 4.0 Matters	The SoCG states the following:	UKHSA does not agree to the last paragraph.	SoCG to be

	Agreed; Table 4.1 Row entitled 'Consultation'.	'The Proposed Changes to the DCO include an increase in the height of the twin absorbers if they are to be used for the Proposed Development. The changes have been assessed in the ES Addendum including consideration of air quality effects. The revised air quality impact assessment shows that the increased stack heights for the twin absorbers slightly reduces the potential air quality effects on human health receptors although there is no change in the significance of predicted effects which remains negligible. Based on the above clarifications, it is agreed by both Parties that the issues raised by the UK Health Security Agency in their Relevant Representation have been appropriately addressed.'	UKHSA provided a response to the applicant on 18th March 2022 where we advised that we were unable to comment on the public health impact of the changes as we had not been provided an updated Air Quality Chapter (and associated technical appendices). UKHSA has not received any further documentation or reports since this time, therefore we cannot agree that 'Relevant Representation has been appropriately addressed'. Please see reference 8 of this table.	updated. Relevant reports to be submitted to the UKHSA for review.
6	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Waste Arisings'.	The SoCG states the following: 'It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management is not part of the UK Health Security Agency remit.'	UKHSA's recommended wording is as follows: It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management and compliance are not part of the UK Health Security Agency's remit.	SoCG to be updated.
7	Section 4.0 Matters Agreed; Table 4.1; Row entitled 'Draft DCO, requirements and protective provisions'.	The SoCG states the following: 'It is agreed that no changes are sought by the UK Health Security Agency to the draft DCO (APP-005), including requirements and protective provisions.'	UKHSA is no longer able to agree to this wording in light of proposed changes to the stack height (please see reference 5 of this table). As detailed in the UKHSA response dated 18th March 2022, we advised that we were unable to comment on the changes as we had not been provided an updated Air Quality Chapter	SoCG to be updated. Relevant reports to be submitted to the UKHSA for review.

			(and associated technical appendices). UKHSA has not received any further documentation or reports since this time and as such, have been unable to provide an updated risk assessment. Please see reference 8.	
8	Section 5.0 Matters not agreed and next steps.	The SoCG states the following: '5.1.1. There are no matters not agreed between the parties.'	We do not agree to this statement and have three points for consideration. 1) It is not clear why previous text as found in the earlier SoCG version (VP1.0) has now been removed. We recommend that the following text be included: 'UKHSA outlined that further air quality assessment may be beneficial in order provide further clarity on the process contribution to the overall EAL (Environmental Assessment Level) once the final licensor has been selected. A reappraisal of such operational effects would be undertaken post consent once the licensor is selected, and detailed design is completed. A subsequent permit update may be required following completion of the detailed design to be specific to the design measures to be applied and provide further detail on plant commissioning and start-up and air and water discharges as appropriate.' 2) Further details regarding the assessment of public health impacts from the change in stack height remains outstanding (please see	SoCG to be updated. Relevant reports to be submitted to the UKHSA for review.

			reference 5 of this table). 3) Any outstanding matters for which the UKHSA may be consulted on, in light of the clerical error (please letter from Planning Inspectorate dated 7th March 2022- Rule 17, Request for further information).	

UK Health Security Agency

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
Seaton House
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London Road
Nottingham NG2 4LA

nsipconsultations@phe.gov.uk

Your Ref: EN010114
Our Ref: CIRIS 58602

The Planning Inspectorate
Temple Quay House
2 The Square
Bristol
BS1 6PN

19th May 2022

Dear Sir/ Madam,

Nationally Significant Infrastructure Project
Keadby 3 Low Carbon Gas Power Station, DCO, Statement of Common Ground,
PINS Reference EN010114

Thank you for your consultation regarding the above development. Please note that the UK Health Security Agency (UKHSA) request views from the Office for Health Improvement and Disparities (OHID); and this response is sent on behalf of both UKHSA and OHID.

With regards to the Statement of Common Ground (SoCG) (revision VP3.0, dated April 2022, received 26th April 2022), we note that we have replied to earlier consultations as listed below following receipt of an initial draft from the applicant on 10th December 2021 (VP1.0, dated December 2021).

- 11th January 2022
- 10th February 2022
- 24th March 2022
- 22nd April 2022

We have reviewed the updated SoCG (revision VP3.0, dated April 2022, received 26th April 2022) against our recommendations provided in the most recent consultation response on the 22nd April 2022. We acknowledge some changes to the SoCG have been made following recommendations that were provided in references 2 and 8 (part 1 of UKHSA recommendation only) of Appendix 1 (dated 22nd April 2022). However, there remain several areas that the UKHSA cannot agree to, namely due to the lack of information included in the air quality assessment. Further details are provided in the following section as well as in Appendix 1 of this document.

Air Quality

Notification

We would like to confirm that the UKHSA was only notified of further updated air quality assessment reports (dated April 2022 and May 2022) being available for review upon receipt of the most recent SoCG on 26 April 2022, and we had not received a formal request to review these for an updated public health risk assessment at any point prior.

Public health risk assessment

UKHSA has subsequently reviewed the updated air quality assessment, including Chapter 8 and Appendix 8B in the report entitled '*Proposed Development Changes: Environmental Statements (ES) Addendum - Volume II (Chapters and Appendices)*'. This has confirmed that twin absorbers may be used for the removal of carbon dioxide, with the twin stack heights potentially reaching a maximum of 98.3m AOD. It is noted that modelling has been undertaken at the lowest release heights for this alternative option. It has been concluded in the report that due to reduced downwash, smaller dimensions and circular shape of the twin absorbers, when compared to the single absorber layout, the maximum worst-case results do not change from those originally reported in Chapter 8: Air Quality of the ES Volume I (Document Ref. 6.2.8) [APP-051].

