

# VikingLink

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## UK Onshore Scheme

Environmental Statement

Volume 4 Document ES-4-B.08

Appendix 12

Archaeology & Cultural Heritage (Proposed  
Underground DC Cable)

VKL-08-39-G500-009

August 2017



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## Appendix 12.1 Desk Based Assessment

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**Volume 4 Document ES-4-B.08**

**Appendix 12.1 Desk Based Assessment**

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Underground DC Cable)**

**VKL-08-39-G500-009**

**August 2017**



**Co-financed by the European Union**  
Connecting Europe Facility



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## Glossary & Abbreviations

Glossary of Terms	
Term	Meaning
Beehive quern stone	Beehive quern stone is where the upper stone is hemispherical or bun shaped with a central conical hopper that holds the grain which falls on to the grinding surface. This is held into position with a pivot that fits into a central hole in the bottom. The upper stone also has a deep horizontal socket in its steep side in which to place the wooden peg used as a handle to rotate or oscillate the upper stone. This is the earliest type of rotary quern in Britain. Rotary querns are where the grinding action is circular.
Cropmarks	Cropmarks are formed when the underlying moisture levels varies which effects the growth of agricultural produce (Ref. 1). This can be from an increase in moisture levels, from a negative feature such as a ditch or pit which produces a richer crop, or a reduced moisture level, from a positive feature such as a wall which results in a poorer yield. The best response for cropmarks is between June and July each year. This is however subject to many factors and the absence of cropmarks many not indicate the absence of archaeological features (Ref. 1).
Datum	Datum is an ordnance survey term for sea level.
Domesday Book	The Domesday Book is a manuscript record of the 'Great Survey' which was conducted in most of England and Wales and commissioned by William the Conqueror. The first draft was complete in August 1086 and written in Medieval Latin. Its original purpose was to establish what taxes had been owed during the reign of King Edward the Confessor, this helped William to reassert the right of the Crown and assess where the power lay in the land. The book contains the records of 13,418 settlements.
Geld	The Domesday Book records the tax, or geld unit, to the King or Lord.
Geophysical survey	Technology such as fluxgate gradiometer (for magnetometry) and resistance meter (for resistivity) are scanned over the ground surface and pick up interferences in either the earth's magnetic field (magnetometry) or the effect demonstrated on the passing of energy into the ground (resistivity). The interference or anomalies can be manmade or natural in origin. Their interpretation can give indications into the archaeological potential for a site. If the ground is not susceptible to these anomalies i.e. the machine cannot detect the difference between archaeological features and back ground geology, the results may indicate no archaeology present when in fact there are archaeological features but they just cannot be distinguished from the background geology.

Glossary of Terms	
Term	Meaning
Iceni	Iceni or Eцени were a British tribe in east England during the Iron Age and Roman period. They were a significant power during Claudius reign (10BC – 54AD) but this had waned by AD60. After the death of the tribal king Prasutagus his wife Boudica (or Boudicca) lead an ill-fated revolt against the Roman rule in Britain.
LiDAR	LiDAR (light detection and ranging), also known as Airborne Laser Altimetry, is used to produce accurate horizontal and vertical evaluation measurements. This data has considerable potential for archaeological investigation such as mapping sites with raised earthworks and understanding the site within the wider area (Ref. 2).
Magnetometry	This geophysical survey technique relies on the variations in the soil magnetic susceptibility which often results from past human activities.
Oppidum	Large fortified Iron Age settlement.
Parch marks	In a similar way to cropmarks, the moisture levels in pasture land can indicate buried archaeological remains in the form of parch marks (Ref. 1). These marks are formed when the moisture level in the ground is low. For example, positive features can produce the withering of plants while the negative features can hold more moisture and sustain vegetation longer than the surrounding areas. These parch marks are best seen towards the end of the summer months particularly if the season has been dry (Ref. 1).
Plough team	Recorded in the Domesday Book is the number of plough teams, each team consisted of eight oxen. One way of assessing the value (and tax) of an estate was the number of plough teams that were required to cultivate the land, for example 2.5 plough teams means that there was enough land that required two and a half oxen teams to work.
Quern stone	Quern stones are stone tools used for hand grinding a wide variety of materials i.e. wheat or cereals. They are used in pairs; the lower stationary stone is called the quern while the upper stone is called the handstone, upper stone, rubber or mouler.

Glossary of Terms	
Term	Meaning
Roddon	<p>A roddon or rodham is a raised bank formed from the silt deposits on the bed of a dry river course. The name roddon is used mainly in the fen district (Ref. 3). Differential compaction and shrinkage of the land due to drainage has resulted in these roddons standing on slightly higher ground than the surrounding areas. This is especially true in areas of former peatland (Ref. 1).</p> <p>Malone (Ref. 1) has identified that these roddon, specifically those of the salt marsh creeks, were formed by the build-up of marine silt sediment. Malone admits that recent studies have indicated that this silt deposition was rapid, possibly relating to extreme flooding events. These depositions are usually uniform with course grained sediment with little or no clay settling until the last stage of infilling (Ref 4). The fresh water channels differ from the salt water by their gradual build-up of silt sediment. These fresh water ravines can be influence by marine water especially if their gradients are shallow (Ref. 1).</p> <p>Once formed these roddon were higher, dryer and firmer than the surrounding land which proved to be an attractive quality in the location of the historical settlements in the fenland (Ref. 1).</p>
Salterns	<p>Are mounds of clay or silt left over from the salt making process. They are quite noticeable in the fenland landscape but most have been ploughed flat.</p>
Sondage	<p>A deep trench, usually dug to a great depth to establish stratigraphic layers.</p>
Trial trenching	<p>Trial trenching an archaeological investigation also known as an archaeological evaluation. The trenches vary in length but are usually placed over cropmarks or geophysical anomalies. The trenches are to test to see the amount, date and complexity of the archaeological features in a particular area. The trial trench results can inform as to whether further archaeological investigation is needed.</p>

List of Abbreviation	
Abbreviation	Meaning
AD	Anno Domini is Medieval Latin for 'in the year of the Lord', AD is referred to the time after the death of Christ
AOD	Above Ordnance Datum
BC	Before Christ refers to the time before the birth of Christ
CBM	Ceramic Building Material
DBA	Desk Based Assessment
DC	Direct Current
DMRB	Design Manual for Roads and Bridges
EIA	Environmental Impact Assessment
ES	Environmental Statement
GPA	Good Practice Advice
HER	Historic Environment Record
LB	Listed Building
LCC	Lincolnshire County Council
LPA	Local Planning Authority
NMP	National Mapping Programme
NPPF	National Planning Policy Framework
SM	Scheduled Monument
ZTV	Zone of Theoretical Visibility

# 1 Introduction

1.1.1 This Archaeological and Cultural Heritage Desk-Based Assessment (DBA) has been prepared by Arcadis Consulting (UK) Ltd. The assessment forms part of the Scheme and assesses the proposed Direct Current (DC) cable route, including adjacent land required during construction.

## 1.2 Project Background and Purpose of this Document

1.2.1 Viking Link is a proposed 1400 megawatt (MW) High Voltage Direct Current (HVDC) electricity link between the Danish and British transmission systems. It will allow electricity to be exchanged between Denmark and Great Britain. The project comprises approximately 762 km of DC onshore and offshore electricity transmission cables between new converter stations at each end of the project. These are in turn connected to the high voltage electricity transmission networks at existing substations at Revsing, South Jutland in Denmark and Bicker Fen, Lincolnshire in Great Britain.

1.2.2 This DBA presents the baseline for aspects of the historic environment that may be affected on or around the proposed DC cable route. The report assesses the known and potential for the area to contain cultural heritage assets and archaeological remains.

1.2.3 The proposed DC cable route stretches 67.16 km from the proposed landfall site at Boygriff in East Lindsey to the proposed converter station site at North Ing Drove in South Holland. This report splits the proposed DC cable route into four sections:

- Section One: Proposed Landfall to Well High Lane, a distance of approximately 13.04 km;
- Section Two: Well High Lane to A16/Keal Road, approximately 16.85 km in length;
- Section Three: A16/Keal Road to River Witham, approximately 22.06 km; and
- Section Four: River Witham to the proposed converter station, a distance of approximately 15.21 km.

1.2.4 The proposed DC cable route crosses the Lincolnshire Fens, an area described as 'large-scale, flat, open landscape with extensive vistas to level horizons' (Ref. 5). The Fens are notoriously wet but extensive drainage ditches and pumping stations have made the land suitable for agricultural use.

1.2.5 Other issues related to the overall assessment of the likely effects of the proposed DC cable route on the historic environment are presented in Chapter 12 of the Environmental Statement (ES).

## 1.3 Methodology

1.3.1 The information presented within this DBA builds on the data received from the Lincolnshire County Council (LCC) Historic Environment Record (HER), details of Conservation Areas,

Archaeologically Sensitive Areas (or similar) and 'locally-listed' buildings, as obtained from South Holland, North Kesteven, East Lindsey District Councils and Boston Borough Council. Further information regarding the historic landscape of the fens, and regarding specific archaeological periods and sites within or close to the Zone of Influence was acquired from relevant specialist publications, as detailed in section 1.4.

1.3.2 All designated and non-designated heritage assets are detailed in a gazetteer (Appendix 1). Their locations are indicated on **Figure 2**.

1.3.3 The following actions have been undertaken, to establish a baseline reflective of known archaeological conditions:

- Collation and mapping of data obtained from the Lincolnshire County Council (LCC) Historic Environment Record (HER).
- Collation and mapping of data obtained from LCC HER for designated heritage assets such as Scheduled Monuments (**SMs**), Listed Buildings (**LBs**), Registered Parks, Gardens (**RPGs**) and Landscapes of Historic Interest (**LHI**).
- Collation and mapping of data obtained from South Holland and Boston Borough District Councils for Conservation Areas (**CAs**), Archaeologically Sensitive Areas (**ASAs**) and Locally Listed Buildings (**LLBs**).
- Examination of historic maps including the Ordnance Survey 25" 1st edition and the relevant Tithe Maps through online resources and those found at Lincolnshire County Council Archive; outlined in the sources located in section 1.4.
- Field reconnaissance to identify other features of cultural heritage interest that may not have been identified through the acquired data as described above, also to review the current state of features that had been identified through the process of data mapping, such as historic buildings.
- Preliminary background research (geology and historic environment) from internet resources.
- Compilation of a Gazetteer identifying the cultural heritage sites and features identified through the above process (Appendix 1).
- Discussions with Historic England, and the Conservation Officers at Lincolnshire County Council regarding key cultural heritage issues.

1.3.4 This report provides cultural heritage baseline information within section 3. Each individual route section is split into geology and topology, historical landscape, designated assets and non-designated assets which is in turn divided into both the planning application boundary and 250 m Zone of Influence. An assessment of the overall archaeological potential within each individual route section concludes the respective proposed DC cable route sub-sections.

#### Zone of Influence

1.3.5 The area of study takes on the methodology as described in section 1.3.4 and approached per the four route sections outlined in section 1.1.2.

- 1.3.6 Two Zones of Influence have been established to assess the impact of the proposed DC cable route on heritage assets. The first Zone of Influence, is the redline boundary and is referred to as the planning application boundary from here on in. Assets within the planning application boundary are considered to have the potential to experience direct physical impacts from the proposed DC cable route. The second Zone of Influence extends to 250 m either side of the planning application boundary. Referred to as the 250 m Zone of Influence, this takes into account the potential for the proposed DC cable route to have an impact on the cultural setting of heritage assets. The two Zones of Influence contain heritage assets that are both designated (i.e. Scheduled Monuments, Listed Buildings etc.) and non-designated, and are assessed by historical period.
- 1.3.7 The locations of all designated and non-designated heritage assets are indicated on **Figures 2**.

## 1.4 Sources

### Cartographic sources

- 1.4.1 The following cartographic sources have been consulted during the production of this report;
- 1762 Plan of the River Witham, reproduced 1999 by R.C Wheeler
  - 1765 Heckington enclosure map
  - 1775 John Hudson's Map of the Parish of West Keal
  - 1783 Edward Hare's Map of Donington plan and surveys of the lowlands between Bourn and Boston.
  - 1800 William Taylor's Map of the lordship of Mavis Enderby
  - 1839 Dalby and Dexthorpe enclosure plan of exchanges and allotments
  - 1839 Plan of the parish of Bicker
  - 1857-1888 (Mid-19<sup>th</sup> Century) Map of Swineshead
  - 19<sup>th</sup> Century Plan of Donington
  - 1887 Ordnance Survey 1:10,560 scale map
  - 1888 Ordnance Survey 1:10,560 scale map
  - 1906 Ordnance Survey 1:2,500 scale map
  - 1907 Ordnance Survey 1:10,560 scale map
  - 1940 Ordnance Survey 1:2,500 scale map
  - 1947-1951 Ordnance Survey 1:10,560 scale map
  - 1956 Ordnance Survey 1:10,000 scale map
  - 1968-1969 Ordnance Survey 1:2,500 scale map
  - 1971-1973 Ordnance Survey 1:10,000 scale map
  - 1974 Ordnance Survey 1:2,500 scale map
  - 1975-1976 Ordnance Survey 1:2,500 scale map

- 1976-1979 Ordnance Survey 1:10,000 scale map
- 1977 Ordnance Survey 1:2,500 scale map
- 1980-1985 Ordnance Survey 1:10,000 scale map
- 1983-1989 Ordnance Survey 1:10,000 scale map
- 2000 Ordnance Survey 1:10,000 scale map
- 2016 Ordnance Survey 1:10,000 scale map

#### Documentary sources

- 1.4.2 Several documentary sources have been consulted to inform the baseline assessment. These are listed in the References section at the end of this report. In addition, the LCC HER was consulted for information on known heritage assets within the Zone of Influence.

#### Online resources

- 1.4.3 The following online sources were access during the production of this report. All sources were accessed in May 2017.
- BGS Geology of Britain Viewer, <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>, British Geological Survey (Ref. 11)
  - National Heritage List for England, <https://historicengland.org.uk/listing/the-list/>, Historic England (Ref. 12)

## 1.5 Assessment Criteria

- 1.5.1 The assessment of cultural heritage assets looks to identify how particular parts of a place and different periods in its evolution contribute to, or detract from, identified heritage values associated with the site. This approach considers the present character of the planning application boundary and the 250 m Zone of Influence based on the chronological sequence of events that produced it, and allows management strategies to be developed that sustain and enhance the significance of heritage assets.
- 1.5.2 Significance (for heritage policy) is defined in the NPPF Annex 2 as:
- ‘The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.’* (Ref. 7)
- 1.5.3 Current national guidance for the assessment of the significance of heritage assets is provided by Historic England in the document *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* (Ref. 13) in which significance is weighed by consideration of the potential for the asset to demonstrate the following value criteria outlined in Table 1.

**Table 1: Value Criteria of heritage assets**

Value Type	Definition of Value
Evidential value	Deriving from the potential of a place to yield evidence about past human activity.
Historical value	Deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative.
Aesthetic value	Deriving from the ways in which people draw sensory and intellectual stimulation from a place.
Communal value	Deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values, but tend to have additional and specific aspects

1.5.4 The assessment of cultural heritage assets and their significance has been undertaken with reference to the methodology described in the Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 2 Cultural Heritage (HA 208/07). The DMRB provides guidance on the assessment and management of environmental effects. Within the manual, the cultural heritage resource is split relating to the assessment of the value of the resource.

Asset Value

1.5.5 To understand the level of any effect that a scheme may have on a heritage asset an understanding of the importance of that asset needs to be achieved. The DMRB provides the following tables to aid in the assessment of the value of heritage assets that are relevant to the current situation within the two Zone of Influence.

**Table 2: Factors for assessing the value of Archaeological Assets**

Value (Sensitivity)	Factors
Very High	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.
High	Scheduled Ancient Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives.
Medium	Designated or undesignated assets that contribute to regional research objectives.

**Table 2: Factors for assessing the value of Archaeological Assets**

Value (Sensitivity)	Factors
Low	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Negligible	Assets with very little or no surviving archaeological interest.
Unknown	The importance of the resource has not been ascertained.

**Table 3: Criteria for Establishing Value of Historic Buildings**

Value (Sensitivity)	Criteria
Very High	Structures inscribed as of universal importance as World Heritage Sites. Other buildings of recognized international importance.
High	Scheduled Ancient Monuments with standing remains. Grade I and II* Listed Buildings. Other listed buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listing grade. Conservation Areas containing very important buildings. Undesignated structures of clear national importance.
Medium	Grade II Listed Buildings. Historic (unlisted) buildings that can be shown to have exceptional qualities in their fabric or historical associations. Conservation Areas containing buildings that contribute significantly to its historic character. Historic Townscape or built-up areas with historic integrity in their buildings, or built settings (e.g. including street furniture and other structures).
Low	'Locally Listed' buildings. Historic (unlisted) buildings of modest quality in their fabric or historical association. Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings (e.g. including street furniture and other structures).
Negligible	Buildings of no architectural or historic note; buildings of an intrusive character.
Unknown	Buildings with some hidden (i.e. inaccessible) potential for historic significance.

## 1.6 Report Structure

1.6.1 The remainder of this DBA is structured as follows:

- Section 2. Relevant Legislation. An overview of the necessary legislation protecting heritage and archaeological assets from loss due to development.
- Section 3. Background. A general setting is provided for the British Isle's geological and topographical formations as well as an archaeological overview.
- Section 4. Baseline Conditions. Reports the results of desktop and field studies undertaken to establish existing conditions.
- Section 5. Previous Archaeological Investigations. Recorded archaeological investigations within the proposed DC cable route and the Zones of Influence are identified and described.
- Section 6. Summary of Assessment. Provides a summary of the key findings of the impact assessment.

## 2 Legislation and Policy Context

### 2.1 Relevant Legislation

- 2.1.1 The relevant parliamentary act which provides the legislative framework for development is the Town and Country Planning Act 1990. The Planning (Listed Buildings and Conservation Areas) Act 1990 and the Ancient Monuments and Archaeological Areas Act 1979 provides the framework for legal protection of historic buildings, conservation areas, and designated archaeological remains respectively.
- 2.1.2 The Planning (Listed Buildings and Conservation Areas) Act 1990 applies special protection to buildings and areas of special architectural or historic interest.
- 2.1.3 Section 66 (1) of the act states that “*in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses*”.
- 2.1.4 The Ancient Monuments and Archaeological Areas Act 1979 gives statutory protection to any structure, building, or work which is of particular historic or archaeological interest and regulates any activities which may affect such areas. Under the Act any work that is carried out on a Scheduled Monument must first obtain Scheduled Monument consent.

### 2.2 Relevant National Policy

- 2.2.1 The relevant national policy applicable to this DBA is section 12, Conserving and Enhancing the Historic Environment of the NPPF. This section provides guidance for the conservation and investigation of heritage assets and requires local authorities to take the following into account: -
- *The desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;*
  - *The wider social, cultural, economic, and environmental benefits that conservation of the historic environment can bring; and*
  - *The desirability of new development making a positive contribution to local character and distinctiveness; and opportunities to draw on the contribution made by the historic environment to the character of a place.*
- 2.2.2 Scheduled Monuments and their setting are a material consideration in the NPPF.
- 2.2.3 The NPPF details the policy further with relevant paragraphs 131- 135 presented here.
131. *In determining planning applications, local planning authorities should take account of:*
- *the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation*
  - *the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality*

- *the desirability of new development making a positive contribution to local character and distinctiveness*

132. *When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, grade I and II\* listed buildings, grade I and II\* registered parks and gardens, and World Heritage Sites, should be wholly exceptional.*

133. *Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply:*

- the nature of the heritage asset prevents all reasonable uses of the site
- no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation
- conservation by grant-funding or some form of charitable or public ownership is demonstrably not possible
- the harm or loss is outweighed by the benefit of bringing the site back into use

134. *Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.*

135. *The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.*

## **2.3 Relevant Local Policy**

### East Lindsey District Council

- 2.3.1 The statutory development plan for East Lindsey District Council currently comprises 'saved' policy from the East Lindsey Local Plan (ELLP). The ELLP was originally adopted in 1995, was then updated in 1999. The policies were then reviewed in 2007 and either 'saved' where relevant or deleted where not. In the circumstances where the policies within the Local Plan are not consistent with the NPPF then that they should be afforded reduced weight or no weight.
- 2.3.2 The Council are in the process of preparing a replacement for the ELLP, the East Lindsey District Council Local Plan (Submissions Modifications Draft) which comprises the Core Strategy and the

Settlement Proposals document. The Plan is currently (May 2017) at draft stage (Submissions Modification) and due to its advanced stage of preparation it is considered a material consideration in the determination of the planning applications.

- 2.3.3 Taking into account the information above, the policies from both of the previously mentioned plans which are considered to be of relevance to the Scheme have been summarised and are outlined in the following sections.

East Lindsey Local Plan Alteration 1999 (Saved Policies, September 2007)

- 2.3.4 Policy A5 (Quality and Design of Development) provides support to new development which improves the quality of the environment and does not conflict with other policies within the plan. The policy states that new development will only be permitted where:

- a) *“Its design - including its layout, density, scale, appearance or choice of materials - does not detract from the distinctive character of the locality;*
- b) *It retains or incorporates features or characteristics which are important to the quality of the local environment including important medium and long-distance views;*
- c) *It is integrated within a landscaping scheme appropriate to its setting.”*

Policy A5 goes on to state that:

*“Greatest attention will be paid to the design of development in the following areas, statutorily designated or recognised as having special character and which must be retained and respected:*

- *The Lincolnshire Wolds Area of Outstanding Natural Beauty;*
- *The Coastal Conservation Areas, including the National Nature Reserves and the*
- *Special Area of Conservation;*
- *Conservation areas; and*
- *Historic parks and gardens*

*Particular attention will also be paid to other areas where special character has been identified such as the Areas of Great Landscape Value and the Fens and Marshes.”*

- 2.3.5 The policy also further describes the guidance the Council judge should be used in determining the appropriateness of development, provides detail on the desired approach to Landscaping in development, and outlines specific development considerations within the Fen and Marsh areas.

- 2.3.6 Policy C11 (Lincolnshire Wolds Area of Outstanding Natural Beauty and Areas of Great Landscape Value) states that:

**A.** *“The Council will protect the natural beauty of the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) and the distinctive character of the Areas of Great Landscape Value (AGLV) by not permitting development which would:*

- *harm landscape features which contribute to the character of the area;*
- *harm the distinctive character, role or regional or local historic significance of the area; or*
- *inhibit the quiet enjoyment of the AONB.*

2.3.7 Policy C2 Development and Demolition affecting a Listed Building states that:

*“Planning permission will be given for development which is within the curtilage of, or affects the setting of, a Listed Building only where its form, scale, proportions, materials, siting, boundary treatment and associated landscaping preserves or enhances the special architectural or historic interest, viability or long-term use of the Listed Building.”*

The policy also states that:

*“Consent will only be granted for the demolition, or substantial demolition, of a grade I or II\* Listed Building in wholly exceptional circumstances and of a grade II Listed Building in exceptional circumstances and, in every case, only where:*

- a) It can be shown that there is no suitable alternative to development; and*
- b) Proposals for redevelopment have been approved; and*
- c) The valid contract has been let for the approved redevelopment.”*

East Lindsey Core Strategy (Submissions Modifications Draft, March 2017)

2.3.8 Strategic Policy 11 (SP11 Historic Environment) states that:

*“The Council will support proposals that secure the continued protection and enhancement of heritage assets in East Lindsey, contribute to the wider vitality and regeneration of the areas in which they are located and reinforce a strong sense of place.*

*Proposals will be supported where they adhere to the following criteria (not limited to):*

- Protect and enhance heritage assets and their setting;*
- Preserve and enhance the special character, appearance and setting of the District’s Conservation Areas;*
- Have particular regard to the special architectural or historic interest and setting of the District’s Listed Buildings;*
- Do not harm the site or setting of a Scheduled Monument; any unscheduled nationally important or locally significant archaeological site;*
- Preserve or enhance the quality and experience of the historic landscapes and woodland of the District and their setting;*
- Promote a sustainable and viable use which is compatible with the fabric, interior, surroundings and setting of the heritage asset; and,*
- Conserve heritage assets identified as being at risk, ensuring the optimum viable use of an asset is secured where it is consistent with the significance of the heritage asset.”*

2.3.9 The policy text defines clearly the assets it considers under the wider definition of ‘Heritage Assets’. The policy also provides further direction relating to at risk assets.

2.3.10 Strategic Policy 23 (SP23 – Landscape) advises that the District’s landscapes will be protected, enhanced, used, and managed to provide an attractive and healthy working and living environment. Development will be guided by the District’s Landscape Character Assessment and landscapes defined as highly sensitive will be afforded the greatest protection.

