LAND AT BANK FARM, MARTIN LANE, BURSCOUGH, LANCASHIRE

Archaeological Evaluation

Oxford Archaeology North
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Mr David Gibbons

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APPENDIX 3: CONTEXT LIST

APPENDIX 4: FINDS LIST
SUMMARY

The construction of a new irrigation lake measuring 200m x 112m (planning reference 8/2004/1527) on land at Bank Farm, Martin Lane, Burscough, Lancashire (NGR SD 4188 1302) necessitated a programme of predetermination evaluation, as it was possible that important archaeological remains could be affected by the proposed development. Consequently, Mr David Gibbons commissioned Oxford Archaeology North (OA North) to carry out an archaeological evaluation in accordance with a formal brief issued by the Lancashire County Archaeology Service (LCAS).

The outlined development area is currently laid down to arable, and positioned to the east of Bank Farm, approximately 500m to the north of Gorst Lane and adjacent to Langley’s Brook. The area of the proposed lake is close to four separate findspots of prehistoric worked flint in the Sites and Monuments Record (SMR) (PRN nos. 4156, 4158, 4159, 4161), and a Bronze Age stone axe hammer (PRN 2032). This has been taken to indicate occupation and use of the area during the Mesolithic through to the Bronze Age period. In addition, a number of unidentified and undated cropmarks (PRNs 2810, 4443, 4444, 4445) are present, but are likely to relate to old field boundaries.

The archaeological evaluation comprised eight trenches measuring 30m x 2m, totalling 240m in length, and was undertaken in April 2006. The evaluation trenches were characterised for the most part by features relating to drainage; 22 modern field drains were observed across seven of the eight trenches. However, three of the trenches revealed archaeological features of interest, Trenches 2, 3 and 5.

Two ditch features were revealed in Trench 2, 207, and in Trench 5, 502, which correlated with the cropmarks observed in aerial photography, traversing the field on an approximate east/west alignment (PRN 4443). Although no specific dating evidence was obtained the features are most likely post-medieval field boundaries, also functioning as drainage gullies.

Four pits, 310, 312, 314 and 316, and a charcoal-rich layer, 317, were revealed in Trench 3. A further pit, 506, was revealed in Trench 5. The pit fills and the charcoal-rich layer were sampled and assessed for their palaeoenvironmental and dating potential. The fill, 309, of pit 310 produced some evidence of metalworking and charcoal was recovered from fill 311 of pit 312. Pit 506 in Trench 5 also produced evidence of slag. However, no finds were recovered from the pits to date the activity, but given the archaeological potential for the immediate vicinity, the features could be of prehistoric date.

The charcoal-rich layer 317 was identical in terms of composition to the pit fills 309, 311, 313, and 315. However, 317 was also seen to occupy undulations in the underlying geology, as opposed to the pit fills 309, 311, 313, and 315 that appeared to occupy deliberate cuts into the natural geology rather than disturbed areas.

In summary, Trench 1 contained one area of animal-related disturbance, 105, and three modern drains. Trench 2 included one area of animal-related disturbance, 209, and a ditch, 207, and was crossed by six modern field drains. Trench 3 produced four pits, 310, 312, 314, and 316, a spread of charcoal, 317, and seven modern field drains. Trench 4 contained two modern field drains. Trench 5 included one pit feature, 506,
and a ditch feature, 502. Trench 6 contained one modern drain, and Trench 7 contained three areas of animal disturbance and three modern field drains. Trench 8 was devoid of any features.

The development site is largely devoid of significant archaeological features and it would seem that the proposed development will not have a significant impact on the archaeological record. Consequently, there are no recommendations for further archaeological work.
ACKNOWLEDGEMENTS

Oxford Archaeology North would like to thank David Gibbons for his co-operation during the evaluation, and for commissioning the work. Thanks are also due to Mary Miller of Lancashire Rural Futures, and Doug Moir of Lancashire County Archaeology Service for his advice.

Chris Healey, Caroline Bulcock and Ged Callaghan undertook the evaluation. Chris Healey wrote the report and Christina Clarke prepared the illustrations. The finds were examined by Chris Howard-Davis. The environmental samples were prepared by Sandra Bonsall and examined by Elizabeth Huckerby. The project was managed by Emily Mercer, who also edited the report.
1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 Lancashire County Archaeological Service (LCAS) was consulted with regard to a planning application (Planning Reference 8/2004/1527) for the construction of a new irrigation lake on land at Bank Farm, Martin Lane, Burscough, Lancashire (NGR SD 4188 1302; Fig 1) by West Lancashire District Council. LCAS advised that a pre-determination evaluation should be undertaken due to the potential for impact on important archaeological remains by the proposed development. This would enable the West Lancashire District Council to make an informed decision regarding the planning application and whether an appropriate mitigation strategy is required. A formal brief was issued for a programme of archaeological work, to include consultation of the Sites and Monuments Record (hereafter the ‘SMR’), in order to obtain an overview of the archaeological and historical background, and the excavation of eight trial trenches.

1.1.2 Oxford Archaeology North (OA North) submitted proposals for the archaeological work in accordance with the LCAS brief and were commissioned by David Gibbons, owner of the proposed development area. The archaeological fieldwork was undertaken in April 2006, the results of which are presented in this report in the form of a short document, outlining the findings, followed by a statement of the archaeological potential and significance.

1.2 SITE LOCATION AND TOPOGRAPHY

1.2.1 The site lies in a relatively flat area between New Lane and Drummersdale (Fig 2), 2.5km north-west of the town of Burscough. The field for the proposed development lies in an area formerly occupied by Martin Mere, an inland basin that has formed an estuarine or marine inlet at various points throughout its history, and surrounded by peat mosses (Middleton et al, forthcoming). Martin Mere was formerly the largest lake in Lancashire before it was drained in 1692 (ibid), and the area is now surrounded by agricultural land, currently predominantly used for cereals and vegetables, often potatoes and salad crops.

1.2.2 The underlying geology comprises Boulder Clay over which sits a drift geology of primarily windblown Shindley Hill Sands (Countryside Commission 1998, 88).
2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 In accordance with a brief produced by LCAS (Appendix 1), OA North submitted a project design (Appendix 2). The project design was adhered to in full and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 SMR VISIT

2.2.1 The Lancashire SMR, Preston, was consulted to provide an archaeological and historical overview of the site and its surroundings. This information was used to assist compilation of the background (Section 3).

2.3 EVALUATION

2.3.1 Eight trenches measuring 30m x 2m were mechanically excavated, using a toothless ditching bucket, under the supervision of an archaeologist to the level of the natural subsoil or to the level of the first significant archaeological deposits. The trenches were hand-cleaned, and potential archaeological deposits were manually excavated in order to test their date, character and extent.

2.3.2 The trenches were recorded using a system devised from that used by the English Heritage Centre for Archaeology. The archive includes both a photographic record and accurate large-scale plans and sections at appropriate scales. Recording was principally in the form of a pro-forma trench record sheet for each trench, which noted the orientation, dimensions and description of the topsoil and subsoil present in the trench. Features thought to be of possible archaeological potential were recorded using pro-forma context record sheets.