However, UKHSA considers that insufficient information has been submitted in support of the public health risk assessment. We recommend that modelled outputs of concentrations of pollutants from stack emissions at human health receptors be provided in support of the conclusions in the above paragraph so that UKHSA can satisfy itself that the worst-case modelled data do not change from those detailed in the originally reported.

It is unclear why modelling has not been undertaken for a range of stack heights for the twin absorber scenarios to inform the public health impact assessment and stack design. Further justification for this approach is recommended. Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent.

In view of this, UKHSA is unable to agree to several items in the Statement of Common Ground nor sign this document. Further details are provided in Appendix 1.

It has been assumed that no further Environmental Statements will be submitted considering the clerical error (please refer to the letter from Planning Inspectorate dated 7th March 2022- Rule 17, Request for further information).

Yours faithfully

On behalf of UK Health Security Agency
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

UK Health Security Agency

Appendix 1. Statement of Common Ground, Position of Parties

Ref.	Relevant Rep. Matter	SSE Thermal and Equinor's Position	UKHSA's Position
1	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary; Details described in row 'January 2021 (formal Stage 2 Consultation/response)'.	The SoCG states the following: 'The UK Health Security Agency provided advice on construction impacts, cumulative impacts during construction and operation, impact and risk assessments, Air Quality Standards, amine product emissions and modelling, the proximity of residential properties to the water connection, discharge corridors, abnormal indivisible load route and permanent emergency access via Chapel Road and the assessment of potential impacts on these, asbestos risk and water assessments. The UK Health Security Agency sought clarity regarding works across different phases, receptor locations, the carbon capture process and equipment, process emissions, stack height, confirmation that potential Polycyclic Aromatic Hydrocarbons (PAH) emissions have been adequately scoped out if required and assessment years. The UK Health Security Agency recommended providing clearer and more accurate identification, reference and	UKHSA had recommended (response dated 22nd April 2022) that the SoCG wording be updated with the following. 'The UK Health Security Agency (as Public Health England) raised points in relation to Environmental Public Health and Health and Wellbeing. Environmental Public Health recommendations comprised the need for further assessment and clarity of cumulative and combined emissions and impacts, works across different phases and receptor locations. Further details regarding the water connection, discharge corridors, abnormal indivisible load route and public health impacts from wastes were also recommended. Specific feedback was provided for Air Quality Construction and Operational Impacts (including emissions from the carbon capture process and equipment, process emissions, stack height, confirmation that potential polycyclic aromatic hydrocarbons (PAH) emissions have been adequately scoped out); and land, water, incidents/accidents and electromagnetic field (EMF) assessments.' We note that the wording of this section has not been

		justification for selection of the human health receptors in the assessments. It was stated that emissions of particulate matter from all potential sources do not appear to have been assessed and clarification is needed in light of the potential for unabated emissions from the CCGT plant. The UK Health Security Agency additional comments are provided in Appendix 2.'	changed. Instead, the reader is advised that additional comments from UKHSA are provided in Appendix 2.
2	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary.	UKHSA notes that for the row entitled 'January -March 2022' it is stated that comments on draft SOCG provided by UK Health Security Agency (refer to Appendix 1).	UKHSA also received a 'Non-Statutory Consultation on the Proposed Changes to the Previously Submitted Environmental Statement', where the UKHSA provided a response on the 18th March 2022 advising that we advised that we were unable to comment on the public health impact of the changes as we had not been provided an updated air quality chapter (and associated technical appendices).
3	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Consultation'.	The SoCG states the following: 'A summary of pre-application consultation is contained in the Consultation Report (APP-030) and Appendix 16A: Population and Health Signposting (APP-096) in ES Volume II. It is agreed that the consultation summary in Section 3 of this SoCG provides an accurate record of consultation with the UK Health Security Agency/ Public Health England on application matters to date.'	UKHSA cannot agree to this statement. Please see information provided in references (rows) 1 -2 of this table. Section 3 of the SoCG does not provide an accurate record of consultation due to the wording which has not been amendment.
4	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Consultation'.	The SoCG states the following: 'The Proposed Changes to the DCO include an increase in the height of the twin absorbers if they are to be used for the Proposed Development. The changes have been assessed in the ES Addendum including	UKHSA does not agree to the wording of this statement. UKHSA has reviewed the updated air quality chapters which confirm that the proposed change includes the potential use of twin absorbers, with maximum heights of the stacks extending up to 95.5m (AOD).

		consideration of air quality effects. The revised air quality impact assessment shows that the increased stack heights for the twin absorbers slightly reduces the potential air quality effects on human health receptors although there is no change in the significance of predicted effects which remains negligible. Based on the above clarifications, it is agreed by both Parties that the issues raised by the UK Health Security Agency in their Relevant Representation have been appropriately addressed.'	We recommend that modelling be undertaken for a range of stack heights for the twin absorber scenario, with the modelled outputs of concentrations of pollutants from stack emissions at human health receptors being provided in support of the conclusions in the above paragraph. Please see reference 7 of this table.
5	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Waste Arisings'.	The SoCG states the following: 'It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management is not part of the UK Health Security Agency remit.'	UKHSA's recommended wording is as follows: It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management and compliance are not part of the UK Health Security Agency's remit.
6	Section 4.0 Matters Agreed; Table 4.1; Row entitled 'Draft DCO, requirements and protective provisions'.	The SoCG states the following: 'It is agreed that no changes are sought by the UK Health Security Agency to the draft DCO (APP-005), including requirements and protective provisions.'	UKHSA is not able to agree to this wording in light of proposed changes to absorbers and stack heights and the absence of sufficient information being provided in support of the air quality assessment. (please see references 4 and 7 of this table).
7	Section 5.0 Matters not agreed and next steps.	The SoCG states the following: '5.1.1. There are no matters not agreed between the parties.'	We do not agree to this statement. Further details regarding the assessment of public health impacts from the change in stack height and configuration (please see reference 4 of this table) are outstanding.