It further states that:

*“Development will be supported where it allows for greater public access to the countryside and naturalistic coast, and helps provide additional employment opportunities.*

*The Council will ensure that the distinctive character of the District’s landscapes whether they are of cultural, natural or historic significance, will not be compromised. In particular, the highest level of protection will be given to the Lincolnshire Wolds Area of Outstanding Natural Beauty.*

*The Council will support development that conserves and enhances designated and historic landscapes (Winceby Battlefield, Lincolnshire Wolds, Coastal Country Park, Conservation Areas, Historic Parks and Gardens, setting of listed buildings within the landscape).”*

2.3.11 Strategic Policy 27 (SP 27 – Renewable and Low Carbon Energy) advises that Large-scale renewable and low carbon energy development, development for the transmission and interconnection of electricity, and infrastructure required to support such development, will be supported where their individual or cumulative impact is, when weighed against the benefits, considered to be acceptable in relation to:

- a) *“residential amenity;*
- b) *surrounding landscape, townscape and historic landscape character, and visual qualities;*
- c) *the significance (including the setting) of a historic garden, park, battlefield, building, conservation area, archaeological site or other heritage asset;*
- d) *sites or features of biodiversity or geodiversity importance, or protected species;*
- e) *the local economy;*
- f) *highway safety; and*
- g) *water environment and water quality.”*

Development within or affecting the setting of the Lincolnshire Wolds AONB, and landscape areas defined as highly sensitive within the East Lindsey LCA, will only be permitted in exceptional circumstances, where the development is in the public interest and considering the following:

- *“National considerations, and the impact upon the local economy;*
- *the cost of, and scope for, developing elsewhere outside the designated area, and,*
- *any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be satisfactorily moderated.”*

### Boston Borough Council

2.3.12 The statutory development plan for BBC currently comprises the ‘saved’ parts of the Boston Borough Local Plan (BBLP) and the Boston Borough Interim Plan (Non-Statutory Development Control Policy) 2006. The BBLP was originally adopted in 1999, with the policies then being reviewed in 2007 and either ‘saved’ where relevant or deleted where not. In the circumstances

where the policies within the Local Plan are not consistent with the NPPF then that they should be afforded reduced weight or no weight.

- 2.3.13 The 2006 Boston Borough Interim Plan was produced as a replacement for the BBLP but had to be withdrawn from the statutory adoption process in February 2006. Boston Borough Council subsequently adopted a revised version of the Interim Plan for development control purposes. However, due to significant objection received during the production of the plan, the policies contained within the Interim Plan are judged not to carry weight and therefore will not be considered within this Planning Statement.
- 2.3.14 BBC, SHDC, and LCC are in the process of preparing a new local plan, the South-East Lincolnshire Local Plan (SELLP), which will guide development in the area until 2036 and act as a replacement for the BBLP. The Plan is currently (May 2017) at draft stage and therefore is considered a material consideration in the determination of the planning applications. It is anticipated that the plan will be adopted in Spring 2018.
- 2.3.15 The policies from both the BBLP (2007 saved policies) and the SELLP which are of relevance to the Scheme have been summarised and are outlined in the following sections.

Boston Borough Local Plan, Adopted 1999 (Saved Policies, 2007)

- 2.3.16 Policy CO1 (Development in the Countryside) states that development will not be permitted in the countryside unless other local plan policies support it. The policy goes on to state that the plan makes allowance for development which benefits economic activity, or which meets social needs, while maintaining or enhancing the environment.

South East Lincolnshire Local Plan 2011-2036 (Publication Version, March 2017)

- 2.3.17 Policy 3 (Development Management) is a strategic policy relating to new development advising that proposals requiring planning permission for development will be permitted provided that sustainable development considerations are met, specifically in relation to:
1. *“size, scale, layout, density and impact on the amenity, trees, character and appearance of the area and the relationship to existing development and land uses;*
  2. *quality of design and orientation;*
  3. *maximising the use of sustainable materials and resources;*
  4. *access and vehicle generation levels;*
  5. *the capacity of existing community services and infrastructure;*
  6. *impact upon neighbouring land uses by reason of noise, odour, disturbance or visual intrusion;*
  7. *sustainable drainage and flood risk; and*
  8. *impact or enhancement for areas of natural habitats and historical buildings and heritage assets.”*

- 2.3.18 Policy 25 (The Historic Environment) seeks to respect the historical legacy, varied character, and appearance of South East Lincolnshire's historic environment. Development proposals will conserve and enhance the character and appearance of designated and non-designated heritage assets, such as important archaeology, historic buildings, conservation areas, monuments, street patterns, streetscapes, landscapes, parks, river frontages, structures, and their settings through high-quality sensitive design.

#### South Holland District Council

- 2.3.19 The statutory development plan for SHDC currently comprises the 'saved' parts of the South Holland Local Plan (SHLP). The SHLP was originally adopted in 2006, and the policies were then reviewed in 2009 and either 'saved' where relevant or deleted where not. If the policies within the Local Plan are not consistent with the NPPF then policy dictates that they should either be given reduced or no weight.
- 2.3.20 The South-East Lincolnshire Local Plan is also relevant to the area of SHDC.

#### North Kesteven District Council

- 2.3.21 The statutory development plan for North Kesteven currently comprises the Central Lincolnshire Local Plan (CLLP) which was adopted by the Central Lincolnshire Joint Strategic Planning Committee in April 2017 and replaced the Local Plans of the City of Lincoln, West Lindsey and North Kesteven District Councils.
- 2.3.22 The policies from the CLLP considered to be of relevance to the Proposed Development are summarised and outlined in the following sections.

#### Central Lincolnshire Local Plan (Adopted, April 2017)

- 2.3.23 Policy LP25 (The Historic Environment) states that development proposals should protect, conserve and seek opportunities to enhance the historic environment of Central Lincolnshire. In instances where a development proposal would affect the significance of a heritage asset (whether designated or non-designated), including any contribution made by its setting, the applicant will be required to undertake the following, in a manner proportionate to the asset's significance:
- *"Describe and assess the significance of the asset;*
  - *Identify the impact of the proposed works; and,*
  - *Provide justification for the works, so that any harm can be weighed against public benefits."*

Unless it is explicitly demonstrated that the proposal meets the tests set out in the NPPF, permission will only be granted or development affecting designated or non-designated heritage assets where the impact of the proposal(s) does not harm the significance of the asset and/or its setting.

Proposals will be supported where they protect the significance of assets (and non-designated assets) and their setting and promote opportunities to better reveal heritage assets and enhance existing features.

- 2.3.24 The policy provides more detailed guidance on Listed Buildings, Conservations Areas, and archaeological remains and how proposals will be assessed in relation to these assets.

## 2.4 Guidance

- 2.4.1 Additional guidance documents relevant to this assessment include the Chartered Institute for Archaeologists (CIfA) Standard and guidance for historic environment desk-based assessment (Ref. 11)
- 2.4.2 The NPPF details the policy further with relevant paragraphs 131- 135 presented here. Further guidance on all aspects of the NPPF is provided on the Planning Practice Guidance website (Ref. 12), this includes a section entitled *Conserving and Enhancing the Historic Environment*.
- 2.4.3 Historic England (Ref. 8) has also published three Good Practice Advice (GPA) notes of which GPA 3: The Setting of Heritage Assets is relevant to this study. This document sets out guidance on managing change within the settings of heritage assets, including archaeological remains and historic buildings, sites, areas, and landscapes.
- 2.4.4 The GPA 3 recommends the following broad approach to assessment, undertaken as a series of steps that apply proportionately to complex or more straightforward cases:

- Step 1** Identify which heritage assets and their settings are affected
- Step 2** Assess whether, how and to what degree these settings make a contribution to the significance of the heritage asset(s)
- Step 3** Assess the effects of the proposed development, whether beneficial or harmful, on that significance
- Step 4** Explore the way to maximise enhancement and avoid or minimise harm
- Step 5** Make and document the decision and monitor outcomes

## 3 Background

### 3.1 Location

3.1.1 The proposed DC cable route passes through three distinct character areas of Lincolnshire as defined by Natural England. These are, from north-east to south-west, the coast and marshes, the Wolds and the Fens.

### 3.2 Geology and Topography

3.2.1 Route Section 1 of the proposed DC cable route passes from the coast through the marsh area. The underlying geology is chalk with superficial deposits of clay silt and sand alluvium deposited by rivers to the east. These give way in the west, near Alford, to glacial till ('Boulder Clay') and sands and gravels. The coastal area is mostly flat with some areas of gentle undulations including some saltern mounds. Some areas are enclosed by landform, embankments, sand dunes or trees. There is an extensive network of drains, ditches and dykes with a strong geometric pattern.

3.2.2 Route Section 2 of the proposed DC cable route passes through the south-eastern reaches of the Lincolnshire Wolds – a long, narrow band of rolling agricultural land dominated by a west-facing chalk escarpment approximately 50 m high. The landscape features open plateau hilltops, strong escarpments, ridge-top routeways, dramatic wooded slopes and valleys. The Wolds have a varied geology. The solid geology is largely made up of a sequence of sandstones, clays, sandy limestones, ironstones and chalk deposited between 155 and 95 million years ago during the late Jurassic and Cretaceous periods. The chalk is capped in the south-eastern reaches by glacial clay 'till' deposits which give rounded edges to the Wolds and make the soils ideal for cultivated farming practices. The south-western part of the Wolds in the Dalby and Spilsby area has not been subject to the same glacial erosion. Rather it features ridges and valleys, often with no superficial deposits. The Wolds have been heavily cultivated for agriculture over the years, and woodland cover is sparse. It is a generally sparsely populated area, with villages predominantly lying hidden at the foot of slopes.

3.2.3 Route Sections 3 and 4 of proposed DC cable route pass mainly through the fens, with the northern area of Route Section 3 occupying higher ground around East and West Keal. The fens are characterised by a low lying and very flat landscape with very large fields divided by straight drainage channels, emptying into the River Witham which itself has been engineered and straightened over most of its course here. A hierarchy of rivers, drains and ditches provide a strong linear pattern on the area which is also followed by the road pattern. The fenland geology is a complex combination of post-glacial alluvium and freshwater clays overlying solid geology of the mudstones of Oxford Clay and West Walton Formation, Ampthill Formation and Kimmeridge Clay Formation. Soils are a dark friable peat. The land has been reclaimed and drained from the

natural marshes and wet woodlands from which the 'reclaimed' Fens of today actually take their name. The Fenlands have been drained and farmed over a period of hundreds of years and therefore present an almost totally man-made landscape. The land is almost exclusively set to arable farming, managed within the very large, distinctively flat fields. Tree and woodland cover is scarce and hedgerows are almost entirely absent.

### 3.3 Archaeological and historical context

#### Palaeolithic and Mesolithic

- 3.3.1 The earliest evidence for human activity in the British Isles dates from the Palaeolithic period. At this time southern and eastern Britain were linked to continental Europe by a wide land bridge (Doggerland) allowing humans to move freely. Many changes in the environment, encompassing several glacial and interglacial episodes greatly affected human settlement in the region. Evidence is scarce and commonly consisting of stone tools, often displaced from their original locations by action of glaciers and rivers (Ref. 14). The earliest evidence of hominid activity was found on the coast of nearby North Norfolk and dates from 800,000BC.
- 3.3.2 The coastal area and marshland of Route Section 1 is unlikely to encounter any evidence for Lower and Middle Palaeolithic human activity as the area to the east of Alford was eroded away by the sea around 115,000 years ago, during the Ipswichian Interglacial. Upper Palaeolithic finds could possibly be present.
- 3.3.3 The higher ground of the Wolds (Route Section 2), however, has yielded traces of human occupation from the Lower and Middle Palaeolithic period for example handaxes found at Welton-le -Wold Quarry, west of Louth, which were probably used by pre- or ancestral Neanderthal hunters in the Hoxnian Interglacial around 400,000 years ago. Bifacial handaxes were found in Salmonbury, north-west of the proposed DC cable route.
- 3.3.4 There is evidence for later Palaeolithic and Mesolithic activity within the vicinity of the planning application boundary and 250 m Zone of Influence. This consists of a flint of possible Upper Palaeolithic or Mesolithic date recorded from near East Keal, within Route Section 2.
- 3.3.5 The end of the ice age at c 8,000 BC (the start of the Mesolithic) saw temperatures increase causing the ice to melt and sea levels to rise. This resulted in Britain being cut off from continental Europe for the last time around 6500 BC. Human activity at this time followed a pattern of seasonal occupation and often leave little evidence other than flint scatters.
- 3.3.6 Nothing of Mesolithic date has been recorded within neither the planning application boundary or the 250m Zone of Influence in lower lying areas of the coastal marsh and the fenlands. Unsurprisingly, Mesolithic activity was concentrated in the areas of higher ground, for example the southern Wolds (Ref. 15). Significant Mesolithic remains have been found here particularly in the Lymn valley areas. In East and West Keal which straddle Route Sections 2 and 3 of the proposed DC cable route, Mesolithic flints have been recorded during fieldwork. Just to the south, at Hagnaby Lock, Mesolithic flints have also been found. The hunters who discarded these flints were taking advantage of the hunting and fishing opportunities of the Fen edge.

### Neolithic

- 3.3.7 During the Neolithic period, the transition from transient hunter-gatherer societies to settled, farming communities becomes evident in the archaeological record. The period is also defined by the construction of funerary and ritual monuments suggesting organised social structures. Technological advances in stone tool production are also a feature of the period (Ref. 16).
- 3.3.8 The Wolds has an exceptional ritual landscape including the densest distribution of long barrows in the country and seems to have become a cultural focal point at this time. Some of these monuments are within both the planning application boundary and 250 m Zone of Influence for example Dalby and Dexthorpe, with Spellow Hills located just outside the Zone of Influence. The ancient trackways were likely to have been created or used during these times for long distance trade, such as the Bluestone Heath Road and Caistor High Street.
- 3.3.9 In contrast, the coastal marshes reveal little from this date and it is assumed that this area was too wet for habitation at this time. However, as in the Mesolithic period, evidence of Neolithic activity has been recorded on the Fen edges with flint scatters from this date found at East and West Keal and near Stickford.

### Bronze Age

- 3.3.10 Technological advances continued into the Bronze Age, and changes to settlement patterns and funerary practices become evident in the archaeological record. Woodland clearance was continued by Bronze Age farmers to open up the land for agriculture and for the first-time extensive field systems were laid out across the landscape. Agricultural surpluses were used by emerging elites to create prestige metal items which were often traded over wide areas including western Europe (Ref. 17).
- 3.3.11 Little evidence of Bronze Age activity has been found in the coastal marshes. The Wolds however contain an important grouping of round barrows including a bowl barrow from the Lymm Valley near Langton Grange Farm. These burial mounds are often ploughed out and appear as cropmarks on aerial photographs. Additionally, flint scatters have been found at East Keal and near Stickford and a burnt mound and other Bronze Age settlement features found on a sandy ridge within Route Section 3.
- 3.3.12 Absence of Bronze Age remains in this area of the Fens should perhaps not be taken as an absence of activity but rather of a potential masking of later Prehistoric remains under alluvium. The Fens in other counties contain a wealth of well-preserved Bronze Age sites such as Flag Fen near Peterborough and Must Farm in Cambridgeshire.

### Iron Age

- 3.3.13 Advances in technology and farming practice are evident in the Iron Age throughout England. This period saw increases in population and, along with this, a rise in tribal warfare.

- 3.3.14 The River Witham provided an important artery into the Fens and was both exploited and venerated by the local tribe, the Corieltauvi. Evidence of this comes from the iconic Witham Shield and the Fiskerton causeway, as well as two log boats, all found approximately 10 km east of Lincoln. The Corieltauvi Tribe created an oppidum in Sleaford, from where they minted coins and farmed.
- 3.3.15 Salt making was an important industry on the coast in the Late Iron Age (Ref. 17) although no salterns have been recorded within the planning application boundary or 250 m Zone of Influence for the proposed DC cable route.
- 3.3.16 Cropmarks of Prehistoric enclosures and hut circles have been mapped in Route Section 2 and Iron Age pottery clusters have been recorded at West Keal within Route Section 3. Areas of the Fens appear to have been settled as evidenced by Prehistoric cropmarks such as those mapped north-west of Donington.

#### Roman

- 3.3.17 The Roman invasion of Britain in AD43 was followed by the establishment of a military infrastructure. This is evidenced by Early Roman temporary camps, the establishment of roads and, later, the construction of a number of forts.
- 3.3.18 One such fort was established at Lincoln (Lindum) which later developed into a colonia. The Roman road network included Ermine Street and Fosse Way and enabled transport of soldiers and agricultural produce across this region which may have been farmed as part of an Imperial Estate.
- 3.3.19 Native settlement sites continued in use from the Iron Age into the Roman period, as did the salt-making industry on the coast. This important commodity was transported inland along such routeways as the Salter's Way which connected Donington to the Roman settlement of Saltersford and beyond. The sea was retreating and the coastline was extending out into the sea leaving good grazing on the coastal saltmarshes. Nothing of Roman date has been found in the coastal area of the proposed DC cable route (route section 1). This may be due to a significant Late/Post-Roman marine transgression which took place in Lincolnshire in the fourth to sixth centuries AD. Romano-British settlements and salterns on Lincolnshire Marshes appear to have been buried under several metres of marine alluvium at this time.
- 3.3.20 Parts of the fens were settled in the Roman period, evidence of which is usually provided by cropmarks seen from the air or by pottery scatters recorded by the Fenland Survey. Close to route section 4, cropmarks of enclosures and trackways have been recorded north-west of Donington.
- 3.3.21 Within the Fens, the Romans constructed a number of canals that linked with the Rivers, many of which have been identified by the Fenland Survey (Ref. 18). The Romans were the first to attempt to control water levels of the Fens by building flood defences and drainage channels, including the construction of the Car Dyke from Lincoln to Peterborough.

- 3.3.22 The Fen edge continued to be exploited and settled, along the proposed DC cable route this can be seen north-west of Stickford and in East Keal where pottery scatters have been recorded. Fen edge villas are also known although none have been recorded within the proposed DC cable route Zone of Influence.
- 3.3.23 In the Wolds, there are a number of Roman settlements and villas, most of them only visible as cropmarks, for example Roman enclosures and boundaries have been mapped not far from Dalby. Ancient routeways such as Bluestone Heath Road connected the Wolds with other parts of the region.

#### Early Medieval

- 3.3.24 The departure of the Roman armies encouraged a wave of Anglo-Saxon settlers to populate the country in the 5th and 6th centuries. Although many Roman ways of life were lost the new settlers introduced a new era in land management involving more systematic methods of cultivation. Patterns of woodland clearance occurred during this period which had a lasting influence and is often reflected in the present-day parish boundaries.
- 3.3.25 Place-names and documentary evidence indicate the foundation of a number of villages and towns during this period, as well as a number of churches and religious houses.
- 3.3.26 Settlement continued within the region during the post-Roman period with Anglo-Saxon settlers moving into the same locations as their Roman predecessors. The Early Medieval period saw the start of reclamation of the flooded coastal zone in Route Section 1 of the proposed DC cable route. Many of these early settlements were submerged by a devastating marine transgression in the fourth–sixth centuries AD.
- 3.3.27 The Wolds were an important area in the formative years of Christianity in the county with a very early monastery at Partney. The Wolds also feature several Anglo-Saxon cemeteries which are evidence the continuing occupation of this area.
- 3.3.28 The Fenland survey (Ref. 18) has located, by fieldwalking, many Early and Middle Saxon settlements in the Fens that would be otherwise hard to detect as they are often located away from the centres of Medieval and Modern population. The marine transgression the fourth–sixth centuries AD resulted in many of them being abandoned and submerged.
- 3.3.29 Fen edge Saxon sites include a large settlement at Stickford which had its origins in the Roman period and continued till the Medieval period. Many other Saxon fen-edge sites were later abandoned in favour of the sandy sites of the uplands, probably because of deteriorating conditions.
- 3.3.30 No known Early Medieval sites have been recorded in Route Section 4, however in Route Section 3 on the higher ground at West Keal there is an Early Saxon cemetery as well as evidence of a settlement that had origins in the 9th century. At East Keal in Route Section 2 there is an Early to Middle Saxon settlement.

3.3.31 Lincolnshire was invaded by the Danish Vikings in the 8th Century who developed Lincoln into a trading and manufacturing centre. The Zone of Influence formed part of the area occupied by the Danes but was on an important political and cultural boundary between Anglo-Saxon England and the Danelaw. The Vikings have left little trace in the archaeological record in the Zone of Influence but the influence of the Viking occupation is evident in many of today's place names with the suffixes "by" "thorpe" and "kirk".

### Medieval

3.3.32 Following the conquest of southern England in 1066, the Normans took control of Lincolnshire. As elsewhere in England, this was followed by the construction of a series of castles and the gift of land to the aristocracy. There are no castles within the Zone of Influence although Bolingbroke Castle is located near to Route Section 3.

3.3.33 A notable feature associated with the region is the high number of deserted Medieval villages, testimony to the area's formerly dense population; the result of a thriving wool trade. Deserted Medieval villages are known of at Saleby in Route Section 1, at Raithby in Route Section 2 and at Stickford and East Keal in Route Section 3. The Wolds in particular has one of the largest densities of deserted and shrunken Medieval villages in the country. Additionally, many of the Modern settlements have their origins in the Medieval period.

3.3.34 Churches and moated sites dot the landscape and ridge and furrow is also a common feature. These earthwork remnants of Medieval ploughing can be seen surrounding nucleated settlements within all Route Sections apart from Route Section 4.

3.3.35 In the middle ages, as well as sheep rearing, the Fens were also utilised for growing hay and reeds, for fishing and wild fowling, and occasionally as ploughed land. In the Late Middle Ages there was a decline in the wool trade and the Fenlands became neglected.

3.3.36 An important part of the Medieval economy were the monasteries and their extensive estates. In the Middle Ages monks played an important role in tending the land on the edges of the Fen and in early efforts at drainage. A number of monasteries developed in Lincolnshire including at Bardney, South Kyme, Revesby and Spalding.

3.3.37 Swineshead and Boston were early Fenland settlements that became prosperous and developed into towns.

### Post Medieval

3.3.38 The Post Medieval period begins with the breakdown of the monastic ownership of land following dissolution, leading to private ownership of land and the gradual disappearance of open fields giving way to enclosed field patterns.

3.3.39 The 16th and 17th centuries were a time of population decline in rural areas. There was a general migration to towns, a decline in the wool trade resulting in a conversion of land back from

- pasture to arable and a rationalisation of agricultural holdings. During the 18th century the enclosure movement had a great influence on land patterns.
- 3.3.40 The coastal marshland area is dotted with scattered Post Medieval farmsteads, as are all sections of the proposed DC cable route – most of which are still in use.
- 3.3.41 The Wolds has evidence of many small parklands and a number of smaller estates, which often include modest Tudor or Georgian country houses, with both Georgian and Victorian farmsteads, and farm workers' cottages are a particular feature of the area. Quarrying is also a common feature of the Wolds landscape.
- 3.3.42 The Fenlands continued to offer a rich source of food, fuel and pasture in the early Post Medieval period however the landscape changed dramatically with the coming of the Industrial Revolution. There was a need for increased agricultural production and in 1762 an Act of Parliament was obtained to authorise major drainage works in the area of the River Witham. Huge capital investment was made in the Fens with the objective being to convert seasonally inundated grassland, only useful for six months, into land which could support farming all year round. Flooding was still a danger and because the Fens are so low lying, pumps were constructed to raise unwanted water up to the River Witham. In the 18th Century windmills powered such pumps but after the 1820s, steam power was often installed.

#### Modern

- 3.3.43 A major 20th century influence on the landscape has been the growth of airfields along the top of the limestone edge. This part of Lincolnshire was ideal for military airfields because the expanse of flat and well drained ground provided the ideal conditions for runway construction. Airfields were first brought into operation at various times in the First World War with new airfields opening up all over the county during the Second World War. RAF East Kirkby is one such airfield along the proposed DC cable route, located in Route Section 3.

## 4 Baseline Conditions

### 4.1 Introduction

4.1.1 The baseline conditions present the designated and non-designated heritage assets which have the potential to be impacted by the proposed DC cable route and split between the planning application boundary and 250 m Zone of Influence for each section. These assets are presented by route section and split by historical period. Within each historical period, assets are presented by geographical location, moving east to west across each route section of the proposed DC cable route.

### 4.2 Route Section 1 Proposed Landfall to Well High Lane

#### Geology and topography

4.2.1 At the eastern end of section one of the proposed DC cable route, from the area of the proposed landfall site, the geology is a white chalk bedrock. The bedrock changes to a grey chalk as the proposed DC cable route moves inland, to the north of Alford. A change to a final variation of a lower greensand sandstone occurs here, before returning back to a white chalk as the section meets the second part of the route, at Well High Lane.

4.2.2 The superficial deposits within the first section of the route show further variation. An alluvium deposit containing clay, silt and sand is formed around the proposed landfall site. A change to a till, iamicton level is seen at various points at the eastern end of the proposed DC cable route, with a dense area at the point the A1111 turns west, south of Hannah, and continues in a south westerly direction towards Alford. As the route section reaches Well High Lane, further changes in the superficial deposits occur, swapping predominantly between the alluvium and till deposits, with sparse areas of a glaciofluvial deposit formed of Devensian sand and gravel.

4.2.3 The landscape of the route section, at the proposed landfall site, is characterised as a wide coastal plain which incorporates three distinctively, but closely interconnected areas running broadly parallel with the edge of the Lincolnshire Wolds. As the first section of the proposed DC cable route meets the second section, to the west of Alford, the Lincolnshire Wolds become an ever-present feature. The area is a long, narrow band of rolling agricultural land dominated by a west-facing chalk escarpment approximately 50 m Above Ordnance Datum (AOD). The area is characterised by a range of varied, yet unified features, including open, arable plateau hill tops, deep dry valleys with sinuous beech woods and isolated ash trees punctuating the skyline.

