

# Barnwell Manor Wind Farm, Sudborough Northamptonshire: An Archaeological Evaluation Report

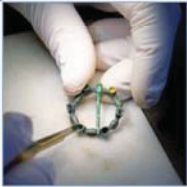
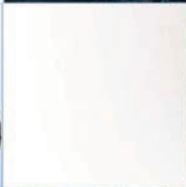
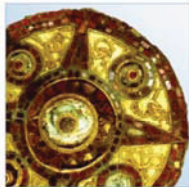
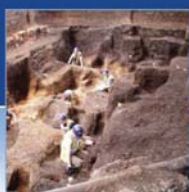
Planning Application Number: EN/10/00068/FUL

National Grid Reference Number: SP 9650 8460

AOC Project No: 30963

Site Code: BAM 11

Date: June 2011



ARCHAEOLOGY

HERITAGE

CONSERVATION

# Barnwell Manor Wind Farm, Sudborough, Northamptonshire: An Archaeological Evaluation Report

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|---------------------------------------|---|
| <b>On Behalf of:</b>                  | <b>Barnwell Manor Wind Energy Ltd</b>             |
| <b>National Grid Reference (NGR):</b> | <b>SP 9650 8460</b>                               |
| <b>AOC Project No:</b>                | <b>30963</b>                                      |
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| <b>Date of Evaluation:</b>            | <b>6<sup>th</sup> - 14<sup>th</sup> June 2011</b> |
| <b>Date of Report:</b>                | <b>June 2011</b>                                  |

This document has been prepared in accordance with AOC standard operating procedures.

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## Non-Technical Summary

*An archaeological evaluation was undertaken by AOC Archaeology Group between the 6<sup>th</sup> and 14<sup>th</sup> June 2011 at the site of the proposed Barnwell Manor Wind Farm, Sudborough, Northamptonshire. The work was undertaken on behalf of Barnwell Manor Wind Energy Ltd. The aim of the evaluation was to assess the impact of development on any surviving archaeological remains.*

*An evaluation comprising six machine excavated trenches was carried out on site. Three of the trenches contained archaeological remains. The remains were mainly in the form of linear features consisting of an undated ditch, a possible Roman gully and a post-medieval gully. The ditch is likely to represent a possible field boundary, whilst function of the gullies remains unclear. The pottery recovered from the possible Roman gully has been identified as a shell ware which may date to the Roman period. Further finds included post-medieval tile.*

*The archaeological evaluation achieved its aim in identifying a small quantity of archaeological remains within the proposed site. There is a low potential for further archaeological remains to be present within the development area and as such no further work is recommended. The final decision, however, rests with the Archaeological Officer to Northamptonshire County Council. The results of the archaeological evaluation will be issued to the Northamptonshire HER for public dissemination, as well as an electronic copy issued to Archaeological Data Service (ADS). An OASIS form has also been completed for the site.*



## 1. Introduction

### 1.1 Site Location

- 1.1.1 The site is centred on National Grid Reference (NGR) SP 9650 8460 and is located to the north of the village of Sudborough. The turbine infrastructure covers an area of 6.8ha and lies in an area which is bound by Fermyn Wood to the north, Souther Wood, arable land and a number of lodges to the east, Sudborough Road to the south and Cat's Head Wood with some arable land to the west (Figures 1 and 2).
- 1.1.2 The site is currently arable land with a general gradient downhill from north-east to south-west. A number of drains, streams and ponds are located within the site boundary.
- 1.1.3 The proposed development scheme comprises the construction of five wind turbines with associated crane bases, access tracks, an electricity substation, anemometer and underground cabling to connect to the local electricity distribution network.

### 1.2 Planning Background

- 1.2.1 The local planning authority is East Northamptonshire District Council. Archaeological advice to the council is provided by Lesley-Ann Mather, Archaeological Officer to Northamptonshire County Council (NCC).
- 1.2.2 There are no Scheduled Monuments, Listed Buildings or Areas of Archaeological Importance recorded within the site boundary. The site does not lie within a Conservation Area or Registered Park or Garden
- 1.2.3 To support a planning application (EN/10/00068/FUL) for the site a programme of archaeological works was undertaken. The first stage of this scheme of works was production of a desk-based assessment (DBA) and environmental impact assessment (EIA) chapter for cultural heritage (AOC 2010). This was later followed by geophysical survey in April 2010.
- 1.2.4 The planning application (EN/10/00068/FUL) was refused with insufficient archaeological information being cited as one of the reasons. A scheme of archaeological evaluation trenching was therefore requested to provide the required archaeological information.
- 1.2.5 This reports details the results of the archaeological evaluation. The archaeological evaluation conformed with current best archaeological practice and local and national standards and guidelines.
- Department of Communities and Local Government - Planning Policy Statement 5: Planning and the Historic Environment (DCLG 2010).
  - English Heritage – Management of Archaeological Projects (EH 1991).
  - English Heritage – Archaeological Assessment and Evaluation Reports (Guidelines) (EH 1992).
  - English Heritage – Archaeological Guidance Paper 3: Standards and Practices in Archaeological Fieldwork (EH 1998a).
  - English Heritage – Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (EH 2002).
  - Institute for Archaeologists – Standards and Guidance and Guidelines for Finds Work (IfA 2008).
  - Institute for Archaeologists – Standard and Guidance for Archaeological Field Evaluations (IfA 2008).
  - Institute for Archaeologists – Code of Conduct (IfA 2010).
  - Museum of London – Archaeological Site Manual (MoL 1994).
  - RESCUE & ICON – First Aid for Finds (RESCUE & ICON 2001).

- The East Midlands Spatial Strategy (2009)
- The Milton Keynes and South Midlands Sub-Regional Strategy (2005)
- The North Northampton Core Spatial Strategy (2008)
- The Rural North, Oundle and Thrapston Plan (2007)
- United Kingdom Institute for Conservation – Conservation Guidelines No.2 (UKIC 1990).

### **1.3 Geology and Topography**

- 1.3.1 Geological mapping for the area indicates that the majority of the site lies over bedrock geology of Oxford Clay of Jurassic date; this overlies the limestone of the Jurassic Greater Oolite, which outcrops on the valley sides to the south of the site.
- 1.3.2 The topography of the site is a series of undulations with a general downwards trend from north-east towards the south-west.
- 1.3.3 No previous geotechnical investigations are known to have been undertaken on site.

## **2 Historical and Archaeological Background**

### **2.1 The Prehistoric Periods**

(Palaeolithic c. 500,000 – 10000 BC; Mesolithic c. 10000 to 4000 BC; Neolithic c. 4000-2200 BC; Bronze Age c. 2200-700 BC and Iron Age c. 700 BC - AD 43)

- 2.1.1 There is no indication of any archaeology predating the Mesolithic period is present within the application boundary. Finds of artefactual material from the environs around the site and excavated evidence indicate that there is some potential for later prehistoric archaeology to be present within the boundary of the site.
- 2.1.2 Two Neolithic ground and polished flint axes were found in the surrounding area. A flint arrowhead of hollow based type was recovered to the east of the proposed wind farm and a flint working site has been noted to the north. Both worked flints and a leaf-shaped arrowhead have been recovered from the flint working site. A concentration of worked flints was located to the south of Sudborough. A flint blade and burnt stone were recovered from the site area in 1965 and are likely to be of Neolithic or early Bronze Age date.
- 2.1.3 Bronze Age burials were located northwest of Brigstock village in 1928. Accounts of the discovery vary, with one report noting a single crouched inhumation and another noting five or six skeletons found in association with pottery and bone needles. To the west of the proposed wind farm, a group of earthworks resembles Bronze Age barrows; however, ploughing of the features revealed late Iron Age pottery and subsequent excavation resulted in the recovery of dating material of the late pre-Belgic Iron Age.
- 2.1.4 Prehistoric archaeology identified in the immediate vicinity of the proposed development area includes a possible Iron Age house; however the Historic Environment Record holds no details related to this site other than its location. No evidence for archaeological features in this location was identified on the walkover survey or on aerial photographs. Possible Iron Age enclosures have also been identified near the wind farm boundary.
- 2.1.5 Also in the vicinity of the development boundary Iron Age pits and settlements have been recorded, as has an Iron Age farmstead. A further enclosure located to the southeast of the proposed wind farm yielded a single sherd of Late Iron Age pottery during rescue excavations (Jackson 1977).
- 2.1.6 A number of enclosures and associated features such as field systems identified from aerial photography in the area could also have their origin in the later prehistoric period.