UKHSA Position Statement (copy provided to the Applicant 19 May 2022) and Applicant's comments in response to the Position Statement

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
1	Section 3.0 Summary of Consultation; Table 3.1: Consultation Summary Details described in row 'January 2021 (formal Stage 2 Consultation/ response)'.	The SoCG states the following: 'The UK Health Security Agency provided advice on construction impacts, cumulative impacts during construction and operation, impact and risk assessments, Air Quality Standards, amine product emissions and modelling, the proximity of residential properties to the water connection, discharge corridors, abnormal indivisible load route and permanent emergency access via Chapel Road and the assessment of potential impacts on these, asbestos risk and water assessments. The UK Health Security Agency sought clarity regarding works across different phases, receptor locations, the carbon capture process and equipment, process	UKHSA had recommended (response dated 22nd April 2022) that the SoCG wording be updated with the following. 'The UK Health Security Agency (as Public Health England) raised points in relation to Environmental Public Health and Health and Wellbeing. Environmental Public Health recommendations comprised the need for further assessment and clarity of cumulative and combined emissions and impacts, works across different phases and receptor locations. Further details regarding the water connection, discharge corridors, abnormal indivisible load route and public health impacts from wastes were also recommended. Specific feedback was provided for Air Quality Construction and Operational Impacts (including	The Applicant has updated Table 3.1 to include the wording requested.

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
		emissions, stack height, confirmation that potential Polycyclic Aromatic Hydrocarbons (PAH) emissions have been adequately scoped out if required and assessment years. The UK Health Security Agency recommended providing clearer and more accurate identification, reference and justification for selection of the human health receptors in the assessments. It was stated that emissions of particulate matter from all potential sources do not appear to have been assessed and clarification is needed in light of the potential for unabated emissions from the CCGT plant. The UK Health Security Agency additional comments are provided in Appendix 2.'	emissions from the carbon capture process and equipment, process emissions, stack height, confirmation that potential polycyclic aromatic hydrocarbons (PAH) emissions have been adequately scoped out); and land, water, incidents/accidents and electromagnetic field (EMF) assessments.' We note that the wording of this section has not been changed. Instead, the reader is advised that additional comments from UKHSA are provided in Appendix 2.	
2	Section 3.0 Summary of	UKHSA notes that for the row entitled 'January-March 2022' it	UKHSA also received a 'Non-Statutory Consultation on the	The Applicant has for completeness included the

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
	Consultation; Table 3.1: Consultation Summary.	is stated that comments on draft SOCG provided by UK Health Security Agency (refer to Appendix 1).	Proposed Changes to the Previously Submitted Environmental Statement', where the UKHSA provided a response on the 18th March 2022 advising that we advised that we were unable to comment on the public health impact of the changes as we had not been provided an updated air quality chapter (and associated technical appendices).	response received in relation to the Applicant's non-statutory consultation in **Appendix 4**. As noted in Table 3-1, the air quality assessment for the Proposed Development Changes was published and notified to all Interested Parties on 8 April 2022 following submission to the ExA at Deadline 5 (5 April 2022). The Applicant confirmed to the UKHSA on 10 May 2022 that the additional submissions at Deadline 6a would only formalise (and not change) what was previously submitted for the change request at Deadline 5.
3	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Consultation'.	The SoCG states the following: 'A summary of pre-application consultation is contained in the Consultation Report (APP-030) and Appendix 16A: Population and Health Signposting (APP-096) in ES Volume II. It is agreed that the consultation summary in Section 3 of this	UKHSA cannot agree to this statement. Please see information provided in references (rows) 1 -2 of this table. Section 3 of the SoCG does not provide an accurate record of consultation due to the wording which has not been amendment.	The Applicant has updated this version of the SoCG to take into account UKHSA additional comments and included correspondence between the Parties in a new Appendix. The UKHSA agreement that this statement is agreed is sought via

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
		SoCG provides an accurate record of consultation with the UK Health Security Agency/ Public Health England on application matters to date.'		the updated draft VP4.0 of this SoCG.
4	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Consultation'.	The SoCG states the following: 'The Proposed Changes to the DCO include an increase in the height of the twin absorbers if they are to be used for the Proposed Development. The changes have been assessed in the ES Addendum including consideration of air quality effects. The revised air quality impact assessment shows that the increased stack heights for the twin absorbers slightly reduces the potential air quality effects on human health receptors although there is no change in the significance of predicted effects which remains negligible.	UKHSA does not agree to the wording of this statement. UKHSA has reviewed the updated air quality chapters which confirm that the proposed change includes the potential use of twin absorbers, with maximum heights of the stacks extending up to 95.5m (AOD). We recommend that modelling be undertaken for a range of stack heights for the twin absorber scenario, with the modelled outputs of concentrations of pollutants from stack emissions at human health receptors being provided in support of the conclusions in the above paragraph. Please see reference 7of this table.	The Applicant has not determined final stack heights and locations to allow flexibility in the selection of preferred technology and has instead, applied the Rochdale Envelope. Emission to air impacts have been assessed in the ES Addendum at up to 95.5m (AOD) based on height above finished ground level. This stack height is considered to adequately disperse emissions from the Proposed Development for the assessed twin absorber option and as shown in Appendix 3, the results are assessed as not significant and are comparable with the results from the single absorber assessed in the original assessment.

