

# The Keadby 3 Low Carbon Gas Power Station Project

**Document Ref: 7.3**

**Planning Inspectorate Ref: EN010114**

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

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

## Framework Construction Workers' Travel Plan

**The Planning Act 2008**

**Applicant: Keadby Generation Limited**

**Date: May 2021**

## DOCUMENT HISTORY

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## GLOSSARY

Abbreviation	Description
AGI	Above Ground Installation - installations used to support the safe and efficient operation of a pipeline; above ground installations are needed at the start and end of a cross-country pipeline and at intervals along the route.
Applicant	Keadby Generation Limited
CCGT	Combined Cycle Gas Turbine - a highly efficient form of energy generation technology. An assembly of heat engines work in tandem using the same source of heat to convert it into mechanical energy which drives electrical generators and consequently generates electricity.
CCUS	Carbon Capture, Usage and Storage - group of technologies designed to reduce the amount of carbon dioxide (CO <sub>2</sub> ) released into the atmosphere from coal and gas power stations as well as heavy industry including cement and steel production. Once captured, the CO <sub>2</sub> can be either re-used in various products, such as cement or plastics (utilisation), or stored in geological formations deep underground (storage).
CTMP	Construction Traffic Management Plan – a plan outlining measures to organise and control vehicular movement on a construction site so that vehicles and pedestrians using site routes can move around safely.
CWTP	Construction Workers Travel Plan – a plan managing and promoting how construction workers travel to a particular area or organisation. It aims at promoting greener, cleaner travel choices and reducing reliance on the private car.
DCO	Development Consent Order - made by the relevant Secretary of State pursuant to The Planning Act 2008 to authorise a Nationally Significant Infrastructure Project. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include rights of compulsory acquisition.
ES	Environmental Statement – a report in which the process and results of an Environment Impact Assessment are documented.

Abbreviation	Description
HGV	Heavy Goods Vehicle – vehicles with a gross weight in excess of 3.5 tonnes.
HP	High pressure
IHT	The Institute of Highways and Transportation - represents and qualifies professionals who plan, design, build, manage, maintain and operate transport and infrastructure.
MW	Megawatt – unit of power.
NEP	The Northern Endurance Partnership - a partnership between bp, Eni, Equinor, National Grid, Shell and Total to develop infrastructure to transport and store CO <sub>2</sub> emissions.
NLC	North Lincolnshire Council
NSIP	Nationally Significant Infrastructure Projects – defined by the Planning Act 2008 and covers projects relating to energy (including generating stations, electric lines and pipelines); transport (including trunk roads and motorways, airports, harbour facilities, railways and rail freight interchanges); water (dams and reservoirs, and the transfer of water resources); wastewater treatment plants and hazardous waste facilities. These projects are only defined as nationally significant if they satisfy a statutory threshold in terms of their scale or effect.
PPE	Personal Protective Equipment - equipment that will protect the user against health or safety risks at work.
SoS	Secretary of State - title typically held by Cabinet Ministers in charge of Government Departments.
ZCH	Zero Carbon Humber - a consortium of energy and industrial companies and academic institutions with a shared vision to transform the Humber region into the UK's first net-zero carbon cluster by 2040.

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## EXECUTIVE SUMMARY

- 1 This Framework Construction Workers' Travel Plan (Framework CWTP) has been prepared on behalf of Keadby Generation Limited (the Applicant) in relation to a proposed 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') (the Proposed Development).
- 2 The Framework CWTP is designed to promote and encourage the use of sustainable transport modes and reduce reliance on the private car during the construction phase of the Proposed Development. Subject to the necessary consents being granted and an investment decision being made, construction of the Proposed Development could potentially start as early as Quarter 4 (Q4) 2022. Construction activities are expected to be completed within 42 months, followed by a period of commissioning.
- 3 The Applicant is committed to sustainable development and realises that the success of the Travel Plan will be based on their enthusiasm and commitment in overseeing that the appointed contractor encourages and promotes the recommended measures detailed within this report to their workers. This Framework CWTP sets out the aims, objectives and measures to promote sustainable travel to the Proposed Development Site by construction workers.
- 4 This document is a Framework CWTP setting the limits considered necessary in light of the assessment of traffic impacts associated with the Proposed Development. The appointed contractor will be required to use this as the starting point for their Travel Plan for Construction Staff, which is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**). This Framework CWTP also describes the measures considered necessary to minimise the impact of construction worker vehicles on the local highway network. The contractor will need to confirm that these measures will be implemented.
- 5 This Framework CWTP is structured as follows:
  - Section 1 provides background information including the Proposed Development Site location and accessibility;
  - Section 2 describes the Proposed Development;
  - Section 3 presents the objectives;
  - Section 4 sets out roles and responsibilities;
  - Section 5 describes the proposed travel plan measures;
  - Section 6 describes the process for setting targets; and
  - Section 7 outlines the proposed monitoring of the final CWTP.

