

MICHLOW DRIVE, BRADWELL, DERBYSHIRE

Archaeological Excavation



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SUMMARY

Following a planning application (Planning Reference NP/DDD/0604/0644) by Michael Hydes and Associates Ltd (MHA) for a residential development within a field to the north-east of Michlow Drive, Bradwell, Derbyshire (NGR SK 1725 8169), the Peak District National Park Authority (PDNPA) Conservation Archaeologist requested that a programme of archaeological investigation be undertaken prior to any development taking place.

Accordingly, a four-trench evaluation was undertaken by Archaeological Research and Consultancy of the University of Sheffield (ARCUS) in 2004. This encountered the putative remains of a roundhouse gully and several lithic artefacts in Evaluation Trench 2, located within the north-eastern corner of the proposed development site. Subsequently, PDNPA issued a brief for an excavation on the site. Oxford Archaeology North (OA North) produced a project design to meet this brief and, following its approval, were commissioned to undertake the work by John Samuels Archaeological Consultants (JSAC), on behalf of MHA.

OA North undertook the fieldwork in October 2005, which comprised the reexcavation and extension of Evaluation Trench 2. A moderate assemblage of Mesolithic and Neolithic stone artefacts was recovered from the topsoil, subsoil and a deposit later identified as colluvium; however, as these artefacts were redeposited and not recovered from stratified archaeological contexts, they have very limited potential for further analysis. Once the excavation reached the natural drift geology, the putative roundhouse gully and a number of similar features were found and identified as shale-filled variations in the natural geology.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to express thanks to Dan Slatcher of John Samuels Archaeological Consultants for commissioning the work and his assistance during the project. OA North are also grateful to Sarah Whitely, the Peak District Archaeologist.

The excavation was undertaken by Andy Bates and Emily Betts. The report was compiled by Andy Bates and the drawings were produced by Emily Betts and Marie Rowland. The lithic artefacts were examined and reported upon by Caroline Bulcock and Christine Howard-Davis. The project was managed by Stephen Rowland, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Michael Hydes and Associates Ltd (MHA) submitted a planning proposal for a residential development in a field to the north-east of Michlow Drive, Bradwell, Derbyshire (Planning Reference NP/DDD/0604/0644; NGR SK 1725 8169; Fig 1). In response, the Conservation Archaeologist for the Peak District National Park Authority (PDNPA) advised that a four-trench programme of archaeological evaluation should be carried out prior to development, to assess the potential for archaeological remains on the site. This evaluation was completed by Archaeological Research and Consultancy of the University of Sheffield (ARCUS 2004). Along with several stone artefacts of Mesolithic and Neolithic date, several putative archaeological features were identified cutting the natural drift geology in Evaluation Trench 2, located within the north-eastern corner of the proposed development site (Fig 2). These putative features comprised a curvilinear feature, identified as a possible roundhouse gully, and a posthole.
- 1.1.2 Following completion of the evaluation, PDNPA issued a brief (*Appendix 1*) for a programme of mitigative investigation to re-excavate and extend the limit of Evaluation Trench 2 and record any present archaeological remains. Following the submission and approval of a project design (*Appendix 2*), Oxford Archaeology North (OA North) were commissioned by John Samuels Archaeological Consultants (JSAC), acting on behalf of MHA, to undertake this excavation.
- 1.1.3 The excavation took place between the 10th and 14th of October 2005, and was visited by Dan Slatcher of JSAC and Sarah Whitely of PDNPA on the 13th of October 2005. This report details the results of the excavation and the potential for further analysis of the excavated data in the form of a short document.

1.2 SITE LOCATION AND GEOLOGY

- 1.2.1 **Location:** the village of Bradwell lies in the northern half of the county of Derbyshire, to the west of Sheffield, within the Peak District National Park (Fig 1). The development site comprises 0.5ha of rough pasture located immediately to the north-east of Michlow Close, a recent residential development. The development area, which lies at a height of *c* 170m OD at the southern end, gently slopes downward towards the north-east. The surrounding area comprises enclosed fields with dispersed farmsteads with traditional farm buildings and walls constructed mainly of local limestone (Countryside Commission 1998, 139).
- 1.2.2 *Physical Background:* the underlying solid geology is of Carboniferous (345-280 million years ago) limestone, but the site is also located near the boundary between the limestone and Carboniferous millstone grit, outcrops of which are

located to the north, east and west of Bradwell (Geological Survey 1978). Both rock-types are overlain by Devensian glacial drift deposits (70,000 to 10,000 years before present). This material contains a large amount of natural chert, which is likely to be associated with the glacial erosion of the underlying limestone.

1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 *Prehistoric:* northern Derbyshire has produced a large number of Mesolithic find spots, although it is hinted in Myers (2003, 4) that this may be an artifice of the erosion caused by large numbers of ramblers in the southern Pennine hills, which have increased the chances of discoveries in Millstone Grit areas. In the surrounding limestone areas there is a large body of evidence indicating the occupation of caves during the Mesolithic period (*ibid*). On the Carboniferrous limestone, upon which Bradwell is sited, Dowel Cave, Fox Hole Cave and a rock-fissure site at Sheldon all produced Mesolithic artefacts (*ibid*). On the Magnesian Limestone, in eastern Derbyshire, Mesolithic material was recovered from Cresswell Crags, Ash Tree Cave and Whalley 2 Rock Shelter (*ibid*).
- 1.3.2 Excavations c 130m to the north of the development site uncovered deposits containing earlier Mesolithic to later Neolithic flints and fragments of Later Neolithic pottery (Guilbert and Taylor 1992, 11). Many of the flints were derived from pits. Fifteen postholes, in a roughly circular alignment, may have related to a roundhouse (*ibid*).
- 1.3.3 Systematic fieldwork conducted in the 1980s showed that Neolithic and Bronze Age artefacts are relatively common across Derbyshire's three landscape zones, including the limestone plateaux, and the nearby gritstones. (Hart 1981). The most significant excavated Neolithic site within the region is that of Lismore Fields, Buxton, where evidence of timber structures and artefacts associated with woodland clearance and agriculture were recovered (Barnet and Smith 2004, 15).
- 1.3.4 On the gritstones of the Eastern Moors, to the east of Bradwell, later prehistoric farms can be identified from small clearance cairns, intermittent stretches of low stony or earthen banks forming boundaries, and terraced platforms marking the position of roundhouses, such as those excavated at Gardom's Edge (*op cit*, 16-21). In association with these fields and cairnfields are the occasional small ritual monument, including Bronze Age barrows and stone circles (*ibid*). The origin of such settlements is normally considered to be Late Neolithic/Early Bronze Age (2000 1500 BC), although a number of these sites evidently continued into the Iron Age or early Roman period, until a deteriotating climate and soil conditions led to their abandonment (*ibid*).
- 1.3.5 *Roman:* the second century AD Roman fort of *Navio* lies just over 1km to the north-east of the site. The fort measures just over 2 acres in size and was possibly subject to Theodosian reconstruction in the fourth century AD (Frere 1969, 161 & 347). The Roman road linking *Navio* and Roman Buxton (*Aquae Arnemetiae*) may lie adjacent or close to the east of the present development

- site. Closer to the site, mid-second to fourth century AD Romano-British pottery was recovered from a buried plough soil, during the Grey Ditch excavations, *c* 130m to the north of the development site (see *Section 1.3.6*, below) (Guilbert and Taylor 1992, 7).
- 1.3.6 *Medieval:* the Grey Ditch (SM No 29813), which runs along the north-eastern boundary of the development area on a north-west/south-east alignment, is considered to be an early medieval boundary bank and ditch. It is thought to have been constructed some time between the fifth and seventh centuries AD as a political or frontier boundary during the period of instability which followed the end of Roman administration in Britain (*op cit*, 2). The discovery of the Late Roman pottery within deposits sealed by the bank during the Grey Ditch excavations (*Section 1.3.5*) lends credence to a post-Roman date for construction (Guilbert and Taylor 1992, 7). The ditch of the feature was re-cut at least four times, re-instating it as a boundary feature, although whether this reinstatement relates to a political boundary or an agricultural function after the original purpose of the feature was superseded is unresolved (*ibid*).
- 1.3.7 Bradwell is mentioned in the Domesday Book as being held by William Peverel, with sufficient land for two ploughs and was worth 30 Shillings (Williams and Martin eds 2002). The development site lies within the open fields of medieval Bradwell, and the reversed S-shaped aratral curve indicative of ploughing with oxen is visible in the current field boundaries. An archaeological evaluation at Michlow Drive was undertaken by Birmingham University in 1996 in advance of the construction of the recent buildings to the south of the present development area (BUFAU 1996). Within these trenches, possible traces of medieval ridge and furrow were located.
- 1.3.8 **Post-medieval:** the land of the present development site did not form part of the wastes and commons on the 1639 map of Bradwell Commons and, therefore, may have been enclosed by that time (*Appendix 1*). Elsewhere in Bradwell, the remnants of the open field system may have survived until Bradwell's Parliamentary Enclosure act in 1820 (*ibid*). The Birmingham University evaluation in 1996 uncovered a number of post-medieval features to the south of the present development area, including a late seventeenth- to early eighteenth-century pit sealed by a stone surface (BUFAU 1996).

