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3.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT SITE

3.1 Site Location

3.1.1 The Proposed Development Site ('the Site') is located off South Marsh Road, Stallingborough, North East Lincolnshire and is located within the administrative area of North East Lincolnshire Council (NELC).

3.1.2 This Chapter is supported by Figures 3.1 - 3.3 in ES Volume II (Document Ref. 6.3).

3.2 The Proposed Development Site

3.2.1 The Site extends to around 23 hectares (ha) in area and is shown on Figure 3.1 in ES Volume II (Document Ref. 6.3). The Site is centred on approximate grid reference TA 230 133.

3.2.2 For the purposes of the Environmental Impact Assessment (EIA), the following terms are used to describe the Site and its component parts (see Figure 3.1):

- 'the Site' – the Application boundary, which includes the existing South Humber Bank Power Station (SHBPS) with the exception of the National Grid sub-station and Above Ground Installation (AGI). The Application boundary is known as the 'Order Limits' in the Draft DCO (Document Ref. 2.1);
- 'the Main Development Area' (also referred to as Work No. 1) – this is the area within the Site where the Proposed Development will be located;
- landscape and biodiversity mitigation and enhancement area (also referred to as Work No. 3) – this comprises an area within the Site, to the west of SHBPS and the Main Development Area, where landscape and biodiversity mitigation and enhancement works are proposed; and
- the construction laydown areas (also referred to as Work No. 5) – temporary areas within the Site and outside of the Main Development Area, to be used during the site preparation and construction.

3.2.3 The Site also includes areas for existing and proposed accesses from South Marsh Road (to the north of the Main Development Area) (Work No. 4), and areas within which utilities connections will be made (to the west of the Main Development Area) (Work No. 2).

3.2.4 The Site includes the existing SHBPS which is owned and operated by EP SHB Limited, a subsidiary of EP UK Investments Limited (EPUKI). SHBPS consists of two combined cycle gas turbine (CCGT) units fired by natural gas, constructed in the 1990s, with a combined gross electrical capacity of approximately 1,400 MW.

3.2.5 The Main Development Area is shown on Figure 3.1 in ES Volume II (Document Ref. 6.3) and is located to the east of the existing CCGT plant and to the west of the cooling water pumping station. The Main Development Area occupies an area of circa 7 ha and currently comprises a vegetated area, with underground cooling water pipes (connecting the CCGT units and the cooling water pumping station), other buried services and an associated private access road.

- 3.2.6 The Site is largely flat and typically stands at around 2.0 metres Above Ordnance Datum (m AOD).
- 3.2.7 Drainage ditches (managed by SHBPS) run along the northern, western and southern perimeters of the Site.
- 3.2.8 The remainder of the Site (save for the new Site access) is owned by EPUKI and comprises the existing SHBPS and land to the west of SHBPS.

3.3 Site History

- 3.3.1 SHBPS was constructed in two phases between 1997 and 1999. In 2017 Centrica sold SHBPS to EPUKI.
- 3.3.2 Historic Ordnance Survey (OS) maps have been studied to determine the previous land uses within the Site and surrounding land as detailed in Table 3.1 below.

Table 3.1: Review of historical maps relating to the Site

HISTORICAL MAP DATES	ONSITE LAND USE	OFFSITE LAND USE
1887 – 1888	Agricultural land use.	Agricultural land use.
1907 – 1908	No significant changes.	No significant changes.
1932 – 1933	No significant changes.	Light railway shown running north-west to south-east to the east of the Site.
1938 – 1956	No significant changes.	No significant changes.
1966	No significant changes.	Works complex and associated pipelines located circa 500 m to 1 km the south-east of the Site.
1968	No significant changes.	Works complex located to the immediate north of South Marsh Road. Watercress beds shown circa 890 m to the east at Primrose Cottage. Works complex (Tronox, previously Cristal and Millennium Inorganic Chemicals) located circa 1.1 km to the north of the Site.
1982	No significant changes.	Aforementioned works complexes both extended to the east.

HISTORICAL MAP DATES	ONSITE LAND USE	OFFSITE LAND USE
1986 – 1989	No significant changes.	Extension to works complex (Tronox) located circa 1.1 km to the north of the Site.
2000	SHBPS has been constructed with associated power line to the west.	New works complex (BOC Gases) located circa 430 m to the north-west of the Site to the north of Middle Drain.
2006	Changes to buildings associated with the SHBPS along the western boundary of the Site. Additional waterbody shown to the south of South Marsh Road.	Waterbody shown circa 240 m to south of the Site. Underground pipeline circa 300 m to the north-east of the Site extending from the shoreline out into the Humber Estuary.
2018	No significant changes.	BOC Gases works complex extended to land south of Middle Drain, circa 295 m to the west of the Site.

