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Gale Common Ash Disposal Site – Phase III, Womersley, North Yorkshire

archaeological excavation assessment report and updated project design

on behalf of
Scott Wilson Ltd

for
British Energy PLC

Report 2112

December 2008 revised

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West One, Wellington Street, Leeds LS1 1BA

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1. Summary

The project

- 1.1 This report presents the results of an archaeological excavation conducted in advance of a development at Gale Common Ash Disposal Site. The works comprised excavation of three open areas within the development area.
- 1.2 The works were commissioned by Scott Wilson Ltd, and conducted by Archaeological Services in accordance with a written scheme of investigation (Cooper 2007a) and mitigation strategy provided by Scott Wilson Ltd (Scott Wilson 2008). These have been approved by the County Archaeologist for North Yorkshire County Council and the English Heritage Regional Science Advisor.

Results

- 1.3 The archaeological investigations exposed elements of the late Iron Age to late Roman rural landscape. Two main centres of settlement were preserved south of the site boundary. In the excavated areas, the immediate environs of these settlements were also uncovered, providing information about the context of the settlement, their size and nature.
- 1.4 In the southwest part of the site, a previous scheme of evaluation had identified a late Iron Age/Romano-British settlement. Boundaries and enclosures relating to this settlement were exposed. Later Roman ditches were observed extending into this area, indicating an attempt to integrate this earlier rural landscape into the field system established further to the east.
- 1.5 To the southeast, a late Roman rectilinear enclosure system was identified. Enclosures, trackways, and a wooden building relating to this settlement were all exposed. The settlement was greater in size than the earlier centre, and also displayed evidence of expansion and changing use during its occupation. The centre of settlement appeared to be more widely spread than in the late prehistoric area, and a higher proportion of domestic refuse in the form of pottery, glass, jewellery remains, and a quern fragment, was recovered.

Recommendations

- 1.6 It is recommended that a scheme of full analysis of the excavated material from the excavation works is carried out, incorporating the results of the geophysical survey and evaluation. In addition, the ceramics from the previous evaluation should be reassessed in light of the larger assemblage now recovered from the site. The analysis will provide information to extend the understanding of settlement and land-use in this area of the country during the later prehistoric and Roman periods. It is proposed that the results should be published in *The Yorkshire Archaeological Journal* or another suitable archaeological journal. An updated project design for this work is provided in Appendix 5.

2. Project background

Location (Figure 1)

- 2.1 The site is an area of land approximately 12.6 hectares in size, located on the southwest side of the Gale Common Ash Disposal area, near to Wormersley, North Yorkshire (NGR: SE 537 212). The site is to form a continuation to the present ash tip, requiring the removal of topsoil and some subsoil before a geosynthetic liner is laid down. Three areas were subject to archaeological soil-stripping and excavation. Area A was situated on the west side of the site, and measured 9259m², whilst Areas B and C were on the eastern side and measured 13632m². Both areas were irregular in plan, as areas of soil were adapted to the evolving nature of the project.

Development

- 2.2 The development is the extension of the existing ash mounds within the Gale Common site. This will comprise the construction of a raised access route, return water levee system and embankment formed of ash. Due to the identification of an archaeological resource within the development area, a mitigation strategy for the development was designed to reduce the impact upon this resource: this involved the preservation of some remains *in situ*, archaeological monitoring and recording of some areas, and archaeological excavation of others.

Aims and objectives

- 2.3 The general objectives of the works were:
- to preserve by record the archaeological remains that will be impacted by the development;
 - to confirm and enhance the results of the evaluation to understand the extent date and nature of archaeological deposits and features;
 - to provide a clearer understanding of the level of activity within the development area and surrounding landscape.
- 2.4 The specific aims of the works were:
- to determine the extent of the occupation settlement activity previously recorded;
 - to obtain further information on the nature and function of the occupation areas;
 - to determine the extent of activity within the immediate area of the evaluation Trench 10;
 - to determine the nature and extent of archaeological features and/or deposits within the apparent blank areas.

Methods statement

- 2.5 The works have been undertaken in accordance with a written scheme of investigation (Copper 2007a) and a mitigation strategy (Scott Wilson 2008)

both of which have been approved by the County Archaeologist for North Yorkshire County Council and the Regional Scientific Advisor.

Dates

- 2.6 Fieldwork was undertaken between the 6th of May and the 27th of June 2008. This report was prepared between the 25th September and the 12th of December 2008.

Personnel

- 2.7 Fieldwork was conducted by Graeme Attwood, James Best, Dr James Bruhn, Edward Davis, David Graham, Richard Mason, Jason Mole, Andy Platell, Alicia Swindells, Paul Watson, Dr Dave Webster, and Richie Willis, and supervised by Mark Randerson.
- 2.8 Post-excavation works were conducted by Janice Adams, Bryan Atkinson, Janet Beveridge, Matt Claydon, Charlotte Henderson, Andy Platell, Mark Randerson, and Dr Dave Webster.
- 2.9 This report was prepared by Daniel Still and Mark Randerson, with illustrations by David Graham. Specialist analysis was conducted by Dr Jeremy Evans and Philip Mills (ceramics), Louisa Gidney (animal bone), Prof Jennifer Price (glass), Fraser Hunter & Dawn McLaren (metal, stone, and industrial residues), Jennifer Jones (conservation, daub, industrial residues, and pot boilers), Dave Heslop (querns), Jason Mole (flint), Dr Helen Ranner (macrofossil and pollen analysis), and Dr Stephen Davis (insect assessment). The Project Manager was Daniel Still.

Archive/OASIS

- 2.10 The site code is **PGC08**, for **Pontefract Gale Common 2008**. The archive is currently held by Archaeological Services and will be transferred to the Yorkshire Museum in due course. Archaeological Services is registered with the **Online AccesS to the Index of archaeological investigationS project (OASIS)**. The OASIS ID number for this project is **archaeol3-51058**.

3. Landuse, topography and geology

- 3.1 At the time of the fieldwork the development area comprised fields of improved grassland designated as set-aside.
- 3.2 The site is roughly level, with a gentle downward slope to the south; the height of the site varied between 5m and 10m AOD. The site has been subject to ploughing in the past. A slight ridge appears to have crossed the north side of the site, aligned east to west. This area was very heavily plough damaged, with many archaeological features completely removed by horizontal truncation. To the south of this, archaeological preservation improved, with excellent survival encountered against the southern boundaries of both areas. A high level of groundwater was also present on the south side of the site.

- 3.3 The solid geology of the area comprises Permian and Triassic sandstone, mudstone and magnesian limestone. This is overlain by laustrine deposits which derived from the glacial Lake Humber and comprise alternating layers of sands and clays (Institute of Geological Sciences 1983; British Geological Survey 1977). Natural subsoil was exposed in all areas of the site. The character of this subsoil varied within localised areas, but was generally a moderately compact mid brownish yellow silty sand, mottled with small irregular lenses of mid brown, mid yellow, and light yellowish white.

4. Historical and archaeological background

- 4.1 A desk-based assessment of the site has already been completed (Copper 2007b) and sets out the historical background of the site in detail. This is briefly summarised below.

The prehistoric period (up to AD 70)

- 4.2 Within the vicinity of the development area are two areas of ancient woodland, potentially dating back to prehistoric times. Evidence for prehistoric human activity in the area comprises flint tools recovered close to the site at Wood Hall moated manor. A series of crop marks have also been identified of potentially late prehistoric date (below, 4.9).

