

# Environmental Statement: Volume I

## Chapter 3: Description of the Site

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## 3.0 DESCRIPTION OF THE SITE

### 3.1 Introduction

- 3.1.1 The land on which the Proposed Development is to be located (termed the 'Site') is primarily located on land immediately to the north of the Existing VPI CHP Plant Site Rosper Road, South Killingholme, North Lincolnshire, DN40 3DZ.
- 3.1.2 In addition to the Site, the Application includes provision for the use of an existing gas pipeline (the 'Existing Gas Pipeline') to provide fuel (gas) to the Proposed Development. The Existing Gas Pipeline runs from the Existing AGI Site to an existing tie in the National Grid (NG) Feeder No.9 located to the west of South Killingholme. The Site and the Existing Gas Pipeline together comprise the Order Land for the DCO application.
- 3.1.3 As discussed in Chapter 1: Introduction (ES Volume I), the Applicant is not seeking consent to carry out any works to the Existing Gas Pipeline and, as a result, it does not form part of the Site or Proposed Development and is excluded from the scope of the assessments conducted as part of this EIA.
- 3.1.4 This Chapter is supported by Figures 3.1 and 3.1a (ES Volume II, Application Document Ref. 6.3), which illustrates the Site boundary and areas within the Site.

### 3.2 The Site

- 3.2.1 The Site is primarily located on land immediately to the north of the Existing VPI CHP Plant Site, as previously stated. Immingham Dock is located approximately 1.5 kilometres ('km') to the south east of the Site at its closest point. The Humber ports facility is located approximately 500 m north and the Humber Refinery is located approximately 500m to the south.
- 3.2.2 The villages of South Killingholme and North Killingholme are located approximately 1.4 km and 1.6 km to the west of the Site respectively, and the town of Immingham is located approximately 1.8 km to the south east. The nearest residential property comprises a single house off Marsh Lane, located approximately 325 m to the east of the Site.
- 3.2.3 The Site is located almost entirely within the boundary of the administrative area of North Lincolnshire Council (a unitary authority). A small part of the Existing Gas Pipeline lies within the administrative area of North East Lincolnshire Council (also a unitary authority). The boundary of the Order Land (red line) encompassing all aspects of the Proposed Development and also the existing gas pipeline is shown in the aforementioned Figure 3.1a (ES Volume II).
- 3.2.4 The Site comprises a number of areas, which are primarily located adjacent to and within the Existing VPI CHP Plant:
- Work No. 1 – an OCGT power station (the 'OCGT Power Station') with a gross capacity of up to 299MW;
  - Work No. 2 – access works (the 'Access'), comprising access to the OCGT Power Station Site and access to Work Nos. 3, 4, 5 and 6;
  - Work No. 3 – temporary construction and laydown area ('Temporary Construction and Laydown') comprising hard standing, laydown and open storage areas,

contractor compounds and staff welfare facilities, vehicle parking, roadways and haul routes, security fencing and gates, gatehouses, external lighting and lighting columns;

- Work No. 4 – gas supply connection works (the ‘Gas Connection’) comprising an underground and/or overground gas pipeline of up to 600 millimetres (nominal internal diameter) and approximately 800 m in length for the transport of natural gas from the Existing Gas Pipeline to Work No. 1;
- Work No. 5 – an electrical connection (the ‘Electrical Connection’) of up to 400 kilovolts and associated controls systems; and
- Work No 6 – utilities and services connections (the ‘Utilities and Services Connections’).

3.2.5 These areas are described in more detail in the sections below and illustrated on Figure 3.1 and 3.1a (ES Volume II, Application Document Ref. 6.3).

### **OCGT Power Station Site**

3.2.6 The OCGT Power Station Site (Work No. 1) consists of an undeveloped parcel of land of approximately 2.7 ha lying between the Existing VPI CHP Plant to the south, and Rosper Road to the east. Immediately to the north are a private car park and a number of single storey structures associated with TLOR.

