

NAA

ARCHAEOLOGICAL EVALUATION REPORT

NYCCHTR	
ONY	12660
LNK	4285
ONY	8348
Form	6064
Recd	11/3/09

Northern Archaeological Associates Ltd

Marwood House
Harmire Enterprise Park
Barnard Castle
Co Durham
DL12 8BN

t 01833 690800

f 01833 690801

e rf@naa.gb.com

w www.naa.gb.com

HARROGATE BOROUGH COUNCIL PLANNING DIVISION	
REC'D	05 MAR 2009
6 64 152 P OUTMAJ	
APP NO	

LAND AT WETHERBY ROAD
BOROUGHBRIDGE
NORTH YORKSHIRE

prepared for

COMMERCIAL ESTATES GROUP

Project No 0872
Text Greg Speed
Illustrations Catherine Chisman and Damien Ronan
Edited by Richard Eraser

Approved by Mary Eraser
Signature *Mary Eraser*

NAA 08/84
November 2008

Rec'd 11/3/00

to e4 152 P OUTMAJ

6064 pmsm

C 8348.

GNY 4285

SAY 1260

LAND AT WETHERBY ROAD, BOROUGHBRIDGE, NORTH YORKSHIRE

ARCHAEOLOGICAL EVALUATION REPORT

Summary	1
1 0 Introduction	3
2 0 Location, topography and geology	3
3 0 Archaeological and historical background	4
4 0 Aims and objectives	8
5 0 Methodology	9
6 0 Survey and excavation results	11
7 0 Discussion	16
8 0 Conclusion and recommendations	18
References	19
Appendix A Pottery assessment	22
Appendix B Biological remains assessment	26

LAND AT WETHERBY ROAD, BOROUGHBIDGE, NORTH YORKSHIRE

ARCHAEOLOGICAL EVALUATION REPORT

Summary

This report presents the results of an archaeological evaluation of an area of land proposed for a mixed use development at Wetherby Road, Boroughbridge, North Yorkshire, centred at SE. 3935 6605. The report has been prepared by Northern Archaeological Associates Ltd (NAA) on behalf of Commercial Estates Group (CEG). The planned programme of work comprised a topographic survey of earthworks of former ridge and furrow cultivation and excavation of seven trial trenches within a field forming the western half of the proposed development area. The trenches were located so as to examine potential archaeological features identified as a result of previous geophysical survey, and to investigate apparently 'blank' areas within the survey.

The geophysical survey and evaluation trenching demonstrated the presence of a limited number of archaeological features of Romano-British date concentrated on the slightly higher ground at the southern end of the field. A previously known Roman road or trackway passes from east to west across the south-eastern corner of the field, and a trench excavated across its position demonstrated that its route is marked by a sequence of at least six, presumably successive, parallel ditches. A second trench nearby identified a hearth-pit and a second pit each containing Roman pottery and indicating probable contemporary occupation activity in this part of the site. An undated ditch identified during previous development to the south also continued across the current proposal area. Excavation of part of this feature did not recover any artefacts and it remains undated, although it appears to pre-date the Roman road and may form part of an Iron Age field system.

In contrast to the results from the southern part of the area, five trenches located within the central and northern parts of the field did not identify significant archaeological remains. Targeted anomalies recorded by the geophysical survey within these trenches were either of natural or modern origin. In general, the geophysical survey provided an accurate indication of the features present below-ground within the western part of the proposed development area, and the evaluation trenching has served to refine the interpretation of the survey.

Construction of the existing Advanced Technology Park across the eastern half of the proposed development area has involved substantial ground disturbance, earth-movement and terracing. It is considered unlikely that any significant archaeological remains survive within this area and no further archaeological intervention is recommended for this part of the site.

It is recommended that, in advance of any development within the field forming the western half of the proposed development area, an archaeological 'strip, map and record' exercise be taken across the higher ground at the southern end of the field in

order to record any further features associated with the probable area of Romano-British period settlement. In addition, it is recommended that archaeological monitoring (a 'watching brief') be undertaken across the remaining area of the field during stripping of the site in order to record any additional discrete archaeological features. Provision should be made within the construction programme to permit adequate investigation and recording of any archaeological features encountered during this work.

A Written Scheme of Investigation for any archaeological mitigation works should be prepared and submitted to North Yorkshire County Council Heritage and Environment Section (archaeological advisors to Harrogate District Council) in order that the investigations and recording would constitute a scheme of works that had been agreed with the planning authority.

1 0 INTRODUCTION

1 1 This report presents the results of an archaeological evaluation of an area of land proposed for a mixed use development at Wetherby Road, Boroughbridge, North Yorkshire, centred at SE 3935 6605 (Figure 1). This report has been prepared by Northern Archaeological Associates Ltd (NAA) on behalf of Commercial Estates Group (CEG). The planned programme of work comprised excavation of six trial trenches within a field forming the western half of the proposed development area. Based on the initial results a seventh trench was subsequently excavated.

1 2 The evaluation was based upon an archaeological desk-based assessment and geophysical survey of the proposed development area (NAA 08/05, GSB 2008). The main objectives of the work were to investigate anomalies of potential archaeological origin identified by the geophysical survey and to determine whether additional archaeological features were present within apparently 'blank' areas on the geophysical survey. A Written Scheme of Investigation for the evaluation (NAA 08/81) was submitted to North Yorkshire County Council Heritage and Environment Section (archaeological advisors to Harrogate District Council) in order that the trial trenching would constitute a scheme of works that had been agreed with the planning authority.

1 3 All work was undertaken in accordance with the professional guidance and standards published by English Heritage (1991) and the Institute of Field Archaeologists (IFA 2001).

2 0 LOCATION, TOPOGRAPHY AND GEOLOGY

2 1 The proposed development area is located some 0.75 km south of the centre of Boroughbridge. It lies within Boroughbridge civil parish in Harrogate District. The site lies between the A168(T) (formerly the south-bound carriageway of the A1) to the west and Wetherby Road to the east. It comprises an 'L'-shaped area on fairly level ground at a height of c. 25m AOD and extending to 5.85 ha. Within the western half of the site, the northern boundary is formed by the River Tutt (also known as the Fleet Beck). To the east are farm buildings, a cemetery and modern housing along the southern bank of the River Tutt. The southern side of the area is bounded by a recent housing development on the site of the former Ponderosa Caravan Park.

2 2 The 'L'-shaped site comprises two main areas. The eastern half has previously been developed as the Advanced Technology Park, and the western half comprises a large pasture field. An area within the south-western corner of the industrial estate has been levelled and the presence of a distinct scarp along the western and southern boundaries of this area up to 1.5m high suggests that

there was some truncation of this part of the site during the previous development

- 2 3 The solid geology in the area comprises Permian and Triassic sandstones, overlain by alluvium (British Geological Survey 1979, 1977) The soils in the area are mapped as being of the Bishampton 1 Association, fine loamy soils with slowly permeable subsoils and slight seasonal waterlogging, suited to cereal cultivation and pasture (Soil Survey of England and Wales 1983, Jarvis *et al*/1984, 110-2)

3 0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 3 1 The archaeological and historical background to the proposed development area has been described in detail in the desk-based assessment (NAA 08/05) and is only summarised here

Previous nearby archaeological investigations

- 3 2 Extensive previous archaeological investigations have been undertaken within the areas lying immediately to the north and south of the proposed development area. An evaluation comprising geophysical survey and trial trenching was undertaken in 1997-8 within the field to the north of the proposed development site lying between the River Tutt and Roecliffe Lane and to the east of Bar House (GSB 1997, NAA 1998). Additional investigations were undertaken immediately to the east within the grounds of The Rose Manor Hotel in 2006 (ASUD 2006a, 2006b). Geophysical survey and excavation were undertaken within the field to the west of Bar House and within various fields northwards from Roecliffe Lane towards the River Ure during upgrading of the A1 to motorway in 1993-5 (GSB 1993a and b, NAA 1993, Bishop 2005, Speed in prep). No archaeological works were undertaken during the A1 development in the area where it passes the western edge of the proposed development area. Immediately to the south of the proposed development area, geophysical survey and archaeological trenching was carried out within the site of the former Ponderosa Caravan Park in advance of a housing development in 1996-8 (Site 9) (Garner-Lahire 1996, Signorelli and Copp 1999).

Earlier prehistoric

- 3 3 The earliest evidence of human activity within the study area comprises finds of Mesolithic worked flints recorded as having been found in the vicinity of the Devil's Arrows (Wymer and Bonsall 1977, 374).
- 3 4 The proposed development area lies only 300m to the south of the Devil's Arrows standing stones (centred on SE 3900 6653). The three remaining stones are Scheduled. They are irregularly spaced, running in a rough line from north

to south over a distance of some 174m to the north and south of Roecliffe Lane. John Leland, who visited Boroughbridge sometime between 1535 and 1540, recorded four stones, the fourth stone standing adjacent to the surviving central stone. Another account, dating from 1584, recorded the presence of five stones, one lying on the ground (Walford 2007). Burl (1991, 16) considered that 'the Devil's Arrows should be thought of as an isolated stone row'. However, extensive excavations undertaken in the area to the west of the Devil's Arrows and to the north of Roecliffe Lane in 1993-5 revealed a widespread complex of Later Neolithic features including two double timber post-rows, an associated ditch, at least one small structure and pits containing Grooved Ware. Radiocarbon dates from the post-rows suggested an early to mid 3rd millennium BC date for this activity (Speed, in prep). No excavation was undertaken immediately adjacent to the Devil's Arrows, but the two sites were linked by an extensive scatter of worked flints recovered from the field surface in the intervening area (NAA 1993).

- 3.5 Despite one of the Devil's Arrows lying to the south of Roecliffe Lane, investigations to the west and east in 1993-5 and 1998 did not identify earlier prehistoric archaeological features, although a small residual assemblage of worked flint of probable Later Neolithic or Early Bronze Age date was recovered during the 1998 work, and further worked flints were recovered in 2006 during work within the grounds of The Rose Manor Hotel immediately to the east (ASUD 2006a). Several residual worked flints were recovered during trenching within the former Ponderosa Caravan Park site immediately to the south of the proposed development.

