



Little Crow

Solar Park

Little Crow Solar Park, Scunthorpe

ENVIRONMENTAL STATEMENT

CHAPTER 3

THE DEVELOPMENT SITE AND ITS ENVIRONS

Revision:
APFP Reg:
PINS Reference:

Submission
5(2)(a)
EN010101

Author:
Date:

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October 2020

3 DEVELOPMENT SITE AND ITS ENVIRONS

3.1 INTRODUCTION

3.1.1 This chapter of the Environmental Statement provides a description of the development site and the surrounding context. Detailed topic specific descriptions are expanded upon in the supporting technical chapters and technical appendices. Other documents which support this chapter are:-

- **Appendix 3.1** Flood Risk Assessment and Drainage Strategy (Document Ref 7.3 LC TA3.1)
- **Appendix 3.2** Phase 1 Ground Conditions Desk Study (Document Ref 7.4 LC TA3.2)
- **Appendix 3.3** Geotechnical and Phase II Contamination Report (Document Ref 7.5 LC TA3.3)
- **Appendix 3.4** Woodland Management Plan (Document Ref 7.6 LC TA3.4)
- **Appendix 3.5** Minerals Assessment Report (Document Ref 7.7 LC TA3.5)

3.2 LOCATION OF SITE

3.2.1 The development site is located on a localised ridge between the settlements of Scunthorpe to the west and Broughton to the east. The village of Broughton is separated from the site by an extensive area of dense forestry and woodland. Between the main residential and commercial areas of Scunthorpe, directly adjacent to the western boundary of the site, lies the extensive industrial complex of the Scunthorpe Steel Works. To the north the ridge continues approximately 11km to the banks of the Humber Estuary. Also to the north is an area of heathland known as Risby Warren. To the south the ridge runs approximately 35km to the City of Lincoln. A Roman Road, Ermine Street runs adjacent to Broughton to the east of the site. A secondary scarp slope known locally within Scunthorpe as 'The Cliff' lies to the west. Away from Scunthorpe the landscape is largely rural. The development site (excluding the area identified for the temporary construction compound) extends to approximately 225 hectares and is comprised largely of arable fields which are bounded and heavily contained by dense woodland to the north, east and south which serve to provide significant screening of the site from the wider landscape. Phased forestry operations take place in the surrounding woodland and this matter is discussed in the supporting Woodland Management Plan.

3.2.2 Adjacent to the north east corner of the development site is a former conventional oil well compound, known as Broughton B1. This was sunk in 1984 by BP Petroleum Development Limited. The oil well compound is demarked by perimeter fencing and lies outside the order limits of the development proposal. The Phase I Ground Conditions Desk Study provides additional information regarding the former oil well. The former oil well is set within a single field that will house the temporary construction compound for the development.

3.2.3 The order limits extend to include the area required for the development and the area required for the temporary construction compound. The former oil well area is excluded from the order limits.

3.3 PUBLIC RIGHTS OF WAY

3.3.1 A Public Right of Way (Footpath 214 on the Definitive Rights of Way Map) crosses the order limits and follows a mixture of field boundaries and the existing farm track.

3.3.2 The Ordnance Survey mapping does not routinely show the correct delineation of the right of way and for the purpose of this submission, any OS mapping data used for the accompanying drawings have been updated to show the correct definitive map routing.

3.4 LANDFORM AND TOPOGRAPHY

3.4.1 In terms of landform the site lies on the edge of a localised ridge, raised slightly above the surrounding landscape, which would generally give potential for it to be visible from much of the wider landscape. However, as the site survey work has confirmed, surrounding woodland encloses much of the site, and therefore any views remain generally well contained.

3.4.2 The local ridge forms part of a wider scarp and vale topography. The site straddles part of the west facing scarp slope and the east facing limestone plateaux which runs eventually into the lower dip slope towards the River Ancholme.

3.5 LAND USE, BUILDINGS AND INFRASTRUCTURE

3.5.1 Land use across the site is predominantly agricultural with fields laid down to a mixture of arable and managed grassland. Some forestry operations are being undertaken within the surrounding woodland resulting in the storage of logs in piles next to the main access track through the site. There is no building within the site. A poultry unit is located adjacent to the east of the site, whilst to the west lies the vast expanse of industrial development associated with the Scunthorpe steel industry.. The steelworks area extends for more than 2km, beyond which lies the urban area of Scunthorpe. Various utilities cut through the site and these include a water main; 33k overhead power lines; and, a double row of 132kv overhead pylons. The lines pass through the adjacent woodland without opening up large gaps in which the site can be seen.