#### Historic landscape character

4.2.4 This route section comprises three historic landscape character zones. The easternmost zone is the Mablethorpe Outwash which covers the area of the proposed DC cable route from Proposed

- Landfall to just west of Boy Grift Drain. This zone is characterised by highly dispersed settlements with isolated farmsteads. The largest area of settlement is found at Sandilands whereby formerly distinct settlement along the coast has been interconnected by the establishment of caravan parks along the connecting roads. The agricultural land within this region is predominantly defined by a strong rectilinear pattern with boundaries laid out at right angles to roads and drains. The agricultural landscape has however been altered since the Second World War which has resulted in the creation of some large Modern fields.
- 4.2.5 From Boy Grift Drain in the east, to Ailby in the west, the proposed DC cable route is located within the Middle Marsh Historic Landscape Character Zone. This zone is characterised by little Modern development and the settlements have retained much of their historic character. There are several isolated farmsteads within this zone of which the majority have expanded significantly from their original size. The fields that make up this zone are of mixed type, however, close to settlement zones there are instances where the open field systems have survived. There is a strong survival of planned enclosure across the zone. Modern development is generally located on lower lying ground whilst settlements which predate the drainage of the landscape are on higher ground. In general, the larger settlements such as Alford and Orby are situated on higher ground and are highly nucleated, whereas the lower lying drained marshland settlements are restricted to isolated farm complexes and linear settlement strings.
- 4.2.6 The Spilsby Crescent zone spans both Route Section 1 and 2 and is a predominantly agricultural zone of arable use. Grazing land is restricted to small fields that are in close proximity to settlements. The zone also includes a large number of small nucleated settlements which form a line which is believed to equate to a spring line. The historic cores of these settlements are predominantly focused along roadways which link the high Wold settlements with the coastal grazing marshes and fens. The Modern settlement and agricultural landscapes are a natural growth of the Medieval open field farming system. In the latter half of the twentieth century many of the field boundaries were removed to facilitate Modern agricultural mechanised techniques, where previous fields were planned enclosures the Modern fields retain long and straight boundaries. The landscape had also gone through changes during the seventeenth, eighteenth and nineteenth centuries as a result of the aristocracy creating designed landscapes. This is believed to have caused the relocation of some settlements.
- 4.2.7 The southern-western area of this route section takes in an area of the Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) to the north-west of Alford.

#### Designated Heritage Assets

- 4.2.8 There are no designated heritage assets of any date within the planning application boundary. There are no designated heritage assets of Prehistoric, Roman, Early Medieval, Medieval or Modern date within the Zone of Influence.

Post Medieval (1540-1901) designated assets within the 250m Zone of Influence

- 4.2.9 Section one of the proposed DC cable route has the potential to impact upon the setting of multiple Post Medieval heritage assets. These assets are all farmsteads. Of these, three are listed. All of these buildings are Grade II listed and are of **medium** value.
- 4.2.10 The Cottage at Markby (**LB33**) is a late 17th century farmhouse with alterations from the 19th and 20th century. The setting of this asset is informed by its location on the outskirts of Markby, the surrounding agricultural land and the nearby road. Its setting informs its significance and extends to within the planning application boundary. It has **historical**, and **aesthetic** significance as a typical example of a red-brick Lincolnshire farmhouse.
- 4.2.11 Manor Farmhouse (**LB27**) is a mid-18th century house that had alterations in the 19<sup>th</sup> and 20<sup>th</sup> centuries (Plate 1). It is situated at the southern end of Saleby and the house is sat in a large moated enclosure. The asset's setting is informed by its location on the outskirts of the village of Saleby, surrounded by open farmland. The setting informs its significance and extends to within the planning application boundary. This asset has **historical** and **aesthetic** significance.

**Plate 1: View of Manor Farmhouse looking south (Photo 391)**



- 4.2.12 Ailby House Farmhouse (**LB34**) is a 17th century farmhouse that is constructed of English bond and a thatched roof with brick coped gables. It had alterations in the 19th and 20th century. The setting of this asset is informed by its location surrounded by agricultural land and buildings, with

which it has a functional and historical association. Its setting informs its significance and extends to within the planning application boundary. It has **historical**, and **aesthetic** significance.

#### Non-Designated Heritage Assets

##### Prehistoric (30,000 BC – AD 43) assets within the planning application boundary

- 4.2.13 There are no recorded heritage assets dating to the Prehistoric period within the planning application boundary of the first section of the proposed DC cable route.

##### Prehistoric (30,000 BC- AD 43) assets within the 250 m Zone of Influence

- 4.2.14 One heritage asset of Prehistoric date was recorded within the 250 m Zone of Influence. This asset is a long neck Prehistoric beaker that was discovered on the beach at Sutton on Sea (**443**). It is of **low** value and has potential **evidential** significance for further previously unrecorded associated archaeology associated with it.

##### Roman (AD 43-410) assets within planning application boundary

- 4.2.15 There are no recorded heritage assets dating to the Roman period within the planning application boundary of the first section of the proposed DC cable route.

##### Roman (AD 43-410) assets within the 250 m Zone of Influence

- 4.2.16 There are no recorded heritage assets dating to the Roman period within the 250 m Zone of Influence of the first section of the proposed DC cable route.

##### Early Medieval (410-1066) assets within the planning application boundary

- 4.2.17 There are no recorded heritage assets dating to the Early Medieval period within the planning application boundary of the first section of the proposed DC cable route.

##### Early Medieval (410-1066) assets within the 250 m Zone of Influence

- 4.2.18 There are no recorded heritage assets dating to the Early Medieval period within the 250 m Zone of Influence of the first section of the proposed DC cable route.

##### Medieval (1066-1540) assets within the planning application boundary

- 4.2.19 There are seven heritage assets within the planning application boundary that date to the Medieval period.
- 4.2.20 An asset of **low value** which stretches across the planning application boundary and moves south through the 250 m Zone of Influence, parallel to the county's east coast line is a section of sea bank used as a sea defence in the parish of Huttoft (**160**). Known as "Roman bank", the asset is depicted through the NMP and marked on the 1905 OS county series map. Its setting is

- informed by its relationship with the coastline, the nearby settlements and the road which follows its course. Its setting is within the planning application boundary and beyond. This asset has **evidential, historical** and **aesthetic** significance.
- 4.2.21 The NMP also identified a probable Late Medieval earthwork enclosure and field boundary at Huttoft (**159**), this was visible during the walkover survey. Its setting is informed by its location within agricultural land with which it has a functional and historical association. The asset is of **low** value and it has **evidential** significance.
- 4.2.22 A former field boundary and ridge and furrow was identified during archaeological walkover survey (Appendix 2) to the north of Wold View farm (**261**). The results of geophysical survey further supported the presence of ridge and furrow within this area (Ref. 19). Its setting is informed by the surrounding agricultural land with which it has a functional and historical association. The asset would have formed part of a wider Medieval agricultural landscape, and has **evidential** significance as evidence of past human activity. It is of **low** value. The shrunken Medieval village of Saleby (**103**) is mentioned with Thoresthorpe in the Domesday survey of 1086, it is depicted on the National Mapping Programme (NMP), and identifiable through aerial photography, as a series of earthwork crofts, boundaries, ridge and furrow and enclosures. It was not visible during the archaeological walkover survey. The regional research agenda has identified the need and importance to confirm the extent of shrunken Medieval villages such as Saleby, and to clarify the nature of the desertion of sites, to update the HER accordingly (Ref. 20). Its setting is informed by its location within the current settlement of Saleby and the surrounding agricultural landscape with which it has a functional and historical association. It is of **medium** value with **aesthetic, evidential** and **historical** significance.
- 4.2.23 The moated site of Saleby (**104**), while associated with the shrunken village, does not individually fall within the planning application boundary; it is treated as an individual asset as listed in the Lincolnshire HER data. The regional research agenda highlights that a better understanding of early manorial sites is needed, and identifies a need for a synthesis of the evidence for moated sites within the region (Ref. 20). Moats also have the potential to hold well-preserved waterlogged deposits which could provide information on standards of living. It is associated through the Domesday Book with Thoresthorpe shrunken village (**105**). The setting of this site is informed by its location on the outskirts of the village of Saleby, the surrounding agricultural land and Manor Farmhouse (**LB33**). The moated site of Saleby (**104**) is of **medium** value and with **evidential** and **historical** significance as it contributes to the Medieval landscape of the region alongside providing a picture of landuse.
- 4.2.24 Ridge and furrow was identified to the south of Rigsby Wood (**174**), it was not visible during the archaeological walkover survey. This asset is of **low** value with **evidential** significance.

#### Medieval (1066-1540) assets within the 250 m Zone of Influence

- 4.2.25 Two areas of Medieval ridge and furrow are recorded at the northern end of the 250 m Zone of Influence. The ridge and furrow at Sutton on Sea (**63**) is roughly aligned south-east to north-west.

- To the south-east the ridge and furrow at Sea Bank Farm, Huttoft (**64**) is aligned on a north-west to south-east axis. The setting of these assets is informed by the agricultural land within which they are situated however it does not make a major contribution to their significance. Both assets are of **low** value and have **evidential** significance.
- 4.2.26 The NMP identified a probable Medieval earthwork enclosure at Huttoft (**158**), however it was not visible during the archaeological walkover survey. This asset has **evidential** significance and is of **low** value.
- 4.2.27 Archaeological walkover survey identified concentrations of earthwork ridge and furrow which were predominantly orientated north-south at America Farm (**260**). Located to the south-west are and further former field boundaries, including ridge and furrow at Wold View Farm (**262**). The setting of these assets is informed by the agricultural land within which they are situated however it does not make a major contribution to their significance. Both assets are considered to be of **low** value and **evidential** significance.
- 4.2.28 The deserted Medieval village of Asserby (**267**) is recorded as visible within aerial photographs by the HER. It was not mentioned within the Domesday Book but is mentioned within the Booke of Fees. This asset is of **medium** value due to its potential to contribute to the regional research framework. Its setting is informed by the current settlement of Asserby and the surrounding agricultural landscape. Its setting extends to within the planning application boundary but does not form a major contribution to its significance. It is of **evidential** and **historical** significance.
- 4.2.29 Two heritage assets of Medieval date were recorded at Markby. The deserted Medieval village of Markby (**166**) was not visible during the archaeological walkover survey. However, as the regional research framework highlights the need to investigate the extent of deserted Medieval villages and to investigate the reasons behind the desertion, this asset has the potential to contribute to this framework (Ref. 20). It is of **evidential** significance and **medium** value. The probable Medieval earthwork fishpond in Markby (**167**), shown in the NMP and visible during the archaeological walkover survey is considered to be of **low** value and of **evidential** significance. Its setting is informed by its location on the outskirts of Markby and the nearby watercourse with which it likely had a functional and historical association. Its setting does not extend into the planning application boundary
- 4.2.30 The Late Medieval earthwork field system at Bilsby (**268**) was depicted on the NMP however in 2013 the HER recorded that the asset was no longer visible on Google Earth and it appears to have been ploughed out. This asset is of **low** value and **evidential** significance.
- 4.2.31 The shrunken village of Thoresthorpe (**105**) was not visible during the archaeological walkover survey however it is recorded by the HER. This asset is of **medium** value and **evidential** significance due to its potential to contribute to the regional research framework.
- 4.2.32 Late Medieval earthwork ridge and furrow was recorded by the HER to the west of Saleby (**157**), this is of **evidential** significance and **low** value.
- 4.2.33 The archaeological walkover survey identified former field boundaries including ridge and furrow and a strip field in Ailby (**255**) which are probably associated with Ailby deserted Medieval village

- (219). The setting of these assets are informed by each other, the settlement of Ailby, Ailby House Farm (**LB34**) and the surrounding agricultural land. Their setting extends to within the planning application boundary but does not form a major contribution to its significance. These assets are of **medium** value and **evidential** significance as they have the potential to contribute to the regional research agenda.
- 4.2.34 Rigsby Medieval settlement (**269**) is recorded within the HER as visible as earthworks surrounding the village of Rigsby. Ridge and Furrow is also visible as earthworks to the south-east. The deserted Medieval village is mentioned in Domesday 1086 and the Book of Fees. The setting of this asset is informed by the village of Rigsby and the surrounding agricultural land. Its setting extends to within the base scheme but only contributes in part to its significance. It has **evidential**, **aesthetic** and **historical** significance and is of **medium** value due to its potential to contribute to the regional research framework.

#### Post Medieval (1540-1901) assets within the planning application boundary

- 4.2.35 The Sutton on Sea and Alford Tramway (**117**) passes through both the 250 m Zone of Influence and the planning application boundary on a north-north-west to south alignment. It is a steam railway opened in 1884 that has a single pair of rails with a two-foot, six inch gauge tramway. It replaced the Alford to Mablethorpe railway which closed in 1889. Archaeologically, the tramway was identified during a watching brief at Bilsby village. It was not visible during the archaeological walkover survey. The regional research framework highlights the need for fieldwork and research to establish the nature and development of linear transport systems (Ref. 21), therefore this asset is of **evidential** and **historical** significance, and **medium** value. The disused railway to the west of Huttoft which is known as the Sutton Branch Line Walkway and Conservation Area (**411**) survives as a visually dominant linear route through the landscape. It is currently used as a public footpath which is lined heavily by established hedgerows. Its setting is informed by the landscape within which it is situated and contributes to its significance. It is of **medium** value with **aesthetic**, **historical** and **communal** significance.
- 4.2.36 The disused railway to the north-west of Alford survives in part as an upstanding earthwork (**412**). Its setting is informed by the landscape within which it is situated and contributes to its significance. It is of **medium** value with **aesthetic**, **historical** and **communal** significance.

#### Post Medieval (1540-1901) assets within the 250 m Zone of Influence

- 4.2.37 The Post Medieval period within the 250 m Zone of Influence is represented by farmsteads which survive to varying extents.
- 4.2.38 Sea Bank Farm at Huttoft (**22**) is a partially extant nineteenth century unlisted farmstead. It has seen a significant loss (>50%) of traditional buildings. Its setting is informed by the agricultural land surrounding the farm, the close proximity of the Sea Bank (**160**) to the east and the shoreline which extends beyond. Its setting extends within the planning application boundary but only contributes partially to its significance.

- 4.2.39 Three farms are located in Mablethorpe and Sutton; South Farm (26) is a partially extant nineteenth century farmstead whilst there is also a demolished unnamed farmstead to the north-west (27). To the west, America Farm (179) is a redeveloped 19<sup>th</sup> century farmstead. Yarlsgate Farm (23) and Wold Farm (24) are both partially extant nineteenth century farmsteads in Huttoft. The settings of these assets are formed by the farmland in which they are situated, their proximity to each other and the Boy Grift Drain which passes nearby. Their settings extend within the planning application boundary but these do not make a major contribution to their significance. They are all of **low** value with **historical** and **communal** significance.
- 4.2.40 The partially extant nineteenth century farmstead at Furze Hill (426) has a regular courtyard of E plan with a farmhouse that is detached from the main working complex. The setting of this asset is informed by the farmland within which it is situated. Whilst its setting extends to within the planning application boundary, this setting does not form a major part of its significance. It is of **low** value with **historical** and **communal** significance.
- 4.2.41 Mill House Farm (Old Mill House) at Beesby with Saleby (427) is a partially extant nineteenth century farmstead that is L-shaped in plan with a farmhouse which is detached from the main working complex. The setting of this asset is informed by the farmland within which it is situated, and its location along Mill Lane, with which it shares its name. Whilst its setting does extend into the planning application boundary, this setting only forms part of its significance. It is of **low** value with **historical** and **communal** significance.
- 4.2.42 A pinfold (452) was recorded on the second edition County Series OS map of 1905 at Saleby. This asset is of **low** value with **evidential** and **historical** significance.
- 4.2.43 The Wesleyan Methodist Chapel at Saleby (453) was built in 1855, and a school room added to the building in 1914. The chapel closed in 1984 and the yellow-brick building is now in a state of disrepair. The setting of this asset is informed by its location within the settlement of Saleby with which it has a functional and historical association. This setting does extend into the planning application boundary, and forms part of its significance. It is of **low** value with **communal**, **historical** and **evidential** significance.
- There are two redeveloped nineteenth century farmsteads located in Saleby, these are Home Farm (180) and Saleby Manor (181). The settings of these assets are informed by the settlement of Saleby and the surrounding agricultural land. The setting of Saleby Manor is also informed by its close proximity to Manor Farmhouse (LB27), and the Medieval earthworks (104) of the moat. The setting of Saleby manor (181) does extend into the planning application boundary but this setting does not form a major part of its significance. Similarly, the setting of Home Farm (180) also extends into the planning application boundary, but does not make a major contribution to its significance. These assets are of **low** value with **historic** significance.
- 4.2.44 A demolished nineteenth century farmstead is recorded at Goose Field in Aby with Greenfield (28), this was not visible during the archaeological walkover survey. This asset is of **low** value and **evidential** significance.
- 4.2.45 The demolished farmsteads are all of **low** value and **evidential** significance.

Modern (1901-Present) assets within the planning application boundary

- 4.2.46 There are no recorded heritage assets dating to the Modern period within the planning application boundary of the first section of the proposed DC cable route.

Modern (1901-Present) assets within the 250m Zone of Influence

- 4.2.47 There are no recorded heritage assets dating to the Modern period within the 250m Zone of Influence of the first section of the proposed DC cable route.

Undated assets within the planning application boundary

- 4.2.48 There are two undated heritage assets within the planning application boundary of the first section of the proposed DC cable route, both of which were identified through geophysical survey.
- 4.2.49 To the north-west of Ailby geophysical survey identified a couple of pit-like anomalies (**407**) that are of uncertain origin, given their lack of a wider context into which the results can be placed. This asset is of **low** value and **evidential** significance.
- 4.2.50 Geophysical survey also identified a fragmented curvilinear trend (**408**) which could be a plough damaged ditch to the north-west of Rigsby. This asset is of **low** value and **evidential** significance.

Undated assets within the 250m Zone of Influence

- 4.2.51 There are no recorded heritage assets that are undated within the 250m Zone of Influence of the first section of the proposed DC cable route.

Historic Map Regression

- 4.2.52 This route section is mostly characterised by agricultural land divided into rectilinear fields that are intersected by field boundaries, drains and roads. Boy Grift Drain crosses through this route section. It also features dispersed settlements and farmsteads. There are few wooded areas, some are located to the west of Alford. The land within the planning application boundary has changed little overall from the late 19<sup>th</sup> century. Most changes within the area occurred after the mid-20<sup>th</sup> century, particularly around larger towns, such as Alford.
- 4.2.53 The 1888 1:10,560 OS map of Lincolnshire shows the section to be dominated by rectilinear fields, with highly dispersed settlements, focussed along roads and isolated farmsteads. Few significant changes are illustrated between the 1888 1:10,560 OS map and the 1907 1:10,560 OS map of Lincolnshire. Fewer trees are shown along field boundaries, roads and near to settlements. Field sizes have remained the same, with a good number of Medieval strip fields still visible. Several highways which were recorded as lanes on the 1888 map are now referred to as roads, for example Old Mill Lane in Huttoft, is now labelled as Old Mill Road. The Alford and Sutton Tramway which was recorded on the 1888 map is now shown as a road.

- 4.2.54 The 1940 1:2,500 OS map shows the land adjacent to the coast has changed from scrub to grassland, and is labelled as 'Golf Links'. Several breakwaters have also been added along the coastline. A sewage farm has been built alongside the Mablethorpe Loop Line railway, close to Sutton le Marsh (now Sutton on Sea). Several new houses have been constructed in Sutton le Marsh along Crabtree Lane. Little overall change is illustrated between the 1907 1:10,560 OS map and the 1940 map. The 1951 1:10,560 OS map of Lincolnshire shows the earlier labelled Roman Bank (**160**) that runs along the coastline is now referred to as Sea Bank.
- 4.2.55 Few significant changes are illustrated between the 1951 1:10,560 map and the 1968-1969 1:2,500 OS plan. Four ponds have been created in the field to the west of Roman Bank House. Sandilands Golf Club is also marked. A caravan park is recorded on the south side of Crabtree Lane. The Huttoft Road (A52), heading south out of Sutton le Marsh has been straightened. This can particularly be seen on sharp bends near Cherry Tree Farm and South Farm.
- 4.2.56 The 1971-1973 1:10,000 OS map of Lincolnshire shows some changes to the area. Across the route section there is an increase in the number of drains. Field boundaries have been straightened and consolidated in some areas, Thoresthorpe in particular. The steady growth to the size and number of settlements is reflected in the increase of farm and cottages illustrated. Sandilands Golf Club is depicted to have expanded. The farmstead of Furzehill, along the A111, has also expanded with the addition of buildings.
- 4.2.57 The 2000 1:10,000 OS map of Lincolnshire shows some changes to the route section, these are mostly in the size and number of settlements and infrastructure. Almost all of the villages and hamlets show small signs of growth. The sites of several new, individual houses can be seen dispersed across the section. Several isolated farms which were previously labelled are no longer, indicating decline of use. Several railways have fallen out of use; the Sutton and Willoughby Railway section of the Mablethorpe Loop is shown as disused. The GNR Louth, Mablethorpe, Sutton on Sea and Willoughby (East Lincolnshire) Railway Line is shown as dismantled. Several small pond and water features are shown on this map which do not appear on earlier maps, particularly close to the coast where they are most common.
- 4.2.58 The 2016 1:10,000 OS map of Lincolnshire shows further slight changes to the area, again mostly in size and number of settlements and infrastructure. Growth in villages has continued, with the town of Alford showing the greatest increase in residential housing. Several individual residences are now shown along the A1104 that were not previously shown. Several farm sites have expanded, with an increase in agricultural buildings, particularly poultry sheds. Several footpaths along Wold Grift Drain are now shown. Rigsby Wood is now shown as a Nature Reserve.

### Archaeological Potential

- 4.2.59 No early archaeological resource is present in the first route section from Proposed Landfall to Well High Lane. The potential remains **low** for Prehistoric material to be present due to the

- known historical nature of the Lincolnshire Fen landscape, with a **negligible** to **low** potential between the Roman and Early Medieval period.
- 4.2.60 A greater potential is evident for the presence of heritage assets dating to the Medieval period. The evidence for settlement sites, with the presence of four shrunken villages at Saleby (**103**), Thoresthorpe (**105**), Markby (**166**) and Ailby (**219**), presents the potential for further evidence of human activity within the 250m Zone of Influence and planning application boundary. A **medium** potential for more Medieval activity is further supported by the wide range of ridge and furrow examples across the section area, indicating a strong presence of settlement.
- 4.2.61 There is evidence for activity of historical significance from the Post Medieval period. A few farmsteads are located within the 250m Zone of Influence of the first route section, with both the 250m Zone of Influence and planning application boundary truncating the 1884 Sutton on Sea and Alford tramway (**107**). There is the potential for there to be further examples of Post Medieval heritage assets, but this potential remains **low**, as it would be expected for any unknown assets to become known through regression analysis of historical mapping.

### 4.3 Route Section 2 Well High Lane to A16 (Keal Road)

#### Geology and topography

- 4.3.1 Route section two shows a similar variation in the bedrock as to the first section with similar formations. The section starts with the same white chalk subgroup and fluctuates quickly between a grey chalk and a sandstone, in a very short distance at the start of the section. As the proposed DC cable route progresses in a south west direction, the bedrock geology changes to mudstone, siltstone and sandstone deposits as part of the Wealdon Group which is experienced to the north east of Sausthorpe. Amphill Clay, part of the West Walton formation, then becomes present to the south of Sausthorpe. Further variations are experienced between the geologies of the Wealdon Groups of sandstone mudstone, and the West Wealdon formation. This continues until the junction of the A156 and A16 and the subsequent border between route sections two and three, where the Amphill Clay of the West Walton formation becomes the primary geology.
- 4.3.2 Records on the British Geological Survey do not record any superficial deposit for the majority of the area contained within the 250m Zone of Influence of the second section of proposed DC cable route. Certain deposits are described as an alluvium formed as a clay, silt and sand, located as a thin strip to the south and south west of Sausthorpe. This becomes present as the route section moves from the east and heads south west, to the south of the Modern settlement area. The project's area of interest remains in an area with no superficial deposit recorded. Upon reaching the boundary of the third route section at the junction of the A16 a Till- diamicton becomes present.
- 4.3.3 The topography of the second route section remains the same as the western end of the first route section. The presence of the Lincolnshire Wolds remains and continues through the area of the second route section to the junction of the A16. This area remains relatively flat across the 50 m AOD high chalk escarpment.

### Historic landscape character

- 4.3.4 This route section comprises two historic landscape character zones, the previously detailed Spilsby Crescent Zone and The Dry Valleys. The Dry Valleys makes up the bulk of this route section, whilst the Spilsby Crescent covers the northern and southernmost regions. This zone is characterised by small settlements along dry river valleys. These settlements are predominantly occupied by eighteenth century or later buildings with pantile roofs, a few examples of mud and stud cottages still remain, while churches and other major public buildings are predominantly built of Spilsby Sandstone. There are a few isolated farm complexes which are associated with historic earthwork sites. The region is characterised by large Modern fields however there are many examples of surviving ancient enclosures and nineteenth century rectilinear fields. In the south of this region there is a high density of country houses with small parklands and associated woodland which form distinctive belt patterns around the current and former boundaries of the parks. The zone is now sparsely populated however the density of village earthworks which are evident within this region demonstrates that it was once highly populated. During the eighteenth and nineteenth centuries, the zone was subject to widespread enclosure particularly on the higher ground which created a new landscape of planned rectilinear fields. The remains of the Medieval open fields are visible through the sinuous field boundaries.