Later prehistoric and Roman

- 3.6 Evidence for possible Late Iron Age activity was identified during investigations adjacent to the Roecliffe Roman fort during the A1 works in 1993 and also to the south of Roecliffe Lane in 1998. The excavated features included part of a roundhouse, ditches and postholes and a cremation burial, and quantities of Iron Age pottery were recovered.
- 3.7 The earliest evidence for Roman activity in the immediate area is the Roecliffe fort discovered by geophysical survey during the A1 works in 1993. Subsequent excavations in the area immediately to the east of the fort recorded extra-mural activity of Flavian date. The site of the fort has since been Scheduled. It is thought that the fort represents a precursor to a possible fort at Aldborough some 2km to the east, the site having moved when Dere Street was laid out in the later 1st century (Bishop 2005, 218). The site of the walled Roman town of Isurium Brigantum is now largely overlain by the village of Aldborough, some 1km to the east of the proposed development area.
- 3.8 A ditch of possibly Roman date recorded within the 1998 Roecliffe Lane site was probably identified continuing eastwards during the work carried out at the Rose Manor Hotel in 2006. Other linear features in this area were either

Romano-British or medieval in date (ASUD 2006b) Excavations at the western side of Bar House in 1993 and 1995 revealed evidence for a Roman road, ditches and cremation burials of probable Flavian date (Bishop 2005, 156-8)

- 3 9 Roman road 720b ran from Ilkley via Hampsthwaite towards Aldborough (Margary 1973, 406-7) Its projected line passes immediately to the north of the River Tutt adjacent to the proposed development area However, the geophysical survey and trial trenching undertaken between the river and Roecliffe Lane in 1997-8 did not identify the road (GSB 1997, NAA 1998) Trenching within the former Ponderosa Caravan Park immediately to the south of the proposed development area in 1996-8, and some 280m to the south of the projected line, did identify a Roman road running from west-southwest to east-northeast (Figure 2) The metalled road surface was up to 9.1m wide and, as it survived, consisted of a single layer of large gravel in a broad shallow cut, although there was some evidence of truncation The road was flanked intermittently by small gullies presumably for drainage Several sherds of later Roman pottery were recovered from the gravel surface Small ditches approaching the road from the south and south-east produced only residual flints and were undated but possibly represented phases of field system pre-dating establishment of the roadway To the west the Roman road passes into the south-western corner of the proposed development area

Medieval

- 3 10 Although early medieval finds have been made in Aldborough, there is no certain evidence for this period within Boroughbridge A rectangular pit and associated postholes excavated at Roecliffe Lane in 1998 may have been an early medieval *grubenhaus*, but did not produce datable evidence
- 3 11 The medieval Borough of Boroughbridge is recorded in documents from 1165, when it already possessed the bridge after which the town was named The medieval town was concentrated at the southern side of the river crossing, some 0.75km to the north-east of the proposed development area
- 3 12 Extensive evidence for medieval agricultural activity has been recorded in many areas around Boroughbridge in the form of ridge and furrow cultivation This is visible as earthworks or cropmarks, or has been recorded during geophysical survey or excavation Extensive earthwork remains of ridge and furrow survive within the western half of the proposed development area (Plate 1) The ridge and furrow is aligned roughly from north to south and shows a pronounced 'reverse-S' curvature typical of this type of earthwork The earthworks are best preserved within the northern half of the field, but fade-out to the south (Figure 3) The earthworks appear to have been deliberately levelled within the paddock at the eastern side of the field The geophysical survey of the proposed development area (see below) shows that the ridge and furrow extends across the whole area of the field (Figure 2), and to the south lies at right angles to the adjacent Roman road Geophysical survey undertaken

within the former Ponderosa Caravan Park in 1996 showed that ridge and furrow immediately to the south of the Roman road had a contrasting alignment running from east to west parallel to the road. This indicates that the road was either still extant or survived as a boundary during the medieval period.

- 3 13 At the northern end of the proposed development area, a bank has been recorded from aerial photographs running adjacent to the southern bank of the Tuff. The ridge and furrow to the south curves to meet this bank at right angles, and the bank probably represents an associated plough headland.

Post-medieval and modern

- 3 14 In the post-medieval period the town continued to be concentrated in the area adjacent to the bridge. Changes within the immediate vicinity of the proposed development area can be followed on successive Ordnance Survey maps from 1855 onwards. In 1855, the site lay within fields some distance to the south of Boroughbridge. The southern and northern site boundaries were as they exist today. The area between these two boundaries was bisected by an east to west aligned boundary apparently post-dating the ridge and furrow. A trackway led from the western boundary along the line of the subdivision and then along the northern boundary of what is now the industrial estate to Wetherby Road. This trackway was no longer shown in 1895.

Geophysical survey results

- 3 15 A geophysical survey (Figure 2) was undertaken over an area of some 3ha within the field comprising the western part of the proposed development area (GSB 2008). The small paddocks at the eastern edge of the area were excluded from the survey area.
- 3 16 The most obvious feature of the dataset is a broad ferrous anomaly (A) resulting from a pipe running southwards from an inspection chamber located within the north-western corner of the field. The 'halo' from this feature has served to mask most features in a band along the western edge of the field. A similar masking effect (B) occurred at the north-eastern corner of the field due to the presence of metal pens. A linear ferrous response was recorded running from east to west across the field. The eastern, more diffuse, half of this feature (C) corresponds to the position of a former trackway recorded by 19th century Ordnance Survey maps. The sharper western half (D) is likely to represent a service running towards a stable block.
- 3 17 Parallel bands curving from north-northwest to south across the whole area are consistent with the earthwork ridge and furrow present within the field. Zones where the anomalies fade-out (E) do not reflect diminished preservation, but merely areas in which the chosen grid alignment for the survey has been most effective in reducing the magnetic effects of the ridge and furrow. Along the

north-western edge of the area, the topographically flatter area considered to be a related plough-headland is reflected within the geophysical data (F)

- 3 18 A post-medieval field boundary following the curve of the ridge and furrow which formerly subdivided the field from north to south is represented by a linear band of magnetic disturbance (G). A zone of magnetic disturbance (H) and adjacent ferrous anomalies (I) lying on the line of this boundary may be associated and hence of modern origin. Several linear trends (J) running eastwards at right angles to the former boundary may represent land-drains.
- 3 19 An area of high magnetic response (K) at the south-western corner of the survey area corresponds to the expected position of the Roman road previously recorded by excavation within the former Ponderosa Caravan Park to the south. However, magnetometer survey within that site did not identify the roadway at all, and it is unclear why it should be so prominent within the current survey. It is possible that the current strong anomaly is actually being caused by modern ferrous material or a service overlying the Roman road.
- 3 20 A linear anomaly (L) crossing the southern part of the area from south-east to north-west continues the line of a small ditch which was recorded by both geophysical survey and excavation within the area to the south. To the north-west, anomaly (L) is obscured by the 'halo' from modern service (A). It does not appear to continue beyond (A) to the north-west, but may return to the south-west as a linear anomaly (M) recorded at the western edge of the area. Another linear anomaly (N) runs to the north-east at right-angles to ditch (L), although any intersection between the two features has been obscured by the zone of magnetic disturbance (H).
- 3 21 The survey identified a number of isolated pit-type anomalies (O), but there were no distinct anomalies in their vicinity to place them in context, as such their archaeological significance may be questionable. It is possible that these are pockets of naturally enhanced soil or isolated effects from the ridge and furrow cultivation. Certain anomalies (P) were highlighted as being most likely ferrous, but marginal in their characteristics. Similar responses might be recorded over small-scale industrial features or small pits containing fired material.

4 0 AIMS AND OBJECTIVES

- 4 1 The desk-based assessment recommended that a limited programme of additional evaluation comprising excavation of a series of trial trenches be undertaken within the field forming the western half of the proposed development area. The trial trenching was to be undertaken to evaluate the potential for prehistoric and Roman remains indicated by geophysical survey, so as to inform a detailed scheme of archaeological mitigation for the proposed development.

- 4.2 Specific aims of the trial trenching were to determine
- whether the Roman Road survived within the south-western corner of the site
 - the nature and date of the probable prehistoric enclosure system within the site
 - whether pit-type and possible small industrial features recorded by the geophysical survey represented archaeological features, and to determine their nature, date and state of preservation
 - whether archaeological features were present within apparently 'blank' areas on the geophysical survey
 - to produce a report of the results of the work either as a stand-alone document or to be included in an appropriate publication, such as the Yorkshire Archaeological Journal
- 4.3 The desk-based assessment also recommended that a detailed topographic survey be undertaken in order to record the extensive earthwork remains of ridge and furrow cultivation and the associated probable plough headland present within the field forming the western half of the proposed development area. It recommended that this should be carried out prior to any significant groundworks such as trial trenching being undertaken within the site, which would significantly degrade the remains.
- 4.4 The desk-based assessment concluded that there has been considerable terracing, ground-levelling and construction-related ground-disturbance within the Advanced Technology Park forming the eastern half of the proposed development area. It was considered unlikely that significant archaeological features survive within this area.
- 5.0 **METHODOLOGY**
- Topographic survey
- 5.1 The Written Scheme of Investigation proposed that a separate topographic survey be undertaken within the field forming the western half of the proposed development area in order to record the earthwork remains of ridge and furrow. In the event, a detailed topographic survey of the area undertaken by Faber Maunsell on behalf of the client was made available and was enhanced to provide the required archaeological earthwork survey.

Trial trenching

- 5 2 The planned trial trenching consisted of excavation of six trenches, the location and dimensions of which were designed to evaluate specific anomalies of potential archaeological significance recorded by the geophysical survey (Figure 2). The trenches also targeted blank areas within the geophysical survey to confirm the actual extent of the archaeology. On the basis of the results of these trenches, excavation of an additional trench (Trench 7) was subsequently undertaken. The total area of excavation amounted to some 620m², representing some 2% of the field forming the western part of the proposed development area.
- 5 3 A mechanical excavator fitted with a toothless ditching bucket removed topsoil and subsoil down to a level at which significant archaeological deposits were first identified or down to natural subsoil deposits, whichever was encountered first. Spoil was visually screened for artefacts. Where archaeological remains were exposed, trench surfaces were cleaned by hand and all identified features were planned and photographed.
- 5 4 Hand excavation of selected archaeological features was undertaken to determine depth, dimension and preservation of archaeology and to ensure recovery of sufficient artefactual and environmental evidence to enable dating and assessment of the archaeology to be achieved.
- 5 5 A planning grid within each trench was located using a total station theodolite linked to a pen computer using real-time mapping software. Information was transferred to AutoCAD software and reproduced for incorporation within this report. All levels were tied in to Ordnance Datum.
- 5 6 All archaeological features were photographed and recorded at an appropriate scale. Sections were drawn at a scale of 1:10 and plans at a scale of 1:20. A written description of features was recorded on *pro forma* sheets using the NAA context recording system.
- 5 7 The site code was WRB08.
- 5 8 A photographic record of the site was taken using monochrome prints and colour slide at a format of 35 mm. Digital images were also taken as appropriate.
- 5 9 A metal detector survey was undertaken of all stripped surfaces by an experienced operative. In the event no significant finds were recovered.
- 5 10 Pottery was collected as bulk samples. Finds were appropriately recorded and processed using the NAA system and submitted for post-excavation assessment. All finds recovered were appropriately packaged and stored under

optimum conditions. Finds recovery and storage strategies were in accordance with published guidelines (English Heritage, 1995, Watkinson and Neal, 1998)

- 5.11 Forty-litre bulk palaeoenvironmental samples were taken from appropriate deposits and submitted for assessment of the environmental potential, including charcoal, small bones, cereal grains, pollen, mollusca and macro-environmental material. Recovery and sampling of environmental remains was in accordance with published guidelines (English Heritage 2002, 2003)

6.0 SURVEY AND EXCAVATION RESULTS

Topographic survey (Figure 3)

- 6.1 The topographic survey recorded low earthworks of ridge and furrow extending across most of the area of the field running from north to south with a slight 'reverse-S' shape. The ridges were typically some 8-9m apart. The ridge and furrow was bounded to the north and south by low, broad banks characteristic of the headlands used to turn the plough during cultivation. The earthworks had been flattened within a broad band along the western edge of the field as a result of construction of a modern sewer.

