

9 Archaeology

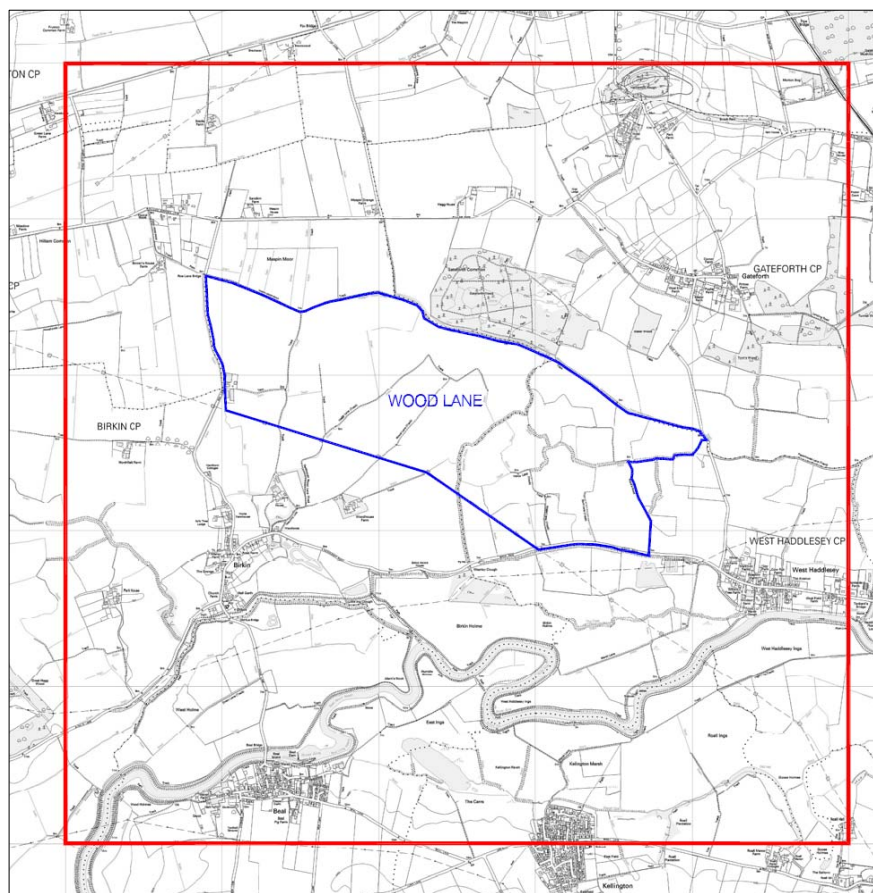
9.1 Introduction

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 Woodlane (grid reference 454 427). The archaeological assessment was undertaken by Field Archaeology Specialists (FAS) Ltd, on behalf of North Energy Associates Ltd for Prowind Gateforth GmbH & Co.KG. Initial research and report preparation was carried out in November 2008. Geophysical survey was undertaken by Wessex Archaeology in 2009. Subsequently, the archaeological assessment was expanded and enhanced in March 2009.

A full version of the archaeological desk-based assessment is provided as Appendix 9.1, which should be referred to for full detail, gazetteer and figures. The geophysical survey report by Wessex Archaeology is provided as 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 (25km²) was defined (Figure 9.1). Within this area, the wind farm site has been considered in more detail as a “detailed study area”.



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Figure 9.1 The study area

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 & consultation

9.2.1 *Documentary and archival research*

Known and potential archaeological sites within the detailed and wider study areas 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 Aerscene) 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 (SAM) number, National Monument Number (NMN), Listed Building reference (LiB), North Yorkshire HER 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 9.1 in Volume 4.

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 Volume 4, 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*¹.

9.3.2 Desk-based assessment

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

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*³.

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.

No Scheduled Ancient Monuments were identified within the wind farm site; one Scheduled Ancient Monument was identified within the wider study area, being the Roman fort close to Roall Hall.