## **2.2 The Roman Period (AD 43 – AD 410)**

- 2.2.1 The area around the development site is rich in Roman remains. This may be due to the presence of Gartree Road, which was a major Roman road from the first century AD. The road linked towns at Leicester and Godmanchester, passing through the northeast portion of Northamptonshire between Middleton and Clopton (Margary 1955; RCHME 1975; RCHME 1979; Taylor 2000; Wood 2007). A number of sites relating to the road have also been identified within the immediate vicinity of the site including an agger, or rampart for the road located immediately west of the proposed wind farm boundary. A holloway west of the proposed wind farm and soil marks located immediately east may also be associated with the road.
- 2.2.2 A great number of Roman findspots have been identified within 1 km of the site; the majority of these finds were pottery sherds, however, coins of Salonina, a silver coin of Nero, roof tiles and a saddle quern have also been recovered. Large amounts of limestone rubble associated with a very dark area of soil with inclusions of bone, sherds of Samian ware and colour-coated wares may also indicate Roman settlement to the northeast of the proposed development (Hall 1960-1999).
- 2.2.3 A number of other suspected Roman settlements and villas have also been identified within 1km of the site. These are mainly enclosures which have been identified through aerial photography and fieldwalking and little aside from their location is known.
- 2.2.4 A Roman timber bridge is located at Harper Brook 3.9 km to the southeast of the proposed wind farm. Remains of a bridge were excavated on the north side of the brook in the late 1960s. However, at the time it could not be determined whether the bridge crossed the brook or the River Nene nearby, as both waterways were known to have changed courses (EH 1986).
- 2.2.5 Roman temples were located 968m to the north of the proposed wind farm on the opposite side of Harley Way. The two temples were built around the 3<sup>rd</sup> century and continued in use until the late 4<sup>th</sup> century. A great number of coins dating from the 1<sup>st</sup> to the 4<sup>th</sup> centuries have been recovered from the site as have a number of bronze statuettes, two of which depict a horse and rider. Structural remains identified during excavations include the temples and two further circular structures and an Iron Age ditch (Taylor 1957; Lewis 1965; Greenfield 1970).

## **2.3 The Early Medieval (AD 410 – AD 1066) and Medieval Periods (AD 1066 – AD 1538)**

- 2.3.1 Medieval sites identified within the vicinity of the proposed wind farm boundary include findspots containing medieval pottery. These are likely to be related to a deserted medieval settlement which lies between the northern boundary of the proposed wind farm and Lyveden. This evidence of settlement is likely associated with the Manor at Lyveden to the east. The deserted medieval village was originally identified as earthworks located on either side of Lyveden Brook. The village was excavated in the late 1960s and early 1970s and revealed houses, workshops and kilns. The village seems to have been occupied from the early 13<sup>th</sup> century to the 15<sup>th</sup> century. The primary activity at the village seems to have been potting; quarry pits, clay puddling pits and waster pits were also identified. In 1406 10 tenants were noted as being potters. The exact date of desertion of the village is unknown; however it is likely to have occurred during the imparking of the Lyveden estate by the Tresham family in the 15<sup>th</sup> century. The earthworks associated with the village are no longer visible at surface level, having been subject to intensive ploughing (Medieval Village Research Group 1965; Bryant & Stean 1971; Evison, Hodges & Hurst 1974; RCHME 1985).
- 2.3.2 Lyveden to the northeast of the proposed wind farm as well as Sudborough to the south and Brigstock to west are all shown on maps as early as 1576, when all three appear on Saxton's map of that date. The medieval estate at Lyveden in particular was extensive with the house at Lyveden Old

Building acquired by Sir Thomas Treshams as early as the mid 15<sup>th</sup> century (Pevsner 1961; Gotch 1956). However, the original deer park associated with the estate is known to date to the early 14<sup>th</sup> century as Robert de Wyvill was granted a licence to impark in 1328. Some remains of the old park boundary are located immediately outside the north-eastern boundary of the proposed wind farm.

- 2.3.3 Following the acquisition of the Lyveden Estate by the Treshams in 1450 a programme of imparkation and improvement was carried out over the course of the following centuries. In 1540 Sir Thomas received a licence to impark 320 acres of land and imported 120 acres of woodland, 250 acres of pasture and 50 acres of meadow enclosing the earlier deer park. The new park boundary may also run through the proposed wind farm given a portion of it survives immediately north-east of the boundary and a possible lodge associated with the park has been identified within the proposed wind farm boundary.
- 2.3.4 Formal gardens were established at Lyveden in the 1590s and consisted of an upper, middle and lower garden with the lower garden remaining unfinished (Page 1930; RCHME 1975; EH 2004). The gardens included moats, canals, a water orchard, walks and mounds. A summerhouse or banqueting house, built to a design by Robert Stickwells was also added in 1604-05 (*ibid*).
- 2.3.5 The remains of Benefield Castle, a mid-12<sup>th</sup> century ringwork castle, are located to the northeast of the proposed wind farm. A fortified medieval settlement is also located to the east. In addition, several medieval moated sites are also located in the wider area around the site and include sites at Stoke Doyle, Upper Lyveden, and Bearshank Wood. There was also a moated nunnery at Slipton Lodge.
- 2.3.6 Brigstock Manor House dates primarily to the late 15<sup>th</sup> century and Drayton House is first recorded in the early 14<sup>th</sup> century. Drayton, like Lyveden, had an associated deer park and formal gardens.
- 2.3.7 Several of the listed churches in the wider area also have their origins in the medieval period. The Church of St Andrew in Brigstock dates to the late 10<sup>th</sup> century and All Saints Church has its origins in the 12<sup>th</sup> century. The Church of St Peter in Lowick is slightly later in date, dating primarily from the late 14<sup>th</sup> to early 15<sup>th</sup> century. St Michael and All Angels Church has a tower of the 12<sup>th</sup> century, although the majority of the building was constructed in the 13<sup>th</sup> and 14<sup>th</sup> century with restoration taking place in the 19<sup>th</sup> and early 20<sup>th</sup> century.
- 2.3.8 In addition to the fortified sites, churches and estates noted above, numerous medieval findspots, deserted medieval villages and medieval industrial complexes are located throughout the wider region around the site.

## **2.4 The Post-Medieval (AD 1538 – AD 1900) and Modern Period (AD 1900 to present )**

- 2.4.1 Analysis of maps from the 17<sup>th</sup> century onwards has allowed for study of land use and settlement history in and around the proposed development area throughout the post-medieval period. Though highly stylistic, earlier maps in the area of the proposed wind farm give a good indication of the land use and important settlements. Jansson's map of 1659 shows enclosed park land at 'Lyfden' and Faden's map of 1779 indicates both the Old and New Building along with the layout of the woodland and woodland plans associated with the estate.
- 2.4.2 The first edition Ordnance Survey map of 1888/89 shows Sudborough Green Lodge No. 1 located east of the proposed wind farm boundary. This is shown as an H-plan building with further roofed buildings to the north and south. This map indicates that the present layout of woodland had already been established. Lyveden Old Building, New Building and the formal garden are visible to the east.

- 2.4.3 In the wider area, the majority of sites dating to the post-medieval period are residential and commercial buildings located within the surrounding villages. Many of these buildings are listed and 10 villages in the surrounding area contain Conservation Areas.
- 2.4.4 The second edition Ordnance Survey map of 1901 indicates little change within the proposed wind farm boundary. Alterations appear to have been made to the building at Lyveden Old Building; however these appear to have been confined to a small group of buildings northeast of the main complex. The 1927 Ordnance Survey map shows few changes; an unroofed structure is shown near the to the east of the site and additions have been made to the building at Sudborough Green Lodge.
- 2.4.5 The 1972/75 Ordnance Survey map indicates the unroofed structure is no longer present and the site at Lyveden Old Building has been much reduced and is annotated as at Lyveden Manor.
- 2.4.6 Modern remains of cultural heritage significance surviving in the surrounding area are related to Grafton Underwood Airfield which opened in 1942 and closed in 1959. Remains include a pillbox and operation blocks. Three pillboxes are also located at Brigstock.
- 2.4.7 A number of undated remains including ditch and bank earthworks and possible charcoal burning platforms are also located within the vicinity of the proposed wind farm boundary.

### **3. Strategy**

#### **3.1 Aims of the Investigation**

- 3.1.1 The aims of the archaeological evaluation were defined as being:
- To establish the presence/absence of archaeological remains within the impact zones of the proposed turbine bases and substation.
  - To determine the extent, condition, nature, character, quality and date of any archaeological remains encountered.
  - To record and sample excavate any archaeological remains encountered.
  - To assess the ecofactual and environmental potential of any archaeological features and deposits.
  - To determine the extent of previous truncations of the archaeological deposits.
  - To enable the archaeology advisor to East Northamptonshire, to make an informed decision on the status of the condition, and any possible requirement for further work in order to satisfy that condition.
- 3.1.2 The specific aims of the evaluation were defined as being:
- Determine the presence or absence of any activity associated with the projected Roman road that may cross the development site.
  - Determine the presence or absence of medieval and post-medieval activity within the impact zones of the proposed wind turbines and substation.
- 3.1.3 The aim is also to make public the results of the investigation, subject to any confidentiality restrictions.