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 The fieldwork was conducted in adherence with the PDNPA-approved project design compiled by OA North (*Appendix 2*). The work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 ARCHAEOLOGICAL EXCAVATION

- 2.2.1 The original Trench 2 excavated by ARCUS (2004) measured 10m by *c* 1.5m and was aligned north/south. During the present excavation, this trench was extended 3m to the east, producing an area 10m by 4.5m. Under the supervision of an OA North archaeologist the trench was excavated by an 8 ton 360° mechanical excavator fitted with a 2m wide toothless ditching bucket. The trench was excavated in a stratigraphic manner, to cause minimal disturbance to archaeological features, and the spoil heaps were scanned for artefacts. The first 0.5m of topsoil was removed, to what was effectively the topsoil/subsoil interface, after which the area was cleaned and recorded. Following this, as specified within the brief (*Appendix 1*), machine excavation proceeded in 0.1m spits, with each successive horizon cleaned and recorded before removal, until the natural glacial till was encountered.
- 2.2.2 The recording comprised a full description and preliminary classification of the deposits and materials revealed on OA North *pro-forma* recording sheets, as recommended by English Heritage's Centre for Archaeology. A plan was produced showing the location of the trench, with representative sections being drawn at a scale of 1:10. A photographic record, using black and white print and colour slide formats, was maintained. The position of the trench and of any significant artefacts and features within the trench was located using a Zeiss total station theodolite. This information was incorporated with digital map data in a CAD system to create the location map and site plans.
- 2.2.3 All finds recovered were bagged and recorded by context number; all significant finds were retained and have been processed and temporarily stored according to standard practice (following the Institute of Field Archaeologists guidelines).

2.3 PALAEOENVIRONMENTAL ASSESSMENT

2.3.1 The single monolith sample taken during the course of the excavation was cleaned and examined in the laboratory. Rapid notes were made of observations, but the nature of the material was such that further processing for more detailed assessment would not have been worthwhile.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 2*) and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The archive will be deposited with the Derbyshire Record Office and an index to the archive, along with a copy of this report, will be submitted to the Derbyshire SMR. The finds will be deposited with the Buxton Museum, Buxton, Derbyshire.

3. EXCAVATION RESULTS

3.1 Introduction

3.1.1 A single trench measuring 4.5m by 10m was excavated (Fig 2), incorporating the original 1.5m wide evaluation trench excavated by ARCUS (2004) (Plate 1). Detailed context descriptions are given in *Appendix 3* of this report. The modern ground surface lay at 175.82m OD at the northern end of the trench and 176.09m OD at the southern end.

3.2 RESULTS

- 3.2.1 Essentially, four main successive sediments were located across the full extent of the excavation trench. These comprised, from the top of the sequence, topsoil, *1*, measuring 0.38m thick; subsoil, *2*, measuring 0.35m thick; colluvium, layers *3* and *14*, 0.38m and 0.07m thick respectively; and, at the base of the trench, the natural glacial till, *6*, which was encountered at depths between 174.60m OD and 174.93m OD (Fig 3; Plate 2).
- 3.2.2 Colluvium 3 was located across the extent of the excavation, but deposit 14 was noted only at the southern end of the trench in the west-facing section (Fig 3). The essential difference between the two colluvial deposits was that layer 14 did not include the high level of flint and chert inclusions found in 3, suggesting it derived from a different parent material. Overall, however, the colluvial deposits were very similar to the natural glacial till (6) and, are likely to represent redeposition of eroded till from the higher land to the south of the present development site. Cutting into the colluvial deposit 3, and sealed by subsoil 2, was a single posthole, 5. This measured c 0.26m in diameter and 0.2m deep. Posthole 5 had a single fill, 4, formed from a mix of topsoil, subsoil and colluvium, possibly representing a deliberate back-filling of this feature (Plate 3). No dating evidence was recovered from this feature.
- 3.2.3 Once the upper surface of the glacial till at the base of the trench had been cleaned, it was possible to identify a number of distinct, more or less linear, features (contexts 7 to 13; Fig 4; Plate 4) within the glacial till and running roughly north-east/south-west across the excavation area. Of these, contexts 11 and 12 respectively corresponded very closely with putative posthole 204 and roundhouse gully 206, identified during the ARCUS evaluation. The expanded excavation area made it possible to identify contexts 7 to 13 as localised natural lenses of clay mixed with crushed shale within the glacial till; although there was some limited variation in their composition, all formed part of the natural till.
- 3.2.4 Lithic artefacts were found in the topsoil, subsoil and colluvial deposits, and are detailed below (*Section 3.3*). A monolith was also taken from the section through the colluvial deposits (Fig 3), an assessment of which is given below (*Section 3.4*).

3.3 FINDS

- 3.3.1 A small assemblage of worked and unworked lithic material (82 fragments) was recovered from three contexts, comprising topsoil *I*, subsoil *2*, and underlying colluvium *3*, with a small group unstratified. Of the group examined, 26 fragments were ostensibly unworked, and can be excluded from further discussion. Whilst deriving from a simple stratified succession, none of the fragments can be associated with anthropogenic features and, deriving largely from colluvium, in effect, represent a palimpsest group accumulated over a relatively long period from a range of depositional events in the surrounding area.
- 3.3.2 The worked material, mainly grey-banded and black Derbyshire chert and, therefore, largely local in origin, shows secondary and tertiary working typical of flintworking of the Neolithic to Early Bronze Age. There is, however, a small but significant element which could be representative of later Mesolithic activity, including two grey flint cores (the only flint from the site) and a single microlith.
- 3.3.3 Most of the fragments represent debitage generated in the course of tool production and can thus sustain little further analysis. Few fragments within this assemblage can be identified as formal tools (c 12 items), although the likelihood is that much of the debitage examined had received some *ad hoc* use.

3.4 PALAEOENVIRONMENTAL ASSESSMENT

3.4.1 A preliminary assessment of the single monolith sample taken during the excavation confirmed that the natural till was sealed by a colluvial deposit and, therefore, had no analytical potential for palaeoenvironmental reconstruction.

4. DISCUSSION

4.1 CONCLUSIONS

- 4.1.1 Although lithic artefacts dating from the Mesolithic and Neolithic periods were recovered during the course of the excavation, unlike those of the nearby Grey Ditch excavations (Guilbert and Taylor 1992), none were recovered from within archaeological features. The high chert content of the natural drift geology is likely to have attracted those in search of raw material for tool manufacture; the presence of working debitage within the excavated assemblage (including those from the evaluation - ARCUS 2004) might suggest that such activity took place at source. However, it would appear that the origin of the lithics recovered during the excavation was the layer of colluvium, rather than the immediate underlying drift geology of the development site. Even those lithic artefacts that were recovered from the topsoil and subsoil are likely to have been reworked from the colluvium through agricultural activity. Whilst the presence of such artefacts does not definitively demonstrate archaeological activity on site, it does indicate that the surrounding areas were used quite intensively over a long period of prehistory.
- It is tempting to associate the origin of the colluvial material on site with 4.1.2 increased run-off and erosion caused by more widespread deforestation and agriculture on the higher areas to the south of the present development site. The absence of Bronze Age material from the flint assemblage may suggest that the colluviation occurred at the end of the Neolithic, but without further investigation and analysis within the local area, this cannot be definitively proven. A similar deposit was encountered during the Grey Ditch excavation, beneath a horizon identified as a pre-bank plough soil (Guilbert and Taylor 1992). In that instance, this material was identified as post-glacial in origin, as it too, like the layer identified by the current excavation, immediately overlay the natural geology without any intervening soil development; the presence of large numbers of Early Mesolithic to Late Neolithic artefacts was attributed to bioturbation (ibid). However, the lack of a coarser fraction within the clay recorded in the 1992 excavation contrasts with that of the current excavation, lending credence to the premise that the colluvium derived from the erosion of a number of different parent materials, as posited for layers 3 and 14 from the present investigation.
- 4.1.3 Despite the presence of the nearby Grey Ditch, no evidence for Early Medieval activity was found during the excavation. Away from the main focus of the boundary feature itself, any contemporary activity is likely to be agricultural in nature and, therefore, to leave few datable clues, particularly given the fact that well-studied chronological indicators from this period are largely restricted to pottery forms and dress ornamentation rarely found outside of either a high status or funerary context.