The Roman period (AD 70 to 5th Century)

- 4.3 Romano-British settlement has already been identified close to the site at Wood Hall. This comprises a series of ditches forming part of field systems and trackways. Aerial photographic evidence suggests these continue into the development area. It is reputed that a Roman tessellated pavement was uncovered at Wood Hall during drainage works in 1957. Other remains identified in the wider landscape from this period include a coin hoard at Criddling Stubbs and a settlement at Womersley Quarry.

The medieval period (5th century to 1540)

- 4.4 Directly adjacent to the southern boundary of the site is the site of the regionally significant medieval Wood Hall moated manor. This dates from the 12th century or earlier. Aerial photographic evidence indicates that the remains of ridge and furrow are present, which may date from the medieval and post-medieval periods.

The post-medieval period (1541 to 1899)

- 4.5 Cartographic evidence shows that the development area comprised fields during the post-medieval period. Some of the field boundaries have been removed and can still be traced on aerial photographs. The only other changes to the site during this period appear to have been the cutting of two substantial drainage ditches.

The modern period (1900 to present)

- 4.6 In recent years a huge quantity of waste ash has been deposited directly to the north of the development area. This has derived from power stations in the region.

Previous archaeological works

- 4.7 Extensive archaeological works have previously been conducted at the Wood Hall moated manor (Metcalf 2001), approximately 200m south of the development area. These have established that the site dates from at least the 12th century and that the buildings were subject to structural change over the following two hundred years. Below the medieval levels a number of Romano-British features and finds were identified. These included several boundary ditches and an area of ard marks.
- 4.8 The development area has been subject to a number of recent archaeological works directly related to this project. This has comprised a desk-based assessment, geophysical survey (ASWYAS 2007), trial trenching (Cooper 2007c) and an assessment of geotechnical and topographic data.
- 4.9 The desk-based assessment identified cropmarks both within the site and within close proximity. These were interpreted as most likely late Iron Age/Romano-British in date, reflecting a landscape of fields, enclosures and trackways.
- 4.10 In order to examine the nature and extent of the cropmarks a geophysical survey was undertaken. The results of the survey highlighted two separate areas of anomalies. A rectilinear arrangement of enclosures was identified in the southeast part of the development area and an oval enclosure in the southwest part. Medieval ridge and furrow and post-medieval field boundaries were also identified.
- 4.11 The final stage of evaluating the site comprised a programme of trial trenching. The results of this work are outlined below.

5. The trial trenching

- 5.1 A series of ten trial trenching were excavated to sample both anomalies and blank areas identified in the geophysical survey.
- 5.2 Archaeological features were identified in all but two of the trenches (Trenches 3 and 8). Two trenches were located across the extensive geophysical anomalies in the southeast part (trenches 5 and 6) and two in the southwest part of the area (trenches 1 and 2). A significant archaeological resource was identified within these trenches comprising numerous ditches and gullies. Additional features identified in trenches 5 and 6 included pits and postholes.
- 5.3 Further archaeological features were identified in trenches 4, 7, 9 and 10. These mainly comprised ditches and gullies and several pits in trench 10. None of the features within trenches 4, 7 and 9 were identified within the geophysical survey interpretation.
- 5.4 Based on the assessment of the ceramic assemblage, activity on the site can be divided into two broad phases. Several ditches within trenches 1 and 2 were

dated as late Iron Age/early Romano-British; these include a large curvilinear enclosure ditch. The second phase dates to the later Roman period (3rd to 4th century); this includes features in trenches 1, 2, 5, 6 and 10, and indicates that the rectilinear system of enclosures is late Roman in date.

- 5.5 Environmental evidence was recovered from features from both phases of activity, including both charred cereal and wild plants and waterlogged deposits in trenches 1 and 2; these included remains of both plants and invertebrates. These have the potential to significantly add to our knowledge of the economic basis of the settlements and their immediate environment.
- 5.6 The trial trenching confirmed the presence of two foci of activity indicated by the geophysical survey and that the archaeological resource is in a good state of preservation.
- 5.7 The following recommendations were made about the finds assemblage from the evaluation; it is proposed these are completed as part of the final analysis phase of the project:
- Flint – 4 pieces, all residual or unstratified – No further work recommended
 - Two metal objects – No further work recommended
 - Industrial waste from eleven contexts – No further work recommended
 - Pottery – recommendation for re-examination as part of the full analysis stage of the project
 - Environmental – no further work on the samples assessed from the evaluation
- 5.8 It is recommended that the data from the geophysical survey and evaluation trenches, including the specialist assessments, is incorporated within the final analysis phase of the project.

6. The excavation (Figure 2)

Introduction

- 6.1 Following the results of the evaluation works a mitigation strategy was agreed between the County Archaeologist, the English Heritage Regional Science Advisor, Scott Wilson Ltd, and British Energy. This included the preservation *in situ* of the archaeological resource in the southern part of the site and archaeological monitoring during initial topsoil removal within three areas of the site. It soon became apparent that archaeological deposits comprising mainly soil-filled ditches were present in all of these areas and that the survival of archaeological features was more extensive than suggested by the evaluation works. Further supervised soil-stripping was undertaken to determine the potential nature and extent of these remains and three large areas were established (A, B and C). These areas were cleaned, sample excavated and recorded. Three investigation trenches were dug between Areas A and C, and a further two to the north of Area A, in order to determine the extent and nature of archaeological activity here. Photographic recording and surveying work was undertaken in these trenches, with no excavation. It was

also agreed that the northern part of the site would be handed over to the developer as deposits had been severely truncated here. During soil-stripping in that part of the site any archaeological features exposed were recorded. In all, eight phases of activity were identified within the site. The broad phasing and character of the archaeological resource is outlined below. These have been broadly dated to:

- Phase 1: Natural
- Phase 2: Late prehistoric/early Roman
- Phase 3: Roman
- Phase 4: Roman
- Phase 5: Roman
- Phase 6: Medieval
- Phase 7: Post-medieval
- Phase 8: Modern

6.2 A full list of contexts is included in Appendix 1 and site matrices are presented in Appendix 3.

Area A

6.3 Area A was located in the southwest part of the development areas. During the monitoring of the initial soil-stripping operations a number of archaeological features were identified. A large open area measuring 9259m² was then opened up to identify the nature and extent of the archaeology.

Phase 2 – Late prehistoric/early Roman

Ditches and gully

6.4 Seven ditches and a gully were identified. These comprised:

- *F112* – A substantial boundary (up to 3m in width) traversing the entire middle part of the area on a northeast-southwest alignment. The line of this feature had been re-cut a number of times. The nature of the fills suggests that they may have been deposited by moving water. Two trenches (Trenches 11 and 12) excavated to the north of Area A confirmed that the feature continued for at least 60m.
- *F128; F130; F135* – Several east-west aligned boundary ditches in the southeast corner of Area B. *F130* terminated within the trench and was substantially truncated by *F128*. Both *F128* and *F135* continued beyond the area of excavation to the east and west.
- *F89* – A shallow gully directly north of *F112* and on the same alignment. Both ends of the gully terminated within the trench.
- *F93* – A northeast-southwest aligned ditch. Only the northern terminal of the ditch was within the excavated area. A stakehole was identified within the base of the feature.
- *F83* – A northwest-southeast aligned ditch. This was heavily disturbed by a modern field drain and animal burrows.
- *F81* – A northwest-southeast aligned ditch. The northern end of the feature terminated within the area.