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
Grade II*	Particularly important buildings of more than special interest

¹ English Heritage (2005), *Wind Energy and the Historic Environment*

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

³ 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 Buildings of special interest

A total of 11 Listed Buildings were identified within the wider study area, including one Grade I Listed Building (St Mary's Church) and one Grade II* Listed Building (Gateforth Hall). The remainder were Grade II Listed Buildings ranging from a Roman sarcophagus to buildings of 19th-century date. One of the Listed Buildings, Birkin House, lies to the south of the detailed study area, but none were identified directly within the site boundary.

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 Baseline conditions - 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 (before present) onwards⁴. Early post-glacial woodland (c.10,200BP to c.7,500BP) 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 outcrops⁵. 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. Within the vicinity of the Woodlane site, two Neolithic stone axes were recovered as chance finds in the 1970s. These both occur to the north of the Woodlane site, one beyond its northern extent, and one within its extent, suggesting that evidence for Neolithic activity may be present in the vicinity.

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

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

9.7.4 *Bronze Age*

Discoveries of Bronze Age and later date are more prolific than for earlier periods⁶, although none have been identified within the Woodlane site. Palaeoenvironmental evidence from Birkin⁷, suggested that the Bronze Age-Iron Age landscape was more 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 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 sites⁸, 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, field systems which either appear to be associated with more diagnostically early cropmarks, or which are clearly not aligned with medieval or post-medieval field systems are potentially of this date, and include examples within the Woodlane site.

9.7.6 *Roman*

Roman evidence from the wider study area includes the small fort at Roall, which has been defined as a small auxiliary fort of possible Agricolaan date; 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 to the south of the Woodlane site. Notably this does not lie far from the recorded findspot of a stone sarcophagus of Roman date, listed as a gypsum burial⁹. This would indicate a burial of some status, and it is possible that the cropmarks indicate a significant Roman settlement. The coffin now sits outside the Norman Church, and has been assigned Listed status. 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.

⁶ Head, R., Fenwick, H. and Van de Noort, R. (1999) *Introduction to the archaeological survey* in Van de Noort and Ellis (eds.)

⁷ Lillie, M. and Gearey, B. (1999) *The palaeoenvironmental survey of the rivers Aire, Ouse, Wharfe and Derwent* in Van de Noort and Ellis (eds.)

⁸ Van de Noort and Davies (1993)

⁹ Laing, L. (1977) *Studies in Celtic survival* BAR British Series 37, Oxford

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 palace¹⁰. 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 date¹¹. 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. At Gateforth the earthworks of a possible moat and features possibly associated with a now-shrunken part of the village, indicate former areas of activity.

Moats are a dominant feature within the wider area, and would have surrounded domestic, religious and agricultural buildings¹²; such features are identified as a dominant feature of the 12th to 14th centuries in the Vale of York¹³.

Within the wider study area, a total of five possible moats have been identified, through earthworks and cropmarks, one of which has been identified within the Woodlane site. This feature, labelled "Roe Field Moat" on the earlier Ordnance Survey editions of 1850 and later, is said to have been destroyed in the 20th century, and is currently visible only as cropmarks¹⁴ (Figure 9.2). This field is recorded as "Moat Garth" on the tithe map of 1845. A possible fishpond has been noted within the enclosure, and a cropmark of a trackway leads northwards from the site.

¹⁰ Head *et al* (1999)

¹¹ Historic Environment Records

¹² Van de Noort and Davies (1993)

¹³ Fenwick, H. (1999), *Medieval moated sites in the Vale of York: distribution, modelling and wetland potential* in Van de Noort and Ellis (eds.)