### Designated Heritage Assets

- 4.3.5 There are multiple heritage assets within the second route section of the proposed DC cable route, that are designated as either a scheduled monument or as a listed building. Assets fall within either the planning application boundary or the 250m Zone of Influence.

#### Prehistoric (30,000BC- AD 43) designated assets within the 250m Zone of Influence

- 4.3.6 A long barrow is located 465 m west of Dexthorpe (**SM5**) and survives below the present ground surface but has been disturbed through ploughing. The nature of the barrow means that there is a significant potential for it to yield further information about the burial rites of the Prehistoric period and the structural formation of long barrows. The setting of this asset is informed by its upland location within agricultural land, with an open vista. Its setting informs its significance and extends to within the planning application boundary. This is a **high** value asset with **evidential** significance.
- 4.3.7 Located c.400m to the south-east of Langton Grange Farm is Ring Holt Bowl barrow (**SM3**). This is a circular mound that measures 30 m in diameter and 1.5 m high. It dates to the Bronze Age and is situated on a south-west facing hill slope above a tributary of the River Lymm. Traces of an infilled ditch are present within the northern arc of the barrow, but there is no evidence to indicate that the site has been subject to any archaeological excavation. The setting of this asset is informed by its upland location with far reaching views and the surrounding agricultural land. Its setting informs its significance and it extends to within the planning application boundary. This is a **high** value asset with **aesthetic** and **evidential** significance.

Plate 2 Photograph facing west towards Ring Holt Bowl Barrow (SM3) (Photo 623)



- 4.3.8 Both of these scheduled monuments have the potential to contribute to the regional research agenda, which highlights the importance of examining how ceremonial centres such as these developed over time (Ref. 16).

Post Medieval (1540-1901) designated assets within the 250m Zone of Influence

- 4.3.9 Brickfields (**LB28**) on Old Bolingbroke Road at East Keal is a Grade II Listed late 18<sup>th</sup> century house, with minor 20<sup>th</sup> century alterations. The setting of this asset is informed by its location surrounded by agricultural land and a former brick works (Plate 3). Its setting informs its significance and extends to within the planning application boundary. This asset is of **medium** value with **aesthetic** and **historical** significance.

Plate 3 Photograph facing north-east towards Brickfields (LB28) (Photo 536)



- 4.3.10 Barley Cliff and Flanking Walls (**LB29**) is a Grade II listed former rectory, now a house. It was built in 1826 and underwent alterations in the later 19th century. It is constructed of red brick with Flemish bond, has slate roofs and three wall stacks. The Traphouse to Barley Cliff (**LB35**) is Grade II listed and constructed in the same year, and of the same materials. It has two storeys and a three-bay front, with three windows on each floor. The listing states it has only been included for its association with Barley Cliff (**LB29**). The settings of these assets are informed by each other and the surrounding gardens, woodland and the A16 road. Their setting informs their significance but does not extend to within the planning application boundary. These assets are of **medium** value with **aesthetic** and **historical** significance.
- 4.3.11 Raithby Conservation Area (**CA1**) is present within the 250m Zone of Influence. Currently, a conservation area appraisal is not available for Raithby. However, this conservation area is focused around the central road which travels through the village. This road is bordered by houses and their associated gardens. The setting of this asset is informed by the settlement of Raithby and the buildings that are located within it. Its setting does not extend to the planning application boundary. This asset is of **medium** value with **aesthetic**, **historical** and **communal** significance

### Non-Designated Heritage Assets

#### Prehistoric (30,000BC- AD 43) assets within the planning application boundary

- 4.3.12 There are seventeen Prehistoric recorded assets within the planning application boundary. The majority of these assets relate to settlement activity and funerary monuments.
- 4.3.13 A possible round barrow cropmark (**225**) is visible on aerial photographs to the north west of Ulceby Cross. It has **evidential** significance, as it has potential to yield evidence of early human activity, and is of **low** value.
- 4.3.14 A cropmark enclosure (**124**) was recorded to the south-east of Driby. A second feature, a linear cropmark feature (**125**), is also recorded, both of which were not visible during the field walkover survey. These assets are of **low** value and **evidential** significance.
- 4.3.15 A possible round barrow cropmark was recorded to the south of Fulletby (**119**). This is of **medium** value and **evidential** significance due to its location in close association with another barrow cropmark (**118**) which could indicate that this is a ceremonial landscape. Due to the potential of this landscape to be a ceremonial landscape this asset has the potential to contribute to the regional research framework as this highlights the need to gain a better understanding of the development of ceremonial landscapes (Ref. 16).
- 4.3.16 Cartographic analysis identified the findspot of a stone axe marked at Langton Hill (**266**). This asset is of low value and **evidential** significance due to the location's potential to have previously unrecorded below ground archaeological remains associated with it.
- 4.3.17 Located to the north-west of Dexthorpe is a series of enclosure and boundary cropmarks (**144**). This asset is of **low** value and **evidential** significance.
- 4.3.18 A further cropmark of a possible round barrow (**120**) is also evident, 825 m north west of Dalby. This asset is of **medium** value and **evidential** significance as it has the potential to contribute to the regional research framework as this highlights the need to gain a better understanding of the development of ceremonial landscapes (Ref. 16).
- 4.3.19 Hut circle and enclosure cropmarks which have been interpreted as a possible farmstead are located to the south of Dexthorpe (**230**). This asset is of **evidential** significance and **low** value.
- 4.3.20 Geophysical Survey identified a ring ditch to the north-west of Dalby (**397**). This ring ditch appears to have a break on the south, however a linear ditch-like anomaly partially masks the picture. It is unclear if the ditch is associated with the ring. A second ditch of probable archaeological interest crosses the survey area and there are several possible pit-like responses. This asset is of **evidential** significance and **medium** value due to its location within a ceremonial landscape and therefore its ability to contribute to the regional research framework (Ref. 16, Ref. 17).
- 4.3.21 Barbed and tangled arrowheads and scrapers found in Langton by Spilsby as part of a flint scatter (**99**) are of **low** value and **evidential** significance.
- 4.3.22 To the west of Dalby, a series of hut circle, enclosure and boundary cropmarks (**146**) are recorded, which are of **low** value and **evidential** significance.

- 4.3.23 To the north-east of Sausthorpe a Bronze Age flint scatter with scrapers is said to have been found near America Farm but was seen at Langton Hall in 1955 (**98**). Although this asset has since been removed other previously unrecorded assets may remain at the site. The regional research agenda has highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Consequently, this asset and its location has the potential to contribute to the regional research agenda, therefore they are of **evidential** significance and **medium** value.
- 4.3.24 Located to the north of Highfield Farm at West Keal is a barrow cropmark (**123**) which was not visible during the archaeological walkover survey. This is of **evidential** significance and **low** value.
- 4.3.25 Situated within the southernmost area of this route section at East Keal are multiple finds assemblages which were identified during a rapid fieldwalking survey along the proposed DC cable route of the East Keal bypass route. These finds include a Late Neolithic/ Early Bronze Age flint assemblage (**76**), Early and Middle Bronze Age pottery and burnt stone (**80**) and a concentration of Mesolithic flints (**115**). Although these assets have since been removed other previously unrecorded assets may remain at the site. The regional research agenda has highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Consequently, these assets and this location have the potential to contribute to the regional research agenda, therefore they are of **evidential** significance and **medium** value.

#### Prehistoric (30,000 BC- AD 43) assets within the 250m Zone of Influence

- 4.3.26 The heritage assets which date to the Prehistoric period within this route section are primarily find scatters and cropmarks.
- 4.3.27 The barrow cropmark at Langton Grange Farm (**118**) is closely associated with a further barrow (**119**) The close association of these assets implies that these barrows could be part of a ceremonial landscape consequently they have the potential to contribute to the regional research framework as this highlights the need to gain a better understanding of the development of ceremonial landscapes (Ref. 16). This asset is therefore of **medium** value and **evidential** significance.
- 4.3.28 A Bronze Age perforated quartzite hammer is recorded to have been found in the Parish of Langton by Spilsby (**417**). This asset is of **evidential** significance and **medium** value due to its potential to contribute to the regional research framework which highlights the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16)

- 4.3.29 Cropmarks of a possible barrow (419) and Prehistoric enclosure and boundary (423) are recorded at Langton Hill. These assets have **evidential** significance and are of **low** value.
- 4.3.30 To the west of Dexthorpe a barrow cropmark is recorded (121). This asset is of **evidential** significance and **low** value.
- 4.3.31 A possible barrow was recorded during an archaeological walkover survey at Dalby (252). This is in the form of an oval mound identified on an escarpment, where an irregular oval earthwork is recorded on the 1:10,560 map of 1887. This asset is of **evidential** significance and **low** value. However, if it was to be confirmed as a barrow it would be of **medium** value due to its potential to contribute to the research framework as its proximity to Ring Holt bowl barrow (SM3) implies that it was within a ceremonial landscape.
- 4.3.32 Continuing southwards along the Zone of Influence are three findspots. Two leaf shaped flint arrowheads were recorded to have been found near America Farm to the south-east of Langton (211). A flint scatter dating from the Early Mesolithic to the Early Bronze Age was recovered from a north facing slope in Wheelabout Wood (79). Worked flint was also found as part of a small concentration of flints within a general background scatter (89).
- 4.3.33 Although these assets have since been removed, other previously unrecorded assets may remain at the site. The regional research agenda has highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Consequently, these assets and this location have the potential to contribute to the regional research agenda, therefore they are of **medium** value with **evidential** significance.
- 4.3.34 Two cropmarks are recorded at Putney, a possible barrow (420) and a Prehistoric cropmark (421). Both of these assets are of **evidential** significance and **low** value.
- 4.3.35 Flints are recorded to have been found on land near and old churchyard at Wood Hill (447). These flints comprise flakes and a core. These assets and their location are of **medium** value due to their potential to contribute to the regional research framework which highlights the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). They are also of **evidential** significance.
- 4.3.36 A possible round barrow is recorded at Bennington Plantation (448). This asset was initially recorded as a cropmark however it has since been identified as an earthwork during a walkover survey. It is of **low** value with **evidential** and potentially **aesthetic** significance. Its setting is informed by its upland location with views overlooking a watercourse, its setting does not extend to within the planning application boundary.
- 4.3.37 Two findspots are recorded at East Keal; an Upper Palaeolithic or Mesolithic blade core (170) and Mesolithic Flakes and Blades (270). These assets have **evidential** significance and are of **low** value.

4.3.38 A dense concentration of Prehistoric activity is recorded in the same field at West Keal. This comprises worked flint as part of a scatter (**70**); a small concentration of 11 heavily plough damaged flints within a wider scatter (**71**) and a Prehistoric site (**72**). To the south of this concentration of Prehistoric activity is a flint flake with blade shape (**204**). Although these assets have since been removed other previously unrecorded assets may remain at the site. The regional research agenda highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Consequently, these assets and this location has the potential to contribute to the regional research agenda, therefore they are of **medium** value with **evidential** significance.

Roman (AD 43-410) assets within planning application boundary

4.3.39 Located 1.3 km to the north-east of Sausthorpe and on the eastern perimeter of the planning application boundary is a cropmark of a Roman enclosure and boundaries (**145**). Approximately 770 m to the south-south-west of this and c.900 m to the east of Sausthorpe are further cropmarks of. These assets are of **evidential** significance and **low** value.

Roman (AD 43-410) assets within the 250m Zone of Influence.

4.3.40 Roman activity within the 250m Zone of Influence is represented by findspots and settlement activity.

4.3.41 The site of an extensive Romano-British settlement (**460**) is recorded at Dalby, Ulceby and Fordington. This site lies both sides of the Roman road and extends north into Ulceby. Evidence of wooden tiled-roof buildings, with chalk and rammed earth floors were identified. Finds included coins from the 1<sup>st</sup> to 5<sup>th</sup> centuries; Samian, New Forest, castor and coarse ware pottery; nails; glass and bronze. A quern stone, metalwork and flint work were also found.

4.3.42 Just to the north of this site, evidence of Roman activity (**461**) was recovered from a field immediately west of Ulceby Cross. The line of a Roman road was identified, as a chalk and gravel spread across the field. Pottery finds from the 2<sup>nd</sup> – 4<sup>th</sup> century were found, along with two possible rubbish pits containing animal bones, pottery and oyster shells. Both these assets (**460**, **461**) have **evidential** value, as evidence of Romano-British settlement activity. The regional research framework highlights a need to gain an understanding of routeways during the Roman period, to establish their date, direction and construction (Ref. 22). Both therefore have the potential to contribute to the regional research agenda and consequently are of **medium** value.

4.3.43 At Ulceby with Fordington Roman pottery was discovered which included Samian Ware in a field opposite a known settlement site (**93**). Romano British pottery was also identified in 1909 at Langton by Spilsby (**95**, **96**, **97**). These assets are of **evidential** significance and **low** value.

4.3.44 Roman enclosures and boundaries, associated with other cropmarks of uncertain origin (**138**), are located across Partney Road. This is of **evidential** significance and **low** value. Also at this location is a Roman cropmark trackway (**226**). The regional research framework highlights a

need to gain an understanding of routeways during the Roman period, to establish their date, direction and construction (Ref. 22). This asset therefore has the potential to contribute to the regional research agenda consequently it is of **medium** value and **evidential** significance.

- 4.3.45 Multiple find spots are recorded at East Keal. Romano-British greyware pottery sherds were identified alongside a kiln prop (**109**). Two areas with a high concentration of Romano-British finds have been identified at East Keal resulting in the potential location for other sites of Roman origin in the area. During fieldwalking which was undertaken along the route of the East Keal bypass, Romano-British pottery which included greyware, shell gritted ware and Samian were recovered. A Romano-British site was defined by three distinct concentrations of findspots during the Fenland survey (**216**). These concentrations comprised two large lumps of slag and greyware sherds; greyware, mortaria, colour coated ware and slag; and greyware, shell gritted ware, colour coated ware and slag. The plough has also caught a layer of darker soil, chalk/mortar and burnt material. These assets are of **evidential** significance and **low** value.

#### Early Medieval (410-1066) assets within the planning application boundary

- 4.3.46 There is one recorded heritage asset within this route section recorded as an Early/Middle Saxon site (**108**), recorded at the southern end of the route section at East Keal. This site consists of three or more concentrations of pottery within a soil mark, but was not visible during the archaeological walkover survey. Other finds include a burnt piece of amber, rectangular piece of polished bone, a lava quern and slag. The regional research agenda identifies the need to undertake survey and intensive study of known sites (Ref. 23). This asset is of **medium** value and **evidential** significance due to the rarity of sites which date to this period and its ability to contribute to the regional research framework.

#### Early Medieval (410-1066) assets within the 250m Zone of Influence

- 4.3.47 Two Saxon records are present within the 250m Zone of Influence at East Keal. Sherds of mainly Early Saxon, with some Middle Saxon, pottery have been discovered and noted as a Saxon site (**91**). A further eight sherds were discovered at a possible Late Saxon or Early Medieval settlement site (**217**). Both of these assets are of **evidential** significance and have a **low** value.

#### Medieval (1066-1540) assets within the planning application boundary

- 4.3.48 Geophysical Survey identified ridge and furrow that was oriented east-west and south- north at Dalby Bar (**398**). This asset is of **low** value and **evidential** significance.
- 4.3.49 Archaeological walkover survey identified a further area of possible ridge and furrow at Dalby (**149**). This asset was visible as earthworks and it is of **low** value and **evidential** significance. Its setting is informed by its location within agricultural land with which it has a functional and historical association.
- 4.3.50 The Medieval Chapel of Well is recorded to the south-west of Dalby (**92**). In the late twelfth century, a grant was given to the chapel. This asset is of **evidential** and **historical** significance,

and **low** value. To the north of Raithby two areas of ridge and furrow are recorded (**130**, **132**) however they were not visible during the archaeological walkover survey. Also at Raithby is the earthworks of a Medieval trackway (**129**), this was not visible during the archaeological walkover survey. These assets are of **evidential** significance and **low** value.

- 4.3.51 Geophysical survey identified two areas at Mardon Hill (**401**, **402**). These assets are of **evidential** significance and **low** value.
- 4.3.52 Artefactual evidence has also been discovered through work on the East Keal bypass, where a large quantity of Medieval pottery was recovered from field 2 (**107**) of the bypass work. This asset is of **evidential** significance and **low** value.

#### Medieval (1066-1540) assets within the 250m Zone of Influence

- 4.3.53 A Medieval field system is recorded in Langton by Spilsby (**106**). This asset comprises a large area of cultivation terraces and strip lynchets. It is of **low** value and **evidential** significance.
- 4.3.54 The site of the deserted Medieval village of Dexthorpe (**444**) was recorded as comprising the earthwork remains of a church, building, crofts, trackways and ponds. Its setting is informed by its rural location within the current village of Dexthorpe. Whilst its setting does extend into the planning application boundary, this setting only forms part of its significance. This asset is of **medium** value due to its potential to contribute to the regional research framework. It is of **evidential**, **historical** and **aesthetic** significance.
- 4.3.55 The shrunken Medieval village of Langton (**418**) is located on the very edge of the 250m Zone of Influence at Langton. It is mentioned in the Domesday Survey the old hall burnt down in 1405. Its setting is informed by its location on the outskirts of the village of Langton with which it has a functional and historical association. This asset is of **medium** value due to its potential to contribute to the regional research framework. It is of **evidential**, **historical** and **aesthetic** significance.
- 4.3.56 Earthwork ridge and furrow is recorded at Dalby (**229**). The setting of this asset is informed by the agricultural land within which it sits, it does not extend to within the planning application boundary. It has **evidential** and **aesthetic** significance and is of **low** value.
- 4.3.57 To the north-east of Sausthorpe, a field boundary cropmark is recorded (**136**). This is of **evidential** significance and **low** value.
- 4.3.58 On the very edge of the 250m Zone of Influence and to the north of Hundleby are the earthworks of a Late Medieval field system which comprises ridge and furrow and field boundaries (**449**). This asset was identified on aerial photographs by the NMP. Its setting is informed by its location within agricultural land and does not extend to within the planning application boundary. It is of **low** value with **evidential** and **aesthetic** significance.
- 4.3.59 The Medieval settlement at Mavis Enderby (**134**) was identified through earthworks. It consists of crofts, boundaries and ridge and furrow. This asset is of **historical** and **evidential** significance. This asset is of **medium** value due to its potential to contribute to the regional research

framework. Its setting is informed by the proximity of the modern-day settlement of Mavis Enderby and its location within the Rectory Park (234). Whilst the setting of the Medieval settlement (134) does extend into the planning application boundary, this setting only forms small part of its significance.

- 4.3.60 Two areas of ridge and furrow are located on the outskirts of Raithby (128, 450), The settings of both of these assets are informed by their location within agricultural land with which they would have had a functional and historical association. The setting of one area (128) does extend into the planning application boundary, but this setting is not a major contribution to its significance. Both assets are of **evidential** and **aesthetic** significance, and are of **low** value.
- 4.3.61 Ridge and furrow was identified at Wheelabout Wood, West Keal (176) during a magnetometry survey, although it was not visible during field walkover survey. It is of **evidential** significance and **low** value.
- 4.3.62 Artefactual evidence from East Keal included the discovery of Toynton and Bolingbroke wares (110,111) alongside a kiln prop and in association with a Medieval bronze strap end (218). A possible Medieval settlement was also identified within this area (78) this was indicated by slight soil marks and a scatter of unglazed pottery as well as a further concentration of pottery, building rubble and some tile; These assets are all of **evidential** significance and **low** value.

#### Post Medieval (1540-1901) assets within the planning application boundary

- 4.3.63 East Keal Park (168) was recorded on the first edition c.1880 and c.1905 Ordnance Survey maps. This asset is of **evidential**, **historical** and **aesthetic** significance and **low** value, and represents the enclosure of this area within the Post Medieval period. Its setting is informed by its upland location on the outskirts of East Keal with views to the lowlands to the south.

#### Post Medieval (1540-1901) assets within the 250 m Zone of Influence

- 4.3.64 The Post Medieval activity is predominantly represented by industrial and agricultural remains.
- 4.3.65 Archaeological walkover survey identified two quarry pits at Rigsby (254) and Bluestone Heath (256), These assets are both of **low** value and **aesthetic** and **evidential** significance. The setting of these assets is informed by the agricultural landscape within which they are situated and do not extend as far as the planning application boundary.
- 4.3.66 An unnamed, partially extant, nineteenth century unlisted farmstead (428) is recorded in Dexthorpe, Dalby. The farmhouse is attached to a range of working buildings, with a regular U plan courtyard. The setting of this asset is informed by its isolated location, surrounded by agricultural farmland, with which it has a functional and historical association. It has **evidential** significance and is of **low** value.
- 4.3.67 To the south-west, Langton Grange Hall and Gardens (231) was built by Bennet Langton in 1886, and designed by Louth architect James Fowler; it was demolished in the late 1950s. This asset has **evidential** and **historical** significance and **low** value.

- 4.3.68 Archaeological walkover survey identified a former quarry at Dalby (**253**). This asset is of **aesthetic** and **evidential** significance, it is of **low** value. The setting of this asset is informed by the agricultural landscape in which it is situated and does not extend as far as the planning application boundary.
- 4.3.69 House Farm (Stainton's Farm), Dalby (**415**) is a partially extant nineteenth century unlisted farmstead. The setting of this asset is informed by its location, in the centre of Dalby, surrounded by agricultural land with which it has a functional and historical association. This asset has **evidential** significance and is of **low** value.
- 4.3.70 The site of America Farm (**463**) is recorded in Langton by Spilsby. This demolished nineteenth century farmstead had a regular courtyard and a detached farmhouse. It has **evidential** significance and is of **low** value.
- 4.3.71 There is one partially extant nineteenth century farmstead in Sausthorpe, this is East Farm (**32**). Its setting is informed by its rural location surrounded by farmland with which it has a functional and historical association. The modern agricultural buildings which lie to the north east also form part of its setting. Whilst its setting does extend into the planning application boundary, this setting is not a major contribution to its significance. It is of **low** value and **evidential** significance.
- 4.3.72 In Partney, there is a site of a demolished nineteenth century unlisted outfarm (Partney Barn) (**416**). The setting of the asset is informed by its isolated location, surrounded by associated agricultural land. It has **evidential** significance and is of **low** value.
- 4.3.73 Red House at Raithby (**185**) is a partially extant nineteenth century farmstead. This asset is of **evidential** significance and **low** value. Its setting is informed by its location on the edge of Raithby, its position within the Raithby CA (**CA1**) and its associated agricultural land. Its setting does extend into the planning application boundary, but this setting is not a major contribution to its significance.
- 4.3.74 Two Post Medieval heritage assets are located in Mavis Enderby. These are the Rectory Park (**234**) which was identified on the 1907 OS map and earthwork and stonework quarries (**133**), which were not visible during the archaeological walkover survey. These assets are both of **evidential** significance and **low** value.
- 4.3.75 Two Post Medieval unlisted farmsteads (**429**, **430**) are located to the south of Raithby. Glebe Farm (**429**) and Raithby Grange (**430**) are both partially extant nineteenth century unlisted farmsteads. The HER states that the site of Raithby Grange (**430**) is based upon place name evidence. The settings of these assets are informed by their location on top of Raithby Hill, surrounded by agricultural land, with which they have functional and historical associations. The settings of these assets do extend into the planning application boundary, although are not a major contribution to their significance. These assets have **evidential** significance and are of **low** value.
- 4.3.76 The Old Churchyard, Raithby (**446**) is a cemetery and friends burial ground located to the south of Raithby. According to the Raithby Church Terriers (documents detailing lands and property

- owned by the Church of England) the site is also known as the 'Old Churchyard' and 'The Quaker Burial Ground'. In 1606, the site was described as 'old' implying that the site was already of some antiquity at that time. Up until the 1960s the site was pasture land, although the land is now disused. This asset has **evidential** significance as a burial site with human remains, **historical** significance for its association with the Church of England and the Quaker Religious Society of Friends, and **communal** significance. It is of **medium** value.
- 4.3.77 The site of Wood House, Wood Hill (**459**) was identified on the 1887 OS 1:10560 map, indicating that this asset was built before this date. It does appear on the 2000 OS 1:10000 map but is not shown on the 2017 OS 1:10000 map, indicating that it was destroyed sometime between these dates. It has **evidential** significance and is of **low** value.
- 4.3.78 There are three nineteenth century farmsteads recorded at East Keal which survive to varying extents. The unnamed farm and Fair View farm (**35, 37**) are partially extant whilst Highfield Farm remains upstanding (**36**). The settings of these assets are informed by their location surrounded by agricultural land with which they have functional and historical associations. The settings of all these assets are also informed by their location near to the settlements of East and West Keal, and the areas of industrial activity at Mardon Hill. The settings of all do extend into the planning application boundary, however, these settings only form part of their significance. These assets are all of **evidential** significance and **low** value.
- 4.3.79 Archaeological walkover survey identified two industrial heritage assets at Mardon Hill. The Brick and tile works (**251**) were identified by a quarry hollow and a quarry pit of a disused quarry was also identified within this area (**250**). These are both of **aesthetic** and **evidential** significance and **low** value. Their settings are informed by the agricultural land within which they sit, their proximity to Brickfields House (**LB28**) and to the settlements of East and West Keal. The setting of these assets (**250, 251**) extends to within the planning application boundary and does form part of their significance.
- 4.3.80 A building platform at Mardon Hill (**249**) was identified on the 1979 OS 1:10 000 map and during the archaeological walkover survey. This asset has **evidential** significance and is of **low** value.
- 4.3.81 An unnamed rectory dated to the late eighteenth century is located to the southwest of East Keal (**75**). A second rectory, Glebe Farm in East Keal (**186**) is a partially extant seventeenth century listed farmstead. It has a loose courtyard with four sides of the courtyard formed by working agricultural buildings. The farmhouse is detached with the gable end facing on to the yard. These assets are all of **evidential** and **aesthetic** significance, they are of **low** value. The setting of these assets are informed by each other and does not extend to the planning application boundary.
- 4.3.82 The Keal Wesleyan Methodist Chapel is located in East Keal (**175**) and was built prior to 1800. It was rebuilt on same site in 1863 but has now been demolished. It was originally built in red brick and was classical in style. It is considered to be of **low** value and **evidential** significance.