Discrete features

6.5 Several discrete features were identified in the central part of the area. These comprised a circular ring-ditch, sub-circular gully, a posthole and a pit.

Ring-ditch

- 6.6 South of the boundary F112 a sub-circular ring-ditch was identified [F449]. This was oval in shape with an internal diameter of up to 1.7m. The ditch in profile was steep-sided with a flat base and was filled by a single homogenous fill.

Sub-circular gully

- 6.7 North of boundary F112 a sub-circular gully was identified [F102]. This had an internal diameter of approximately 5.6m. The gully formed a half-circle with the west side open.

- 6.8 Two features were identified within close proximity of the sub-circular gully with which they may be associated. These comprised a pit [F105: 0.76m by 0.52m] located inside it and a posthole [F133: 0.35m in diameter] located a little to the west.

Phase 5 – Late Romano-British

Ditches

- 6.9 Two boundary ditches were identified. These comprised:
- *F23 and F3* – A northeast-southwest aligned boundary ditch forming the western boundary of the site. The northern terminal of the ditch was located, and in all an approximate length of 132m of the ditch was uncovered. This continued below the baulk to the south. A break in the northern part of the ditch would have provided an entrance way. The northern part of the boundary was very shallow due to horizontal truncation.
 - *F140 and F166* – A curvilinear ditch was identified in the southeast corner of the area. An entrance through the boundary was present as a break in the western side of the ditch. These cut ditch F128, and appeared to be re-using this earlier boundary.

Discrete features

- 6.10 One rectangular pit [F11: 0.72m x 0.68] was identified directly adjacent to the boundary ditch F23.

Phase 6 – Medieval

Ditch

- 6.11 A single ditch was identified in the southeast part of the site. This cut ditch F166.

Phase 7 – Post-medieval

Gully

- 6.12 Three features dating from this period were identified. A 20m length of gully [F108] was located in the southern part of the area. This was aligned north-south and both terminals were within the excavation area.

Treehole

- 6.13 In the central part of the area a treehole was identified [F103: 3.2m x 2.4m].

Sheep burial

- 6.14 A sheep burial was located in the northwest part of the site. The burial had been truncated by a modern land drain and animal burrowing leading to the loss of the skull and the displacement of some of the skeleton.

Phase 8 – Modern

- 6.15 Both plough scars [F2] and field drains [F1] were exposed across the area, with plough damage particularly evident to the north, where this had caused horizontal truncation. The entire area was overlain by topsoil.

Finds

- 6.16 Six potsherds were recovered from the area, one of which is of medieval date and was presumably deposited by manuring. Of the remaining sherds, four are Roman, whilst one, from ditch [F23], is of late Iron Age/Roman date. Such a small assemblage may indicate that this area lay some distance from the Roman period settlement. A high volume of potboiler fragments were retrieved from 14 contexts, however, strengthening the suggestion that the settlement south of the area is of prehistoric date (above, 5.4). Two worked flint fragments, possibly residual, also lend weight to this idea. Bone was recovered from one animal burial, with one more fragment from ditch [F23].

Environmental

- 6.17 Plant macrofossil remains of wheat were recovered from the area, which was the staple cereal crop in the region during the later prehistoric period. Weed remains, fire waste, and domestic refuse were also recovered, suggestive of the normal waste deposits associated with a settlement.

Area B

- 6.18 Area B was in the southeastern part of the development area, extending towards the southeast boundary. Archaeological features were again identified during the monitoring of the initial soil-stripping operations. An area was opened in stages, eventually measuring 6998m², to investigate and assess these remains.

Phase 2 – Late prehistoric/early Roman

Alluvial lens

- 6.19 A discrete alluvial lens [F500] was exposed to the west of the centre of Area B, where the topography of the site formed a heavily-waterlogged natural 'bowl'. This lens was very irregular in shape, and comprised a fine light grey silty sand.

Phase 3 – Roman

Ditches

- 6.20 A series of ditches and smaller gullies were identified, although all were truncated by later activity. These comprised:
- *F232 and F172* – The south side of a northwest-southeast aligned ditch or gully, next to the south boundary. [F172] extended from the baulk in a northeast direction, forming an enclosure.

- *F281* – A short length of a boundary gully, following a northwest-southeast alignment. It is very probable that this gully was a continuation of [F232] to the southeast.
- *F170* – A sinuous drainage gully. This cut through pit [F176] at its south extent.
- *F253 and F255* – Two drainage ditches/gullies which ran, like [F172], towards the natural ‘bowl’ noted above (6.19).
- *F407 and F493* – Boundary gullies at the west of the area. These both followed a northwest-southeast alignment, and were roughly parallel with [F232] and [F281], to the south.

Enclosure

- 6.21 An irregular enclosure was excavated at the north side of the area. This was formed by a curvilinear ditch [F379] which progressed south and southeast from the east side of gully [F369]. A recut of this ditch [F310; F377] extended further to the south, whilst a northeast-southwest aligned linear gully [F423] formed the southeast side.

Rectangular enclosure

- 6.22 A rectangular enclosure, aligned northwest-southeast, was identified in the southwest of the area. This was defined by a wide, flat-based ditch [F239; F241; F450] which extended north from the boundary line created by [F232] and [F281].

Phase 4 - Roman

Ditches

- 6.23 This phase formed a period of substantial enlargement of the settlement, with four substantial ditches replacing earlier gullies and defining or re-defining boundaries.
- *F198* – A substantial boundary ditch, aligned northwest-southeast near to the south boundary of the area, and coming to a terminal to the northwest. This replaced ditch/gullies [F232] and [F281].
 - *F265* – A continuation of the line of ditch [F198], extending from approximately three metres northwest of the ditch terminal to the baulk. The break in the line between this and [F198] formed an entrance, where gully [F281] had previously been a continuous boundary.
 - *F369* – A sub-square enclosure ditch in the centre of the area, aligned northeast-southwest. This had an entrance on the southwest side.
 - *F296* – The terminal end of a heavily-truncated boundary ditch. This formed a northwest-southeast aligned boundary north of [F198], with a terminal facing the southeast corner of enclosure [F396].
- 6.24 In addition, a number of smaller ditches and gullies were also exposed as part of this phase including:
- *F184, F186, and F195* – Small enclosure gullies in the southwest part of the area, possibly stock enclosures.
 - *F220* – A short length of enclosure gully, progressing northeast-southwest to the entrance formed by ditches [F198] and [F265]

- F187 – A long, northwest-southeast aligned gully forming a narrow enclosure north of ditch [F296].
- F249, F251, F259, F298, and F300 – A series of drainage gullies south of the natural ‘bowl’.
- F413, F444, and F487 – Three small enclosure ditches in the northwest part of the area.

Structure

- 6.25 A rectangular building [F399] was exposed in the centre of the square enclosure [F369]. The beam slots for this structure were exposed. The building was aligned northeast-southwest, with walls evident on the northeast, northwest, and southeast sides, whilst the southwest side was left open. The structure was initially symmetrical. However, the southeast wall was later extended southwards, making the building 11.7m long at its greatest extent, and 6.4m wide. Two discrete beam slots were excavated within the building, both of which had been burnt *in situ*, leaving behind deposits of ash, charcoal, and burnt daub.

Haystack gully

- 6.26 To the southeast of the square enclosure, a sub-circular gully [F347] was identified. This gully formed a ring roughly 5m in diameter, with a gap to the west. Two discrete post holes [F362; F364] were associated with the gully.

