RWE Npower Renewables

Hemswell Cliff Wind Farm

Archaeology and Cultural Heritage Baseline Report

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Author	Owen Raybould	**Technical reviewer**	Helena Kelly
Date:	25 May 2011	Date:	27 May 2012
Project manager	Polly Bentham	**Quality reviewer [optional]**	
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Summary

The Hemswell Cliff wind farm is proposed on agricultural land approximately 14km to the east of Gainsborough, Lincolnshire. RSK Environment Ltd (RSK) was commissioned by RWE Npower renewables (the Client) to undertake an archaeological and cultural heritage study of the wind farm site.

This report documents the collation and presentation of the known cultural heritage resource (historical and archaeological) through analysis of local and national registers, historic map regression, aerial photographs and a site visit in order to predict the preservation potential for archaeological deposits and heritage assets within the Site boundary.

There are 25 known heritage assets within, or partially within the Site boundary, and three additional sites bordering the Site. It is considered that the potential exists for further hitherto undiscovered subsurface archaeological sites. Based on known data there is considered to be a high potential for archaeological sites of the Neolithic, Roman, and Post-medieval periods; and medium potential for Mesolithic and Iron Age date sites.

There are 208 designated heritage assets within the 15 km study area set around the site.

1. INTRODUCTION

1 This report comprises a compilation of archaeological archive sources (desk-based assessment – DBA), and a summary of field observations made during a field reconnaissance survey for the proposed Hemswell Cliff Wind Farm (hereafter 'the Development''). The report concentrates on two study areas:

- Study Area A includes the planning application area ("the Site") with an additional 1km buffer. This has been defined in order to identify known, and determine the likely potential for currently unknown heritage assets within the Site upon which physical impacts could potentially occur.
- Study Area B has been defined in order to identify designated heritage assets that are present within the Site and the wider area (up to 15km) upon which visual impacts could potentially occur.

2 As the two study areas overlap there are records that are common to both. This has been taken into account when describing the baseline for both study areas.

3 The purpose of the report is to provide baseline data against which the impacts of the Development can be assessed. The results of the assessment will be presented in the Environmental Statement (ES) chapter, including for both physical and visual impacts, and will provide a basis for the determination of further stages of investigation and mitigation.

4 The specific objectives of the DBA were to:

- Identify and define relevant designated and non-designated heritage data within Study Area A;
- Establish from existing evidence the likely archaeological potential of the Site;
- Provide an assessment of the importance for each of the known heritage assets;
- Identify and define designated heritage assets within a 15km study area i.e. Study Area B;
- Carry out a screening exercise with regards to the sensitivity to visual impacts for each of the designated heritage assets.

5 The specific objectives of the field reconnaissance survey (Site only) were to:

- Identify extant archaeological remains (features with a surface signature) within the Site;
- Identify areas of previous impact;
- Record field boundaries within a summary of local topography;
- Record current land use and compare to identified evidence of previous land use; and

- Record exposed geology and watercourses.

6 The specific objective of the site visits to designated heritage assets within Study Area B was to record the character of each monument and its setting.

2. ASSESSMENT METHODOLOGY AND UNCERTAINTY

Desk-based Assessment

7 National, regional and local planning policy relevant to archaeology and cultural heritage is summarised in ES Chapter 5: Planning. In line with guidance outlined in National Policy Statements EN1 5.8 and EN3 2.7.41 – 2.7.45, methodologies for assessment of the historic environment in the following guidance documents have been followed:

- English Heritage, 2005, *Wind Energy and the Historic Environment;*
- English Heritage, 2008, *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment;*
- English Heritage, 2011, *The Setting of Heritage Assets;* and
- English Heritage, 2011, *Seeing History in the View.*

8 This assessment and associated gazetteer was compiled according to the Institute for Archaeologists' ('IfA') *Code of Conduct* (2010) and *Standard and Guidance for Archaeological Desk-based Assessment* (2011).

9 Elements of the historic environment that are worthy of consideration in the planning process are called 'heritage assets', including buildings, parks and gardens, standing, buried and submerged remains, areas, sites and landscapes, whether designated or not. Heritage assets may be affected by direct physical change or by change in their setting.

Definitions

10 Physical impacts are defined as damage to the fabric of a heritage asset, which typically could occur during construction phases. These impacts may be major, for example, where groundworks completely destroy important archaeological remains, to a minor change to part of a heritage asset, leading to an impact on our ability to interpret it, or its context.

11 Visual impacts are defined as visual change within a heritage asset or its setting as a result of the Development as proposed, resulting in an affected ability to interpret, understand or appreciate the asset's significance.

12 Indirect impacts are secondary, brought about by knock-on impacts as a result of the Development as proposed, such as machinery noise affecting appreciation of a heritage asset.

13 NPPF[7] states that Baseline data together with an assessment of the impact of the proposal should be set out in development applications. It is the applicant's responsibility to describe the significance of any heritage assets affected, including

any contribution made by their setting [NPPF para. 128]. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting [NPPF para. 132].

14 Setting is defined in Annex 2 of the NPPF as "the surroundings in which a heritage asset is experienced", thus, elements of an asset's surroundings that form a relationship with, and make a contribution to its significance are considered part of its setting.

Study Areas

Potential Physical Constraints: Study Area A

15 Study Area A is designed to determine whether any physical impacts to known heritage assets are likely as a result of the Development.

16 Known heritage assets within the Site, including access tracks, turbine locations and cable routes were identified. In addition, known heritage assets up to 1km from the Site boundary were considered in order to determine the likelihood of hitherto unknown subsurface archaeology within the footprint. The archaeological potential was thus assessed through local trends within or immediately adjacent to the development footprint.

Designated Heritage Assets: Study Area B

17 A maximum study area of 15km was considered to identify and assess in visual terms any heritage assets within the Zone of Theoretical Visibility (ZTV). Study Area B was thus designed to identify designated heritage assets identified as a material consideration by NPPF, where a visual impact would be possible as a result of the Development. The maximum area of search for each of the following monuments was:

- World Heritage Sites: 15km;
- Registered Parks and Gardens: 15km;
- Scheduled Monuments: 15km;
- Grade I and Grade II* Listed Buildings: 15km;
- Grade II Listed Buildings: 5km; and
- Conservation Areas: 5km.

18 Scheduled Monuments (SMs), Grade I and II* Listed Buildings (LBs), Historic Battlefields and Registered Parks and Gardens (RPGs) have been assessed to the maximum study area of 15km (in agreement with consultees) as long views can be significant to the reason for designation of these assets. Visual impacts on Grade II LBs and Conservation Areas (CAs) have been assessed for a 5km Study Area (in agreement with consultees) as it is considered that significant impacts to such heritage assets are unlikely beyond this distance.

19 Non-designated heritage assets that are of demonstrably equivalent significance to a designated asset and potentially sensitive to visual impacts have also been assessed.

Consultation and Data Collection

20 The Historic Environment team at Lincolnshire County Council (LCC) and English Heritage were consulted at the outset with regards to scope.