## 3.2 Methodology

- 3.2.1 The evaluation consisted of archaeological trial trenching (archaeological evaluation). The evaluation involved the machine excavation of six trenches (Figure 2), excavated under archaeological supervision.
- 3.2.2 All machining was carried out using a 360 tracked machine with a smooth bladed ditching bucket, under the constant supervision of an archaeological Project Officer.
- 3.2.3 The site code BAM 11 was agreed with the Northamptonshire Historic Environment Record for the project, and was used for all fieldwork.
- 3.2.4 The location and OD heights for each context were established using Global Positioning System equipment.
- 3.2.5 All recording was in accordance with the standards and requirements of the Museum of London's *Archaeological Field Manual* (MoL 3rd edition 1994).
- 3.2.6 All of the work was carried out in line with:
- Archaeological Guidance Papers (AGP): 2-4, *Standards and Practices in Archaeological Fieldwork* (English Heritage 2009)
  - IfA *Standard and Guidance for Archaeological Field Evaluation* (IfA 2008).
- 3.2.7 A continuous unique numbering system was employed. For each trench, a block of numbers in a continuous sequence was allocated. In this report the archaeological fills and layers are represented in curved brackets i.e. ( ), whilst the cut numbers are represented in square brackets i.e. [ ].
- 3.2.8 Written descriptions, comprising both factual data and interpretative elements, were recorded on standardised sheets.
- 3.2.9 The evaluation was conducted by Catherine Edwards under the overall management of Melissa Melikian, Operations Director. The site was monitored by Lesley-Ann Mather Archaeological Advisor to Northamptonshire County Council.



## 4 Results

### 4.1 Trench 1 (Figures 2 and 3)

Table of the stratigraphic sequence

| Context No | Depth | Max Height of Deposit (mOD) | Description/Interpretation                                       |
|------------|-------|-----------------------------|--|
| 100        | 0.20m | 93.41m – 93.21m             | Medium grey brown clay silt. Agricultural topsoil.               |
| 101        | 0.14m | 93.21m – 93.07m             | Grey orange silty clay with chalk flecks. Subsoil/Natural.       |
| 102        | 0.08m | 93.07m                      | Light grey yellow clay with chalk, flint and limestone. Natural. |

- 4.1.1 Trench 1 was located within the western extent of the site, sited on a shallow slope, sloping west to east. (Figures 2 and 3). The trench was T-shaped with the longer section orientated west-east measuring 55.00m by 30.00m.
- 4.1.2 The earliest deposit identified in Trench 1 was (102), a natural light grey clay with inclusions of chalk, flint and limestone, recorded at a height of 93.07m-92.17mOD. Overlying the natural was (101), a 0.14m thick layer of grey orange silty clay with inclusions of chalk. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.



Plate 1: Gully [108]

- 4.1.3 Cutting into (101) was [108], a linear gully which measured 4.5m x 0.45m x 0.19m and ran northwest-southeast. The gully which had steeply sloped sides and a concave base was filled by (107), a medium orange brown clay with inclusions of limestone and fragments of pottery. The four cross-fitting fragments of shelly ware pottery have been identified as possibly dating to the Roman period. The fragments, however, are fairly similar to other shelly wares which may occur in both later Iron Age and the Saxon/medieval period. As such the dating for the gully cannot be confidently stated.
- 4.1.4 Also cutting into (101), were three possible plough marks recorded as [104], [110] and [112]. The plough marks vary in width between 0.30m and 0.23m. The marks were aligned northwest-southeast



[104] and northeast-southwest [110] and [112], and were filled by (103), (109) and (111), a yellow brown silty clay with inclusions of flint and chalk. No find were recovered from these features.

- 4.1.5 Four features thought to be tree bowls were recorded cutting into (101). These were recorded as [106], [114], [116] and [118] and measured 0.90m x 0.50m x 0.05m, 0.34m x 0.29m x 0.07m, 0.82m x 0.41m x 0.12m and 0.50m x 0.30m x 0.08m respectively. The features were filled by (105), (113), (115), and (117) which was recorded as a dark blackish brown silty clay with inclusions of fine roots. No dating evidence was recovered during their excavation.
- 4.1.6 Overlying the trench was (100), a 0.20m thick layer of grey brown clay silt interpreted as agricultural topsoil recorded at a height of 93.14m-92.82mOD.

## 4.2 Trench 2 (Figures 2 and 4)

**Table of the stratigraphic sequence**

| Context No | Depth | Max Height of Deposit (mOD) | Description/Interpretation   |
|------------|-------|-----------------------------|--|
| 200        | 0.32m | 88.66m – 88.34m             | Dark greyish brown silty clay. Agricultural topsoil.                                 |
| 201        | 0.25m | 88.34m – 88.09m             | Medium yellowish grey brown silty clay. Subsoil/natural.                             |
| 202        | 0.03m | 88.09m – 88.06m             | Medium grey yellow brown silty clay with inclusions of chalk and limestone. Natural. |

- 4.2.1 Trench 2 was located within the centre of the site, sited on a shallow slope, sloping south to east, (Figures 2 and 4). The trench was T-shaped with the longer section orientated north-south measuring 55.00m by 30.00m.
- 4.2.2 The earliest deposit identified in Trench 2 was (202), a natural grey yellow silty clay with inclusions of chalk and limestone, recorded at a height of 88.09mOD-86.55mOD. Overlying the natural was (201), a 0.25m thick layer of yellow grey silty clay with inclusions of chalk. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.



**Plate 2: Ditch [204]**

- 4.2.3 Cutting into (201) was [206], a linear gully which measured 2.00m x 0.83m x 0.23m and ran northwest-southeast. The gully which had steeply sloped sides and a concave base was filled by (205), a dark brown grey sandy silty clay with inclusions of natural limestone and post-medieval ceramic tile.
- 4.2.4 Also cutting into (201) was [204], a furrow measuring 3.0m wide and 0.18m thick. The furrow, which had gradual sloped sides, was filled by (203), a medium grey yellow brown silty clay with frequent chalk, limestone and ceramic building material (CBM). The fragments of brick and tile have been dated to the post-medieval period.
- 4.2.5 Overlying the trench was (200), a 0.32m thick layer of grey brown clay silt interpreted as agricultural topsoil recorded at between 88.66m-87.36mOD.

### 4.3 Trench 3 (Figures 2 and 5)

**Table of the stratigraphic sequence**

| Context No | Depth | Max Height of Deposit (mOD) | Description/Interpretation   |
|------------|-------|-----------------------------|--|
| 300        | 0.30m | 91.10m – 90.30m             | Dark greyish brown silty clay. Agricultural topsoil.                                 |
| 301        | 0.21m | 90.30m – 90.59m             | Medium yellowish grey brown silty clay. Subsoil/natural.                             |
| 302        | 0.14m | 90.59m – 90.45m             | Medium grey yellow brown silty clay with inclusions of chalk and limestone. Natural. |

- 4.3.1 Trench 3 was located within the centre of the site (Figures 2 and 5). The trench was T-shaped with the longer section orientated north-south measuring 55.00m by 30.00m.
- 4.3.2 The earliest deposit identified in Trench 3 was (302), a natural grey yellow silty clay with inclusions of chalk and limestone, recorded at a height of 90.45m-89.81mOD. Overlying the natural was (301), a 0.21m thick layer of yellow grey silty clay with inclusions of chalk. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.



**Plate 3: Linear Gully [303]**

- 4.3.3 Cutting into (301) was [304], a linear gully which measured 2.00m x 0.40m x 0.06m and ran west-east. The gully which had gradual sloped sides and a concave base was filled by (303), a dark brown grey sandy silty clay with inclusions of natural limestone. No finds were recovered from the excavated gully.
- 4.3.4 Overlying the trench was (300), a 0.30m thick layer of grey brown clay silt interpreted as agricultural topsoil recorded at between 91.10mOD-90.30mOD.

#### 4.4 Trench 4 (Figures 2 and 6)

**Table of the stratigraphic sequence**

| Context No | Depth | Height of Deposit (mOD) | Description/Interpretation   |
|------------|-------|-------------------------|--|
| 400        | 0.32m | 92.27m – 91.95m         | Dark grey brownish grey clay silt. Agricultural topsoil.                             |
| 401        | 0.17m | 91.25m – 91.78m         | Medium yellowish grey brown silty clay. Subsoil/natural.                             |
| 402        | 0.40m | 91.78m – 91.38m         | Medium grey yellow brown silty clay with inclusions of chalk and limestone. Natural. |

- 4.4.1 Trench 4 was located within the east of the site (Figures 2 and 6). The trench was T-shaped with the longer section orientated northeast-southwest measuring 55.00m by 30.00m.