Phase 5 - Roman

Ditches

- 6.27 Further boundary features, enclosures and double-ditch trackways were created in this phase. A series of ditches were investigated, comprising
- F161 and F192 – These two ditches formed a sinuous parallel trackway which extended from the southwest corner of the area across the entrance previously formed by [F198] and [F265]. This trackway then met another at a right angle. [F192] turned northwest, to form part of the south side of this, whilst [F161] turned southeast, following the boundary of rectangular enclosure [F239] to ditch [F198].
 - F373 – This ditch formed a trackway with the northwest extension of [F192], truncating the southwest side of square enclosure [F369].
 - F207 – A right-angled boundary ditch which ran from the southeast corner of [F369], cutting through ditch [F296], and turned to the southeast.
 - F367 – A boundary ditch extending northeast from a terminal on the northeast corner of enclosure [F369].
 - F293 and F371 – A short linear and curvilinear ditch inside enclosure [F369], cutting the north side of building [F399]. These two ditches appeared to be re-instating the previous enclosure which stood here (see 6.21, above).
 - F181 and F197 – Two small enclosure ditches in the east part of the area.

Alluvial lens

- 6.28 A discrete lens of alluvial material [F246] lay in the natural 'bowl', west of the centre of the area. This layer was again very irregular in shape, and comprised a fine light grey silty sand, mottled with mid brown and light greyish white.

Discrete features

- 6.29 A deposit of packed earth [F393] lay within the northwest side of structure [F399]. This does not appear to have been a floor layer, and may be related to the building's demolition. The remains of an impacted, complete pot [F293] were buried with this layer, overlying a beam slot of the structure.

Phase 7 – Post-medieval

Ditch

- 6.30 A substantial boundary ditch [F230] traversed the southern part of the area. This boundary can be dated to 1805 or earlier, based on cartographic evidence. The boundary truncated a number of earlier features, with [F296] removed almost entirely, and extended across the site on a very similar alignment to several of the Roman-British ditches.

Pond

- 6.31 On the north side of the ditch [F230] a sub-circular pond or watering hole was excavated. This feature [F274] had moderately sloping sides which became steeper to the centre of the pond, forming a 'funnel' shape. The remains of a simple wooden revetment were found lining the steeper centre.

Discrete features

- 6.32 An irregular posthole [F304] was excavated on the north side of boundary [F230]. This feature was very similar to several posts identified within the boundary ditch fills to the south. To the east, an intersection of shallow gullies [F313] and [F315] appeared to be related to ploughing or other agricultural activities.

Phase 8 – Modern

- 6.33 Plough scars [F2] and field drains [F1] were again evident across the area as a result of modern activity. The entire area was overlain by topsoil.

Finds

- 6.34 Potboiler fragments were recovered from nine contexts in the area, with the volume of fragments far lower than that of Area A. The amount of pottery was far greater, however, representing the majority recovered from the site. The pottery is late Roman, mainly from the fourth century AD, with the majority recovered from stratified and well-sequenced contexts. This confirms the suggestion (see 5.4, above) of a late Roman date for the rectilinear enclosure system identified in this part of the site. Pottery was recovered from the backfilled beam slots of structure [F399], and parts of the fabric of this building were preserved as burnt daub. A partially-worked shale bead was also found in the structure.
- 6.35 Fragments of cattle and sheep/goat bone were recovered from the area, and part of a quern was found near to the south boundary and the focus of the

settlement. Two fragments of Roman glass were found, one from trackway ditch [F192] and one from the pond. Two worked flints were recovered, although, in the absence of any associated deposits or debitage, these must be judged to be residual pieces.

Environmental

- 6.36 Remains of spelt wheat and barley were recovered from the area, in addition to oats and rye species. Charred brome grass, an arable weed, was also recovered, which suggests the presence of cultivated crops. The charcoal remains from the structure (see 6.25, above) demonstrated poor survival due to the waterlogged nature of the surrounding deposits, although they do indicate that the *in situ* burning was at a comparatively high temperature. Seeds of sedges and rushes point to marshy areas nearby, and insect remains suggest the presence of wet woodlands. As with Area A, weed remains, fire waste, and fragments of domestic refuse were also recovered, indicative of the normal waste deposits associated with occupied areas.

Area C

- 6.37 Area C was also located in the southern part of the site, to the immediate west of Area B and separated by an access road which remained in place during the development. The area measured 6634m². This area was excavated to identify the extent of the enclosure ditches identified in Area B. The majority of features identified within the area are extensions of the complex of trackways and field enclosures identified in Area B.

Phase 2 – Late prehistoric/early Roman

Ditch

- 6.38 In the centre part of the area a short section of truncated east-west aligned ditch survived [F353].

Phase 3 – Roman

Ditches

- 6.39 Two southeast-northwest aligned boundary ditches were identified traversing the central part of the area [F265; F454]. The western terminal of F265 was located within the area. F454 had been heavily truncated by later ditches.

Phase 4 – Roman

Ditch re-cut

- 6.40 The western part of the boundary ditch F407 was redefined by the re-cut F454.

Phase 5 - Roman

Ditches

- 6.41 Four ditches were excavated within the area during this phase. They defined the route of two trackways and several enclosures. These both cut features F267 and F407.
- *F317 and F435* – These two approximately north-south aligned ditches formed the western boundary of a trackway. They were separated by an entrance way in the central part of the area. Here the ditches curved westward until parallel with each other and terminated.

- *F192 and F373* – These two ditches formed the eastern boundary of a trackway and in the southern part of the area both turned eastward to become parallel

Gully

- 6.42 Ditch F317 was cut by a short east-west aligned section of gully [F317] in the western part of the area. Both ends of the gully terminated within the area.

Entrance

- 6.43 A cut [F445] was made into the re-cut F454 and deliberately backfilled with re-deposited natural clay and sand to form a firm entrance between the trackway ditch F317 and the re-cut.

Small enclosure

- 6.44 Directly south of F192 a small enclosure was identified; this comprised two sections of ditch [F303 and F388], oval in shape with an internal diameter of up to 5.8m. Two gaps (up to 0.7m wide) between the ditches were present in the north-east and southern parts of the feature forming entrance points. A post-hole [F391] was identified in the northern terminal of F388. The northern part of the feature was truncated by a land drain.

Phase 6 – Medieval

- 6.45 A boundary ditch was identified traversing the southern part of the area on an east-west alignment [F141].

Phase 7 – Post-medieval

- 6.46 The continuation of boundary ditch [F230] traversed the centre part of the area, following the alignments shown by cartographic evidence. The boundary cut through a number of the earlier ditch fills.

Phase 8 – Modern

- 6.47 Both plough scars [F2] and field drains [F1] were evident across the area as the result of modern activity. The entire area was overlain by topsoil.

Finds

- 6.48 A smaller quantity of finds was recovered in this area, which may suggest that it lay toward the periphery of the late Roman settlement. Sherds of Roman pottery were recovered from ditch fills, in addition to one bone fragment and the waste from a domestic hearth. One fragment of modern glass was retrieved from ditch [F141], although this was most probably derived from recent plough scarring which cut through this feature.

Environmental

- 6.49 The recovery of environmental remains was also poor from this area, with only traces of fire waste and a few macrofossils surviving.

