

HAMELDON HILL WIND CLUSTER, NEW BARN FARM, BURNLEY, LANCASHIRE



Archaeological Watching Brief



Oxford Archaeology North

April 2006

**McNicholas Construction
Services**

Planning Ref: 12/02/0516
Issue No: 2006-07/511
OA North Job No: L9655
NGR: SD 8150 3050

Document Title: HAMELDON HILL WIND CLUSTER, NEW BARN FARM,
BURNLEY, LANCASHIRE

Document Type: Archaeological Watching Brief

Client Name: McNicholas Construction Services

Issue Number: 2006-7/511

OA Job Number: L9655

National Grid Reference: SD 8150 3050

Prepared by: Richard Lee
Position: Project Officer
Date: April 2006

Checked by: Stephen Rowland Signed.....
Position: Project Manager
Date: April 2006

Approved by: Alan Lupton Signed.....
Position: Operations Manager
Date: April 2006

Document File Location X: Stephen/Projects/L9655 Hameldon Hill/Reports

Oxford Archaeology North

Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

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Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

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SUMMARY

McNicholas Construction Services have submitted proposals to Lancashire County Council Environment Directorate for the construction of a three-turbine wind farm at Hameldon Hill, New Barn Farm, Burnley, Lancashire (Planning Reference 12/02/0516, NGR SD 8150 3050). Following a desk-based assessment of the site undertaken by the Centre for Wetland Research (CWR 2002), Lancashire County Archaeological Services (LCAS) requested that all groundworks associated with the development should be the subject of an archaeological watching brief. These groundworks comprised construction of an access road and the excavation of footings and pads for the wind turbines themselves, but also for cranes to construct the turbines. Following the submission of costs and a project design, OA North were commissioned by McNicholas Construction Services to undertake the watching brief.

The watching brief, undertaken between February and March 2006, revealed no evidence of discrete archaeological features or deposits in any of the proposed turbine locations or beneath the route of the access road. However, a number of earthworks, including banks, mounds and ridge and furrow were present within the field in which the turbines were constructed and, in several instances, were transected by the access road. Following consultation with LCAS and, in agreement with the client, these earthworks were recorded by a rapid walkover and GPS survey in order to establish their location and state of preservation and so inform future planning decisions on the site. In total, eleven features were identified, including four banks, two areas of ridge and furrow, a possible building platform, an enclosure, a mound and two embanked depressions. The function of the latter three features could not be identified on the basis of the current limited investigation, but it is likely that the banks represented boundaries within a possibly medieval field system characterised by the ridge and furrow.

ACKNOWLEDGEMENTS

OA North would like to express its thanks to McNicholas Construction Services for commissioning the project and to Kevin Roberts, Grant Slade and the ground staff for their assistance on site.

The watching brief and the GPS survey was undertaken by Jeremy Bradley and Richard Lee, who also wrote the report. The illustrations were produced by Marie Rowland and Mark Tidmarsh. The project was managed by Stephen Rowland, who also edited the report, together with Alan Lupton.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 McNicholas Construction Services have submitted proposals to Lancashire County Council Environment Directorate for the construction of a three-turbine wind farm at Hameldon Hill, New Barn Farm, Burnley, Lancashire (Planning Reference 12/02/0516; NGR SD 8150 3050) (Fig 1). Following a desk-based assessment of the site undertaken by the Centre for Wetland Research (CWR 2002), Lancashire County Archaeological Services (LCAS) requested that all groundworks associated with the development should be the subject of an archaeological watching brief. These groundworks comprised construction of an access road and the excavation of footings and pads for the wind turbines themselves, but also for cranes to construct the turbines. The access road originates to the north of Old Barn Farm, to the north-west of the development site, and passes along the route of an existing trackway south-east and eastwards towards New Barn Farm. Groundworks within this area were to comprise topsoil stripping alongside the existing trackway to a maximum additional width of 2m. To the south of New Barn Farm, the proposed access road was to be newly-built, involving topsoil and subsoil stripping to a maximum depth of 0.7m and a width of up to 4m. The turbine and crane bases positioned along the access route were to be stripped of topsoil and subsoil and excavated to a depth of *c* 2m below the present ground level. In addition, an area for the construction site compound, measuring *c* 30m by 50m and lying just to the west of New Barn Farm, was stripped of topsoil to a depth of roughly 0.2m.

1.1.2 Following the submission of costs and a project design, OA North were commissioned by McNicholas Construction to undertake the watching brief, which was undertaken between February 2nd and March 8th 2006. During the groundworks, a number of earthworks were observed which had not been located during the previous desk-based assessment and walkover survey (although the presence of banks, ditches and a circular mound is mentioned; CWR 2002). LCAS were informed of the presence of these features and requested that a limited programme of survey be undertaken in order to record the location, extent and state of preservation of these features in order to provide further information on any future planning decisions to be made within the area. The survey was undertaken on March 21st and 24th 2006. This report sets out the results of the watching brief and the survey in the form of a short document, including a brief historical background for the site.

1.2 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

1.2.1 The area undergoing development lies 2km to the south-west of Burnley within several pasture fields subdivided by drystone and slab walls. The surrounding upland landscape comprises areas of improved pasture, rough grassland and wet moorland (CWR 2002). The Carboniferous and Jurassic sandstone of the solid geology is overlain by Palaeozoic sandstone drift deposits, which are themselves overlain by seasonally waterlogged fine loamy

and clay soils and capped by an acidic peaty surface horizon of the Wilcocks 1 Association (*ibid*). Hameldon Hill, in common with the surrounding raised areas, is topped with Blanket Peat and wet, very acidic soils (*ibid*). Historically, these poor soils and steep slopes would appear to have been sparsely exploited for mixed pastoral farming, rather than for arable. As a result, these upland areas are relatively unspoilt and have good potential for the preservation of archaeological features (*ibid*).

