

## 9 Archaeology

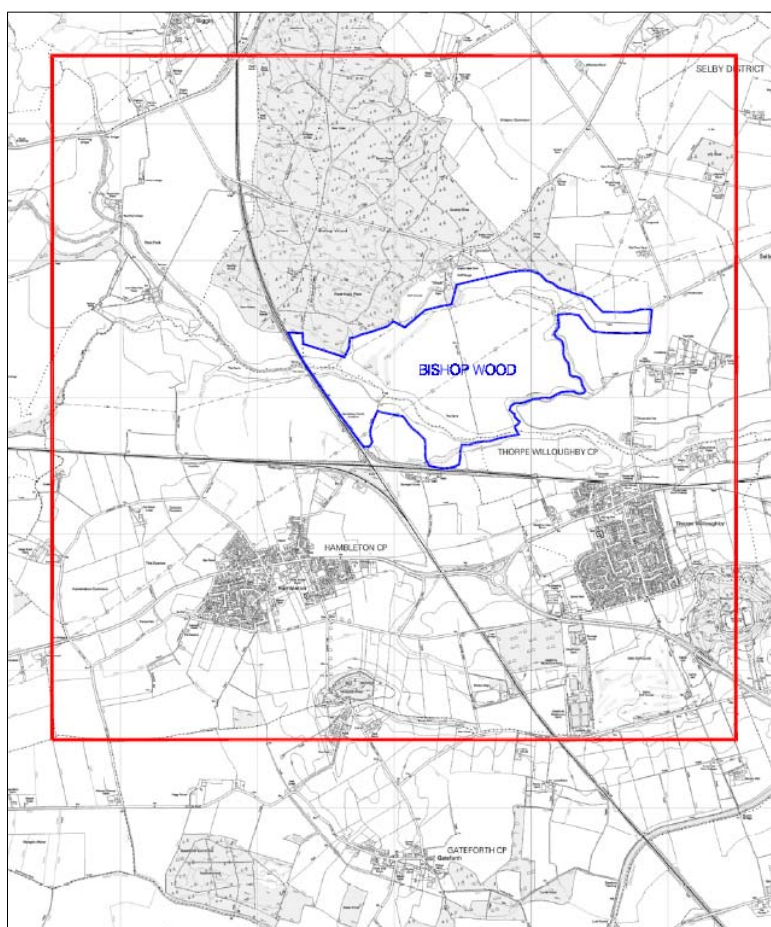
### 9.1 Introduction

This document presents the results of an archaeological desk-based assessment (DBA) and programme of archaeological evaluation, carried out for the site of the proposed wind farm at Bishopwood (grid reference 456 432). The archaeological assessment was undertaken by Field Archaeology Specialists (FAS) Ltd, on behalf of North Energy Associates Ltd for Prowind Hambleton Windfarm GmbH & Co.KG. Initial research and report preparation was carried out in November 2008. Geophysical survey was undertaken by Wessex Archaeology early in 2009. Subsequently, the archaeological assessment was expanded and enhanced in March 2009.

A full version of the archaeological desk-based assessment is provided in Volume 3 Appendix 9.1, which should be referred to for full detail, gazetteer and figures. The geophysical survey report by Wessex Archaeology is provided in Volume 3 Appendix 9.2.

#### 9.1.1 Structure of the study

In order to assess the archaeological potential of the proposed wind farm site, a “wider study area” of 5km x 5km (25km<sup>2</sup>) was defined (Figure 9.1). Within this area, the wind farm site has been considered in more detail as a “detailed study area”.



**Figure 9.1 Detailed and wider study areas**

9.1.2 *Aims and objectives*

The assessment was undertaken at two levels, the detailed study area and the wider study area, with the aim of establishing:

- the wider archaeological and historical context of the proposed wind farm site, as represented by known and potential archaeological sites within the wider study area
- the significance of known and potential archaeological sites within the immediate vicinity of the proposed wind farm (detailed study area)
- the impact that the proposed extraction would have on known and potential archaeological sites and their wider archaeological and historical landscape.

**9.2 Methodology and consultation**

9.2.1 *Documentary and archival research*

Known and potential archaeological sites within the detailed study area and wider study area were identified through an enhanced search of the North Yorkshire Historic Environment Record (NYHER). The National Monuments Record (NMR), Swindon, was consulted for monument and events records, listed buildings, and aerial photographs. Further information was gathered by consulting historic maps at the North Yorkshire Record Office, aerial photographs of the area (National Mapping Programme (NMP), NYHER and AEROScene) and from a variety of published sources.

9.2.2 *Walkover survey*

A walkover survey of the site was carried out on 25th November 2008. As much of the land had been recently planted, the walkover was restricted to paths, tracks and roads. The perimeter of each area was followed, and broad traverses made across the site, to allow the character of the landscape to be assessed, and the visibility from the site to be considered.