4.2 IMPACT

4.2.1 The evaluation and excavation have indicated that, although evidence of archaeological activity is present on and around the development site, all of that identified on the development site itself is secondarily redeposited. Any development on the site is, therefore, unlikely to have a negative impact on archaeological features.

4.3 POTENTIAL AND RECOMMENDATIONS FOR FURTHER WORK

4.3.1 Given the largely negative nature of the results, there is no real potential for further analysis of the stratigraphic information recorded during the excavation. The potential of the lithic assemblage for further analysis is limited, and can only be of local significance, adding to the knowledge of the distribution of Late Mesolithic and Neolithic activity in the area. The material has been catalogued in outline, but it is, however, thought that publication of a brief comment, in the form of a note, on the nature and range of the material is appropriate.

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APPENDIX 1: PROJECT BRIEF

BRIEF FOR ARCHAEOLOGICAL INVESTIGATION

Proposal: Residential development

Planning application number: n/a

Location: Off Mitchlow ne, Bradwell

Grid Reference: SK 1725 8169

Geology: Carboniferous Limestone

Area of proposal site: c.0.5 ha (see accompanying plan).

Land use and vegetation cover: rough pasture

Summary

Planning permission for the above development has been granted by the Peak District National Park Authority.

Pre-determination evaluation of the site has revealed features which may be of archaeological origin. A final stage of investigation and recording of these features is required as a condition of planning permission. This a brief for the necessary works.

1.0 Archaeological background

- 1.1 The proposed development area is land which is thought to have been originally part of the medieval open field system of Bradwell, extant field boundaries having fossilised the shape of the medieval strips. The land did not form part of the wastes and commons at the time of the 1639 map of Bradwell Commons, therefore it may have been enclosed by this time. The allotment of some land within this area suggests that remnants of the open field system may have survived until Bradwell's Parliamentary Enclosure (1820).
- 1.2 The site is bounded at its eastern end by the Grey Ditch, a linear monument comprising an embankment and ditch which is thought to have represented an early medieval boundary. The best preserved four sections of the feature have Scheduled Monument status (SM number: 29813).
- 1.3 The section which bounds the proposed development area takes the form of a lynchet with a trackway running along the former embankment. To the north is a shallow ditch of varying depth to a maximum of about 0.7m.
- 1.4 Close to the western end of this section, an excavation during the 1990s revealed that much of the earthwork survives in good condition below ground. Finds of Roman pottery in a plough soil sealed by the bank suggest that the monument was constructed sometime in the mid-1st millennium AD. Other finds and features from beneath, and adjacent to , the bank included: Neolithic pottery and chert and flint artefacts of Mesolithic origin. The flintwork was recovered from pits which were sealed by the pre-bank plough soil. These were located within the southern-most 6 metres of the excavation trench. Fifteen postholes were also identified in this area, which partially formed a roughly circular setting which may have been the foundations of a prehistoric round-house. Several stakeholes with blacken fills lay in the middle of the floor, suggesting the former existence of a central hearth.

- 1.5 A pre-determination evaluation was undertaken as part of phase three of developments at Michlow Lane in 1996. This involved the excavation of two trial trenches orientated NW-SE across the fossilised medieval strip fields. No archaeological deposits were recorded in trench 1, but a shallow pit and stone surface, dated to the late 17th early eighteenth century were identified in the south-eastern half of the northern-most trench, trench 2.
- 1.6 Field evalution was undertaken in advance of the submission of a planning application for phase 4 of the development during 2004. This involved geophysical survey across the site followed by a scheme of trial trenching. Of the four trenches excavated, only one, trench 2, revealed features which are likely to be of archaeological origin. These were discovered at a depth of about 1m below ground surface and comprised a shallow linear feature (204) and a subcircular feature (206), the extent of which was obscured by the eastern edge of the trench. No cultural material was recovered from either feature, though a fragment of unworked flint was retrieved from 204. As these features were discovered right at the end of the project both received only very limited sampling, which would also mitigate against either the recovery of finds or the characterisation of the features.
- 1.7 There are other sites and finds in the immediate area, including the Roman fort of Navio, located less than a kilometre to the north-east. The projected line of the Roman road linking Navio and Buxton may run either through, or close by to the east of, the development site.

2.0 Requirement for an excavation

- 2.1 The proposed development would severely damage or destroy any archaeological remains which may be present on the site. It has been recommended therefore that a final phase of archaeological excavation should take place to obtain further information on the remaining archaeological deposits.
- 2.2 The objectives of the excavation should be to gather sufficient information to establish the character, extent, state of preservation and date of any archaeological deposits within the proposed development area.
- 2.3 The evaluation should investigate the area indicated on the accompanying plan.

3.0 Excavation Techniques

The excavation techniques chosen should comply with all health and safety regulations. It is envisaged that the following work would be required:

- 3.1 Trench 2 which originally measured 10m x 2m is to be re-opened and the features described in paragraph 1.6 above, which were identified during the evaluation, re-exposed. The redeposited fill of the trench may be removed by machine to within 200mm of the buried features, the remaining overburden is to be removed by hand excavation.
- 3.2 Trench 2 is then to be extended by 3m eastwards for its whole length (10m). The first 0.5 metres of overburden can be removed by machine, subsequent deposits are to be removed in a series of 10cm spits, with each exposed surface being hand cleaned.

4.0 Excavation Proposal

- 4.1 A detailed excavation proposal should be formulated by potential contractors and submitted to the Peak District National Park Senior Conservation Archaeologist for approval. The proposal should include:
- 4.1.1 A description of the proposed methods of excavation and recording system.
- 4.1.2 An explanation of the sampling strategies to be used.

- 4.1.3 A projected timetable for work on the site.
- 4.1.4 Details of the arrangements made for deposition of the finds and site archive (see section 8 below).
- 4.2 The work shall be carried out by appropriately qualified and experienced staff; details of staff numbers and their relative experience should be included, plus their responsibilities in carrying out the work. Staff C.V.s. should be included (unless already supplied to Peak District National Park Cultural Heritage Team Manager in previous project specifications).
- 4.3 Contractors should be appropriately insured for nature of the work which is to be undertaken.

5.0 Excavation guidelines

Where trenches are to be opened by machine the following guidelines should be observed:

- 5.1 The health and safety implications of any use of earth-moving machinery on the site must be taken in to account.
- 5.2 An appropriate machine should be used. The choice should be influenced by the prevailing site conditions, and the machine must carry out a clean and safe job.
- 5.3 An appropriate bucket should be used for the nature of the work being carried out.
- 5.4 All machining is to be carried out under the direct supervision of an archaeologist and should be halted if archaeological deposits are encountered.
- 5.5 All topsoil or recent overburden should be removed down to the first significant archaeological horizon in successive level spits. Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits.
- 5.6 Trenches to be recorded according to the normal principles of stratigraphic archaeological excavation.
- 5.7 The stratigraphy of any trial trench is to be recorded even where no archaeological deposits have been identified. No archaeological deposit should be entirely removed unless this is unavoidable, and then not without the specific approval of the Senior Conservation Archaeologist.
- 5.8 Any human remains which are excavated must initially be left in situ and, if removal is necessary, this must comply with the relevant Home Office regulations.
- 5.9 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.
- 5.10 The archaeological contractors will be responsible for locating any service pipes, cables etc., which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

6.0 Site Monitoring

6.1 Reasonable prior notice (14 days) of the commencement of the excavation is to be given to the Senior Conservation Archaeologist of the Peak District National Park Authority Archaeology Service.

6.2 With regard to site inspections, the contractor will liaise with the Senior Conservation Archaeologist in order that the general site stratigraphy can be assessed in the initial stage of trial trenching and/or so that the site can be inspected when field work is near to completion, but before any trenches have been backfilled.

7.0 Report

- 7.1 A report shall be produced to include background information, a summary of the works carried out, and a description and interpretation of the findings. The report should also include:
- 7.1.1 A location plan showing all excavated areas with respect to nearby fixed structures and roads;
- 7.1.2. Illustrations of all archaeological features with appropriately scaled hachured plans and sections;
- 7.1.3. Specialist descriptions of artefacts or ecofacts;
- 7.1.4 An indication of potential archaeological deposits not disturbed by the present development.
- 7.1.5 Data files relating to measured survey should be provided as both a print out and in an electronic format to be agreed with the Derbyshire Sites and Monuments Record.
- 7.2 Copies of the final report are to be deposited with the Peak District National Park Cultural Heritage Team and the Derbyshire Sites and Monuments Record. Reports should be provided in both paper and electronic form.
- 7.3 The report should not give an opinion on whether preservation or further investigation is considered appropriate, but should provide an interpretation of results, placing them in a local and regional context.
- 7.4 The results of the work may be published in the appropriate issue of Archaeology and Conservation in Derbyshire, and, if of regional or national significance, within an archaeological journal.