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
		Based on the above clarifications, it is agreed by both Parties that the issues raised by the UK Health Security Agency in their Relevant Representation have been appropriately addressed.'		Based on the design provided for the twin absorber scenario, it is considered that the stack height assessed is the lowest possible based on the absorber height provided which allows the installation of the emissions monitoring equipment required to monitor emissions under the Environmental Permit for the site. Any increase in the stack height would result in improved dispersion of the emissions and therefore lower impacts than those provided, however as the presented results are all considered to be negligible adverse and not significant, it is not considered that a higher stack is required.
5	Section 4.0 Matters Agreed; Table 4.1 Row entitled 'Waste Arisings'.	The SoCG states the following: 'It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management is	UKHSA's recommended wording is as follows: It is agreed that no further comments were received from the UK Health Security Agency on waste arisings and their effects. Waste management and	The Applicant has included the words 'and compliance' in this updated version of the SoCG (VP4.0).

REF	RELEVANT REP. MATTER	SSE THERMAL AND EQUINOR'S POSITION	UKHSA'S POSITION	APPLICANT'S FINAL POSITION AT DEADLINE 7
		not part of the UK Health Security Agency remit.'	compliance are not part of the UK Health Security Agency's remit.	
6	Section 4.0 Matters Agreed; Table 4.1; Row entitled' Draft DCO, requirements and protective provisions'.	The SoCG states the following: 'It is agreed that no changes are sought by the UK Health Security Agency to the draft DCO (APP-005), including requirements and protective provisions.'	UKHSA is not able to agree to this wording in light of proposed changes to absorbers and stack heights and the absence of sufficient information being provided in support of the air quality assessment. (please see references 4 and 7 of this table).	The Applicant has provided the information requested in references 4 and 7 of the table and seeks, via this updated SoCG (VP4.0) the UKHSA agreement that this statement is now agreed.
7	Section 5.0 Matters not agreed and next steps.	The SoCG states the following: '5.1.1. There are no matters not agreed between the parties.'	We do not agree to this statement. Further details regarding the assessment of public health impacts from the change in stack height and configuration (please see reference 4 of this table) are outstanding.	The Applicant has provided the information requested in references 4 and 7 of the table and seeks, via this updated SoCG (VP4.0) the UKHSA agreement that this statement is now agreed.

APPENDIX 3 – RESULTS OF OPERATIONAL IMPACT ASSESSMENT FOR HUMAN HEALTH IMPACTS – MAXIMUM LOCATION

AECOM Infrastructure & Environment UK Limited
5th Floor, 2 City Walk
Leeds LS11 9AR
United Kingdom

T: +44 (0)113 391 6800
[redacted]

Project name:
Keadby Carbon Capture Equipped Gas Fired Generating Station

Project ref:
EN EN010114

To: UKHSA

CC:

From:
AECOM

Date:
20 May 2022

Technical Memorandum – Additional Data Request by UKHSA

Table 8.13 of Chapter 8: Air Quality of ES Addendum Volume II (**REP6a-066**) has been updated to show the results presented in the original Chapter 8 (shown in **grey text**) and the twin absorber results (shown in **black text**). This table shows the maximum impacts of all species released that are predicted to occur anywhere. All results are considered to be negligible adverse and not significant.

In addition, Tables 11 and 12 of Appendix 8B of ES Addendum Volume II (**REP6a-066**) have been updated in the same way.

Table 8.1: Results of operational impact assessment for human health impacts – maximum location

Species	AQAL ($\mu g/m^3$)	Proposed Development Only			Background Concentrations (BC)		PEC ($\mu g/m^3$)	PEC/ AQAL %	Significance of effect
		PC ($\mu g/m^3$)	PC/ AQAL %	Magnitude of impact	Existing ($\mu g/m^3$)	With K2 ($\mu g/m^3$)			
NO_2 hourly mean (as the 99.79th percentile)	200	24.6	12%	Minor	19.0	20.0	44.7	22%	Negligible adverse (**not significant**)
		15.2	8%	Insignificant			35.2	18%	Negligible adverse (**not significant**)
NO_2 annual mean	40	0.8	2%	Low	9.5	10.0	10.9	27%	Negligible adverse (**not significant**)
		1.2	3%	Low			11.2	28%	Negligible adverse (**not significant**)
CO 1-hour mean (as the 100th percentile)	30,000	459	2%	Insignificant	252	547	1,006	3%	Negligible adverse (**not significant**)
		126	0.4%	Insignificant			673	2%	Negligible adverse (**not significant**)
CO 8-hour rolling average	10,000	190	2%	Insignificant	252	547	737	7%	Negligible adverse (**not significant**)
		109	1.1	Insignificant			656	7%	Negligible adverse (**not significant**)

Species	AQAL (µg/m³)	Proposed Development Only			Background Concentrations (BC)		PEC (µg/m³)	PEC/ AQAL %	Significance of effect
		PC (µg/m³)	PC/ AQAL %	Magnitude of impact	Existing (µg/m³)	With K2 (µg/m³)			
NH_3 1-hour mean	2,500	6.8	0.3%	Insignificant	3	3.2	10.0	0.4%	Negligible adverse (**not significant**)
		1.3	0.1%	Insignificant			4.5	0.2%	Negligible adverse (**not significant**)
NH_3 annual mean	180	0.04	0.02%	Imperceptible	1.5	1.6	1.6	0.9%	Negligible adverse (**not significant**)
		0.06	0.03%	Imperceptible			1.7	0.9%	Negligible adverse (**not significant**)
Amines (as MEA) 1-hour mean (as the 100th percentile)	400	25.2	6%	Insignificant	-	-	25.2	6%	Negligible adverse (**not significant**)
		6.9	2%	Insignificant			6.9	2%	Negligible adverse (**not significant**)
Amines (as MEA) Annual mean	100	0.22	0.2%	Imperceptible	-	-	0.22	0.2%	Negligible adverse (**not significant**)
		0.3	0.3%	Imperceptible			0.3	0.3%	Negligible adverse (**not significant**)
Blank row inserted to assist presentation of the table.									