## 1.0 INTRODUCTION

### 1.1 Overview

- 1.1.1 This Framework Construction Workers' Travel Plan (CWTP) (**Application Document Ref. 7.3**) has been prepared by AECOM 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 construction) 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 - **Application Document Ref. 6.2**).
- 1.1.4 The Proposed Development falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the 2008 Act, as it is an onshore generating station in England that would have a generating capacity greater than 50MW electrical output (50MWe). As such, a DCO application is required to authorise the Proposed Development in accordance with Section 31 of the 2008 Act.
- 1.1.5 The DCO, if made by the SoS, would be known as 'The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order' ('the Order').

### 1.2 The Applicant

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

which lies to the north and south of the Proposed Development Site and generates renewable energy from 34 turbines, with a total installed generation capacity of 68MW.

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

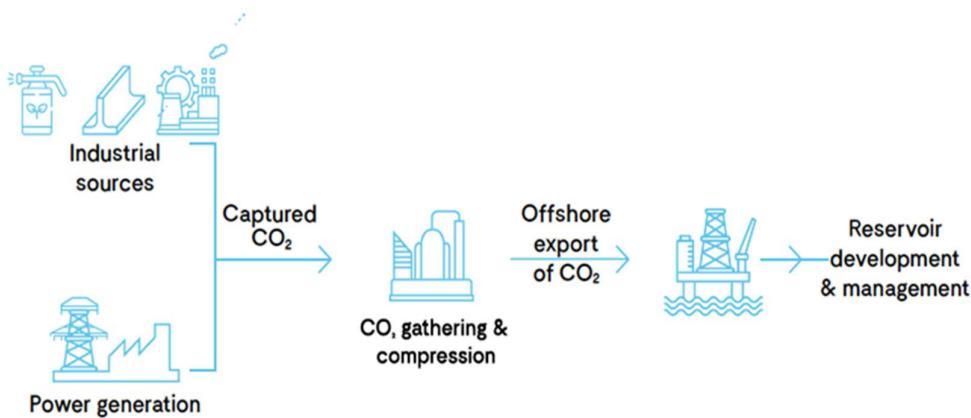
### **1.3 What is Carbon Capture, Usage and Storage?**

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

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<sup>1</sup> <https://www.zerocarbonhumber.co.uk/the-vision/>

<sup>2</sup> <https://www.zerocarbonhumber.co.uk/news/northern-endurance-partnership/>



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

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

### 1.4 The Proposed Development

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

Schedule 1 of the draft DCO (**Application Document Ref. 2.1**) as Work No. 1 – 11 and shown on the Works Plans (**Application Document Ref. 4.3**).

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

1.4.4 The Proposed Development will include:

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

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

1.4.5 The Applicant will be responsible for the construction, operation (including maintenance) and eventual decommissioning of the Proposed Development,

with the exception of the National Grid Gas compound works (**Work No. 2A**), the works within the National Grid Electricity Transmission 400kV substation (part of **Work No. 3A**), the works within the Northern Powergrid 132kV substation (part of **Work No. 3B**), and the National Grid Carbon compound works (**Work No. 7B**), which will be the responsibility of those named beneficiaries.