Exploratory trenches

- 6.50 Five narrow trenches were excavated within the site to further explore the extent and nature of the archaeological resource. These comprised two north of Area A (Trenches 11 and 12; see 6.4 above) and three between Area A and

Area C (Trenches 13, 14 and 15). The features identified in the trenches were planned and photographed; none were excavated.

Trenches 1 and 2

- 6.51 The boundary ditch F117 was identified in both trenches; no other features were identified.

Trench 13

- 6.52 Ten linear features were identified traversing the trench. Most were aligned approximately east-west. Several of the features are likely to be boundary ditches and a continuation of ditches identified in the southeast corner of Area A. Some of the features may have been furrows of medieval or post-medieval date.

Trench 14

- 6.53 Two linear features traversed the trench on an approximate east-west alignment.

Trench 15

- 6.54 A single linear feature was identified traversing the southern part of the trench on a north-south alignment; this is most likely a continuation of one of the ditches identified in Area C.

Condition, quality, and significance

- 6.55 The preservation of archaeological remains was, in general, excellent across all excavated areas of the site (see 6.1, above). Heavy plough scarring was visible in all areas, but had not penetrated to a significant depth: the most heavily truncated area to the north had not been excavated. The natural topography of the site, particularly the south side of Area B, also prevented horizontal truncation. The acidic nature of the soil had an impact on finds recovery, with both bone and environmental remains adversely affected. Recovery of stratified pottery was good, however, with a well-dated sequence from Areas B and C. Elements of high-class items such as glass and worked shale were also recovered.
- 6.56 The site appears to move in focus, with occupation changing from a small-scale later Iron Age settlement to an enlarged and expanding late Roman rural landscape. In Yorkshire, the change in the late Roman period between small, native sites and larger, Romanised 'estates' has been noted elsewhere. This has been seen as evidence of a shift in agricultural policy, with a gradual move toward bigger fields and fewer, larger Roman sites (Roberts 2005, 216-217). Significantly, it appears that the whole of this process can be observed on the site, with the abandonment of the Iron Age centre and the establishment of a larger Roman focus. There is evidence for the gradual inclusion of the earlier fields, with ditches [F140] and [F166] re-establishing a previous Iron Age boundary (see 6.9, above). It is notable to be able to observe this changing pattern of economy and occupation on a single site.

7. The finds

Pottery assessment by Dr J. Evans and P. Mills

Summary

- 7.1 Around 209 hand-recovered sherds of Roman pottery, with a minimum number of rims (MNR) of 46, were presented for examination from the site. All the rims and some 203 of these sherds were stratified. There were no sherds of samian in the assemblage.
- 7.2 Romano-British rural landscapes of field enclosures of this type are recognised as a priority for study, as they have been relatively under researched in the region (Evans and Willis 2002).

Results

- 7.3 The material chiefly dates from the early to mid fourth century, with the strongest emphasis on the mid fourth century, represented by S-bend and proto-Huntcliff calcite gritted ware jars and Crambeck vessels. There is a Nene valley colour coat developed bead and flanged bowl from [235] which would probably date to the latter half of the fourth century in the north, and a Crambeck type 7 (Corder and Birley 1936) painted parchment ware mortarium from a plough scarring context [F2]. However, the absence of Huntcliff type rims on the site makes it unlikely that the site continued much beyond c. AD 360.
- 7.4 A South Yorkshire oxidised reed rim segmental bowl from [483], dates from the later first to early second century. The only other possibly early forms are a Drag 38 copy in South Yorkshire oxidised ware from [246], dating from the second century onwards, which is accompanied by a later second century mortarium of similar date.
- 7.5 A single sherd of medieval gritty ware was recovered from ditch fill [167], the only sherd from that context.
- 7.6 Table 2.1 shows the approximate breakdown of the main fabric classes from the site. Table 2.2 gives a more detailed breakdown by the fabric types (identified during the assessment), with the national Roman fabric code (Tomber and Dore 1998) given as appropriate.
- 7.7 There were no amphora, Black Burnished or samian wares present in the assemblage. Colour-coated and parchment fine wares are rare at 1% (0.5% each). Gritted wares make up 52 % of the assemblage, and are dominated by calcite gritted ware (which makes up 48.3% of the total assemblage). This fabric is mainly represented by S-bend and proto-Huntcliff type jars. The presence of Dales ware is surprisingly low at 0.5%. Mortaria are relatively common at 5.5%, and are represented by a number of sources: South Yorkshire, Crambeck and Mancetter-Hartshill, with the former being the most common source, as might be expected given its proximity. There is a small quantity of South Yorkshire oxidised ware, at 3%, represented by two Drag 38 copy bowls and a segmental bowl with a reeded rim.

- 7.8 Reduced wares make up 39% of the assemblage. The largest group is Crambeck grey ware, (11%), comprising mainly bowls and dishes. There is a sizable amount of probably south Yorkshire greyware (11%), whose forms are mainly jars, including a storage jar from [210], and a similar quantity of a smooth black-slipped greyware (10%), the high quantity of which suggests a source relatively close to the site. Forms in this fabric include a storage jar from [380].
- 7.9 Table 2.3 shows an approximate functional analysis of the assemblage. The functional assemblage fits within the pattern we would expect for a rural site in the region. The data in this assessment are collected from a rapid scan of the material during spot dating (Table 2.4).

Recommendations

- 7.10 It is recommended that the ceramic assemblage is studied in detail and the stratified coarsewares from the Roman phases recorded by sherd numbers, weight, RE, BE and minimum numbers of rims for form and fabric, following the Oxford Archaeology and Warwickshire Museum recording system. Full determination to exact fabric will be performed on all sherds.
- 7.11 The assemblage is a rural group, and relatively large for the area from which it was recovered. As noted above, it is mainly of early to mid fourth century date. Pottery evidence has the potential to provide essential information about the dating of the site sequence, and also the function of the site through a series of ceramic indicators that are quite sensitive markers of site type. Methods of differentiating between types of site all rest in different ways on viewing all the ceramics from a site as an assemblage, to be compared with assemblages from other sites. Noting the presence or absence of individual pottery types is of no use in demonstrating differences between types of sites, whereas strikingly clear patterns emerge from the comparison of different aspects of quantified assemblages. Functional analysis is of major importance. In studies of pottery assemblages, this involves classifying vessels into shape categories, following definitions related to height-diameter ratios, thereby assigning basic function to a vessel, and examining the proportion of these classes occurring at a site. Functional analyses of data from northern sites show both chronological trends and consistent variations in the composition of assemblages, between, principally, forts and towns on the one hand, and basic rural sites on the other, with villas falling between the two (Evans 2001). Functional analysis takes the data beyond identification and classification, and provides a means of using the assemblage to examine the range of activities taking place at the site, assess the degree of regional and chronological conformity of the site by comparing and contrasting it with information gathered from the large number of other rural sites examined in South and West Yorkshire, and also providing quantified evidence of supply to the region in the later Roman period.

Animal bone assessment by L. Gidney

Summary

- 7.12 A small collection of animal bones was recovered, principally from ditch fills (Table 2.5). Preservation of the bones is extremely poor and this collection is unlikely to be representative of the faunal waste originally deposited.