8.0 Deposition of Archive and Finds

- 8.1 Upon completion of fieldwork samples shall be processed and all finds shall be cleaned, identified, assessed, spot-dated and properly stored. A field archive shall be compiled consisting of all primary written documents, plans, sections, photographs and electronic data (in a format to be agreed by the repository museum).
- 8.2 After agreement with the landowner, the field archive should be deposited with Buxton Museum & Art Gallery. The archaeological contractor should contact Ros Westwood, curator, (direct dial telephone number: 01298 24658; fax: 01298 79394) at the beginning of the project to arrange this.

9.0 Standards

9.1 The above activities will be undertaken in line with the Institute of Field Archaeologists Standard and Guidance for archaeological field evaluation (revised September 1999)!

Sarah Whiteley Senior Conservation Archaeologist February 2005

APPENDIX 2: PROJECT DESIGN

MICHLOW LANE, BRADWELL, DERBYSHIRE

Archaeological Excavation:

Project Design



Oxford Archaeology North

August 2005

John Samuels Archaeological Consultants

Grid Reference: SK 1725 8169 OA North Job No: L9581

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 John Samuels Archaeological Consultants (hereafter the 'client') have requested that Oxford Archaeology North (OA North) supply costs and a project design to meet the Peak District National Park Authority Archaeology Service (PDNPAAS) brief for a programme of archaeological excavation to be undertaken at Michlow Lane, Bradwell, Derbyshire in advance of a residential development. The proposed development area covers roughly 0.5ha of rough pasture.

1.2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

1.2.1 During the Middle Ages, the development area formed part of medieval Bradwell's open field system. The eastern part of the site is bounded by the Grey Ditch (SM No:29813), a linear bank and ditch thought to represent an early medieval boundary which, within the development area, comprises a lynchet and trackway running along the former embankment; the ditch survives to a depth of 0.7m in parts. Previous field work in the area has identified Roman pottery within a plough soil sealed by the Grey Ditch, along with a prehistoric round house and pits containing Mesolithic and Neolithic artefacts. The most recent phase of archaeological fieldwork, undertaken in 2004, uncovered a shallow linear feature and a subcircular feature within Trial Trench 2 at a depth of about 1m below the current ground surface.

1.3 OXFORD ARCHAEOLOGY NORTH

- 1.3.1 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past 24 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.
- 1.3.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. 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.

1.4 ARCHIVE DEPOSITION

- 1.4.1 The results of the excavation will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition, 1991*) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. 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 in that organisation's code of conduct.
- 1.4.2 The paper archive for the archaeological work undertaken at the site along with any finds will be deposited with the Buxton Museum and Art Gallery.
- 1.4.3 A synthesis (in the form of the index to the archive and a copy of the publication report) will be deposited with the County Sites and Monuments Record, and a copy will also be offered to the NMR.

2.1 ACADEMIC AIMS AND OBJECTIVES

- 2.1.1 One of the main research aims of the excavation, given the commercial nature of the development, will be to characterise and preserve by record the archaeological remains on the site that will be impacted upon by the development. Although no dating evidence was recovered from the features identified during the 2004 evaluation of Trial Trench 2, it is possible that these features are prehistoric in date. The archaeological discoveries within the local area, particularly of Mesolithic and Neolithic finds, draw parallels to important contemporary local sites such as Lismore Fields (Myers 2005), while the very low incidence of Iron Age sites within Derbyshire has been noted (Barrett 2005). Considering the sparse nature of artefactual assemblages from such periods, environmental samples will play a vital role in our understanding of the identified archaeological remains. The following programme has been designed as an appropriate response to the development in order to fully record those features already identified during the course of the evaluation undertaken in 2004 and to assess further subsoil deposits within the development area to determine and, where necessary, record the presence, extent, nature, quality and significance of any archaeological deposits that may be threatened by the proposed development. To this end, the following programme of archaeological work has been designed. The results will provide information as to whether further mitigation works are required prior to, or during, ground works associated with the development. The required stages to achieve these ends are as follows:
- 2.1.2 *Archaeological Excavation:* to implement a programme of excavation through the reexcavation and extension of Trial trench 2, evaluated in 2004.
- 2.1.3 **Post-Excavation** (MAP2) Assessment: the site records, finds and all samples from the excavation programme outlined below will form a checked and ordered site archive as outlined in the English Heritage guideline document Management of Archaeological Projects (2nd edition, 1991b) (hereafter MAP 2). Following compilation of the project archive a report will be produced assessing the potential of the archive (including the paper archive, the finds archive and any palaeoenvironmental samples that are taken) for further analysis as defined in MAP 2 Appendix 4. This post-excavation assessment report will make recommendations for further analysis and publication of the results, as appropriate.

3 METHOD STATEMENT

3.1 EXCAVATION

- 3.1.1 The archaeological programme will establish the presence or absence of both any previously identified, or any unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample the threatened available area.
- 3.1.2 **Trench configuration:** the excavation will comprise the re-excavation of Trial Trench 2, measuring 2m by 10m, which will be located by off-setting against local landmarks and limited exploratory topsoil stripping by machine. Once the area of Trial Trench 2 has been defined, it will be extended eastwards by 3m along the entire 10m length of the trench.
- 3.1.3 *Methodology:* within the area of Trial Trench 2, the topsoil and backfill will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision to, where appropriate, a level 0.2m above the previously identified buried features (roughly 0.8m depth) or, to the level of the natural subsoil. Within the 3m-wide eastward extension of Trench 2, topsoil and recent overburden will be removed by a machine (as above), to a depth of 0.5m below the current ground surface. Subsequent deposits will be removed by machine in 0.1m spits down to the level of the natural geology or to the upper-most archaeological horizon. The surface of each spit, along with the natural soil and any archaeological horizons, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the soil conditions, and inspected for archaeological features. All features of archaeological interest must be investigated and recorded unless otherwise agreed by PDNPAAS. The trenches will not be excavated deeper than 1.20m to accommodate health and safety constraints

- 3.1.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. 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.
- 3.1.5 Any investigation of intact archaeological deposits will be exclusively manual. Selected pits and postholes will initially be half-sectioned, linear features will be subject to a minimum 25% 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*.
- 3.1.6 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.
- 3.1.7 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.
- 3.1.8 **Reinstatement:** it is understood that there will be a basic requirement for reinstatement of the ground. The trenches will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine. An effort will be made to machine-scrape the turf from the area of each trench, which will then be replaced as practically as possible following completion of the excavation.
- 3.1.9 *Fencing/hoarding requirements:* following consultation with the client it is assumed that fencing will not be required to protect the trench from public access. Should the case prove otherwise and Heras fencing or similar is required, following consultation with the client, fencing will be provided.
- 3.1.10 *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.
- 3.1.15 *Treatment of finds:* 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.
- 3.1.16 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.
- 3.1.17 *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.
- 3.1.18 *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.