Modern (1901-Present) assets within the planning application boundary

- 4.3.83 A single Modern asset lies within the planning application boundary. This is the crash site of Lancaster PB476 which occurred on March 4 1945 (**409**). The aircraft is considered to have been shot down by enemy action, it crashed and burnt out (Ref. 24). The exact location of this crash site is not currently known; however, research has indicated that it may fall within the planning application boundary. If the aircraft broke up in the air, debris may be spread over an area greater than 1km. Alternatively if the aircraft made direct impact with the ground, debris could be spread over 1,000m<sup>2</sup>, if a large bomb exploded on impact it could be spread over 1km from the central impact area (Ref. 24). Research has indicated that this is not a Military War Grave however it is likely that there will be debris within the planning application boundary. It is considered unlikely that live or practice bombs will remain at the site however it cannot be discounted, small arms ammunition may remain (Ref. 24). This receptor is of **medium** value and **evidential, historic** and **communal** significance.

Modern (1901-Present) assets within the 250m Zone of Influence

- 4.3.84 A single Modern asset lies within the 250m Zone of Influence of the second route section. These are searchlight batteries, with associated buildings surviving as earthworks in Dalby (**148**). The area seems to be under cultivation, based on current aerial photographic evidence. This asset is of **evidential** and **historical** significance and of **low** value.

Undated assets within the planning application boundary

- 4.3.85 There are twelve records of unknown date that are located in the planning application boundary, all of which are of **low** value and have **evidential** significance.
- 4.3.86 The majority of the undated features which are recorded within the planning application boundary are cropmarks. A cropmark comprising a trackway and enclosure is recorded to the east of Driby (**126**). This asset has been identified through aerial photography and it was not visible during the archaeological walkover survey. Its extent and nature was further clarified through the results of geophysical survey and LiDAR and aerial photographic analysis (Ref. 19, Ref. 1). Two sets of undated cropmarks (**142, 143**) were identified near Langton by Spilsby. The first (**142**) was a cropmark field boundary, enclosure and boundary, the second (**143**) a cropmark enclosure. Several early trackway sites (**94**), of unknown date were also identified in Langton by Spilsby
- 4.3.87 To the south of Ring Holt at Langton by Spilsby, cropmarks of a field boundary and linear feature are recorded (**147**).
- 4.3.88 A potential settlement which consists of boundaries and an enclosure are recorded at Sausthorpe (**137**). Recorded 700m to the south-east of Sausthorpe is a sand pit (**114**) which was depicted on Ordnance Survey mapping.

- 4.3.89 Magnetometer survey at Raithby identified a series of probable pits (**66**). Also recorded within the Raithby area is a cropmark trackway (**131**), however this was not visible during the archaeological walkover survey.
- 4.3.90 Several enclosures, at Wheelabout Wood (**399**) identified from geophysical survey. A small enclosure was clearly defined which appeared to be subdivided and contained several pit-like responses. Another ditch attached to the north-west corner and possible ring ditch. A complex of archaeological features was reflected by an area of increased magnetic response, area went beyond the Zone of Influence to the east and the west. Approximately 40m to the south of the enclosure are two ditches which may be of archaeological interest.
- 4.3.91 In the centre of this survey strip two linear anomalies are visible (**400**) which may well form an enclosure of archaeological interest. There appear to be a cluster of pits or other cut-features and a general increase in the magnetic responses which could reflect archaeological activity. A possible linear ditch was also identified at Mardon Hill (**403**) although the response was uncertain.

#### Undated assets within the 250m Zone of Influence

- 4.3.92 Further undated assets of known archaeological potential have been located within the wider 250m Zone of Influence These assets are predominantly cropmarks and all have **evidential** significance and **low** value.
- 4.3.93 An undated cropmark enclosure and field boundary (**462**) are located to the south east of Driby, having been identified from aerial photographs. This asset has **evidential** significance and is of **low** value.
- 4.3.94 A linear cropmark feature (**127**), running north to south is recorded to the south of Driby Grange, identified from aerial photographs. This asset was not visible during the archaeological walkover survey.
- 4.3.95 To the north of Langton by Spilsby, a cropmark boundary (**422**) is recorded. Several early trackway sites (**94**) are also recorded in Langton by Spilsby, along with several quarries and lime quarries (**424**).
- 4.3.96 A cropmark (**445**), to the southeast of the Spellow Hills, was identified on 1985 Aerial Photographs and described as possibly being two ditches or a cropmark of a long barrow.
- 4.3.97 The NMP identified a linear cropmark feature at Partney (**228**) from cropmark analysis, interpreted as a possible Prehistoric boundary.
- 4.3.98 Geophysical survey identified a probable ditched enclosure in Wheelabout Wood (**68**), it was not visible during the archaeological walkover survey.
- 4.3.99 All of these assets are considered to have **evidential** significance and be of **low** value. Interpretations of these assets may change should further archaeological work be conducted to establish further details, particularly a date. As such, their value may subsequently also change, however due to their nature, this is highly unlikely.

### Historic Map Regression

- 4.3.100 This route section covers the proposed DC cable route from the Parish of Rigsby with Ailby to the Parish of West Keal.
- 4.3.101 The area covered by the route section is predominantly characterised by agricultural land that is divided into rectilinear fields that are intersected by field boundaries, drains and roads. This route section crosses through the River Lymn. There are also several areas of woodland and tree plantation, dispersed settlements and farmsteads.
- 4.3.102 The earliest map for this route section is the 1775 map of the Parish of West Keal in the County of Lincolnshire by John Hudson. This map only covers a small area of the proposed DC cable route, close to the junction of section 2 with section 3, in the Parish of West Keal. It illustrates a mixture of field sizes in use, and several main roads. The Hagnaby Road is shown crossing from east to west, and follows the same route as the Modern A155 road. It also illustrates the minor road which travels north towards Raithby and the Bolingbroke Road which follows the route of the current Keal Hill Road. This map illustrates that the fields to the north of Keal Hill Road are much larger than those within West Keal. Chuch Lane at West Keal is shown, although it continues further north than the present lane. A small pit is illustrated at the end of the lane, at the site of the current disused pit. The land to the west of the A16 road is shown as fields.
- 4.3.103 The 1800 map of the Lordship of Mavis Enderby in the County of Lincoln by William Taylor shows the allocation of land ownership in the Parish of Mavis Enderby. It shows the 'Boston to Lough' Road running from north to south as the eastern parish boundary. This runs along the same route as the unnamed Modern minor road, which runs from West Keal to Raithy. Along the west of this road the fields are irregular and dispersed with wooded areas. The 'Bolingbroke Road' is also shown, following the same course as the Modern B1195 road.
- 4.3.104 The 1839 Dalby and Dexthorpe enclosure plan of allotments and exchanges shows the land ownership within the Parish of Dalby with key roads and field boundaries. 'Turnpike Road' is illustrated which follows the route of the Modern A16 road. Close to Dalby Bar, a sizable chalk pit is marked on the western side of the road that is now the site of a disused quarry (**253**), as identified in the archaeological walkover survey. This area, to the west of the A16, is labelled 'The West Field' but now forms part of Helen's Firs. The Skendleby and Ulceby roads are illustrated, closely following the same route as the unnamed Modern minor road that connects Langton with Ulceby.
- 4.3.105 The 1887 1:10,560 OS map of Lincolnshire shows a variety of field sizes, although most are medium in size. To the north of Raithby there is a high density of smaller Medieval fields. Across this route section there are lots of wooded areas including plantations, carrs, holts and orchards. These wooded areas vary in size larger plantations are located to the north of Sausthorpe. Many of the villages within this route section are adjacent to woodland. Several chalk pits, sand pits and stone pits can be seen scattered across this section of the route, particularly in the areas around Sutterby and Langton. Chalk pits are illustrated next to the houses at Driby Black Houses (**264**), near to Scotland House, and in Dexthorpe. Stone pits are shown at Dalby Bar (**253**),

- Langton Hill (265) and in Sutterby. A brickyard (251) and 'Old Marl Pit' (250) are illustrated at Mardon Hill.
- 4.3.106 The 1906-1907 1:10,560 OS map records little significant change from the previous map. There are fewer trees illustrated along field boundaries, especially in relation to the smaller fields. More drains are shown along field boundaries. Several roads and crossroads are now illustrated with names, for instance Miles Cross Hill road. Two quarry pits are illustrated at Bluestone Heath that were not shown on the 1887 map (256).
- 4.3.107 The 1950-1951 1:10,560 OS map records little overall change. A slight increase of buildings in and around villages can be seen, particularly in Raithby, Sausthorpe and Sutterby. Settlement growth is predominantly focused along main roads.
- 4.3.108 The 1956 1:10,000 OS map shows little overall change. Several archaeological finds and sites have been labelled; a perforated stone axe hammer to the north of Langton (266), a long barrow at Spellow Hills and the site of a Romano-British settlement north-west of Ulceby that lies outside of the Zone of Influence. Some wooded areas and plantations have been lost.
- 4.3.109 The 1975-1976 1:2,500 OS map illustrates little overall change. The site of Driby Black Houses (263), between Sutterby and Ulceby Cross is no longer shown. Several buildings and chalk pits which were previously shown on the 1888 and 1906 maps, are no longer marked. A reservoir is now illustrated opposite Scotland Farm on the A16, along with Scotland House to the north. The 1906 1:2,500 OS map labels Scotland Farm as Scotland House.
- 4.3.110 The 1976-1979 1:10,000 OS map shows some changes. Most of the villages in the section have experienced further expansion, however slight. This is particularly notable in Sausthorpe and Raithby. In contrast to this, several smaller more remote farms are no longer shown on the map, presumably now smaller in size or no longer in use. Numerous additional drains and tracks are now recorded. Many of the chalk pits previously illustrated are now lost or labelled as disused. A new reservoir is illustrated opposite Scotland Farm, Ulceby. Many of the smaller fields which had remained up until this point have been incorporated into larger fields. Several roads are now labelled as A-roads and a roundabout has been added at Ulceby. The quarry pit at Mardon Hill (250) is now illustrated as disused. The quarry pits at Bluestone Heath (256) are no longer shown. A small building is illustrated at Mardon Hill that was not previously shown on mapping. It was identified on the Walkover Survey as a building platform (249).
- 4.3.111 The 1983-1989 1:10,000 OS map illustrates little overall change. There is however an increase in the number of drains and trackways. Several small tree plantations have been lost, these include the round plantations near to Langton.
- 4.3.112 The 2000 1:10,000 OS map shows greater changes than previous maps, although overall the area remains to have changed little. Further settlement growth can be seen, particularly in Sausthorpe, East Keal and West Keal. An increase in the number of new buildings along main roads and at major junctions can be seen. To the south-west of Sausthorpe many of the fields have become significantly bigger, and consequently there are fewer field boundaries. Across this

section there is a notable increase in the number of bodies of water illustrated, particularly to the north of Mavis Enderby.

- 4.3.113 The 2016 1:10,000 OS map shows some changes, although overall this route section has changed little in layout and use since the 2000 map. Almost all settlements have expanded, with villages such as Sausthorpe, Raithby, East Keal and West Keal showing the greatest growth. Settlement growth is focussed along main roads and major junctions. Some small farms are no longer marked, whilst others have expanded. Almost all of the major manors and farms which are illustrated on the 1887-1888 map can still be seen. Similarly, the majority of the wooded areas, including plantations, remain but there has been some loss across the section.

#### Archaeological Potential

- 4.3.114 Unsurprisingly, for the Lincolnshire Wolds landscape, there is a **high** potential for archaeological assets, dating to the Prehistoric period to be present. The second route section has shown a high concentration of Prehistoric assets, including multiple nationally significant scheduled monuments. The majority of the assets date to the Neolithic period (4,000 BC- 2,5000 BC), with other Prehistoric periods represented, demonstrating the potential for continual occupation of the landscape throughout the Prehistory. The majority of the assets detailed above are characterised as artefact find spots or scatters. However, examples of settlement sites and funerary rites, including the scheduled monuments, result in there being a very significant potential for further assets of Prehistoric nature, of both local and national importance.
- 4.3.115 There are a few examples of Roman archaeology within the area. Evidence is provided through assemblages of artefacts throughout the route section, with two areas considered potential settlements in East Keal (**77** and **216**). The presence of cropmarks north east of Sausthorpe (**145**) and a trackway (**226**) demonstrates a **medium** potential for there to be further examples of Roman activity within the Zone of Influence or planning application boundary.
- 4.3.116 The Early Medieval resource details few examples of activity. Examples include artefactual evidence and occupation but very little is found, with site definitions tentatively assigned to limited examples of pottery scatters. The potential for further Early Medieval activity is **low**.
- 4.3.117 Medieval resources are present within the route section through settlement activity, examples of ridge and furrow, as agricultural land management and artefactual assemblages. The strong evidence for settlement activity, however, including the presence of religious practice through the Medieval chapel at Well (**92**), indicating the potential for there to be further archaeological evidence of Medieval origin, resulting in a **medium** probability, for further assets.
- 4.3.118 A **medium** potential is present for there to be further Post Medieval assets within the second route section. The discovery of three further assets during a preliminary field walkover survey demonstrates the presence of unknown heritage assets dating to the period. Furthermore, there was the already known assets of farmland and other examples of quarrying, demonstrating an industry focus along the line of the second proposed DC cable route section.

- 4.3.119 Limited evidence of Modern assets is present and the potential is **low** for any further assets to exist.
- 4.3.120 The presence of a number of undated assets both within the planning application boundary and Zone of Influence, establishes the potential for there to be more assets of archaeological nature. These assets are associated primarily with settlement activity. As a consequence, a **medium** potential is raised for archaeological assets as a general principle, due to the particular dense nature of the second route section.

#### 4.4 Route Section 3 A16 (Keal Road) to River Witham

##### Geology and topography

- 4.4.1 In Route Section 3 of the proposed DC cable route, the bedrock consists of three formations. These are the West Walton Formation, the Ampthill Clay Formation and the Kimmeridge Clay Formation. The sedimentary bedrock for this section is dominated by mudstone, siltstone and sandstone.
- 4.4.2 Superficial deposits within this route section comprise of two distinct areas. The northern area, between West Keal and Stickney, is dominated by Diamicton Till. This deposit is Glacigenic and was formed up to 3 million years ago in the Quaternary Period when the nearby environment was dominated by Ice Age glaciers. The second southern area of superficial deposits, between Stickney and the River Witham, comprises alluvium deposits of clay, silt and sand. These deposits are Fluvial and were formed up to 2 million years ago in the Quaternary Period when this area was dominated by rivers. They follow the channel of the River Witham and include river terrace deposits, floodplain alluvium, estuarine and coastal plain deposits.
- 4.4.3 The topography of the landscape within Route Section 3 is predominately low-lying, with the majority of the proposed DC cable route lying between 2 and 3 m AOD. The land rises to the south west of West Keal, rising to the highest point of the section in West Keal, where the land is 32 m AOD. Across this section are dispersed settlements, focused in nucleated villages. Patterns of drainage are prominent in this section with streams and drains transecting the landscape. The land is divided into rectilinear fields used for agricultural production, with a mix of arable and pasture land.

##### Historic landscape character

- 4.4.4 Route Section 3 is made up of two Historic Landscape Character Zones. As with Route Sections 1 and 2 it includes the Spilsby Crescent Zone and the Eastern Fens. This landscape character zone comprises scattered nucleated settlements located on ridges of slightly higher ground. There are also some linear settlements which have been formed by the infilling of several dispersed settlements. Although the overall settlement pattern is relatively dispersed the density of settlement is quite high in comparison to other areas of fen or marsh as a whole. It is likely that there was limited settlement within this zone in the Early Medieval period, a possible exception to

this would have been in the Stickney/Sibsey area. The reclamation of the fenland began in the eighteenth and nineteenth centuries during which drainage channels and pumping stations were created. It is unlikely that the consolidation of fields within this zone did not take place as the majority of the field boundaries were drains. Consequently, the rectilinear pattern of fields is still evident today and are the most readily identifiable entities of this region. The historic cores of much of the settlements within this region are still evident and identifiable today, as Modern development has been small scale.

#### Designated Heritage Assets

- 4.4.5 Route Section 3 has one designated heritage asset, the Twenty Foot Drain Road bridge (**LB32**) which lies in the 250m Zone of Influence. The Bridge over Twenty Foot Drain (**LB32**), lies to the west of Sibsey and was built circa 1812, under the direction of the engineer John Rennie. The surrounding area was drained and enclosed by Rennie between 1802 and 1812. The bridge is constructed of red brick with ashlar dressings, and underwent restorations in the 20<sup>th</sup> century, resulting in 20<sup>th</sup> century red brick patching. The eastern half of the bridge lies in the parish of Carrington, whilst the western half is in the parish of Westville. The setting of the bridge is informed by its location within drained agricultural land, and as a crossing point over the Twenty Foot Drain. This setting contributes to its **historical** significance for its associations with the surrounding agricultural land and its links with John Rennie. It also has **historical** significance for the way it illustrates the history of the Fens, the evolving nature of the surrounding landscape and as a structural example of technological changes in land management. It is of **medium** value.

#### Non-Designated Heritage Assets

##### Prehistoric (30, 000 BC – AD 43) assets within the planning application boundary

- 4.4.6 The Prehistoric assets within the planning application boundary are restricted to findspots. Sherds of Billingborough type pottery were discovered on sand adjacent to alluvium, on a site to the north of Stickford (**86**). To the west of Stickford two sherds of Early to Middle Bronze Age pottery were discovered (**87**). These two assets (**87, 86**) are located only 259 m from each other with the two sherds (**87**) located to the south of the scatter (**87**). The proximity of these two finds would also suggest that the settlement activity extends between the two findspots forming an area of higher potential for this period. These assets (**86, 87**) offer **evidential** value as evidence of early human activity and are of **low** value.
- 4.4.7 At Hagnaby Lock a dense area of Prehistoric activity is recorded which includes a number of find scatters that are located within the planning application boundary. These scatters include Early Bronze Age pottery sherds and flints (**83**).
- 4.4.8 The regional research agenda has highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Although these assets have since been removed there is the potential for more unrecorded finds to be at

this location, therefore contributing to the research agenda. These assets are therefore of evidential significance and medium value.

#### Prehistoric (30,000 BC- AD 43) assets within the 250m Zone of Influence

- 4.4.9 Within the 250m Zone of Influence, Prehistoric activity is represented by find spots. Two fragments of Neolithic stone axes were found in the parish of West Keal (**74**).
- 4.4.10 Several Bronze Age and Roman sherds were recovered from a poorly exposed surface also near West Keal (**200**). Both are considered to be of **low** value and **evidential** significance.
- 4.4.11 There is a dense area of Prehistoric activity recorded at Hagnaby Lock. A collection of lithics recovered indicated that Mesolithic/Neolithic flint working practices were being carried out on or near to the site (**122**). A scatter of flint finds, within close proximity, indicated a possible Early Bronze Age settlement site on a sandy ridge close to alluvium (**81, 82, 84**). Two ditches, the remnants of a possible burnt mound, a gully and several postholes were recorded on the site (**81**). Finds also included a flint scatter on sand (**84**) and a blade with an edge gloss (**82**). The regional research agenda has highlighted the need to gain an understanding of Neolithic and Bronze Age societies alongside their access to resources by looking at the distribution patterns of sites and artefacts, alongside characterising the sources of lithic materials (Ref. 16). Although these assets have since been removed there is the potential for more unrecorded finds to be at this location, therefore contributing to the research agenda. These assets are therefore of **evidential** significance and **medium** value.

#### Roman (AD 43-410) assets within planning application boundary

- 4.4.12 A scatter of Roman pottery and quern fragments (**201**) was found to the west of Stickford. Geophysical survey identified two weak linear anomalies which may be indicative of the settlement (Ref. 19). This asset (**201**) represents potential settlement activity within this area dating to the Roman period. It is assessed to be of **low** value and has **evidential** significance.

#### Roman (AD 43-410) assets within the 250m Zone of Influence

- 4.4.13 Romano-British activity within the 250m Zone of Influence is represented by find spots. Romano-British pottery was recovered from two or more concentrations of sherds within a soilmark of possible Iron Age and Romano-British sites near to East Keal (**212**). The pottery included greyware, shell gritted ware, mortaria and colour-coated ware. A concentration of Romano-British greyware sherds was found within a soilmark, along with one flint, to the south west of West Keal (**73**).
- 4.4.14 A group of Romano-British pottery sherds were recovered from a poorly exposed surface, to the south of Hagnaby (**206**). The site also yielded 27 flints, Bronze Age pottery and burnt stone.
- 4.4.15 A possible Roman settlement site, north-west of Stickford, was identified from a scatter of Romano-British pottery which extended beyond the soilmark (**85**).

- 4.4.16 All of these assets (**73, 85, 212, 206**) offer evidence of Roman-British activity within the Zone of Influence and are of **evidential** significance and **low** value.

Early Medieval (410-1066) assets within the planning application boundary

- 4.4.17 There are no recorded heritage assets dating to the Early Medieval period within the planning application boundary of the third section of the proposed DC cable route.

Early Medieval (410-1066) assets within the 250m Zone of Influence

- 4.4.18 There are four assets which date to the Early Medieval period within the 250m Zone of Influence. A Late Saxon/Early Medieval settlement site was identified south of West Keal (**207**), close to a moated area. Pottery sherds mainly dating from the 9<sup>th</sup> to 12<sup>th</sup> century were found within a soilmark (**207**), along with bones and a number of Romano-British sherds.
- 4.4.19 To the south-west of the settlement site (**207**), a sherd of Early Saxon pottery (**282**) was found, which is likely to be associated with known activity in this area.
- 4.4.20 Two sherds of Saxon pottery were recovered from a possible Romano-British settlement site, to the north-west of Stickford (**69**). A scatter of Romano-British pottery was also found on the site (**85**). These assets offer evidence of continual human activity across the Romano-British and Early Medieval period, are of **evidential** significance and **low** value.

Medieval (1066-1540) assets within the planning application boundary

- 4.4.21 Earthwork ridge and furrow (**172**) in East Keal, was identified from aerial photographs and recorded by the NMP. The HER reports that these earthworks were destroyed by later arable cultivation, however archaeological walkover survey confirmed the presence of this asset, preserved under woodland at Windrush. The asset has **evidential** significance and is of **low** value.
- 4.4.22 An area of ridge and furrow (**405**) was identified during geophysical survey, to the north-west of Stickford. This ridge and furrow was found to be north south oriented.
- 4.4.23 Another earthwork ridge and furrow was recorded by the NMP at Stickford (**171**), however the earthworks are believed to have been destroyed by later cultivation and consequently they were not visible or recorded during the archaeological walkover survey. (Appendix 2).
- 4.4.24 This asset (**171**) offers **historical** significance as evidence of past land use and agricultural practices within the area although this significance is limited as the asset is no longer extant. This asset is of **historical** significance and **low** value.

Medieval (1066-1540) assets within the 250m Zone of Influence

- 4.4.25 To the south-west of West Keal, is an area of earthwork ridge and furrow (**173**), identified on aerial photographs and recorded by the NMP. These earthworks have been destroyed by later arable cultivation. This asset has **evidential** significance and is of **low** value.

4.4.26 To the south of West Keal is the site of Manor House, a 19<sup>th</sup> century manor house with evidence of Medieval settlement. The Medieval moat has been converted into a ha-ha; earthworks on the site were levelled in 1956 except for a small ditch to the east and south of the manor house (203). None of these features around the Manor House were visible during archaeological walkover survey. A thin scatter of Medieval pottery, burnt stone and tile were found on the site, to the north west of the moated area (205). A scatter of Medieval pottery sherds, tile, iron and glass fragments were recovered within a soilmark 300m to the south west of the site (208). These assets likely relate to Late Saxon/Early Medieval assets identified on the site (207) and indicate an area of higher archaeological importance and are of **low** value. These assets particularly the manor house (203) have the potential to contribute to the regional research framework, this framework highlighted that a better understanding of early manorial sites is needed, there needs to be a synthesis of the evidence for moated sites within the region (Ref. 23). Moats also have the potential to hold well-preserved waterlogged deposits which could provide information on standards of living. The setting of the Manor House is informed by its location within agricultural land, with which it is associated. The proximity of several areas of ridge and furrow (173) contributes to its setting within a landscape dotted with evidence of medieval agricultural activity. Its setting does extend into the planning application boundary and does form part of its significance. The Manor House (203) is therefore of **medium** value and **has evidential** significance whilst the remainder of the assets are of **low** value and also have **evidential** significance.