Results

- 7.13 The bones from contexts [75] and [79] derive from a sheep burial. The size and robustness of the bones suggest a relatively recent post-medieval origin for this find. Despite this, the bones exhibit degradation resulting from a hostile burial environment. Only one other context [202] produced an identifiable sheep/goat element. The remaining identifiable finds were all of cattle. The recovery of only fragments of tooth enamel from three contexts is an indicator of the severe preservational bias in these deposits, as this is the last element to decay. The finds from context [163] are heavily encrusted with iron pan. Two tips of cattle horn cores and a tooth are recognisable. The presence of flat indeterminate fragments suggest that this is all that remains of a cattle skull.
- 7.14 The only positive statement that can be made is that the occupants of this site had cattle and sheep.

Recommendations

- 7.15 No further work is possible on this collection. The paucity and poor condition of these finds indicate that this site has no potential for the survival of a useful faunal assemblage.

Glass assessment by Prof A. J. Price

Summary

- 7.16 Three fragments of glass were recovered from the excavation, two of Roman date. A third fragment, from context [142], is a piece of modern bottle glass.

Results

- 7.17 A fragment of the body and corner from a prismatic bottle of Roman date came from context [286], and a further flat glass fragment, also possibly from a bottle, and of likely Roman date, came from context [482].

Recommendations

- 7.18 No further work on this small assemblage is recommended.

Metal and stone assessment by F. Hunter & D. McLaren

Summary

- 7.19 23 objects were submitted for analysis. The artefacts comprise a limited range of iron objects, many of which are fragmentary, and a small number of worked stone objects, including a possible decorated shale bead (Table 2.6).

Iron

- 7.20 The iron assemblage is dominated by nail fragments. A small number of fragmentary objects are also present, including a ferrule, context [175], a bar or strip fragment, context [246], and a broken oval chain link, context [231], as well as small unidentified pieces. Little of this material is chronologically distinctive, but is consistent with a possible Romano-British or medieval date.
- 7.21 Also present amongst the assemblage is a post-medieval horseshoe with nail shanks *in situ*, a further two conjoining fragments of another, and 3 fragments of post-medieval or modern agricultural implements, including two tips of ploughshares.

Stone

- 7.22 The shale bead SF2 derives from a segmented bracelet of late Roman date. The decoration comprises a crudely incised lozenge shape on the external surface only. The coarse nature of the decoration suggests that it may be unfinished. The bead could be reported on in its current state but would benefit from further cleaning to clarify aspects of its manufacture.
- 7.23 Very little of the coarse stone submitted for analysis displayed traces of wear, but one fragment has patches of abrasion possibly due to use, context [210].

Discussion

- 7.24 The majority of the assemblage derives from ditch and gully fills which are interpreted as Romano-British due to the association of diagnostic pottery sherds. The presence of post-medieval artefacts, such as iron horseshoes, within such contexts does indicate later activity taking place on the site.
- 7.25 Very little of the material examined is chronologically distinctive, but the decorated shale bead, possibly unfinished, is typically late Romano-British in date. Although not a rare find, the bead's possible unfinished state merits more work as it may cast light on the activities taking place at the site as well as clarify the site's date and contacts.

Recommendations

- 7.26 The assemblage is dominated by iron finds, the majority of which are fragmentary and badly corroded. The decorated bead SF2 is probably shale rather than jet, but XRF analysis to confirm this is recommended. One possible abraded stone tool was identified amongst the stone assemblage from context [210]. Basic lithological identification is recommended.
- 7.27 The stone and shale objects are stable, but the shale bead would benefit from more cleaning to remove residual soil. The iron objects are fragile and badly corroded. A selection of these would benefit from stabilisation and corrosion removal to reveal aspects of their shape and manufacture (Table 2.6).

Daub by J. Jones

Summary

- 7.28 Four contexts – all interpreted as beam slots – produced a total of 4941g of burnt clay or daub. The clay used for the daub appeared visually similar under microscopic examination. A few fragments retained traces of the building substrate.

Results

- Context [322]: 1234g, 76 fragments
- 7.29 Mainly small and irregularly shaped, with one larger (108x94x51mm) piece. The clay is a variable buff and red, slightly marbled, and lamellar on freshly broken edges. Tempering is with fine quartz or sand. Many of the fragments are covered with charcoal dust from the adjacent burnt wooden beam. There are some original flattened surfaces and apparent shaping, and two fragments retain linear impressions of the vegetative material used in the substrate.

- Context [360]: 472g, c38 fragments
- 7.30 Mainly small fragments, 66x46x36mm maximum dimensions. Clay and appearance as [322] above. Very little original surface remains. One fragment has a deep finger impression.

- Context [381]: 611g, c16 fragments
- 7.31 Irregularly shaped fragments, with the largest piece 89x64x58mm. Clay and appearance as [322] above. Though some faces are flattened and possibly shaped, no clear impression of the substrate remain.

- Context [382]: 2624g, c113 fragments
- 7.32 Mainly small to medium-sized irregularly shaped fragments, with a few larger pieces up to 112x86x48mm maximum. Clay and appearance as [322] above. A few pieces retain impressions of the substrate, with faint linear surface detail.

Discussion

- 7.33 It is likely that all these deposits represent fallen wall coverings, destroyed as a result of building conflagration. Though many are small and damaged, some pieces do retain impressions of the substrate to which they were attached, and therefore have the potential to provide information on Romano-British building techniques.

Recommendations

- 7.34 Further study by a specialist of those fragments which retain evidence of the organic substrate is recommended.

Industrial residues assessment by J. Jones, F. Hunter & D. McLaren

Summary

- 7.35 Five small fragments of ironworking slag were recovered from two ditch fill contexts, [178] and [372]. These are undiagnostic, but are likely to derive from isolated episodes of secondary ironworking activity such as smithing. In addition, two contexts, [246] and [302] produced a very small quantity (<15g) of cinder, probably from domestic hearths.

Recommendations

- 7.36 This very small assemblage suggests that industrial activity was only of minor importance at the site, and no further work is recommended on the residues.

Rotary Quern assessment by D. Heslop

Summary

- 7.37 A quern stone or fragment of millstone, 135 x 96 x 52 mm thick, was recovered from context [210]. The stone originally had a large diameter, possibly in excess of 600 mm, but there is less than 10% extant. No eye or hopper survives, but there is a fracture through the handle hole. It has parallel top and base planes, with a steeply sloping outer wall. All outer surfaces are roughly tooled. The grinding face has been re-dressed a short time before disuse, with regular circular hammer pecks, up to 10 mm across. The upper surface has the remains of a rectangular slot with very smooth inner surfaces, part of the slot for a handle, or, perhaps more likely, given the diameter of the fragment, a fixing for a mechanical drive.
- 7.38 The stone is made from light grey, poorly sorted medium to coarse sandstone, with small (up to 1 mm) angular, quartz inclusions. Probably Millstone Grit, but could just be one of the coarser Coal Measures sandstones.

Recommendations

- 7.39 No further work on the stone is recommended, but its cross-section should be illustrated at analysis stage.

Pot boilers assessment by J. Jones

Summary

- 7.40 A large quantity of pot boilers were recovered from the site, and selected stones (42) were retained from 33 contexts (Table 2.7). Many of the stones are cracked or fragmented by exposure to heat, and some have heat-reddened surfaces. Most appear to be small (up to c.120mm in length) whole or fragmentary, water-worn sandstone cobbles.

Recommendations

- 7.41 No further work on the assemblage is recommended, but lithological identification is recommended at the analysis stage.

Flint assessment by J. M. Mole

Summary

- 7.42 An un-diagnostic retouched blade, and an end scraper commonly found within Early Neolithic assemblages were recovered from the site.