**Plate 4: Sample section looking northwest**

- 4.4.2 The earliest deposit identified in Trench 4 was (402), a natural grey yellow silty clay with inclusions of chalk and limestone, recorded at a height of 91.72m-91.22mOD. Overlying the natural was (401), a 0.17m thick layer of yellow grey brown silty clay with inclusions of chalk. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.
- 4.4.3 Overlying the trench was (400), a 0.32m thick layer of dark grey brown clay silt interpreted as agricultural topsoil recorded at between 92.27mOD and 91.65mOD.
- 4.4.4 No archaeological remains or artefacts were observed in this trench.



## 4.5 Trench 5 (Figures 2 and 7)

**Table of the stratigraphic sequence**

| Context No | Depth | Height of Deposit (mOD) | Description/Interpretation  |
|------------|-------|-------------------------|---|
| 500        | 0.25m | 86.62m – 86.38m         | Medium orange brown clay silt. Agricultural Topsoil.                            |
| 501        | 0.15m | 86.38m – 86.23m         | Orange yellow brown silty clay with inclusions of chalk. Subsoil/natural.       |
| 502        | 0.08m | 86.23m – 86.15m         | Light yellow grey brown silty clay with inclusions of chalk and flint. Natural. |

4.5.1 Trench 5 was located within the centre of the site, sited on a shallow slope, sloping northeast to southwest (Figures 2 and 7). The trench was T-shaped with the longer section orientated northeast-southwest measuring 55.00m by 30.00m.

4.5.2 The earliest deposit identified in Trench 5 was (502), a natural yellow grey brown silty clay with inclusions of chalk and flint, recorded at a height of 86.09mOD-83.34mOD. Overlying the natural was (501), a 0.15m thick layer of orange yellow brown silty clay with inclusions of chalk. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.



**Plate 5: Ditch [504]**

- 4.5.3 Linear ditch [504] was recorded within the eastern limit of the trench. The ditch, which measured 2.00m x 1.25m x 0.33m and ran north-south, had gradual sloped sides and a concave base. Filling the ditch was (503), an orange yellow brown silty clay with inclusions of chalk and limestone. The interaction between ditch fill (503) and layer (501) is very unclear and it is possible that they are the same deposit. The undated ditch may have been utilised as a boundary ditch or is perhaps naturally filled channel. No dating evidence was recovered.
- 4.5.4 Overlying the trench was (500), a 0.25m thick layer of medium orange brown clay silt interpreted as agricultural topsoil recorded at between 86.62mOD-84.73mOD.

#### 4.6 Trench 6 (Figures 2 and 8)

**Table of the stratigraphic sequence**

| Context No | Depth | Height of Deposit (mOD) | Description/Interpretation  |
|------------|-------|-------------------------|---|
| 600        | 0.36m | 90.24m – 89.88m         | Mid dark grey brown clay silt with inclusions of chalk and limestone. Agricultural topsoil. |
| 601        | 0.14m | 89.88m – 89.74m         | Mid orangey brown silty clay with inclusions of chalk and flint. Subsoil/natural.           |
| 602        | 0.06m | 89.74m – 89.68m         | Light creamy brown and white chalky clay with inclusions of limestone. Natural.             |

- 4.6.1 Trench 6 was located within the centre of the site (Figures 2 and 8). The trench was T-shaped with the longer section orientated northeast-southwest measuring 20.00m by 10.00m.



**Plate 6: Sample section facing east**

- 4.6.2 The earliest deposit identified in Trench 6 was (602), a light creamy brown and white chalky clay with inclusions of limestone recorded at a height of 89.69-89.39mOD. Overlying the natural was (601), a 0.14m thick layer of mid orange brown silty clay with inclusions of chalk and flint. This deposit may be subsoil but is more likely to be a superficial layer of natural clay.
- 4.6.3 Overlying the trench was (600), a 0.36m thick layer of dark grey brown clay silt interpreted as agricultural topsoil recorded at between 90.24mOD-89.91mOD.
- 4.6.4 No archaeological remains or artefacts were recovered from Trench 6.

## 5. Finds (Appendix B)

- 5.1 Only four cross-fitting fragments of pottery were recovered from the gully [108] in Trench 1. The matrix of the sherds contains very common shell inclusions. The fabric is a good match for late Roman shelly wares produced in Harrold, Bedfordshire (as well as other probable production centres in the region), and which are particularly common in East Midlands assemblages of the 3<sup>rd</sup> and 4<sup>th</sup> centuries AD. Since features of this date have been found in the local area, this seems the most likely date for the sherds (Frere 1987, 324); however, it should be noted that fairly similar shelly wares may occur in both later Iron Age and Saxon/medieval assemblages locally and, since these are very small and completely undiagnostic bodysherds, the gully cannot be dated to the late Roman period with absolute certainty.
- 5.2 The fragments of brick and tile recovered from Trench 2 have been identified as dating to the post-medieval period.

## 6. Conclusion

- 6.1 The evaluation successfully established the presence or absence of archaeological remains on site. Four archaeological trenches contained archaeological remains.
- 6.2 The natural horizon was established on site in all trenches and was recorded as a grey yellow silty clay with inclusions of chalk, flint and limestone. The natural deposit was recorded at a height of 92.82mOD in Trench 1 in the west of the site and 83.34mOD in Trench 5 in the southeast.
- 6.3 The archaeological features were mainly in the form of linear features with possible tree bowls. The linear ditch recorded in Trench 5 may have functioned as a boundary ditch considering its size. The gully recorded in Trench 1 may have a different function possibly for drainage or agricultural use. The possible tree bowls may be an indication of a previous tree or shrub line. The edges of these shallow features were not well defined and no dating evidence was recovered.
- 6.4 Several trenches contained plough marks and or furrow marks which suggests some variation in the type of farming carried out on site.
- 6.5 Based on the evaluation it is clear that there is a low quantity of archaeological remains on site. Although one of the features contained possible Roman pottery, the fragment is small and could easily have been deposited within a later agricultural feature through farming practices
- 6.6 It is recommended that no further work archaeological is required.



## 7. Publication

- 7.1 A paper copy of the evaluation report will be issued to Lesley-Ann Mather County Archaeological Advisor for Northamptonshire and to the Northamptonshire HER on the understanding that it will become a public document after an appropriate period of time. A third digital copy of the report will also be submitted to Northamptonshire HER.
- 7.2 An OASIS form has also been completed, (Appendix C) and an electronic copy of the evaluation report will be deposited with the Archaeological Data Service (ADS).
- 7.3 The archive for the evaluation will be prepared and housed by AOC until an appropriate archive depository is established within Northamptonshire.

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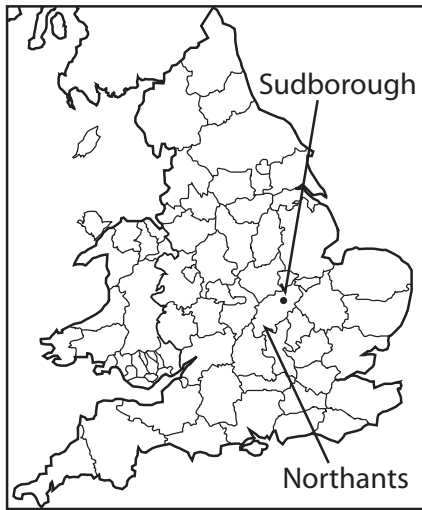
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BARNWELL MANOR WIND FARM, SUDBOROUGH, NORTHAMPTONSHIRE:  
AN ARCHAEOLOGICAL EVALUATION REPORT