2.3.3 The trench locations were located by Differential Global Positioning System (DGPS). GPS instrumentation uses electronic distance measurement along radio frequencies to satellites to enable a positional fix in latitude and longitude, which can be converted mathematically to the National Grid. It uses a post-processed system by comparing a roving station with a similar station on a fixed known point in order to achieve high levels of accuracy, which are typically ±0.25m.

2.4 FINDS

2.4.1 Artefacts recovered from the surface, from layered deposits and from within secure contexts within features were collected and taken to OA North for assessment.
2.5 **PALAEOENVIRONMENTAL ASSESSMENT**

2.5.1 Samples recovered for palaeoenvironmental analysis were collected from suitable deposits using hand shovels and 10 litre buckets. In sampled features either the entire fill was recovered or a 30 litre sample, whichever was the lesser amount.

2.5.2 **Quantification:** six bulk samples were taken in total. These were processed for the assessment of charred and waterlogged plant remains. The samples assessed were between 3 and 8 litres in volume (see Table 2, *Section 4.3*).

2.5.3 **Methodology:** the samples were hand-floated and the flots collected on a 250 micron mesh and air dried. The flots were scanned with a Leica MZ6 stereo microscope and the plant material was recorded and provisionally identified. The data are shown on Table 2 (*Section 4.3*). Botanical nomenclature follows Stace (1991). Plant remains were scored on a scale of abundance of 1 to 5 (where 1 is rare (less than 5 items) and 5 is abundant (more than 100 items)). The components of the matrix were also noted and the samples assessed as to their potential for further analysis.

2.6 **ARCHIVE**

2.6.1 A full archive has been produced to a professional standard in accordance with the project design (*Appendix 2*) and current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the Lancashire County Record Office on completion of the project, with a copy of the report deposited with the Lancashire Sites and Monument Records in Preston.
3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 PREHISTORIC PERIOD

3.1.1 Mesolithic Period: whilst evidence for human activity in the area immediately surrounding the site is sparse, faunal remains have been recovered from the area of Martin Mere, including red deer, ‘Elk’, ‘Irish Elk’ and horse, although none of these were excavated under what are now considered to be controlled circumstances. Undated human bone found in association with red deer and horse bone at Birkdale, Southport in 1872, is taken to have been deposited prior to the windblown sand beneath which it was discovered. These sand deposits began to form c 3300 cal BC (Middleton et al 1995, 29).

3.1.2 Settlement evidence from the Mesolithic is demonstrable on the far northern side of Martin Mere, comprising large flint scatters (North Meols; SD 4045 2145) which have been interpreted as long-term seasonal exploitation of a variety of wetland, marine and estuarine resources (Middleton et al forthcoming). Smaller scatters are also recorded to the south and east of Martin Mere, taken to represent probable concentrations of activity. Flint findsots and scatters recovered from fields to the north-east (PRNs 4158, 4159, 4161) and to the north-west (PRN 4156) of the proposed development area, were all also recorded as prehistoric and possibly Mesolithic. This is suggestive of activity in and around the site.

3.1.3 The evidence of Mesolithic activity in the area immediately to the south of Martin Mere becomes relatively scarce. One reason is that the Shindley Hill Sand on which the development area sits is prone to flooding, and is not always as well drained as it might appear (ibid). Instances where flint scatters have been discovered are due to isolated areas of thick, well-draining sand less liable to seasonal saturation (ibid).

3.1.4 Neolithic and Bronze Age Periods: palynological evidence from the area seems to display forest clearances from the early Neolithic period (ibid). A polished flint axe was found in Burscough (LSMR 0836), a ‘flint knife’ was discovered in the 1960s at a farm in Churchtown (MSMR 3617-11), and ‘flint implements’ were found in association with an ‘axe-head’ north of Ormskirk (LSMR 0825). A serrated flake of probable Neolithic date was observed within an assemblage retrieved from a Mesolithic site (LA606), located on the Banks gravel ridge, although the authors preferred to treat this with caution (ibid). The overall impression is one of extremely thin settlement during the Neolithic period, perhaps rather impermanent in nature.

3.1.5 Two Bronze Age stone axe hammers were found in the region in the early part of the twentieth century, one from Derby Farm, Burscough, (PRN 2032), the neighbouring farmstead to Banks Farm, and the other from the ‘Southport District’. Finds of metalwork from Martin Mere to the north of the site include two palstaves (PRNs 0826, 0827) and a spearhead (PRN 1991), and a small flint scatter (LA570) at Burscough (SD 4250 1615) has been interpreted as displaying Bronze Age characteristics within its small assemblage (Middleton...
et al 1995, 36). The occurrence of metalwork exclusively within the mere is suggestive of ritual deposition in a fashion well-attested locally (op cit, 204-6), as well as on a national level.

3.2 IRON AGE AND ROMANO-BRITISH PERIOD

3.2.1 Although archaeological visibility of rural sites of this date is very poor within the region as a whole (op cit, 97) the nearby site of Dutton’s Farm, Lathom, has recently produced undated ‘pit alignments’ and a farmstead demonstrably shown to have continued from the Iron Age into the Romano-British period, represented by sequential occupation of a small number of roundhouses, the construction of possible granary structures, rubbish or storage pits and associated trackways and field boundaries (Cowell 2002; 2003).

3.2.2 Cropmarks to the north and east of Burscough have been claimed in the past to represent components of field systems incorporating settlements (Jones 1980, 91-4). Such features show up with regularity in the fields positioned on Shindley Hill Sands, with the darker ditch fills contrasting the pale natural sand (Middleton et al forthcoming). The cropmarks to the south of Bank Farm (PRN 4444), the majority of which were interpreted as later field boundaries, included a possible ditched enclosure which could potentially have been an Iron Age settlement. Two of the three subcircular cropmarks to the east of the site (PRN 4445) appear as parch marks and these may possibly relate to some later prehistoric activity also.

3.2.3 The majority of archaeological evidence for the Romano-British period comes from recovered coinage. A hoard found in Scarisbrick in 1655 appears to have been early Imperial, and includes a Vespasianic coin (AD 69-79) (ibid). A hoard was also recovered from Hundred End, at Tarleton Moss, but the date of its contents is unknown (ibid). Middleton et al suggest that these may have been the same hoard as that recorded as being dug from ‘3ft deep in soil’ at Hesketh Moss, including a Vespasianic (AD 69-70) and a Trajanic coin (AD 107). There is also a record of a single coin of Vespasian and ‘two bronzes’ found in 1899 in Martin Mere (LSMR 0076). The haphazard retrieval of these finds means that there is little information that can be elucidated from them beyond the date of their issue.

3.2.4 A number of Romano-British coarseware fragments, and potentially some Roman glass waste, were recovered during a fieldwalking survey ahead of a proposed realignment of the A59 between Rufford and Burscough by the West Lancashire Archaeological Society (ibid). Romano-British potsherds were also fleetingly mentioned at Ryecroft Farm, Rufford, by Kenyon (1991, 54).