Results

Context [137]

- 7.43 A fragment of shattered flint with no worked edges or platforms. The fragment is a dark mottled brown flint most likely from a derived source such as till or gravel. L.14mm; w.13mm; th.3.5mm.

Context [189]

- 7.44 A flint blade, with the proximal end removed, and retouched on the dorsal side of both edges. On the dorsal side on the right edge at the proximal end is a burin facet, the spall from which would have been 18mm long by 15mm wide and approximately 2mm thick. On the left edge, continuous semi-abrupt scaled retouch removals are present for the full extent of its edge. Continuous semi-abrupt scaled retouch is also present on the right edge from the base of the burin facet to the distal end. Two notches are present at the proximal end of the right edge; these may be denticulation immediately below the burin tip or may have served to limit the extent of the burin spall. No bulb of percussion remains. The blade is a light mottled brown flint most likely from a derived source such as till or gravel. L.68.5mm; w.25mm; th.7mm.

Context [448]

- 7.45 A flint flake with a very small platform and a step termination. A diffuse bulb of percussion indicates the use of a soft hammer in its production. The flake is slightly rolled in appearance and has patinated to a mottled grey white, making it impossible to determine the provenance of the flint. The rolled appearance and patina on the flint may indicate that the piece has spent some time in the plough soil, exposed to the elements. L.37.5mm; w.20mm; th.4mm.

Context [500]

- 7.46 A side end scraper produced from a secondary flake. Both edges and the distal end are defined by continuous, abrupt scaled removals. The original flake has been reworked to the point that only the bulb of percussion remains. The bulb is pronounced indicating its production by a hard hammer method. The original flake's platform was cortical. The scraper is produced from a dark mottled brown flint with a well worn cream cortex, most likely from a derived source such as till or gravel. L.27mm; w.27mm; th.9mm.

Discussion

- 7.47 Four fragments of flint were analysed. Two were debitage [137] and [448], two were worked tools. These were a retouched blade with a burin facet [189] and a side end scraper [500]. Whilst the blade is not diagnostic of any particular period, end scrapers are commonly found within Early Neolithic assemblages (Edmonds 1995).

Recommendations

- 7.48 Due to the limited size of this assemblage and the residual nature of the assemblage, no further analysis is required. The two tools recovered from contexts [189] and [500] should be illustrated for the final full analysis report.

Conservation assessment by J. Jones

Summary and condition

- 7.49 A total of 54 objects were received for conservation assessment and X-radiography of the metalwork. These comprise four flint, three glass, 12 stone, one shale and 19 iron objects. There are also six small bags of charcoal or industrial residue and 2,317g of daub. Also recovered from the top of ditch [F230] were three highly corroded fragments of agricultural machinery, including two tips from ploughshare blades.

- 7.50 All the non-metal objects were found to be stable when examined, though the daub is fragile and should be handled with care. The glass is in good condition, with little evidence of weathering. The shale object was dry and stable when examined. Some of the iron objects were found to be moderately corroded, but many are very highly corroded, though stable, with no metal remaining.
- 7.51 Moderately corroded metallic material is defined as having the surface detail, but not usually the general form of the object, obscured by corrosion products, and has some metal remaining below the corrosion. Highly corroded metallic material is defined as having either both the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

Methodology

- 7.52 All the objects were briefly visually examined to assess their condition, to determine the material from which they were made, and to look for surface and technological detail. Details of the artefacts examined were entered into a database (Table 2.8) which includes the context and small finds number, a preliminary identification of the material and of the object, where possible, the condition of the object when examined, its XR plate number, and any technological or other observations.

Recommendations

- 7.53 Investigative conservation work to selectively remove obscuring corrosion products from unidentified iron objects in contexts [175], [246], [285] and [394], to reveal form and surface detail, is recommended. Investigation, surface cleaning and stabilisation of the shale bead from context [346], is also recommended, with EDXRF (energy dispersive X-ray fluorescence) analysis to confirm its identification as shale.

8. The environmental evidence

Plant macrofossils

Methods

- 8.1 Plant macrofossil assessment was carried out on 45 bulk samples taken from Areas A, B and C, and the matrix from a pot base context [247] from Area B. The contexts were varied, representing a range of fills from ditches, gullies, beam slots and postholes, a pond or watering hole, a sheepfold, a trackway and an alluvial lens. The samples were manually floated and sieved through a 500 μ m mesh. The residues were described, and scanned using a magnet for ferrous fragments. The flots were dried slowly and examined at $\times 40$ magnification. Identification of the plant macrofossil remains was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant taxonomic nomenclature follows Stace (1997).

Results

Non-waterlogged contexts

- 8.2 The material in all the non-waterlogged contexts, except [322] in Area B, was dominated by relatively small amounts of fire waste. This consisted principally of charcoal, with coal and coal shale, and occasional traces of clinker and semi-vitrified fuel waste. Pre-Quaternary spores deriving from the coal and coal shale were present in many contexts. Charred heather stems, rhizomes/tubers and monocot stems were recorded occasionally; these may have resulted from the burning of turfs for fuel or from land clearance. There was a background level of metal dust recorded in most contexts; this is commonly associated with deposits from occupation sites. Context [322], a beam slot which contained the remains of a burnt wooden beam and fragments of burnt daub, also contained abundant charcoal fragments from oak and non-oak taxa.
- 8.3 The charred remains of cultivated food plants and weed seeds were scarce and only recorded in Areas A and B. In Area A, wheat was recorded in contexts [118] and [120]. There was more diversity of cereals in Area B: an oat grain in context [246]; symmetrical barley grains in contexts [335] and [381], with an asymmetrical grain in context [179]; wheat grains in contexts [322], [335] and [382]; a rye grain in context [322]; and a few glume wheat glume bases, and an indeterminate rachis fragment in context [335]. Also in Area B, charred tubers from false oat grass were recorded in contexts [324] and [335], and brome grass caryopses in context [335]. Occasional charred weed seeds from wide niche taxa were recorded from Area A, and ruderal, wetland and wide niche taxa were recorded in Area B. Charred and uncharred sclerotia of the soil fungus *Cenococcum geophilum* were abundant throughout in all areas; this fungus is a widely distributed ectomycorrhizal species associated with diverse gymnosperm and angiosperm hosts (Douhan & Rizzo 2005).
- ### Waterlogged contexts
- 8.4 The waterlogged contexts were all in Area B, with the exception of context [302] from Area C. Eleven contexts were assessed, but following receipt of the results of AMS radiocarbon dating of material from the pond in Area B, contexts [286] and [289] are not discussed further (see 8.20 below). Context [302] contained traces of charcoal, insect remains, plant material and a few uncharred seeds.
- 8.5 In Area B, small quantities of fire waste were present in all contexts except [306]. This comprised charcoal, coal and coal shale, with traces of clinker and semi-vitrified fuel waste. Pre-Quaternary spores deriving from the coal and coal shale were present in context [163]. Indeterminate fragments of burnt, calcined and unburnt bone were recorded in contexts [163] and [193]. A single pot sherd was recovered from context [163]. Miscellaneous plant material was present throughout. Small quantities of uncharred seeds were recorded in all contexts except [306]. Insect remains were recorded in all contexts except [305] and [306], being most abundant in context [214], and the tubular larvae cases of caddis fly were recorded in contexts [214] and [284].
- 8.6 A few charred cereal chaff remains consisting of glume wheat glume bases and spikelet forks were present in context [214] and [305]; one of these, from

context [214], was specifically identified as deriving from spelt wheat. Sclerotia of the soil fungus *Cenococcum geophilum* were present in contexts [163], [193], [214], [284] and [305] (see 8.1, above).