1.3 ARCHAEOLOGICAL BACKGROUND

- 1.3.1 **Prehistoric:** no prehistoric remains have been found within the development area itself, but finds from the surrounding area include a Bronze Age beaker from nearby Extwistle Moor and an unidentified vessel (described as an incense cup) recovered in 1905 from an earth circle near Burnley (CWR 2002).
- 1.3.2 **Roman:** Roman settlement within the wider area is indicated by a coin and possible cremation burial from Burnley itself (*ibid*). An undated rectilinear bank and ditched earthwork enclosure, c 25m by 30m, was located during the walkover survey associated with the desk-based assessment (CWR 2002), and appears to relate to a number of earthwork boundary features that have been built upon by the sixteenth century Hapton Tower (*Section 1.3.3*). Sites of similar appearance within the area (for example, Ring Stones Camp, Twist castle and Beadle Hill Camp) have been dated to the Late Iron Age or Romano-British periods, so, on morphological grounds, the same may be true of the Hameldon Hill enclosure (*ibid*). The ditched earthwork is not documented in the County Sites and Monuments Record.
- 1.3.3 **Medieval:** between 1330 and 1615 the present development area lay within a deer park belonging to the Hapton Estate (*ibid*). The remains of Hapton Tower, a ruined tower house built in 1510 by Sir John Townley as part of the deer park, lie just to the south of the proposed access road, but records suggest that a tower, dating to at least 1375, may have preceded the sixteenth century tower on the site (*ibid*). Since Hapton Tower was constructed upon earthworks possibly associated with the square enclosure identified during the desk-based assessment, it is possible that the enclosure is medieval in origin.
- 1.3.4 **Post-medieval:** the house and barn at New Barn Farm are Grade II listed buildings dating to the later seventeenth or early eighteenth centuries, and sadly now somewhat dilapidated. Several small sandstone quarries lie around the development area and close to Hapton Tower (*ibid*).

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 The fieldwork was carried out in accordance with the LCAS-approved project design (*Appendix I*) and was recorded in the prescribed manner. The main divergence from the project design was the requirement from LCAS for the recording of the earthworks, the methodology for which is detailed below (*Section 2.3*). In each case, the work complied with current legislation and accepted best practice, including the Code of Conduct and the relevant professional standards of the Institute of Field Archaeologists (IFA). Close liaison was maintained between OA North staff and the site contractors during the excavations.

2.2 WATCHING BRIEF

2.2.1 As agreed, the watching brief involved intermittent monitoring of topsoil stripping along the route of the proposed access road prior to the development of the site and also of the excavation of platforms and associated crane bases for each of the three wind turbines. The groundworks were enacted by a machine using a tracked 360° excavator with a 1.8m toothed bucket.

2.2.2 The recording comprised a full description and preliminary classification of features or structures revealed on OA North *pro-forma* sheets, and their accurate location in plan. In addition, a photographic record in colour slide and monochrome formats was compiled.

2.3 RECORDING OF EARTHWORKS

2.3.1 Following liaison with LCAS, and in agreement with the client, it was necessary to record the nature, location and extent of a number of earthworks identified within the wider area of the development site. These features were found to cover a large area, and were recorded as accurately as possible on a measured sketch plan rectified through the use of hand-held GPS equipment. Hand-written descriptive notes and a photographic record, (using monochrome and colour slide formats) were also maintained.

2.4 ARCHIVE

2.4.1 The archive has been compiled to a professional standard in accordance with the project design (*Appendix I*) and with current English Heritage guidelines (English Heritage 1991). The archive includes *pro-forma* recording sheets and photographic archive. The paper archive, along with a copy of this report, will be deposited at the Lancashire County Records Office, while a copy of this report and an index to the archive will be submitted to the Lancashire Sites and Monuments Record (SMR).

3. RESULTS

3.1 ACCESS ROAD

- 3.1.1 The route of the access road between Old Barn Farm and New Barn Farm followed an existing trackway, which was enhanced as part of the current development. During the intermittent monitoring works, A 50m long section of the existing track was extended in width by 2m and to a maximum depth of *c* 0.7m, before being filled with hardcore. The base of the trackway extension penetrated only as deep as the loose, dark subsoil, rather than the natural geology. It is, therefore, unsurprising that no archaeological features were observed. Because the natural geology was not exposed during the groundworks associated with the extension of the existing trackway and, there was, therefore, no chance of identifying any archaeological deposits, no further monitoring was undertaken on this phase of the development.
- 3.1.2 Immediately to the west of New Barn Farm, the access road was extended from the newly widened trackway, past the McNicholas Construction site compound. The stripping of topsoil to a depth of *c* 0.2m within the *c* 30m x 50m site compound area took place before the archaeological monitoring was commissioned, but an examination of the revealed scree-like weathered bedrock surface demonstrated the absence of any archaeological features cutting into the natural (Plate 3).
- 3.1.3 The new access road ran in a loop south-east (*c* 400m), then south-west (*c* 140m), north-west (*c* 360m) and then north-east (*c* 75m) again (Figs 1 & 2). The access road was approximately 4m wide along its full length. The excavated depth of the access road varied considerably due to the incline of Hameldon Hill and the deposits across it. On the first stretch of the access road, between New Barn Farm and the proposed location of Turbine 3, excavations reached a depth of 0.3m into the subsoil horizon, within which no archaeological features were visible. On the southerly part of the road, across a more level area of the hill between the proposed locations of Turbines 2 and 3, excavations reached a depth of 0.7m, down to natural boulder clay. No archaeology was apparent here either. Heading west from Turbine 2, excavations reached a depth of only *c* 0.2m before reaching the natural geology and, at the road's terminus, at Turbine 1, excavations were very shallow, with a natural sandstone deposit being encountered at a depth of *c* 0.1m or less. Only in the case of the approach to Turbine 1 was archaeology visible; here, the access road transected the course of a bank (Feature **01**; *Section 4*), and a ditch flanked by banks to the north and south (Feature **08**; *Section 4*). The access road also transected the ridge and furrow (Feature **09**; *Section 4*) observed within this field, but such features were not visible either in the limited section or of the exposed plan of the access track.