Species	AQAL (µg/m³)	Proposed Development Only			Background Concentrations (BC)		PEC (µg/m³)	PEC/ AQAL %	Significance of effect
		PC (µg/m³)	PC/ AQAL %	Magnitude of impact	Existing (µg/m³)	With K2 (µg/m³)			
Acetaldehyde 1-hour mean (as the 100th percentile)	9,200	24.3	0.3%	Insignificant	-	-	24.3	0.3%	Negligible adverse (not significant)
		6.7	0.1%	Insignificant			6.7	0.1%	Negligible adverse (not significant)
Acetaldehyde Annual mean	370	0.21	<0.1%	Imperceptible	-	-	0.21	<0.1%	Negligible adverse (not significant)
		0.3	0.3%	Imperceptible			0.3	0.3%	Negligible adverse (not significant)
Formaldehyde 1-hour mean (as the 100th percentile)	100	2.3	2.3%	Insignificant	-	-	2.3	2.3%	Negligible adverse (not significant)
		0.6	0.6%	Insignificant			0.6	0.6%	Negligible adverse (not significant)
Formaldehyde Annual mean	5	0.02	0.4%	Imperceptible	-	-	0.02	0.4%	Negligible adverse (not significant)
		0.03	0.6%	Imperceptible			0.03	0.6%	Negligible adverse (not significant)
Blank row inserted to assist presentation of the table.									

Species	AQAL ($\mu g/m^3$)	Proposed Development Only			Background Concentrations (BC)		PEC ($\mu g/m^3$)	PEC/ AQAL %	Significance of effect
		PC ($\mu g/m^3$)	PC/ AQAL %	Magnitude of impact	Existing ($\mu g/m^3$)	With K2 ($\mu g/m^3$)			
Ketones 1-hour mean (as the 100th percentile)	89,500	22.9	<0.1%	Insignificant	-	-	22.9	<0.1%	Negligible adverse (not significant)
		6.2	0.01%	Insignificant			6.2	0.01%	Negligible adverse (**not significant**)
Ketones Annual mean	6,000	0.2	<0.1%	Imperceptible	-	-	0.2	<0.1%	Negligible adverse (not significant)
		0.3	<0.1%	Imperceptible			0.3	<0.1%	Negligible adverse (**not significant**)

PC = Process Contribution, AQAL = Air Quality Assessment Level, BC = Background Concentration, PEC = Predicted Environmental Concentration

Table 2: Predicted change in annual mean NO_2 concentrations

Receptor	AQAL (µg/m³)	PC (µg/m³)	PC/AQAL %	Modified Background Concentration (BC) (µg/m³)	PEC (µg/m³)	PEC/ AQAL %
Max anywhere	40	0.8	2.0%	10.0	10.9	27%
		1.2	2.9%		11.2	27%
OR1		0.3	0.8%	9.8	10.1	25%
		0.9	2.1%		10.7	27%
OR2		0.2	0.6%	9.8	10.0	25%
		0.4	1.0%		10.2	25%
OR3		0.1	0.3%	9.8	9.9	25%
		0.2	0.5%		10.0	25%
OR4		0.1	0.3%	9.1	9.3	23%
		0.3	0.7%		9.4	23%
OR5		0.3	0.8%	9.9	10.3	26%
		0.5	1.3%		10.5	26%
OR6		0.4	0.9%	8.9	9.3	23%
		0.4	1.0%		9.4	23%
OR7		0.2	0.6%	9.9	10.1	25%
		0.3	0.8%		10.2	25%
OR8		0.1	0.3%	9.4	9.5	24%
		0.2	0.4%		9.6	24%
OR9		0.02	0.0%	11.9	11.9	30%
		0.02	0.0%		11.9	30%
OR10		0.2	0.4%	10.0	10.2	26%
		0.3	0.7%		10.3	26%
OR11		0.7	1.8%	9.1	9.8	25%
		0.8	2.1%		9.9	25%

PC = Process Contribution, AQAL = Air Quality Assessment Level, BC = Background Concentration, PEC = Predicted Environmental Concentration

Table 3: Predicted change in hourly mean NO_2 concentrations (as the 99.79th Percentile of Hourly Averages)

Receptor	AQAL (µg/m^3)	PC (µg/m^3)	PC/AQAL %	Modified BC (µg/m^3)	PEC (µg/m^3)	PEC/ AQAL %
Max anywhere	200	24.6	12%	20.0	43.6	22%
		15.2	8%		35.2	18%
OR1		7.1	4%	19.6	26.7	13%
		11.3	6%		30.9	15%
OR2		6.5	3%	19.6	26.1	13%
		8.3	4%		27.9	14%
OR3		5.6	3%	19.5	25.1	13%
		9.5	5%		29.0	15%
OR4		6.6	3%	18.3	24.8	12%
		9.9	5%		28.1	14%
OR5		5.0	2%	19.9	24.8	12%
		6.1	3%		26.0	13%
OR6		4.8	2%	17.9	22.6	11%
		5.5	3%		23.4	12%
OR7		3.7	2%	19.7	23.5	12%
		4.8	2%		24.5	12%
OR8		4.6	2%	18.9	23.4	12%
		5.5	3%		24.4	12%
OR9		1.1	1%	23.7	24.9	12%
		1.3	1%		25.0	12%
OR10		8.2	4%	20.1	28.2	14%
		11.3	6%		31.4	16%
OR11		9.2	5%	18.2	27.4	14%
		10.8	5%		29.0	15%