21 Information and views have been sought from statutory and non-statutory bodies during the assessment process, including:

- The regional Historic Environment Record (HER) maintained by LCC for scheduled and non-scheduled heritage assets and grey literature;
- The National Monuments Record (NMR) maintained by English Heritage for scheduled and non-scheduled heritage assets and aerial photographs;
- The local council for information on historic landscape characterisation (HLC), locally-listed parks and gardens and Conservation Areas and existing strategies such as the local development framework (LDF) etc;
- Groundsure for historic Ordnance Survey map coverage and information on the underlying geological deposits;
- Early cartographic sources and published sources held at the Lincolnshire Archives in Lincoln;
- Magic.co.uk and the English Heritage downloads available on-line from the NMR were used to obtain additional data for designated heritage assets; and
- Relevant secondary sources, including those available on the internet.

Gazetteer

22 A gazetteer has been compiled using information from the data sources listed above (Appendix 7.2). All heritage assets within the gazetteer have been allocated a unique reference number, e.g. RSK ID 1, and are presented on ES Figures 7.1 and 7.2.

Plot Numbering

23 Each individual field or land parcel (plot) within the application site boundary was allocated an individual Plot Number running from 1 – 17, annotated on Figure 7.1. Throughout the ES chapter and appendices, known heritage assets are referenced with regards to plot numbers and their location within the Site.

Field Reconnaissance Survey

24 The entire Site was systematically walked and described by plot, by an appropriately qualified archaeologist. This is referred to throughout the ES as field

reconnaissance survey (FRS). Additional land takes, including access tracks, were visited as appropriate.

25 A table was compiled, recording all observations made, including above-ground features; negative features; soil discolouration or crop marks; surface finds; evidence of current and previous land use, boundaries, topography and aspect; exposed geology; watercourses; and health and safety considerations. The table is included below (Table 5).

Site Visits to Designated Heritage Assets

26 Designated heritage assets in Study Area B, within the ZTV, identified sensitive to visual impact were visited and assessed in terms of:

- Asset significance;
- Setting definition;
- Asset character, integrity, appearance and the way in which it is appreciated;
- Relationships with other heritage assets, including group value and shared settings;
- Reasons for designation, and degree to which they contribute to appreciation and significance of the asset;
- Formal design - intended sight lines and vistas, intervisibility with contemporaneous and other heritage assets, and natural features;
- 'Key' (principal/critical) views towards, from, and within heritage asset;
- Topography/landscape situation;
- Asset scale: prominence/dominance;
- Relative scale of proposed development (anticipated);
- Landscape character, particularly unaltered settings; and
- Degree of alteration, and significant existing impacts including indirect impacts.

Assessment of Importance

27 The relative importance of each heritage asset has been determined to provide a framework for comparison. The categories of importance do not reflect a definitive level of importance or value of a heritage asset, but a provisional one based on the asset's significance. Consideration of the asset's combined values offers representation of the importance of a given resource and provides an analytical tool that can inform later stages of archaeological assessment and the development of appropriate mitigation.

28 Some non-designated assets of archaeological interest are known to be of at least equivalent importance as many places that are designated. Their relative

importance nevertheless means that they are treated as if they are designated assets.

29 The grading of importance of heritage assets is based on criteria listed in Table 1.

Table 1: Criteria for determining importance of sites

Importance	Definition
Very High	Assets and structures of acknowledged international importance. Examples include World Heritage Sites, and buildings of recognised international importance.
High	Assets and structures of acknowledged national importance. Examples include Scheduled Ancient Monuments, Listed Buildings, and Conservation Areas.
Medium	Assets and structures of acknowledged regional importance. Examples include historic townscapes, and undesignated assets of value within the county HER.
Low	Assets and structures of acknowledged local importance. Examples include historic (unlisted) buildings, assets of limited value registered in the county HER, and assets compromised by poor preservation.
Negligible	Assets and structures known to be of low archaeological or historical importance. Examples include remains previously subject to large-scale destruction, assets with very little or no surviving archaeological or historic interest and assets which hold little intrinsic archaeological value.
Uncertain	Assets and structures of uncertain character, extent and/or date where the importance cannot be ascertained.

Limitations and Uncertainty

30 By its nature, FRS can only identify evidence of buried archaeological remains with an above-ground signature; other buried remains may exist.

31 The heritage asset data from the HER and NMR consist mainly of secondary information derived from varied sources. There are several limitations to the dataset however:

- The dataset can be limited because it lacks random opportunities for research, fieldwork and discovery. There can often be a lack of dating evidence for sites;
- Documentary sources are rare before the medieval period, and many historic documents are inherently biased; and
- Primary sources, especially older records, often fail to accurately locate sites and can be subjective in any interpretation.

3. BACKGROUND INFORMATION

Site Background

32 The Site is situated approximately 14km to the east of Gainsborough, Lincolnshire, approximately centred on National Grid Reference (NGR) 495047, 392005, covering an area of approximately 330 Hectares (Ha). The site is located between the A15 to the east and the B1398 (Middle Street) to the west.

33 The county of Lincolnshire derived from the merging of the territory of the ancient Kingdom of Lindsey with that controlled by the Danelaw borough, Stamford. For some time the entire county was called 'Lindsey', and it is recorded as such in the Domesday Book.

34 Land use is predominantly arable agriculture, comprising large open fields (Plates 1 and 2, Appendix 7.3). Place-names in the region are dominated by –thorpe and –by suffixes, indicating Anglo-Saxon and Norse origin of many of the settlements, and an enduring agricultural landscape is presumed, with historic settlements concentrating at today's settlement locations.

Geology

35 Bedrock underlying the Site is composed of Argillaceous Rocks with Subordinate Sandstone and Limestone of the Rutland, Lincolnshire and Blisworth Formations (Derived from the BGS 1:50,000 Digital Geological Map of Great Britain). No superficial deposits are present according to the same source.

36 The site is located on top of the dominant landscape feature of the region, the 'Lincolnshire Cliff', a Jurassic (Oolitic) limestone ridge which runs c.80km south from the River Humber. This landscape was exposed by the Anglian glacial, and subsequently shaped by depositions and erosion caused by meltwaters of the Devensian ice sheet. The extent of the Devensian ice sheet is marked by low hills of till, the ice-sheet's terminal moraine which indicate that this latest ice advance did not reach the site (Bennett & Bennett, 2001).

Topography

37 Site topography is gently undulating but generally slopes to the east, from approximately 73m above Ordnance Datum (aOD) to approximately 34m aOD.

38 The Site itself is located on a shelf-like geography – the Lincolnshire Cliff varies in height from 77m aOD north of Lincoln to 123-154m on the Kesteven uplands. The hills between Kirton and Lincoln are dry with many dry valleys in the dip slope between Lincoln and Ancaster.

39 At the Site location the cliff drops off very steeply by c.20m to the immediate west of Middle Street and on towards the Trent Valley, and drops off gradually over a

distance of c.8km to the east towards the valleys of the rivers Ancholme and lower Witham, collectively known as the 'Clay Vale'.

40 The Site is characterised by long-distance views to either the east or west, depending on where in the Site boundary one is located, but few locations afford views in all directions at once. The exception is the trig point in plot 9 (Plate 3, Appendix 7.3). Visually, the site is dominated only by modern and natural features, such as occasional mature trees, telegraph poles and farm buildings on the site itself, and grain silos north of Hemswell Cliff (Plates 1 and 2, Appendix 7.3).