9.2.3 *Geophysical survey*

On completion of the initial archaeological assessment, a programme of archaeological evaluation was designed, to further assess the character, date and extent of archaeological remains to be impacted by the ground works.

9.2.4 *Gazetteer*

All sites and monuments identified within the wider study area and detailed study area were assigned an individual Desk-Based Assessment number (DBA Ref.) and entered into a gazetteer with cross-references to their Scheduled Ancient Monument Number (SAM), National Monument Number (NMN), Listed Building reference (LiB), North Yorkshire Historic Environment Record Number (MNY) and North Yorkshire event number (ENY) where applicable (see Appendix 9.1). The distribution of sites within the detailed study area was plotted onto Ordnance Survey mapping. The Gazetteer appears as an appendix to Appendix 10.1.

9.2.5 *Assessment of significance and impact*

An assessment of the significance of known and potential archaeological sites within the detailed study area was undertaken, followed by consideration of the likely impact of the proposed wind farm. Full details of the significance and impact assessments are included in the Appendix 9.1.

### 9.3 Guidance

#### 9.3.1 National and Regional Planning Framework and Guidelines

- Ancient Monuments and Archaeological Areas Act, 1979
- Town and Country Planning (Listed Buildings and Conservation Areas) Act, 1990
- Local Plans (as appropriate)
- Planning Policy Guidance Note 15 (Planning and the Historic Environment)
- Planning Policy Guidance Note 16 (Archaeology and Planning)

The archaeological assessment has also been undertaken with reference to English Heritage's *Wind Energy and the Historic Environment*<sup>1</sup>.

#### 9.3.2 Desk-Based Assessment

The archaeological assessment was prepared in accordance with the Institute for *Standard Guidance for Archaeological Desk-Based Assessments*<sup>2</sup>.

#### 9.3.3 Geophysical survey

The design of the geophysical programme was carried out following the English Heritage Research and Professional Services Guideline No. 1, *Geophysical Survey in Archaeological Field Evaluation* and Institute for Archaeologists Paper No. 6 *The Use of Geophysical Techniques in Archaeological Evaluations*<sup>3</sup>.

### 9.4 Baseline Conditions - Scheduled Ancient Monuments

Scheduled Ancient Monuments (SAMs) are nationally important archaeological features (including buildings, earthworks and isolated structures), which are protected by the state through the auspices of the Ancient Monuments and Archaeological Areas Act 1979. Scheduled Monument Consent (SMC) is required if work or alteration is to take place within the boundary of the area that has been scheduled. Buildings designated as SAMs, or buildings within areas designated as SAMs, may also be Listed Buildings, but it should be noted that in such instances, legislation relating to SAMs (Ancient Monuments and Archaeological Areas Act 1979) takes precedence over that relating to Listed Buildings.

One Scheduled Ancient Monument was identified within the boundary of the wind farm site, being the Second World War bombing decoy close to Scalm Park Cottages. A further Scheduled Ancient Monument within the wider study area is represented by Thorpe Hall moated monastic grange.

### 9.5 Baseline conditions - Listed Buildings

Listed Buildings are buildings of special architectural or historic interest that are designated under the Planning (Listed Buildings and Conservation Areas) Act 1990 and which are included on a list compiled by the secretary of State for Culture, Media and Sport. Listed Buildings in England are graded according to criteria recommended by English Heritage. The grades are summarised as follows:

Grade I                      Buildings of exceptional interest

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<sup>1</sup> English Heritage (2005), *Wind Energy and the Historic Environment*

<sup>2</sup> Institute for Archaeologists (2008), *Standard Guidance for Archaeological Desk-Based Assessments*

<sup>3</sup> English Heritage (2008), Research and Professional Services Guideline No. 1, *Geophysical Survey in Archaeological Field Evaluation*; Institute for Archaeologists (2002), Paper No. 6 *The Use of Geophysical Techniques in Archaeological Evaluations*.

Grade II\*            Particularly important buildings of more than special interest

Grade II             Buildings of special interest

A total of 16 Listed Buildings were identified within the Wider Study Area, including one Grade II\* Listed Building (Gateforth Hall). The remainder were Grade II Listed Buildings of 18th to 19th-century date.

#### 9.6 Baseline conditions - other statutory designations

No Registered Battlefields, Registered Parks and Gardens, Conservation Areas or World Heritage Sites were identified within the wider study area (NYCC enhanced search).

#### 9.7 Known sites and monuments - landscape development of the study area

##### 9.7.1 *Palaeolithic*

As with much of Yorkshire, no evidence for Palaeolithic activity was identified within the study area. Information relating to this period is confined to palaeoenvironmental information which has demonstrated the changing development of the landscape of the area from c.10,200BP onwards<sup>4</sup>. Early post-glacial woodland (c.10,200BP to c.7500BP) saw a progression from birch and pine domination to more mixed species, including oak, pine, elm and hazel, with a decline of birch.