3.2.5 Immediately to the north of the site at Banks Farm, on the far north side of Martin Mere between Holmeswood Moss and Tarleton Moss, sites comprising heavily concentrated scatters of flint pebbles are known. These have been interpreted as being related to burnt mounds known to date from various periods, although with a distinct lack of evidence of burning. Similar examples are known in the Norfolk Fens, and have been dated to the Roman period (Middleton et al forthcoming).
3.3 **MEDIEVAL PERIOD**

3.3.1 Relatively recent drainage of Martin Mere has produced finds of possible bridge structures (MSMR 3618-76) and dug-out canoes (LSMR 0829), of which some appear to have been deliberately sunk into the mere (*ibid*). It is possible that these are of medieval origin, although there has been no secure dating. While dug-outs continued to be used in the medieval period, any conclusions regarding availability of local timber and the use of such vessels to exploit water-borne resources must remain speculative (*ibid*).

3.3.2 Earthworks close to the mere appear in the medieval period, with a number of moats existing to the south of Martin Mere and on the higher ground between the mere and the River Douglas to the east (*ibid*). Their appearance is not necessarily related either to land reclamation or utilisation of the wetlands, but it may relate to the emergence of ‘high-status sites’ (*ibid*).

3.3.3 Whilst little evidence is available for medieval field systems in the vicinity, ridge-and-furrow fields have been recorded near Tarleton (LSMR 2830, 3425), with remains of what were probably the townfields for North Meols (*ibid*) and Churchtown (MSMR 3718-3). These townfields probably represent a continuing and unsystematic enclosure of wasteland; on the edges of the mere it would seem that as early as 1303 parcels of land were in the process of reclamation for agricultural use and for pasture (*ibid*).

3.4 **POST-MEDIEVAL PERIOD**

3.4.1 Martin Mere was first drained in 1692, a well-documented event (Eccleston 1786) compared with the rest of its history (Coney 1992, 51). Thomas Fleetwood (1661-1717) was the protagonist in the draining of the mere, by marriage having become a chief local landowner and securing the necessary Act of Parliament for its abstraction (*op cit*, 54). The initial works were required to be improved upon and consolidated in the eighteenth and nineteenth centuries due to flooding. Indeed, this continues with the renewed drainage and pumping station constructed as recently as 1961 (Middleton *et al*, forthcoming).

3.4.2 Although prior to 1692 the mosses to the immediate south of the mere were an historical unknown in terms of their economic employment, drainage meant that they could be used for peat extraction and pasturage, as well as arable use (Eccleston 1786). The SMR shows two large well-defined cropmarks (PRN 4443) seen to traverse the proposed development area. These are likely to be a part of a wider system of post-medieval field boundaries, the exact date of which is uncertain.

3.4.3 Peat-cutting on the mosses to the south of Martin Mere seems to have been well-regulated, an edict of 1703 stating that

‘noe inhabitant shall turne any Cattle Sheep up on the turf moss to the prejudice [*sic*] of turves betwixt the first of May and the 25th of July
Except the[y] keep A tenter to keep them out of the turves...’ (quoted in Coney 1992, 53)

3.4.4 ‘Moss-rooms’, as parcels of peat-cutting land were known, were let by the local landowners (Middleton et al, forthcoming), and this probably continued until the early twentieth century. The availability of local coal from the Lancashire Coal Measures, as early as the seventeenth century, was a major factor in the intensity of peat-cutting activity (Langton 1979, 54). While strikes in the later nineteenth century served to raise both the price and the level of cutting activity, eventually this increased premium precipitated the demise of the peat industry in the early twentieth century (Rosbottom 1987, 220).
4. RESULTS

4.1 EVALUATION

4.1.1 Introduction: the eight trenches, which measured 30m by 20m, were positioned to adequately sample the area outlined for the proposed irrigation lake. With the exception of two cropmarks likely to belong to post-medieval field boundaries (PRN 4443), no sites were noted during the consultation of the SMR to be positioned within the outlined area. Therefore, the trenches were configured to obtain a representative sample, whilst incorporating the cropmarks. Trenches 2, 3, 6 and 7 were aligned approximately north-north-west/south-south-east and Trenches 1, 4, 5 and 8 were aligned approximately east-north-east/west-south-west.

4.1.2 The trenches were excavated to a depth between 0.25m and 0.55m, which reflected the various depths of the topsoil on to natural deposits. The topsoil across the site was generally a dark brown slightly sandy-clay with occasional inclusions of small sub-angular stones, and appeared to contain a high level of imported ‘night-soil’ with nineteenth century potsherds and glass fragments included. The natural subsoil was well-leached Shindley Hill Sand, and its colour varied slightly from whiteish-grey to pale orangey-brown.

4.1.3 Apart from Trench 8, field drains were evident in all trenches. A large number were aligned in an approximate east/west alignment, although field drains aligned north/south were observed in Trench 1, north-west/south-east aligned drains in Trenches 2 and 4, and field drains aligned north-east/south-west were observed in Trenches 2, 6 and 7.

4.1.4 Trench 1: was 0.6m deep at the eastern end and 0.35m deep at the western end. Three modern field drains, 102, 103, and 104, were identified traversing the trench on approximately east/west alignment (Plate 2). A dark sub-circular feature, 105, was revealed and investigated at the western end of the trench. However, it became evident from its ephemeral and diffuse nature that this was of natural origin.

4.1.5 Trench 2: was excavated to a maximum depth of 0.4m. Six modern field drains were recorded. Five drains, 201, 202, 203, 205 and 206, were aligned in an approximate east/west alignment. The sixth, 204, was observed turning at a right-angle in the trench from the north-east towards the south-east (Fig 4).

4.1.6 A ditch was recorded at the southern end of the trench, 207, on an east/west alignment. Only the northern side of the ditch was observed, and the base was seen to extend beyond the southern end of the trench (Fig 5). Ditch 207 was at least 0.61m deep and appeared to follow a linear course, with two distinct fills, 210 and 211 (Fig 7). One very small fragment of brick with mortar still attached was retrieved from the lowest fill of the ditch, 211 (Fig 7), and it seems most likely that this feature corresponds to the northernmost cropmark (PRN 4443) seen on aerial photography (Fig 2).
4.1.7 **Trench 3:** was 0.6m deep at the southern end of the trench and was 0.4m deep at the northern end. Seven modern field drains traversed this trench, all on approximately east/west alignments, 302, 303, 304, 305, 306, 307 and 308 (Fig 5).

4.1.8 Four shallow pit features, 310 (Plate 3), 312, 314, and 316 (Plate 4), were located in the trench (Fig 5). These were all excavated by half-section and their fills were sampled in order to assess the palaeoenvironmental potential (Section 4.3, below). No finds were retrieved from the pits by which they could have been dated.

4.1.9 Charcoal spreads, 317, were observed forming discrete amorphous patches sealed by a thin layer of clay, 301. Layer 317 was also sampled in order to assess its palaeoenvironmental and dating potential (Section 4.3, below).