Archaeological and Historical Background

Prehistoric Periods

Palaeolithic Period 450,000 BC-12,000 BC

41 Evidence dating from the early Stone Age period is rare throughout Britain and especially so in the north, given that remains of activity were subsequently destroyed by movements and melting of the Devensian ice sheet. However, stray finds have survived in the region out of context and can be recovered from glacial deposits, notably at Kirmington. Internet database sources indicate 25 Palaeolithic period find-spots in Lincolnshire.

42 In the Middle and Upper Palaeolithic periods, the presence of the ice sheets trapped water in the Ancholme valley, resulting in islands of dry land at the Wolds and Lincolnshire Cliff. Accordingly, a Palaeolithic/Mesolithic site is postulated based on a finds assemblage identified on the cliff edge north of Willoughton Manor (RSK ID 15).

43 The nearest evidence for Palaeolithic occupation is located at the natural rock shelter at Edlington Wood, 5km south west of Doncaster. In Lincolnshire a multi-period settlement and burial site is known at Tallington. Additionally, a significant Palaeolithic site lies over the border in Derbyshire at NGR SK 534 742. Creswell Crags, made up of Mother Grundy's Parlour, Robin Hood's Cave, The Pin Hole, and Church Hole are an upper Palaeolithic and Mesolithic occupation site.

44 Following retreat of the ice-sheets, initial vegetation cover such as oak, elm, birch and lime and the resulting landscape mixture of fen, shallows and higher dry land created an ideal resource for hunting, fishing and occupation. The density of recovered archaeological evidence suggests that the area to the north of the Lincolnshire Cliff (now Scunthorpe) was particularly densely populated throughout the prehistoric periods.

Mesolithic Period 12,000 BC-4000 BC

45 Palaeoenvironmental evidence has demonstrated an improvement in climate during the Mesolithic period. With regards to occupation, evidence for exploitation of the Lincolnshire landscape is plentiful, especially in the Ancaster/Grantham areas, as well as Hall Hill on the south edge of the Wolds. The majority of this evidence is limited to lithic material (internet database sources indicate 25 such find-spots in West Lindsey), however, an assemblage excavated in a saucer-shaped depression

near the top of the Lincolnshire Cliff near to the Site at Willoughton has been interpreted as a Mesolithic camp, suggesting temporary settlement similar to that of Sheffield's Hill, Scunthorpe (May 1976). Within Study Area A, lithic material has been recorded at the base of the cliff south of Willoughton (RSK ID 40).

46 In the wider area, excavation at Starr Carr in the East Riding revealed semi-sedentary occupation deposits from the Mesolithic period. It is suggested three/four families seasonally occupied the site between October and April while following/hunting red deer. Furthermore, preserved finds of bone harpoons and a wooden paddle suggest log boats were used for fishing in the local meres (Williams & Fairbank 1987).

Neolithic Period 4000 BC-2000 BC

47 Known Neolithic settlement sites are recorded at Dragonby and Great Ponton, but none are yet known on the higher ground of the Lincolnshire Cliff. Previous aerial photograph studies have identified prehistoric linear ditches concentrated on the high ground in the parish of Hemswell that may date to the Neolithic period (Bewley, 1998).

48 The period is also characterised by an abundance of stylistically dated Neolithic polished stone axes from within the Study Area. Over 200+ find-spots of Neolithic date are indicated in the West Lindsey area according to internet database sources, two of which are located in Study Area A (RSK IDs 23 & 27).

49 Tombs provide additional evidence for Neolithic activity in the region such as the conspicuous long barrows at 12 locations throughout West Lindsey including Hemswell (RSK ID 9), as well as a further three interpreted mortuary enclosures and a possible henge at Owmby, all of which indicate ritual significance in the immediate landscape of the Site. A possible Neolithic long-barrow is interpreted within Site boundary (RSK ID 9), identified on aerial photography only, the age and function of the site are unproven.

50 Uplands in the region have been demonstrated to have provided routes for trade and travel from Prehistoric times until the present day. The Lincolnshire Cliff is part of the main 'Jurassic Way' (Middle Street RSK ID 26) maintaining access to early settlements at the fen edges as well as further reaching Neolithic settlements in the east Yorkshire limestone uplands. Further presumed prehistoric routeways in Lincolnshire include Mareham Lane on the east edge of the ridge; Sewstern Lane which links East Anglia to the Trent valley; Salters Way linking the coast to the Midlands; and High Street running along the western edge of the Wolds. Some of these were later redeveloped as Roman roads, whereas others, such as the Lincolnshire Cliff were ignored by the Romans, who in this case preferred to construct Ermine Street (RSK ID 1), following a similar route but further north (see below).

Bronze Age 2000 BC-600 BC

51 During this period, a shift in belief resulted in individual cremation burials, a practice demonstrable by the presence of distinctive beaker pottery and grave goods such as jewellery, jet and bone and metal objects. Settlement during the early Bronze Age is recorded primarily in uplands such as the Pennines, thus this burial rite

provides the only evidence of settlement in the region. Over 60 barrow sites are recorded in West Lindsey on internet database sources, with full cemeteries interpreted at Barlings, Brattleby, Cherry Willngham, Nettleton, Kirmond le Mire, Normanby le Wold, Stainton le Vale, Thoresway, Thorganby, and Walesby. Enclosures at Kirmond le Mire and Stainfield may be Bronze Age in date and may represent settlement but these are unexcavated.

52 Climate change and sea-level rise are generally cited during this period, identified through palaeoenvironmental evidence and the identification of features such as submerged forests, below the present high-water mark. The Bronze Age is attributed as the period during which peat deposits developed over fens, and areas such as the Isle of Axholme woodlands were replaced by peat deposits (May 1976).

53 Late Bronze Age settlement evidence in Lincolnshire is most common on ground characterised as lowland, such as that at Deeping St James. Over two thirds of Bronze Age artefactual evidence in Lincolnshire is recorded below the 30m contour in the Trent, Whitham and Ancholme river valleys, with relatively few artefacts from this period recorded in upland locations (May 1976). Furthermore, fens and marshland appear to be barren during this period, but this is likely an effect of subsequent build-up of soils since the Bronze Age, burying land surfaces and masking contemporary evidence.

Iron Age 600 BC- AD 43

54 Territorial groupings formed at the end of the Bronze Age resulted in different Iron Age tribes on either side of the Don, on the north side, the Brigantes (a territory now termed Doncaster) and on the south side, the Corieltauvi (previously known as the Coritani) covered the area from the Humber to south of Leicester, including modern Lincolnshire. Unlike their neighbours, the Corieltauvi did not use coinage (Todd, 1973).

55 Economically, large areas of the North Midlands were developed prior to the Roman invasion. Excavated settlement evidence has been recovered from near to the Site at Owmby and Dragonby, and from within Study Area A (RSK IDs 24 and 44). Small agricultural settlements may be represented in West Lindsey by enclosures identified through aerial photography, however, the date of most are yet to be proven through excavation (RSK IDs 2, 3, 5, 6 and 38 are located within the Site boundary, RSK IDs 12-13, 45, 68-70, 76, 79 and 80 are located within Study Area A).

56 The construction of hillforts such as that at Honington Camp near Grantham indicates a cohesive, wealthy community, also interpreted through the introduction of coinage during this period. Excavated settlement evidence, such as that at Castle Lime Pit near Ancaster suggests that Iron Age settlement was thoughtfully positioned at naturally strategic landscape positions, in this case on a shelf in a gap in the Lincolnshire Cliff with a spring water supply and extensive views (May 1976).