Excavation results

Trench 1 (Figure 4)

- 6.2 This trench was located at the southern edge of the field. It measured 20m in length and 4m in width, and was aligned from north to south. It was positioned in order to evaluate geophysical anomaly (K), thought to represent the route of the Roman road crossing the south-western corner of the field. It was also intended to determine the presence or absence of any additional associated features such as a flanking ditch adjacent to the road.
- 6.3 The trench was stripped of some 0.2-0.3m of dark brown clayey sandy silt topsoil [21] which produced two medieval pottery sherds, several post-medieval sherds ranging in date up to the later 18th or early 19th century, and an 18th century clay tobacco pipe bowl. Below this was a relict plough-soil horizon [22] consisting of slightly yellowish mid brown clayey silty sand. This was 0.18m thick at the northern end of the trench, increasing to 0.45m thick at the southern end and forming the make-up of a distinct raised earthwork at the southern edge of the field in this area. This deposit produced a small assemblage of medieval and post-medieval pottery sherds and a fragment of 18th century tobacco pipe stem. The raised earthwork probably represented a former plough-headland at the southern edge of the ridge and furrow in this area.

- 6 4 Deposit [22] overlay natural orange-brown sandy clay and gravel [23] which formed a relatively level horizon. This was cut at a slight angle across the north-western corner of the trench by a furrow-base [43] running from north to south. Cleaning across this feature produced a small finds assemblage comprising a possibly worked flint, a pottery sherd of later 18th or early 19th century date and two clay tobacco pipe stem fragments, one of 17th or early 18th century date and the other of 18th century date.
- 6 5 Within the southern part of the trench the boulder clay was cut by a sequence of six parallel linear features (ditch group [20]) running from east to west on a similar alignment to the expected Roman road (Plates 2 and 3). The only possible evidence for surviving road surfacing was a thin scatter of pebbles and small stones [24]. This only survived within the top of the hollow over a linear cut [25] crossing the southern end of the trench. Only the northern edge of this feature was observed. It was more than 1.30m wide and at least 0.25m deep with a gently-sloping, rather stepped northern side. It was filled with mid to dark yellowish brown slightly clayey silty sand [26] containing occasional small rounded pebbles.
- 6 6 Ditch [27] crossed the trench some 1.5m to the north of feature [25]. It was 1.60m wide and 0.38m deep with rather stepped sides and a broad, slightly concave base, and had an almost identical fill [28]. A further 0.6m to the north the trench was crossed by a small ditch or gully [29]. This was 0.66m wide and 0.18-0.28m deep with a slightly asymmetric 'U'-shaped profile, the northern edge sloping more steeply than the southern. Its fill [30] was slightly different, being mid to dark brown slightly silty clayey sand containing occasional small rounded pebbles.
- 6 7 Some 0.7m to the north of ditch [29] lay a series of three inter-cutting small ditches or gullies. Due to the similarity of the fills no relationships could be determined between these features. The southern gully [31] was 0.70m wide and 0.26m deep. The middle feature [33] was 0.60-0.70m wide and up to 0.31m deep. The northern gully [35] was 0.45m wide and up to 0.18m deep. All three had a 'U'-shaped profile with the sides sloping at approximately 45°. Each was filled with mid to dark brown slightly silty clayey sand containing occasional small rounded pebbles (respectively contexts [32], [34] and [36]). Fill [32] produced a chip of oxidised pottery considered to be of later 18th or 19th century date and possibly intrusive.

Trench 2 (Figure 5)

- 6 8 Trench 2, which was located centrally within the southern half of the field, measured 20m long and 4m wide, and was aligned from north-east to south-west. It was positioned in order to evaluate the probably prehistoric ditch represented by geophysical anomaly (L), to determine its state of preservation and to recover dating evidence. The trench was also sited to investigate examples of geophysical anomalies (J) and (P), in order to determine whether

- they represented archaeological features, and, if so, to determine their nature and date
- 6 9 The trench was stripped of 0.30m of topsoil [10] and 0.10-0.15m of a relict ploughsoil horizon [11]. The topsoil produced a small assemblage of medieval and post-medieval pottery sherds dating up to the 18th century and a fragment of early 18th century clay tobacco pipe stem, and the buried soil horizon produced a small assemblage of medieval and post-medieval pottery sherds. The natural deposits [12] within the trench comprised a sequence of bands of reddish brown sandy clay and greyish brown clay crossing the trench from east to west. At the south-western end of the trench this was cut by a furrow base, and a modern land-drum corresponding to geophysical anomaly 'J' crossed the trench from east to west towards its north-eastern end.
- 6 10 The anticipated ditch (geophysical anomaly 'L') crossed the trench near its south-western end, running from south-east to north-west. Ditch [13] was 1.45m wide and 0.50m deep, with a straight-sloping 'V'-shaped profile (Plate 4). It was filled with a fairly homogeneous dark brown sandy clayey silt [14] containing occasional rounded cobbles and small pebbles mainly concentrated towards the centre base. No finds were recovered from this deposit.
- 6 11 The targeted anomaly 'P', located 1.0m to the north-east of ditch [13], proved to be a sub-rectangular hearth- or fire-pit [15] (Plates 5 and 6). The pit was aligned from east to west and measured 1.61m long, 0.95m wide and had a surviving depth of 0.23m although it had clearly been truncated. The natural subsoil around the top edges of the feature (but not within the base) had been burnt to a red colour to a thickness of up to 0.03m. The base and sides of the pit had been lined with rounded cobbles, measuring up to 240mm but with few smaller than 100mm suggesting that some selection had taken place. All had been reduced to a mid grey colour although only a couple showed any evidence of heat-shattering. Quantities of wood-charcoal were present behind and below this lining, indicating that the pit had been utilised for a fire prior to their insertion. Further charcoal overlay the cobble lining and throughout the dark brown slightly silty sandy clay fill [16] of the pit. This also contained fragments of fired clay, fragments of burnt bone, animal tooth enamel fragments from cattle and pig, and produced a small chip of Samian ware pottery and four sherds in an oxidised sandy fabric possibly of either Romano-British or medieval date. Two soil samples taken from this deposit produced a single charred grain of barley.
- 6 12 A second pit was located immediately to the east of pit [15]. Pit [18] had a rather irregular sub-oval plan, aligned from north to south, with fairly steep-sloping sides to a large, flattish base. It measured 1.12m long, up to 0.70m wide and survived to a depth of 0.13m. It was filled with mid to dark brown slightly silty slightly sandy clay [19] containing occasional small rounded stones, moderate flecks and small lumps of charcoal and rare flecks of fired

clay It produced a sherd of Samian Ware pottery and a second sherd of hand-made native-character pottery of either later Iron Age or early Romano-British date

Trench 3

- 6 13 This trench was located near the centre of the field. It measured 30m long, 4m wide and was aligned from north-west to south-east. It was positioned in order to evaluate linear geophysical anomaly (N) in order to determine its nature and date. It was also intended to evaluate 'blank' areas to either side of this feature, in order to determine the presence or absence of any additional features, and to investigate a strong discrete ferrous anomaly (I), in order to determine whether it was of archaeological origin.
- 6 14 The trench was stripped of some 0.3m of topsoil and some 0.1-0.2m of a relict ploughsoil horizon. The topsoil (context [37]) produced a small assemblage of later medieval and post-medieval pottery sherds, an early tobacco pipe bowl and two 18th century stem fragments. The relict ploughsoil (context [38]) produced a sherd of Roman greyware, a medieval pottery sherd, post-medieval pottery extending in date up to the later 18th or early 19th century and another 18th century tobacco pipe stem fragment. The natural deposits generally consisted of mid brown or orange-brown sandy clayey silt and gravel.
- 6 15 The targeted linear geophysical anomaly (N) proved to be a linear band of natural grey clay. The discrete ferrous anomaly (I) corresponded to a large cut feature occupying the north-western 5m of the trench and filled with dark greyish brown sandy clayey silt soil containing large quantities of cobbles, brick and tile fragments, iron fragments and quantities of 19th or 20th century pottery and glass. This part of the trench lay within a slight hollow recorded by the topographic survey and possibly representing the site of a previously unrecorded in-filled pond. No archaeological features were identified within this trench.

Trench 4

- 6 16 This was located at the western edge of the area and measured 15m long and 4m wide. It was orientated from north-west to south-east and was positioned in order to evaluate linear geophysical anomaly (M) in order to determine its nature and date. Due to its proximity to the hedge forming the western field boundary, this trench was excavated 4m east of its planned position.
- 6 17 The trench was stripped of 0.3m of topsoil and some 0.2m of a relict ploughsoil horizon. The topsoil (context [39]) produced a small assemblage of post-medieval pottery extending in date up to the 18th century, and the relict ploughsoil (context [40]) produced a sherd of probable medieval pottery.

- 6 18 Within the southern 5m of the trench these deposits directly overlay 'clean' orange-brown sandy boulder clay and gravel. To the north, the top of this deposit was mixed with broken rock and topsoil to a depth of more than 0.2m, although it should be noted that no disturbance was apparent within the overlying soil horizons. It is likely that this disturbance was related to construction of the former A1 dual carriageway immediately to the west. No archaeological features were identified within this trench.