Approximate Site Location  
Within England & Wales

Based on the Ordnance Survey's 1:50 000 Landranger map of 1996  
with the permission of the Controller of Her Majesty's Stationery Office,  
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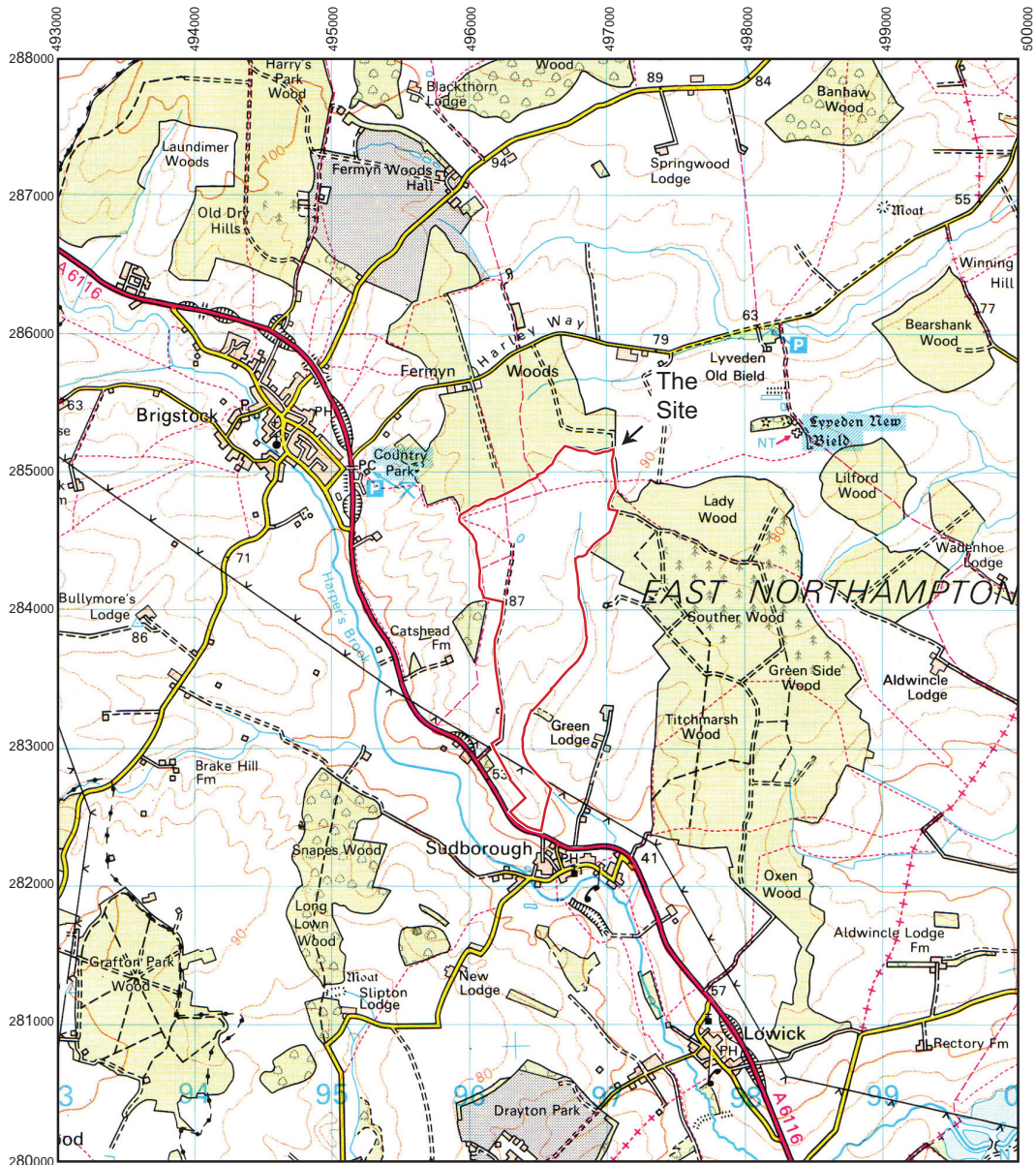