- 1.4.6 The Proposed Development includes the equipment required for the capture and compression of carbon dioxide emissions from the generating station so that it is capable of being transported off-site. ZCH Partnership will be responsible for the construction, operation and decommissioning of the carbon dioxide gathering network linking onshore power and industrial facilities including the Proposed Development in the Humber Region. The carbon dioxide export pipeline does not, therefore, form part of the Proposed Development and is not included in the Application but will be the subject of separate consent applications by third parties, such as the Humber Low Carbon Pipeline DCO Project by National Grid Carbon<sup>3</sup>.
- 1.4.7 The Proposed Development will operate 24 hours per day, 7 days per week with programmed offline periods for maintenance. It is anticipated that in the event of CCP maintenance outages, for example, it will be necessary to operate the Proposed Development without carbon capture, with exhaust gases from the CCGT being routed via the Heat Recovery Steam Generator (HRSG) stack.
- 1.4.8 Various types of associated and ancillary development further required in connection with and subsidiary to the above works are detailed in Schedule 1 'Authorised Development' of the draft DCO (**Application Document Ref. 2.1**). This along with **Chapter 4: The Proposed Development in the ES Volume I (Application Document Ref. 6.2)** provides further description of the Proposed Development. The areas within which each numbered Work (component) of the Proposed Development are to be built are defined by the coloured and hatched areas on the Works Plans (**Application Document Ref. 4.3**).

## 1.5 The Proposed Development Site

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

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

- 1.5.2 The existing Keadby Power Station site currently encompasses the operational Keadby 1 and (under construction) Keadby 2 Power Station sites, including the Keadby 2 Power Station Carbon Capture and Readiness reserve space.
- 1.5.3 The Proposed Development Site 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).
- 1.5.4 The Proposed Development Site includes other areas including:
- Previously developed land, along with gas, towns water and other connections, and access routes, within the Keadby Power Station site;
  - 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, the routes of which utilise an existing farm access track towards Chapel Lane and land within the existing Northern Powergrid substation on Chapel Lane;
  - Water Connection Corridors:
    - 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.

- 1.5.5 In the vicinity of the Proposed Development Site the River Trent is tidal, therefore parts of the Proposed Development Site are within the UK marine area. No harbour works are proposed.
- 1.5.6 Further description of the Proposed Development Site and its surroundings is provided in **Chapter 3: The Site and Surrounding Area** in ES Volume I (**Application Document Ref. 6.2**).
- 1.5.7 Its location in relation to the surrounding area and the strategic road network is shown in Figure 1.

**Figure 1: Proposed Development Site Location**



## 1.6 The Development Consent Process

- 1.6.1 As a NSIP project, the Applicant is required to obtain a DCO to construct, operate and maintain the generating station, under Section 31 of the 2008 Act. Sections 42 to 48 of the 2008 Act govern the consultation that the promoter must carry out before submitting an application for a DCO and Section 37 of the 2008 Act governs the form, content and accompanying documents that are required as part of a DCO application. These requirements are implemented through the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) ('APFP Regulations') which state that an application must be accompanied by an ES, where a development is

considered to be 'EIA development' under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations).

- 1.6.2 An application for development consent for the Proposed Development has been submitted to the Planning Inspectorate (PINS) acting on behalf of the Secretary of State. Subject to the Application being accepted (which will be decided within a period of 28 days following receipt of the Application), PINS will then examine it and make a recommendation to the Secretary of State, who will then decide whether to make (grant) the DCO.

## 1.7 The Purpose and Structure of this Document

- 1.7.1 This Framework CWTP has been prepared in support of **Chapter 10: Traffic and Transport (ES Volume I – Application Document Ref. 6.2)** and draws upon the ES assessment of impacts on transport receptors presented in **Appendix 10A: Transport Assessment (ES Volume II- Application Document Ref. 6.3)**. This Framework CWTP outlines how workers would travel to the Site during the construction phase. It would be used by the appointed contractor to inform the Construction Workers' Travel Plan, which is proposed to be secured by a Requirement of the draft DCO (**Application Document Ref. 2.1**) for details.