3.4 The Surrounding Area

- 3.4.1 The Site is located on the South Humber Bank between the towns of Immingham and Grimsby; both over 3 km from the Site.
- 3.4.2 The surrounding area is characterised by a mix of industrial and agricultural land use with the nearest main settlements being the villages of Stallingborough, Healing and Great Coates. A range of industrial land uses are dispersed along the southern bank of the Humber Estuary.
- 3.4.3 The land immediately surrounding the Site to the south, west and north-west is currently in agricultural use with a polymer manufacturing site (Synthomer (UK) Limited) and the NEWLINCS waste management facility both located to the north of the Site beyond South Marsh Road. The Humber Estuary lies around 175 m to the east of the Site.
- 3.4.4 Access to this part of the South Humber Bank is via the A180 Trunk Road and the A1173. The Barton railway line runs north-west to south-east between Barton-on-Humber and Cleethorpes circa 2.5 km to the south-west of the Site and a freight railway line runs north-west to south-east circa 300 m (at the closest point) to the Site.
- 3.4.5 In addition to the drainage ditches around the majority of the perimeter of the Site, the Oldfleet Drain is located approximately 300 m south of the Main Development Area. A large pond lies off-site approximately 400 m south of the Main Development Area and just to the south of the Oldfleet Drain.

3.5 Potential Environmental Sensitivities/ Receptors

3.5.1 A number of environmental receptors relevant to the EIA have been identified within and outside the Site, as described below. All distances given are the shortest distance between the receptor and the closest point of the Site boundary.

3.5.2 Key receptors for each topic area have been identified as part of the assessment process and details are included in the relevant technical chapters (Chapters 7 – 19 of this ES). A summary is also provided below.

Residential Receptors

3.5.3 There are no residential receptors within 500 m of the Site.

3.5.4 The closest residential properties (individual receptors) are located approximately 1 km west and are presented on Figure 3.2 in ES Volume II (Document Ref. 6.3). These are:

- Poplar Farm (located on South Marsh Road); and
- Primrose Cottage (accessed via Station Road north of the A180).

3.5.5 There are eight other residential properties located within 2 km of the Site.

3.5.6 The nearest settlement is the village of Stallingborough over 2 km away.

3.5.7 Potential effects on residential receptors are considered in Chapter 7: Air Quality, Chapter 8: Noise and Vibration, Chapter 9: Traffic and Transport, Chapter 11: Landscape and Visual Amenity and Chapter 18: Human Health.

Designated Nature Conservation Sites

3.5.8 The Site is not subject to any statutory or non-statutory ecological designations.

3.5.9 Designated nature conservation sites in the vicinity of the Site are presented on Figure 3.2 in ES Volume II (Document Ref. 6.3) and summarised below.

3.5.10 The Humber Estuary is located around 175 m to the east of the Site and is designated as a Ramsar site, Special Protection Area (SPA), Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). There are no other SSSIs within 2 km or European designated sites within 10 km of the Site.

3.5.11 There are four Local Wildlife Sites (LWS) within 2 km of the Site:

- Healing Cress Beds Stallingborough LWS – approximately 0.7 km south-west;
- Sweedale Croft Drain LWS – approximately 0.8 km south-east;
- Laporte Road Brownfield Site LWS – approximately 1 km north-west; and
- Fish Ponds to the West of Power Station, Stallingborough LWS – approximately 1 km south-west.

3.5.12 There are two Sites of Nature Conservation Importance (SNCI) identified within 2 km of the Site:

- Field West of Power Station Stallingborough SNCI (approximately 30 m south-west); and
- North Moss Lane Meadow SNCI (approximately 0.9 km north-west).

3.5.13 The potential effects of the Proposed Development on designated nature conservation sites and other ecological receptors are considered in Chapter 10: Ecology of this ES, with supporting information provided in Chapter 7: Air Quality and Chapter 8: Noise and Vibration of this ES and in the Habitats Regulation Assessment (HRA) Signposting Report (Document Ref. 5.8).

Traffic and Transport Receptors

3.5.14 South Marsh Road provides highway access to the Site, as well as the SHBPS, Synthomer (UK) Limited, and the NEWLINCS Integrated Waste Management Facility, both located north of the Site. It is understood that South Marsh Road is also used by the Environment Agency to access flood defences along the bank of the Humber Estuary east of the existing SHBPS cooling water pumping station.

3.5.15 The Site is not crossed by any public rights of way.

3.5.16 There are two public rights of way within 500 m of the Site – a public footpath located to the north, passing in an east-west direction from Hobson Way to the coastline, where it connects to a public bridleway which runs in a north-south direction along the Humber Estuary to the east of the Site.

3.5.17 The potential traffic and transport effects of the Proposed Development are considered in Chapter 9: Traffic and Transport of this ES.

Air Quality

3.5.18 NELC declared an Air Quality Management Area (AQMA) on Cleethorpe Road (numbers 100-176 and 103-177) Grimsby in 2010, for a breach in the nitrogen dioxide annual mean objective. The AQMA is located circa 5.1 km south-east of the Site.