- 3.1.19 Environmental Sampling: as stated in the academic research aims, the recovery of adequate samples of environmental material will be vital for the greater understanding of processes acting upon the site and for placing the site within a wider ecological context. Environmental samples (bulk samples of 30 litres volume, cores or monoliths to be sub-sampled at a later stage) will be collected from suitable deposits (i.e. the deposits do not contain demonstrably recent material and are well-stratified). If it is suspected that the environmental analysis of any non-recent context will aid the interpretation of that context or feature, for example where no finds have been recovered and the nature of the formation processes pertaining to the deposit are in doubt, then environmental samples should be taken. If it is found that there is an onsite presence of natural deposits with the potential for a well-preserved stratigraphic sequence suitable for the chronological reconstruction of ecological history, it is recommended that a core should be taken for further analysis. Where such deposits are encountered, an appropriate sampling strategy in accordance with English Heritage Guidelines for Environmental Archaeology (2002) will be agreed with PDNPAAS, the client and the English Heritage Regional Science Advisor. It is likely to be necessary for the OA North palaeoenvironmentalist to attend site to advise on appropriate sampling of specific features. This will be costed as a contingency.
- 3.1.20 The assessment of selected environmental samples will involve initial sub-sampling, for example for pollen etc. A sub-sample, of at least 10L and up to the entire 30L sample taken, depending upon the nature of the soil and of the nature of the environmental material will be processed in the laboratory by washing the material within a bucket and washing over the light, organic fraction into a 300 micron test sieve. The contents of this light fraction (the flot) and sub-samples of the heavy fraction (residue) will be assessed with the aid of microscopes and suitable reference material. Where deposits suitable for the preservation of insects have been sampled, processing will involved paraffin flotation and storage of the resultant flot in methanol before assessment.
- 3.1.21 Processing of pollen samples will involve a standard chemical procedure (method B of Berglund & Ralska Jasiewiczowa (1986), using HCl, NaOH, sieving, HF, and Erdtman's acetolysis to remove carbonates, humic acids, particles >170 microns, silicates, and cellulose respectively. The samples will then be stained with safranin, dehydrated in tertiary butyl alcohol, and the residues mounted in 2000 cS silicone oil. Tablets containing *Lycopodium* spores will be added at the beginning of the preparation so that pollen concentrations can be calculated (Stockmarr, 1971).
- 3.1.22 Samples will also be collected for technological, pedological and chronological analysis as appropriate. If necessary, access to conservation advice and facilities can be made available. OA North maintains close relationships with Ancient Monuments Laboratory staff at the Universities of Liverpool, Durham and York and, in addition, employs artefact and palaeoecology specialists with considerable expertise in the investigation, excavation and finds management of sites of all periods and types, who are readily available for consultation.
- 3.1.23 Human remains: the results of the recent evaluation did not locate any evidence of human remains on the site. However, should evidence of burials be identified, the 1857 Burial Act would apply and a Home Office Licence would be sought. This would involve all work ceasing until the proper authorities were satisfied before the burials are able to be removed. In normal circumstances, field recording will also include a continual process of analysis, evaluation, and interpretation of the data, in order to establish the necessity for any further more detailed recording that may prove essential. The grave cut and/or coffin and contents will be recorded in plan at 1:20. Significant details of any grave goods, should they be discovered, will be planned at 1:10. Photography will be used to provide a further detailed record of the skeleton. Any cremated remains will be 100% sampled and will undergo laboratory processing for the separation of human bone from any other materials and the recovery of any associated archaeological or ecological evidence. The removal of such remains will be carried out with due care and sensitivity.
- 3.1.24 **Radiocarbon** Assay: should deposits, or material within deposits, suitable for radiocarbon assay be encountered, samples will be taken wherever possible. Such material may also be collected from material sampled for environmental analysis. Dating of at least one selected

radiocarbon sample should be undertaken immediately following the completion of the excavation, as this will help to further inform the programme for the MAP2 assessment. A limited, but responsible programme of radiocarbon dating will be established during the MAP2 assessment as appropriate, on the basis of the significance of the features from which samples were taken.

3.2 POST-EXCAVATION ASSESSMENT

- 3.2.1 Following completion of the fieldwork, the results will be collated and the site archive completed in accordance with English Heritage MAP2, Appendix 3. A post-excavation assessment of the archive and the resource implications of the potential further analysis will be undertaken. The stratigraphic data and the finds assemblage will be quantified and assessed, and the environmental samples processed and a brief assessment of their potential for further analysis made. The assessment will, where appropriate, comprise:
 - Quantification of all site records, including drawings
 - Assessment of the stratigraphic sequence, in terms of complexity and, where possible, provisional chronology
 - A summary description of the results of the excavation, including an identification of formation processes
 - An assessment of the significance of the deposits from which radiocarbon samples have been taken and the selection of specific samples for submission for analysis
 - An assessment of the quantity and provisional dating of any pottery recovered from the
 excavation and an assessment of the further work required for the analysis of a selected
 assemblage from the evaluation and excavation. Such analysis may include:
 - i. Typological analysis in order to trace any cultural and practical influences on the form of vessels and to improve an understanding of the chronological basis of pottery typologies
 - ii. Fabric and petrographic analysis as a means of sourcing fabric materials
 - iii. Lipid analysis in order to identify any foodstuffs that were placed within pottery vessels iv.Illustration of selected pottery sherds
 - An assessment of the quantity, form and provisional dating of any lithic material (including flint, chert and volcanic tuffs) in order to establish a programme of further analysis, which might include:
 - i. Form, function and typological analysis, as a means of dating artefacts exploring any functional or cultural influences upon the shape of objects and also for establishing areas of manufacture and use
 - ii. Fabric and petrographic analysis in order to source the materials used for tools and for reconstructing the potential size of areas exploited by past populations
 - iii. Use-wear analysis for the determination of the function that artefacts were put to, ie: the silica gloss associated with reaping of cereals and grasses
 - iv.Chemical residue analysis for the determination of the presence of substances such as blood on tool edges
 - An assessment of the nature and quantity of any faunal remains along with the potential for further analysis. Such analysis might include:
 - i. Species representation, proportions, metrical conformation, pathological lesions, age and sex for the understanding of the pastoral and hunting economies and the nature of animal husbandry practices
 - ii. Butchery, burning, gnawing and fracturing as a means of determining the treatment and processing of meat products along with attitudes to waste disposal
 - iii. Analysis that might help to address research questions regarding the introduction of domesticated species during the Early Neolithic, which might include an examination of non-metric traits and body conformation that could indicate the presence of animals of

- primitive type, or of greater or lesser genetic diversity or of indigenous or extraneous origin
- An assessment of environmental remains recovered from the excavation, including the
 nature and quantity of materials such as molluscs, pollen, charcoal and carbonised plant
 remains along with the potential of any well-stratified assemblages for further analysis in
 terms of:
 - i. Identification of economic and subsistence practices through the identification of edible plant remains
- ii. The identification of food processing strategies as indicated by the presence of various plant anatomical parts (ie, chaff), either separated from or still attached to seeds and grains. Within this context, insect remains may also be important in identifying any storage or refuse functions associated with features
- iii. The nature of the environments exploited for plant foods through the identification of weed seeds, which may also indicate the nature of human manipulation of the local environment, as may insect remains
- iv. The character of the local environment through the analysis of pollen, plant macrofossils and fungal spores and the potential impact of man upon this environment
- v. The character of the immediate environment as indicated by any mollusc or insect remains and relict topsoil horizons
- vi. The presence of faecal material and parasite eggs that may be informative of the general state of health of past populations
- An assessment of any human remains, including age, gender and any pathological lesions along with the distribution of the remains themselves, in terms of their potential for further analysis, which might include:
 - i. Demographic reconstruction in terms of age and gender
- ii. Isotope analysis for the reconstruction of past dietary practices and also for the origin of populations
- iii. Any possible cultural practices during life, such as 'beautification' (ie, head deformation, filing of teeth) and of any post-mortem ritual practices that would lend clues to treatment of, and attitudes towards, the dead
- An assessment of any monoliths or core samples taken from specific deposits for their potential for further analysis in terms of site formation processes
- 3.2.2 The assessment results will be presented within a post-excavation assessment report which will summarise the results of the excavation and any initial hypotheses that can be drawn from the assessment of the finds and environmental samples. Within the framework of these initial results, an attempt will be made to place the data from the excavation within a regional context both in terms of a chronological narrative and of significance. The assessment report will make recommendations for a schedule, timescale and programme of analysis in accordance with MAP2 Appendix 4.
- 3.2.3 One bound and one unbound copy of the MAP2 assessment report will be submitted to the client within six months of completion of fieldwork. Should the client require an interim statement, a draft report, or a separate copy of the MAP2 assessment report, bound and unbound copies of such reports can be provided on request, within three weeks of the completion of each stage of the programme of work. Both Hard and digital copies of the report will be submitted to the Peak District National Park Cultural Heritage Team and the Derbyshire SMR. Further to any of the above assessments, 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 each phase of the programme of work was undertaken

- 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
- plans and sections at an appropriate scale showing the location and position of deposits and finds located during the evaluation
- monochrome and colour photographs as appropriate
- a list, and dates, for any finds recovered along with a description and interpretation of the deposits identified
- a description of any environmental or other specialist work undertaken and the results obtained
- a copy of this project design, and indications of any agreed departure from that design
- the report will also include a complete bibliography of sources from which data has been derived
- 3.2.4 This report will be in the same basic format as this project design; a copy of the report can be provided in .pdf format on CD, if required. Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field excavation will not be included within the report, but can be provided in a separate communication.

3.3 ANALYSIS

3.3.1 A provisional programme of post-excavation analysis is anticipated. The extent of the programme, however, can only be reliably established on completion of the post-excavation-assessment report, but it is likely, considering the nature of the material from the evaluation, that each of the proposed stages for analysis of ceramic, lithic and environmental remains will be undertaken on selected assemblages of material from well-stratified deposits (see *Section 3.3* above).. The final cost of analysis, however, will be based upon the results of the MAP2 assessment and will be outlined in further correspondence. The proposed programme anticipates both analysis of the site stratigraphy and the artefactual/ecofactual evidence leading to the production of a final report. This will be completed within two years of the fieldwork.