57 Mortuary practices are not typical in the Iron Age, although one burial of note occurs in the wider region of the Study Area, at Ferrybridge. Traditionally a practice of the Parsii tribe, based in east Yorkshire, the Ferrybridge chariot burial, incorporated over 250 feasted cattle and is the most westerly of the known distribution.

Historic Periods

Romano-British Period AD 43-410 AD

58 The Romans established permanent government in Lincolnshire soon after the invasion of AD 43 and Lincolnshire adapted readily to Roman life. The initial wave of Roman occupation of Britain reached as only far north as the River Humber in AD43, and was marked by Ermine Street (A15) and the Fosse Way (A46), both lined with small forts spaced a day or half a day's march apart.

59 Lincoln was the northern limit of Roman occupation until uprisings led to a military push northwards and the establishment of EBOR (York), following which Lincoln's strategic importance dwindled.

60 The Romans constructed hard standings and walkways across the fens. Ermine Street (RSK ID 1) is a major Roman route through Lincolnshire that bounds the Site to the east, and linked Roman London to the north. A possible off-shoot towards Atterby has also been identified through aerial photo assessment (RSK ID 71). The Romans also built inland ports such as the Brayford Pool at Lincoln. Roman activity is concentrated either close to rivers or above the 10m contour, suggesting the importance of riverine transport as well as road. Waterways were excavated, linking navigable rivers as well as improving drainage. Foss Dyke is navigable and probably Roman in origin.

61 Internet database sources record over 400 Roman sites or find-spots in West Lindsey, indicating considerable localised activity likely concentrating around, or due to the presence of Ermine Street. Settlement is recorded in Bigby, Bishop Norton, Blyborough, Glentham and Great Limber. Forts have been demonstrated at Marton, Newton on Trent, Snitterby, Stow, Swinhope, and Willoughton; and a small fortified Roman town proven at Caistor. Cemeteries are recorded at Burton, Caistor, West Firsby, Faldingworth, Nettleton, Ogodsby, including a barrow at Riseholme. Eleven villas are recorded throughout the region, as well as one temple at Fillingham, and five Roman roads.

62 Prolific local archaeologist Ethel Rudkin identified potential Roman settlement adjacent to Old Leys Lane, immediately north of the Site's northern boundary (RSK IDs 32 and 36) (Rudkin 1933), to the south of Patchett's Cliff Farm (RSK ID 37), and also at the base of the cliff to the north of Hemswell (RSK IDs 47 and 49). This immediate Roman presence (RSK IDs 6 and 84) was confirmed more recently through an archaeological programme associated with the installation of the Blyborough to Cottam pipeline (RSK ID 50). Additionally, a number of enclosures are identified in Study Area A, but only through aerial photography and yet to be proven through archaeological fieldworks (see 10.4.27 above) may be of Roman origin.

Anglo-Saxon and Viking Periods AD 410-1066

63 The history of the late Anglo-Saxon period is primarily known from written sources in Old English, Old Norse and Latin (Binns 1980) dating directly from the fifth and sixth centuries, during colonisation by the Anglo-Saxon invaders.

64 Incoming groups of Angles settled predominantly in what is now the Midland and East Midland areas. The town walls of Caistor and Horncastle were likely a result of the resistance to Anglo-Saxon colonisation. Nevertheless, the Angles were successful and the Anglian Kingdom of Lindsey was established between the Witham and the Humber, in the northern part of what is now Lincolnshire by the 6th Century and seems to have maintained its independence until at least the end of the 7th Century. Indeed much Anglo-Saxon architecture is evident in the churches of the region, such as Lincoln, Marton, and Barton on Humber. Lindsey was absorbed into the rising power of the kingdom of Mercia in the 8th Century. Excavated evidence for an 8th century aristocratic settlement has been recorded at Flixborough.

65 Throughout this period major Roman roads remained in use, but the earlier towns appear to have been ignored and fell into disuse. Anglo-Saxon (and later Medieval) villages are not located along the Jurassic Way (now Middle Street), but lie on the spring line below the limestone crest, linked to the prehistoric routeway by link road spurs. Accordingly, only one find-spot of Anglo Saxon date is recorded on the top of the cliff (RSK ID 28), whereas the remaining six sites including evidence for settlement are located at the cliff base (RSK IDs 21, 22, 39, 41, 48 and 52).

66 Anglo-Saxon structures were typically timber-built and partly due to this reason Anglo-Saxon settlements are problematic to locate archaeologically. It is most likely that agricultural farmsteads, hamlets and settlements developed into the agricultural settlements which occupy the landscape today. Anglo-Saxon settlement remains have been excavated in Lincolnshire at Lincoln, Stamford, Torksey, Osbournby and Salmonby. At Gortho, a Romano-British settlement was recorded beneath an Anglo-Saxon defended Hall which in turn lay beneath a 12th century motte (Sawyer, 1998).

67 The primary source of archaeological evidence is through the excavation of Anglo-Saxon cemeteries, such as those located at Hough on the Hill, Rushington, and Sleaford. Cemeteries provide information on the wealth and status of individuals through grave-goods, whilst numbers infer population density, as at Castledyke, Barton-on-Humber where numerous excavated remains indicate a large 6th century population

68 The period from AD860 – 960 is known as the ‘Viking century’, reflecting the occupation of the area during this period by Viking invaders. In 865, what had started as seasonal raids became a sustained campaign as a formidable Danish raiding army landed in East Anglia and established winter quarters there. This force succeeded in conquering Mercia and all the other Anglo-Saxon kingdoms except Wessex.

69 Scandinavian settlers followed the raiders into the swathe of England under Danish control, which became the Danelaw. Lincoln became a Danish borough. In the 10th century it became the head of the new shire of Lincolnshire. Culturally, the Vikings were akin to the Anglo-Saxon tribes, and remains of that period are similarly difficult to identify.. Thus, many farmsteads and hamlets are likely to be situated on sites that were first settled during the early Medieval period.

70 The Vikings have left a legacy of Scandinavian elements in many Lincolnshire place-names. Suffixes such as '-by', meaning farm/settlement of Viking origin are more densely clustered in Lincolnshire than any place in the country. Place-name analysis suggests that the roots of the name of Hemswell originated during the Anglo-Saxon period, and many parish/town names in the vicinity of the Study Area apparently originated in the Anglo-Saxon period. Anglo-Saxon place names were commonly adopted for open spaces within pasture land, initially described as 'feld', which later became the '-field' suffix. The origins and meanings are summarised in Table 2 (Source: Mills 2003).