Trench 5

- 6 19 Trench 5 was located within the central northern part of the field. It measured 30m long and 4m wide, and was orientated from east to west. It was positioned so as to evaluate the presence or absence of any archaeological features within a 'blank' area on the geophysical survey.
- 6 20 The trench was stripped of 0.30m of mid to dark brown slightly clayey silty sand topsoil and 0.2-0.4m of a mid brown slightly clayier and stonier relict plough-soil horizon. Within the eastern 15m of the trench the natural deposit consisted of reddish brown sandy boulder clay and gravel, whilst to the west it comprised yellowish grey clay. Several land-drains were noted running in the base of former furrows, with another running the length of the trench on an alignment consistent with geophysical anomalies 'J' recorded slightly further to the south. No archaeological features were identified within the trench.

Trench 6

- 6 21 This was located towards the north-eastern corner of the area and measured 20m long and 4m wide. It was orientated from north-east to south-west, and was positioned in order to evaluate a discrete geophysical anomaly (O) in order to determine whether it was of archaeological origin. To the south-west it also investigated a 'blank' area on the geophysical survey in order to determine the presence or absence of any archaeological features. Due to the presence of a footpath this trench was moved some 5m to the south-west of its planned position, but still included anomaly 'O' within its north-eastern end.
- 6 22 The trench was stripped of some 0.30m of topsoil and some 0.35m of a relict plough-soil horizon. The natural deposit along most of the length of the trench was reddish brown sand boulder clay. At its north-eastern end, in the area corresponding to geophysical anomaly 'O', the boulder clay was overlain by a laminated sequence of alluvial deposits consisting of alternating grey clay and reddish brown sand. No archaeological deposits were identified within the trench.

Trench 7

- 6 23 In view of the negative results from Trenches 3-6, an additional Trench 7 was excavated to the south of Trench 6 in order to confirm these results and also to

evaluate a slightly raised area of ground at the north-eastern side of the field. Trench 7 measured 20m long by 4m wide, and was orientated from east to west.

- 6.24 The trench was stripped of some 0.30m of topsoil and 0.2-0.35m of a relict plough-soil horizon which thickened down-slope to the west. The topsoil (context [41]) produced a small assemblage of medieval and post-medieval pottery sherds extending in date up to the later 18th or early 19th century, and the relict plough-soil (context [42]) produced a sherd of post-medieval pottery. The exposed natural deposit consisted of orange-brown sandy clay and gravel with some pockets of grey clay. A land drain was observed following a furrow crossing the western end of the trench. No archaeological features were identified.

7.0 DISCUSSION

- 7.1 The only evidence for the earlier prehistoric period recovered during the assessment consisted of a fragment of flint recovered from a later furrow in Trench 1. The flint was in poor condition and it was uncertain whether it had been worked.
- 7.2 Trench 1, excavated across the suggested route of a Roman road or trackway crossing the south-western corner of the area, demonstrated that the raised earthwork in this area is probably a plough-headland associated with the former ridge and furrow cultivation of the field, rather than a raised *agger* (embankment) associated with the road. No definite evidence for survival of surfacing materials was recorded within the trench.
- 7.3 The sequence of six parallel (and presumably successive) ditches presumably flanked the roadway, indicating that the road was likely to have continued in use for a considerable period of time, although the absence of securely provenanced dateable finds means that no overall time-frame can be suggested for this usage. However, it should be noted that the previous excavation within the former Ponderosa Caravan Park to the south of the current evaluation area identified slight linear features running on a similar alignment to those in 2008. It is possible that some or all of the recently excavated features are unconnected with the road. The strong geophysical response from this area (anomaly K) appears to have been produced by the greatly increased depth of soil in this area due to the presence of the complex of ditches combined with the overlying plough-headland.
- 7.4 The linear ditch (anomaly L) targeted by Trench 2 (ditch [13]) did not produce any artefactual evidence to date it. It is suggested to be pre-Roman as it appears to be bisected by the Roman road. The feature is known to have run in a straight line for at least 210m, as recorded by the recent geophysical survey and previous work within the former Ponderosa Caravan Park to the south.

- Possible side ditches (geophysical anomalies N and M) targeted by Trenches 3 and 4 proved to be of natural or modern origin. Agricultural enclosure systems of Iron Age and Romano-British date are widespread along the Vale of Mowbray and the western edge of the Vale of York, and generally comprise large fields comparable in size to many post-medieval fields in the area. It is quite likely that the ditch crossing the proposed development forms one side of a large Iron Age field aligned at right-angles to the River Titt, the other boundaries of which lie outwith the investigated area.
- 7.5 The two pits recorded in Trench 2 indicate probable settlement of Romano-British date in the immediate vicinity. The 'domestic' nature of the finds assemblages recovered from these features contrasts sharply with the general absence of finds from the ditches investigated nearby. The geophysical survey suggests the presence of a relatively localised grouping of several similar features nearby (anomalies P). The only other sherd of Romano-British pottery recovered from the site was also located nearby, within the buried plough-soil horizon in Trench 3 some 30m to the north.
- 7.6 The concentration of the Roman road and possible Romano-British settlement activity on the slightly higher ground at the southern edge of the area away from the River Titt mirrors the distribution of features recorded in 1993-5 and 1998 to the north of the river. In this area, on the higher ground immediately to the south of Roecliffe Lane, widespread evidence for Iron Age and Romano-British settlement was identified (Bishop 2005, 156-8, NAA 1998).
- 7.7 The widespread but sparse distribution of medieval pottery sherds within both the topsoil and relict buried plough-soil layer across the area is consistent with the practice of manuring of arable fields and suggests that the ridge and furrow cultivation across this area is of medieval origin. The presence of post-medieval pottery and clay tobacco pipe fragments within the furrow indicates that the ridge and furrow was retained in use up to at least the 18th century, and thereby influenced the shape of the extant field boundaries.
- 7.8 The evaluation demonstrated that a number of other anomalies recorded by the geophysical survey were not archaeological in origin. A series of parallel anomalies 'J' identified within Trenches 2 and 5 were caused by a sequence of modern land-drains running from east to west. Anomaly 'O' investigated by Trench 6 proved to be of natural origin, as did a linear anomaly 'N' in Trench 3. A strong ferrous response 'I' investigated by Trench 3 was shown to be of modern origin and, on topographic grounds, possibly represented an in-filled pond. A similar large ferrous response 'H' was not investigated, but lies within the same topographic hollow and is likely to form part of the same feature. Anomaly 'M' investigated by Trench 4 at the western edge of the area proved to have been caused by widespread disturbance, probably of modern origin, associated with construction of the adjacent former A1 dual carriageway.

8.0 CONCLUSION AND RECOMMENDATIONS

- 8.1 Construction of the existing Advanced Technology Park across the eastern half of the proposed development area has involved substantial ground disturbance, earth-movement and terracing. It is considered unlikely that any significant archaeological remains survive within this area and no further archaeological intervention is recommended for this part of the site.
- 8.2 Within the field comprising the western half of the development area, the geophysical survey and evaluation trenching have demonstrated the presence of a limited number of archaeological features of Romano-British date concentrated on the slightly higher ground at the southern end of the field. Five trenches located within the central and northern parts of the field did not identify significant archaeological remains.
- 8.3 It is recommended that, in advance of any development
- a 'strip, map and record' exercise be taken across the higher ground at the southern end of the field in order to record any further features associated with the probable area of Romano-British period settlement (Figure 6)
 - archaeological monitoring (a 'watching brief') be undertaken across the remaining area of the field during stripping of the site in order to record any additional discrete archaeological features. Provision should be made within the construction programme to permit adequate investigation and recording of any archaeological features encountered during this work.
- 8.4 A Written Scheme of Investigation for any archaeological works should be prepared and submitted to North Yorkshire County Council Heritage and Environment Section (archaeological advisors to Harrogate District Council) in order that the investigations and recording would constitute a scheme of works that had been agreed with the planning authority.

REFERENCES

- ASUD (2006a) *Land at the Rose Manor Hotel, Boroughbridge, North Yorkshire an archaeological evaluation* Unpublished Archaeological Services, University of Durham report
- ASUD (2006b) *Archaeological Excavation, Land at The Rose Manor Hotel, Horsefair, Boroughbridge, North Yorkshire* Unpublished Archaeological Services, University of Durham report
- Bishop, M C (2005) 'A New Flavian Military Site at Roecliffe, North Yorkshire', in *Britannia* **XXXVI**, 135-223
- British Geological Survey (1977) *Geological Survey Ten Mile Map, South Sheet (Quaternary)* Southampton Ordnance Survey
- British Geological Survey (1979) *Geological Survey Ten Mile Map, South Sheet (Solid)* Southampton Ordnance Survey
- Burl, A (1991) 'The Devil's Arrows, Boroughbridge, North Yorkshire', in *The Yorkshire Archaeological Journal* **63**, 1-24
- English Heritage (1991) *Management of Archaeological Projects*
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds* Ancient Monuments Laboratory
- English Heritage (2002) *Environmental Archaeology A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* Centre for Archaeology Guidelines 2002 01
- English Heritage (2003) *Archaeological Science at PPG16 interventions Best Practice Guidance for Curators and Commissioning Archaeologists*
- Garner-Lahire, J (1996) *Geophysical Survey, Ponderosa Caravan Park, Boroughbridge* Unpublished Field Archaeology Specialists Ltd report
- GSB (1993a) *A1 Motorway Walshford to Dishforth* Unpublished Geophysical Surveys of Bradford Report 93/14
- GSB (1993b) *A1 Motorway Walshford to Dishforth Additional Survey* Unpublished Geophysical Surveys of Bradford Report 93/31
- GSB (1997) *Roecliffe Lane, Boroughbridge Geophysical Survey* Unpublished Geophysical Surveys of Bradford Report 97/97