3.4 Publication

- 3.4.1 It is anticipated that the results of the excavation will be worthy of publication. If possible, the publication text will be prepared in a suitable form for inclusion in either a regional or national journal.
- 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.

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 on request to all interested parties.

4.2 Full regard will, of course, be given to all constraints (services etc) during the fieldwork as well as to all Health and Safety considerations. Information regarding services within the study area have been received and will be used during the course of the excavation.

5. PROJECT MONITORING

5.1 Whilst the work is undertaken for the client, PDNPAAS will be kept fully informed of the work and its results, and will be notified a week in advance of the commencement of the fieldwork. After its submission to PDNPAAS any proposed changes to the project design will be agreed with PDNPAAS in consultation with the client. Fieldwork will be monitored by the client and by PDNPAAS on behalf of the developer.

6. RESOURCES AND PROGRAMMING

6.1 STAFF PROPOSALS

- 6.1.1 The project will be under the direct management of **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed.
- 6.1.2 The excavation will be directed by **Vix Hughes** (OA North Project Officer). Vix is an extremely experienced and proficient field archaeologist who has undertaken supervision of numerous small-, medium- and large-scale evaluation and excavation projects. She will be assisted, Christina Clarke (OA North Project Assistant), a skilful and experienced excavator.
- 6.1.3 The processing and analysis of any palaeoenvironmental samples will be carried out under the auspices of **Elizabeth Huckerby BA**, **MSc** (OA North Environmental Manager), who has extensive experience of the palaeoecology of the North West, having been one of the principal palaeoenvironmentalists in the English Heritage-funded North West Wetlands Survey.
- Assessment of the finds from the evaluation will be undertaken under the auspices of OA North's in-house finds specialist **Chris Howard-Davis** (OA North Finds Manager). Chris acts as OA North's in-house finds specialist and has extensive knowledge of all finds of all periods from archaeological sites in northern England.

6.2 Programming

- 6.2.1 **Excavation:** initially, on week will be required to carry out the full excavation of features within the original and expanded limits of Trench 2. However, any discrete features extending beyond the area agreed for excavation may require investigation, which may extend the duration required for the fieldwork, as may the necessity for sieving. This will occur in consultation with PDNPAAS and the client, and will be costed as a variation.
- 6.2.2 **Interim report document:** an interim report on the findings from the excavation can be made available to the client and to PDNPAAS in order to ensure that the required fieldwork is fulfilled and being completed in accordance with the planning conditions. This can be forwarded to the client within three working weeks of the completion of fieldwork. Should information be required sooner, an official letter summarising the results can be produced.
- 6.2.3 **Post-Excavation Assessment:** a post-excavation assessment will be undertaken within six months of completion of the fieldwork. Estimates for the cost of this element are included within the costing section, divided by excavation area, but the exact costs will be dependent upon the amount of data recovered from the site. The assessment report will present an overview of the results of the excavation and the scope of the post-excavation analysis required, a timetable for that analysis and the cost of further analysis.
- 6.2.4 **Post-Excavation Analysis**: a revised project design will also be submitted for the post-excavation detailed analysis which will be implemented through to archive report and publication within two years of the completion of the fieldwork.

6.3 ARCHIVE

6.3.1 The archive will be deposited within six months following submission of the report, unless otherwise instructed.

7. INSURANCE

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

8. REFERENCES

Barrett, D, 2005 'An archaeological resource assessment of the Later Bronze and Iron Ages (the Later First Millennium AD) in Derbyshire,' in *The East Midlands Regional Research Framework*

English Heritage, 1991 Management of Archaeological Projects, second edition, London

Myers, A, 2005 An archaeological resource assessment of the Neolithic and Early Bronze Age in Derbyshire,' in *The East Midlands Regional Research Framework*

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 INDEX

Context	Thickness	Description	Interpretation
1	0.38m	A friable very dark grey fine sandy silty clay, with	Topsoil
		1% to 10% sub-rounded and sub-angular flint, chert	
		and gritstone inclusions of a maximum size of	
_		60mm x 50mm x 50mm	
2	0.35m	A friable mid-orange/grey fine sandy silty clay, with	Subsoil
		1% to 10% sub-rounded and sub-angular flint, chert	
		and gritstone inclusions with a maximum size of 80mm x 60mm x 50mm	
3	0.38m	A firm mid-greyish orange, firm, clay with 25% to	Colluvial deposit
3	0.36111	30% sub-rounded and sub-angular flint and chert	Conuviai deposit
		inclusions of a maximum size of 50mm x 40mm x	
		40mm	
4	0.2m	A friable, very dark grey coarse sandy-silt, with 1%	Fill of posthole 5, comprised
		to 5% sub-rounded and sub-angular stone inclusions	a mix of deposits 1, 2 and 3.
		of a maximum size of 50mm x 40mm x 40mm, and	Possibly a deliberate backfill
		less than 1% charcoal flecks	of the posthole
5		Circular feature, measuring 0.26m x 0.22m x 0.2m,	Posthole
	0.2	with straight, near-vertical sides and a flat base	C1 : 1 : 11
6	0.3+	A firm mid-orange/grey clay with c 25% angular and sub-angular flint and chert inclusions with a	Glacial till
		maximum size of 130mm x 80mm x 80mm. At the	
		southern end of the original evaluation trench, a	
		sondage into the till, 0.14m deep, produced a deposit	
		of crushed shale	
7	0.23	A firm very dark grey silty clay with 30% to 40%	A lens of crushed shale and
		crushed shale fragments, less than 10mm x 10mm x	clay within the glacial till.
		10mm in size	Essentially part of the till
			deposits
8	0.39	A firm dark grey silty clay with 30% to 40%	A lens of crushed shale and
		crushed shale inclusions, less than 10mm x 10mm x 10mm in size	clay within the glacial till.
		Tollini ili size	Essentially part of the till deposits
9	0.43	A firm very dark grey silty clay with 30% to 40%	A lens of crushed shale and
	0.15	crushed shale fragments, less than 10mm x 10mm x	clay within the glacial till.
		10mm in size	Essentially part of the till
			deposits
10	0.3	A firm mid-grey silty clay with 1% sub-rounded and	A lens of crushed shale and
		sub-angular flint and chert inclusions, of a	clay within the glacial till.
		maximum size of 30mm x 20mm x 15mm, and 1%	Essentially part of the till
		to 10% shale fragments less than 10mm x 10mm x	deposits
11	0.25	10mm in size	A lens of crushed shale and
	0.23	A firm dark grey silty clay with less than 1% flint and chert inclusions of a maximum size of 30mm x	clay within the glacial till.
		25mm x 6mm, and 1% to 10 % shale fragmented	Essentially part of the till
		less than 10mm x 10mm x10mm in size	deposits
12	0.17	A firm dark grey silty clay with less than 1% flint	A lens of crushed shale and
		and chert inclusions of a maximum size of 35mm x	clay within the glacial till.
		18mm x 10mm, and 1% to 10 % shale fragments	Essentially part of the till
		less than 10mm x 10mm x 10mm in size	deposits.

Context	Thickness	Description	Interpretation	
13	0.2	A firm dark grey silty clay with less than 1% flint	A lens of crushed shale and	
		and chert inclusions of a maximum size of 10mm x	clay within the glacial till.	
		10mm x 10mm, and 1% to 10 % shale fragments		
		less than 10mm x 10mm x 10mm in size. Very dark	deposits	
		grey silty-clay mottles within the deposit, of a		
		maximum size of 50mm x 40mm, formed 10% to		
		15% of the layer, the result of decayed roots forming		
1.4	0.07	more humic sediment	C 11 1 1 1 1	
14	0.07	A firm mid-brownish-orange silty clay, with less	Colluvial deposit	
		than 1% flint and chert inclusions 50mm x 40mm x 30mm in size		
		30mm in size		
Comtorita	Toom od has Al	DCUS (2004) for analystics Transl 2		
		RCUS (2004) for evaluation Trench 2	T / / / /	
Context		Description	Interpretation	
200			Topsoil and Turf, same as 1	
201		Silty clay	Subsoil, same as 3	
202		Silty clay, with slightly higher stone content than 201	Subsoil	
203		Silty clay	Fill of 204 , same as 12	
204		Linear	Cut (natural deposition)	
205		Silty clay	Fill of 206 , same as 11	
206		Linear?	Cut (natural deposition)	
207		Shale	Natural	