##### 9.7.2 *Mesolithic*

Mesolithic evidence from the Vale of York is rare, and tends to be concentrated on the edge of the Wolds and the higher and drier outcrops<sup>5</sup>. Finds of Mesolithic flint at Brayton Barff supports the idea that higher land was exploited at this time; the lowland riverine areas may have been exploited for hunting and fishing.

Borehole evidence from Birkin, carried out as part of the Humber Wetland Project, has provided an indication of the Mesolithic landscape of this region. Pollen samples indicated a landscape of dense alder carr, with close-canopy woodland of lime, hazel and oak beyond the floodplain. Low quantities of taxa suggested a low biodiversity.

No finds of Mesolithic date were identified within the wind farm site, which occupies low-lying ground.

##### 9.7.3 *Neolithic*

Neolithic activity in the Vale of York is represented mainly by find spots, which tend to occur in similar topographic locations to those of the Mesolithic, on localised outcrops. Generally, these finds take the form of stone axes, and flint scatters. Two flint scatters of prehistoric date have been encountered in the southern part of the wider study area.

##### 9.7.4 *Bronze Age*

Discoveries of Bronze Age and later date are more prolific than for earlier periods<sup>5</sup> although none have been identified within the Bishop Wood site. Palaeoenvironmental evidence from Birkin<sup>6</sup>, suggested that the Bronze Age-Iron Age landscape was more

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<sup>4</sup> Van de Noort, R. and Davies, P. (1993), *Wetland Heritage: an archaeological assessment of the Humber Wetlands*, Kingston upon Hull

<sup>5</sup> Head, R., Fenwick, H. and Van de Noort, R. (1999) *Introduction to the archaeological survey* in Van de Noort and Ellis (eds.)

<sup>6</sup> Lille, M. and Gearey, B. (1999) *The palaeoenvironmental survey of the rivers Aire, Ouse, Wharfe and Derwent* in Van de Noort and Ellis (eds.)

open than preceding periods and indicated the possibility of anthropogenic activity in the landscape.

It is also possible that a series of ring-ditches, identified mainly near to Gateforth but with two outliers within the wider study area, represent barrows of Bronze Age date; equally, however, these could be hut circles of later date and without further investigation must remain uncertain. Generally, few Bronze Age barrows have been encountered on low, wetland sites<sup>4</sup>, which might indicate a preference for the latter interpretation.

#### 9.7.5 *Iron Age/Romano-British*

Evidence of Iron Age activity from the wider Vale of York includes funerary and settlement evidence.

Aerial photographs of the wider study area suggest that this area was intensively settled and exploited; numerous cropmarks have been assigned to the Iron Age/Roman period on the basis of their form, many of which appear to represent field systems. More fragmented, and therefore undated, cropmarks which either appear to be associated with diagnostically early field systems, or which are clearly not aligned with medieval or post-medieval field systems, are potentially of this date.

Associated with these field systems, settlement evidence is suggested by cropmarks to the north of Hambleton and to the north of Bishop Wood, both within the wider study area. These include enclosures, trackways and associated ring-ditches.

No features of this date were identified within the Bishopwood site.

#### 9.7.6 *Roman*

Roman evidence from the wider landscape includes the small fort at Roall; cropmarks and geophysical survey identified a *vicus* to the southeast of the fort, and a possible bathhouse to the northwest.

Cropmark evidence for another possible settlement of Roman date, with contemporary field system has also been identified some distance to the south of the wider study area, and may have been associated with the recorded findspot of a stone sarcophagus. Further evidence for Roman activity is evidenced in the finds of Roman grey ware found during field walking.

It is likely that many of the field systems of Iron Age date endured into the Roman period, and without excavation it is not possible to assign secure dates to these features. No features of Roman date were encountered within the proposed wind farm site.

#### 9.7.7 *Early medieval*

Evidence for early medieval activity in the area is mainly historical, and archaeological evidence dating to this period is scarce. Sherburn in Elmet, which lies to the northwest, retains the name of the early medieval kingdom of Elmet, and Hall Garth in Sherburn has traditionally been considered to be the location of King Athelstan's palace<sup>5</sup>. From this time, there is a suggested link between this area and the See of York; Athelstan is said to have granted the manors of Sherburn in Elmet and Cawood to Archbishop Wulfstan.

No archaeological evidence of early medieval date has been found in the wider study area to date, other than an unprovenanced horse mount of early medieval date<sup>7</sup>. However, Domesday Book indicates that much of the settlement pattern of the area had been established by this time; the villages of Birkin (*Berchinge*), Beal (*Begale*), West Haddlesey, Hambleton (*Hamelton*), Thorpe Willoughby (*Torp*) and Gateforth were in existence by the 1080s, and evidence of place-names, particularly the Anglo-Scandinavian *Torp* suggest that their origins are much earlier.

### 9.7.8 *Medieval*

The villages that had their origins in the early medieval period evidently persisted into the medieval period.