Table 1: Place-name assessment

Parish/Town name	Derivation	Translation	Domesday Morphology
Hemswell	OE Pers. Name + wella	Spring or stream of a nam called Helm	Helmswelle
Huckerby	OScand - by	Farmstead, village, settlement	
Gainsborough	OE Pers. Name + burh	Stronghold of a man called Gegn	Gainesburg
Glentworth	OE Glente + worth	Enclosure frequented by birds of prey or at a look-out place	Glentewrde
Glentham	OE Glente + ham	Homestead frequented by birds of prey or a look-out place	Glentham
Springthorpe	OE + OScand Spring + thorpe	Outlying farmstead by a spring	Springetorp
Kirton	OScand Kirkja (probably replacing OE Cirice) + OE tun	Village with a church	Chirchetune
Bishop Norton	OE North + tun	North farmstead or settlement (i.e. one to the north of another)	
Snitterby	OE + O Scand Pers. Name + by	Farmstead or village of a man called Syntra	Snetrebi
Waddingham	OE Pers. Name + inga + ham	Homestead of the family or followers of a man called Wada	Wadingeham
Willoughton	OE Wilig + tun	Farmstead or village where willow trees grow	Wilchetone
Pilham	OE Pil / Pers. Name + ham	Homestead made with stakes, or Homestead of a man called Pila	Pileham
Saxby	OScand Pers. Name + by, the first element may be Oscand Saksar (Saxons)	Farmstead or village of a man called Saksi / Saxon settlement	Sassebi

Medieval Period 1066 - 1485

71 Following the Norman invasion of England in 1066, 30 castles were constructed in Lincolnshire in order to enforce authority over the countryside. Construction of Lincoln Cathedral as well as most of the monasteries were started during this period, but peaking in the twelfth century, by the end of which there were over 80 monasteries in the county. Within Study Area A, the Church of St Helen (RSK ID 53) and All Saints', Hemswell (RSK ID 63) are believed to be Medieval in origin. In addition, prominent features of the landscape, constructed with the intention of exertion of authority, are motte and bailey castles, private aristocratic residences of which at least 30 are known to have been constructed in the region between the eleventh and thirteenth centuries. Good examples survive at Lincoln, Castle Blytham, and Barrow on Humber; smaller 'ringworks' are identified at Swineham, Heydour, and Welbourn.

72 Medieval Lincolnshire was divided in three administrative units: Holland, Kesteven, and Lindsey. Domesday records show that Lincolnshire was once of the most densely populated counties, a population that doubled between the eleventh and fourteenth centuries. The majority of this dense population was engaged in successful arable agriculture and associated trade.

73 Climate changes less favourable to arable agriculture, a switch to the less labour intensive sheep-farming, and the black death epidemics resulted in a population decline and c.235 deserted medieval villages (DMVs) known in Lincolnshire. These are most common in the Wolds and South Kesteven uplands, however, four are identified within Study Area A alone (RSK IDs 18, 51 & 82).

74 A common remnant of arable agriculture still evident in the landscape is that of ridge and furrow earthworks (RSK IDs 16 & 46). The result of the practice of ploughing strip fields rented to tenant farmers is frequently associated with the Medieval period but actually began in the early Medieval period and continued through until the post-medieval period. Strip fields identified within the Site boundary on Enclosure mapping (RSK ID 300) may have been already established.

Post-Medieval and Modern Periods 1485 - Present

75 The Victorian period saw the flowering of industry, with over 500 windmills these became a regular feature of the landscape. RSK ID 4 is a mill, known through documentary evidence is dated to AD1600 and located within the Site boundary. In addition are RSK IDs 30 & 74, located in Study Area A.

76 An industrial approach to farming, known as 'high farming' was adopted. Characterised by machinery and a drive towards efficiency, the origin of the E-shaped farm with double courtyards is a feature of high farming. Field-name evidence for a pigeoncote (RSK ID 7) located within the Site boundary may date to this period.

Drainage and Enclosure

77 Fen drainage to produce productive arable land from wetland began in Lincolnshire in the Medieval period but took place largely in the eighteenth – mid nineteenth centuries. Previous common land, albeit useful for grazing and hunting, was

drained by pumping water along dykes and out to sea. Initial wind-powered pumps were replaced by steam power.

78 The Site location at a relative landscape highpoint would suggest natural drainage, however, the Willoughton Enclosure Act was surveyed and the award drawn up by land drainage engineers, indicating that the Site may have been wet. Despite the lack of drainage ditches observed on the Site presently, a large serpentine drain is evident throughout the historic map sequence (now 'piped-in', land owner, Pers. Comm.) (RSK ID 304). This early drainage effort prior to the date of enclosure indicates that the landscape may have been wet throughout the historical periods.

79 Typically fields from this early period of enclosure have irregular shapes and are smaller parcels of land. However, with the agricultural revolution saw more widespread enclosure of former trackless heath and rabbit warrens. These later fields tended to be more regular and larger in shape. Late enclosure is reflected in the pattern of straight roads and hedges. Documents observed at Lincolnshire Archives place enclosure of the Site at Hemswell Cliff in 1796.

80 The enclosure of nearby parish, Corringham is described in a contemporaneous article, The History of Corringham (1882), "Before enclosure the land was farmed in small allotments scattered far and wide. The largest occupier had as many as 50 lots in one field. What was once a wild open common growing furze and hawthorn bushes only, and supporting geese, donkeys and sheep, in two or three years was changed into farms laid out with fields intersected with good stone roads, drained and fenced, with good farm houses and outbuildings" (paraphrased in Oxoniensis, 1904).

81 Within Study Area A there are 33 known heritage assets dating to the post-medieval period. Of these, 15 are located within the Site boundary: extant structures (RSK IDs 292, 294 and 295), former structures (RSK IDs 290, 291 and 293), surface workings (RSK IDs 296 – 299 and 301), ridge and furrow (RSK ID 300) and a drain of possible antiquity (RSK ID 304). The remaining known heritage assets are located outside the Site boundary, the majority are buildings, including 11 extant listed buildings (RSK IDs 55, 57-60, 63-67, 73 and 78), former buildings (RSK IDs 62, 86 and 87), the site of village stocks (RSK ID 61), surface workings (RSK ID 56), and a parkland (RSK ID 19).

82 Two additional heritage assets located within the Site boundary, both former structures, appear on modern OS mapping (RSK IDs 302 and 303). According to mapping, a very small fraction of Hemswell Airfield (RSK ID 8, see below) may have been located within the Site. The remaining modern site within Study Area A also relates to WWII, a searchlight battery (RSK ID 81).

RAF Hemswell

83 The flat topography of the county of Lincolnshire is suitable for airfields, despite its vulnerability to attack by sea and air. Resultantly, 20 airfields were opened in WWI, and a further 46 in WWII, protected by numerous land defences.

84 The first airfield at Hemswell (RSK ID 8) was opened in 1916 and called Harpswell after a nearby hamlet. Shortly after the end of WWI the Site was returned to farmland. A new RAF Station, now called Hemswell, was built in the 1930's.

Bomber Command was formed in 1936. Squadrons moved from Hemswell to its satellite airfield at Ingham in late 1943 to enable concrete runways to be laid and so bring the airfield up to Class A Standard. Final RAF use was as No.1 Recruit Training School and the Station ceased all RAF activities in 1967.

85 Recently, much of the previous RAF base has been converted into a trading estate. Although not preserved as a museum, the old road layout has been retained and most of the buildings have been restored and converted to various new uses. The married quarters were developed into a residential area that became the newly created civil parish of Hemswell Cliff. In 1995, the RAF Hemswell Memorial was erected on the edge of the old parade ground.