- GSB (2008) *Wetherby Road, Boroughbridge, North Yorkshire Geophysical Survey Report* Unpublished GSB Prospection Ltd Report 2008/11
- Institute of Field Archaeologists (2001) *Standard and Guidance for an Archaeological Evaluation*
- Jarvis R A, Bendelow V C, Bradley R I, Carroll D M, Furness R R, Kilgour I N L, and King S J (1984) *Soils and Their Use in Northern England* Soil Survey of England and Wales Bulletin 10 Harpenden
- Margary, I D (1973) *Roman Roads in Britain Third Edition*, London
- NAA (1993) *A1 Motorway Walshford to Dishforth Fieldwalking Survey* Unpublished Northern Archaeological Associates Report 93/17
- NAA (1998) *Roecliffe Lane, Boroughbridge, North Yorkshire Archaeological Evaluation Report* Unpublished Northern Archaeological Associates Report 98/23
- NAA (2008a) *Land at Wetherby Road, Boroughbridge, North Yorkshire Archaeological Desk-Based Assessment Report* Unpublished Northern Archaeological Associates Ltd Report 08/05
- NAA (2008b) *Land at Wetherby Road, Boroughbridge, North Yorkshire Archaeological Survey and Trial trenching Written Scheme of Investigation* Unpublished Northern Archaeological Associates Ltd Report 08/81
- Signorelli, L and Copp, A (1999) *Archaeological Excavations, Ponderosa Park, Boroughbridge, North Yorkshire* Unpublished Field Archaeology Specialists Ltd report
- Soil Survey of England and Wales (1983) *Soils of England and Wales Map Sheet 1 Northern England* Southampton Ordnance Survey
- Speed, G (in prep) *A1 Motorway Walshford to Dishforth Excavation within a Neolithic and Eady Bronze Age Landscape between Boroughbridge and Marton-le-Moor, North Yorkshire*
- Walford, J (2007) 'An Early Description of the Devil's Arrows, Boroughbridge, North Yorkshire', in *Yorkshire Archaeological Journal* 79, 325
- Watkinson D and Neal V (1998) *First Aid for Finds*
- Wymer, J J and Bonsall, C J (eds) (1977) *Gazetteer of Mesolithic sites in England and Wales, with a gazetteer of Upper Palaeolithic sites in England and Wales* CBA Research Report 20

Cartographic sources

- 1855 Ordnance Survey 1 10560 First Edition Yorkshire Sheet 138
- 1893 Ordnance Survey 1 2500 Sheet 138 2
- 1895 Ordnance Survey 1 10560 Second Edition Yorkshire Sheet 138
- 1909 Ordnance Survey 1 2500 Sheet 138 2
- 1910 Ordnance Survey 1 10560 Third Edition Yorkshire Sheet 138
- 1952 Ordnance Survey 1 10560
- 1978 Ordnance Survey 1 10000 North Yorkshire Sheet SE 36 NE

Appendix A
POTTERY ASSESSMENT

Peter Didsbury MPhil FSA

Introduction and methodology

A total of 71 sherds, weighing 566 grams, and having an average sherd weight of 7.97 grams, was recovered from the excavations. All material was examined, and then quantified by the two measures of count and weight, according to fabric category within archaeological context. Data was entered on an Access database, which is supplied as an integral part of this report and which should be consulted on matters of detail where appropriate. Fabric codes employed in the database are presented in an appendix (below).

Discussion

The findings are presented as a series of grouped spot-dates within a general discursive framework. Without access to a detailed fabric reference collection for the Boroughbridge area, the medieval fabrics are simply categorised as MED (see appendix, below), though generic considerations have often enabled chronological and other more detailed observations to be made, entered in the 'Remarks' column.

Roman material occurs only in context 19 possibly residually in contexts 16, and residually in context 38. None is closely chronologically diagnostic, though the presence of what is apparently Central Gaulish samian provides a 2nd century *terminus post quem* for context 19. It may be noted that the hand-made pottery from this context (H2) could either be Late Iron Age or contemporary with the samian.

Medieval pottery consists principally of sandy redwares of probable High Medieval date, c. late 12th to early 15th century. Late medieval purple-glazed and Humberware-type fabrics of c. 15th to 16th century date also occur (contexts 41 and 37). Most of the medieval material is residual, its only possible occurrences as the latest or sole component in an assemblage are in contexts 16 and 40.

Post-medieval and modern material accounts for the majority of the site assemblage, with a date-range from the 16th to the late 19th or early 20th century. Much of this material consists of well-known nationally distributed fabrics such as Staffordshire Slipware and Mottled Wares, and White English Salt-Glazed Stoneware (all 18th century), or, later, factory-produced earthenwares of the later 18th and 19th century.

The context assemblages may be spot-dated as follows (date of latest component)

18th century 11, 39

Later 18th or earlier 19th century 21, 32, 38, 41, 42, 43

Later 18th or 19th century 22

Later 19th or 20th century 10, 37

Conclusions and recommendations

The pottery assemblages mainly date from the 18th and 19th centuries. There is also limited evidence of Roman and medieval activity resulting in pottery deposition.

No further work on these assemblages appears to be necessary. The material may, however, be retained in an appropriate archive in the interests of future ceramic research in the region.

Reference

Jennings, S (1981) *Eighteen centuries of pottery from Norwich*. East Anglian Archaeological Report 13 (Norwich)

Appendix fabric common names and database codes

Most of the following fabric terms are generic, self-explanatory, or in common regional or national use.

<i>Code</i>	<i>Common name/remarks</i>
BANDSL	Banded slipware (19th or early 20th century)
CREAM	Creamware (late 18th or early 19th century)
GREB	Brown-glazed red earthenware (post-medieval)
H2	Hand-made material employing non-soluble stone temper
LBLAK	Late Blackware (18th or 19th century)
MED	Medieval
MODSW	Modern stoneware
PEARL	Pearlware
PMED	Post-medieval
PORC	Porcelain
PURP	Purple-glazed wares in the late medieval 'Midland Purple' tradition
RG	Roman greyware
RS	Samian ware
STAFSL	Staffordshire slipware
STAFSMOT	Staffordshire mottled ware
TIN	Tin-glazed earthenware
TPWW	Transfer-printed white earthenwares
TRSL	Trailed Slipware ('Metropolitan' type)
UGRE	Unglazed red earthenware
UNAT	Unattributed
WESGSW	White English Salt-Glazed Stoneware

Catalogue

Id	Context	Fabric	No	Remarks
1	19	RS	1	Body Central Gaulish
2	19	H2	1	Body Hard-fired and fully reduced Quartz grains and clusters (igneous rather than sandstones?) Probably 1A/earlier RB (i.e. could be contemporary with the samian)
3	42	CREAM	1	Perforated body (colander, drainer?) Late 18th or early 19th century
4	39	WESGS W	2	Small handle and body fragments
5	39	STAESM OT	1	Body
6	39	GREB	1	Scrap, glazed both sides Acceptable as being contemporary with rest of assemblage, but could also be later
7	32	CREAM	1	Flake, < 1 gram
8	32	UNAT	1	Unglazed sandy redware Medieval?
9	38	MODS W	2	Bodies, two brown vessels Base of ?tankard with band of rouletting, grooved body Later 18th or 19th century Similar fabrics in 10 and 43
10	38	LBLAK	1	Body Closed form?
11	38	RG	1	Worn body, undatable Light grey sandy fabric with dark grey surfaces
12	38	MED	1	Body Sandy greyware with buff surfaces Single possible glaze spot, almost colourless, on interior 'High medieval'?
13	22	MED	1	Rod handle in light red sandy fabric with pale margins and browner surfaces Perhaps from drinking jug 13th to 15th century
14	22	LBLAK	1	Internally glazed body
15	22	CREAM	2	Rim and body flakes
16	22	MODS W	1	Base of open form, pinkish cream fabric, brown salt glaze both sides
17	43	MODS W	1	Tankard base with three ridges above Similar fabric to those of tankards in 10 and 38 Later 18th or 19th century
18	21	PEARL/T PWW	3	Vermicelli rim, small flatware, chinoiserie print, blue decorated fragment
19	21	CREAM	1	Outbent rim fragment
20	21	MED	2	Bodies, different redware vessels One with brown suspension glaze High medieval?
21	41	PURP	1	Cordoned sherd, probably closed form as jug, cistern Hard, close, red, slightly gritty fabric Most likely 15th or 16th century
22	41	STAFSL	1	Fragment Pink fabric variety with white underglaze slips
23	41	WESGS W	1	Ridged fragment
24	41	CREAM	1	Fragment, < 1 gram
25	41	MED/PM ED	1	Flake, light-firing fabric with coppery interior suspension glaze
26	40	MED?	1	Unglazed body, sandy redware
27	10	TPWW	2	Vermicelli sherd from closed form, 'Willow Pattern' flatware
28	10	LBLAK	1	Glazed inside and partially on exterior Closed form?
29	10	MODS W	3	Two joining base sherds of tankard base with ridges, cf. fabrics in 38 and 43 Plus flake in light fabric with one yellowish salt-glazed surface
30	10	BANDSL	1	Body Blue, white and black bands
31	10	PORC	1	Fragment with blue-glazed exterior A late factory product
32	10	GREB	1	Fragment Brown glaze both sides, fabric similar to that
33	10	PMED?	2	Closed form shoulder, grooved Green suspension glaze on exterior, remains of ?clear glaze on interior Also pinkish buff sherd with dark brown glaze both sides
34	16	RS	1	Chip, much < 1 gram
35	16	RO?/ME D?	4	Bodies and scrap, different vessels All oxidized and sandy, two quite coarse
36	37	WESGS W	2	Shallow dish/deep plate, flatware rim with gadrooned edge
37	37	GREB	2	Large storage jar with lateral handle, and fragment from second vessel Of 'late' appearance, probably 19th century

Id	Context	Fabric	No	Remarks
38	37	CREAM	3	Body, base, 'Queen's shape' rim
39	37	BANDSL	1	Body, blue and white bands
40	37	TPWW	1	Flatware rim, geometric border
41	37	TIN	1	Fragment, blue decoration, glaze extant on interior only 17th or 18th
42	37	UCRE	1	Post-medieval
43	37	MED	4	Three sandy oxidized, various fabrics, one strap handle with deep central groove and notched edges Humberware-like fabric 15th or 16th century?
44	37	UNAT	1	Heavily burnt fabric, vitrified
45	11	STAFSL	2	Body with applied brown blobs on interior and simple rim, both probably same cup, cf Jennings 1981, no 176
46	11	WESGS W	2	Simple rim ?cup, and rim fragment with undulating edge
47	11	TRSL	1	Open form rim in reddish fabric with reddish brown suspension glaze on interior and applied motif in yellow-firing slip 17th or earlier 8th
48	11	MED	2	Closed form base in grey sandy ware with off-white exterior, cream-coloured fragment

Appendix B

BIOLOGICAL REMAINS ASSESSMENT

Deborah Jaques and Alexandra Schmidl

(Palaeoecology Research Services Report PRS 2008/78)

Summary

Washovers and biological remains recovered from three sediment samples (representing two deposits) recovered from excavations on land at Wetherby Road, Boroughbridge, North Yorkshire, were submitted for an evaluation of their biological potential. Archaeological features were concentrated in two of the seven trenches and included ditches and gullies associated with a possible Roman road (Trench 1) and two pits, one of which was interpreted as a cobble-lined hearth.