3.2 TURBINE AND CRANE PLATFORMS

- 3.2.1 **Turbine 1:** is located at the western terminus of the access road, within the same field as the bank and ditched enclosure identified during the desk-based assessment and walkover survey (CWR 2002). Sediment stripping of the

turbine base and the associated area of hard standing revealed a thin veneer of sandstone pebbly subsoil, 70mm thick, beneath a 0.1m thick layer of topsoil. Beneath the subsoil, the scree-like natural was revealed (Plate 1). Across the field in which the turbine lies are clear traces of several banks and of intermittent ridge furrow (Plate 2), along with a possible building platform (Feature 10; Section 4). Many of the features show the marks of fresh tyre tracks across them, but no traces of ridge and furrow or of other archaeological features were present within the stripped area of the turbine platform.

3.2.2 **Turbine 2:** Turbine 2 is the most southerly of the turbine platforms and the highest up the hill. This was located mid-way between a small sandstone flag quarry, to the east, and the site of Hapton Tower, to the west. Excavation here was quite shallow; a very thin topsoil and subsoil, depth 0.3m, gave way onto a clayey-silt boulder clay natural within which some fragments of sandstone were apparent. No archaeology was observed.

3.2.3 **Turbine 3:** lies on the eastern edge of the development area, within an adjacent field to that occupied by Turbine 2 and on the eastern incline of Hameldon Hill. This area encompassed a modern, but now disused and overgrown, rough tarmac trackway running south-east from the rear of New Barn Farm. The track is visible as a modern earthwork. It was left *in situ* by the excavation and will be incorporated into the groundwork plan. The associated access area was stripped to a depth of 0.2m, onto subsoil, while excavation for the turbine platform was to depth of 2m. Within the area of the turbine base, subsoil, to a depth of 0.4m, lay directly above a mixture of sandstone flags and gravel. This scree-like deposit (excavated to a depth of 3m within a test pit within the Turbine 3 base) represented the weathered underlying bedrock and was found in several locations across the site. No archaeology was observed within the area of Turbine 3.

4. GAZETTEER OF EARTHWORK FEATURES

| | |
|------------------------------|--|
| Feature number | 01 |
| Site name | Hameldon Hill |
| NGR | SD 80948 29837 - SD 80886 30100 |
| Site type | Bank |
| Period | Unknown |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | A low bank, c 175m long, 2m wide, 0.2m high where transected by the access track and east/west aligned. The bank is composed of greyish-yellow silty sand and sealed by dark brownish-grey silt topsoil (0.1m thick). The adjacent ridge and furrow appears to be later than this feature. |
| Assessment | The feature is very close to the access road but will probably not be affected by the present development. |

| | |
|------------------------------|--|
| Feature number | 02 |
| Site name | Hameldon Hill |
| NGR | SD 80885 30101 (east end) SD 80837 30046 |
| Site type | Linear bank |
| Period | Medieval/post-medieval |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | Linear bank, aligned east/west. Immediately south of the banked enclosure (Feature 03). Feature 02 is 0.75m high, 3.5m wide and 75m long. The bank becomes intermittent to the south-west. The feature is respected by the ridge and furrow and is probably contemporary. |
| Assessment | The feature is in the same field as Turbine 1 but is unlikely to be affected by it. It may be affected by farm vehicles tracking across it, however. |

| | |
|------------------------------|---|
| Feature number | 03 |
| Site name | Hameldon Hill |
| NGR | SD 80875 30110 |
| Site type | Banked enclosure |
| Period | Romano-British/medieval |
| SMR No | - |
| Statutory Designation | - |
| Sources | CWR 2002 |
| Description | The enclosure was first recorded by the Centre for Wetland Research 2002. Appears to be a rectilinear bank and ditched earthwork enclosure measuring c 25m x 30m. May relate to a number of earthwork boundary features that have been built upon by the sixteenth century Hapton Tower. So far undated but thought to be either Romano-British or related to a deer park belonging to the Hapton Estate that covered the development area between 1330 and 1615. The enclosure is earlier than the drystone wall that is built over the top of it, however. The enclosure is respected by the ridge and furrow that is apparent around it. |
| Assessment | The feature is in the same field as Turbine 1 but is unlikely to be affected by it. It has been, and will continue to be, affected by farm vehicles tracking across it, however. |