3.6 AGRICULTURAL LAND

3.6.1 The agricultural land classification distribution within the site was found that the majority of the site, at circa. 77% is deemed to be Grade 3b agricultural land. The areas not surveyed as part of the oily survey comprised the existing access track; the area proposed for the temporary construction / decommissioning compound; and, the proposed battery storage area.

3.7 BIODIVERSITY FEATURES AND ENVIRONMENTAL DESIGNATIONS

3.7.1 The site generally comprises open arable farmland, which is surrounded by a network of hedgerows and ditches as well as extensive woodland plantations. The most frequently encountered habitat at the site consists of open arable farmland. The arable fields comprised a mixture of spring-sown cereals and oilseed rape, as well as game cover crops at the edge of some fields. Field margins are characterised by coarse, semi-improved grassland. This habitat is also encountered alongside farm tracks and in some areas of fields which had been left fallow.

ENVIRONMENTAL STATEMENT MAIN STATEMENT

DEVELOPMENT SITE AND ITS ENVIRONS

3.7.2 Field boundary hedgerows are generally species-poor although the hedgerows vary in height, length, condition and management¹.

3.7.3 The northern, western and southern boundaries are bordered by woodland, mainly comprising semi-mature to mature plantation broadleaved woodland but with some coniferous elements and semi-natural woodland also present. Small pocket broadleaved woodland are also present in the west of the site. Broughton Far Wood Site of Special Scientific Interest (SSSI) and Broughton Alder Wood SSSI are located 820m and 920m east of the order limits respectively. Broughton West Wood Local Wildlife Site (LWS) partially borders the east of the site, and is designated for its woodland habitat.

3.7.4 The proposed development site is a considerable distance from the Humber Estuary a Special Protection Area (SPA), Special Conservation Area (SAC) and Ramsar site. The area encompassing the SPA is situated approximately 11km north of the site at the closest point, whilst the SAC and Ramsar site is located 9km west at the closest point. It primarily receives its designation for its estuarine habitats, which support a range of associated species including internationally important assemblages of wintering and migratory birds.

3.8 CULTURAL HERITAGE

3.8.1 The site of the former medieval Gokewell Priory (NLHER ref. MLS1805) is located within the northern area of the site. This is a non-designated site and survives as above-ground remnant earthworks and potential belowground archaeological remains.

3.8.2 The landscape surrounding the site of the former medieval priory has undergone extensive change since the medieval period. The medieval field systems are no longer extant, and the surrounding area is now made up of very large, modern blocks of agricultural land. The agricultural regimes have also changed noticeably since the medieval period, with more intensive ploughing and use of the land.

3.8.3 The designated heritage assets located within the 2km study area are set out below: -

- Scheduled Earthworks of Raventhorpe Medieval Settlement, located c.940m south of the Site (NHLE Ref: 1016426);
- Grade II Raventhorpe House, located c. 900m south of the Site (NHLE Ref: 1346807);
- Grade II Listed Springwood Cottage, located c.450m northeast of the Site (c.315m north of the access track (NHLE Ref: 1083734));
- Grade II Listed Stable Northeast of Springwood Cottage, located c.450m northeast of the Site (NHLE Ref: 1310038);
- Grade II Listed Stone Cottage and Adjoining Outbuildings, Broughton, located c.900m southeast of the Site (NHLE Ref: 1310013);
- Grade II Listed 66 High Street, Broughton, located c.1.5km southeast of the Site (NHLE Ref: 1083740);
- Grade I Listed Church of St Mary Broughton and the Grade II Listed Church Gates, located c.1.4km southeast of the Site (NHLE Refs: 1161801 and 1083741);

¹ Under a forestry licence

ENVIRONMENTAL STATEMENT MAIN STATEMENT

DEVELOPMENT SITE AND ITS ENVIRONS

- Grade II Listed The Hollies, Broughton, located c.1.4km southeast of the Site (NHLE Ref: 1309931);
- Grade II Listed Broughton War Memorial, located c.1.5km southeast of the Site (NHLE Ref: 1391424);
- Grade II Listed Broughton Grange Farmhouse, located 1.9km east of the Site (NHLE Ref: 1083736); and
- Grade II Listed Coach House/Stable approximately 10m east of Broughton Grange Farmhouse, located 1.9km east of the Site (NHLE Ref: 1346496).