- 1.7.2 This document is structured as follows:

- Section 1 provides background information including the Proposed Development Site location and accessibility;
- Section 2 describes the Proposed Development;
- Section 3 presents the objectives;
- Section 4 sets out roles and responsibilities;
- Section 5 describes the proposed travel plan measures;
- Section 6 describes the process for setting targets; and
- Section 7 outlines the proposed monitoring of the final CWTP.

## 2.0 PROPOSED DEVELOPMENT

### 2.1 Indicative Construction Programme

2.1.1 It is anticipated that construction of the Proposed Development could (subject to the necessary consents being granted and an investment decision being made) potentially start as early as Quarter 4 (Q4) 2022. Construction activities are expected to be completed within 42 months, followed by a period of commissioning. However, for the purposes of **Appendix 10A: Transport Assessment** (ES Volume II – **Application Document Ref. 6.3**) a construction build programme lasting 42 months starting in Q2 2029 (Mabey Bridge replacement and A18 carriageway improvements) and ending Q4 2032 would provide a representative worst-case scenario for traffic impact assessment purposes.

### 2.2 Accessibility

2.2.1 The accessibility of the Proposed Development Site has been reviewed with respect to opportunities for walking, cycling and the availability of public transport.

#### Walking

2.2.2 The Institute of Highways and Transportation (IHT) document, '*Planning for Journeys on Foot*' (Institute of Highways and Transportation, 2000) suggests that the preferred maximum is up to 2km for commuting.

2.2.3 Considering a circa 2km walking catchment to the Proposed Development Site entrance off A18, the potential for walking is limited. The local villages of Keadby and Althorpe lie >2km away and so would not be within walking distance of the Proposed Development Site.

#### Cycling

2.2.4 Cycling provides a good alternative to the private car in that it is cheap, offers reliable journey times, is environmentally friendly and promotes improved health through regular exercise. The IHT states that the average length of a cycle journey is 5km.

2.2.5 A 5km catchment area includes the villages of Keadby, Gunness and Althorpe. Given this catchment area, the potential for cycling to the Proposed Development Site is considered to be limited.

2.2.6 Whilst there is no specific cycling infrastructure in the vicinity of the Keadby Power Station Site, either on or off-road, it is considered that the Proposed Development Site is reasonably accessible for those within the 5km catchment wishing to cycle.

### Public Transport

- 2.2.7 The IHT document, '*Guidelines for Public Transport in Development*' 1999 (IHT, 1999) recommends a maximum walking distance of 400m to a bus stop.
- 2.2.8 There is a bus stop located on the B1392 Trentside to the south of the Stainforth and Keadby Canal located approximately 1.5km from the main construction site entrance off the A18. This bus stop is served by one bus service (Service 35) which routes between Amcotts and Scunthorpe. However, the service is infrequent with only 4 services per day Monday to Friday and 3 services per day on a Saturday and is not considered generally compatible with construction workers arriving and leaving the Proposed Development Site. As such, public transport is likely to be an unattractive option for construction workers.

### Train Services

- 2.2.9 The nearest train station to the Proposed Development Site is Althorpe (circa 4.2km to the north-east of the Proposed Development Site access) providing an hourly service to Scunthorpe and a 2 hourly service to Doncaster. The IHT document, '*Guidelines for Planning for Public Transport in Developments*' (IHT, 1999), recommends a maximum walking distance of 800m to a major fixed public transport mode, therefore, it is unlikely that there would be a large demand by construction workers for journeys of this type.

## **2.3 Construction Phase Site Worker Traffic Generation**

- 2.3.1 The construction workforce is forecast to peak at circa 1,300 workers per day in months 26 – 27. The construction worker profile is provided within **Appendix 10A: Transport Assessment** (Volume II of the ES, **Application Document Ref. 6.3**).
- 2.3.2 The core construction working hours for the Proposed Development would be 07:00 to 19:00 Monday to Friday (except bank holidays) and 08:00 to 13:00 on Saturdays. Key exceptions to these core working hours could include activities that must continue beyond these hours (e.g. during concrete pouring) which would be agreed in advance with the local authority, works undertaken in response to an emergency, and non-noisy activities that may be undertaken at night.
- 2.3.3 In relation to traffic generation associated with construction workers, for robustness, the peak construction month has been considered (i.e. months 26–27). The assumption has been made that 80% of workers would travel to site by private car, with an average occupancy of two workers per vehicle, and 20% would travel to site by minibus with an average occupancy of seven workers per vehicle. This is to account for the fact that some of the general and specialist workers would work in groups and arrive/ depart together. The resulting worst-case traffic volumes during the peak of construction are set out in **Table 1**.