| | |
|------------------------------|--|
| Feature number | 04 |
| Site name | Hameldon Hill |
| NGR | SD 80916 29967 (south-east) SD 80675 30360 (north-east) SD 80791 29988 (south-west) SD 80538 30353 (north-west) |
| Site type | Ridge and furrow |
| Period | Medieval/post-medieval |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | Ridge and furrow can be seen across much of the field in which Turbine 1 is located, covering an area roughly 75m by 400m, although much of it has already been disturbed due to the long term presence of agriculture and animal husbandry in this field. The ridge and furrow runs north-west/south-east along the north-east incline of the field but appears to respect many of the other features around it. The location of Turbine 1 is in an area of the field where the ridge and furrow has virtually disappeared already. Each sequence of ridge and furrow is 3m wide. |
| Assessment | The feature is in the same field as turbine one but is unlikely to be directly affected by it. It has been, and will continue to be, affected by farm vehicles tracking across it however and animals grazing upon it. |

| | |
|------------------------------|---|
| Feature number | 05 |
| Site name | Hameldon Hill |
| NGR | SD 80785 30221 |
| Site type | Small sub-circular mound. |
| Period | Unknown |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | A small subcircular mound, 10m wide and 1.5m high. To the north of a similar feature (06a), and the banked enclosure (Feature 03) with which it appears to be associated. There is some hollowing-out of this feature, which is now used by sheep as a place to shelter from inclement weather. It is not clear whether the hollow is natural or man-made. |
| Assessment | The feature is in the same field as Turbine 1 but is unlikely to be directly affected by the development. It has been, and will continue to be, affected by animals grazing upon it and by the use of this area as a vehicle track, however. |

| | |
|------------------------------|---|
| Feature number | 06 |
| Site name | Hameldon Hill |
| NGR | 06a SD 80800 30188, 06b SD 80817 30175 |
| Site type | Two banked hollows. |
| Period | Unknown |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | Two banked hollows both partly surmounted by the modern field wall. The southern most feature (Feature 6b) appears to have an entrance to the north. The bank is 1m high and 2m across. The internal size of the hollow is 8m x 5m. It is not clear whether the hollows are an original component of the feature or a later man-made addition. Both appear to relate to Feature 03 the banked enclosure. |
| Assessment | The feature is in the same field as Turbine 1 but is unlikely to be directly affected by it. The hollows are currently used by sheep to shelter in and a number of horses walk across them also. More significant is the damage to these earthworks caused by traversing farm vehicles. |

| | |
|------------------------------|---|
| Feature number | 07 |
| Site name | Hameldon Hill |
| NGR | SD 80770 30212 |
| Site type | Bank |
| Period | Medieval /Post-medieval |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | A low bank extending south-west from Feature 05 but respected by the ridge and furrow around it. Beginning underneath the field wall and running westwards, the bank is 19m long, 0.6m high and 7.5m wide. This appears to be a component part of Features 02 , 03 , 05 and 06 . |
| Assessment | The feature is in the same field as Turbine 1 but is unlikely to be directly affected by it. Sheep and horses currently graze on and around the feature. |

| | |
|------------------------------|--|
| Feature number | 08 |
| Site name | Hameldon Hill |
| NGR | SD 80887 29898 |
| Site type | Ditch and twin banks |
| Period | Unknown |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | A ditch and twin banks <i>c</i> 206m long. The ditch has a bank to the south, although this may be a lynchet partly formed by ploughing. A second bank was located 3m to the north, where the access road crossed it. It is probable that some building foundations may be submerged around this site. |
| Assessment | This feature was very close to the access road however an extant farm track already crosses part of this feature. |

| | |
|------------------------------|---|
| Feature number | 09 |
| Site name | Hameldon Hill |
| NGR | SD 80568 29978 (centred) |
| Site type | Ridge and Furrow |
| Period | Medieval/post-medieval |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | Ridge and furrow can be seen, in a roughly rectangular area (<i>c</i> 270m by <i>c</i> 80m), to the west of the stream. There is more definition here than there is to the ridge and furrow on the east side of the field (Feature 04). This site runs up to the foot of the hillock on which Hapton Tower once stood. The ridge and furrow may also have been truncated by quarrying to the west. |
| Assessment | Largely unaffected by the current development project, although some of the current farming practices do impact upon it. |

| | |
|-----------------------|----------------------------|
| Feature number | 10 |
| Site name | Hameldon Hill |
| NGR | SD 80731 30038 |
| Site type | Possible Building Platform |

| | |
|------------------------------|--|
| Period | Unknown |
| SMR No | - |
| Statutory Designation | - |
| Sources | Walkover Survey |
| Description | Rectangular negative feature, located on the eastern side of the stream. Measuring roughly 15m north/south by 5m east/west. Although overgrown, there is evidence of masonry and other building materials. |
| Assessment | Largely unaffected by the current development project, but does lie very close to Turbine 1. |