APPENDIX 4: FINDS CATALOGUE

OR	Context	Raw material	Reduction	Туре	Description/comments	Typological date range
100	2	Black Derbyshire chert	Tertiary	Retouched medial blade fragment	Prism-shaped profile; non-invasive retouch on edges of ventral face; some trimming on dorsal face	Earlier Neolithic
101	2	Black Derbyshire chert	Tertiary	Retouched medial blade fragment	Prism-shaped profile; non-invasive retouch down each edge; relatively small	Later Mesolithic- Earlier Neolithic
102	2	Grey chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
103	2	Black Derbyshire chert	Tertiary	Retouched medial blade fragment	Prism-shaped profile; non-invasive retouch on edges of ventral face; some trimming on dorsal face	Earlier Neolithic
104	2	Black Derbyshire chert	Secondary	Retouched flake	Non-invasively retouched flake	Earlier Neolithic
105	2	Grey banded chert	Tertiary	Core rejuvenation tablet/scraper	Signs of crushing on dorsal face; probably retouched (non-invasive) for use as scraper	Earlier Neolithic
106	2	Black Derbyshire chert	Tertiary	Retouched flake/side scraper	Retouch down both edges; relatively invasive on one edge	Early-Late Neolithic
107	2	Black Derbyshire chert	Tertiary	Retouched distal blade fragment/fabricator	Prism-shaped profile; non-invasive retouch down all edges; both ends heavily abraded	Early-Late Neolithic
108	2	Black Derbyshire chert	Tertiary	Retouched flake	Non-invasively retouched flake	Earlier Neolithic
109	2	Black Derbyshire chert	Tertiary	Possible broken arrowhead	Possibly unfinished due to breakage during production; morphologically similar to Later Neolithic examples	Later Neolithic
110	2	Grey chert	Primary	Broken unmodified flake	Probably representative of an early decortication stage of working	Early Neolithic- Early Bronze Age
111	2	Grey flint	Tertiary	Bifacial core	Multi-directional working; negative hinge fracture scars	Early Neolithic- Early Bronze Age
112	2	Grey chert	Tertiary	Unmodified proximal blade fragment	Very poor quality stone	Earlier Neolithic
113	2	Black Derbyshire chert	Tertiary	Unmodified thinning flake	Small thinning flake with feather termination; indicative of a late stage of working	Early-Late Neolithic
114	2	Black Derbyshire chert	Secondary	Unmodified blade	Irregular shape; terminates with step fracture at cortex; probably represents an early stage of working	Earlier Neolithic
115	2	Black Derbyshire chert	Tertiary	Un-worked piece	Small chunk; no clear bulb of percussion or flake scars	N/A
116	2	Black Derbyshire chert	Secondary	Unmodified flake	Cortex covers approximately half of piece including striking platform	Early Neolithic- Early Bronze Age
117	2	Grey chert	Tertiary	Broken retouched flake/ side scraper	Non-invasive retouch down feathered edge	Earlier Neolithic
118	2	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
119	2	Grey banded chert	Primary	Unmodified flake	Terminates with slight hinge fracture at cortex; representative of an early decortication stage of working	Early Neolithic- Early Bronze Age
120	2	Grey chert	Tertiary	Unmodified medial blade fragment	Severely hinge fractured; relatively small	Later Mesolithic- Earlier Neolithic

OR	Context	Raw material	Reduction	Туре	Description/comments	Typological date range
121	2	Brown translucent flint	Tertiary	Broken unmodified flake	Evidence of severe hinge fracture and negative hinge fracture scars on dorsal face	Early-Late Neolithic
122	2	Grey chert	Tertiary	Un-worked piece	No clear scars to suggest systematic removal of flakes or blades; small chunk	N/A
123	2	Grey chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
124	2	Black Derbyshire chert	Tertiary	Broken unmodified flake	Slight hinge fracture	Early Neolithic- Early Bronze Age
125	2	Black Derbyshire chert	Secondary	Retouched distal blade fragment	Prism-shaped profile; some non-invasive retouch down each edge	Earlier Neolithic
126	2	Black Derbyshire chert	Tertiary	Retouched distal blade fragment/scraper	Hinge fractured; non-invasive retouch down sides and end	Earlier Neolithic
126	2	Black Derbyshire chert	Tertiary	Unmodified flake	Sharp edges created by neat feather termination	Early Neolithic- Early Bronze Age
126	2	Black Derbyshire chert	Tertiary	Unmodified distal blade fragment	Slight hinge fracture	Earlier Neolithic
126	2	Black Derbyshire chert	Tertiary	Unmodified thinning flake	Small thinning flake with feather termination; indicative of a late stage of working	Early-Late Neolithic
126	2	Black Derbyshire chert	Tertiary	Broken unmodified flake	Scarring on dorsal face suggests removal from a unidirectionally-worked blade core	Later Mesolithic- Earlier Neolithic
127	2	Grey chert	Secondary	Retouched blade	Cortex on striking platform; non- invasive retouch down one edge	Earlier Neolithic
128	2	Grey chert	Tertiary	Retouched distal blade fragment	Slight non-invasive retouch at end; relatively small	Later Mesolithic- Earlier Neolithic
129	2	Light grey flint	Secondary	Broken blade core	Scarring on one face shows removal of at least four microlith-sized blades from single platform	Later Mesolithic-Earlier Neolithic
130	2	Grey chert	Tertiary	Unmodified medial blade fragment	Multi-directional working on dorsal face	Earlier Neolithic
131	3	Grey chert	Secondary	Unmodified flake	Probably representative of an early stage of working	Early Neolithic- Early Bronze Age
132	3	Grey chert	Secondary	Unmodified proximal blade fragment	Cortex on striking platform; only unidirectional scars apparent on dorsal face	Later Mesolithic- Earlier Neolithic
133	3	Black Derbyshire chert	Secondary	Un-worked piece	No clear scars to suggest systematic removal of flakes or blades; poor quality piece	N/A
134	3	Grey banded chert	Tertiary	Unmodified proximal blade fragment	Unidirectional-directional working on dorsal face	Later Mesolithic- Earlier Neolithic
135	3	Black Derbyshire chert	Secondary	Un-worked piece	Shattered piece; can be re-fitted to other pieces of same OR number	N/A
135	3	Black Derbyshire chert	Secondary	Un-worked piece	Shattered piece; can be re-fitted to other pieces of same OR number	N/A
135	3	Black Derbyshire chert	Secondary	Un-worked piece	Shattered piece; can be re-fitted to other pieces of same OR number	N/A
135	3	Black Derbyshire chert	Secondary	Un-worked piece	Shattered piece; can be re-fitted to other pieces of same OR number	N/A

OR	Context	Raw material	Reduction	Туре	Description/comments	Typological date range
135	3	Black Derbyshire chert	Tertiary	Un-worked piece	Shattered piece; can be re-fitted to other pieces of same OR number	N/A
136	3	Grey banded chert	Secondary	Un-worked piece	No clear evidence of working	N/A
137	3	Grey chert	Tertiary	Un-worked piece	Scars present but probably due to frost shatter as bulb of percussion is centrally positioned	N/A
138	3	Grey banded chert	Tertiary	Broken retouched flake/ side scraper	Slight hinge fracture; non-invasive retouch down one side	Earlier Neolithic
139	3	Grey chert	Secondary	Un-worked piece	No clear evidence of working	N/A
140	3	Grey banded chert	Tertiary	Unmodified proximal blade fragment	Extreme distal end snapped off; relatively small	Later Mesolithic-Earlier Neolithic
141	3	Grey chert	Secondary	Unmodified proximal blade fragment	Cortex on striking platform; only unidirectional-directional scars apparent on dorsal face	Later Mesolithic-Earlier Neolithic
142	3	Grey banded chert	Tertiary	Un-worked piece	Small chunk; no clear bulb of percussion or flake scars	N/A
143	3	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
144	3	Grey chert	Tertiary	Unmodified distal blade fragment	Hinge fractured	Earlier Neolithic
145	3	Black Derbyshire chert	Secondary	Large un-worked piece	No clear scars to suggest systematic removal of flakes or blades; irregular and of poor quality	N/A
146	3	Grey chert	Tertiary	Un-worked piece	No clear scars to suggest systematic removal of flakes or blades	N/A
147	3	Black Derbyshire chert	Tertiary	Retouched distal blade fragment/borer	Retouch down both edges; point created by slight hinge fracture; use-wear apparent	Earlier Neolithic
148	3	Grey banded chert	Tertiary	Retouched flake/side and end scraper	Feather termination; non-invasive retouch down one side and at end	Earlier Neolithic
149	3	Black Derbyshire chert	Tertiary	Retouched distal blade fragment	Terminates with severe hinge fracture; non-invasive retouch down one edge	Earlier Neolithic
150	3	Grey banded chert	Tertiary	Large un-worked chip	Scars present but probably due to frost shatter as bulbs of percussion are centrally positioned	N/A
151	3	Grey chert	Tertiary	Serrated flake	Intact flake with very slight hinge termination; serrated on all edges except struck end	Earlier Neolithic
152	3	Grey banded chert	Tertiary	Retouched distal blade fragment	Slight hinge fracture; non-invasive retouch down sides and end; break due to vein of poorer quality stone	Earlier Neolithic
153	3	Black Derbyshire chert	Tertiary	Un-worked piece	No clear scars to suggest systematic removal of flakes or blades; poor quality piece	N/A
154	3	Grey banded chert	Secondary	Bifacially-worked composite tool	Retouched to point at one end (borer); serrated down sides and at opposite end; heavily worn	Early-Late Neolithic
155	3	Grey banded chert	Tertiary	Bifacially-worked composite tool	Retouched to point at one end (borer); trimmed down sides and opposite end (scraper)	Early-Late Neolithic
156	3	Black Derbyshire chert	Tertiary	Borer/scraper	Flake with non-invasive retouch on all edges and to a point at one end	Earlier Neolithic
157	3	Black Derbyshire chert	Tertiary	Retouched flake	Non-invasively retouched flake	Earlier Neolithic
158	U/S	Grey banded chert	Secondary	Broken retouched flake	Some non-invasive retouch down two edges; heavily worn	Earlier Neolithic

