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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 wholly located within the administrative area of North East Lincolnshire Council (NELC).

3.1.2 This Chapter is supported by Figures 3.1 - 3.2 in Volume II of this Environmental Statement (ES).

3.2 The Proposed Development Site

3.2.1 The Site as defined by the planning application boundary is around 25 hectares (ha) in area. The full extent of the Site is shown on Figure 3.1 in ES Volume II.

3.2.2 For the purposes of the Environmental Impact Assessment (EIA), the following terms are used to describe the Site:

- **the Site** – The whole site within the planning application boundary, which includes the existing South Humber Bank Power Station (SHBPS) as detailed in Chapter 1: Introduction;
- **the Main Development Area** – This is the area within the Site where the main construction works will be carried out and where the Proposed Development will be located when operational; and
- **the construction laydown areas** – Temporary areas within the Site outside of the Main Development Area to be used during the site preparation and construction phase.

3.2.3 The existing power station is wholly owned and operated by EP SHB. It consists of two CCGT phases fired by natural gas. The SHBPS has a combined gross electrical capacity of approximately 1,375 MW.

3.2.4 The Main Development Area is shown on Figure 3.1 in ES Volume II and is located to the east of the existing CCGT buildings and associated infrastructure and to the west of the cooling water pumping station. The Main Development Area occupies an area of circa 7 ha and currently comprises undeveloped land; a vegetated area used mainly as the route for the underground water cooling pipes (connecting the two CCGT phases to the cooling water pumping station) and associated access road.

3.2.5 The Site is largely flat and typically stands at around 2.0 metres Above Ordnance Datum (m AOD). The Main Development Area comprises grassland and the pumping station access road. In the north-east of the Main Development Area there is an existing man-made pond and some scattered scrubby vegetation and discrete sections of hedgerow. There is a second man-made pond within the south-west of the Main Development Area which was previously used as a settlement pond for commissioning purposes for SHBPS but is now fed naturally by surface water as the drainage pipes connected to it are redundant. Drainage ditches run along the northern and southern perimeters of the Site. There are also a number of existing buried services associated with the SHBPS within the Main Development Area.

3.3 The Surrounding Area

3.3.1 The Site is located on the South Humber Bank between the towns of Immingham and Grimsby; both over 3 km from the Site.

- 3.3.2 The surrounding area is characterised by a mix of industrial and agricultural land use with the main settlements being the villages of Stallingborough, Healing and Great Coates. There is a concentration of industrial land uses on the South Humber Bank along the bank of the Humber Estuary.
- 3.3.3 The area surrounding the Site immediately to the south, west and north-west is in agricultural use with a large 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.
- 3.3.4 Access to the South Humber Bank is via the A180 Trunk Road and the A1173. The Barton Line (railway) 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.
- 3.3.5 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.

3.4 Site History

- 3.4.1 The SHBPS was constructed in two phases between 1997 and 1999. In 2017 Centrica sold the SHBPS to EP UK Investments Ltd.
- 3.4.2 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.
189219081910	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 – 1951 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 (Cristal – previously 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 (Cristal – previously Millennium Inorganic Chemicals) located circa 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 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.

3.5 Potential Environmental Sensitivities/ Receptors

- 3.5.1 When undertaking an EIA it is important to understand which receptors will be considered as part of the assessment.
- 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 - 17). A summary is also provided below.
- 3.5.3 Where distances are quoted in this ES the distance is defined (unless otherwise stated) as the shortest distance between two described locations, for example from the closest point of the Site boundary to the closest point of a receptor.

Residential Receptors

- 3.5.4 There are no residential receptors within 500 m of the Site.
- 3.5.5 The closest residential properties (individual receptors) are located approximately 1 km west and are presented on Figure 3.2 in ES Volume II. These are:
- Poplar Farm (located on South Marsh Road); and
 - Primrose Cottage (accessed via Station Road north of the A180).
- 3.5.6 There are eight other residential properties located within 2 km of the Site.
- 3.5.7 The nearest settlement is the village of Stallingborough over 2 km away.
- 3.5.8 Potential effects on residential receptors are considered in Chapter 7: Air Quality, Chapter 8: Noise and Vibration and Chapter 11: Landscape and Visual Amenity.

Designated Nature Conservation Sites

- 3.5.9 The Site is not subject to any statutory or non-statutory ecological designations.
- 3.5.10 Identified designated nature conservation sites in the vicinity of the Site are presented on Figure 10C.2 in Appendix 10C (ES Volume III) and summarised below.

- 3.5.11 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.
- 3.5.12 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.
- 3.5.13 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).
- 3.5.14 The potential effects of the Proposed Development on designated nature conservation sites and other ecological receptors are considered in Chapter 10: Ecology and Nature Conservation.

Traffic and Transport Receptors

- 3.5.15 South Marsh Road provides highway access to the SHBPS and also to 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.
- 3.5.16 The Site is not crossed by any public rights of way.
- 3.5.17 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.
- 3.5.18 The potential traffic and transport effects of the Proposed Development are considered in Chapter 9: Traffic and Transport.

Air Quality

- 3.5.19 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.
- 3.5.20 Air quality effects are considered in Chapter 7: Air Quality.

Geology and Hydrogeology

- 3.5.21 The geology underlying the Site comprises superficial deposits of Tidal Flat deposits (clay and silt) underlain by Glacial Deposits (clay and sand). The bedrock geology is the Flamborough Chalk Formation.
- 3.5.22 The superficial deposits are designated as unproductive strata with low permeability; however permeable sand layers are likely to contain groundwater.

- 3.5.23 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.
- 3.5.24 The Site is located within a nitrate vulnerable zone (NVZ) (North Beck Drain NVZ).
- 3.5.25 The potential geological and hydrogeological effects of the Proposed Development are considered in Chapter 12: Geology, Hydrogeology and Land Contamination.

Hydrology and Flood Risk

- 3.5.26 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.
- 3.5.27 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.
- 3.5.28 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.
- 3.5.29 The potential hydrological effects of the Proposed Development (including a flood risk assessment) are considered in Chapter 14: Flood Risk, Hydrology and Water Resources.

Cultural Heritage

- 3.5.30 There are no designated heritage assets within the Site.
- 3.5.31 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 3.7 km to the south-west of the Site.
- 3.5.32 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.
- 3.5.33 The Great Coates Conservation Area is located circa 2.6 km to the south of the Site.
- 3.5.34 There are also seven non-designated archaeological sites within 1 km of the Site.
- 3.5.35 The potential effects on heritage assets are considered in Chapter 13: Cultural Heritage and the identified designated assets are shown on Figure 13.1 in ES Volume II.

Landscape

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

3.5.37 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.

3.5.38 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.

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

Hazardous Installations

3.5.40 Consultation has been carried out with the Health and Safety Executive (HSE) regarding Consultation Zones for nearby potentially hazardous installations and pipelines. The locations of these zones have informed the design layout such that the HSE has advised that they anticipate being able to issue a Do Not Advise Against response.

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 online interactive maps accessed 16/07/2018;
- Environment Agency 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);
- Natural England 'MAGIC' website <https://magic.defra.gov.uk/magicmap.aspx>;
- North East Lincolnshire Council – Air Quality Management Areas webpage <https://www.nelincs.gov.uk/environment-and-community-safety/environmental-health/air-quality/air-quality-management-areas/>; and
- North East Lincolnshire Council (2010), North East Lincolnshire Council Landscape Character Assessment, Sensitivity and Capacity Study.