PC = Process Contribution, AQAL = Air Quality Assessment Level, BC = Background Concentration, PEC = Predicted Environmental Concentration

A

APPENDIX 4 – ADDITIONAL CORRESPONDENCE

Public Health England

Environmental Hazards and Emergencies Department
Centre for Radiation, Chemical and Environmental Hazards (CRCE)
Seaton House
City Link
London Road
Nottingham
NG2 4LA

nsipconsultations@phe.gov.uk

www.gov.uk/phe

Our Ref: 55489CIRIS

Freepost Keadby 3

19th January 2021

Dear Sir or Madam

Nationally Significant Infrastructure Project
The Keadby 3 Low Carbon Gas Power Station Project
Public Consultation Section 42 Stage

Thank you for your consultation regarding the above development. Public Health England (PHE) welcomes the opportunity to comment on your proposals and Preliminary Environmental Information Report (PEIR) at this stage of the Nationally Significant Infrastructure Project (NSIP).

Please note that we have replied to earlier consultations as listed below and this response should be read in conjunction with that earlier correspondence:

Request for Scoping Opinion 12/06/2020

PHE exists to protect and improve the nation's health and wellbeing and reduce health inequalities; these two organisational aims are reflected in the way we review and respond to NSIP applications.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up, to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from, for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

We have assessed the submitted documentation and wish to make the following comments:

Environmental Public Health

It appears that gaps remain in the assessment of emissions from the proposed development and the cumulative impacts from nearby development/works, including the Keadby 2 development site and Keadby 1 Power Station. It is noted that future plans for Keadby 1 have not yet been confirmed, with options comprising either continued operation (subject to a new contract) or decommissioning followed by removal.

Overall, there is a lack of clarity regarding works across different phases, whether activities occur simultaneously, their intensity, what comprises existing infrastructure and what will be commissioned/constructed. Further consideration of cumulative and combined impacts for the baseline assessments is required. Limited details are available for the monitoring to be undertaken to assess these and the effectiveness of mitigation measures. The intention to include further detail on cumulative impacts from air quality in the final environmental statement (Section 2.3.2; Appendix 8b) is acknowledged.

Uncertainties regarding the carbon capture process and equipment makes it difficult to assess the potential public human health impacts. We would welcome the inclusion of further details regarding the proposed technologies.

Clearer and more accurate identification, reference and justification for selection of the human health receptors in the assessments is recommended in each of the chapters. Although human health receptors have been selected to be representative of residential dwellings in the area, consideration is needed for inclusion of Red House and adjacent properties which are in close proximity to the main site (noted to be adjacent to emergency vehicle access road), Roe Farm, and Scunthorpe Sea Cadets (youth group), which have not been acknowledged.

In view of the proximity of residential properties to the water connection, discharge corridors, abnormal indivisible load route and permanent emergency access via Chapel Road; it is recommended that further details are included in each of the chapters regarding the nature of these and any potential impacts from the construction, operational and decommissioning phases.

It is recommended the public health impacts and mitigation from wastes arising from the development, their disposal and transport also be assessed and included in this application. Further details and clarity are recommended in relation to electromagnetic fields (EMF).

Further specific points and recommendations for consideration have been detailed in the Appendix.

Health and Wellbeing

We have focused our approach on assessing determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:

- Access
- Traffic and Transport
- Socioeconomic
- Land Use

We have reviewed the consultation report and have the following recommendations:

Construction Work Force

The report identifies the peak work force of approximately 1,300 people and provides an estimate of the proportion within the Scunthorpe TTWA and other locations. The report identifies the potential impact on the provision of local tourist accommodation and the private rented sector (para 16.6.16 and 16.6.17). Although the report identifies available tourist accommodation bed space, no assessment is made upon the local private rented sector. The North Lincolnshire Local Housing Needs Assessment (September 2019) identifies the growing use of private rented accommodation within the local area.

Consultation with the local authority could usefully explore this issue and an assessment of the current Keadby 2 workforce would indicate likely accommodation type and location required by Keadby 3.

Recommendation

The potential impact of the construction workforce on the availability and affordability of private rented accommodation must be assessed and reported within the ES.

Road Safety

The consultation report uses the guidelines issued by IEMA (GEART) and also assesses implications for road safety, by analysis of crash data. Chapter 10 - Traffic and Transport assesses and reports on road safety, with reference to Appendix 10A traffic data. Chapter 10 makes no specific assessment to impacts on road safety for vulnerable road users (cyclists and walkers), despite a number of the road traffic collisions within Appendix 10A crash data involving vulnerable road users.

Recommendation

The traffic and transport chapter must assess and report on potential impacts to vulnerable road users.

Cumulative Effects Assessment

The consultation report identifies the potential for Keadby 1 to cease operation in 2022, subject to opportunities for further agreements in future auctions. The report notes that any future plans for Keadby 1 Power Station will be confirmed by the Applicant in due course.

The cumulative effect assessment recognises that it is likely that Keadby 1 Power Station would not be in operation concurrently with the Proposed Development. It further identifies uncertainty regarding plans for the timing of future closure of Keadby 1 Power Station. The report, however, specifically scopes out consideration of the removal of Keadby 1 Power Station structures. The information within the consultation, however, does not definitively rule out the possibility of the decommissioning and removal of Keadby 1 structures. As such under the normal worst case scenario approach, the decommissioning and removal of Keadby 1 structures should be considered within the ES.