3.9 HYDROLOGY

3.9.1 The site is located in Flood Zone 1, at low risk of flooding, according to the Environment Agency Flood Map for Planning, consistent with its elevated location.

3.9.2 There are isolated pondings within the order limits – indicative of the generally free-draining nature of the soil. In the west of the site the water is shown to issue from a spring line and flows westwards.

3.9.3 The site contains a number of watercourses, generally running north south along the slope, and linked by watercourses flowing down the slope. A detailed topographic survey has been undertaken of the site, and shows that the channels are well-defined and approximately 1m deep.

3.9.4 Localised areas up to 50m wide appear to have a very gentle fall to the east, and, leading through woodland. There are no evident watercourses or signs of surface water flows to the east, indicating that the rainfall infiltrates into the ground where it lands, ie the shallow gradient allows infiltration.

3.10 GROUND CONDITIONS

3.10.1 The complete site area is classified as underlain by freely draining slightly acid sandy soils. These have typically low fertility arable land cover, and drain to groundwater. The complete site area is underlain by Newport 1 Type Soils. These are deep well drained sandy and coarse loamy soils. They are free draining and permeable in unconsolidated sands or gravels, which have a relatively high permeability and high storage capacity. They have a very low potential for ground movement (shrinkage or swelling). These soils will, by nature of their high permeability, readily transmit a wide range of pollutants because of the rapid drainage and low attenuation potential. The uppermost 300mm of the soil profile is sandy and 'light'.

3.10.2 Newport 1 Soils have typically an upper 250mm of dark brown slightly stony sandy loam or loamy sand, overlying brown slightly stony loamy sand or sand, with a weak fine subangular blocky structure. Below 500-550mm depth, these develop into yellowish red or brownish yellow slightly stony sand of single grain structure.

3.10.3 Historical maps revealed the following:

- 1885 to 1906 - Majority of site agricultural fields with drainage ditches in lower area. Gokewell Priory Farm with pond in northern area. Hummocky /marshy area in extreme lower southwest with pond. Several small scale excavations or pits in lower western area may indicate surface diggings for ironstone.
- 1948 to 1955 – No significant changes within the site

ENVIRONMENTAL STATEMENT MAIN STATEMENT

DEVELOPMENT SITE AND ITS ENVIRONS

- 1968 to 1980 - Overhead powerlines constructed crossing SW to NE from substation within Iron & Steel Works to SW. Possible new drainage ditches (and small pond) within hummocky area in extreme northwest near Crow Covert. Clearance of Sodwall Plantation (possible ironstone workings)
- 1994 to 2002 Gokewell Priory Farm buildings demolished – exact date unclear from mapping. Opencast ironstone workings annotated in extreme SW site extension area.
- 2002 to 2014 No significant changes apparent within site. Maximum elevation of drainage ditches / surface water courses on this mapping at 36mAOD in north, 43mAOD centrally, 35mAOD central southern, and 30mAOD in southern area.

3.10.4 Any potential relevant contamination sources are therefore considered to be limited to remnant metals in soils within any localised backfilled ironstone pits, and air borne derived particulates from the extensive industrial complex to the west and southwest, remaining within shallow depth site topsoil. The Gokewell Priory Farm building area was demolished prior to 2002, and no specific development in that area is proposed. The hummocky areas west of this (near Crow and Little Crow Coverts) may relate to either this demolition or drainage works, or less likely to ironstone working. With regards to mineral extraction, preliminary understanding is that the ironstone is deemed to be unsuitable for either safeguarding and/or extraction. A minerals resource report accompanies the submission.

3.11 AIR QUALITY

3.11.1 North Lincolnshire Council has declared an Air Quality Management Area (AQMA), which incorporates part of Scunthorpe town centre and an area east of Scunthorpe, including the Steel Works site. The development site is located within the AQMA.