¹⁴ Le Patourel, H.E.J. (1973) *The moated sites of Yorkshire*, London

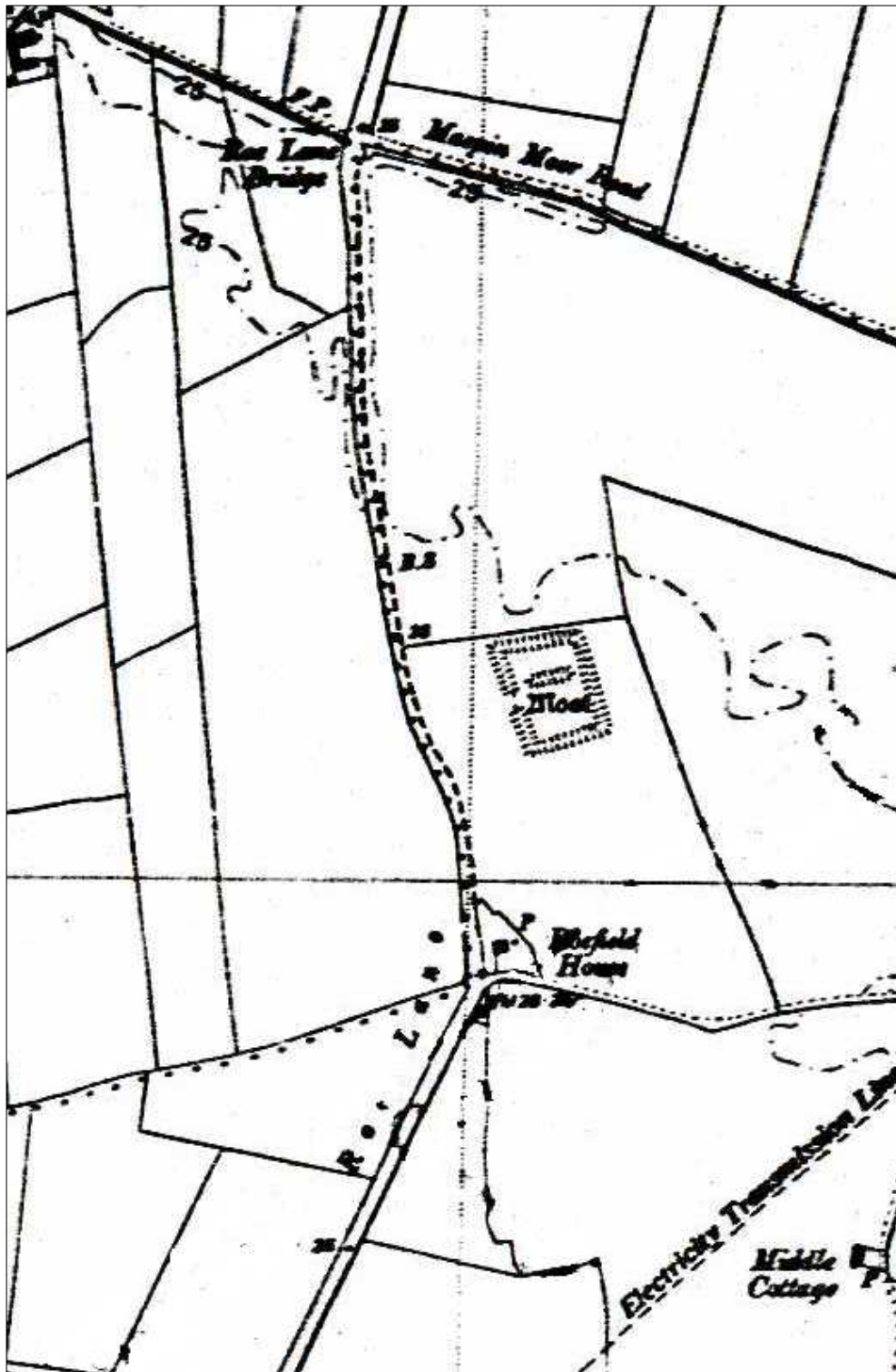


Figure 9.2 Roe Field Moat

By far the most numerous medieval features of the landscape are the areas of ridge and furrow, identified either through upstanding earthworks or cropmarks. Further evidence for medieval activity in the wider landscape is attested by finds of ceramic encountered during fieldwalking.

Medieval centres of worship have also been recorded within the wider study area. The church of St Mary, at Birkin, is described as “one of the most impressive Norman

churches in Yorkshire, and retains much of its Norman plan and structure”¹⁵. The church is a Grade I Listed Building, and overlooks the Woodlane site.

9.7.9 *Post-medieval to modern*

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 the Ordnance Survey edition of 1849. Features associated with waterways in the area include a post-medieval sluice, encountered during a watching brief, and the 18th-century Beal Bridge. Possible flood defences close to Birkin are likely to be of post-medieval date.