Recommendation

The decommissioning and removal of Keadby 1 structures should be considered within the cumulative effects assessment of the ES unless:

- Suitable and sufficient evidence is available to demonstrate that the decommissioning and removal of Keadby 1 structures will definitely not overlap with the construction of Keadby 3; or

- Embedded mitigation within the ES confirms that the operator will not decommission and remove Keadby 1 structures during the course of the construction of Keadby 3

If you require any clarification on the above points or wish to discuss any particular issues please do not hesitate to contact us.

Yours faithfully

On behalf of Public Health England
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

APPENDIX

It is recommended that the following specific points and recommendations are considered.

Air Quality

- Emissions of PAH were acknowledged as a potential issue in the scoping report. In light of air quality standard exceedances in the Scunthorpe area linked to local industrial sources; confirmation that potential PAH emissions have been adequately scoped out is required.
- Emissions of particulate matter from all potential sources do not appear to have been assessed, clarification is needed in light of the potential for unabated emissions from the CCGT plant (Section 3.4.2; Appendix 8b).
- Across the air quality assessments, for the operational and construction phase, different assessment years have been chosen for peak activity (2025 and 2031 respectively).

Construction Impacts

- Dust
    - Greater clarity is needed on consideration of baseline and cumulative impacts from the whole site footprint. It is recommended this include Keady 2 construction and Keadby 1 removal (unless continued operation confirmed), details and justifications regarding which assessment year has been chosen and any monitoring proposals.
    - Clarification regarding the absence of any receptors identified north of the abnormal indivisible load route.
    - Better consistency across documentation in the impact and risk assessment employed. For example, 3.2.13 of Appendix 8a describes a low risk of unmitigated dust impacts on human health; whilst Chapter 8 describes a low to medium risk.

- Traffic
    - Further clarity regarding the choice of peak construction year (2031), details regarding the consideration of cumulative impacts and how these change with time.
    - With reference Table 16 of Appendix 8a, it is unclear how values for the 'do something' scenario have been derived and what measures these would comprise.
    - Limited assessment of findings against Air Quality Standards has been made, including the impact of the projected maximum HGV movements for the first two months of the construction phase on sensitive receptors.

- NRMM
    - Assessment of NRMM impacts within wider parts of the development should include cumulative impacts from other air pollution sources and include both PM_{10} and $PM_{2.5}$.

Operational Impacts

- It is currently unknown which amine products will be emitted, particularly those likely to be degraded to N-amines, and how much use of the plant will affect the amount which is emitted – the overall emission could be up to 50% of the EAL. Once more is known, it would

be beneficial to potentially re-model in order to get a more realistic impression of what the process contribution to the overall EAL is likely to be, and it is noted that further work is planned with respect to this.

- Greater clarity and consistency in the terminology and description of potential process emissions is recommended. For example, it is assumed that in Chapter 8, Section 8.6.11, when considering the impact of emissions from the CCU plant, that this also includes emissions from the CCGT plant as suggested in Appendix 8b.
- Use of the lowest stack height as described in Section 8.2.42 (Chapter 8), would potentially be detrimental to air quality, it would be helpful to clarify whether this informs a worst-case scenario.
- Isopleth plots have been provided for NO_2 only and it is unclear why North Moor Farm has not been identified.
- Baseline Assessments should include an assessment of cumulative impacts including the use of generators and Keady 1 Power Station (unless decommissioning and removal confirmed with no overlap in their operation).

Land Quality

- Further clarity regarding the area used for the baseline assessment. In Section 13.3.13 of Chapter 13, the study area is described as extending 250m from the boundary of the proposed development site. However, it is stated that the baseline in terms of soil chemical quality will be based on information directly within the development site only.
- Further details be provided regarding the source of the site rating methodology, how this informs the preliminary risk assessment and why S8 Historic Landfill Site has a baseline risk score of 3 (Table 13.11; Chapter 13).

Water

- Section 12.3.47 of Chapter 12 states that there is not a scenario whereby the proposed development and Keadby 1 Power Station and Keadby 2 Power Station would be operational together. However, as described in Chapter 19, plans for Keadby 1 have not yet been confirmed and therefore a worst-case approach (which includes the continued operation of Keadby 1) is recommended in all water assessments.

Incidents/Accidents

- In Table 18.2 of Chapter 18 only acknowledges current users in the assessment of asbestos risk. Risks to off-site users may also need to be considered; especially if identified in the decommissioning of Keadby 1.

EMF

- The assessment of public health impacts from EMFs has only looked at the operational stages. It is recommended that construction and decommissioning phases are also included.
- Further clarity regarding the location of potential electrical connections and the associated 132kV substation is recommended.

- The assessment does not acknowledge Red House and adjacent properties as receptors. Confirmation that these are not located within 50m of the new infrastructure is recommended, otherwise more details on the EMF levels should be provided.

UK Health Security Agency

Environmental Hazards and Emergencies Department
Seaton House, City Link
London Road
Nottingham, NG2 4LA

nsipconsultations@phe.gov.uk
www.gov.uk/ukhsa

Your Ref: ENO10120
Our Ref: CIRIS 58400

FREEPOST KEADBY 3

18th March 2022

Dear Sir/Madam

Nationally Significant Infrastructure Project
Keadby 3 Low Carbon Gas Power Station Project
Non-Statutory Consultation on the Proposed Changes to the Previously Submitted Environmental Statement

Thank you for your consultation regarding the above development. Please note that the UK Health Security Agency (UKHSA) request views from the Office for Health Improvement and Disparities (OHID); and this response is sent on behalf of both UKHSA and OHID.