Figure 1: Site Location

500m 0 2 km

1:50 000



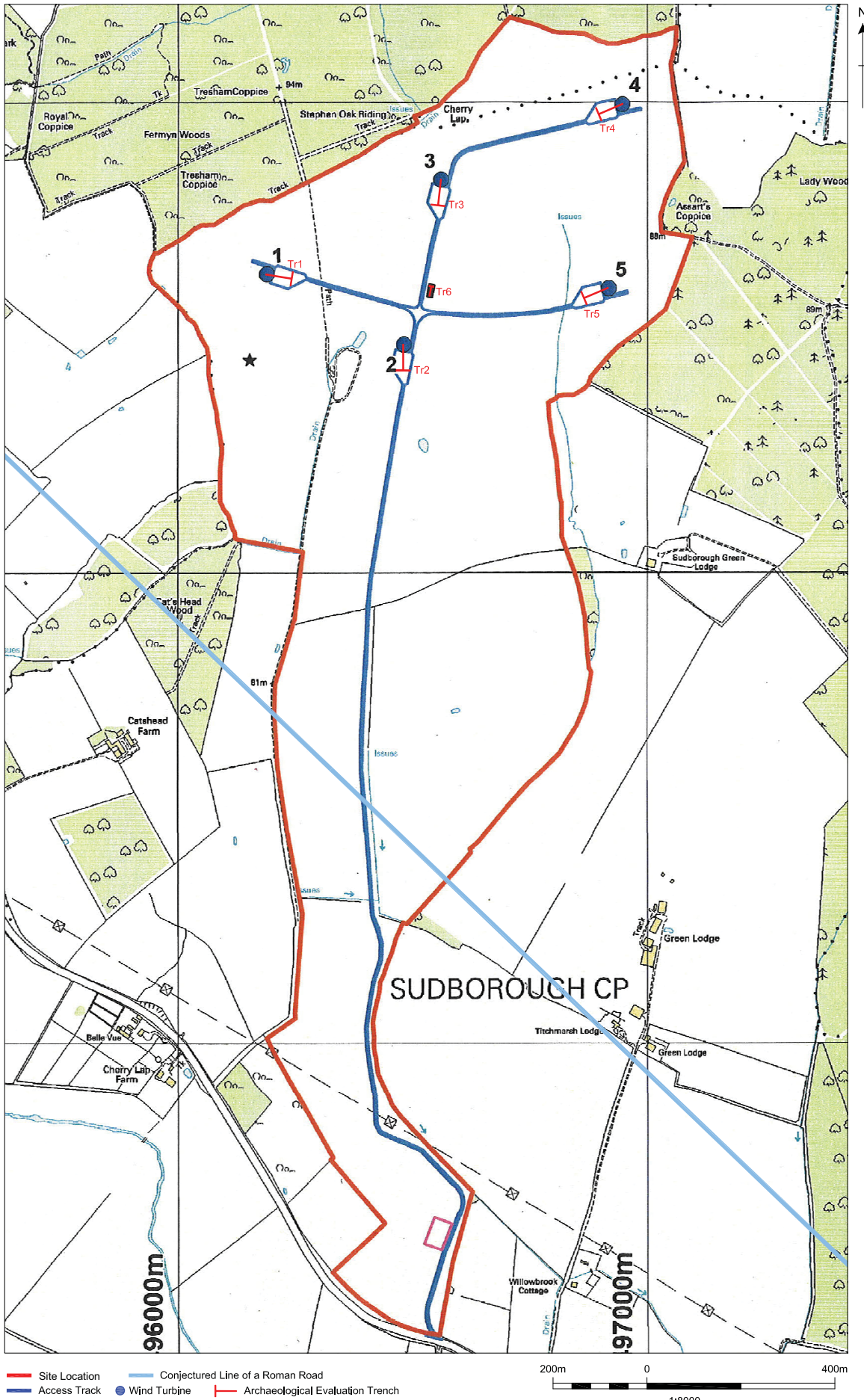
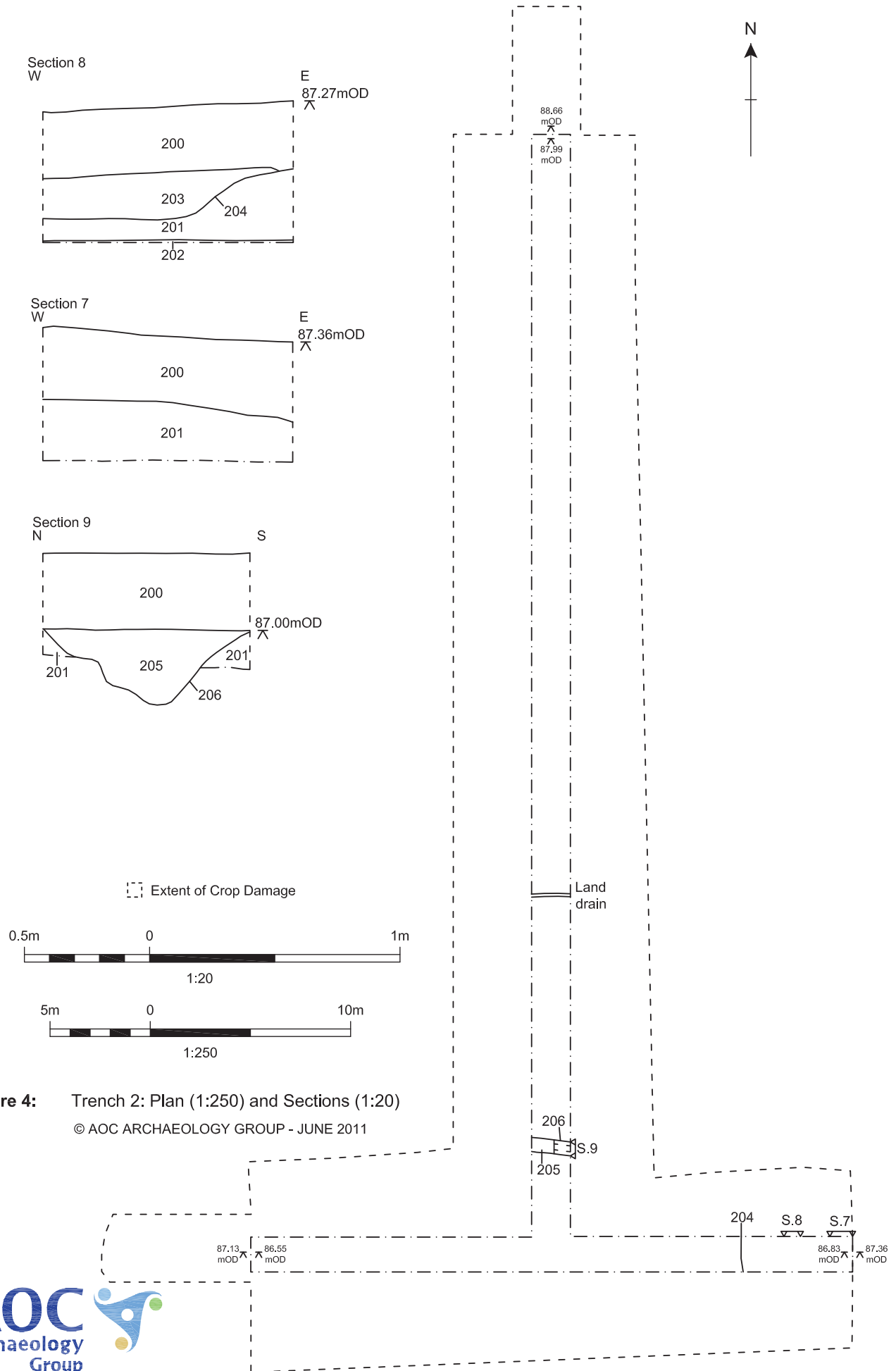
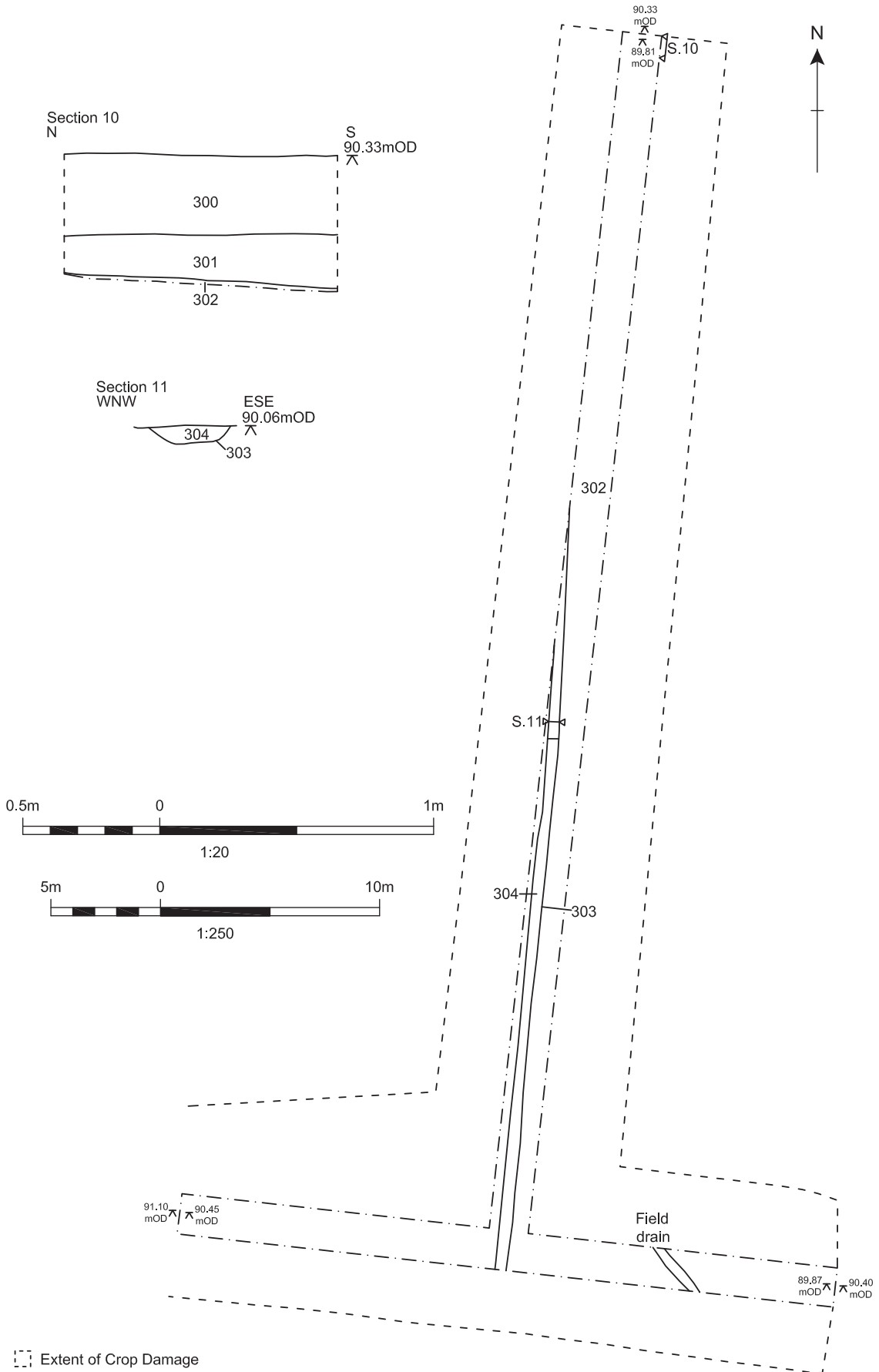