OR	Context	Raw material	Reduction	Туре	Description/comments	Typological date range
158	U/S	Grey banded chert	Tertiary	Microlith	Pressure-flaked retouch apparent down one edge	Later Mesolithic
159	U/S	Black Derbyshire chert	Secondary	Retouched flake	Terminates with step fracture; non- invasive retouch on one edge	Earlier Neolithic
159	U/S	Black Derbyshire chert	Secondary	Indeterminate tool	Cortex on dorsal face; severe crushing evident on one edge and end suggests used for crushing/grinding	Early Neolithic- Early Bronze Age
159	U/S	Grey banded chert	Secondary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Un-worked piece	No clear evidence of working	N/A
159	U/S	Grey banded chert	Tertiary	Unmodified broken flake	No retouch evident	Early Neolithic- Early Bronze Age
159	U/S	Grey chert	Tertiary	Broken unmodified flake	Hinge fractured	Early Neolithic- Early Bronze Age
159	U/S	Grey chert	Tertiary	Retouched distal blade fragment	Non-invasive retouch on all edges	Earlier Neolithic
160	1	Grey chert	Tertiary	Broken blade core	Scarring on one face shows removal of at least five microlith-sized blades from single platform	Later Mesolithic-Earlier Neolithic

ILLUSTRATIONS

FIGURES

- Figure 1: Site location
- Figure 2: Trench location
- Figure 3: West-facing section of excavated area
- Figure 4: Plan of excavated area
- Figure 5: West-facing section through deposits 6, 11 and 12 within sondage

PLATES

- Plate 1: Excavated trench incorporating ARCUS evaluation Trench 2
- Plate 2: West-facing section of excavation trench
- Plate 3: North-facing section of posthole 5
- Plate 4: West-facing section through natural features identified as cuts **204** and **206** during the evaluation

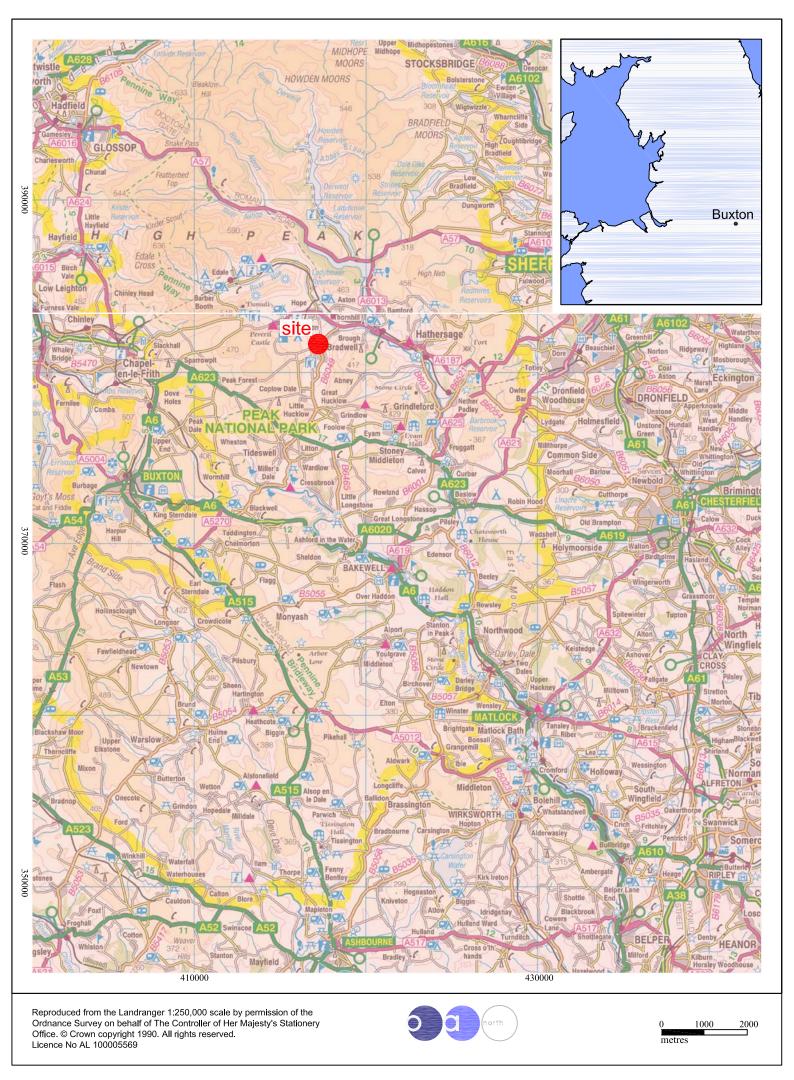


Figure 1: Location Map

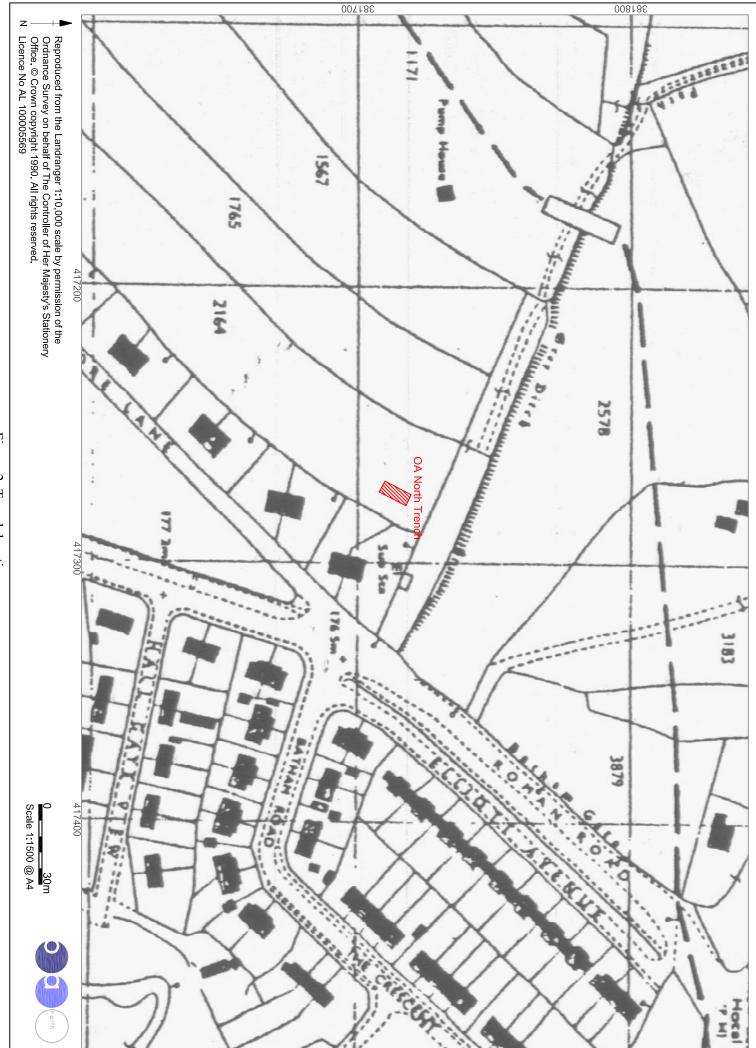


Figure 2: Trench location

Figure 3: West-facing section of excavated area.

Figure 4: Plan of excavated area.

Figure 5: West-facing section through layers **6**, **11** and **12** with in sondage



Plate 1: Excavated trench incorporating ARCUS evaluation Trench 2



Plate 2: West-facing section of excavation trench



Plate 3: North-facing section of posthole 5



Plate 4: West-facing section through natural features identified as cuts **204** and **206** during the evaluation