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 (see Figure 9.3).

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 enclosure rather than earlier features. The recent geophysical survey 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. Evidence for relatively modern ploughing, or possibly subsoiling, was also encountered during the recent geophysical survey at a number of locations.

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.

¹⁵ Pevsner, N. (1959), *Buildings of England: Yorkshire, the West Riding*, London



Figure 9.3 Field enclosure boundaries

9.8 Assessment of significance

The significance of the known and potential archaeological remains within the wider study area was assessed; detailed grading and justification of significance is included in Volume 4, (Part A), Appendix 9.1.

Chapter 9 Archaeology

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

Five sites (5%) within the wider study area were assigned Very Important (A) status. These include the Scheduled Ancient Monuments, the Grade I Listed Building of St Mary's Church, and Grade II* Listed Building of Gateforth Hall. The *vicus* and bathhouse of the Roman fort have been included in the gazetteer as separate monuments, but by virtue of location within the Scheduled area have also been assigned as Very Important. None of these sites occur within the Woodlane site.

A total of 21 sites (21%) within the wider study area have been assessed as Important, including the nine Grade II Listed Buildings identified, representing 18th to 19th century structures, of significance within a regional or county context. Sites which

appear to represent prehistoric and medieval burial or settlement are also considered Important, as each has the potential to produce occupation deposits and evidence for past activity within the wider landscape. The moated sites, although relatively common within this region, have the potential to produce wet-preserved remains relating to medieval activity, and are therefore also considered Important. The post-medieval and possibly earlier site of Birkin Hall is also considered to be of regional significance; an archaeological evaluation undertaken in 2004 demonstrated the potential for high status occupation deposits. Of the 21 sites graded as Important, one lies just outside the Woodlane site, being the moated site at the western edge of the site - see Figure 9.2

A total of 34 sites (34%), are features which together allow the gradual development of the local landscape to be traced, and are considered to be Moderately Important (C). 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; this includes an axe find from the Woodlane site. 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 (including two groups within the Woodlane site) provide evidence for medieval agricultural regimes that are not otherwise recorded. Geophysical survey within the Woodlane site identified further features which have been interpreted as historic field systems or associated drainage which do not appear post-medieval or later. 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. Earthworks to the south of Gateforth also contribute to the medieval character of the landscape; the rectilinear feature close to Birkin is also included. Rural buildings of likely post-medieval or later date which have not been considered significant enough for Listed status are graded of Moderate Importance; now-demolished Roall Hall is given local significance as the below-ground remains may survive. Landscape features such as Beal Bridge, the railway network (extant) and the post-medieval sluice are also considered to be moderately important as they contribute to knowledge of local infrastructure and water management. Religious houses are also of local significance, and therefore of Moderate Importance.

Some 31 sites, being 31% are assigned Limited Importance. Although the areas of historic woodland, post-medieval field boundaries and flood defences 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. These have been assigned a slightly lower significance (D) since they are so extensive. The majority of features identified within the Woodlane site fall within this category, being field boundaries of post-medieval or later date (see Figure 9.4). Buildings which would have been of local significance, but which do not now survive, are also assigned Limited Importance, including single buildings which have been demolished but may have below-ground remains, such as Low Cottage within the Woodlane site. Finds of ceramic recovered during fieldwalking are considered of Limited Importance as they may derive from manuring, rather than direct loss or activity. The nonextant railway line is of historic interest to studies of the local landscape, but no longer survives, and is therefore of limited archaeological significance.