Ancient biological remains were rather scant and mainly limited to charcoal, some of which could be identified as Maloideae (apple subfamily) and ash. A single charred barley grain was also present. Both deposits gave sufficient charcoal for radiocarbon dating to be attempted. However, the material would be far from ideal for this purpose, twig fragments and a charred grain fragment from Context 16 would provide sufficient suitable material, however.

The vertebrate remains from the samples were few and mostly restricted to pieces of tooth enamel and burnt bone fragments. The assemblage was highly fragmented as a result of fresh breakage damage. Only two molar fragments could be identified as pig, although other pieces of tooth were probably cattle.

None of the biological remains were of interpretative value. On the evidence of the current material, the deposits at this site have little potential for useful bioarchaeological interpretation and no further investigation of these remains is warranted.

Introduction

An archaeological evaluation was undertaken by Northern Archaeological Associates Ltd (NAA) on an area of land at Wetherby Road, Boroughbridge, North Yorkshire, (centred on NGR SE 3935 6605) in 2008, prior to the proposed redevelopment of the area.

Seven trial trenches were excavated but archaeological features were only revealed in two (Trenches 1 and 2). Trench 1 provided evidence, in the form of a number of gullies and ditches, for the line of a possible Roman road which had been identified during an earlier intervention, although neither of the excavations produced any secure dating evidence. A ditch and two pits were encountered in Trench 2. Roman pottery was recovered from the two pits, one of which was interpreted as a cobble-lined hearth. All of the sampled deposits were fills of the two pit features.

The 'flots' (hereafter termed washovers) and remains recovered from the residues from three sediment samples ('GBA'/'BS' *sensu* Dobney *et al* 1992) processed by NAA, were submitted to

Palaeoecology Research Services Limited (PRS), County Durham, for an evaluation of their bioarchaeological potential

Methods

Sediment samples

The sediment subsamples were processed by NAA prior to delivery to PRS, and the unsorted washovers and organic remains recovered from the residues were submitted for evaluation. The weights and volumes of the subsamples were recorded before being placed onto 500 micron nylon mesh in a sieving tank. The light organic fraction was washed over into a 500 micron sieve to collect the washovers. After this initial process, the residues were left to dry and were then re-washed following the same procedure. This additional stage was incorporated to enable any charred botanical remains still within the residue to be more easily recovered.

The washovers and material from the residues were scanned for biological remains (using a low power binocular microscope where necessary) and the presence of these, and of other remains, recorded on paper.

During recording, consideration was given to the identification of remains suitable for submission for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS).

Nomenclature for plant species follows Stace (1997) and charcoal identifications follow Schoch *et al* (2004).

Vertebrate remains

For the vertebrate remains, subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Brief notes were made concerning fragment size, dog gnawing, burning, butchery and fresh breaks where applicable.

Where possible, fragments were identified to species or species group using the PRS modern comparative reference collection. Fragments not identifiable to species were described as the 'unidentified' fraction. Within this fraction fragments were grouped into a number of categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal (assumed to be caprovid, pig or small cervid) and totally unidentifiable.

Results

Plant macrofossils

The washovers were almost exclusively of charcoal and rootlets, with a single cereal grain of barley (*Hordeum distichon* L / *H. vulgare* L). Additionally, most also contained a few uncharred seeds/fruits and earthworm egg capsules which, together with the rootlets, were almost certainly modern contaminants/intrusions.

Details of the plant remains are presented in Tables 1 and 2 in context number order, together with notes on other remains present and regarding material suitable for radiocarbon dating.

Vertebrate remains

Vertebrate remains from the two sampled deposits, amounted to 68 fragments and were mostly limited to pieces of tooth enamel and fragments of burnt bone. Some of the burnt remains were white/grey in colour suggesting that they had been subjected to high temperatures, although prolonged heating at lower temperatures may achieve the same effect. A few of the enamel fragments were also very slightly scorched.

Extensive fresh breakage damage was noted throughout, resulting in few identifiable fragments. Two of the fragments of tooth were identified as pig, whilst some of the larger pieces of enamel were probably from cattle teeth. Details of the vertebrate assemblage by sample can be found in Table 3.

Discussion and statement of potential

Ancient plant remains recovered from the sediment samples were mostly restricted to charcoal, with a single gram of barley, these are likely to reflect past human activity in the vicinity. Both of the fills from the cobble-lined hearth in pit 15 gave quite large quantities of charcoal. Some of the larger fragments could be identified as apple subfamily (Maloideae – including *Amelanchier*, *Cotoneaster*, *Crataegus*, *Cydonia*, *Mespilus*, *Pirus*, *Sorbus*) and ash (*Fraxinus*). The charcoal almost certainly represents the remains of wood burnt as fuel.

Both deposits gave sufficient charcoal for radiocarbon dating to be attempted. However, most of this material would be far from ideal for this purpose – as neither the wood species nor the age of the wood prior to charring could be determined any date returned would contain an unknown error (most likely to manifest as an artificially early date). The exceptions to this were the twig fragments (and also the single cereal grain) from Context 16 which would provide suitable material for radiocarbon dating via accelerator mass spectrometry (AMS), if required.

The vertebrate material from the samples was somewhat scant and highly fragmented as a result of fresh breakage damage. The presence of a high proportion of tooth enamel fragments suggests a taphonomic bias in favour of certain types of skeletal elements, i.e. those which are more durable and survive better when preservational conditions are poor. Teeth tend to survive in poor conditions because of their higher mineral content (in comparison to bone), whilst burnt remains are also more likely to be recovered under such conditions. These remains are likely to represent butchery or food waste that was thrown into the fire or discarded into the pit.

Recommendations

No further study of the biological remains from this site is warranted.

Retention and disposal

The ancient organic remains recovered from the processed subsamples should be retained as part of the physical archive for the site.

Unless required for purposes other than the study of biological remains, any remaining unprocessed sediment from the deposits reported here may be discarded.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here

Acknowledgements

The authors are grateful to Gail Hama and Lynne Lowrie, of Northern Archaeological Associates, for providing the material and the archaeological information, and for the processing of the sediment samples, respectively

References

- Dobney, K, Hall, A R, Kenward, H K and Milles, A (1992) A working classification of sample types for environmental archaeology *Circaea, the Journal of the Association for Environmental Archaeology* 9 (for 1991), 24-6
- Schoch, W H, Heller, I, Schweingruber, F H and Kienast, F (2004) Wood anatomy of central European species Online version www.woodanatomy.ch
- Stace, C (1997) *New Flora of the British Isles second edition* Cambridge Cambridge University Press

Table 1 Land at Wetherby Road, Boroughbridge, North Yorkshire Summary of the biological remains recovered in the washovers from the NAA processed sediment samples, with notes on any material suitable for submission for radiocarbon dating Key 'C/S' = Context number/Sample designation, 'T' = Trench, 'kg/l' = amount of sediment processed in kilograms and litres, 'wt' = weight of washover in grammes, 'IDs' = identifiable charcoal, 'A' = suitable material for radiocarbon dating via AMS present (NB in most cases charcoal fragments are not considered as suitable material for this purpose), 'D' = further detailed recording recommended

C/S	T	Context description	kg/l	wt	Identifiable ancient plant remains (charred and waterlogged)	IDs	Notes including modern contaminants (waterlogged)	Other	A	D
16/AA	2	fill of cobble-lined hearth in pit 15 (western half)	41 5/36	52	charcoal (to 35 mm), one gram of barley (<i>Hordeum distichon</i> L / <i>H. vulgare</i> L)	apple subfamily (Maloideae), ash (<i>Fraxinus</i>)	rootlets, a few earthworm egg capsules, two seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>), two seeds of dwarf elder/elder (<i>Sambucus ebulus</i> L / <i>S. nigra</i> L)		Yes	No
16/AB	2	fill of cobble-lined hearth in pit 15 (eastern half)	46/36	143	charcoal (to 30 mm, including a few twig fragments)	apple subfamily (Maloideae), ash (<i>Fraxinus</i>)	rootlets, a few earthworm egg capsules		Yes	No
19/AA	2	fill of pit 18	46/39	19	some slightly deformed charcoal (to 10 mm), a few fragments of root/rhizome (to 8 mm)	none	mostly rootlets, a few earthworm egg capsules	some slag (to 6 mm)	No	No

Table 2 Land at Wetherby Road, Boroughbridge, North Yorkshire Summary of the charcoal recovered from the residues from NAA processed sediment samples, with notes on any material suitable for submission for radiocarbon dating Key 'C/S' = Context number/Sample designation, 'T' = Trench, 'kg/l' = amount of sediment processed in kilograms and litres, 'wt' = weight of charcoal in grammes, 'size /mm' = maximum dimension of charcoal fragments present in mm, 'IDs' = identifiable charcoal, 'A' = suitable material for radiocarbon dating via AMS present (NB in most cases charcoal fragments are not considered as suitable material for this purpose), 'D' = further detailed recording recommended

C/S	T	kg/l	wt	size /mm	IDs	Notes	A	D
16/AA	2	41 5/36	8	20	apple subfamily (Maloideae)	charcoal	No	No
16/AB	2	46/36	111	25	apple subfamily (Maloideae), ash (<i>Fraxinus</i>)	mostly charcoal, a few twig fragments (to 23 mm), one piece of bark (to 23 mm)	Yes	No
19/AA	2	46/39	<1	10	None	very silted deformed charcoal	No	No

Table 3 Land at Wetherby Road, Boroughbridge, North Yorkshire 'Summary of the vertebrate remains recovered from the residues from NAA processed sediment samples' Key 'C/S' = Context number/Sample designation, 'Fragments' = total fragment count

C/S	T	Context description	Fragments	Wt (g)	Notes
16/AA	2	fill of cobble-lined hearth in pit 15 (western half)	14	7	14 bone fragments (to 14 mm, 7 g) were recovered from this sample. Preservation of the remains was described as 'fair', although fresh breakage damage was noted. Two molar fragments were identified as pig, whilst two other enamel fragments were possibly from a large mammal tooth. The other ten fragments, seven of which were burnt (four were white in colour and three were grey/black), were unidentifiable to species or family group.
16/AB	2	fill of cobble-lined hearth in pit 15 (eastern half)	23	12	23 fragments (to 29 mm, 12 g) of which 15 were pieces of tooth enamel. These last were probably from a single cow molar which had been damaged both in the ground and more recently during excavation. Eight bone fragments were also present but these could not be identified. Six of these had been burnt or scorched.
19/AA	2	fill of pit 18	31	12	31 fragments of bone (to 38 mm, 12 g), most of which were of reasonable preservation, although much fresh breakage damage was evident. Most fragments (28) were pieces of large mammal tooth enamel, which probably were part of one tooth, possibly cattle. A further three fragments were recorded, none of which were identifiable, one was burnt.