3.5.19 Air quality effects are considered in Chapter 7: Air Quality of this ES.

Geology and Hydrogeology

3.5.20 The geology underlying the Site comprises superficial deposits of Tidal Flat deposits (clay and silt) underlain by Glacial Deposits (clay and sand).

3.5.21 The superficial deposits are designated as unproductive strata with low permeability; however permeable sand layers are likely to contain groundwater.

3.5.22 Bedrock at the Site is the Flamborough Chalk Formation and is designated as a Principal Aquifer. The nearest source protection zones from the Chalk aquifer are approximately 2 km to the south-west and north-west. Available groundwater monitoring data indicates that groundwater within the Chalk is likely to be confined beneath the overlying low-permeability superficial deposits.

3.5.23 The Site is located within a nitrate vulnerable zone (NVZ) (North Beck Drain NVZ).

3.5.24 The potential geological and hydrogeological effects of the Proposed Development are considered in Chapter 12: Geology, Hydrogeology and Land Contamination of this ES.

Hydrology and Flood Risk

- 3.5.25 The Site is located in Flood Zone 3a (as shown on the Flood Map for Planning (Rivers and Sea)). Zone 3a is land that has a 1 in 100 or greater annual probability of river flooding; or land that has a 1 in 200 or greater annual probability of sea flooding. However, the Site benefits from the presence of tidal flood defences along the south bank of the Humber Estuary which are maintained by the Environment Agency.
- 3.5.26 The nearest designated watercourse is the Oldfleet Drain, located approximately 300 m to the south of the Main Development Area (at its closest point) which is classed by the Environment Agency as a Main River.
- 3.5.27 The Site is located around 175 m from the Humber Estuary. At this location the Humber is classified under Water Framework Directive as an Estuarine and Coastal Water Body GB 530402609201.
- 3.5.28 The potential hydrological effects of the Proposed Development (including a flood risk assessment) are considered in Chapter 14: Water Resources, Flood Risk and Drainage of this ES.

Cultural Heritage

- 3.5.29 There are no designated heritage assets within the Site.
- 3.5.30 There are three Scheduled Monuments located within 5 km of the Site:
- Stallingborough medieval settlement, post-medieval house and formal gardens (NHLE 1020423) is located approximately 3.3 km to the west of the Site;
 - the churchyard cross 20 m south of St Peter and St Paul's Church (NHLE 1020023), Stallingborough is located approximately 3.3 km to the west of the Site; and
 - two moated sites at Healing Hall (NHLE 1010947) are located approximately 3.2 km to the south-west of the Site.
- 3.5.31 There are six listed buildings within 3 km of the Site. These are all designated Grade II and located within existing settlements. A further seven Listed Buildings have been identified within a 5 km radius that have either a Grade I or Grade II* designation.
- 3.5.32 The Great Coates Conservation Area is located circa 2.6 km to the south of the Site.
- 3.5.33 There are also seven non-designated archaeological sites within 1 km of the Site.
- 3.5.34 The potential effects on heritage assets are considered in Chapter 13: Cultural Heritage of this ES.

Landscape

- 3.5.35 At a national scale the Site and its immediately surrounding area is located in National Character Area (NCA) 41: Humber Estuary and NCA 42: Lincolnshire Coast and Marshes.

3.5.36 At a regional scale the area in which the Site is located is characterised within the North East Lincolnshire Landscape Character Assessment, Sensitivity and Capacity Study 2015 (NELLCA). Local Character Areas (LCAs) relevant to the Site on a regional scale, are:

- Humber Estuary; and
- Lincolnshire Coast and Marshes.

3.5.37 At a local scale three relevant Local Landscape Types are identified in Section 5 (Character) of the NELLCA as follows:

- Landscape Type 1: Industrial Landscape;
- Landscape Type 2: Open Farmland; and
- Landscape Type 3: Wooded Open Farmland.

3.5.38 The effects of the Proposed Development on the landscape are considered in Chapter 11: Landscape and Visual Amenity of this ES.

3.6 References

British Geological Survey (BGS) (1991) *England Wales Sheet 81 Patrington Solid and Drift Geology (1:50,000 scale map and memoir)*

Coal Authority (undated) *Online interactive maps* accessed 18/09/2019

Department of Environment, Farming and Rural Affairs (undated) *MAGIC website* <https://magic.defra.gov.uk/magicmap.aspx>

Environment Agency (undated) *Flood Map for Planning website* <https://flood-map-for-planning.service.gov.uk/>

Landmark (2018) *Envirocheck Report 169911223_1_1 (14 June 2018)*

Natural England (2013) *NCA Profile 41: Humber Estuary (NE344)*

Natural England (2013) *NCA Profile 42: Lincolnshire Coast and Marshes (NE521)*

North East Lincolnshire Council (undated) *Air Quality Management Areas website* <https://www.nelincs.gov.uk/environment-and-community-safety/environmental-health/air-quality/air-quality-management-areas/> ; and

North East Lincolnshire Council (2015) *North East Lincolnshire Council Landscape Character Assessment, Sensitivity and Capacity Study*