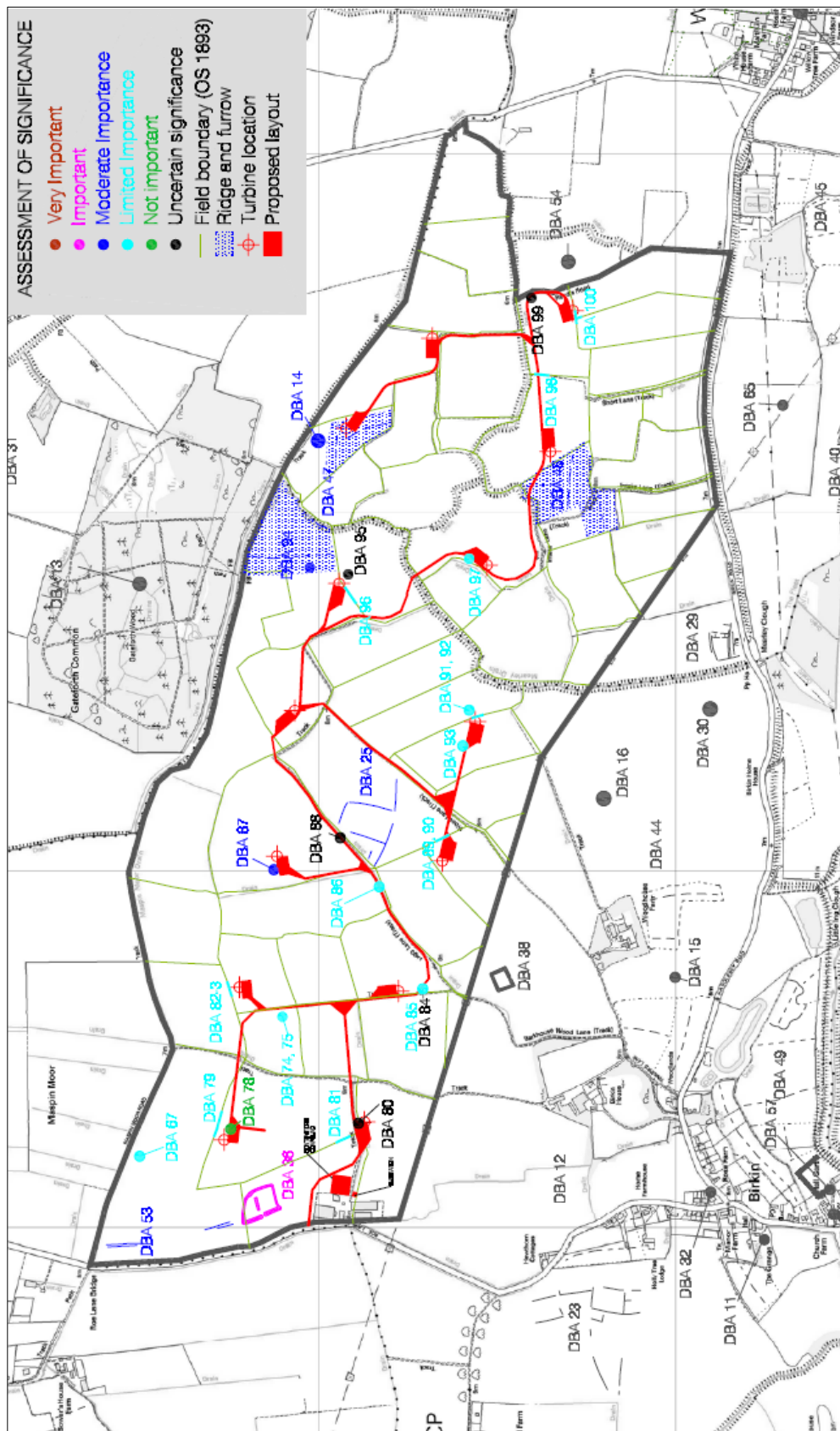


Figure 9.4 Assessment of significance

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Of uncertain significance (eight sites, 8%) are more general find locations, including that of the Roman sarcophagus from Birkin, for which the lack of secure location means that it cannot be used to identify a site of importance within the landscape. The site of Maspin Grange is of uncertain significance. An old stream bed identified from aerial photographs is of uncertain significance archaeologically. Potential archaeological features encountered within the Woodlane site, during the geophysical survey, including possible pits, curvilinear features and a sub-annular feature are also of uncertain significance as their date and function remains unknown.

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 detailed study area to be assessed.