4.1.10 **Trench 4:** was 0.35m deep at the western end of the trench and 0.5m deep at the eastern end. This trench was entirely devoid of any features of archaeological significance, with only two field drains recorded crossing the trench on an approximately north-west/south-east alignment (Plate 5).

4.1.11 **Trench 5:** was excavated to a maximum depth of 0.5m. The majority of the trench was occupied by a large ditch, 502, on an approximately east-north-east/west-south-west alignment (Fig 6, Plate 6). A 1m slot was excavated to investigate the ditch (Fig 7) and two distinct fills, 503 and 504, were observed, but no finds were produced. It appears to correspond to the southernmost of the two cropmarks (PRN 4443) noted on aerial photography (Fig 2), and most probably represents a post-medieval field boundary.

4.1.12 To the south of ditch 502, a small ovoid pit, 506, was excavated and recorded by half-section (Plate 7, Figs 6 and 7). The feature did not produce any finds, although the fill, 507, was sampled to assess its palaeoenvironmental and dating potential (Section 4.3, below).

4.1.13 **Trench 6:** was 0.4m deep at the southern end and 0.3m deep at the northern end. The southern end of the trench was crossed by a modern field drain on a north-west/south-east alignment (Plate 8). No features or finds of archaeological significance were noted.

4.1.14 **Trench 7:** was 0.4m deep at the southern end and 0.35m deep at the northern end. Three modern field drains were recorded crossing the trench, two following east/west alignments and the third on a north-west/south-east alignment (Plate 9). Amorphous and ephemeral areas of manganese staining were observed throughout the trench.

4.1.15 **Trench 8:** was 0.5m deep at the western end and 0.3m deep at the eastern end. No features or finds of archaeological origin or otherwise were revealed.
4.2 FINDS

4.2.1 In total, 17 fragments were recovered during the investigation. Their distribution is shown below, in Table 1, and a detailed description is provided in Appendix 4.

<table>
<thead>
<tr>
<th>Context</th>
<th>Lithic</th>
<th>Other</th>
<th>Natural</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td></td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>208</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>211</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Topsoil</td>
<td>2</td>
<td>10</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>2</td>
<td>4</td>
<td>11</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 1: Distribution of finds

4.2.2 Thirteen fragments of flint and chert were recovered. Only two could be established as worked and were recovered from the ditch fill, 208. The remainder appeared to be cortex-covered black flint and small fragments of water-worn brown flint, all from the topsoil, with a single fragment of chert from the ditch fill, 208. However, a small possible blade fragment was noted amongst the material from the topsoil, and perhaps has a Mesolithic origin, although this cannot be stated with certainty. A large sub-rectangular worked piece in a pale grey flint is probably a gunflint of post-medieval date.

4.2.3 Three very small fragments of fired clay, possibly daub, came from the field drain 201, and a very small and badly abraded fragment of tile or brick came from the fill, 211, of ditch 207. Iron-rich fragments from the natural subsoil in Trench 8, 801, originally thought to be iron nails, were determined during analysis to be iron panning that had developed around rootlets.

4.2.4 Finds from the topsoil excavated within the trenches included one bodysherd of a Bellamine vessel and various fragments of eighteenth and nineteenth century ceramics, which are believed to have been imported as ‘nightsoil’, and thus of little archaeological value.

4.2.5 Generally, the finds add very little to the interpretation as they could not be closely dated. However, the occurrence of worked flint adds to the corpus of material accumulating in this area. There is no recommendation for any further analysis.

4.3 ENVIRONMENTAL SAMPLES

4.3.1 Six environmental bulk samples were taken for the assessment of charred and waterlogged plant remains from pits 310, 312, 314, 316, and 506, and a charcoal spread on the site, 317. The aim was to assess the potential for the samples to inform about the economy and environment on and around the site during its period of use.
4.3.2 The results of the assessment are shown in Table 2. No charred plant remains were found in any of the samples. Small numbers of waterlogged seeds were present in four of the samples, 311, 313, 317, and 507, and included *Chenopodium album* (goosefoot), *Stellaria media* (common chickweed), *Carex trigynous* (sedges), *Juncus* sp (rushes) and *Urtica urens* (small nettle).

4.3.3 The sample from the charcoal spread, 317, contained, as expected, large quantities of wood and charcoal fragments with a very small quantity of coal. The fill, 309, for pit 310 showed some minor evidence of metalworking.

4.3.4 **Discussion and potential:** the assessment found only low numbers of waterlogged seeds together with amorphous plant material in the six samples. However, the identification of common chickweed, fat-hen and small nettle suggests some cultivated or disturbed ground. The records of sedges and rushes indicate that there was also some damp ground. This correlates with the general environment of the site, which is known to have been cultivated, and by the sheer number of modern drains revealed is known to be prone to flooding or poor drainage. Therefore, there is no recommendation for further analysis, although the sample from 317 may have potential for radiocarbon dating should it be warranted.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Context</th>
<th>Feature</th>
<th>Vol. (l)</th>
<th>Flot description</th>
<th>Plant remains</th>
<th>Potential</th>
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<tbody>
<tr>
<td>001</td>
<td>309</td>
<td>Pit fill</td>
<td>4</td>
<td>110 ml. Metal working</td>
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<td>None</td>
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<td>002</td>
<td>311</td>
<td>Pit fill</td>
<td>4</td>
<td>110 ml. Charcoal &gt;2mm (1), AMP (3), WPR (1)</td>
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<td>None</td>
</tr>
<tr>
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<td>313</td>
<td>Pit fill</td>
<td>4</td>
<td>110 ml. AMP ((4), Stellaria media)</td>
<td>None</td>
<td>None</td>
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<tr>
<td>004</td>
<td>315</td>
<td>Pit fill</td>
<td>3</td>
<td>100ml. AMP (4)</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>005</td>
<td>317</td>
<td>Charcoal spread</td>
<td>8</td>
<td>50 ml. Charcoal &gt;2mm (3) &lt;2mm (4), Coal (1), Wood fragments (4) AMP (4), Insect remains (1)</td>
<td>WPR (2), Stellaria media, Carex, Urtica urens</td>
<td>None</td>
</tr>
<tr>
<td>006</td>
<td>507</td>
<td>Pit fill</td>
<td>4</td>
<td>150 ml. Slag (5)</td>
<td>WPR Rumex acetosella (1)</td>
<td>None</td>
</tr>
</tbody>
</table>

Table 2: Assessment of charred and waterlogged plant remains.
(Plant remains scored on a scale of 1 to 5, where 1 is rare (1-5 items) and 5 is abundant (more than 100 items). WPR = waterlogged plant remains. AMP = amorphous plant material)
5. DISCUSSION

5.1 CONCLUSION

5.1.1 Eight trenches were excavated in order to determine the presence or absence of hitherto unknown sub-surface archaeological features or features or deposits relating to the flint scatters and cropmarks in the area. Three of these trenches revealed archaeological features of interest, Trenches 2, 3 and 5.