Moats are a dominant feature within the wider area, and would have surrounded domestic, religious and agricultural buildings<sup>4</sup>; such features are identified as a dominant feature of the 12th to 14th centuries in the Vale of York<sup>8</sup>. Within the wider study area, three moats have been identified, through earthworks and cropmarks; one at the Scheduled Ancient Monument site of Thorpe Hall, less than 1km to the south east of the Bishop Wood site, and a second at Manor Garth, to the west. The latter was associated with the Archbishop of York in the late 14th century. A third, at Mattram Hall, is known from the Ordnance Survey 1907 edition.

By far the most numerous medieval features of the landscape are the areas of ridge and furrow, identified either through upstanding earthworks or cropmarks. While much of the area would have been given over to agriculture, a significant area of land within the wider study area would have formed medieval parkland, specifically known as Scalm Park and Rest Park. The names of local buildings and fields retain these names. Rest Park was first documented in the 14th century, and was retained by the Archbishop after alienation from the manor of Sherburn in 1545; this park is depicted on Saxton's 16th-century map, and the location of the pale is recorded in later documents. The name of "Bishop Wood" relates to this early association with the church. Other medieval centres of worship have been recorded within the wider study area, including a chapel reported to have existed in association with Thorneyfield Grange, and existed into the 19th-century as a field barn.

A possible communication route within the landscape is represented by references to "Bishop Dike", an artificial channel running from the Ouse, east of Cawood, to Sherburn in Elmet, and believed to have been used to transport stone from the Huddlestone Quarry to York. This would have passed across the northwestern corner of the wider study area; the name is preserved as Bishopdike Road.

Further evidence for medieval activity in the wider landscape is attested by finds of ceramic encountered during fieldwalking.

### 9.7.9 *Post-medieval to modern*

Given the high level of ecclesiastical land ownership of the area, the Dissolution would have seen considerable reorganisation of some of the estates of the area. Thorpe Hall, for example, was listed amongst the possessions of Selby Abbey in 1539, and consequently will have changed hands.

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<sup>7</sup> Historic Environment Records

<sup>8</sup> Fenwick, H. (1999), *Medieval moated sites in the Vale of York: distribution, modelling and wetland potential* in Van de Noort and Ellis (eds.)

After alienation from the manor of Sherburn in Elmet, the role of the Parker at Rest Park is said to have continued, and the Parker's house is believed to be represented by cropmarks within the north eastern part of the wider study area. Scalm Park farmhouse, situated to the north of the detailed study area, is 17th-century in origin, but has no recognisable early features.

Agricultural activity would have dominated the landscape during the post-medieval period, and is known to have diversified during this period. A number of potential cornmills have been identified within the area, including an example recorded on Jeffrey's map and local place-names.

The landscape of the wider study area underwent enclosure in the late 18th and early 19th century; Cawood and Wistow were enclosed in 1780, Beal and Kellington in 1793, Monk Fryston in 1793, Brayton, Thorpe Willoughby and Burton in 1803, Selby in 1808, Birkin in 1815, and Hillam in 1811. Enclosure maps for many of these areas survive, and give an indication of field boundaries which have since been lost. Most of the cropmark features assigned to this period represent field boundaries and tracks which, by drawing comparison to cartographic evidence, appear to be post-medieval enclosures rather than earlier features. The recent geophysical survey (WA 2009) identified a number of features which, when compared with the historic Ordnance Survey editions, can be securely identified as field boundaries. Others appear to run perpendicular or parallel to these 19th-century boundaries, suggesting that they are likely to represent boundaries or drainage associated with the same land use.

Additions to the 19th-century landscape also included the construction of a number of farmhouses and barns, and a series of buildings within the villages, several of which have been assigned Listed Building status. On a larger scale, Gateforth Hall was constructed in 1814 for Humphrey Osbaldston. The hall, now granted Grade II\* listed status, occupies slightly elevated land overlooking the surrounding landscape. The associated lodges and gate piers, coach houses and ha-ha created a large complex within the rural landscape.

Post-medieval to modern industrial activity in the wider study area included sand extraction, and more modern industry is represented by a jam factory. The construction of railways across the area in the early 19th century would have transformed the landscape. The expansion of villages close to the lines, including Hambleton and Thorpe Willoughby, also included the construction of new places of worship.

Military features within the landscape include an army camp recorded at Brayton Barff, and a World War II decoy at Scalm Park; the latter lies within the Bishopwood Wind Farm site.

### 9.8 Assessment of significance

The significance of the known and potential archaeological remains within the wider study area has been assessed, and details and justification of their assessment is included in Appendix 9.1.

An assessment of the significance of known and potential archaeological sites within the detailed study area was undertaken, followed by consideration of the likely impact

of the proposed extraction, and the formulation of appropriate mitigation strategies. This involved a three-stage approach.

Firstly, the importance of each individual resource was evaluated.