The Woodlane site lies to the north of the flood plain of the River Aire. Lillie and Gearey¹⁶ suggest that the potential for peat is greatest at the northern edge of the flood plain, and there is therefore some potential for palaeoenvironmental evidence in this area. The Humber Wetlands records the flood plain in this area as a medium channel with alluvium and peat encountered at 1m to 3m in depth. There is therefore potential for wet-preserved eco- and artefactual remains, due to depths of alluvium found to have accumulated. The basal peat at 2.32m below Ordinance Datum developed after 5000-4000 cal BC¹⁷, indicating the potential for late Mesolithic and early Neolithic material. Organic deposition continued to the Iron Age at c.500 cal BC; the presence of 3m of alluvium protecting these deposits indicates that the palaeoenvironmental resource is largely protected, albeit threatened by increasing drainage of the lowlands.

The low-lying situation means that prehistoric settlement is unlikely, although the presence of axe heads found to the immediate north of the site would suggest that activity in the area is likely, potentially represented by further lithic artefacts.

Cropmarks suggest that much of the detailed study area would have been exploited as field systems from an early period; possible Iron Age-Romano-British boundaries have been identified within the area, and the general findspot of the Birkin sarcophagus to the immediate south would suggest that Roman settlement existed in the vicinity, possibly associated with the fort of Roall. No enclosures of a diagnostic form were encountered during the geophysical survey, although this does not preclude their existence on the Woodlane site.

Medieval activity is also represented within the detailed study area; areas of ridge and furrow are recorded adjacent to Gateforth Wood, and it is likely that this will have been much more extensive. The cropmark of Roefield Moat lies within the detailed study area, and appears to have a trackway leading north from it. The site has the potential for medieval buildings, artefacts and occupation deposits to survive, as well as possible wet-preserved eco- and artefacts within their moats. A second moat lies just outside the boundary of the detailed study area.

¹⁶ Lillie, M. and Gearey, B. (1999) *The palaeoenvironmental survey of the rivers Aire, Ouse, Wharfe and Derwent* in Van de Noort and Ellis (eds.).

¹⁷ Calibrated radio carbon date

The area is known to have been partly wooded into the 19th and 20th centuries, with “Thorney Hagg”, “Bawn Moor” and “Low Wood” marked on Ordnance Survey editions (see Figure 9.5), and enclosure would have meant many more field boundaries across the area, many of which are likely to survive archaeologically, as has been demonstrated by the recent geophysical survey.