#### Post Medieval (1540-1901) assets within the planning application boundary

- 4.4.27 There are three recorded Post Medieval assets within the planning application boundary.
- 4.4.28 A disused railway (413) on the eastern bank of the River Witham was identified from Ordnance Survey mapping. This railway line, which originally ran from Lincoln to Boston, was known as the Water Rail Way, as it followed the course of the River Witham. By the 1960s the railway had been closed. A large section of the railway has been converted for use as a cycle path. This asset has **historical** significance, for its association with the industrial heritage of Lincolnshire and **communal** significance as a publicly accessible cycle path. It also has **aesthetic** significance, as a linear feature along the River, which stretches across the Lincolnshire landscape. Its setting is informed by its location next to the River Witham and surrounded by agricultural land. It is of **low** value.
- 4.4.29 The site of unnamed farm is located in Sibsey (194). The demolished nineteenth century out farm, had a loose courtyard with two sides of the courtyard formed by working agricultural buildings. This demolished farmstead is of **low** value and has **historical** and **evidential** significance.
- 4.4.30 An unnamed farmstead in West Fen (190), visible during field walkover surveys, has been identified as a partially extant 19th century unlisted farmstead. It has a loose courtyard with three

sides of the courtyard formed by working agricultural buildings. The farmhouse is detached from the main working complex. The asset has **historical** significance and **low** value.

Post Medieval (1540-1901) assets within the 250m Zone of Influence

- 4.4.31 The majority of the Post Medieval non-designated assets within this route section are farmsteads which survive to varying extents.
- 4.4.32 An unnamed nineteenth century outfarm is located to east of West Keal. It is unlisted, has a regular L-plan courtyard and large Modern sheds are now located on the site (**38**). It is assessed to have **historical** significance as it relates to the history of agricultural activity in the area. Its setting is informed by the agricultural land which surrounds it, although its setting does not extend into the planning application boundary. It has historical significance and is of **low** value.
- 4.4.33 Manor House in West Keal (**187**) is a nineteenth century unlisted farmstead that was visible during walkover surveys. It has a regular courtyard with L-plan range plus detached buildings to the third side of the yard. The farmhouse is detached from the main working complex and was visible during the archaeological walkover survey. The setting of this asset is informed by its location surrounded by agricultural land, and does extend into the planning application boundary. Its setting only contributes part of its significance. The asset has **historical** significance and **low** value.
- 4.4.34 Glebe Farm (Limes Farm) in West Keal (**39**) is a partially extant nineteenth century unlisted farmhouse. It has a regular courtyard with linked outbuildings to all four sides of the yard. The farmhouse is detached from the main working complex. Its setting is informed by the surrounding agricultural land, which it is associated with. This setting does extend into the planning application boundary, although only forms part of the assets significance. It is assessed to be of **low** value and has **historical** significance.
- 4.4.35 Hagnaby Priory Country House and Park, in East Kirkby (**215**) is the country house and grounds of Charles Kirk, and was built in 1835 in the neo Tudor-Gothic style. It appears on c.1905 OS maps as Hagnaby House. Only fragmentary remains of the house survive. Whilst the house lies outside of the 250m Zone of Influence, the park land does extend into the area. This asset has slight **aesthetic** and **historic** significance and is of **low** value.
- 4.4.36 Magers Farm (**40**) is a partially extant nineteenth century farmstead with a courtyard and working agricultural buildings. Archaeological walkover survey identified building remains to the north-west of this farm (**246**). This building was depicted on the 1:10,000 map of 1978. These assets are of **evidential** significance and are of **low** value.
- 4.4.37 Staunch Farm in Stickford (**189**) is a redeveloped nineteenth century out farm in an isolated location. It consists of a single building although large Modern sheds are now located to the side of the site. The setting of this asset is informed by its location within agricultural land which it has a historical association with. The setting of this asset does extend into the planning application boundary, although does not make a major contribution to its significance. The asset is of **historical** significance and **low** value.

- 4.4.38 Byeway Farm, East Kirkby (**431**) is an extant nineteenth century farmstead. It has a regular courtyard of U plan and the farmhouse is detached from the main working complex. It is located within a loose farmstead cluster. The asset is of **historical** significance and is of **low** value.
- 4.4.39 Lock House (**41**) in Stickford is a partially extant nineteenth century unlisted farmstead. It has a courtyard with working agricultural buildings. The farmhouse is detached from the main working complex. It is of **historical** significance and **low** value.
- 4.4.40 The White Barn at Hagnaby Lock (**188**) is a partially extant nineteenth century unlisted farmstead. It has a loose courtyard with three sides of the courtyard formed by working agricultural buildings. The farmhouse is detached from the main working complex. The asset is of **historical** significance and **low** value.
- 4.4.41 Park Farm, Stickford (**432**) is a partially extant nineteenth century farmstead. It has a regular courtyard with L-plan range plus detached buildings to the third side of the yard. The farmhouse is detached from the main working complex. It has **historical** significance and is of **low** value.
- 4.4.42 An unnamed farmstead in West Fen (**433**) is a partially extant nineteenth century farmstead. It has a regular courtyard of E plan and the farmhouse is detached from the main working complex. There has been significant loss (greater than 50%) of traditional buildings. This asset has **historical** significance and is of **low** value.
- 4.4.43 Five farmsteads that survive to varying extents are recorded to be located in West Fen (**42, 43, 44, 45, 46,**). They all have **historical** significance and are of **low** value. The setting of two of these farmsteads (**45, 46**) extends into the planning application boundary, although these settings are not a major contributor to their significance.
- 4.4.44 The site of an unnamed farmstead is known in West Fen (**434**). This demolished, nineteenth century, farmstead forms a row with additional detached elements. The farmhouse was attached to a range of working buildings. Its setting is informed by its isolated location surrounded by agricultural land. It has **historical** significance and is of **low** value.
- 4.4.45 Medlam Farm, Carrington (**435**) is a partially extant nineteenth century farmstead, with regular courtyard of U plan. The farmhouse is detached from the main working complex and there has been a partial loss (less than 50%) of traditional buildings. Its setting is informed by its isolated location and does extend into the planning application boundary. It has **historical** significance and is of **low** value.
- 4.4.46 Skirbeck Farm (Skirbeck Allotment) in Sibsey (**193**) is a redeveloped nineteenth century unlisted farmstead with regular U-plan courtyard. The farmhouse is detached with the gable end facing on to the yard. Large modern sheds are located to the side of the site. Its setting is informed by its location surrounded by agricultural land. Its setting does extend into the planning application boundary although only forms part of its significance. The asset is of **historical** significance and **low** value.
- 4.4.47 The site of a demolished, unnamed farm (**464**) is known in Stickney. The nineteenth century farmstead had a regular courtyard with multiple regular yards and a farmhouse detached from the main working complex. It has **historical** significance and is of **low** value.

- 4.4.48 Sycamore Farm (**465**), is a nineteenth century farmstead, located in Sibsey. The farmstead has a loose courtyard, with working agricultural buildings, and a detached farmhouse. It has **historical** significance and is of **low** value.
- 4.4.49 The Harvest Man Inn in Carrington (**191**) is an extant nineteenth century unlisted farmstead. It has a regular courtyard with L-plan range plus detached buildings to the third side of the yard. The farmhouse is detached from the main working complex. Its setting is informed by its location surrounded by agricultural land and does extend into the planning application boundary although only forms part of its significance. The asset has **historical** significance and is of **low** value.
- 4.4.50 The site of an unnamed farmstead (**441**) is recorded in the north-west of the parish of Frithville and Westville. This demolished nineteenth century farmstead had a regular courtyard of U plan. The farmhouse was detached from the main complex of farm buildings. The asset has **historical** significance and is of **low** value.
- 4.4.51 The site of an unnamed farm is recorded in Thornton Le Fen (**60**). The demolished nineteenth century unlisted farmstead had a regular L-plan courtyard with the farmhouse detached from the main working complex. The demolished farmstead is of **low** value and **has historical** significance.
- 4.4.52 Primrose Hill Farm (**195**), Mill Farm (**196**) and Broadway (**197**) in Thornton Le Fen are three partially extant nineteenth century unlisted farmsteads. Each has a courtyard with associated working agricultural buildings and a farmhouse. Mill Farm (**196**) also has large Modern sheds located on site. The settings of all these farms are informed by their location surrounded by agricultural land. All of their settings extend into the planning application boundary, although these settings only form part of their significance. All of these assets are of **low** value and **have historical** significance.
- 4.4.53 There are four partially extant nineteenth century farmsteads in Langrville (**61, 198, 199, 442**). Beech House Farm (**198**) and Castle Dike Farm (**199**), have regular courtyards with farmhouses detached from the main working complex. Both have also seen a partial loss of traditional buildings. Elm Tree Cottage (**61**) and Laburnum House (**442**), both have loose courtyards with three sides of each courtyard formed by working agricultural buildings. Both farmhouses are detached from the main working complexes. The settings of all these farms are informed by their location surrounded by agricultural land. All of their settings extend into the planning application boundary, although these settings only form part of their significance. All of these assets (**61, 198, 199, 442**) have **historical** significance and are of **low** value.

Modern (1901-Present) assets within the planning application boundary

- 4.4.54 There is one recorded heritage asset dating to the Modern period within the planning application boundary.
- 4.4.55 A Second World War pillbox is located at Shorts Corner, to the south of Carrington. It was visible during the archaeological walkover survey (Plate 4). The pillbox is a three-bay 'type 23' with a covered middle bay, covered entrance and 6 loopholes (**116**). It is an example of the 'Lincolnshire

three-bay', a variation of the traditional 'type 23' design. This variation is uncommon, as is only found in Lincolnshire, giving this asset **aesthetic** significance as an extant example of this design. It has **historical** significance for its contribution to national Second World War field defences, but also for its association with regional military activity. The setting of this asset is informed by its remote location surrounded by mostly flat, agricultural land and its position alongside the B1183 Carrington Main Road. This setting only forms part of its significance.

**Plate 4 Photograph looking west towards Shorts Corner Pillbox (116) (Photo 32)**



#### Modern (1901-Present) assets within the 250m Zone of Influence

- 4.4.56 The Modern heritage assets that are located within the 250m Zone of Influence are military in character. The site of RAF East Kirkby can be identified to the south of Hagnaby (**156**) (Plate 5). It originally functioned as a decoy airfield, with construction beginning in 1942, and was fully operational by August 1943. The station went into care and maintenance in November 1945 but was retained for trial use. The Ministry of Defence finally disposed of the site in 1970 and it is now home to the Lincolnshire Aviation Heritage Centre. Only the periphery of the site was located within the walkover survey, this area had been returned to agriculture and was therefore no longer visible.

Plate 5 Photograph looking south at RAF East Kirkby (156) (Photo 436)



- 4.4.57 Both of these sites have the potential to contribute to the regional research framework as this highlights that there is a need to survey, record and investigate the nature, extent and changing nature of defensive and defensive facilities throughout the period (Ref. 21). They are therefore of **historical** and **communal** significance and **medium** value.

Undated assets within the planning application boundary

- 4.4.58 Two linear anomalies (**404**) cross the width of Area 65, to the south-west of West Keal, however they are difficult to categorise in the absence of any other evidence. This asset has **evidential** significance and is of **low** value.

Undated assets within the 250m Zone of Influence

- 4.4.59 Two assets, are located within the 250m Zone of Influence of Route Section 3, and are of an unknown date.
- 4.4.60 Cropmarks of a possible undated ring ditch, or hut circle and sub-rectangular enclosure (**454**) were identified on Google Maps dating from 1999 and 2002.
- 4.4.61 Relict field boundaries at Castle Dike Farm (**244**) were located during field walkover survey. Both assets (**454, 244**) are considered to be of **evidential** significance and **low** value.

### Historic Map Regression

- 4.4.62 This route section is mostly characterised by agricultural land that is divided into rectilinear fields which are intersected by field boundaries, drains and roads. Several large drains cross through this section; Medlam Drain, Twenty Foot Drain, West Fen Catchwater Drain and Newham Drain. This route section also features dispersed settlements and farmsteads.
- 4.4.63 The 1762 Plan of the River Witham covers the course of the River from Lincoln to Boston. With regards to the area that is covered within this route section, the map illustrates the areas covered by the Parish of Stickney to the Parish of Langrick. This region is illustrated as West Fen. The map illustrates the line of 'Grundy's New Projected River and Banks' as well as 'New Cut - resolv'd on at Sleaford Jan. 13, 1762', the latter being the scheme that was executed. Newham Drain, Medlam Drain and Mill Drain all pass through West Fen and are illustrated on the map.
- 4.4.64 The 1775 map of the Parish of West Keal in the County of Lincolnshire by John Hudson adds to the sequence of development for this route section. This map covers the Modern Keal Cotes area and the Parish of West Keal. Few features are shown on the map, but it does show a mixture of field sizes in use, and several main roads. A main road is shown travelling from north to south which closely follows the route of the Modern A16 road. Much of the land immediately to the west of this road is shown as smaller fields. Medieval strip fields are illustrated to the south of the Hagnaby Road, which follows the route of the current A155. This area was identified on the archaeological walkover survey as several smaller relict fields with very well-preserved examples of earthwork ridge and furrow, oriented east-west (**247**). The archaeological walkover survey also identified two further areas of Medieval ridge and furrow to the east of the current A16 road (**172, 248**). The 1775 map illustrates this land as agricultural, although it is now a large garden. The route of the Modern Mill Lane is illustrated and labelled as Keal Coates Road, it continues further west towards Hagnaby. Archaeological walkover survey identified an area of east-west orientated ridge and furrow in the fields to the north of Mill Lane (**245**). An unnamed road crosses this, and runs parallel to the A16 road. The crossing of these roads lie adjacent to the Modern Limes Farm.
- 4.4.65 The 1887-1889 1:10,560 OS map of Lincolnshire illustrates fields of varying sizes. Almost all of the field boundaries in this section are linear and regular with most running parallel or perpendicular to main roads. Along the A16, close to Keal Coates, there are several small strip fields that are indicative of Medieval field systems. Significantly fewer trees and wooded areas are illustrated within this route section than in route sections one and two, a small number are illustrated along the field boundaries to small Medieval field strips.
- 4.4.66 The 1906-1907 1:10,560 OS map shows little overall change from the previous map. Several areas illustrate signs of slight growth, with a small increase in the number of buildings along Medlam Drain and Hakerley Bridge.
- 4.4.67 The 1951 1:10,560 OS map illustrates some small changes from the previous map, although very little in the route corridor itself. Settlements in the section show signs of expansion, with new buildings in the village of New Bolingbroke. The Boston to New Sleeping railway line is also named. A small building is shown to the north-west of Mager Farm which was not previously

- shown on earlier maps. The remains of this building were identified during the archaeological walkover survey (246).
- 4.4.68 The 1956 1:10,000 OS map shows little overall change from the 1951 map. A loss of several small plantation areas is illustrated as is the addition of access trackways to isolated fields. An airfield landing strip is now recorded to the south of Hagnaby which has resulted in the loss of several farms and buildings such as Hagnaby Grange.
- 4.4.69 The 1977 1:2,500 OS map illustrates little overall change from the 1956 map. Several field boundaries which were previously recorded are no longer shown. A field boundary to the north-west of Gipsey Bridge, close to Castle Dyke Farm, is no longer illustrated. This was identified during the Walkover Survey as a relict field boundary (244) in the form of an earthen mound.
- 4.4.70 The 1978 -1979 1:10,000 OS map illustrates a number of changes from the 1956 map. Settlement growth is depicted across the route section with an increase in the number of houses and cottages, however this is most notable in East and West Keal. There has also been growth in agriculture with an increase in the number of farmsteads illustrated, several farms have expanded in size and poultry sheds have appeared close to Stickford. An increase in the number of drains along field boundaries and main roads is also recorded.
- 4.4.71 The 1980 1:10,000 OS map records slight changes within the route section. The Boston to New Steeping railway line is now labelled as dismantled. The Lincolnshire Loop railway line which runs along the north bank of the River Witham is also shown as dismantled. Westville Road is illustrated alongside West Fen Catchment Drain. Cut Dyke Drain is shown as a much smaller, and less significant drain, than in earlier maps. Several villages have expanded in size, most notably Gipsey Bridge and Langrville.
- 4.4.72 The 2000 1:10,000 OS map illustrates some changes within the route section. Many field boundaries have been removed to form large open fields. In many places drains have been installed alongside roads, and several tracks have now become roads. The introduction of several areas of small bodies of water are illustrated which were not previously. Several farms have expanded, whilst others appear to have contracted and fallen out of use. Poplar Tree Farm has grown significantly, as has Bowsers Farm which now contains a substation. Several poultry houses are also illustrated close to the disused Hagnaby airfield. Small scale housing development is also illustrated with more residences along Stickney Lane.
- 4.4.73 The 2016 1:10,000 OS map illustrates continued change that was reflected in earlier maps. There is continued settlement expansion both in established settlement areas and as isolated development. Carrington and Stickford in particular illustrate growth in the number of residences. As it was illustrated on the 2000 map, some farms have increased in size whilst others have shrunk or are no longer recorded. Hagnaby Fen is now listed as Hagnaby Fen Nature Reserve.

#### Archaeological Potential

- 4.4.74 A vast range of archaeological artefacts, dating to the Prehistoric period, provide evidential value for human occupation within both the 250m Zone of Influence and planning application boundary

- of the third route section. Based on what is known within the section, the potential for there to be further evidence of Prehistoric activity is believed to be **medium**.
- 4.4.75 Limited Roman and Early Medieval assets are located within the route section. The potential for further assets for either period is **low**.
- 4.4.76 The archaeological resource of Medieval assets provides evidence for a range of human activities in the area. The fact pottery assemblages are described as fairly large, along with the establishment of further assets through field walkover surveys, validates the **medium** potential for there to be more Medieval assets.
- 4.4.77 While there is a wide range of Post Medieval assets including listed buildings, predominantly within the 250m Zone of Influence, it is not unreasonable to expect new assets to have been established through analysis of historical mapping in the area. Although one asset was located during field walkover, the potential for there to be any additional assets is **low**.
- 4.4.78 There is a limited presence of assets dating to the Modern period or of Unknown date. Therefore, potential for any further assets of these descriptions is **low**.

## 4.5 Route Section 4 River Witham to the Proposed Converter Station

### Geology and topography

- 4.5.1 The primary bedrock of the northern area of Route Section 4 is similar to that in Section 3, being the West Walton Formation, the Ampthill Clay Formation and the Kimmeridge Clay Formation. The bedrock for this section is sedimentary and dominated by mudstone, siltstone and sandstone. The primary bedrock for the southern area of Route Section 4, from Great Hale Fen to the proposed converter station, is mudstone of the Oxford Clay Formation.
- 4.5.2 Superficial deposits for this area are dominated by alluvium deposits of clay, silt and sand. The area to the west of Great Hale Fen is primarily Diamicton Till interspersed with areas of Glacial Sand and Gravel. The superficial deposits to the south of Little Hale Fen and west of South Forty Foot Bank consist of peat.
- 4.5.3 The topography of the landscape within Route Section 4 is predominately low-lying, between 1 and 6 m AOD. The land is highest along the embankments of South Forty Foot Drain and the River Witham, where the land rises to 6 m AOD. The A17 road is also slightly higher than the surrounding land at 4 m AOD.
- 4.5.4 Across this section, the landscape can broadly be defined as low-lying fenland with sparse levels of settlement, centred around nucleated villages. Patterns of drainage are prominent in this section, with the River Witham, streams and drains transecting the landscape. The land is largely used for agricultural production, with a mix of arable and pasture land.

### Historic landscape character

- 4.5.5 The bulk of this route section comprises The Eastern Fens, which was discussed above, however its northern most tip also consists of the Witham Fens. The Witham Fens as a whole display a

dispersed settlement pattern. There are few nucleated settlements. Other settlement types include isolated farmsteads and irregular linear settlements along some routeways. There is extensive survival of the planned enclosure and drainage of eighteenth and nineteenth centuries. This zone is crossed by extensive drainage ditches which vary in width from a metre to the South Forty Foot Drain which is more than 20 m wide. The majority of the field boundaries are drainage ditches as opposed to hedges which enhances the open character of this area. The use of drainage ditches as field boundaries as opposed to hedges also meant that limited consolidation and enlargement took place following the Second World War like it did in other zones.

#### Designated Heritage Assets

- 4.5.6 There are no designated assets of any historical period, within either the planning application boundary or the 250m Zone of Influence within the fourth section of the proposed DC cable route.

#### Non-Designated Heritage Assets

##### Prehistoric (30, 000 BC – AD 43) assets within the planning application boundary

- 4.5.7 There are no recorded heritage assets dating to the Prehistoric period within the planning application boundary.

##### Prehistoric (30,000 BC- AD 43) assets within the 250m Zone of Influence

- 4.5.8 There are no recorded heritage assets dating to the Prehistoric period within the 250m Zone of Influence.

##### Roman (AD 43-410) assets within planning application boundary

- 4.5.9 There is one recorded heritage asset dating to the Roman period within the planning application boundary of the fourth section of the proposed DC cable route. This is a cropmark of a Prehistoric/ Romano-British settlement (**21**), that was not present during archaeological walkover survey. Trial trenching conducted within the proposed converter station site (Appendix 23.4) has provided further evidence that largely supports the cropmark analysis. A range of artefacts were recovered, including Roman pottery dated predominately between the second and fourth centuries, and evidence for farming through a wealth of deposited animal bones and environmental samples uncovering agricultural activity. These receptors which are indicative of a Roman settlement which had trade links to sites across Lincolnshire and Peterborough have **historical** and **evidential** significance and are of **medium** value.

##### Roman (AD 43-410) assets within the 250m Zone of Influence

- 4.5.10 There is one recorded heritage asset dating to the Roman period within the 250m Zone of Influence. There are several probable cropmarks of Prehistoric or Romano-British date to the north west of Donington (**20**). They consist of a complex series of enclosure, boundary and ring

ditches, and a possible trackway. None were visible during archaeological walkover survey. They are considered to be of **medium** value and have **evidential** significance.

Early Medieval (410-1066) assets within the planning application boundary

- 4.5.11 There are no recorded heritage assets dating to the Early Medieval period within the planning application boundary.

Early Medieval (410-1066) assets within the 250m Zone of Influence

- 4.5.12 There are no recorded heritage assets dating to the Early Medieval period within the 250m Zone of Influence.

Medieval (1066-1540) assets within the planning application boundary

- 4.5.13 There are no recorded heritage assets dating to the Medieval period within the planning application boundary.

Medieval (1066-1540) assets within the 250m Zone of Influence

- 4.5.14 There are no recorded heritage assets dating to the Medieval period within the 250m Zone of Influence.

Post Medieval (1540-1901) assets within the planning application boundary

- 4.5.15 There are three assets which date to the nineteenth century within the planning application boundary. Within this section of the proposed DC cable route, three of these assets are farmsteads which represent the agricultural activity of the area and one is a settlement site.
- 4.5.16 A demolished farmstead is recorded at Holland Fen with Brothertoft (**55**), this was not visible during the archaeological walkover survey. This asset has **historical** significance and is of **low** value.
- 4.5.17 The settlement of Amber Hill (**154**) is a plot of land of 30 acres allotted under the Holland Fen Enclosure Award to provide materials for repairing the roads of several parishes having rights of common in Holland Fen. The parish was formed in 1880 by uniting the fen allotments of Algarkirk and Sutterton and the extra-parochial place of Amber Hill. No physical features relating to this historical activity were present during the field walkover survey. This asset has **historical** significance for its association with local enclosure and governance, and **communal** significance as a modern village with a resident community. It is of **low** value.
- 4.5.18 The site of an unnamed, demolished farmstead is recorded at Little Hale (**52**). This farmstead had a regular L plan courtyard and detached farmhouse. This asset has **historical** significance and is of **low** value.

#### Post Medieval (1540-1901) assets within the 250m Zone of Influence

- 4.5.19 The Post Medieval period within the 250 m Zone of Influence is primarily represented by farmsteads and settlement activity.
- 4.5.20 The former farm buildings at Grant's Farm in Holland Fen (**141**) survive to varying degrees. The farm buildings were originally laid out in a U shape, however only the southern half of this arrangement has been recorded as the northern half is a residential property. The recorded section is in a L-shaped plan, with two wings that are separated by a garden wall with an arched gateway. The earliest phases of the building may date to the seventeenth century, with additions in the nineteenth and twentieth century. The setting of this asset is informed by the agricultural land which surrounds it. This setting does extend into the planning application boundary, although only forms part of its significance. This asset has **historical** significance and is of **low** value.
- 4.5.21 Home Farm (**53**), Pear Trees (**54**), Gillbridge Farm (**56**) and an unnamed farmstead (**439**) are all partially extant, unlisted nineteenth century farmsteads in Holland Fen with Brothertoft. All have regular courtyards with the farmhouse detached from the main working complex. Home Farm (**53**) and the unnamed farmstead (**439**) have experienced partial loss of traditional buildings, whilst at Gillbridge Farm (**56**) the farmhouse is the only surviving structure. The settings of all these farms are informed by their location surrounded by agricultural land. All of their settings extend into the planning application boundary, although these settings only form part of their significance. They are each considered to be of **low** value and have **historical** significance.
- 4.5.22 There is one unnamed farmstead recorded at Holland Fen with Brothertoft (**57**). This is a nineteenth century farmstead whose only surviving structure is the farmhouse. This asset is of **historical** significance and **low** value.
- 4.5.23 Mob's Eye (**440**), in Amber Hill is a partially extant nineteenth century unlisted farmstead. It has a loose courtyard with three sides of the courtyard formed by working agricultural buildings. The farmhouse is detached from the main working complex.
- 4.5.24 A redeveloped unnamed farmstead is recorded at Three Hundreds, Amber Hill (**58**). This nineteenth century farmstead has a regular courtyard and large modern sheds located to the side of the site. Both Mob's Eye (**440**) and the unnamed farmstead (**58**) have historical significance for their association with the surrounding agricultural land and the settlement of Amber Hill. The settings of both are informed by the surrounding land and both extend into the planning application boundary. Both are of **low** value.
- 4.5.25 The site of Six Hundreds Farm, (**436**) a demolished nineteenth century farmstead, is recorded in Heckington, This farmstead had a regular U plan courtyard with the farmhouse detached from the main working complex. This asset has **historical** significance and is of **low** value.
- 4.5.26 Rakes Farm (**47**) is located 1.5 km to the east of East Heckington. The partially extant nineteenth century farmstead is unlisted and is accompanied by a courtyard and working agricultural buildings, all of which were visible during the archaeological walkover survey. This asset has **historical** significance and **low** value.