Secondly, the importance of sites within the detailed study area was assigned in relation to a number of different criteria, including documentation (archaeological and historical), international, national, regional and local significance, statutory protection, survival, group value (if applicable), potential and amenity value.

Thirdly, on the basis of these criteria, six different grades of importance have been ascribed to cultural heritage resources.

Category	Grading	Importance of resource
A	Very Important	Resources of national importance, including Scheduled Ancient Monuments, or those monuments in the process of being scheduled and which otherwise meet scheduling criteria, all Listed Buildings grades I and II*, Registered Historic Parks and Gardens grades I and II*, and Registered Historic Battlefields
B	Important	Resources of importance within a regional or county context, including Conservation Areas, Grade II Listed Buildings and Registered Parks and Gardens grade II
C	Moderate Importance	Resources of local importance. These may have been partially destroyed by past land use, whether by agricultural activity or previous built development
D	Limited Importance	Resources of limited local importance, due to their high frequency, lack of provenance or limited survival. These include finds from fieldwalking, and post-medieval field Boundaries
E	Not Important	Resources that are so badly damaged or altered that too little remains to justify their inclusion in a higher category
F	Uncertain	Resources of uncertain importance based upon their type or condition

Three sites (<1%) have been assigned Very Important (A) status. These include the two Scheduled Ancient Monuments and the Grade II\* Listed Building of Gateforth Hall. The Scheduled Monument represented by the WWII decoy lies within the boundary of the Wind farm development.

The 16 Grade II Listed Buildings identified within the wider study area have been assessed as Important (B), representing structures of importance within a regional or county context. The majority reflect the development of the 18th- and 19th-century rural landscape. Also considered to be of regional importance is the potential Mesolithic site of Brayton Barff; although represented only by finds, the elevated location suggests that the flints may represent *in situ* activity. Sites which have the



potential for prehistoric and medieval burial or settlement are also assessed as important, as each has the potential to produce occupation deposits and evidence for past activity within the wider landscape. This includes the possible burials represented by cropmarks of ring ditches and square barrows. The pit alignment is also considered important, as a type of feature which represents prehistoric boundary divisions and landscape organisation. The possible Iron Age or Romano-British settlements identified from cropmarks are also included in this grade of significance. The moated sites of the area, although relatively common within this region, have the potential to produce wet-preserved remains relating to medieval activity, and are therefore also considered important. Manor Garth house complex is included, as well as the moat, due to its wider significance as a manor house of the Archbishops of York. The Bishop's Dike is also considered to be of regional significance, and therefore "important"; this provides an indication of the infrastructure involved in the construction of York Minster. A total of 25 sites (22%) have been assessed as Important.

A total of 30 sites (26%), are features which together allow the gradual development of the local landscape to be traced. These include finds of prehistoric origin (where the find location is recorded), which, although not found *in situ*, provide an indication of areas of activity. Cropmarks representing field systems and enclosures of likely prehistoric and medieval date have been included, as they allow a picture of the local landscape to be created. Likewise, large areas of ridge and furrow provide evidence for medieval agricultural regimes that are not otherwise recorded. The local villages, and their place-name evidence, each contribute to the early medieval and later character of the landscape. Associated fishponds also point to medieval or post-medieval exploitation of the landscape, adding to knowledge of the local economy. Rural buildings of likely post-medieval or later date which have not been considered significant enough for Listed status are graded of moderate importance. Landscape features such as the railway network (extant) are also considered to be moderately important as they contribute to knowledge of local infrastructure and water management. Local factories, religious houses, military sites are also of local significance, and therefore moderate importance.

Some 51 sites, being 44%, are assigned limited importance. Although the areas of historic woodland, post-medieval field boundaries and drainage features also contribute to the wider development of the landscape, these extensive features have been assessed at a slightly lower level of significance, as they are a relic of the system of landscape organisation that survives today, and are widely recorded cartographically. Buildings which would have been of local significance, but which do not now survive, are assigned limited importance, including single buildings which have been demolished but may have below-ground remains, the documented mills, and the possible moat at Mattram Hall. Scalm Park and Rest Park have also been assigned limited significance; although historically important, these areas are not represented physically within the wider study area, other than in surviving place-names. Knowledge of the location of Scalm Park Pale enhances understanding of this landscape, but does not survive. Finds of ceramic recovered during field walking are considered of limited importance as they may derive from manuring, rather than direct loss or activity, and unidentified and now-lost flint which might be of greater significance, has been assigned limited importance as no further details are now known. Similarly, the findspot of post-medieval coins would have greater significance if its provenance could be more closely defined. The non-extant railway line and sand pit are both of historic

interest to studies of the local landscape, but no longer survive, and are therefore of limited archaeological significance.

One site (<1%) has been assigned the lowest level of significance (E) as it represents a modern service of no archaeological significance.

Of uncertain significance (4 sites, <1%) are a number of cropmark features or geophysical anomalies which have yet to be further defined.