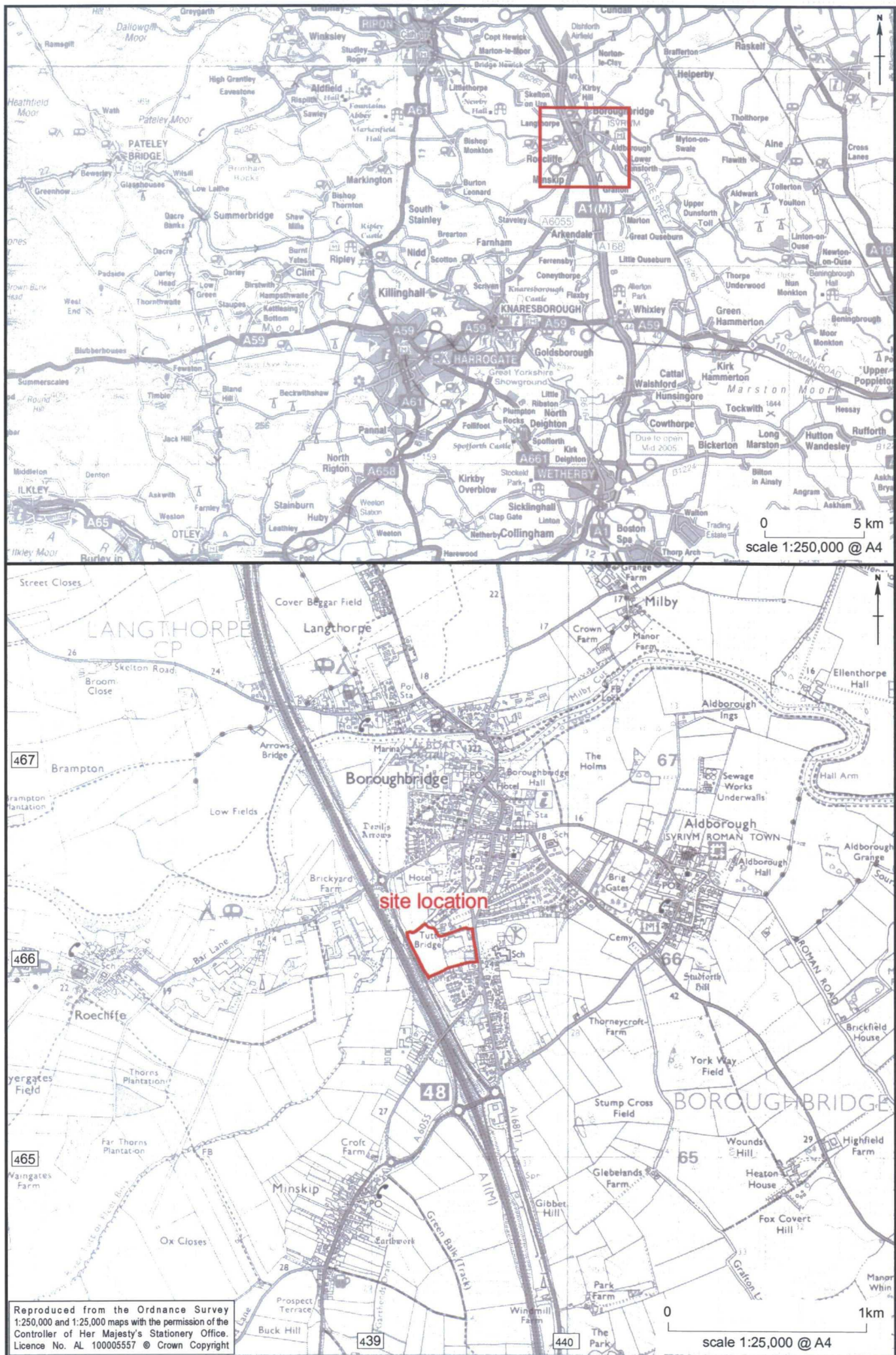


Figure 1 Wetherby Road, Boroughbridge: site location

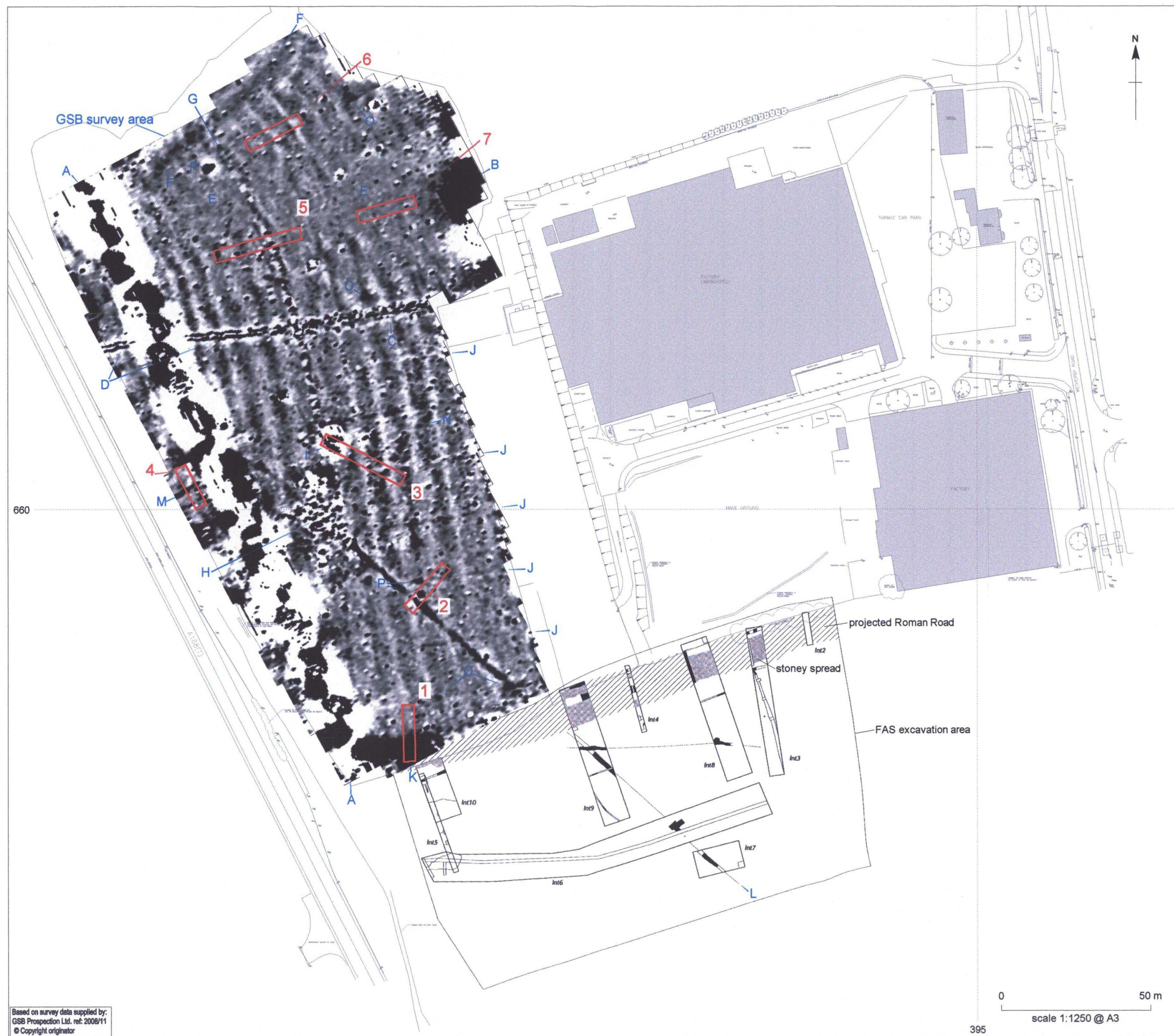


Figure 2 Wetherby Road, Boroughbridge: trial trench locations overlain on geophysical survey results