- 4.5.27 Swineshead House, (59) in Swineshead, is a partially extant, unlisted nineteenth century farmstead with a regular F-plan courtyard. There has been significant loss of traditional buildings on the site. This asset has **historical** importance and **low** value. The settings of both (47, 59) extend into the planning application boundary, although these settings only form part of their significance.
- 4.5.28 Park House and parkland (451), in Great Hale is indicated on the 1906 OS Country Series map. Whilst the date of the building is unknown, it lies outside the Zone of Influence. The south-eastern corner of the parkland, however, does lie within the Zone of Influence. The parkland is identified on the 1888 OS map and likely predates this. Aerial photography from 2017, accessed from Google Earth, shows this land is now agricultural land. The parkland has **historical** significance for its association with Park House, and **evidential** significance as a source of physical evidence for changing land use. As the parkland has not been maintained or conserved, it is not considered to have aesthetic or communal significance. The setting of this asset is informed by its location within the surrounding agricultural land, and its relationship with nearby farms. It is of **low** value.
- 4.5.29 There are two nineteenth century farmsteads in Great Hale, White House Farm (437) and an unnamed farmstead (48). Both have regular courtyards and farmhouses detached from the main working complex. The unnamed farmstead (48) is partially extant, and has seen a loss of traditional buildings, whilst at White House Farm (437) the farmhouse is the only surviving structure. The settings of both these farms are informed by their location surrounded by agricultural land. Both of these settings extend into the planning application boundary, although these settings only form part of their significance. Both have **historical** significance are of **low** value. There are three nineteenth century farmsteads recorded at Little Hale, (49, 50, 438), all of which are unnamed. Two of these (49, 438) have courtyards, detached farmhouses and have been redeveloped. Large modern sheds are located on the site of the latter (438). The remaining farmstead (50) has been demolished, although did also have a courtyard and detached farmhouse. The settings of two of these assets (49, 438) are informed by the surrounding agricultural land, with which they are associated. These settings do extend into the planning application boundary, although only form part of their significance. All of these assets have **historical** significance and are of **low** value.
- 4.5.30 Three unlisted nineteenth century farmsteads, in the parish of Bicker have been demolished; Vicarage Farm (6) and two unnamed farms (51, 192). All had regular courtyards and detached farmhouses. These are all of **historical** significance and **low** value.
- 4.5.31 A fourth unnamed outfarm, (8) is recorded in the parish of Bicker. This nineteenth century, outfarm has been redeveloped and large modern sheds are now located on the site. The location of the regular L plan courtyard is unclear. This outfarm It has **historical** significance and is of **low** value. The settings of this asset is informed by its location within agricultural land, with which it is associated. Its setting extends into the planning application boundary but only forms part of its significance.

- 4.5.32 There are two nineteenth century farmsteads in Helpringham; Eau End Farm (7) and River Farm (10). Both have regular courtyards and farmhouses detached from the main working complex. Eau End Farm (7) has an L plan range, plus detached buildings to the side of the yard. River Farm (10) has a prominent covered yard and is located within a loose farmstead cluster. The settings of both these farms are informed by their location surrounded by agricultural land. Both of their settings extend into the planning application boundary, although these settings only form part of their significance. Both have **historical** significance and are of **low** value.
- 4.5.33 Three nineteenth century farms were identified in Donington, Middle Fen (5) and two unnamed farmsteads (11, 12). Middle Fen (5) is a partially extant outfarm, with a regular courtyard, L plan range and detached buildings to the third side of the yard. The location of this outfarm is unclear. One of the unnamed farmsteads (11) has a loose courtyard, detached farmhouse and has been redeveloped. The site of the second unnamed farmstead (12) has been demolished. This had a courtyard with L-plan range, detached buildings and a detached farmhouse. The settings of two of these farms (5, 11) extend into the planning application boundary, although do not form a major part of their significance. All of these assets have **historical** significance, and are of **low** value.

Modern (1901-Present) assets within the planning application boundary

- 4.5.34 There are no recorded heritage assets dating to the Modern period within the planning application boundary of the fourth section of the proposed DC cable route.

Modern (1901-Present) assets within the 250 m Zone of Influence

- 4.5.35 There are no recorded heritage assets dating to the Modern period within the 250m Zone of Influence of the fourth section of the proposed DC cable route.

Undated assets within the planning application boundary

- 4.5.36 There are no recorded heritage assets of no date within the planning application boundary of the fourth section of the proposed DC cable route.

Undated assets within the 250 m Zone of Influence

- 4.5.37 An undated ditch was recorded just to the north of Old Amber Hill (155). It is considered to have archaeological potential and be of **low** value and **evidential** significance.
- 4.5.38 Several undated enclosure features were recorded at Bicker Fen (164, 165). One was a rectangular enclosure with internal features (164), the second an ovoid shaped enclosure (165). An undated cropmark of ditches and enclosure ditches (233) was recorded near to these features.
- 4.5.39 A trackway or similar feature (161) of unknown date is visible as a cropmark on aerial photographs, in Little Hale Fen.

4.5.40 All of these assets are of **low** value and have **evidential** significance.

#### Historic Map Regression

- 4.5.41 This route section is mostly characterised by agricultural land that is divided into rectilinear fields which are intersected by field boundaries, drains, droves and roads. It also features dispersed settlements and isolated farmsteads. This section of the proposed DC cable route crosses several significant drains, dykes and droves. These include South Forty Foot Drain, North Forty Foot Drain, Twenty Foot Drain, Skerth Drain, Holland Dyke, Clay Dyke, Maryland Drain and North Drove. Almost all of the field boundaries in this section are linear and regular, with most running parallel or perpendicular to the River Witham or South Forty Foot Drain.
- 4.5.42 The 1762 Plan of the River Witham is the earliest map for this route section and covers the course of the River from Lincoln to Boston. Within this route section it shows the area from the Parish of Langrick to the north to Helpringham Eau in the south, labelled as Low Holland Fen. The map shows the old line of the River Witham as well as the 'New Cut - resolv'd on at Sleaford Jan. 13, 1762', the latter being close to the current route of the River. The North Forty Foot Drain, labelled as Lord Fitzwilliam's Drain, and the South Forty Foot Drain are both shown, although the routes of both differ from later maps. Old Hammond Beck and The Skerth are included, with slight differences to their current routes. Seven windmills are shown along South Forty Foot Drain between Middle Fen and Swineshead.
- 4.5.43 The 1765 Heckington enclosure award map shows the area between the A17 (labelled as Great Turnpike Road), Holland Dyke and Skerth Drain. The Six Hundreds area is labelled 'Lady Fraisers Six Hundreds' and features no field boundaries.
- 4.5.44 The 1774 Helpringham enclosure map shows the area to the west of South Forty Foot Drain, below Helpringham Eau. The area is illustrated to be divided by linear fields with no farms or other features in the Zone of Influence.
- 4.5.45 The 1783 plan of the Lowlands in Donington illustrates Middle Fen and North Ing. North Ing drove and Mill Drain are recorded. The area is divided into Medieval strip fields running parallel to the South Forty Foot Drain. There are no other significant features within the 250m Zone of Influence.
- 4.5.46 The 1839 plan of the parish of Bicker is the earliest detailed plan for Bicker. It shows several key droves within the Zone of Influence; Bicker Drove, Cross Twelves Drove. Vicarage Drove, North Drove and Double Twelves Drove. Holt Hills Drove is shown adjoining the western end of North Drove. Two Mill Drains are illustrated, one between North Drove and Cross Twelves Drove, the other along Cross Twelves Drove. Cross Twelves Drove follows the current route of Bicker Drove.
- 4.5.47 The mid-nineteenth century map of Swineshead shows little change from the previous maps which cover the same areas. Turnpike Road is labelled, which follows the same route as the current A17 road. Several buildings are shown along Turnpike Road, approximately in the current

- location of Swineshead House. Holland Dyke and the Mown Rakes are illustrated although the Dyke is shown on the eastern side of the Rakes.
- 4.5.48 The nineteenth century plan of Donington covers Middle Fen and North Ing. There are almost no changes to the area from previous maps. There have been no changes to field boundaries, droves or drains since the 1783 plan of Donington.
- 4.5.49 The 1888-1889 1:10,560 OS map of Lincolnshire is the earliest map to cover the whole route in detail. It shows few changes from previous maps with a mixture of field sizes with few areas of woodland or tree planting. Woodland is illustrated focussed around settlements such as East Heckington and Langrville. Some field boundaries of Medieval strip fields are also shown with trees, for example along Timm's Drove.
- 4.5.50 The 1906 1:10,560 OS map shows little overall change from the 1888-1889 map. In many areas, field boundaries are now represented as drains. Several new houses have been built along the A17 road.
- 4.5.51 The 1947-1951 1:10,560 OS map illustrates little overall change from the 1906 map. Some settlement areas show signs of gradual growth. Swineshead Bridge, Abbey Parks, and Amber Hill show increases in the number of buildings present. Embankments are illustrated either side of Holland Dyke, to the north of Six Hundreds, which were not previously shown on mapping.
- 4.5.52 The 1956 1:10,000 OS map records the erection of an overhead electricity cable to the south of the South Forty Foot Drain.
- 4.5.53 The 1974 1:2,500 OS map shows little overall change. Several farmsteads have expanded in size; for example, Rakes Farm near Swineshead Bridge has almost tripled in size. In contrast, Six Hundreds Farm has contracted considerably and is now named Manor House.
- 4.5.54 The 1976 1:10,000 OS map shows some slight changes from the 1974 map. Several pumping stations have been built along the Twenty Foot Drain near East Heckington. Brand End Farm and Cottage Farm near Swineshead have expanded. A sewage pumping station and sewage works is illustrated to have been constructed at Swineshead Bridge. Large embankments have also been added either side of Holland Dyke and Skerth Drain.
- 4.5.55 The 1976-1977 1:2,500 OS map shows some changes. Two drains have been added on either side of South Forty Foot Drain. Additional embankments on either side have been added with gaps for tributary drains. This map also illustrates the expansion of fields in the Little Hale Fen area, with consequent loss of drains and field boundaries. Several buildings that appear on the earlier 1956 1:10,000 OS map are no longer listed such as Whitehouse Farm in Bicker Fen, multiple buildings opposite Ferry Farm in West Low Grounds and Three Hundreds in The Rakes.
- 4.5.56 The 1980-1985 1:10,000 OS map shows some changes from the previous map, mostly in settlement number and size. Across the area many farms have expanded whilst others have shrunk or are no longer recorded. Willow Farm has grown significantly in size, Devonport Farm is shown with two new piggeries and Holland Fen has several poultry houses that were not previously shown. Settlement areas along droves, drain and at crossing points show signs of growth, Gill Bridge and Amber Hill being two examples. This map also shows the construction of

- multiple pumping and sewage stations along major drains and dykes. Close to Holland Dyke there is a new pumping station, Old Amber Hill is illustrated to have a sewage works and the South Forty Foot Drain near Bicker has three new pumping stations, all not previously shown.
- 4.5.57 The 2000 1:10,000 OS map shows further changes from the previous, although overall the section has changed little. Continued growth is illustrated at several farms such as Willow Farm and Davenport Farm. The expansion of the poultry industry is implied by the illustration of further poultry houses at Bailey Bridge Farm at Holland Fen for example. Generally, fields have stayed the same size, although some have expanded with the removal of field boundaries as seen east of South Forty Foot Drain. North Ing Drove, near Bicker Fen, is now marked as a road, with several stones along it. A reservoir has been constructed at Great Hale Fen.
- 4.5.58 The 2016 1:10,000 OS map shows some changes in the route section, most of which continue from changes shown in previous maps. The growth of the size and number of buildings has continued, with settlement expansion both in established settlements and remote areas. Amber Hill and Swineshead Bridge have experienced growth, although neither can be considered sizable settlements. Some farms have increased in size whilst others have shrunk or are no longer recorded. Close to Swineshead Bridge several more pumping stations are illustrated along South Forty Foot Drain. At Bicker Fen, Bicker Wind Farm is illustrated, this comprises 11 wind turbines and an electricity generating station.

#### Archaeological Potential

- 4.5.59 The potential for archaeological assets ranging from Prehistory to Medieval, as well as the Modern era, is **negligible**. An extremely limited number of assets have been recorded thus far in the area indicating very restrictive evidence for extensive human occupational activity.
- 4.5.60 The baseline has shown that Post Medieval occupation, mainly evidenced by farmsteads, is the most dominant type of activity across the landscape of the fourth route section. The potential for further assets of this nature is **low**.
- 4.5.61 A limited number of undated artefacts have been located within the Zone of Influence of the route section. These provide no further evidence, other than a **low** potential for added heritage resources.

## 5 Previous Archaeological Investigations

### 5.1 Introduction

5.1.1 In this section recorded archaeological investigations within the proposed DC cable route planning application boundary and the Zones of Influence are identified and described. Further information is provided in the Gazetteer (Appendix 3).

### 5.2 All Route Sections

#### Air Photographic and LiDAR Assessment

5.2.1 In April 2017 Trent and Peak Archaeology conducted an air photographic and LiDAR assessment of the proposed DC cable route working width (a 400 m buffer centred on the proposed DC cable route).

5.2.2 The LiDAR survey provided a detailed terrain model of the majority of the Zone of Influence. Parts of the Lincolnshire Wolds were not covered where coverage was less extensive. The resolution of the Environment Agency data was sufficient to identify surviving Medieval earthworks, settlement remains and ridge and furrow.

5.2.3 Earthwork features identified along the route largely appeared to relate to the agricultural use of the land; in the form of remains of ridge and furrow cultivation and defunct field boundaries. A mound was identified at Furzehill, Bilsby, interpreted as a possible earlier feature and burial mound.

5.2.4 The most numerous class of feature were the watercourses, of various types. These survive as silt-filled roddens or down-cutting channels.

5.2.5 The air photographic assessment found mapped features were found to be concentrated in two main areas: the Witham and Holland Fens in the southwest, and the Lincolnshire Wolds in the north and centre. The West Fen north of Boston and the Lincolnshire March approaching the coast were found to be almost devoid of features.

5.2.6 The assessment found evidence of extensive sites in Donington, Bicker Fen, Harrington and Raithby. It concluded that the limits of sites mapped represented only the limits of the available air-photographic evidence, archaeological features could extend beyond.

#### Geophysical Survey Report

5.2.7 In June 2017, SUMO Services Ltd. undertook a geophysical survey of the area outlined for the proposed DC cable route. The first phase of investigation, covering 69 areas marked for survey, detected the majority of anomalies of archaeological interest towards the western end of the proposed DC cable route.

- 5.2.8 These responses included ditches and enclosures, as well as ring ditches. Occasional lengths of ditch and isolated pit-like anomalies were recorded elsewhere, but an archaeological interpretation was tentative. At the eastern end of the Zone of Influence, anomalies of a natural origin were in evidence; ridge and furrow cultivation patterns were also present in many of the areas.
- 5.2.9 The survey corridor passed over a variety of geologies, none were particularly poor for magnetic survey. Apart from areas of very strong magnetic responses, it was believed that the results provided a good indication of the presence of archaeological features.

### **5.3 Route Section 1 Proposed Landfall to Well High Lane**

#### Rapid Field Survey of the Lincolnshire Coastal Grazing Marsh

- 5.3.1 In June 2010 a rapid field survey of the Lincolnshire Coastal Grazing Marsh was undertaken by Heritage Trust Lincolnshire. Scheduled Monuments, Listed Buildings and archaeological sites were visited and assessed for condition.

#### Candlesby to Trusthorpe Hall gas pipeline

- 5.3.2 In October and November 1999, archaeological watching briefs were carried out by Network Archaeology on selected sites along the route of a replacement gas main between Trusthorpe and Candlesby. The pipeline route runs for 15.75 km and crosses the line of the Roman road near Skendleby. The ground disturbance was limited to the excavation of a 300 mm wide trench approximately 1.2 m deep. Four sites were monitored during the ground disturbance work.
- 5.3.3 A small assemblage of Medieval or Early Medieval pottery was recovered from the spoil of the pipe-trench immediately to the north of Asserby Lane. Old maps indicated that there was a field boundary at this location. The report concluded that the finds probably came from the fill of a ditch running along this boundary.

### **5.4 Route Section 2 Well High Lane to A16 (Keal Road)**

#### Watching Brief of land adjacent to 68 Main Road, Toynton All Saints

- 5.4.1 A watching brief was undertaken by Archaeological Project Services in September 2004 during groundworks at 68 Main Road, Toynton All Saints, Lincolnshire. The watching brief monitored the excavation of foundation trenches for a new dwelling. The investigations identified a single Medieval pit containing pottery wasters and kiln debris. Although no kilns of Medieval date were revealed, a dumped deposit was also identified. Finds comprised mainly of pottery produced in the village, the bulk of which was waste. The evidence suggested that a kiln lies within moderate proximity to the site.

#### Walkover Survey for the Covenham WTW to Boston Transfer

- 5.4.2 A walkover survey was conducted to assess the impact of proposed construction of the Covenham Water Treatment Works to Boston Transfer pipeline. Several areas of Medieval ridge and furrow were noted, along with the earthwork remains of a possible round barrow. Several artefacts were also recorded along the proposed route, including Medieval pottery, possibly Prehistoric pottery, and a civil war cannon ball.

#### Geophysical Survey for the Covenham WTW to Boston Transfer

- 5.4.3 In June and July 2011, Barlett-Clark Consultancy conducted a geophysical magnetometry survey along selected parts of the proposed Covenham Water Treatment Works to Boston Transfer pipeline. A number of archaeological sites were identified, including some which clearly represented areas of former settlement and agricultural activity.

#### Field Walking for the Covenham WTW to Boston Transfer: Phase 2

- 5.4.4 Between September and October 2011, Oxford Archaeology carried out a programme of systematic archaeological field walking was conducted along selected parts of the proposed Covenham Water Treatment Works to Boston Transfer pipeline. Several concentrations of finds were identified. Concentrations of struck and reworked flint were found to the south of the village of Harrington, indicating the potential for Prehistoric activity in this area. A high proportion of pottery from the Roman period was found in east Sibsey and also to the east of Yarburgh. A large assemblage of Medieval pottery to the south of Old Bolingbroke was identified, implying the possibility of for a settlement site on or near this area.

#### Geophysical Survey for the Covenham WTW to Boston Transfer: Phase 2

- 5.4.5 A second phase of geophysical magnetometry survey was conducted between September and October 2011 by Barlett – Clark Consultancy. This was along selected parts of the proposed Covenham Water Treatment Works to Boston Transfer pipeline. The areas surveyed comprised the parts of the proposed pipeline route that could not previously be accessed, along with the expansion of several areas of archaeological significance identified in the first phase. A number of archaeological sites were identified, including some which clearly represent areas of former settlement and agricultural activity, and a possible isolated ring-ditch.

#### Field Walking for the Covenham WTW to Boston Transfer

- 5.4.6 A programme of systematic archaeological field walking was conducted in May 2011 by Oxford Archaeology East along selected parts of the proposed Covenham Water Treatment Works to Boston Transfer pipeline. Several concentrations of finds were identified. A concentration of struck and reworked flint (including a polished stone axehead) was found to the south-west of the village of Swaby, indicating the potential for Prehistoric activity in the vicinity. A large assemblage

of Medieval pottery was identified just south of Old Bolingbroke and a high proportion of finds from both the Roman and Medieval periods were displayed in fields to the immediate east of the village of Sibsey.

#### Field Observation, finds from Raithby

- 5.4.7 In March 1999, worked flint were found on land near the old churchyard by an individual, Mr A. Armstrong.

#### Fieldwalking Survey along the route of the proposed East Keal bypass

A rapid fieldwalking survey was carried out by Lindsey Archaeological Services in February 1993 along the preferred route of the proposed bypass. Various finds including a large quantity of flints, were observed.

### **5.5 Route Section 3 A16 (Keal Road) to River Witham**

#### Fenland Management Project Magnetometer Survey at Hagnaby Lock

- 5.5.1 A magnetometer survey was conducted in January 1994, as part of the Fenland Management Project, six months prior to excavations. Large quantities of burnt stone lessened the effectiveness of the survey in identifying individual features. A Bronze Age settlement site was identified at Hagnaby Lock, Stickford.

#### Fenland Management Project Fieldwalking Survey at Hagnaby Lock

- 5.5.2 A fieldwalking survey was carried out as part of the Fenland Management Project between January and December 1994. Gridded fieldwalking was undertaken in 5m squares. A Bronze Age settlement site and Mesolithic to Neolithic flintworking site was identified.

#### Fenland Management Project Trial Trenching at Hagnaby Lock

- 5.5.3 Between January and December 1994, a programme of trial trenching was carried out as part of the Fenland Management Project. Two trenches were placed over two of the densest concentrations of finds. The first, northern trench measured 60 m by 10 m and was also positioned adjacent to the extinct stream. To gain good quality environmental evidence a smaller 1.5 m wide trench was dug from the south-western corner of Trench 1 towards the extinct watercourse. The second, southern trench measured 25 m by 10 m and was placed over a geophysical anomaly. In order to obtain standardised finds and bulk sample retrieval, sixty-five 1 m square test pits were also excavated on a chequerboard grid pattern in the vicinity of a known burnt mound.

#### Site Visit and Field Observation at Folly Lane Solar Farm, West Fen

- 5.5.4 A site visit was undertaken by Crestwood Environmental Ltd. in May 2015 in order to assess the impact of the proposed construction of the Folly Lane Solar Farm, West Fen. Remnant hedges, grass margins and scattered trees were identified along the boundaries of the field. However, no other evidence of relict landscapes was observable on the Site or in the immediate locality. There were no building remains, roads or hollows that may have indicated disturbance of the natural landscape, apart from the drains, which were found to still be in use. There were no other archaeological finds or features identified, including evidence of ridge and furrow.

#### Magnetometry Survey at Folly Lane Solar Farm, West Fen

- 5.5.5 A fluxgate gradiometer survey was conducted in September 2015 by Pre-Construct Geophysics, to inform the proposed construction of a solar farm on land to the west of Folly Lane, near Stickney. All of the magnetic variation recorded appeared to relate to modern agricultural activity or natural geological features, and no archaeological features were identified.

#### Trial Trenching at Land West of Folly Lane, West Fen

- 5.5.6 In October 2015 Pre-Construct Archaeological Services Ltd. excavated five trial trenches to inform the proposed construction of a new solar farm on land to the west of Folly Lane, West Fen. No evidence of human activity pre-dating the drainage and enclosure of the West Fen was encountered. No archaeological features, deposits or finds were encountered.

#### Field Observation, Lower Witham Flood Defences Scheme, Phase 2

- 5.5.7 Site visits were made in January 2002 by Pre-Construct Archaeology, in order to identify any extant archaeological features along the River Witham.

#### Site Visit to the Pillbox, Short's Corner

- 5.5.8 In January 1999, a site visit was made by the Council for British Archaeology to inspect a Second World War pillbox, at Short's Corner. The visit was part of the Defence of Britain project. The structure was assessed to be constructed in reinforced concrete, with a porch covering the entrance and 6 embrasures. The pillbox forms part of the Northern Command: Witham Stop Line defence grouping.

### **5.6 Route Section 4 River Witham to the Proposed Converter Station**

#### Building Survey of Former Farm Buildings off Main Road, Holland Fenn (Brothertoft)

- 5.6.1 A programme of historic building recording was undertaken by Archaeological Project Services in December 2002, at former farm buildings off Main Road. The survey was undertaken as a result of a planning application for the conversion of the farm building to a dwelling. Permission was

subject to conditions including the undertaking of buildings recording prior to the conversion works. The building is of historic interest and important in terms of local rural vernacular architecture.

- 5.6.2 Only the southern half of this arrangement was recorded, with the northern half being a separate property, having been previously converted to residential property. The survey provided a record of the appearance of the farm buildings, together with details of alterations, fixtures and fittings
- 5.6.3 The whole of the building was photographically recorded and a ground plan was produced. Three phases of development were noted, along with remains of agricultural features.

#### Watching Brief of Plot 2, Sutterton Drove, Amber Hill

- 5.6.4 A watching brief was conducted by Archaeological Project Services in August 2005, during groundworks at Plot 2, Sutterton Drove, Amber Hill. The watching brief monitored the excavation of foundation trenches for a new residential development.
- 5.6.5 No artefacts were recorded during the watching brief. It did, however, reveal natural gravels into which a ditch had been cut. The ditch remained undated but was interpreted as having a drainage and boundary function. The ditch was subsequently levelled.