### 9.9 Statement of archaeological potential

In addition to providing evidence on the known sites within the study area, the archaeological features identified within the wider study area allow the archaeological potential of the proposed Wind farm site to be assessed.

The Bishopwood site is low-lying, and as such is not a likely candidate for prehistoric settlement during the Mesolithic and Bronze Age periods. No flint finds have been recorded in the immediate vicinity, although this may be due to factors of recovery.

Iron Age/Romano-British field systems have been identified both north and south of the site, and it is likely that such activity would have extended across the detailed study area. The lack of known cropmarks on the site (other than the undated “settlement” in the NYHER) may indicate destruction by ploughing, or other factors influencing visibility.

The moated sites of Thorpe Hall and Manor Garth lies to the northeast and southwest of the site, and ridge and furrow to the north and south of the detailed study area suggest that some of the area would have been given over to agriculture during this period. Some of the land may, however, have been parkland, and the woodland now represented by Bishop Wood may have extended across some of this area. Archaeological remnants of ridge and furrow might be expected, although the lower-lying areas to the south and east, drained by Selby Dam and Dutchman’s Dike, may have been more waterlogged and less suited to arable. Medieval ceramic has been encountered to the west of the site.

The area was enclosed in the late 18th/early 19th century, which will have seen the creation of new field boundaries across the site. Some boundaries, now disused, have been identified as cropmarks and geophysical anomalies, and it is likely therefore that such features survive archaeologically.

The lack of modern building activity, other than the construction of the railway along the western boundary of the site, means that remains are likely to have been truncated only through modern ploughing, and that where this has not completely removed features, evidence for earlier land boundaries and agricultural regimes will survive.