5.1.2 Four pits, 310, 312, 314 and 316, and a charcoal-rich layer, 317, were revealed in Trench 3, and were of apparent archaeological significance. The fill, 309, of pit 310 produced some evidence of metal working and charcoal was recovered from pit 311. Pit 506 in Trench 5 also produced evidence of slag. However, no finds were recovered from the pits to date the activity, but given the archaeological potential for the immediate vicinity, the features could be of prehistoric date.

5.1.3 The layer 317 was identical in terms of composition to the pit fills 309, 311, 313, and 315. However, the charcoal-rich layer 317 was seen to occupy undulations in the Shindley Hill Sand, as opposed to the fills 309, 311, 313, and 315 that appeared to occupy genuine cuts into the natural geology rather than disturbed areas. Layer 317 may also indicate later disturbance of the fills in the pit features.

5.1.4 The two ditch features revealed in Trench 2, 207, and in Trench 5, 502, correspond to the cropmarks observed in aerial photography traversing the field on an approximate east/west alignment (PRN 4443). Although no specific dating evidence was obtained the features are most likely post-medieval field boundaries, also functioning as drainage gullies.

5.2 IMPACT AND RECOMMENDATIONS

5.2.1 The character of the archaeological features discovered over the eight trenches suggests that the development site is largely devoid of significant archaeological features and that the proposed development will not have a significant impact on the archaeological record. Consequently, there are no recommendations for further archaeological intervention.
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APPENDIX 1: PROJECT BRIEF

SPECIFICATION FOR AN ARCHAEOLOGICAL EVALUATION ON LAND AT BANK FARM, MARTIN LANE, BURSCOUGH (SD 4188 1302)

Specification prepared at the request of the Mr J E Winrow, Agent on behalf of West Lancashire District Council (Planning Application reference 8/2004/1527)

1. Summary

1.1 A limited amount of archaeological work consisting of trial trenching is proposed to help establish the archaeological significance of the above site. This specification has been written by the Lancashire County Archaeology Service (LCAS), the holders of the Lancashire Sites and Monuments Record. Depending upon the results obtained, additional archaeological work may need to be carried out. This additional work will be governed by separate specifications.

2. Planning Background

2.1 A planning application 8/2004/1527 for an irrigation lake has been submitted to West Lancashire District Council by the Mr D Gibbons, applicant.

2.2 The Local Planning Authority have been advised by LCAS that there is reason to believe that important archaeological remains may be affected by the proposed development and that a pre-determination archaeological evaluation is required.

2.3 This specification has been prepared by LCAS at the request of Mr. J E Winrow of J E Winrow Building Design Services Ltd, acting on behalf of the applicant, to detail what is required for the evaluation and to allow an archaeological contractor to provide a quotation.

3. Site Location & Description

3.1 The site lies to the east of Bank Farm, c. 500m to the north of Gorst Lane, adjacent to Langley’s Brook, and comprises a flat arable field. The proposed irrigation lake will measure 200m x 112m. The underlying geology of the site is Boulder Clay (Geological Survey of Great Britain Sheet 84 Wigan).

4. Archaeological Interest

4.1 The County Sites and Monuments Record includes entries for three separate find spots of worked flints, (PRNs 4158, 4159 & 4161) which included a knife, in the area of the proposed irrigation lagoon at Bank Farm, pointing to occupation and use of the area from the Mesolithic period. The presence of a number of as yet unidentified and undated cropmarks (PRNs 2810, 4444 & 4445) may also indicate later prehistoric activity in the area.

5. Aim of the Evaluation

5.1 The aim of the evaluation is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the application area. The information gained will allow the Planning Authority to make a reasonable and informed decision on the planning application with regard to whether archaeological deposits should be preserved in-situ, or may more appropriately be recorded archaeologically prior to destruction (whether this be a summary record from a salvage excavation or watching brief, or a detailed record from full open area excavation).
6. Evaluation Methodology

6.1 General Instructions

6.1.1 Health and Safety

The archaeologists on site will naturally operate with due regard for Health and Safety regulations, and the contractor must ensure that all relevant requirements are met with regard both to site personnel and to members of the public. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations prior to submission of the tender. **LCAS and its officers cannot be held responsible for any accidents that may occur to outside contractors engaged to undertake this work while attempting to conform to this specification.**

6.1.2 Confirmation of Adherence to Specification

Prior to the commencement of *any work*, the archaeological contractor must confirm adherence to this specification in writing to LCAS, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of LCAS to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor (see para. 11.2, below). **Modifications presented in the form of a re-written project brief will not be considered by LCAS.**

6.1.3 Confirmation of Timetable and Contractors’ Qualifications

Prior to the commencement of *any work*, the archaeological contractor should provide LCAS in writing with a projected timetable for the site work, and with details regarding staff structure and numbers. The names and *curriculum vitae* of key project members (the project manager, site supervisor, any proposed specialists etc.), along with details of any specialist sub-contractors, should also be supplied to LCAS (if C.V.s have not previously been supplied). All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of LCAS.

6.1.4 Documentary research

Prior to the commencement of *fieldwork*, the SMR should be visited by either the project manager or the site supervisor, in order to gain an overview of the archaeological/historical background of the site and environs. In addition to providing a knowledge base for the work in hand, the results of this assessment may be incorporated into the contractor’s report where they are considered to contribute to that report, but any extraneous material should be omitted. Please note that the SMR makes a charge for consultations of a commercial nature. The results of this exercise should be used to inform the whole project. **Please note, however, that a formal desk-based report is not required and the results of this stage of work should be incorporated in the final report.**

7. Trenching Methodology

7.1 Trench Size and Placement

The work is will involve the excavation of 8 trenches 30m wide x 2m long which can be machine-opened. The contractor should also allow for a contingency allowance of 60 square metres. The use of the contingency will depend upon the results obtained in the initial trial trenching. The use of the contingency will be at the decision of LCAS, whose decision will be issued in writing, if necessary in retrospect after site discussions. **The location of the trenches is to be agreed with LCAS but is expected to be of a random grid appearance.**
7.2 Method of Excavation

The trial trenches may be opened and the topsoil and recent overburden removed down to the first significant archaeological horizon in successive level spits of a maximum 0.2m. thickness, by the use of an appropriate machine using a wide toothless ditching blade. Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits. Any machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon (pre-19th century) may be exposed by the machine, but must then be cleaned by hand and inspected for features and then dug by hand.

7.3 Method of Recording

The trenches are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each trial trench is to be recorded even where no archaeological deposits have been identified. No archaeological deposits should be entirely removed unless this is unavoidable in achieving the objectives of this evaluation, although generally a 50% sample of any features identified is expected to be half-sectioned and the depth of archaeological deposits must be assessed. Modern artefacts are to be noted but not retained (18th-century material and earlier should be retained.)

7.4 Use of Metal Detectors on Site

7.4.1 Spoil heaps are to be scanned for non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (18th-century material and earlier should be retained.)

7.4.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not.