Figure 2: Detailed Site / Trench Location Plan

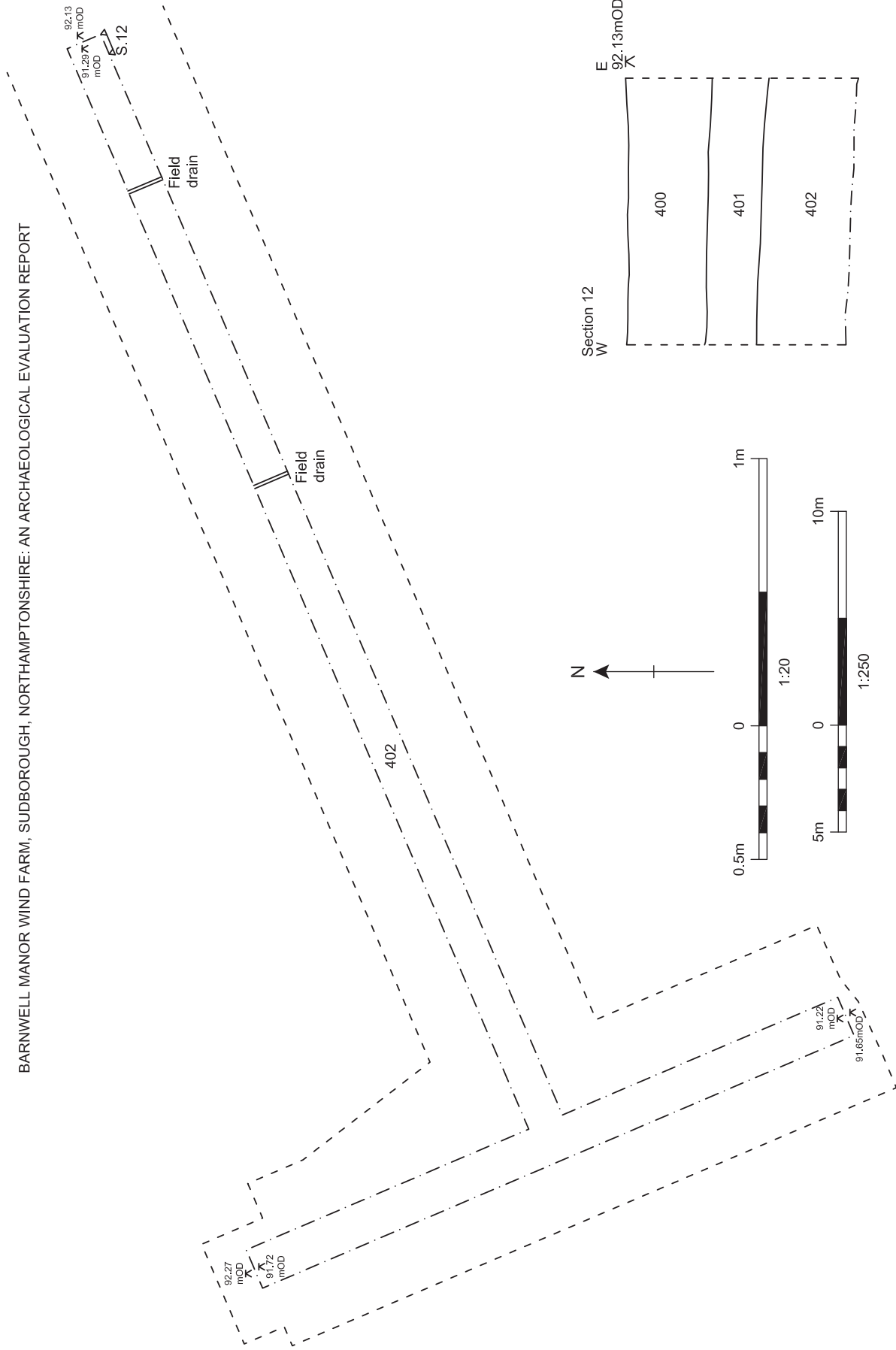






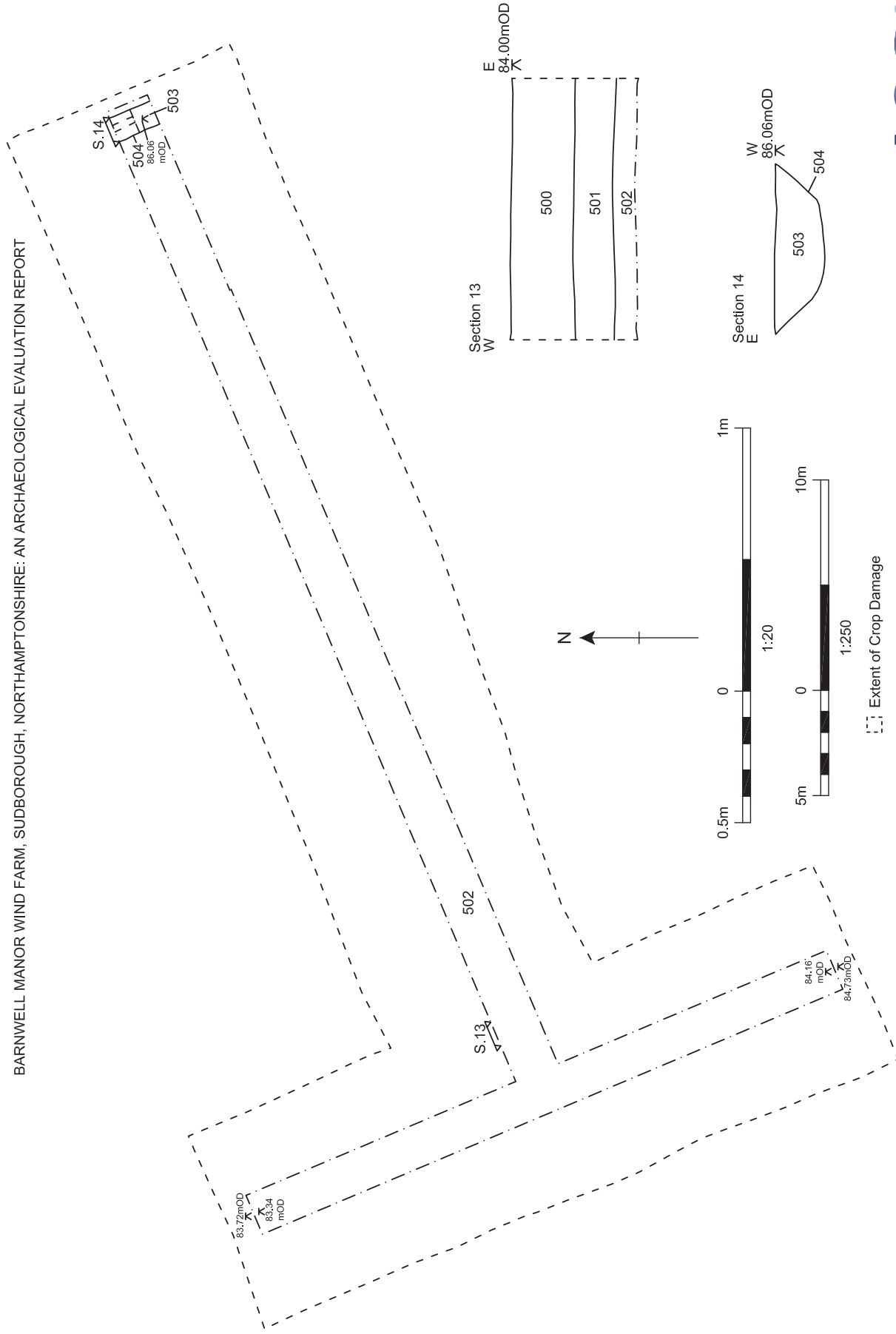


**Figure 5:** Trench 3: Plan (1:250) and Sections (1:20)

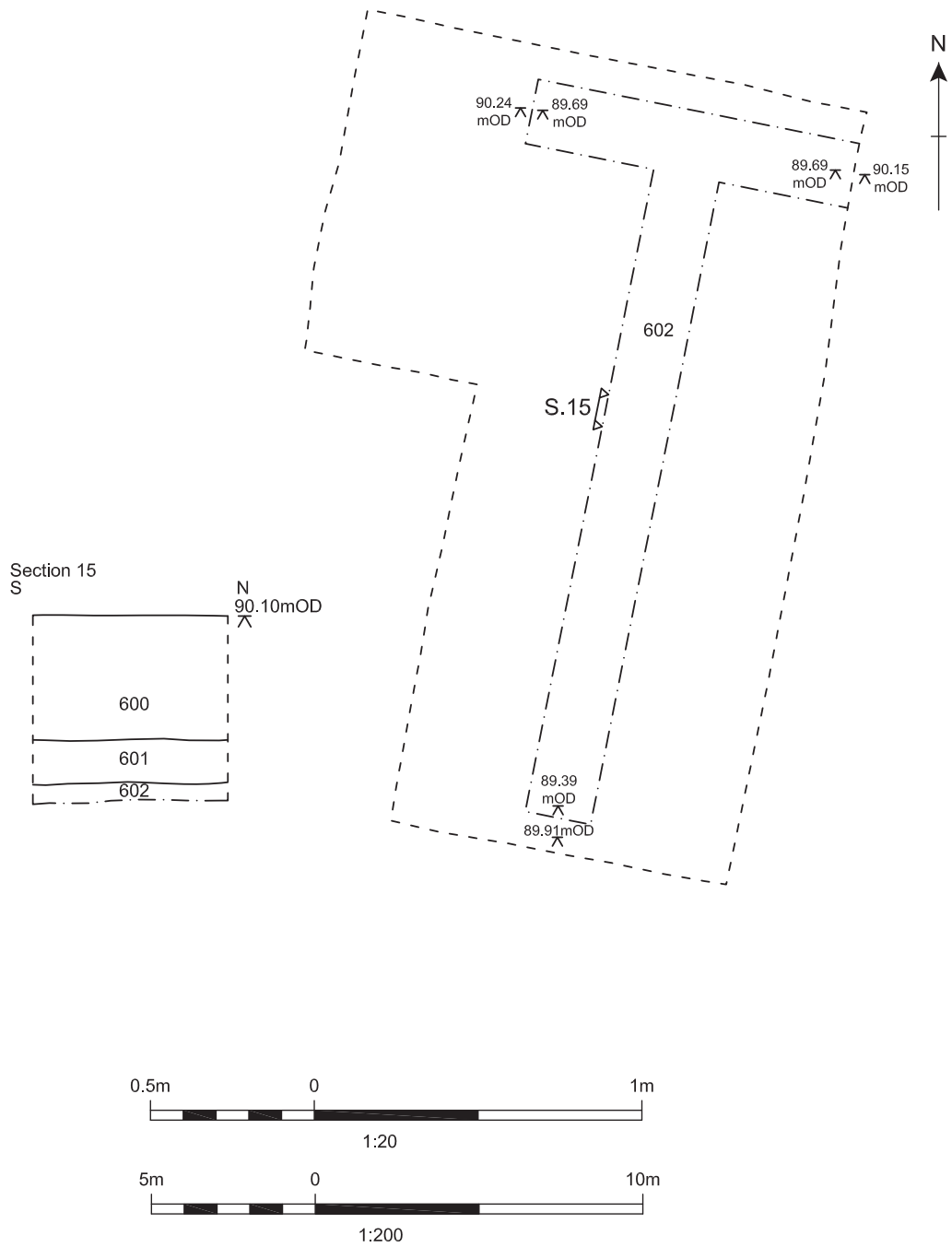


**Figure 6:** Trench 4: Plan (1:250) and Sections (1:20)

--- Extent of Crop Damage



**Figure 7:** Trench 5: Plan (1:250) and Sections (1:20)



**Figure 8:** Trench 6: Plan (1:200) and Sections (1:20)

## Appendices

## Appendix A – Context Register

| Context No. | Context Description        | Length | Width  | Depth |
|-------------|----------------------------|--------|--------|-------|
| 100         | Agricultural Topsoil       | Trench | Trench | 0.20m |
| 101         | Subsoil/Natural            | Trench | Trench | 0.14m |
| 102         | Natural                    | Trench | Trench | 0.08m |
| 103         | Fill of plough Mark        | 11.00m | 0.30m  | 0.10m |
| 104         | Cut of Plough Mark         | 11.00m | 0.30m  | 0.10m |
| 105         | Fill of possible tree bowl | 0.90m  | 0.30m  | 0.05m |
| 106         | Cut of possible tree bowl  | 0.90m  | 0.30m  | 0.05m |
| 107         | Fill of Gully              | 4.50m  | 0.45m  | 0.19m |
| 108         | Cut of Gully               | 4.50m  | 0.45m  | 0.19m |
| 109         | Fill of plough Mark        |        |        | NFE   |
| 110         | Cut of Plough Mark         |        |        | NFE   |
| 111         | Fill of plough Mark        |        |        | NFE   |
| 112         | Cut of Plough Mark         |        |        | NFE   |
| 113         | Fill of possible tree bowl | 0.34m  | 0.29m  | 0.07m |
| 114         | Cut of possible tree bowl  | 0.34m  | 0.29m  | 0.07m |
| 115         | Fill of possible tree bowl | 0.82m  | 0.41m  | 0.12m |
| 116         | Cut of possible tree bowl  | 0.82m  | 0.41m  | 0.12m |
| 117         | Fill of possible tree bowl | 0.50m  | 0.30m  | 0.08m |
| 118         | Cut of possible tree bowl  | 0.50m  | 0.30m  | 0.08m |
|             |                            |        |        |       |
| 200         | Agricultural Topsoil       | Trench | Trench | 0.32m |
| 201         | Subsoil/Natural            | Trench | Trench | 0.25m |
| 202         | Natural                    | Trench | Trench | NFE   |
| 203         | Fill of furrow             |        | 3.0m   | 0.18m |
| 204         | Cut of furrow              |        | 3.0m   | 0.18m |
| 205         | Fill of post med gully     | 2.00m  | 0.83m  | 0.30m |
| 206         | Cut of gully               | 2.00m  | 0.83m  | 0.30m |
|             |                            |        |        |       |
| 300         | Agricultural Topsoil       | Trench | Trench | 0.30m |
| 301         | Subsoil/Natural            | Trench | Trench | 0.21m |
| 302         | Natural                    | Trench | Trench | 0.14m |
| 303         | Fill of furrow             | 2.0m   | 0.40m  | 0.06m |
| 304         | Cut of furrow              | 2.0m   | 0.40m  | 0.06m |
|             |                            |        |        |       |
| 400         | Agricultural Topsoil       | Trench | Trench | 0.32m |
| 401         | Subsoil/Natural            | Trench | Trench | 0.17m |
| 402         | Natural                    | Trench | Trench | 0.40m |
|             |                            |        |        |       |
| 500         | Agricultural Topsoil       | Trench | Trench | 0.25m |
| 501         | Subsoil/Natural            | Trench | Trench | 0.15m |
| 502         | Natural                    | Trench | Trench | 0.08m |

| <b>Context No.</b> | <b>Context Description</b> | <b>Length</b> | <b>Width</b> | <b>Depth</b> |
|--------------------|----------------------------|---------------|--------------|--------------|
| 503                | Fill of Ditch              | 2.00m         | 1.25m        | 0.33m        |
| 504                | Cut of Ditch               | 2.00m         | 1.25m        | 0.33m        |
|                    |                            |               |              |              |
| 600                | Agricultural Topsoil       | Trench        | Trench       | 0.36m        |
| 601                | Subsoil/Natural            | Trench        | Trench       | 0.14m        |
| 602                | Natural                    | Trench        | Trench       | 0.06m        |