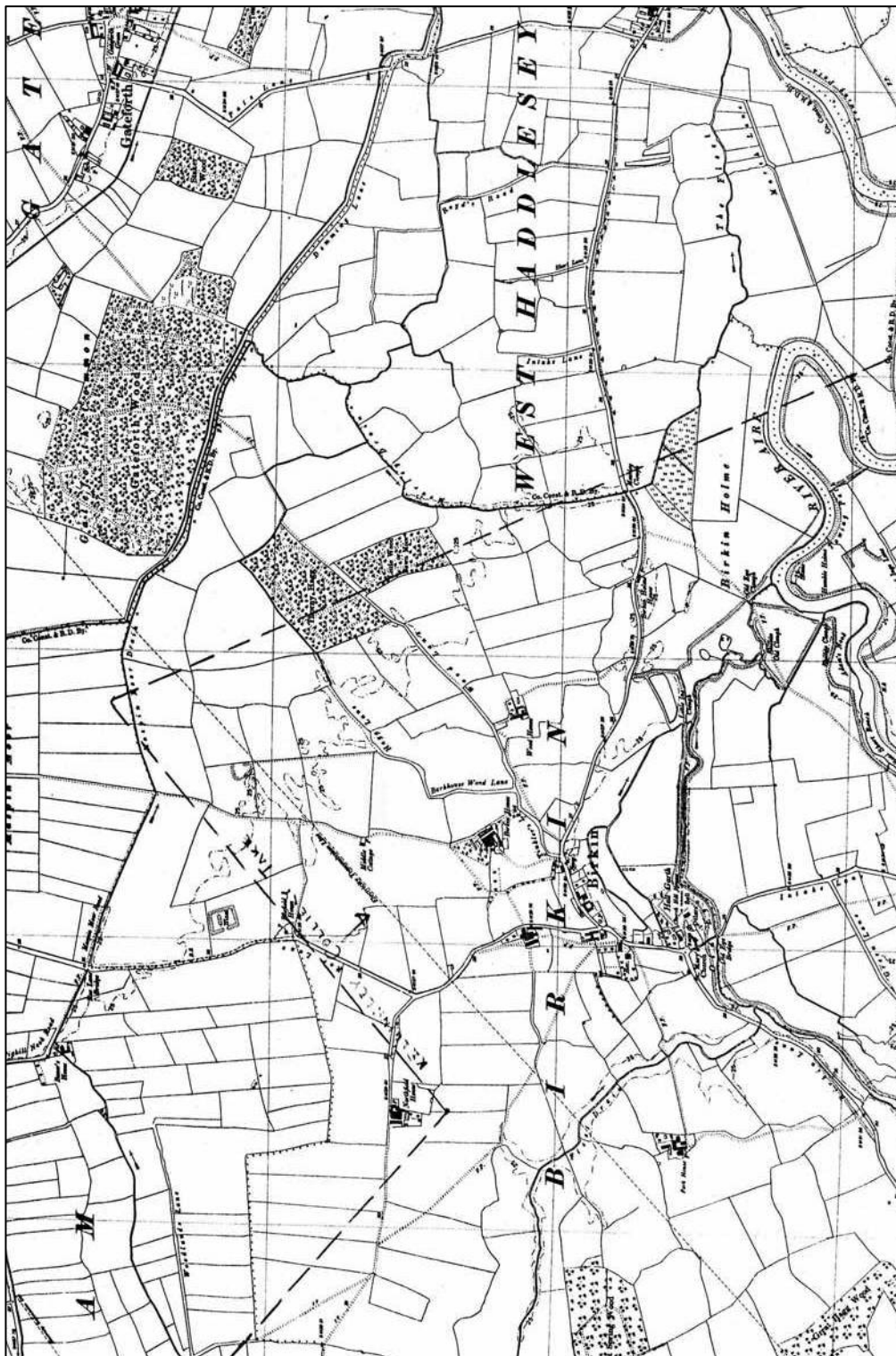


Figure 9.5 Ordnance Survey map showing woodland
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9.10 Assessment of impact

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 125m high turbines will have a visual impact on the landscape, and the setting of historic sites and monuments within it (see Cultural Heritage - Volume 2, 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 Woodlane site (see **Error! Reference source not found.**).

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 (MB)
- High Beneficial (HB)
- Very High Beneficial (VHB)

Direct impact is assessed based on the current layout of turbines and associated infrastructure (see Figure 9.6).

DBA Ref	Description	Significance	Impact	Comment
14	Neolithic Axe find	C	N	Findspot only
25	Field boundaries identified as cropmarks	C	HA	The cropmark features are likely to extend across the area of the proposed works, and will therefore be adversely affected
36	Moat	B	MA	Based on the current plan, the moat will not be directly impacted; features within its environs may, however, extend into the area to be affected
47	Ridge and furrow	C	MA	Potentially impacted by proposed groundworks
48	Ridge and furrow	C	MA	Potentially impacted by proposed groundworks

DBA Ref	Description	Significance	Impact	Comment
53	Ditched enclosure or track	C	MA	Although the cropmark does not extend into the area of proposed works, it is possible that the feature continues, and may be adversely impacted
67	Post-medieval field boundaries	D	MA	Although the cropmarks do not extend into the area of proposed works, it is possible that the features are more extensive, and may be adversely impacted
74	Earthen bank shown on 1907 OS map	D	MA	To south of proposed works, but may extend into the area, and therefore be impacted
75	Low Cottage, now demolished	D	A	Unlikely to be impacted by the groundworks, unless their location is altered
78	Geophysical survey feature - possible ploughing	E	VHA	Within the area to be impacted by the groundworks
79	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
80	Possible pits identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
81	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
82	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
83	Possible modern drainage identified during geophysical survey	D	VHA	Within the area to be impacted by the groundworks
84	Drainage, linear feature and curvilinear features encountered during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
85	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
86	Linear feature running parallel to the modern track, possibly a ditch or drainage feature	D	VHA	Within the area to be impacted by the groundworks