5. DISCUSSION

5.1 CONCLUSIONS

- 5.1.1 The walkover associated with the watching brief recorded the location of the remains of 11 features, including four banks (Features **01**, **02**, **07** and **08**), two areas of ridge and furrow (Features **04** and **09**), a mound (Feature **05**), two banked hollows (Features **6a** and **6b**), a possible building platform (Feature **10**) and a banked enclosure (Feature **03**), the latter of which had previously been recorded by CWR (2002). Similarly, it is likely that mound **05** and at least one of the banks are mentioned in the CWR report. Of these features, only banks **01** and **08** were demonstrably impacted upon by the current phase of development. Although it was possible to record these features in section, no dating evidence was found. It is likely that Turbine 1 would also have had an effect on the ridge and furrow in this area, although in parts, including that within the vicinity of the turbine, these earthworks survived in only poor condition. No subsoil traces of the ridge and furrow was, therefore, exposed within the monitored area, and there was no accompanying dating evidence.
- 5.1.2 The fact that the ridge and furrow of Feature **04** respects bank Features **02** and **07** would suggest that these form part of a contemporary field system (Taylor 1974, 58-9). That Feature **07** is located so close to Mound **05** may also indicate that this, too, was part of the field system, but its function is indeterminate, and may represent a much earlier element within the landscape. Indeed, the eastern limit of Banks **02** and **07** may once have been defined by the current drystone field boundary, likely to relate to the later eighteenth century or early nineteenth century enclosure of the area, but which may have had an earlier predecessor. That the location of this earlier predecessor may not have coincided exactly with the present boundary is suggested by the distance from this boundary to the eastern edge of the extant ridge and furrow. The ridge and furrow of Feature **09** would appear to be later than Bank **01**, although the relationship between Feature **09** and the banks and ditch of Feature **08** is less certain. If the banks of Feature **08** do relate to a positive lynchet from ploughing, then it is possible that they accumulated due to the position of headlands in this area (Steane 1984, 153). Feature **08** could thus be seen as a contemporary feature within the agricultural landscape.
- 5.1.3 The identification of Features **06a** and **06b** is also uncertain, although their close spatial association with Enclosure **03** may mean that they share a relationship. It is possible that these banked depressions represent livestock shelters within what is a fairly inhospitable location. Furthermore, the alignment of these features, along with Feature **05**, may suggest that they are related, and may once have been interconnected; this area alongside the drystone field boundary, however, has been greatly damaged by its regular use as a thoroughfare for agricultural vehicles, causing any clear relationships to be destroyed.
- 5.1.4 As indicated, no dating evidence was recovered that might provide clues as to the date of the observed features. It is, however, tempting to suggest that the

observed field system is medieval in origin and is associated with the Hapton estate. As such, the field system potentially dates to the twelfth or thirteenth centuries, when the burgeoning economy and growing population was leading to agricultural expansion onto more marginal areas (Watson 1995, 67). The fields are likely to have been abandoned either before, or during, the fourteenth century, by which time the land had become emparked (Platt 1978, 47). Even if emparkation of that particular area of the hill occurred later in the fourteenth century, it is likely that the land would have been abandoned around the middle of that century, when climatic deterioration (Steane 1984, 175) and various plagues (Frank 1995, 228) would have made the exploitation of marginal land either unviable or unnecessary when areas of more profitable land would have become available through population decline (Campbell 1995, 95).

- 5.1.5 Because of the limited height of the ridges (likely to relate to the thin soils on the hill slopes, but also to erosion contemporary with the formation of the earthworks, as much as to later plough damage), the current level of survey has not been sufficiently detailed to determine whether or not the ridge and furrow has a characteristically medieval aratral curvature (Steane 1984, 153). Moreover, the ridge and furrow does not appear to have been formed in a series of smaller, perpendicular groupings, another characteristic feature of medieval (communal) field systems (Taylor 1974, 115). The absence of these at Hameldon Hill may relate to patterns in land ownership, but also to the fact that the ridge and furrow is aligned with the north-westerly slope of the hill in this location. Irrespective of date, it is probable that any settlement relating to the field system would have been centred upon either the site of New Barn Farm, or of Feature **10**. A more detailed survey technique, or usage of aerial photographs, may produce more definitive results in the future. If it could be demonstrated that the field system formed by Features **02, 04, 07-09**, is indeed medieval in date, then it is possible that Bank **01** is even earlier, possibly prehistoric or Romano-British.

5.2 IMPACT

- 5.2.1 The impact of the present development upon the known archaeological resource would appear to be fairly limited at present. Turbines 2 and 3 were located within fields where there were no observed archaeological remains, while the position of Turbine 1 and its related access track has had a limited effect on a possibly medieval field system. If nothing else, the watching brief has provided an opportunity to record the presence and nature of several of the earthworks affected by Turbine 1. The main value in recording the presence and extent of the earthworks, however, is the information that will be provided for future planning decisions. Indeed, while any further works on the site are likely to impact upon the earthworks, it is also the case that current agricultural vehicle activity is having a negative effect on several of the earthworks, including Enclosure **03**.