Figure 3 Wetherby Road, Boroughbridge: recorded ridge and furrow earthworks

Trench 1

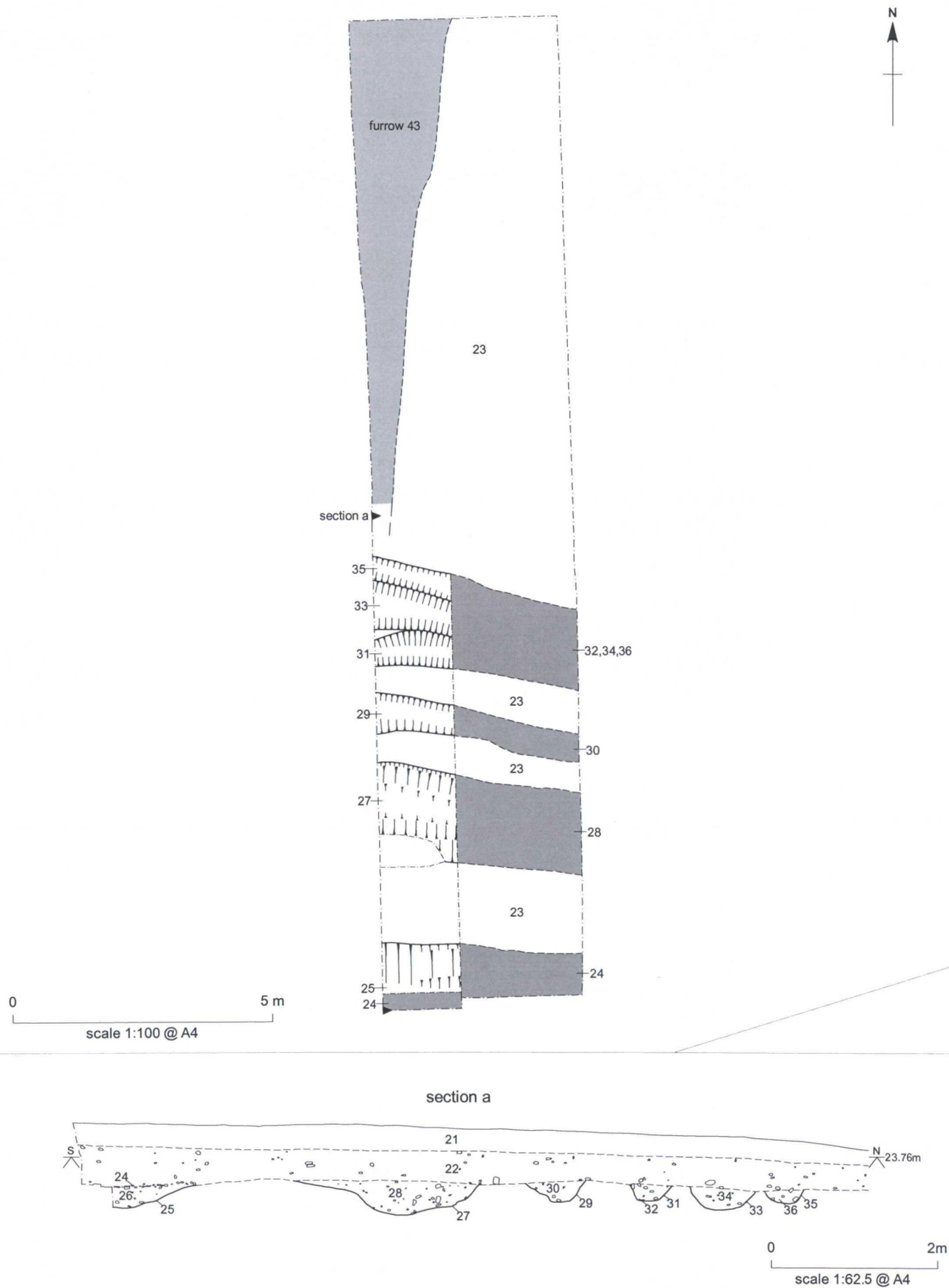


Figure 4 Wetherby Road, Boroughbridge: Trench 1 plan and section

Trench 2

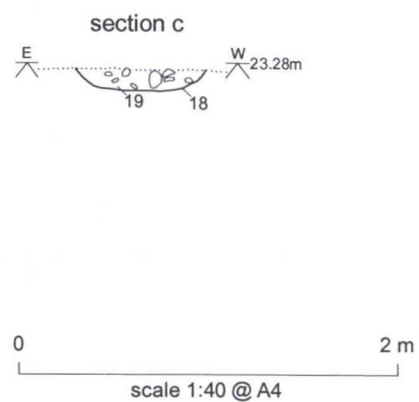
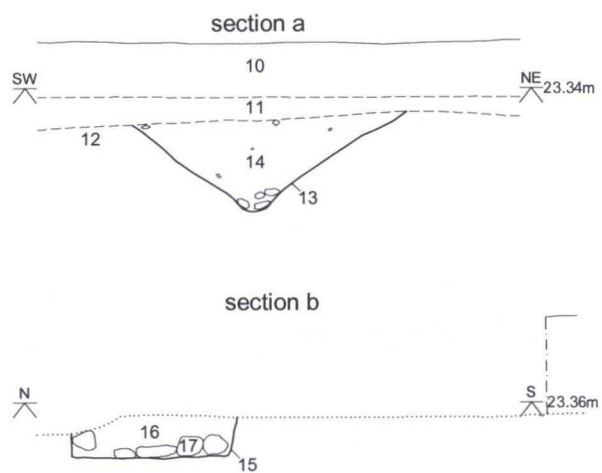
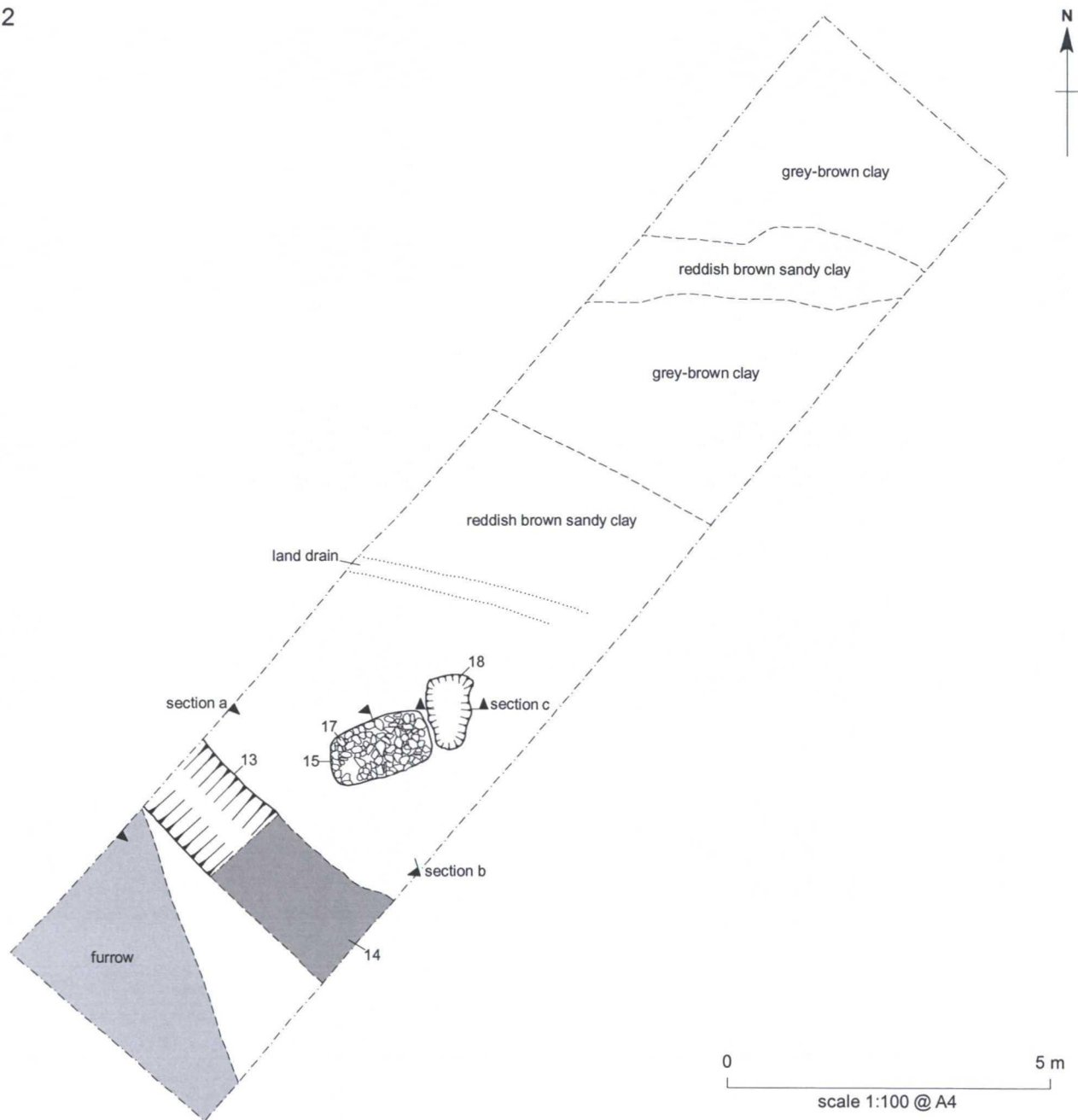


Figure 5 Wetherby Road, Boroughbridge: Trench 2 plan and section



Figure 6 Wetherby Road, Boroughbridge: recommended archaeological mitigation



Plate 1 Wetherby Road, Boroughbridge: earthwork ridge and furrow, facing east



*Plate 2 Wetherby Road, Boroughbridge: Trench 1, ditch group 20, facing south west.
Scales 2m, 1m*



Plate 3 Wetherby Road, Boroughbridge: Trench 1, ditch group 20, facing north west, scales 2m, 1m



Plate 4 Wetherby Road, Boroughbridge: Trench 2, ditch 13, facing north west. Scales 2m, 1m



Plate 5 Wetherby Road, Boroughbridge: Trench 2, pit 15, west-facing section.
Scales 1m, 0.1m

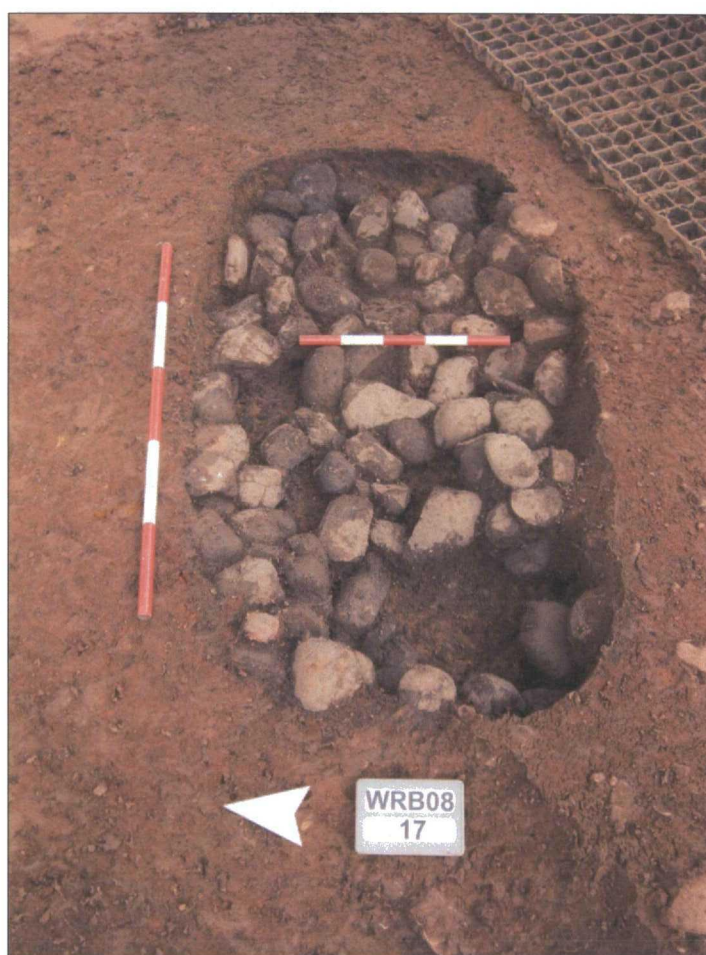


Plate 6 Wetherby Road, Boroughbridge: Trench 2, pit 15 showing stone lining 17.
Scales 1m, 0.5m