## Appendix B – Specialist Reports

### **The Pottery** by Anna Doherty

Four cross-fitting fragments of pottery, weighing just 4 grams were recovered from gully fill (107). The matrix of the sherds contains very common shell inclusions, mostly of c. 1-2mm, almost certainly deriving from fossil shell sources rather than from fresh shell, added as temper. The fabric is a good match for late Roman shelly wares produced in Harrold, Beds. (as well as other probable production centres in the region), and which are particularly common in East Midlands assemblages of the 3<sup>rd</sup> and 4<sup>th</sup> centuries AD. Since features of this date have been found in the local area, this seems the most likely date for the sherds (Frere 1987, 324); however, it should be noted that fairly similar shelly wares may occur in both later Iron Age and Saxon/medieval assemblages locally and, since these are very small and completely undiagnostic bodysherds, the gully cannot be dated to the late Roman period with absolute certainty.

### **References**

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### **Ceramic Building Material** by Catherine Edwards

Four fragments of brick material and three fragments of roofing peg tile were recovered from Trench 2. These have been dated to the post- medieval period. The finds have been recorded and with permission of the archaeological advisor, they will be discarded.

## Appendix C – OASIS Form

**OASIS ID: aocarcha1-101147**

### Project details

|  |   |
|--|---|
| Project name                           | Barnwell Manor Windfarm   |
| Short description of the project       | An archaeological evaluation was carried out at Barnwell Manor prior to the proposed development of the site into a wind farm with 5 turbine bases and associated transformer station. The evaluation, which involved the excavation of 6 T shaped trenches, revealing a possible Iron Age gully, post-medieval gully and furrow and modern plough lines. |
| Project dates                          | Start: 06-06-2011 End: 14-06-2011   |
| Previous/future work                   | Yes / Not known   |
| Any associated project reference codes | 30963 - Contracting Unit No.  |
| Any associated project reference codes | BAM11 - Sitecode  |
| Type of project                        | Field evaluation  |
| Site status                            | None  |
| Current Land use                       | Cultivated Land 4 - Character Undetermined  |
| Monument type                          | GULLY Iron Age  |
| Monument type                          | DITCH None  |
| Monument type                          | GULLY Post Medieval   |

Monument type FURROW Post Medieval

Significant Finds CERAMIC POTTERY Iron Age  
Roman

Significant Finds CERAMIC TILE Post Medieval

Methods & 'Targeted Trenches'  
techniques

Development type Wind farm developments

Prompt Direction from Local Planning Authority - PPG16

Position in the Pre-application  
planning process

### Project location

Country England

Site location NORTHAMPTONSHIRE EAST NORTHAMPTONSHIRE SUDBOROUGH  
Barnwell Manor Farm

Study area 1456.00 Hectares

Site coordinates SP 9650 8460 52.4504462044 -0.579859592276 52 27 01 N 000 34 47 W Point

Height OD / Depth Min: 83.34m Max: 92.82m

### Project creators

Name of AOC Archaeology  
Organisation

Project brief AOC Archaeology  
originator

Project design AOC Archaeology  
originator

Project Melissa Melikian  
director/manager

Project supervisor Catherine Edwards

Type of Windfarm Developer  
sponsor/funding  
body

Name of Barnwell Manor Energy Ltd  
sponsor/funding  
body

### Project archives

Physical Archive Northamptonshire Museum Service  
recipient

Physical Contents 'Ceramics'

Digital Archive Northamptonshire Museum Service  
recipient

Digital Contents 'Ceramics','Stratigraphic'

Digital Media 'Images raster / digital photography','Text'  
available

Paper Archive Northamptonshire Museum Service  
recipient

Paper Contents 'Ceramics','Stratigraphic'

Paper available Media 'Context sheet', 'Map', 'Matrices', 'Microfilm', 'Photograph', 'Plan', 'Report', 'Section', 'Unpublished Text'

### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title BARNWELL MANOR WIND FARM, SUDBOROUGH, NORTHAMPTONSHIRE:  
AN ARCHAEOLOGICAL EVALUATION REPORT

Author(s)/Editor(s) Edwards, C

Date 2011

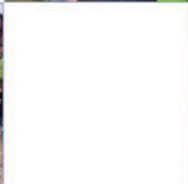
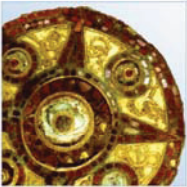
Issuer or publisher AOC Archaeology

Place of issue or publication London

Description Bound report featuring results, illustrations and photographs

Entered by Catherine Edwards (catherine.edwards@aocarchaeology.com)

Entered on 22 June 2011



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