6. BIBLIOGRAPHY

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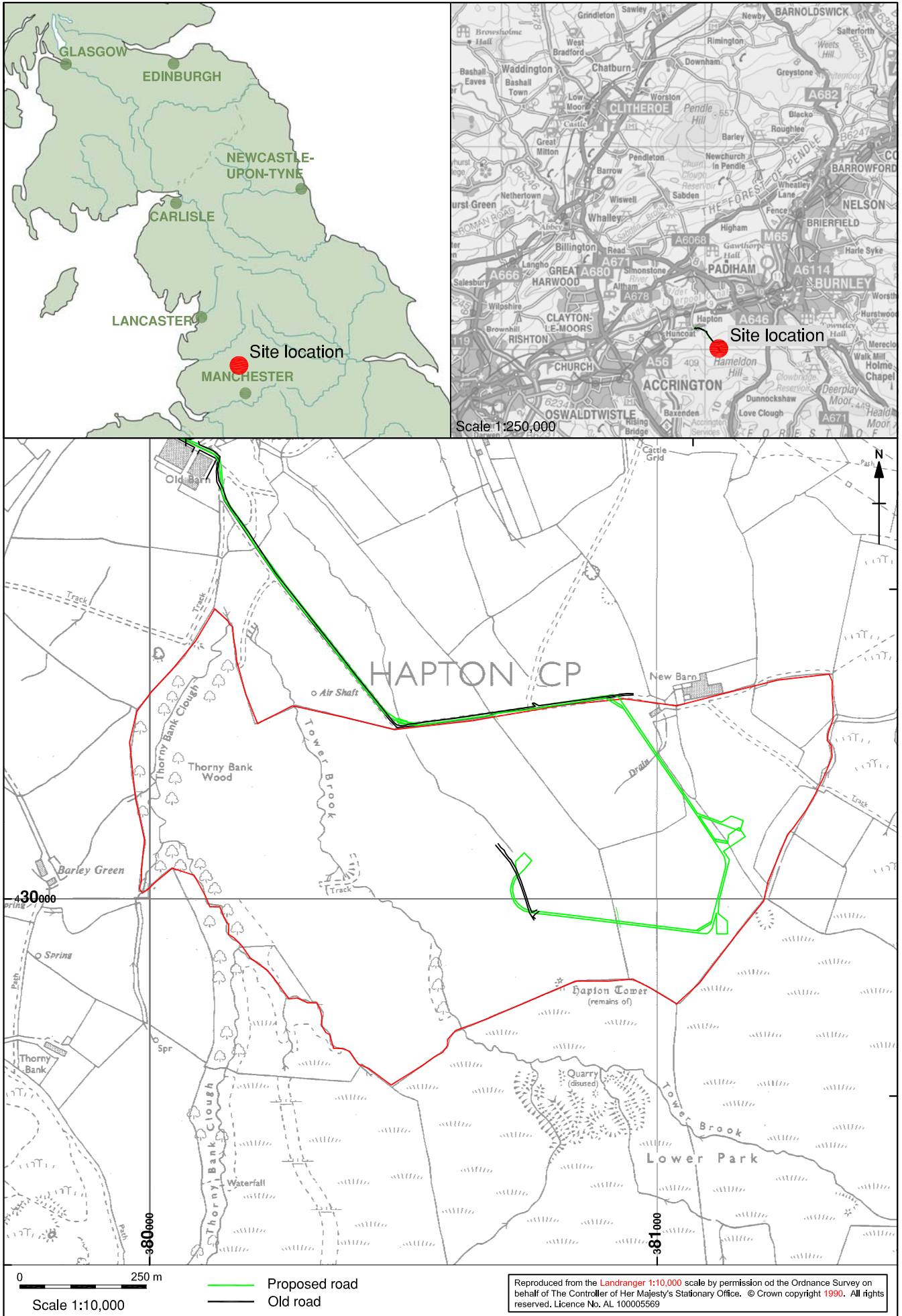