### **Proposed Gas, Electricity and Services Connections**

3.2.7 The Gas Connection Site (Work No. 4) is an area of land to be used for the installation of a new gas pipeline to connect the OCGT Power Station Site to the Existing Gas Pipeline. There are two options under consideration for the corridor, both within the curtilage of the Existing VPI CHP Plant Site: One following the route of internal roadways to the east and south; and one passing between the existing buildings in a more direct north-south configuration. Both routes end at a new tie in at the existing AGI site within the Existing VPI CHP Plant Site.

3.2.8 The Electrical Connection Site (Work No. 5) is a corridor of land extending across the Existing VPI CHP Plant Site that will allow for a new electrical connection from the OCGT Power Station Site to the existing 400kV National Grid substation located within the boundary of the Existing VPI CHP Plant Site, to facilitate the export of electricity from the Proposed Development. Corridors within the Existing VPI CHP Plant Site and east of the OCGT Power Station Site (Work No. 6) will also be used for other service connections between the Proposed Development and the Existing VPI CHP Plant, including connections to the control infrastructure and various other electrical, water and service connections.

3.2.9 No wet cooling system is proposed (the OCGT power station is cooled using a closed loop system and fin fan coolers), so no cooling water supply is required. A towns water connection will be required to periodically top up the closed loop cooling system and for domestic and sanitary purposes. It is proposed that the water for the Proposed Development be supplied from a new tie in, located in Work Number 6, to the existing water main running along Rosper Road.

### **Proposed Temporary and Construction Laydown Areas**

- 3.2.10 This comprises two areas of land for temporary construction laydown for the Proposed Development (Work No. 3). Specifically:
- An area of land to the east of the Existing VPI CHP Plant Site; and
  - An area of land to the north and west of the OCGT Power Station Site currently used for car parking by TLOR.

### **Construction and Operational Access Areas**

- 3.2.11 Access to the Proposed Development is proposed to be from Rosper Road utilising the existing accesses associated with TLOR (to the north of the OCGT Power Station Site) and the Existing VPI CHP Plant Site (to the east of the OCGT Power Station Site). The most northerly access off Rosper Road would allow access to the OCGT Power Station Site itself, the utilities and gas pipeline connections immediately adjacent to it and to the more northerly laydown area. The more southerly access off Rosper Road would allow access to all other parts of the Proposed Development (more southerly laydown area, the Gas Connection Site and other utilities and service proposed within the curtilage of the Existing VPI CHP Plant Site).
- 3.2.12 Access from Rosper Road to the other areas of the Proposed Development would be by the existing internal road network with only minor modifications necessary.

## **3.3 Site History**

- 3.3.1 The OCGT Power Station Site and the Temporary Construction and Laydown Areas have previously been used as a car park and for construction laydown area for TLOR. According to a review of historical mapping, it is likely that the Site was used for farming purposes until 1970s when the neighbouring refineries were developed. A more detailed review of the history of the Site is included in Chapter 11: Ground Conditions and Hydrogeology (ES Volume I). The pre-history of the Site as inferred from the Archaeological record is assessed in Chapter 13: Cultural Heritage (ES Volume I).
- 3.3.2 The surrounding industrial uses means that these areas have not been used for agricultural purposes since approximately the same time as the development of the neighbouring industrial complexes.

## **3.4 The Surrounding Area**

- 3.4.1 The Proposed Development Site is located in an area comprising a mix of industrial and agricultural uses. In addition to the activities identified above, the land to the east of the Site and on the other side of Rosper Road comprises agricultural fields extending approximately 1km toward the Humber Estuary before industrial activities associated with the storage and export of gas and oil and other port activities commence along the banks of the Estuary itself, approximately 1.4km from the Site at its closest point.
- 3.4.2 A railway spur runs north-south to the immediate west of the Site. The spur services the Lindsey Oil Refinery and joins the main line approximately 400m south west of the Site. The main line is the principal railway line in north east Lincolnshire running between Cleethorpes and Barton on Humber.

3.4.3 The nearest conurbations are the villages of South and North Killingholme, and the town of Immingham, all located between 1.6 and 1.7km from the Site at their closest points.