Historic Landscape Characterisation

86 The Cliff that traverses the centre of the Study Areas in a north-south direction divides two historic landscape character Regional Character Areas: the Trent Valley and the Northern Cliff. Within these, the Site itself and its more immediate surrounds are located in character area NCL 3: Cliff Edge Airfields. Both regional areas share many historic features representing the evolution of the joint landscape over time: the antiquity of the main north-south aligned roads A15 and B1398 from the Roman period and before; the last remnants of the nucleated medieval settlement represented by the existing parish boundaries, historic settlement cores, small irregular fields surrounding them, and earthworks representing deserted villages of the period. This is overlain by the evidence of late post-medieval enclosure in the form of large rectangular field bordered by hedges, and isolated farmsteads. Changes in modern farming methods have in many places required the consolidation of these fields to even larger units; the modern period also saw the installation of the iconic airfields that give the local character area its name.

87 Although many historic features survive in today's landscape around the Site, the overall effect is less of a homogenous static landscape of antiquity, but of a patchwork of features representing its various development stages surviving side-by-side. In this patchwork, the evidence of post-medieval enclosure, and modern changes to farming regime are, perhaps, most predominantly represented.

88 The construction of wind farms and continuing consolidation of post-medieval fields are cited as the most significant drivers of change in the HLC character area description.

Previous Archaeological Work

89 The activities of archaeological interventions carried out within Study Area A are recorded as follows:

Table 2: Previous Archaeological Work

RSK ID(s)	HER ID	NMR ID	LOCATION	DESCRIPTION	COMPANY	YEAR	Results
10	ELI7501	1449526	A15, Bishop Norton	Watching brief	Archaeological Project Services	2006	Undated feature
21	ELI225		Willoughton	Fieldwalking		1932	Anglo Saxon finds
50	ELI2197/ ELI414/	1233952	Blyborough to Cottam pipeline	AP assessment, geophysical survey, and Watching brief	Wessex Archaeology	1997	Multiperiod sites
63	ELI3209	1483084	Land adjacent to all Saints Church	Watching brief	Lindsey Archaeological Services	2002	Negative
83		1501524	Land at Long Lane	Watching brief	Preconstruct Archaeology	2005	Negative
84	ELI4085	1233953	Patchett's Cliff	Excavation	Wessex Archaeology	1997	Romano British Farmstead
85	ELI1530		Land south of Church Street	Walkover Survey	City of Lincoln Archaeology Unit	2000	Negative
86		1470533	Church Street	Watching brief	Tony Sumpter Archaeological Consultants	2003	Remains of a 19th century building
87		1515186	Blacksmiths Forge and Shoe House, Brook Street	Architectural Survey	G A Bennett	2006	Post-Medieval Building
88	ELI1531	1364568	Land south of Church Street	Magnetic Susceptibility Survey	Geoquest Associates	2000	Poss. Shrunken Medieval Village
89	ELI2080	1397364	Land south of Church Street, Hemswell	Trial Trenching	Lindsey Archaeological Services	2001	Medieval deposits
90	ELI7698	1460329	Wold Grain Storage Ltd	Trial Trenching	Witham Archaeology	2007	Negative
91	ELI8548/ ELI7697	1516668	Wold Grain Storage Ltd	Resistivity & Magnetometry survey	Stratascan	2006	Poss. features
92	ELI7696		Wold Grain Storage Ltd	Walkover Survey	Witham Archaeology	2006	Negative
93	ELI2270		Scunthorpe to Hatton gas pipeline	Field observation	Network Archaeology	2000	No associated HER records

4. BASELINE CONDITIONS: STUDY AREA A

Designations and Heritage Assets

World Heritage Sites

90 There are no World Heritage Sites recorded within Study Area A.

Registered Parks and Gardens

91 There are no Registered Parks and Gardens located within Study Area A.

Scheduled Monuments

92 There are no Scheduled Monuments located within Study Area A.

Listed Buildings

93 There are 12 Listed Buildings located within Study Area A, of which one is Grade I listed, two are Grade II* listed, and the remaining nine are Grade II listed. These are annotated on Figure 7.1, and described in Appendix 7.2.

Conservation Areas

94 There is one Conservation Area within Study Area A at Hemswell (RSK ID 11). The boundaries of this is annotated on Figure 7.1.

Non-Designated Heritage Assets

95 There are 108 non-designated heritage assets recorded within Study Area A, identified through the NMR, HER (incl. AP assessment), FRS and historic mapping. These are contextually described in paragraphs 41 - 85, listed in Appendix 7.2 and annotated on Figure 7.1.

96 Of these, 23 are located (or partially located) within the Site boundary, of which one is of medium importance (RSK ID 8), 17 are of low importance, and five are of uncertain importance.

Historic Mapping

97 A consultation of historic mapping was made to collect information on the use and development of the Site throughout the post-medieval and modern periods. No tithe or estate mapping was available at Lincolnshire Archives and the mapping sequence comprised the Enclosure awards for the parishes of Hemswell and Willoughton (1768) and Ordnance Survey (OS) mapping 1885 – 2011. Initially small scale OS mapping was assessed, with details for areas of interest added through consultation of 1:2500 scale mapping.

98 Fifteen new sites have been identified within the Site boundary and added to the Gazetteer (Appendix 7.2) as a result of the map regression: mostly dwellings (RSK IDs 290-295, 302 and 303), followed by surface workings (RSK IDs 296-299 & 301), strip fields (RSK ID 300) (Plate 6, Appendix 7.3) and a drain of possible antiquity (RSK ID 304). In summary, the Site is defined an enduring agricultural landscape developed from heath and rabbit warrens.

Table 1: Historic map regression observations

Ref.	Scale	Observations
1768 Enclosure Awards	-	**Hemswell Parish**
		-Site area divided by a single boundary (identified as a trackway during AFRS) (plots 9-17). Otherwise open landscape. -Stone-pit (RSK ID 301) annotated. -Serpentine (natural?) drain (RSK ID 304) annotated. -Ermine Street (RSK ID 1) annotated = 'Old Street'.
		Willoughton Parish
		-Site area divided over three large plots (plots 1&2, 3-6, 7&8), with the eastern plot subdivided into strip fields (RSK ID 300). -'Old Enclosure' annotated in plot 2 with structure annotated in NE corner (RSK ID 293). -Old Leys Land and Middle Street annotated
1885 County Series small scale & 1886 County Series large scale	1:10 560 & 1:2500	-Site covers 37 plots – regularly divided, shaped and proportioned. -Six properties are annotated extant within the Site boundary: • Hemswell Cliff (RSK ID 292) • Unnamed property (now demolished) (RSK ID 290) • Old Leys (now Manor Old Leys) (RSK ID 294) • Old Street Farm (RSK ID 295) • Far Cliff Farm (now demolished) (RSK ID 291) • Unnamed property (now demolished, site of piggeries) (RSK ID 293) -Roads are established: • Old Leys Lane defines Site northern boundary • Ermine Street (RSK ID 1) defines Site eastern boundary • Occupation Lane partially defines Site southern boundary • Middle Street partially defines Site western boundary -Footpaths run between Far Cliff Farm, Old Street Farm, and the Site north-west corner; and Hemswell Cliff – Old Street Farm. -Guideposts are annotated on the Site boundary to the east and north-east. -Ponds are annotated adjacent to unnamed property (plot 2) and Old Street Farm (plot 11). -Surface working annotated to the north-east (RSK ID 296) (plot 5), central (RSK ID 297) (plot 11), south (RSK ID 298) (plot 15) and west (RSK ID 299) (plot 9) . -In the wider area, Hemswell and Willoughton are well established, as is Norton Place.
1905 County Series	1:10 560	-Surface working (RSK ID 296) (plot 5) and pond (plot 2) no longer annotated. -Wells annotated (plots 2 – noted during AFRS, 4, 10 & 15).
1948 County	1:10 560	-Piggery established (plot 2). -Irregular enclosure defined to the west of Site (plot 9) leading to small structure