Figure 1: Site Location

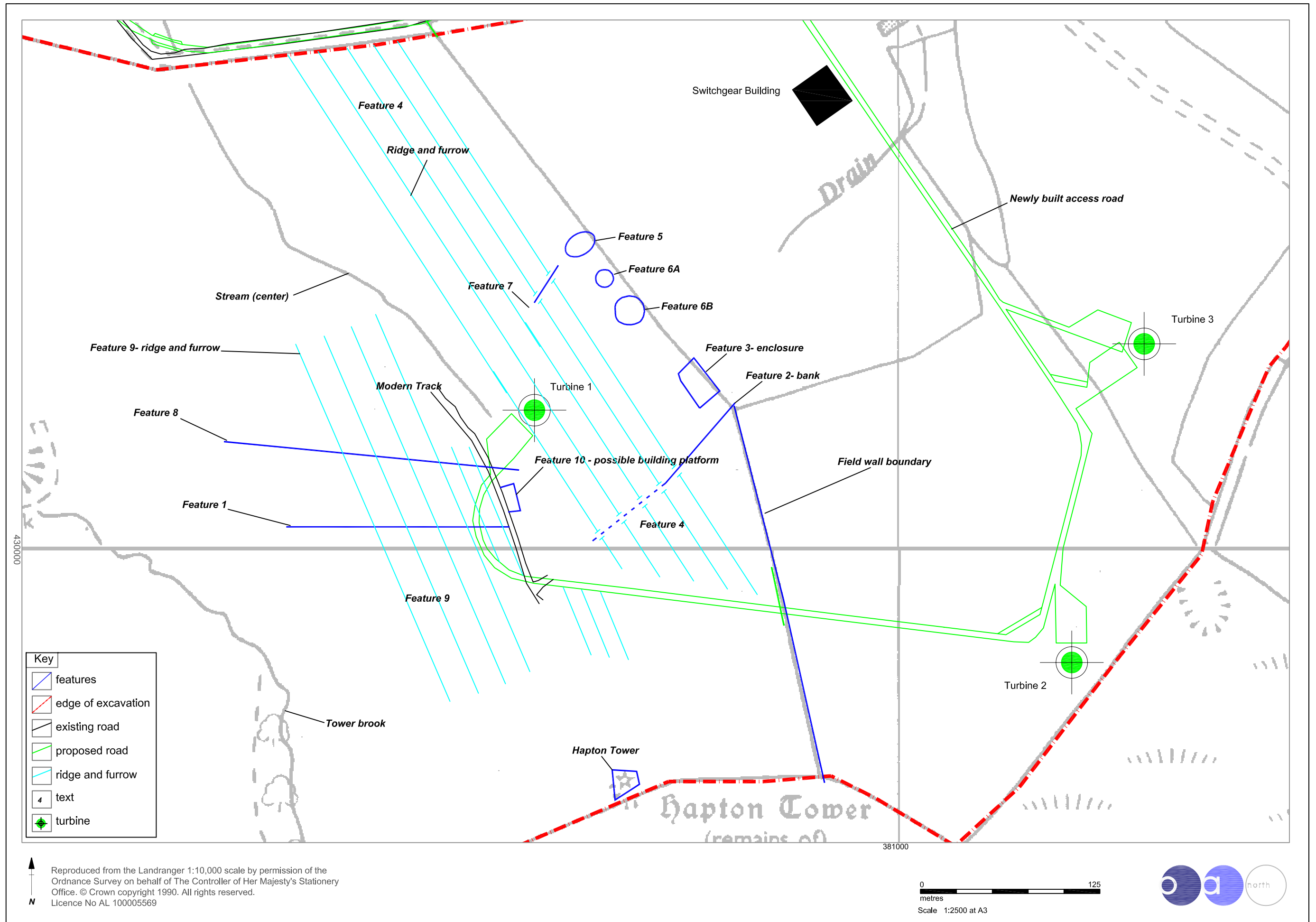


Figure 2: Plan of Watching Brief Features



Plate 1: Area beneath Turbine 1



Plate 2: Ridge-and-Furrow



Plate 3: Working Shot showing Shale Geology beneath compound

APPENDIX 1: PROJECT DESIGN

**HAMELDON
HILL WIND
CLUSTER, NEW
BARN FARM,
BURNLEY,
LANCASHIRE**

**ARCHAEOLOGICAL
WATCHING BRIEF:
PROJECT DESIGN**



Oxford Archaeology North

February 2006

McNicholas Construction Services

OA North Job No: L9655

NGR: SD 8150 3050

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 McNicholas Construction Services (henceforth, the Client) have submitted proposals to Lancashire County Council Environment Directorate for the construction of a three turbine wind farm at Hameldon Hill, New Barn Farm, Burnley, Lancashire (Planning Reference 12/02/0516, NGR SD 8150 3050). Following the receipt of a desk-based assessment on the site undertaken by the Centre for Wetland Research (CWR 2002), Lancashire County Archaeological Service (LCAS) requested that all groundworks associated with the development should be the subject of an archaeological watching brief. These groundworks comprise construction of an access road and the excavation of footings and pads for the wind turbines themselves, but also for cranes to construct the turbines. The access road runs south-west off the existing New Barn Farm/Lower Micklehurst farm access track, towards the location of turbine 3, just to the south of New Barn Farm, continuing south-west to the location of turbine 2. The access road route then turns sharply west and then north-west to reach the location of turbine 3, to the south-west of the farm. Accordingly, the Client requested that Oxford Archaeology North (OA North) submit proposals and costs for the undertaking of a watching brief and the following document, compiled in accordance with a verbal communication with LCAS, represents a project design for an appropriate scheme of archaeological monitoring.

1.2 ARCHAEOLOGICAL BACKGROUND

1.2.1 The development site lies 2km to the south-west of Burnley within several pasture fields subdivided by drystone and stone slab walls, probably dating to the eighteenth to nineteenth century enclosure period. No prehistoric remains have been found within the development area itself, but finds from the surrounding area include a Bronze Age beaker from nearby Extwistle Moor and a unidentified vessel recovered in 1905 from an earth circle near Burnley (CWR 2001). Roman settlement within the area is indicated by a coin and possible cremation burial from Burnley itself (*ibid*). An undated rectilinear bank and ditched earthwork enclosure measuring approximately 25m by 30m was located during the CWS walkover survey, and appears to relate to a number of earthwork boundary features that have been built upon by a sixteenth century tower. It is possible that this feature may be Romano-British in date, but may instead relate to a deer park belonging to the Hapton Estate that covered the development area between 1330 and 1615. The remains of Hapton Tower, a ruined tower house built in 1510 by Sir John Townley as part of the deer park, lie just to the south of the proposed access road linking turbines 1 and 2 and comprises foundations surviving as irregular earthworks covering an area of about 50 square metres (*ibid*). Records suggest that a tower, dating to at least 1375, may have stood on or near this site. The House and barn at Newbarn Farm are Grade II listed buildings dating to the later seventeenth or early eighteenth centuries, and sadly now somewhat dilapidated (*ibid*). Several sandstone flag quarries lie around the development area, the closest being a small example just to the east of the access road linking turbines 2 and 3. A second, larger, quarry lies just to the south of Hapton Tower.

1.2.1 OXFORD ARCHAEOLOGY NORTH

1.2.2 Oxford Archaeology North (OA North) has considerable experience of undertaking watching briefs of all periods, having conducted a great number of small and large scale projects during the past 25 years. Fieldwork has taken place within the planning process and construction programmes, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.2.3 OA North is an Institute of Field Archaeologists (**IFA**) **registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

- 2.1 The following programme has been designed in accordance with the Lancashire County Archaeology Service document entitled *General Conditions for Appropriate Archaeological Contractors in Lancashire*.
- 2.2 **Watching Brief:** in order to determine the presence, date, quality and state of preservation of archaeological features on the site, a permanent presence archaeological watching brief will be maintained during all groundworks on the site associated with primary and ancillary development features (*Section 1.1.1*), in order to determine the presence, date, quality and state of preservation of archaeological features on the site.
- 2.3 **Report and Archive:** a report will be produced for the Client within about eight weeks of completion of the fieldwork. The report will aim to summarise the results of the watching brief within the context of existing knowledge about the site and its surroundings. These results will provide the basis for any recommendations for further work, should this prove appropriate. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

3. WORK PROGRAMME

- 3.1 In line with the objectives and stages of the archaeological works stated above, the following work programme is submitted:
- 3.2 **Watching Brief:** to be maintained during any ground disturbing activities, including those relating to excavation of the access road, service runs and footings for both cranes and turbines (see *Sections 1.1.1 and 2.2*).
- 3.3 **Report and Archive:** production of a suitably illustrated report and properly ordered archive.