3.4.4 The surrounding land uses are as follows:

- **North:** The Site is bounded to the north by the current car park and access to TLOR. North of this is a drainage ditch and the training centre associated with TLOR;
- **South:** To the south of the Site beyond the Existing VPI CHP Plant Site is an area of vacant land and the railway spur to the refinery;
- **East:** Rosper Road, beyond which lie agricultural fields; and
- **West:** To the west of the Site is an area of land that benefits from Planning Permission granted by North Lincolnshire Council (reference PA/2018/918) to a sister company of the Applicant for a 49.9MW output capacity gas fired power station (the VPI Energy Park A development). Beyond that area is TLOR.

### **3.5 Potential Environmental Sensitivities/ Receptors**

3.5.1 When undertaking an EIA it is important to understand which receptors need to be considered in the assessments.

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 6-16). 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 designated site boundary.

3.5.4 The EIA Scoping Report figures (Appendix 1A, ES Volume III, Application Document Ref 6.4.) illustrate the key environmental considerations within the study area (the Site and surrounding areas).

#### **Residential Receptors**

3.5.5 Key receptors include:

- A single residential property on Marsh Lane approximately 325m east of the Site;
- The villages of South and North Killingholme, located approximately 1.4km and 1.6km southwest/ west of the Site respectively;
- The town of Immingham, located approximately 1.8km southeast of the Site; and
- Residential properties in the vicinity of Chase Hill Road, located approximately 2.2km northwest of the Site.

3.5.6 There are no designated Air Quality Management Areas (AQMAs) located within 5km of the site.

### **Traffic and Transport**

- 3.5.7 Rosper Road runs approximately north-south immediately east of the Site. Rosper Road joins Humber Road approximately 480m to the southeast of the Site at a recently improved gyratory junction. Humber Road then passes underneath the railway line before joining the A160 at a roundabout. The A160 is dualled in both directions westwards from this roundabout towards the A180 and M180.

### **Designated Nature Conservation Sites**

- 3.5.8 There are a number of statutory and non-statutory nature conservation sites in the vicinity of the Site. These include the following:
- Humber Estuary Special Conservation Area (SAC), Special Protection Area (SPA), Ramsar site, and Site of Special Scientific Interest (SSSI) located 1.4km north east of the Site;
  - North Killingholme Haven Pits (SSSI) located 2km north of the Site, overlapping with the Humber Estuary Ramsar and SPA site;
  - Eastfield Road Railway Embankment Local Wildlife Site (LWS), located 1km west of the Site;
  - Burkinshaw's Covert LWS, located 400m north east of the Site;
  - Station Road Field LWS, located 400m north of the Site; and
  - Rosper Road Pools LWS, located 245m south of the Site.

### **Cultural Heritage**

- 3.5.9 The only archaeological feature located with the OCGT Power Station Site boundary is a ditch of Iron Age date, recorded during evaluation excavation for previous construction work undertaken by the refinery.
- 3.5.10 There are no World Heritage Sites or Registered Battlefields within 5km of the Site. There is one Registered Garden (Brocklesby Park) located approximately 5km south-west of the Site.
- 3.5.11 There are four Scheduled Monuments (SMs) within 5km of the OCGT Power Station Site. These are:
- Manor Farm moated site, located approximately 2km west of the Site;
  - North Garth moated site and associated enclosures, located approximately 2.4km north west of the Site;
  - Moated site and associated earthworks at Baysgarth Farm, located approximately 2.6km north-west of the Site; and
  - Thornton Abbey Augustinian Monastery, including gatehouse, precinct, medieval road and bridge, moat, fishponds, post-Dissolution college and school, and house, located approximately 4.6km north-west of the Site.
- 3.5.12 There are three Grade I, one Grade II\*, and 11 Grade II listed buildings located within 3km of the Site. The Grade I listed buildings are all churches (the Church of St Denys at North Killingholme, the Church of St Peter at East Halton and St Andrew in Immingham). There

is a Grade II\* listed Manor House, associated with the Scheduled Monument at Manor Farm 2km west of the site. There are also 11 Grade II listed buildings within 2.5km, including the Killingholme lighthouses located approximately 1.6km to the east of the site on the banks of the Humber River.

- 3.5.13 There are no Conservation Areas (areas of special architectural or historic interest) within 5km of the Site.