Chapter 9 Archaeology

DBA Ref	Description	Significance	Impact	Comment
87	Possible historic drainage system identified during geophysical survey	C	VHA	Within the area to be impacted by the groundworks
88	Curvilinear feature identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
89	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
90	Geophysical survey feature - possible historic field boundary	D	VHA	Within the area to be impacted by the groundworks
91	Linear features forming a possible enclosure identified during geophysical survey	D	VHA	Within the area to be impacted by the groundworks
92	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
93	Geophysical survey feature - possible historic field boundary	D	VHA	Within the area to be impacted by the groundworks
94	Linear features identified during geophysical survey, possibly historic drainage and associated boundary	C	VHA	Within the area to be impacted by the groundworks
95	Subannular feature identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
96	Geophysical survey feature - historic field boundary	D	VHA	Within the area to be impacted by the groundworks
97	Curving linear anomaly and possible geological anomalies which appear to represent possible relict stream channel, later consolidated as extant drain.	D	VHA	Within the area to be impacted by the groundworks
98	Geophysical survey feature - track	D	VHA	Within the area to be impacted by the groundworks

DBA Ref	Description	Significance	Impact	Comment
99	Curvilinear anomaly identified during geophysical survey	F	VHA	Within the area to be impacted by the groundworks
100	Geophysical survey feature - historic field boundaries	D	VHA	Within the area to be impacted by the groundworks

Figure 9.6 Assessment of direct impact

Thirty two sites or features have been identified within the detailed study area, from recorded findspots, cropmarks or geophysical survey.

One of the known monuments represents a findspot only; as this was not *in situ*, it cannot be directly impacted (DBA 14). The remains of Low Cottage, should they survive, are unlikely to be impacted (DBA 75).

While the moat and associated trackway do not occur within the area of direct impact, they may have more extensive associated features which would be affected should they extend across the area to be impacted by the turbines and tracks (DBA 36, 53, 67, 74). A possible adverse effect has therefore been noted.

The possibly early field boundaries identified as cropmarks (DBA 25) are highly likely to extend across the area to be impacted, and so will be affected, although not totally removed by the groundworks. Similarly, areas of ridge and furrow (DBA 94, 95), being more extensive, may be affected, but not totally removed, by any groundworks. The same applies to the numerous field boundaries, drainage systems or tracks identified through geophysical survey in the area to be impacted by the proposed windfarm (DBA 78-9, 81-3, 85-7, 89-94, 96-98, 100).

The limited number of features of possible archaeological potential identified during the geophysical survey (DBA 80, 84, 88, 95, 97, 99) may be adversely affected by the wind farm; their significance, however, remains uncertain.

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 (125m), 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 each 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 at Woodlane would be visible from Gateforth Hall (Grade II*) and St Mary's Church (Grade I). This issue has been addressed in detail in the Cultural Heritage chapter.

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.

9.12 Mitigation - wind farm design

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

9.13 Mitigation - 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 is given more detailed consideration, and consultations have been sought with the appropriate statutory bodies (particularly for the Grade I and II* Listed Buildings and Scheduled Ancient Monuments).

9.14 Mitigation - archaeological mitigation

No known features of archaeological significance are situated wholly within the area to be impacted directly by the wind farm. 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 by NYCC 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.

9.14.1 *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 hardstanding. 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.

9.14.2 *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.

9.14.3 *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.

9.14.4 *Reporting and dissemination*

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

9.15 **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. The Woodlane site as a whole has demonstrable archaeological potential, represented by a number of known sites and monuments within its boundary. These include prehistoric artefacts, a possible Iron Age-Romano-British field systems, medieval moated sites, ridge and furrow and post-medieval to modern field boundaries.

The results of the archaeological evaluation suggested that the impact of the proposed wind farm on the archaeological resource would be limited, despite the relatively high archaeological potential of the site as a whole. The majority of the features identified within the area of direct impact were field boundaries of post-medieval or modern date, with some potential areas of medieval field systems; 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.