#### Watching Brief of Plot 3, Sutterton Drove, Amber Hill

- 5.6.6 A watching brief was carried out by Archaeological Project Services in June 2005, during groundworks at Plot 3, Sutterton Drove, Amber Hill. The watching brief monitored the excavation of two test pits and the foundation trenches for a detached house and garage.
- 5.6.7 No artefacts were retrieved. Two lands drains were recorded cut into natural clay deposits overlain by topsoil.

#### Field Observation of Proposed Wind Farm, Bicker Fen

- 5.6.8 A field observation and walkover survey was undertaken by Archaeological Project Services in May 2002 at the proposed wind farm site at Bicker Fen.

#### Magnetometry Survey, Land at Bicker Fen Wind Farm Site, Bicker

- 5.6.9 A geophysical magnetometry scanning survey was conducted by Engineering Archaeological Services Ltd between 2001 and 2003 on land at Bicker Fen, Bicker in advance of a proposed wind turbine development. The aims of the survey were to gather sufficient information to establish the location and extent of any archaeological features within the development area and to characterise the archaeology located. No archaeological anomalies were recorded from the magnetic scanning within the proposed Wind Farm Site. No significant features were discovered

#### Watching Brief of Land at Bicker Friest

- 5.6.10 An archaeological watching brief was conducted during the groundworks for the construction of 5 wind turbines on land at Bicker Friest. A typical fenland sequence of naturally deposited sands and gravels, peat deposits and undated alluvial deposits was revealed, but no archaeological features, deposits or finds were encountered.

## 6 Summary of Assessment

### 6.1 Introduction

6.1.1 The following section presents a summary of the baseline conditions and archaeological potential for heritage assets within the proposed DC cable route. The summary of baseline conditions and archaeological potential is presented for the whole proposed DC cable route, by route section and archaeological potential is then presented again by Local Planning Authority.

### 6.2 Summary

#### Overview of Baseline Conditions

- 6.2.1 There are a total of 271 heritage assets across the proposed DC cable route, of which, 69 fall within the planning application boundary and 202 in the 250m Zone of Influence. These include:
- 6.2.2 Seven listed buildings. All listed buildings identified date from the Post Medieval period. The earliest listed building dates to the 17<sup>th</sup> and the rest date from the 18<sup>th</sup> and 19<sup>th</sup> centuries. They include houses, farmhouses, a former rectory and a traphouse. All are of **medium** value.
- 6.2.3 Two scheduled monuments. All scheduled monuments date from the Prehistoric period. One is a Neolithic long barrow and one is a Bronze Age bowl barrow. Both are of high value.
- 6.2.4 One conservation area, this is Raithby which is assessed to be of **medium** value.
- 6.2.5 Non-designated heritage assets of evidential and historical significance dating from the Prehistoric period to the Modern period, including assets of **medium** value through to assets of **low** value.

#### Overview of Archaeological Potential

- 6.2.6 Overall the archaeological potential of the proposed DC cable route is **medium**, with **high** potential for Prehistoric assets, **medium** potential for Medieval assets and **low** potential for Roman, Post Medieval and Modern assets.
- 6.2.7 The overall potential for archaeological assets within Route Section one is **low**. The presence of several shrunken Medieval villages and areas of cropmarks suggests **medium** potential for evidence of Medieval agricultural and settlement activity.
- 6.2.8 The overall potential for archaeological assets within Route Section two is **medium**. There is **high** potential for archaeological assets dating to the Prehistoric period to be present, particularly for the Lincolnshire Fen landscape. The high concentrations of Neolithic finds and the presence of several scheduled monuments gives greater potential for Prehistoric finds. Concentrations of finds and earthworks from two areas near East Keal suggest a **medium** potential for Roman assets.

- 6.2.9 The overall potential for archaeological assets within Route Section three is **medium**. There is **medium** potential for Prehistoric assets and Medieval assets relating to agricultural and settlement activity. There is **low** potential for remains associated with Roman, Post Medieval and Modern activity.
- 6.2.10 The overall potential for archaeological assets within Route Section four is **negligible** due to the limited archaeological evidence for earlier human activity in the area. There is a **low** potential for unknown assets.

#### Archaeological Potential in East Lindsey District Council

- 6.2.11 There are 53 heritage assets within East Lindsey within the planning application boundary: 11 within route section one (**103**, , **104**, **117**, **159**, **160**, **174**, **261**, **407**, **408**, **411**, **412**); 42 within route section two (**76**, **80**, **115**, **168**, , **66**, **92**, **94**, , , **98**, **99**, **107**, **108**, **114**, **118**, **119**, **120**, **123**, **124**, **125**, **126**, **128**, **129**, **130**, **131**, **132**, **137**, , **142**, **143**, **144**, **145**, **146**, **147**, **149**, **225**, **230** , , **266**, **397**, **398**, **399**, **400**, **401**, **402**, **403**, **409**); 12 within route section three (, **83**, **86**, **87**, , **116**, , **171**, **172**, **190**, **194**, **201**, , **404**, **405**, **413**) and none in route section 4. There are four assets in section two which are also in section 3 (**76**, **80**, **115**, **168**)
- 6.2.12 Of the heritage assets within route section one, six are Medieval, three are Post Medieval and two are of Unknown date. All have **low** archaeological potential, apart from five of **medium** value; (**103**) and (**104**) which relate to two Medieval shrunken villages and ((**117**) a disused tramway and (**411**) and (**412**) which relate to two disused railways.
- 6.2.13 Of the heritage assets within route section two, over half are of Prehistoric or unknown date. Almost all assets are of **low** value, apart from five Prehistoric of medium value (**76**, **80**, **98**, **225**, **397**), one Early Medieval asset (**108**).and one Modern (**409**) of **medium** value
- 6.2.14 Of the heritage assets within route section three, three are from the Prehistoric period, three from the Medieval and three are from the Post Medieval, and one each from the Roman, Modern and Unknown periods. All are of **low** value, apart from two assets of **medium** value; a Bronze Age pottery scatter (**83**) and a Second World War pillbox. (**116**).
- 6.2.15 Overall there is **medium** archaeological potential for heritage assets, particularly for Prehistoric assets and Medieval assets, particularly near to the shrunken Medieval villages of Thoresthorpe and Saleby.

#### Archaeological Potential in South Holland District Council

- 6.2.16 There is one asset, located in route section 4, within South Holland. This asset (**21**) is a cropmark from the Prehistoric period in North Ing and is of **low** value.
- 6.2.17 Overall there is **low** archaeological potential for heritage assets. Potential is greatest for Prehistoric and Medieval assets within areas of concentrated finds and in route section 2.

### Archaeological Potential in Boston Borough Council

- 6.2.18 There are two heritage assets within Boston Borough in the planning application boundary of the proposed DC cable route. One asset is the site of a demolished nineteenth century farmstead in Holland Fen with Brothertoft (**55**). The second asset is the Post Medieval settlement of Amber Hill (**154**). Both assets are of **low** value.
- 6.2.19 Overall there is **medium** archaeological potential for archaeological assets within the Boston Borough. There is **medium** potential for Medieval assets and **low** potential for Post Medieval assets.

### Archaeological Potential in North Kesteven District Council

- 6.2.20 There is one asset, located in route section 4, in North Kesteven. This asset is a Post Medieval nineteenth century demolished farmstead (**52**) of **low** value.
- 6.2.21 Overall there is **low** archaeological potential for heritage assets, with the greatest potential being for Post Medieval assets.

### Conclusion

- 6.2.22 Given the size of the project and its geographic spread it is not surprising that this assessment has demonstrated that there is a sizeable data set of heritage assets within the proposed DC cable route planning application boundary and Zone of Influence. Parts of the route have potential for as yet unknown archaeological remains to be present, where there are known concentrations of assets with **medium** and **low** value.
- 6.2.23 This assessment has catalogued and presented the known designated heritage resources for the DC cable route planning application boundary and Zone of Influence using a range of sources and used the data set to determine the significance and archaeological potential of the proposed DC cable route.

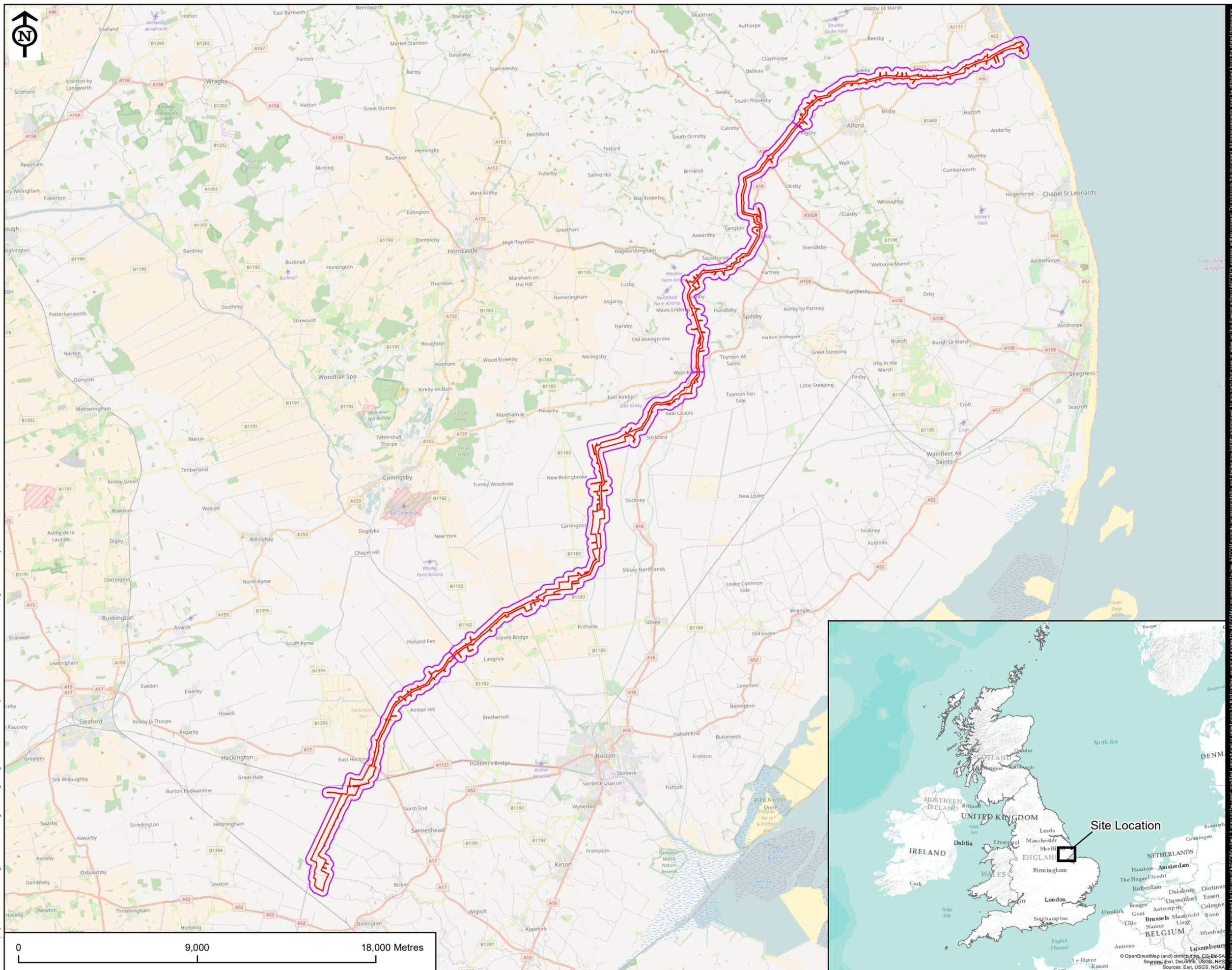
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CONSULTANT: ARCADIS PRODUCED: A.HANKINSON CHECKED: J.MURRAY APPROVED: J.GIDMAN

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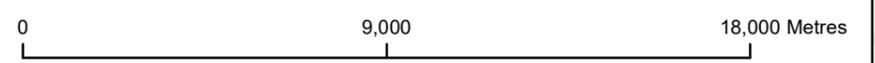
**LEGEND**

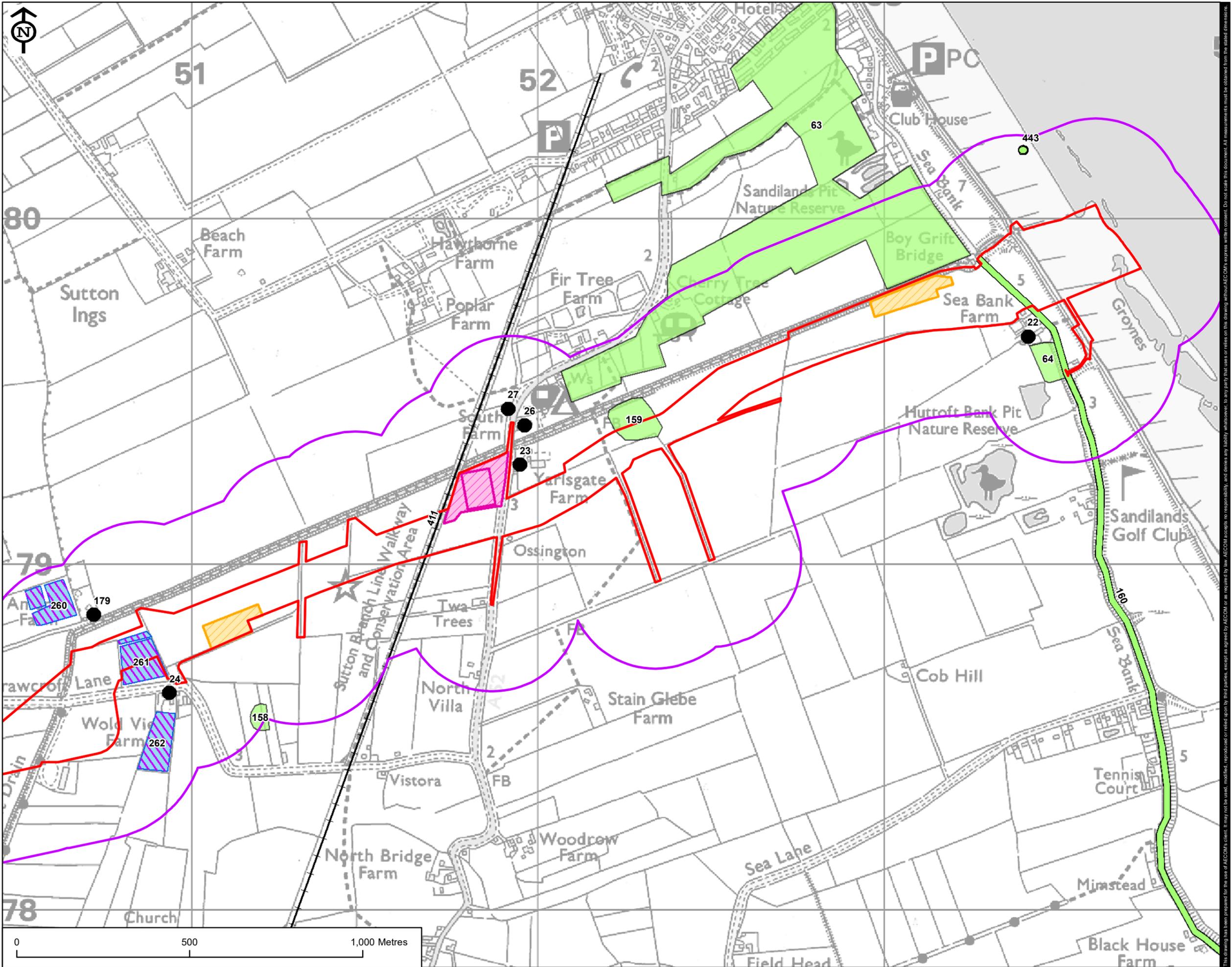
- Application Boundary
- 250m Zone of Influence

**REVISION:**

REV.	DATE	DESCRIPTION
01	24JUL17	Location Map

**FIGURE NO.**  
**FIGURE 1**  
**FIGURE TITLE**  
 BASE SCHEME DESIGN AND 250M ZONE OF INFLUENCE MAP  
**SHEET NUMBER**  
 1 of 1  
**NOTES**





LEGEND

- Planning Application Boundary
- 250m Zone of Influence
- Temporary Works Areas
- Temporary Construction Compound

Designated Assets

Non-Designated Assets

- Previously Unrecorded Archaeology
- Disused Railways
- Farm
- HER Asset
- HER Asset
- HER Asset



REVISION:

REV.	DATE	DESCRIPTION
1	09/06/17	Original Issue
2	14/08/17	Amendments

FIGURE NO.

FIGURE 2

FIGURE TITLE

HERITAGE ASSETS

SHEET NUMBER

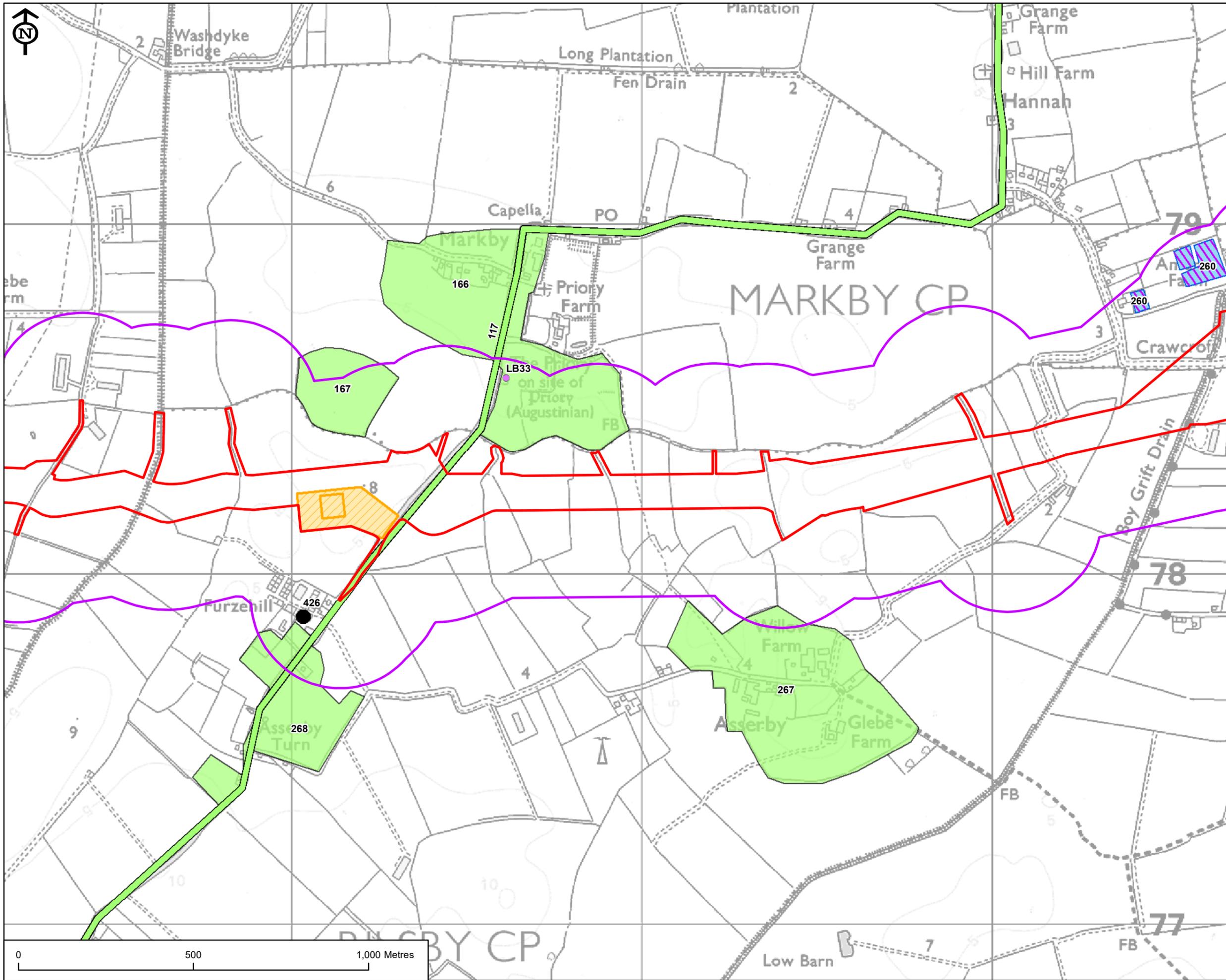
1 of 20

NOTES

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- LEGEND**
- Planning Application Boundary
  - 250m Zone of Influence
  - Temporary Works Areas
  - Temporary Construction Compound
- Designated Assets**
- Listed Buildings**
- Grade II

- Non-Designated Assets**
- Previously Unrecorded Archaeology
  - Farm
  - HER Asset
  - HER Asset



**REVISION:**

REV.	DATE	DESCRIPTION
1	09/06/17	Original Issue
2	14/08/17	Amendments

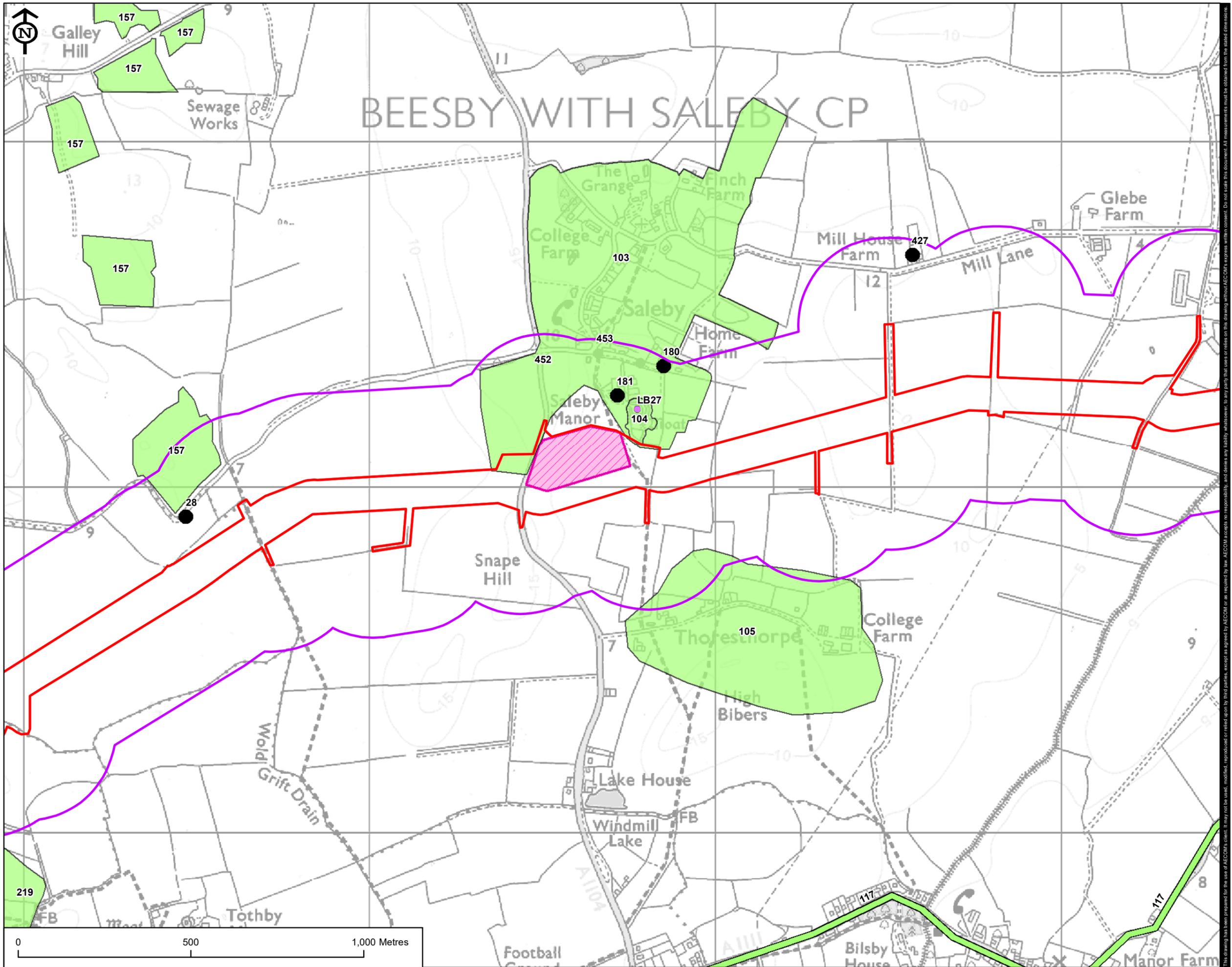
**FIGURE NO.**  
**FIGURE 2**  
**FIGURE TITLE**  
**HERITAGE ASSETS**

**SHEET NUMBER**  
 2 of 20

**NOTES**

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- LEGEND**
- Planning Application Boundary
  - 250m Zone of Influence
  - Temporary Construction Compound

- Designated Assets**  
**Listed Buildings**
- Grade II

- Non-Designated Assets**
- Farm
  - HER Asset
  - HER Asset



**REVISION:**

REV.	DATE	DESCRIPTION
1	09/06/17	Original Issue
2	14/08/17	Amendments

**FIGURE NO.**  
FIGURE 2  
**FIGURE TITLE**  
HERITAGE ASSETS

**SHEET NUMBER**  
3 of 20

**NOTES**

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