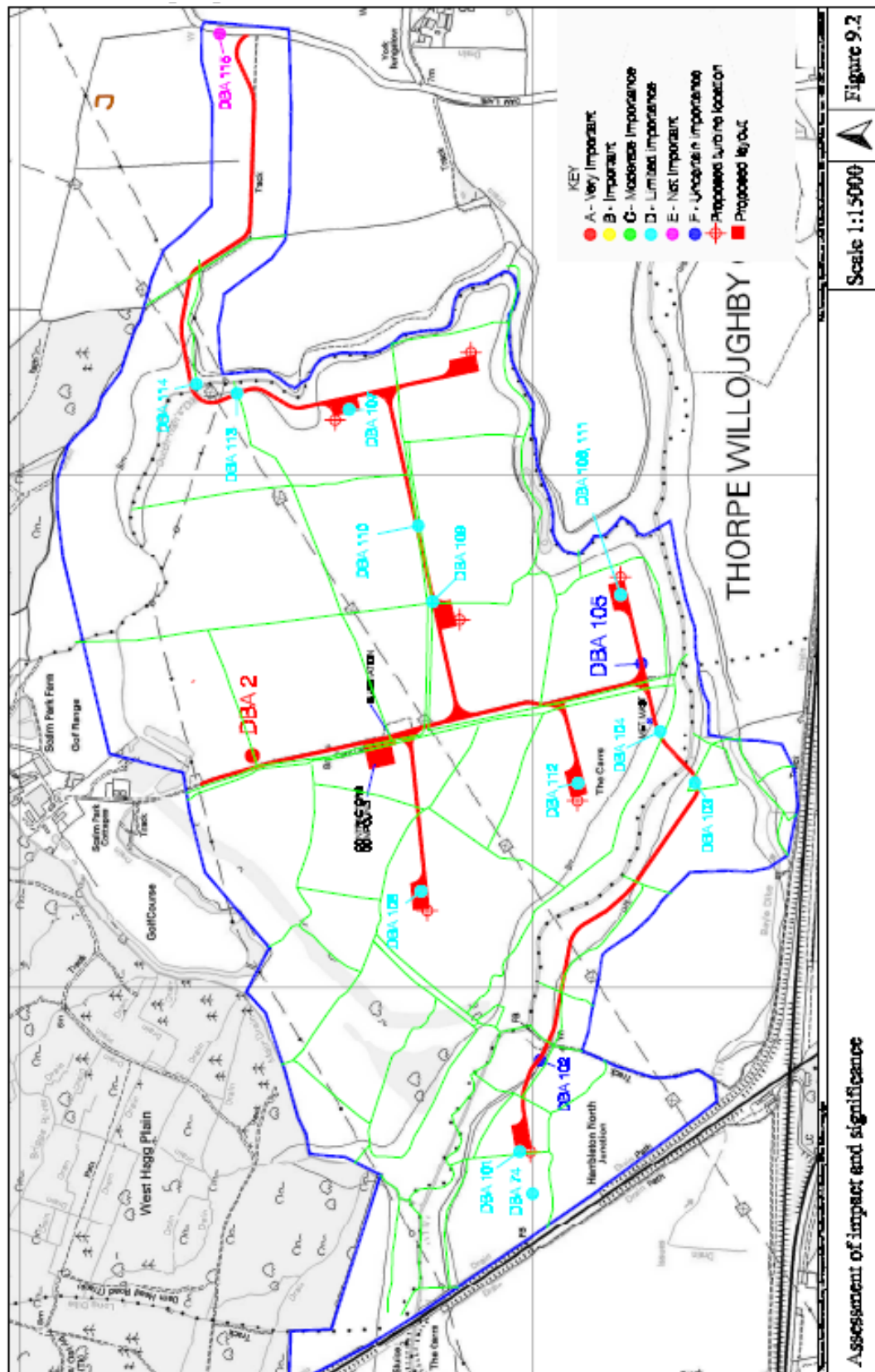


Figure 9.2 Assessment of impact and significance

**9.10 Assessment of impact**

The proposed development will include the construction of a number of wind turbines with associated cable trenches, tracks and compounds; the footprints of the turbines and tracks will have a direct impact on any buried archaeological remains on the site. In addition, the 130m high turbines will have a visual impact on the landscape, and the setting of historic sites and monuments within it (see Cultural Heritage - chapter 10).

9.10.1 *Direct impact*

The *direct impact* has been assessed for all sites and monuments which have been identified within the boundary of the Bishopwood site (see Figure 9.3).

Categories of impact may be graded thus:

- Very High Adverse (VHA)
- High Adverse (HA)
- Medium Adverse (MA)
- Low Adverse (LA)
- Negligible / None (N)
- Low Beneficial (LB)
- Medium Beneficial (MA)
- High Beneficial (HB)
- Very High Beneficial (VHB)

Direct impact is assessed based on the current layout of turbines and associated infrastructure (see Figure 9.2).

DBA Ref	Description	Significance	Impact	Comment
2	World War II bombing decoy control building	A	N	There will be an indirect, visual impact
74	Cropmark enclosures, identified on the 1907 OS map	D	N	Not directly impacted
101	N-S geophysical anomaly identified with field boundary on OS 1850.	D	VHA	Within the area to be impacted by the groundworks
102	Curvilinear features identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
103	Geophysical anomalies identified with field boundary on OS 1850.	D	VHA	Within the area to be impacted by the groundworks

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DBA Ref	Description	Significance	Impact	Comment
104	Linear features identified during geophysical survey	D	VHA	Within the area to be impacted by the groundworks
105	Subannular anomaly identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
106	NNW-SSE aligned geophysical anomaly, not seen on historic OS, but parallel to known field boundaries.	D	VHA	Within the area to be impacted by the groundworks
107	NNW-SSE aligned geophysical anomaly, not seen on historic OS, but parallel to known field boundaries.	D	VHA	Within the area to be impacted by the groundworks
108	Two NE-SW aligned geophysical anomalies, not seen on historic OS, but parallel to known field boundaries.	D	VHA	Within the area to be impacted by the groundworks
109	N-S aligned geophysical anomaly identified as a field boundary on OS 1850.	D	VHA	Within the area to be impacted by the groundworks
110	Two E-W aligned geophysical anomalies, identified as a track on OS 1850.	D	VHA	Within the area to be impacted by the groundworks
111	NNW-SSE aligned geophysical anomaly, not found on historic OS, but running parallel to known historic boundaries.	D	VHA	Within the area to be impacted by the groundworks
112	N-S aligned linear features, identified as field boundaries	D	VHA	Within the area to be impacted by the groundworks
113	E-W aligned geophysical anomalies, identified as field boundaries on historic OS	D	VHA	Within the area to be impacted by the groundworks

DBA Ref	Description	Significance	Impact	Comment
114	E-W and N-S anomaly identified with a spur of Dutchman's Dyke	D	VHA	Within the area to be impacted by the groundworks
115	E-W aligned anomaly identified during geophysical survey as a modern service	E	VHA	Within the area to be impacted by the groundworks

**Figure 9.3 Assessment of direct impact**

A total of 17 sites or features have been identified within the boundary of the detailed study area, from recorded findspots, cropmarks or geophysical survey. The impact of the proposed works has been assessed in terms of the likely direct impact on these sites.

The most significant of the monuments, the Scheduled Ancient Monument represented by a WWII decoy airfield building, lies close to the proposed track, but will not be directly impacted by any groundworks; there is an existing track following this route. One of the sites, a modern service, is not considered to be archaeologically significant (DBA 115). The remaining features are those which were identified as geophysical anomalies, representing either post-medieval/modern field boundaries of limited significance, or linear and curvilinear anomalies, the significance of which has yet to be defined. Few of these fall entirely within the area to be impacted by the groundworks, and so only a small part of the larger features will be removed during the proposed works.

#### 9.10.2 Visual impact

The visual impact of a proposed development on the heritage assets of an area would usually be assessed for each site or monument individually. However, the size of the turbines (130m), with the open and low-lying character of the landscape, means that the turbines are likely to be visible from almost all of the sites within the wider landscape. The assessment must therefore be qualitative, in assessing whether these turbines would have a dramatic impact on the current setting of the sites.