7.4.3 To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at [location of site] between the dates of [insert dates], [name of person contributing to project] is working under direction or permission of [name of archaeological organisation] and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996."

7.5 Environmental Sampling Strategy

Deposits must be sampled for retrieval and assessment of the preservation conditions and potential for analysis of all bioarchaeological remains. A sampling strategy must be agreed with a recognised bioarchaeologist, and the sampling methods should follow the procedures outlined by the English Heritage’s Centre for Archaeology Guidelines, Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (2002/01). Provision should be also be made for the specialist to visit the site and discuss the sampling strategy, if necessary.

7.6 Conservation Strategy

A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle only artefacts of a “displayable” quality would warrant full conservation, but metalwork and coinage from
stratified contexts would be expected to be X-rayed if necessary, and conservation costs should also be included as a contingency.

7.7 Documentation
The actual areas of trenching and any features of possible archaeological concern noted within the trenches, should be accurately located on a site plan and recorded by photographs, summary scale drawings and written descriptions sufficient to permit the preparation of a report on the material. The site grid is to be accurately tied into the National Grid and located on the largest scale map available of the area (either 1:2500 or 1:1250).

7.8 Location of Services, etc.
The archaeological contractors will be responsible for locating any drainage pipes, service pipes, cables etc. which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

7.9 Human Remains
Any human remains that are discovered must initially be left in-situ, covered and protected. If removal is necessary, this must comply with the relevant legislation, any Home Office and local environmental health regulations and English Heritage’s and The Church of England’s Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England (2005) where relevant.

7.10 Treasure Act
The terms of the Treasure Act 1996 must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the “Code of Practice”. Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

8. Commencement of work
8.1 The project will be monitored as necessary and practicable by LCAS, in its role as “curator” of the county’s archaeology. LCAS should receive as much notice as possible and certainly one week of the intention to start fieldwork. This notification is to be supplied in writing, and copied to the relevant Museum (see para. 10.1 below). A copy of the contractor’s risk assessment should accompany notification of intention to commence work.

9. Access/Monitoring Methodology
9.1 The representative of LCAS will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. LCAS’s representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of LCAS’s representative, by the next agreed site meeting. Access is also to be afforded at any reasonable time to English Heritage’s Regional Archaeological Scientific Advisor.

10. Excavation Archives Deposition.
10.1 Before commencing any fieldwork, the archaeological contractor must contact the relevant museum archaeological curator to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is Edmund Southworth, Curator, Museum of Lancashire, Stanley Street, Preston, PR1 4YP; telephone 01772 534075, fax
01772 534079. Agreement for deposition should be confirmed in writing by the archaeological contractor; this correspondence is to be copied to LCAS.

10.2 It is the policy of the Museum of Lancashire to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the District that it serves.

10.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with the Museum of Lancashire.

10.4 It is the responsibility of the archaeological contractor to meet Museum of Lancashire’s requirements with regard to the preparation of excavation archives for deposition.

10.5 The museums officer named in 8.1 above should be notified in writing of the commencement of fieldwork at the same time as LCAS (see para. 7.1).

11. Unexpectedly Significant or Complex Discoveries

11.1 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact LCAS with the relevant information to enable them to resolve the matter with the developer.

12. Post-Excavation Work

12.1 After Completion of Fieldwork

On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines. A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints. An index to the field archive is to be deposited with LCAS (preferably as an appendix in the report). The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see para. 8.1 above). In the absence of this agreement the field archive (less finds) is to be deposited with LCAS.

12.2 Report Format and Content

A report should be produced, which should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of results produced. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers. Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the site investigated (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Site plans should be at an appropriate scale showing trench layout (as dug), features located and, where possible, predicted archaeological deposits. Upon completion of each evaluation trench all sections containing archaeological features will be drawn. Section drawings (at a minimum scale of 1:20) must include heights O.D.. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. Where no archaeological deposits are encountered at least one long section of each trench will be drawn. Artefact analysis is to include the production of a descriptive catalogue with finds critical for dating and interpretation illustrated. Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, and as an appendix, a copy of this specification.
12.3 Summary for Publication

A brief summary report of fieldwork, to appear in the Council for British Archaeology North West Archaeology North West should be produced, even when the fieldwork encountered no archaeological deposits. This should be sent to the editor of Archaeology North West in accordance with the standard format for summary reporting, and in time for it to appear within a calendar year of the completion of fieldwork.

12.4 Publicity

If the project is to be publicised in any way (including media releases, publications etc.), then it is expected that LCAS will be given the opportunity to consider whether it wishes its collaborative role to be acknowledged, and if so, the form of words used will be at LCAS’ discretion.

12.5 Consideration of Appropriate Mitigation Strategy

The report should not give a judgement on whether preservation or further investigation is considered appropriate, but should provide an interpretation of results, placing them in a local and regional, and if appropriate, national context. However, a client may wish to separately commission the contractor’s view as to an appropriate treatment of the resource identified.

12.6 Report Deposition

An Adobe Acrobat ‘pdf’ copy of the report on CD-ROM is to be supplied to the Sites and Monuments Record held by LCAS within a period of twelve weeks following completion of fieldwork unless specialist reports are awaited. In the latter case a revised date should be agreed with LCAS. The report will be supplied on the understanding that it will become a public document after an appropriate period of time (generally not exceeding six months, unless otherwise agreed). A copy shall also be supplied to English Heritage’s Regional Science Adviser at the same time (Sue Stallibrass, University of Liverpool, School of Archaeology, Classics and Oriental Studies (SACOS), William Hartley Building, Brownlow Street, Liverpool, L69 3GS, tel: 0151 794 5046, e-mail: Sue.Stallibrass@liv.ac.uk)

13. General considerations

13.1 Authorised alterations to specification by contractor

It should be noted that this specification is based upon records available in the County Sites and Monuments Record and on a brief examination of the site by LCAS. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist’s professional judgement that

i) a part or the whole of the site is not amenable to recording as detailed above, and/or

ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or

iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification,

then it is expected that the archaeologist will contact LCAS as a matter of urgency. If contractors have not yet been appointed, any variations which LCAS considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, LCAS will resolve the matter in liaison with the developer and the Local Planning Authority.
13. 2 Unauthorised Alterations to Specification by Contractor

It is the archaeological contractor's responsibility to ensure that they have obtained LCAS’s consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in LCAS being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

14. Technical queries

14.1 Further information about the proposed development can be obtained from Mr J E Winrow, Winrow Building Design Services, 6 Staveley Avenue, Burscough, L40 6SB, tel: 01704 892399.

14.2 Similarly, any technical queries arising from the specification detailed above, should be addressed to LCAS without delay.