Ref.	Scale	Observations
Series		although structure is outwith Site boundary.
1951 Provisional	1:10 560	-Site southern boundary is defined with the removal of fields and establishment of Hemswell Airfield (RSK ID 8). -Small structure of unknown use annotated to northern boundary (RSK ID 302) (plot 7).
1982 National Grid	1:10 000	-Many field boundaries are removed creating larger field sizes – creating the modern extents of plots 1, 2, 3, 4, 6, 7 & 8. Partial removal plot 9. -Earthwork associated with Hemswell Airfield is annotated within the Site boundary (plot 14). -Small structure of unknown use is annotated to the north-west of plot 2 (RSK ID 303).
2002 Raster	1:10 000	-Far Cliff Farm (RSK ID 291) is demolished. -Remaining field boundaries are removed – creating the modern extents of plots 9-14.

Field Boundaries

99 In general, plot size has been intentionally enlarged (boundary removal) throughout the later historic periods, as a result of increased mechanisation of the agricultural industry.

100 Following plot-enlargement, retained field boundaries within the Site are of antiquity, and may pre-date the post-medieval period represented by the earliest available mapping. These earlier field boundaries are trackways (see paragraph 104).

Archaeological Field Reconnaissance Survey

101 The FRS was conducted on 9th June 2011, a clear day with good visibility. Access to the entire area within the red-line planning application boundary was afforded to all numbered plots (ES Figure 7.1). Heritage assets known through all desk-based sources were visited. The whole Site was inspected for non-listed (Plate 2, Appendix 7.3) and hitherto unknown heritage assets, especially adjacent to Ermine Street Roman road (Plate 4, Appendix 7.3).

102 No new sites has been added to the gazetteer as a result of the FRS. In general, ploughing has removed surface signatures of all known heritage assets, both above-ground (buildings) and below-ground (quarries).

103 The Site is positioned on elevated ground, and the aspect can be regarded 'open' for all plots (Plates 1 – 3, Appendix 7.3). Land use is predominantly arable, and where opportunities for surface artefact inspection allowed, this was carried out, noting the presence of a later-prehistoric stone tool in plot 9.

104 Based on cross-referencing with historic mapping, the earliest (pre-enclosure) boundaries were observed to be trackways over, presumably, former heath. The Site was since enclosed and divided into regular fields (plots) by a mixture of dry-stone wall (parish boundary only) (Plate 3, Appendix 7.3), hedges and occasional ditches. These relate to systematic enclosure of the landscape between the 18th – 20th centuries and no evidence for an early, unplanned field system was observed.

Table 2: FRS observations

Plot	Topography	Known Arch.	Observations
1	Flat	RSK ID 2	Large surface depression at location of RSK ID 2. Hedge FB.
2	Flat	RSK ID 4 RSK ID 293 RSK ID 303	Mill not evident. Piggeries in place are extant and derelict: modern brick built structures. RSK ID 293 enclosure is not evident, however a brick-lined well is observed – possibly relating to mill, but more likely associated with RSK ID 293. RSK ID 303 is extant and operational: modern brick built structure. Hedge FB. O/h pylons, central plot.
3	Flat	RSK ID 3	Cropmarks not evident. Depression in plot NE corner. Hedge FB (semi-mature Ash, immature Sycamore) Below ground services evident between plots 2 & 3.
4	Flat – rising slightly towards parish boundary (S)		Hedge FB. Parish boundary is bank.
5	U-shaped	RSK ID 296	Quarry not evident. Hedge FB.
6	Flat plateau	RSK ID 294	Manor Old Leys constructed of limestone, sits in sheltered landscape low-point. Garden/allotment to N. Hedge FB.
7	Domed, relative high-point	RSK ID 300 RSK ID 302	Ridge and furrow is evident, despite crop. Structure is extant and operational barn. Hedge FB.
8	Slopes down slightly towards Ermine Street (E)	RSK ID 300	Ridge and furrow not evident. Hedge FB.
9	Domed, Site high-point	RSK ID 5 RSK ID 6 RSK ID 7 RSK ID 38 RSK ID 292 RSK ID 299	Cropmarks not evident. Cropmarks not evident. Dovecote not evident. Cropmarks not evident. Hemswell Cliff extant and operational as barn. Quarry not evident. Prehistoric worked lithic artefact noted on ground surface. Parish FB is bank and dry-stone wall.
10	Slopes down to E		O/h telegraph lines. Small quantities of flint noted on surface - burnt but not worked. No FB between plot 9 & 10, crop change only.
11	Slopes down to E		New hedge FB between plots 10 & 11. No FB between plots 11 & 12, crop change only.
12	Flat	RSK ID 295 RSK ID 297	Old Street Farm extant and now open-fronted barns. Surface workings not evident. No FB between 12 & 13, crop change only.
13	Slopes down to N & E	RSK ID 9	Localised area of taller crops at barrow site, but any earthworks are ploughed flat – not evident.

Plot	Topography	Known Arch.	Observations
		RSK ID 301 RSK ID 304	Quarry not evident. Drain not evident. Hedge, ditch and Ermine Street FB.
The oldest landscape division, already established prior to enclosure, is a trackway running between Ermine Street and Middle Street.			
14	Slopes down to E	RSK ID 8 RSK ID 290	Runway of RAF Hemswell Airfield is preserved, however many tonnes of concrete have been removed (landowner, Pers. Comm.). Resultantly, the small section of RSK ID 8 within the Site boundary is not evident. Former cottages not evident. FB with plot 10 is trackway.
15	U-shaped	RSK ID 291 RSK ID 298	Far Cliff Farm's imprint and demolition is evident. Former garden/allotment is turned over to woodland. Quarry not evident. Possible worked lithic artefact noted on ground surface. FB hedge
16	Flat		FBs are track to N and ditch to E: V-shaped, 2m wide, 1m deep
17	Flat		FBs are track to N, ditch to W and Ermine Street to E.

105 A brick-lined well in plot 2 (Plate 5, Appendix 7.3) is interpreted as a well associated with a structure appearing on the first edition OS map (RSK ID 293). It is also likely that this structure is associated with an 'old enclosure' referenced on the Enclosure award (1768). However, it is possible that the well is associated with RSK ID 4, a windmill which may, in fact, have been a wind-powered pump for land drainage.

Aerial Photographs

106 Modern aerial photographs (APs) of the Site illustrate crop marks (RSK ID 3, a possible Prehistoric or Roman boundary ditch). Additional cropmarks are suspected to be former field boundaries and land drainage (RSK ID 304) (Source: GoogleEarth).

107 No historic AP images were available for consultation at Lincolnshire Archives, however, numerous literary sources were consulted. Numerous AP assessments have been carried out over the Site, the results of which have been incorporated into the HER.

108 A total of 19 heritage assets are included in Study Area A as a result of various AP assessments. Of these, RSK IDs 2, 3, 5, 6, 9 and 38 are located within the Site boundary.