**Table 1: Daily Vehicle Profile during Peak Month of Construction**

Hour beginning	Arrivals	Departures
06:00	167	0
07:00	307	0
08:00	56	0
09:00	28	0
<b>Total</b>		
16:00	0	56
17:00	0	84
18:00	0	390
19:00	0	28
<b>Total</b>	<b>558</b>	<b>558</b>

- 2.3.4 The assumptions set out above and resulting expected traffic volumes are a worst-case and make no allowance for the potential reductions in travel by private car as a result of implementation of the final CWTP.

## 2.4 Construction Phase HGV Traffic Generation

- 2.4.1 **Application Document Ref. 7.2:** Framework Construction Traffic Management Plan provides detail on how the HGV generated by the construction phase will be managed.

## 2.5 Access Proposals

- 2.5.1 It is proposed that all construction workers for the Proposed Development would access the Proposed Development Site via the existing construction site entrance used for Keadby 2 Power Station, located off the A18. However, temporarily during the reconstruction of the Mabey Bridge workers would use the skew bridge nearby on the A18, or the Bonnydale Road or Chapel Lane accesses.

## 2.6 Car Parking Provision

- 2.6.1 Parking demand would vary throughout the construction phase and parking area would be set aside within the Proposed Development Site to accommodate parking for construction workers. It is anticipated that this may be within laydown areas south of North Pilfrey Bridge, adjacent to the access road. If chosen, a park and ride system would then transport the construction workers between the compound and the Proposed PCC Site.

## 3.0 OBJECTIVES

### 3.1 Overview

- 3.1.1 The CWTP, to be secured as a Requirement of the draft DCO (**Application Document Ref. 2.1**), would act in helping the environment by reducing the number of trips made to and from the Proposed Development Site by private car during the construction phase. All construction staff would be made aware of the measures included in that Travel Plan, so that benefits can be delivered, and the number of car borne trips reduced; promoting car sharing and minibus use.
- 3.1.2 The CWTP would aim to provide all construction staff with an awareness of the advantages and potential for travel by more sustainable and environmentally friendly modes of transport, through raising awareness and the provision of information identifying travel options and the necessary contact information.
- 3.1.3 The primary objectives which are of most relevance during the construction period of the Proposed Development are to:
- facilitate an appropriate package of measures to encourage sustainable travel behaviour;
  - reduce car usage (particularly single occupancy car journeys);
  - raise awareness of the sustainable transport measures serving the Proposed Development Site; and
  - minimise the impact of traffic on sensitive locations.

## 4.0 ROLES AND RESPONSIBILITIES

### 4.1 The Applicant

4.1.1 The Applicant would be responsible for ensuring a condition of contract between them and the contractor to develop and comply with the provisions of a CWTP, prepared in accordance with this Framework.

### 4.2 The Travel Plan Co-ordinator

4.2.1 The Travel Plan Co-ordinator has a key role to play in managing, monitoring and implementing the individual measures within the plan. The importance now placed on the Travel Plan process means that the Travel Plan Co-ordinator role is becoming increasingly important. The Travel Plan Co-ordinator would be appointed by the contractor to manage and deliver the Travel Plan. The Travel Plan Co-ordinator's details would be supplied to NLC and Highways England.

4.2.2 The Travel Plan Co-ordinator would work closely with the Site Manager, who has overall responsibility for the Proposed Development Site during construction, and thus has the authority to introduce measures for those workers who do not follow the guidelines.