The south-facing aspect of the site is currently dominated by the two power stations of Drax and Eggborough, and the setting of the Listed Buildings and Scheduled Monuments of the area is already impacted by these sites. The proposed wind farm would be visible from Gateforth Hall (Grade II\*), and would impact the setting of the World War II decoy (SAM) and Thorpe Hall (SAM). A more detailed assessment of visual impact has been prepared by Adrian Smith of North Energy Associates, and forms the separate Chapter 10.

#### 9.11 Mitigation

The assessment found that the proposed Wind farm site lies within a landscape of archaeological potential, exploited from prehistory to the modern day. The evidence from the area relied, however, on chance finds and cropmarks, and many features remained insecurely dated. The programme of evaluation, consisting of a gradiometer

survey of all wind turbine bases and cable and track routes, was undertaken to confirm the character of the archaeological resource within the areas, and to allow appropriate mitigation to be designed. The geophysical survey encountered few features of likely archaeological significance; the majority of the remains related to field boundaries which can be identified with features marked on historic and current Ordnance Survey editions.

9.11.1 *Wind farm design*

Preservation *in situ* is always the preferred measure; the current design of the wind farm avoids the more clearly defined features of higher archaeological potential, including the medieval moat and associated trackway.

9.11.2 *Visual impact*

The visual impact of the wind farm has only been broadly noted in this assessment, and is considered in more detail in the Cultural Heritage chapter. The impact of the turbines on the setting of historic buildings and upstanding remains within the wider landscape must be given more detailed consideration, and if appropriate, consultation sought with the appropriate statutory bodies (particularly for the Grade I and II\* Listed Buildings and Scheduled Ancient Monuments).

9.12 **Archaeological mitigation**

Potential features that are known within the wider site consist mainly of field systems of varying date; the nature and layout of the proposed wind farm means that the development is unlikely to completely remove any of these features.

The presence of hitherto unanticipated archaeological remains cannot be discounted, and the mitigation strategy proposed involves a scheme of “strip, map and record”, with palaeoenvironmental sampling, for the sites of the proposed wind turbines, with an archaeological watching brief to be maintained on all other groundworks. This work should be undertaken in accordance with a specification and Project Design issued and approved by NYCC.

9.12.1 *Strip, map and record*

The area to be impacted by the turbines should be subject to a programme of “strip, map and record”. This will involve the archaeological monitoring of topsoil stripping across the area to be impacted by the turbine and associated hard-standing. Any features of archaeological significance encountered within this area should be accurately mapped, sampled and subject to detailed archaeological recording, so that their character, date and survival can be ascertained. This strategy will ensure that any remains to be impacted by the proposed works are preserved by record.

9.12.2 *Palaeoenvironmental recording*

It has been observed that the proposed wind farm lies within a wider area of palaeoenvironmental potential; land to the south has been subject to investigation as part of the Humber Wetlands Project. The suitability of the turbine locations for palaeoenvironmental sampling should be assessed in tandem with the “strip, map and record” process, through the excavation of a series of test pits. Should deposits of palaeoenvironmental potential be encountered, these should be sampled and subject to assessment.

9.12.3 *Archaeological watching brief*

An archaeological watching brief should be maintained on all other groundworks involved in the construction of the proposed wind farm. This will include continuous archaeological monitoring of any further topsoil stripping or excavation associated with the establishment of tracks, cable trenches or compound areas. Should any remains of archaeological significance be encountered during these groundworks, adequate time should be allowed for the features to be sampled and recorded by the attending archaeological contractor.

9.12.4 *Reporting and dissemination*

On completion of the scheme of archaeological mitigation, all necessary assessments and analyses should be undertaken in accordance with NYCC specifications to allow the production of a full report, and if necessary publication.

9.13 **Summary and conclusions**

The archaeological assessment demonstrated that the site lies within a landscape that has been occupied from the Mesolithic to the modern day. From at least the Iron Age, the area would have been widely exploited for agriculture, and a palimpsest of field systems may survive archaeologically across the area.

Despite the relatively high archaeological potential of the wider landscape as a whole, the results of the archaeological assessment and subsequent evaluation suggested that the Bishopwood site has relatively low archaeological potential, and that the impact of the proposed wind farm on the archaeological resource would be limited. The majority of the features identified within the area of direct impact were field boundaries of post-medieval or modern date; none would be removed entirely by the proposed works.

The potential for unanticipated remains within the area cannot, however, be ruled out. Following consultation with NYCC, a scheme of archaeological mitigation has been proposed, which will include a programme of strip, map and record, with palaeoenvironmental sampling, to be carried out in the areas to be impacted by the construction of wind turbines. An archaeological watching brief is to be maintained on all further works associated with the wind farm.