Please note that we have replied to earlier consultations as listed below and this response should be read in conjunction with that earlier correspondence:

Request for Scoping Opinion	12/06/2020
Section 42	19/01/2021
Publicity of Draft Application	28/04/2021
Registration of Interest	01/09/2021

We have assessed the submitted documentation and wish to make the following comment:

The submitted Environmental Statement (ES) Addendum Non-Technical Summary provides only a high-level summary of the potential air quality impacts arising from the proposed change in stack height. This suggests that there would not be significant changes to the results of the air quality impact assessment. However, without reviewing the updated Air Quality Chapter (and associated technical appendices), we are unable to comment on

whether this would alter the advice and recommendations made in our earlier correspondences.

Yours faithfully

On behalf of UK Health Security Agency
nsipconsultations@phe.gov.uk

UK Health Security Agency

Environmental Hazards and Emergencies Department
Seaton House, City Link
London Road
Nottingham, NG2 4LA

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Our Ref: 58602 CIRIS

Susan Evans
Associate
AECOM
2 City Walk
Leeds LS11 9AR

24 May 2022

Dear Ms Evans,

Nationally Significant Infrastructure Project
Keadby 3 Low Carbon Gas Power Station, DCO, Statement of Common Ground
PINS Reference EN010114

Thank you for providing UK Health Security Agency (UKHSA) with a copy of the final Statement of Common Ground for the above-named development (dated May 2022, reference 8.13, VP4.0, received 23rd May 2022).

UKHSA had noted that the results of operational impact assessments as detailed in Appendix 3 did not include results of N-amine emissions, and this was raised with you directly in a phone call on 23rd May 2022. It was subsequently confirmed in your email the same day 'that the amine (and consequently N-amine) emission was assessed in the submitted ES at the highest emission concentration provided by five different technology licensor providers. The technology provider for the twin absorber plant has indicated that their emission concentration of amines is significantly lower than the 5.5mg/Nm3 assessed in the ES. As a result, the twin absorber technology gives rise to lower amine and N-amine impacts than have been modelled for the single absorber scenario and the results presented in the original ES represent very much a worst-case.'

A number of minor corrections and additions have been made by the UKHSA in the Statement of Common Ground (dated May 2022, reference 8.13, VP4.0, received 23rd May 2022) including some

to reflect the most recent correspondence. A copy of the tracked changes made by the UKHSA has been sent to you. We would request that these tracked changes be accepted and a copy of this letter response be appended to this document in Appendix 4 as a record of correspondence.

Providing the above is undertaken, UKHSA confirms that we are content to agree the Statement of Common Ground.

Yours sincerely

On behalf of UK Health Security Agency
nsipconsultations@phe.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.

Evans, Susan

From: Nsipconsultations <Nsipconsultations@phe.gov.uk>
Sent: 24 May 2022 14:31
To: Evans, Susan; Nsipconsultations
Cc: Lowe, Richard; North, Helen; Wilson, Rupert; Colin Turnbull; 'Keadby 3'
Subject: [EXTERNAL] RE: UK Health Security Agency's Response - Keadby 3 Carbon Capture Power Station- Statement of Common Ground

Dear Susan,

Thanks for confirming that you will accept our tracked changes.

Please be advised that we don't provide signatures. The issuing of a separate letter from the UKHSA confirming that we are content to agree the Statement of Common Ground has been acceptable to the Examining Authority for other projects we have worked on in the past.

The ExA was also copied into the email to you this morning and we have included them in this email response too.

Kind regards

UK Health Security Agency

Ms Carol Richards
NSIP Admin Team
Environmental Hazards and Emergencies Department
Radiation, Chemical and Environmental Hazards
UK Health Security Agency
[redacted]

www.gov.uk/ukhsa Follow us on Twitter @UKHSA

The UK Health Security Agency will move to new UKHSA email accounts in the near future.
For now, please continue to use my current email address.

From: Evans, Susan [redacted]
Sent: 24 May 2022 13:21
To: Nsipconsultations <Nsipconsultations@phe.gov.uk>
Cc: Lowe, Richard [redacted]; North, Helen [redacted] Wilson, Rupert [redacted]>; Colin Turnbull [redacted]>; 'Keadby 3' <Keadby3@planninginspectorate.gov.uk>
Subject: RE: UK Health Security Agency's Response - Keadby 3 Carbon Capture Power Station- Statement of Common Ground

EXTERNAL: This email originated outside of UKHSA. Do not click links or attachments unless you recognise the sender.

Good afternoon

Thanks for your prompt return and minor tracked changes which we note and accept (I'm only proposing to capitalise 'Applicant' for consistency). We will finalise this and submit it into examination once we have your signature which the ExA has noted is required.

If you are unable to provide a signature, please can you advise so that we can submit the necessary evidence that it should be treated as 'signed' into examination.

Best regards

Susan

From: Nsipconsultations <Nsipconsultations@phe.gov.uk>
Sent: 24 May 2022 12:42
To: Evans, Susan [redacted]
Cc: Lowe, Richard [redacted]>; North, Helen [redacted]>; Wilson, Rupert [redacted]>; Nsipconsultations <Nsipconsultations@phe.gov.uk>; Colin Turnbull [redacted]>; 'Keadby 3' <Keadby3@planninginspectorate.gov.uk>
Subject: [EXTERNAL] UK Health Security Agency's Response - Keadby 3 Carbon Capture Power Station- Statement of Common Ground

Dear Susan

Please find attached UKHSA's response to the above.

Kind regards

UK Health Security Agency

Ms Carol Richards
NSIP Admin Team
Environmental Hazards and Emergencies Department
Radiation, Chemical and Environmental Hazards
UK Health Security Agency
[redacted]

www.gov.uk/ukhsa Follow us on Twitter @UKHSA

The UK Health Security Agency will move to new UKHSA email accounts in the near future.
For now, please continue to use my current email address.