#### **Surface Water**

- 3.5.14 The area surrounding the Site is drained via a network of small land drainage ditches that convey surface water from the surrounding greenfield areas located between the Site and the Humber Estuary. TLOR has a surface /grey water management system which includes a lagoon located approximately 45m to the southwest of the site at its closest point.
- 3.5.15 The Existing VPI CHP Plant Site and the OCGT Power Station Site are located predominantly within Flood Zone 3 classified as having a 'high risk' of flooding from fluvial or tidal sources, albeit that the area is defended by existing flood defences as outlined below. Flood Zone 3 comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1.0%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. The Site is not located within an area defined as Functional Floodplain (Flood Zone 3b).
- 3.5.16 Land within the northern area of the Site is located in Flood Zone 3, Flood Zone 2 (for the Construction and Operational Access Area) and Flood Zone 1 (for the construction laydown area). Flood Zone 2 comprises land assessed as having between 1 in 100 and 1 in 1,000 annual probability of river flooding (0.1-1%), or between 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.1-0.5%). Land located in Flood Zone 1 is assessed as having a less than 1 in 1,000 annual probability of sea flooding (0.1-0.5%).
- 3.5.17 There are tidal flood defences in place along the entire south bank of the Humber Estuary. The existing defences to the north and east of the Site comprise a combination of earth embankments topped by concrete wave return walls and small areas of reclaimed land.
- 3.5.18 Although the Site is not shown as benefitting from flood defences on the Environment Agency's flood maps; information provided by the Environment Agency indicate the Site is located in an area that benefits from flood defences offering a standard of protection up to, and including, a 0.5% (1 in 200 year) storm event based on the Still Water Tidal Water Levels.

#### **Geology & Hydrogeology**

- 3.5.19 The OCGT Power Station Site is overlain by Natural Superficial Deposits comprising Devensian Till, overlying the bedrock of the Burnham Chalk formation. There are several piles of reworked natural material located close to the southern boundary of the Site. These were created during development works at TLOR and left in situ; they are now largely grassed over.
- 3.5.20 The Site is not located within a Source Protection Zone. The superficial geology is characterised by as a Secondary 'A' Undifferentiated Aquifer, whilst the bedrock geology is classified as Principal Aquifer.

## Landscape

3.5.21 The Site is not located within or adjacent to any national or regional designations for landscape protection (e.g. Area of Outstanding Natural Beauty, AONB). The Site is located within National Character Area 41: the Humber Estuary, which focussed on the expanse of the Humber Estuary and associated low-lying land. There are no Public Rights of Way (PRoW) across the Site or immediately adjacent to it.

## 3.6 Changes Since the Preliminary Environmental Information Report

3.6.1 Since the production of the Preliminary Environmental Information Report (PEI Report), the Site has been refined to better match the requirements of the Proposed Development, reflecting both changes in design and work to minimise the total land take. The changes are described as follows:

- Removal of the Existing Gas Pipeline. Although included in the PEI Report Red Line Boundary, the Existing Gas Pipeline has never been included within the scope of the EIA. For the sake of clarity, therefore, the land associated with the Existing Gas Pipeline has been excluded from the Site described by the Red Line Boundary in this ES;
- Removal of areas of the Existing VPI CHP Plant Site that will not be affected by the Proposed Development, so that the Red Line Boundary now only incorporates areas associated with the Access, Temporary Construction Laydown, Gas Connection, Electrical Connection and Utilities and Services Connections; and
- The removal of the new gas pipeline routes and Above Ground Installation (AGI) as described in the PEI Report. Previously these two potential routes ran to the east and west of the Existing VPI CHP Plant Site to a new proposed AGI to the south of the Existing VPI CHP Plant Site. It has now been decided that the Gas Connection will link into the existing high pressure gas main via the existing (AGI) located within the curtilage of the Existing VPI CHP Plant Site and link to the OCGT Power Station Site via one of two routes passing through the Existing VPI CHP Plant Site. The land to the east of the Existing VPI CHP Plant Site is retained as part of the Construction and Laydown Site.

## 3.7 References

None Applicable