109 In summary, cropmarks on the Lincolnshire Cliff are particularly dense to the east of Ermine Street. However, the parish of Hemswell is characterised by prehistoric cropmarks on the higher ground, and Bewley (1998) reports linear (possible boundary) ditches on the parish boundary with Willoughton (RSK IDs 3, 5 6, and possibly ID 2).

110 Patchett's Cliff (RSK ID 84), one of five Romano British (RB) sites excavated on the route of pipeline from Blyborough to Cottam (RSK ID 50) was initially identified through AP assessment (RSK ID 38). Within the working width of the pipeline 25 RB features were excavated, some of which extend to within the Site.

5. BASELINE CONDITIONS: STUDY AREA B

Introduction

111 The Site is located on top of the dominant landscape feature of the region, the 'Lincolnshire Cliff', a feature of a glacially formed landscape. The general surrounding landscape is very gently undulating with few focal points. Long-distance views are available only from relative high points.

112 The Site is characterised by long-distance views to either the east or west, depending on where in the Site boundary one is located, but few locations afford views in all directions at once. The exception is the trig point in plot 9 (Plate 3, Appendix 7.3). Visually, the Site is dominated only by modern and natural features, such as occasional mature trees, telegraph poles and farm buildings on the Site itself, and grain silos north of Hemswell Cliff.

Designations and Heritage Assets

113 There are 208 designated heritage assets (including non-designated locally-listed parks and gardens) identified within Study Area B, identified on Figure 7.2 and in Appendix 7.2, and summarised below.

World Heritage Sites (15km)

114 There are no World Heritage Sites recorded within Study Area B.

Registered (15km) and Locally-listed (5km) Parks and Gardens

115 Two Registered Parks and Gardens, identified on Figure 7.2 and in Appendix 7.2, are located within Study Area B.

116 In addition, there are six 'locally listed' parks and gardens (listed in the West Lindsey Local Plan). These are all the grounds of Listed Buildings or Scheduled Monuments.

Scheduled Monuments (15km)

117 There are 49 Scheduled Monuments, identified on ES Figure 7.2 and in Appendix 7.2, located within Study Area B.

Listed Bu*i*ldings (15km – Grade I & II*)

118 There are 84 Grade I and II* Listed Buildings, identified on Figure 7.2 and in Appendix 7.2, located within Study Area B.

Listed Buildings (5km – Grade II)

119 There are 56 Grade II Listed Buildings, identified on Figure 7.2 and in Appendix 7.2, located within 5km of the Site.

Conservation Areas (5km)

120 There are three Conservation Areas located within 5km of the Site, as identified on Figure 7.2 and in Appendix 7.2.

Historic Battlefields (5km)

121 There are no Battlefields recorded within Study Area B.

6. ARCHAEOLOGICAL POTENTIAL

122 Initial observations suggest that the Site has been neither heavily populated nor intensively utilised.

123 The archaeological potential of the Site can be summarised, by period, as follows:

Early Prehistoric Periods

124 Although Palaeolithic activity is attested to in the region, the Site does not particularly fit geographical criteria for an early prehistoric archaeological potential, and any evidence is likely to have been damaged by subsequent natural erosion processes. Low potential.

125 Mesolithic activity is proven in the direct vicinity of the Site and the raised landscape near to fenland resources is similar to that of Mesolithic camps excavated elsewhere. Moderate potential. Due to rarity, evidence for the Mesolithic in any form would be considered of high importance.

126 Neolithic boundary markers are interpreted through aerial photo assessment on the uplands of Hemswell, and a barrow is interpreted within the Site boundary through similar methods. In addition, the Site is considered a geographically attractive location for Neolithic farming activity, and also the Lincolnshire Cliff would have been an important routeway through the fens during this period. High Potential. Neolithic boundary ditches would be considered of low importance, whereas settlement evidence would be considered of moderate importance.

127 Regional archaeological data suggests that the focus of Bronze Age settlement in Lincolnshire was in valleys, and not located on higher ground. Low potential.

Later Prehistoric - Roman – early Medieval Periods

128 Iron Age sites previously identified on the Lincolnshire Cliff appear to have been sited very carefully in defensive breaks in the ridge, with a water source and good vantage views. To these ends, plot 9, the Site high point is considered an ideal location for an Iron Age promontory fort in a landscape with few vantage points. Moderate Potential. If such a site were present at this location it would be considered of moderate importance.

129 Cropmarks of proven Roman origin extend within the Site boundary. In addition, the Site is bordered by Ermine Street Roman road. High Potential. Roman field boundaries would be considered of low importance, whereas settlement evidence would be considered of moderate importance.

130 A high-density of settlements with early Medieval place-names attests to a considerable population in the area during this period, operating an agricultural economy. The enduring place-names do suggest that early Medieval settlements occupy the same landscape positions today. Place-name and excavated archaeological evidence suggests that early Medieval settlements concentrated on

a natural spring-line just below the Jurassic ridge. It is likely therefore that the Site was open agricultural land during this period. Low potential.

Medieval and Post Medieval Periods

131 The location of Medieval settlements (deserted or otherwise) is well known in the region through various survey methodologies. It is likely that, as with the preceding and subsequent periods, the Site was in agricultural land use throughout the medieval period, with settlement located elsewhere. Low Potential.

Late Post Medieval and Modern Periods

132 During these periods the Site was enclosed, comprising dry-stone walls, earthwork and drainage features. A number of properties were also established. Additionally, surface workings began in the later periods. The survival of known buried and surface archaeological features is therefore High, although their importance is considered to be low.

133 A comprehensive review of contemporary map and aerial photo sources provides confidence that no hitherto unknown archaeological sites dating to these periods are present within the Site boundary. Low Potential.

7. CONCLUSIONS

134 Construction of the Development would involve several activities that have the potential for a physical impact on both buried and upstanding archaeological and cultural heritage resources. These activities include:

- Any pre-construction site-investigation trial holes;
- Excavation for turbine foundations, permanent and temporary anemometry masts, and crane hard standing pads;
- Excavation for service trenches, drainage, and cable routes;
- Excavations for the temporary construction compound, permanent access tracks, turning circles, and improvements to existing tracks;
- Excavations for the access upgrades to/from the A15 and Middle Street; and
- Excavation for the substation and control building.

135 The archaeological potential of the Site is derived mainly from:

- Hitherto unknown buried archaeological remains;
- Numerous cropmarks of likely prehistoric/Roman origin (RSK IDs 2, 3, 5, 6, 9 and 38);
- Ermine Street Roman road (RSK ID 1);
- An area of ridge and furrow earthworks (RSK ID 300); and
- A number of later post-medieval and modern features include houses, both extant and subsurface, and surface workings.

136 The Development has the potential to visually/indirectly impact on heritage assets during its operation. These would include adverse impacts, such as:

- Interruption of sight lines and monument intervisibility;
- Where prominence and/or dominance is diminished;
- Impact on views into, out of, and within the area of interest;
- Intrusion into a previously unaltered cultural landscape.

137 Possible indirect impacts can also include noise and shadow flicker from the operational Development, which can impact heritage assets typically within 1km of a turbine.

138 As part of the Environmental Impact Assessment, an archaeology and cultural heritage assessment will be undertaken.