4.2.3 The responsibilities of the Travel Plan Co-ordinator will include:

- encouraging the contractual obligations of contractors/sub-contractors related to the Travel Plan to be adhered to;
- ensuring the Travel Plan notice board is located in a prominent position and that the information is kept up-to-date;
- being based on Site;
- acting as the key point of contact for issues related to construction traffic;
- undertaking a snap-shot parking survey on one day per month to verify that car park occupancy targets are being met;
- reviewing cycle parking provision on a regular basis;
- engaging with local stakeholders;
- monitoring performance against the targets of the CWTP; and
- implementing additional measures if not delivering on targets set.

### 4.3 The Contractor

4.3.1 The contractor will be responsible for managing how their workers travel to and from the Proposed Development Site in order to control the demand for car parking spaces. The contractor's responsibilities will primarily include:

- providing a Travel Plan Co-ordinator to oversee the management and delivery of the CWTP;

- encouraging and promoting the use of sustainable transport measures included within the CWTP; and
- organising crew minibuses to transport workers to and from the Proposed Development Site, where appropriate.

## 5.0 TRAVEL PLAN MEASURES

### 5.1 General

- 5.1.1 To encourage sustainable travel behaviour by construction staff throughout the period of construction, it is important that an appropriate package of measures is introduced. The package of measures would aim to minimise the level of construction worker traffic, and wherever possible, minimise the impact and disruption of the remaining traffic on the local road network.
- 5.1.2 Given the unprecedented changes introduced by the Covid-19 pandemic to travel and construction working methods, all measures outlined in this section are subject to review in the light of prevailing government regulation and/ or guidance at the time of implementation.

### 5.2 Proposed Measures to Reduce the Level of Traffic

#### Car Parking

- 5.2.1 The availability of car parking has a major influence on the means of transport people choose for their journeys, and is, therefore, an important Travel Plan measure in promoting sustainable travel to and from the Proposed Development Site.
- 5.2.2 It is proposed that sections of the car park would gradually be opened up as construction develops, with a defined number of construction worker car parking spaces to be provided during construction. Managing the number of parking spaces available on-site would help to control the number of vehicles and promote sustainable transport options. It would be the responsibility of the Travel Plan Co-ordinator working closely with the Site Manager, to determine the amount of spaces to be provided.
- 5.2.3 Car parking at the Proposed Development Site would be monitored by the Travel Plan Co-ordinator, with restricted access. The Site Manager and the Travel Plan Co-ordinator would set the appropriate criteria for construction workers to receive a pre-allocated parking space.

#### Minibus

- 5.2.4 Contractors would be encouraged to provide minibuses for transporting their workers from the key points of construction worker origin to the Proposed Development Site. This would have the benefit of reducing the number of vehicular trips on the local road network. For example, many construction workers would find local accommodation at hotels and bed and breakfasts (B&B). They would be keen to minimise their daily travel costs and a minibus service would be an attractive means of transport to them. The location of accommodation chosen by these workers could provide suitable pick up locations for the minibus. Minibus routes could also be set up to collect workers that live locally from central pick up points.

- 5.2.5 The contractor would encourage the use of common hotels and B&B by workers that are not from the local area, to encourage the use of shared transport modes such as minibuses.
- 5.2.6 The contractor would be requested to provide minibuses and to organise where the minibuses would pick up workers and at what times.

#### Car Sharing

- 5.2.7 The contractor would be encouraged to set up and manage a car share scheme for their workers. In construction projects, car sharing is already popular amongst workers due to the financial and social benefits it provides. Indeed, it is expected that some workers, if not based locally, would be away from home for a specific length of time, welcoming the companionship of other colleagues.
- 5.2.8 In emergencies, the Travel Plan Co-ordinator would provide a guaranteed lift home for car sharers e.g. by use of taxi. The provision could be extended for emergency situations for staff that cycle to the Proposed Development Site.

#### Cycling

- 5.2.9 Although cycling to the Proposed Development Site is likely to have limited appeal (due to carrying personal protective equipment (PPE) etc. and the distance to the Proposed Development Site from larger conurbations) secure parking for bicycles would be provided. Construction staff that cycle to work would also have access to shower and changing facilities and lockers to store clothing, cycle helmets etc.