4. METHODOLOGY

4.1 WATCHING BRIEF

- 4.1.1 A programme of field observation will accurately and systematically examine and record the location, extent, and character of any surviving archaeological features, horizons and/or deposits revealed during the course of ground disturbance, along with any artefacts, identified during observation.
- 4.1.2 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned accurately at appropriate scales and annotated on to a large-scale plan. A photographic record of archaeological features and general working shots, utilising monochrome print and colour slide will be undertaken simultaneously.
- 4.1.3 A plan will be produced of the areas of groundworks showing the location and extent of the ground disturbance and one or more measured sections will be produced, regardless of the presence of archaeology.
- 4.1.4 Putative archaeological features and/or deposits identified during groundworks, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels, depending on the subsoil conditions and, where appropriate, sections will be studied and drawn. Any such features will be sample excavated (ie. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).

- 4.1.5 It is assumed that OA North will have the authority to stop the works for a sufficient time period to enable the recording of important deposits. It may also be necessary to call in additional archaeological support if a find of particular importance is identified or a high density of archaeology is discovered, but this would only be called into effect in agreement with the Client and LCAS and will require a variation to costing.
- 4.1.6 **Human Remains:** any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. LCAS and the local Coroner will be informed immediately. If removal is essential, the exhumation of any funerary remains will require the provision of a Department of Constitutional Affairs license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations and, if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act, 1981.
- 4.1.7 **Recording:** all information identified in the course of the watching brief works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs or contact prints) to identify and illustrate individual features as well as the nature of the demolition work. Primary records will be available for inspection at all times.
- 4.1.8 Results of the field investigation will be recorded using a paper system, adapted from that used by the English Heritage Centre for Archaeology. The archive will include both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). Levels will be tied into the Ordnance Datum. All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.
- 4.1.9 **Treatment of finds:** excavated soil will be searched as practicable for finds. The presence and nature of finds definitely dating to the nineteenth and twentieth centuries will be noted but they will not otherwise be retained. All other finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed, as appropriate, in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines. Except where noted above, all identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.
- 4.1.10 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.
- 4.1.11 **Contingency plan:** in the event of significant archaeological features or human remains being encountered during the watching brief, discussions will take place with the Planning Archaeologist, as to the extent of further works to be carried out, and in agreement with the Client. All further works would be subject to a variation to this project design.

5. REPORT

- 5.1 The results of the data gathered in *Section 4.1* above, will be collated and submitted in report format, illustrated with the relevant photographs and drawings. Where appropriate, the report will attempt to relate any findings to the known history and archaeology of the site, and to its local setting.
- 5.2 One bound and one unbound copy of the report will be submitted to the Client, and one bound copy and another in digital format will be submitted to LCAS and to the Lancashire Sites and Monuments Record together with an archive CD-ROM. Any subsequent work arising from this survey will be subject to separate consideration in liaison with LCAS and the Client.

- 5.3 The final report will include a copy of this project design, the relevant LCAS brief, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above, and will include details of the final deposition of the project archive. Illustrations will include a location map, trench location plan and plans and sections of trenches drawn at an appropriate scale.
- 5.3 A brief summary of the fieldwork will be prepared and submitted to the Council for British Archaeology North West *Archaeology North West* within 12 months of the completion of the project.

6. ARCHIVE

- 6.1 The results of the watching brief will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The fully indexed project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include all the original records and drawings along with fully labelled and indexed slides and contact prints. It will include summary processing and analysis of any features and finds recovered during fieldwork, in accordance with UKIC guidelines. The deposition of a properly ordered and indexed project archive in an appropriate repository, is considered an essential and integral element of all archaeological projects by the IFA, and arrangement to this effect will be made with the museum curator prior to the commencement of the project.
- 6.2 All finds will be treated in accordance with OA North standard practice, which follows current IFA guidelines and will be deposited, along with a copy of the report and of the original site records, with Lancaster City Museum.

7. HEALTH AND SAFETY

- 7.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 7.2 The client would be asked to determine the nature of any utility services to the properties and site prior to any fieldwork being carried out.
- 7.3 OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

8. CONFIDENTIALITY

- 8.1 The final report is designed as a document for the specific use of the Client, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose, can be fulfilled, but will require separate discussion and funding.
- 8.2 Any proposed variations to the project design will be agreed with LCAS in co-ordination with the Client. OA North will arrange a preliminary meeting, if required, and LCAS will be informed of the commencement of the project in writing.

9. WORK PROGRAMME

- 9.1 The following programme is proposed:

- 9.2 **Watching Brief:** the duration of the watching brief will be dependent upon the progress of the contractor, but is currently expected to last twenty working days.
- 9.3 **Archive/Report:** the report and archive will be produced following the completion of all the fieldwork. The final report will be submitted within eight weeks of completion of the fieldwork and the archive deposited within six months. If desired, an interim statement could be produced within ten days of completion of the fieldwork.

10. STAFFING

- 10.1 The project will be managed by **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed.
- 10.2 The watching brief will be undertaken by an OA North Supervisor, suitably experienced in fieldwork techniques. Present timetabling constraints preclude detailing at this stage exactly who will be undertaking this element of the project.
- 10.3 The archaeological work will be monitored by LCAS, which will be arranged accordingly.

11. REFERENCES

Centre for Wetland Research, 2002 *Archaeological Assessment, Hameldon Hill Wind Cluster, Burnley, Lancashire*, unpubl rep

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London

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