15. Valid period of specification

15.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Lancashire County Archaeology Service
Douglas Moir
Planning Officer (Archaeology)
E-mail: Douglas.moir@env.lancscc.gov.uk

November 2005
APPENDIX 2: PROJECT DESIGN

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Mr J Winrow of Winrow Building Design Services Ltd (hereafter the ‘client’), acting on behalf of Mr D Gibbons, requested that the Lancashire County Archaeology Service (LCAS) forward a formal brief to Oxford Archaeology North (OA North) to submit proposals for an archaeological evaluation. The site concerns land at Bank Farm, Martin Lane, Burscough, Lancashire (centred NGR SD 4188 1302), which is proposed for redevelopment as an irrigation lake measuring 200m x 112m (planning application reference 8/2004/1527). The local planning authority, as advised by LCAS, have requested a programme of predetermination evaluation, as it is possible that important archaeological remains will be affected by the proposed development. The following project design has been prepared and should be read in accordance with the brief issued by LCAS.

1.1.2 The site is currently laid down to arable, and positioned to the east of Bank Farm, approximately 500m to the north of Gorst Lane and adjacent to Langley’s Brook. The area of the proposed lake contains three separate findspots of worked flint in the Sites and Monuments Record (PRNs 4158, 4159, 4161), including a knife. This has been taken to indicate occupation and use of the area during the Mesolithic period. In addition, a number of as yet unidentified and undated cropmarks (PRNs 2810, 4444, 4445) are present, indicating probable later prehistoric activity in the area.

2. OBJECTIVES

2.1 The assessment aims to evaluate archaeological deposits that may be threatened by the proposed development in order to determine their presence, extent, nature and significance. To this end, the following evaluation programme has been designed. The results will provide the local planning authority with the necessary information to determine the outcome of the planning application, as to whether further mitigation works are required prior to, or during, the development or if the remains should be preserved in situ. The required stages to achieve these ends are as follows:

2.2 SMR Visit: to obtain an overview of the background information regarding the archaeological and historical context of the site, which will form the knowledge base for the evaluation trenching.

2.3 Archaeological Evaluation: to implement a programme of trial trenching examining a minimum of 8 trenches within the outlined development area.

2.4 Report and Archive: the archaeological investigation will culminate with a written report, which will aim to assess the significance of the data generated by this programme within a local and regional context. It will present the results of the evaluation and would make an assessment of the archaeological potential of the area.

3 METHOD STATEMENT

3.1 INTRODUCTION

3.1.1 The following work programme is submitted in line with the objectives summarised above.

3.2 SMR VISIT

3.2.1 The first stage of the archaeological investigation will involve consultation of the Lancashire Sites and Monuments Record (SMR ) in Preston and a review of sources held in the OA North library. The information will provide the basis of archaeological and historical knowledge for the site supervisor, and only relevant material will be incorporated into the final evaluation report.
3.3 **EVALUATION**

3.3.1 The programme of trial trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample and provide information concerning the threatened available area.

3.3.2 **Trench configuration:** the evaluation is required to examine 8 trenches measuring 2m in width (the approximate width of a typical excavator bucket) and 30m in length. The location of these trenches will form an adequate sample of the outlined development area, and will be agreed with LCAS prior to the fieldwork commencing.

3.3.3 A contingency is available for additional trenching measuring up to 60m². This is dependant on the initial evaluation trenching results, and its use will be decided by LCAS.

3.3.4 Trenches will be located by use of GPS equipment, which is accurate to +/- 0.25m, or Total Station. Altitude information will be established with respect to Ordnance Survey Datum.

3.3.5 **Methodology:** the topsoil will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision, and will be removed in successive spits of a maximum 0.2m thickness to the surface of the first significant archaeological deposit (pre nineteenth century). This deposit will then be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features.

3.3.6 The trenches will not be excavated deeper than 1.20m to accommodate health and safety constraints; any requirements to excavate below this depth will involve recosting or will be subject to a variation.

3.3.7 All features of archaeological interest will be investigated and recorded unless otherwise agreed by the LCAS. However, they will not be entirely removed, unless unavoidable, in an attempt to preserve such deposits *in situ*. A 50% sample of any features identified is expected to be half-sectioned and the depths of archaeological deposits assessed. Modern artefacts are to be noted but not retained; eighteenth century artefacts and earlier will be retained for examination and assessment.

3.3.8 Any investigation of intact archaeological deposits will be exclusively manual. 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. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.

3.3.9 **Scanning of spoil heaps:** the spoil will be scanned by a member of the OA North field team using a metal detector for non-ferrous metal artefacts. Modern artefacts, of nineteenth century or later, will be noted but not retained.

3.3.10 **Recording:** all information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.

3.3.11 Results of all field investigations will be recorded on *pro forma* context sheets. The site 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). 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.
3.3.12 Plans must include OD spot heights for all principal strata and any features.

3.3.13 The stratigraphy of each trench will be recorded even when there are no archaeological deposits identified. In such cases, at least one long section of each trench will be recorded. All sections will contain heights OD.

3.3.14 **Reinstatement:** it is understood that there will be no requirement for reinstatement of the ground beyond backfilling. The ground will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine. Should there be a requirement by the client other than that stated this will involve recosting.

3.3.15 **Fencing/hoarding requirements:** it is assumed that the client will advise on the arrangements/requirements for the site to be protected from public access. Should heras fencing or similar be required this has been costed as a contingency item.

3.3.16 **Environmental Sampling:** deposits will be sampled and assessed for their potential for palaeoenvironmental analysis. Environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). It may be necessary for OA North’s environmental manager to attend site to discuss the sampling strategy, depending on the deposits, and request advice from English Heritage’s Regional Science Advisor.

3.3.17 An assessment of the environmental potential of the site will be undertaken through the examination of suitable deposits by the in-house palaeoecological specialist, who will examine the potential for further analysis. This will be undertaken in accordance with English Heritage Guidelines (2002).

3.3.18 The assessment would include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, the samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits. It will also consider the potential for the dating of peat deposits and requirements for any radiocarbon and archaeomagnetic dating.

3.3.19 The costs for the palaeoecological assessment are defined as a contingency and will be called into effect if suitable deposits are identified.

3.3.20 **Faunal remains:** if there is found to be the potential for discovery of bones of fish and small mammals a sieving programme will be carried out. These will be assessed as appropriate by OA north’s specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.

3.3.21 **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 Home Office 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. The cost of removal or treatment will be agreed with the client and costed as a variation.

3.3.22 **Treatment of finds:** 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.

3.3.23 All finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines. They will be assessed in terms of the potential for further investigation and preservation needs.
3.3.24 Only those finds that are of a quality worthy of display will be fully conserved, but metalwork and coinage from stratified contexts may be X-rayed. Any conservation requirements will be discussed with the client and costed as a variation.

3.3.25 **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, which may require costing as a variation in discussion with the client.

3.3.26 **Contingency plan:** a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This has been included in the Costings document and would be charged in agreement with the client.

3.3.27 The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. In this way, an impact assessment will also be provided.

3.3.28 **Access:** liaison for basic site access will be undertaken through the client and it is understood that there will be access for both pedestrian and plant traffic to the site.