#### On-site storage

- 5.2.10 An on-site storage facility is usually provided by contractors. This facility would encourage construction workers to store their tools/ PPE on-site. This would reduce the number of tools they would need to carry each day and would assist those workers who are considering cycling or car sharing as a potential travel mode.

### **5.3 Minimising the Impact on the Local Road Network**

#### Staggered Working Hours

- 5.3.1 Working hours on major construction sites tend to be long, due to pressures of timescales and available light. Therefore, the arrival and departure of workers' vehicles tend to be spread over the peak periods, rather than all falling in the traditional peak hours, thereby minimising the impact on any particular time period (refer to **Table 16** within **Appendix 10A: Transport Assessment (ES Volume II) (Application Document Ref. 6.3)**).

### Travel Plan Communication

- 5.3.2 Details of the sustainable transport options available for accessing the Proposed Development Site would be provided in an information pack and sent to construction workers, prior to them starting work at the site. This will raise awareness of the initiatives being implemented and also allow staff to register an interest in the schemes. The contractor will be responsible for ensuring all construction workers receive the information pack prior to starting work on site.
- 5.3.3 All construction workers will receive an introductory meeting on the travel plan when they commence work, incorporated into the site safety briefing. It will include the provision of the following information:
- designated access and exit routes to the Proposed Development Site;
  - details of sustainable transport measures available for accessing the Proposed Development Site; and
  - parking arrangements.
- 5.3.4 This would provide each construction worker with a full awareness of the Travel Plan and measures contained within it.

## 6.0 TARGETS

- 6.1.1 Without management, construction industry standards suggest a typical vehicle occupancy of 1.35 which would result in 963 vehicles arriving and departing the Proposed Development Site per day at the peak of construction.
- 6.1.2 One of the prime objectives of an active CWTP is to set clear and realistic targets. The main target to be achieved during the construction of the Proposed Development is as follows:
- to achieve a car occupancy of 2.33 workers per vehicle over the duration of the construction project. Up until handover of the Proposed Development, no more than one car or van should be parked on-site for every two people registered on-site per day.
- 6.1.3 The Travel Plan Co-ordinator will monitor parking utilisation at the Proposed Development Site, reviewing the split between cars, vans and minibuses. Ensuring that this target is met is dependent on the contractor encouraging workers to travel to and from the Proposed Development Site by sustainable options provided in the final CWTP. If the monitoring (see Section 7 below) finds that the target is not being met, this will result in the implementation of additional measures to help to facilitate the CWTP staying on course to meet its overall objectives.
- 6.1.4 This target represents a 42% reduction in vehicles arriving at the Proposed Development Site when compared to the industry standard.

## 7.0 MONITORING AND REVIEW

### 7.1 General Measures

- 7.1.1 Monitoring the CWTP will be central to ensuring its aims are delivered in practice. Monitoring helps identify failures or changing conditions at the earliest point and therefore that remedial action (i.e. identifying additional measures, providing incentives, marketing campaign to promote the CWTP) can be taken, to facilitate that the Travel Plan stays on course to meet its objectives.
- 7.1.2 The Travel Plan Co-ordinator would be responsible for monitoring delivery of the Travel Plan, to oversee the efficient and effective execution of the measures and to refine the measures, where necessary, to cope with the changes in demand over the construction phase.
- 7.1.3 An important part of the monitoring strategy would be obtaining feedback from construction workers, Highways England, NLC and local residents regarding any issues with construction worker traffic. The appointment of a Travel Plan Co-ordinator will provide an appropriate point of contact is available and can react to such feedback.
- 7.1.4 Furthermore, employees would be given the chance to offer their suggestions and ideas via a suggestion box/ an informal discussion with the Travel Plan Co-ordinator; while review meetings would be held at regular intervals to facilitate effective management of any issues that may arise.

### 7.2 Parking

- 7.2.1 The Travel Plan Co-ordinator would monitor the total number of construction workers on-site and the number of parking spaces provided to help achieve the proposed car occupancy targets. It is anticipated that monitoring would be undertaken on one day per month throughout construction.

## 8.0 REFERENCES

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