3.4 **REPORT AND ARCHIVE**

3.4.1 **Report:** one bound and one unbound copy of a written synthetic report will be submitted to the client. A digital copy of the report will be supplied as a pdf on CD ROM to the SMR held by LCAS within eight weeks following the completion of the fieldwork. However, this may need to be revised in agreement with LCAS should any specialist reports be outstanding. The report will include:

- a site location plan related to the national grid
- a front cover to include the planning application number and the NGR
- the dates on which the fieldwork was undertaken
- a concise, non-technical summary of the results
- an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken
- a description of the methodology employed, work undertaken and results obtained
- an historical and archaeological background
- plans and sections at an appropriate scale showing the location and position of deposits and finds located
- a list of and dates for any finds recovered and a description and interpretation of the deposits identified. This artefact analysis will include illustration of finds crucial to dating and interpretation
- a description of any environmental or other specialist work undertaken and the results obtained
- a copy of this project design and the LCAS project brief, and indications of any agreed departure from the details
• the report will also include a complete bibliography of sources from which data has been derived.

3.4.2 **Confidentiality:** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.4.3 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (Management of Archaeological Projects, 2nd edition, 1991). The project archive will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context.

3.4.4 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the Lancashire Record Office in Preston.

3.4.5 All artefacts will be processed to MAP2 standards and will be assessed by our in-house finds specialists. The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner the Museum of Lancashire. LCAS will be notified of the arrangements made.

4. **HEALTH AND SAFETY**

4.1 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 to LCAS, at the time of notification of commencement, and on request to all other interested parties.

4.2 Full regard will, of course, be given to all constraints (services etc) during the evaluation as well as to all Health and Safety considerations. As a matter of course the Unit uses a U-Scan device prior to any excavation to test for services, however, this is *only an approximate location tool*. Any drawings or knowledge of live cables or services that may pose a risk to OA North staff during evaluation must be made known to the project manager of OA North before site work. This will ensure the risk is dealt with appropriately.

4.3 Site welfare facilities will be provided, including a portable toilet with hot water handwashing facilities, and mess space. It will be located on or adjacent to the site.

4.4 Any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client or main contractor on site to ensure all procedures can be met.

4.5 Should areas of previously unknown contamination be encountered on site the works will be halted and a revision of the risk assessment carried out. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.

5 **OTHER MATTERS**

5.1 **PROJECT MONITORING**

5.1.1 Whilst the work is undertaken for the client, LCAS will be kept fully informed of the work and its results, and will be notified at least one week in advance of the commencement of the
fieldwork. Any proposed changes to the project design will be agreed with LCAS in consultation with the client.

5.1.2 The Museum of Lancashire’s officer, Edmund Southworth, will also be notified of the start date of the fieldwork in writing.

5.1.3 If it is feasible, the trenches will remain open during the course of the fieldwork and backfilled once fieldwork is completed, although this is dependent on site security. This will allow the LCAS representative the opportunity to visit the site and view the findings, including the trenches, any finds on site and any records not in immediate use. As part of the monitoring process any deficiencies observed during the LCAS visit will be amended to the satisfaction of their representative.

5.2 WORK TIMETABLE

5.2.1 SMR Visit: one day will be required to undertake this element.

5.2.2 Evaluation Trenching: approximately days will be required to complete this element.

5.2.3 Report: the report and archive will be produced following the completion of all the fieldwork. The final report will be available within eight weeks of completion of the fieldwork, and the archive deposited within six months.

5.2.4 Scheduling: OA North would require a formal written agreement at least one to two weeks prior to the anticipated start date to ensure sufficient resources and schedule the work as above. It is also a requirement of the LCAS brief that their representative has been provided with one week’s notice.

5.3 INSURANCE

5.3.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

6. STAFFING

6.1 The project will be under the direct management of Emily Mercer BA (Hons) MSc AIFA (OA North Senior Project Manager) to whom all correspondence should be addressed.

6.2 The documentary research will be undertaken by Jo Dawson (OA North supervisor) who is very experienced in such work and capable of carrying out projects of all sizes.

6.3 The evaluation will be supervised by either an OA North project officer or supervisor experienced in this type of project. Due to scheduling requirements it is not possible to provide these details at the present time. All OA North project officers and supervisors are experienced field archaeologists capable of carrying out projects of all sizes.

6.4 Assessment of the finds from the evaluation will be undertaken under the auspices of OA North’s in-house finds specialist Christine Howard-Davis (OA North finds manager). Christine has extensive knowledge of finds from many periods, although she does have considerable experience with Roman finds, being involved with the excavations at Ribchester and at present with the Carlisle Millennium Project.

6.5 Assessment of any palaeoenvironmental samples will be undertaken by or under the auspices of Elizabeth Huckerby MSc (OA North project officer). Elizabeth has extensive knowledge of the palaeoecology of the North West through her work on the English Heritage-funded North West Wetlands Survey.
REFERENCES


English Heritage, 2002 Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-exavcation,

SCAUM (Standing Conference of Archaeological Unit Managers), 1997 Health and Safety Manual, Poole

UKIC, 1990 Guidelines for the Preparation of Archives for Long-Term Storage, London

UKIC, 1998 First Aid for Finds, London
APPENDIX 3: CONTEXT LIST

<table>
<thead>
<tr>
<th>Context</th>
<th>Trench</th>
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<td>Field drain. Cuts 103</td>
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<tr>
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<tr>
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<tr>
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<td>Field drain</td>
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<td>Topsoil</td>
</tr>
<tr>
<td><strong>801</strong></td>
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<td>Natural</td>
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</tbody>
</table>
## APPENDIX 4: FINDS LIST

OR = Object Record Number; Qty = quantity

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<thead>
<tr>
<th>Context</th>
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<th>Material</th>
<th>Category</th>
<th>Qty</th>
<th>Description</th>
<th>Date</th>
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<tr>
<td>208</td>
<td>1</td>
<td>Stone</td>
<td>Chert</td>
<td>1</td>
<td>Fragment of unmodified dark grey chert</td>
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<tr>
<td>Topsoil</td>
<td>2</td>
<td>Stone</td>
<td>Flint</td>
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<td>Fragment of unmodified black flint with white cortex</td>
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<td>Topsoil</td>
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<td>Stone</td>
<td>Flint</td>
<td>10</td>
<td>Body fragments brown flint. Small and water-worn.</td>
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<td>Stone</td>
<td>Flint</td>
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<td>Possible blade fragment, trampled. Brown water-worn flint.</td>
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<td>Stone</td>
<td>Gunflint</td>
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<td>Sub-rectangular gunflint in pale grey flint. Some evidence for use in small nicks along one edge.</td>
<td>Post-medieval</td>
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<tr>
<td>801</td>
<td>3</td>
<td>Iron</td>
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<td>Iron-pan and concreted rootlets.</td>
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<tr>
<td>201</td>
<td>4</td>
<td>Fired clay</td>
<td>Daub?</td>
<td>3</td>
<td>Small fragments of fired clay, possibly daub.</td>
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<tr>
<td>211</td>
<td>5</td>
<td>Ceramic</td>
<td>Building material</td>
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<td>Very small fragment of abraded brick or tile. Alternatively this could be a small fragment of sandstone.</td>
<td>Not closely dated</td>
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