Matrix from pot base, context [247], Area B

- 8.7 The matrix from the pot base contained traces of charcoal and coal, with a few insect remains, earthworm cocoons, uncharred seeds and modern root material.

Results

- 8.8 The results of the macrofossil analysis are presented in Table 2.9. Contexts with material that is potentially suitable for radiocarbon dating are indicated.

Discussion

Area A

- 8.9 The charred plant macrofossil remains recorded from this area were very scarce. The cultivated plant food remains derived from wheat, which was the most common cereal used in the north of England during the prehistoric (Huntley & Stallibrass 1995). The small suite of charred weed seeds is indicative of an occupation site, deriving from taxa typical of open and disturbed ground.
- 8.10 All the contexts were dominated by small amounts of fire-waste, with occasional items of domestic debris, i.e., bone fragments and pot sherds, with a very limited quantity of plant food remains. These fills may therefore represent accumulations of background waste associated with occupation.

Area B

- 8.11 The suite of charred cultivated plant food remains comprised spelt wheat and barley, which are typical of Roman deposits from northern England (Huntley & Stallibrass 1995), and oats and rye species, which have been recovered from Roman deposits in the region, but are more commonly associated with Medieval sites (ibid.). In the absence of any definitive oat chaff, it is not clear whether these oats were cultivated, or wild species growing amongst the cereal crops. The presence of a single asymmetrical grain of barley indicates that the 6-row species (*Hordeum vulgare*) was being used; this morphological characteristic is not present in grains from 2-row barley (*Hordeum distichon*), which is thought to have superseded 6-row barley sometime during the medieval period (ibid.). The charred brome grass caryopses that occurred in context [335] are likely to have derived from brome grass growing as an arable weed amongst the cultivated crops. Cereal chaff remains were scarce, and small arable weed seeds were absent, thus suggesting that cleaned crops were being used. However, the data set is very small and this interpretation must be treated with caution.
- 8.12 Tubers from false oat-grass were recorded in the drainage gully, contexts [324] and [325]. These structures have regularly been recorded on prehistoric sites throughout Britain, and they are believed to have derived from the use of this particular species of grass as kindling in funeral pyres for cremations (Robinson 1988). Godwin (1975) suggests that the tubers were collected or

grown as a food source at that time; this was also the interpretation given by Huntley (1993) for the relatively large numbers of charred tubers that occurred in combination with hazelnuts and cereal grains in a series of Neolithic pits at Marton-le-Moor, North Yorkshire. In the knowledge that there was occupation at this site that pre-dates the Roman period, it is likely that this is re-worked material possibly disturbed by the action of land drainage.

- 8.13 The charcoal sample from the beam slot, context [322], is generally in very poor condition; it is highly vitreous, suggesting exposure to relatively high temperatures, and is contaminated with mineral deposits both internally and externally, indicating a very wet depositional environment. It is likely that this charcoal represents the remains of a burnt wooden beam from the centre of a building. Further analysis of the sample would probably identify the type of wood used in this particular building, but the sample is likely to be homogenous, and not suitable for investigating woodland management practices.
- 8.14 The charred weed seeds are indicative of an occupation site, deriving from taxa typical of open and disturbed ground. The presence of seeds from sedges and rushes indicate the proximity of wet areas.
- 8.15 All the non-waterlogged contexts are dominated by small amounts of fire-waste, with occasional items of domestic debris, i.e., bone fragments and pot sherds, with a very limited quantity of plant food remains. These fills may therefore represent accumulations of background waste associated with occupation.
- 8.16 In view of the later dating for the pond feature [274], contexts [286] and (289) are not discussed further (see 8.20, below). The remaining waterlogged contexts are generally dominated by vegetative material, but also contain suites of charred material similar to the non-waterlogged contexts. It is likely that these hollow features were also acting as accumulators of domestic debris. The numbers of uncharred seeds in these contexts was disappointingly low, with insufficient quantity and diversity to warrant further analysis.

Area C

- 8.17 The contents of the four contexts from Area C, both waterlogged and non-waterlogged, were very similar. There were no charred plant macrofossils, and the only evidence for human activity was traces of fire waste and a non-descript fragment of metal. Again, there was insufficient quantity and diversity of uncharred seeds in the waterlogged context [302] to warrant further analysis.

Radiocarbon date

Method

- 8.18 A piece of oak roundwood was selected from the lower section of the monolith sample from Area B; this was taken towards the base of context [286]. The wood was cleaned of any adhering mineral or plant material by gentle brushing in tap water. The sample was then sent to Beta Analytic inc., Florida, USA, for AMS radiocarbon dating and calibration.

Results

- 8.19 The wood provided adequate carbon for accurate measurement and analysis proceeded normally. The sample information and results of AMS radiocarbon dating are summarised in Table 2.10. Details of the results and calibrations are presented in Appendix 4.

Discussion

- 8.20 The calibrated radiocarbon date of 1640-1950 AD suggested that the pond, feature [F274], could be relatively modern. In view of the difficulties of drainage and subsidence encountered during the excavation, the monolith may have suffered some contamination, and the wood fragment selected for dating could have been modern intrusive material. Roman pottery and glass has been identified with this feature, but these sherds may have been transported via land drainage during the infilling of the feature or by disturbing existing deposits, and thus represent re-deposited material. In the absence of a secure date for the monolith sample, the contexts associated with the pond are not recommended for further analysis.

Pollen

Method

- 8.21 A monolith sample was taken from the fill of a pond feature [274], in Area B. This provided a cross section of four contexts [285], [286], [288] and [289]. Pollen sub-samples were taken from strategic levels in contexts [285] and [286], chosen to provide the maximum information for assessment. Pollen and spores were extracted from one ml of each sub-sample using standard preparation techniques (e.g. Moore *et al.* 1991). These included sodium hydroxide digestion, followed by: sieving; heavy liquid separation; acetolysis; staining; and dehydration. The extract was then suspended in silicone oil and mounted. The slides were examined at high magnification, and identification of pollen and spores was undertaken by comparison with modern reference material, using Moore *et al.* (1991) as a guide.

Results

- 8.22 Pollen preservation was good with a diverse range of grains from tree and herb taxa.

Discussion

- 8.23 In view of the insecure dating for the monolith section (see section 8.20, above), no further pollen analysis is recommended.

Insect remains

Method

- 8.24 Eleven samples of sieved material were provided for assessment of insect remains. These were processed using a standard paraffin flotation technique (cf. Kenward *et al.* 1980). Flots were assessed through the examination of three petri dishes of material. Identification at this preliminary stage has been made at a low taxonomic level, and taxa are listed alphabetically.

Results

- 8.25 Four samples provided viable flots:

8.26 Context [204], Sample <20>

This sample produced a moderate flot, which included much partially decomposed leaf material. The suite of taxa indicates slow/stagnant water with possible local woodland. Taxa present included:

Colymbetes fuscus
Helophorus sp.
Melolontha ? hippocastanea
Ochthebius bicolon
Phyllopertha horticola
Strophosoma melanogrammum

This group represents a potentially interesting assemblage, almost certainly of wet woodland origin and may warrant further analysis.

8.27 Context [214], Sample <48>

This sample produced a large flot with abundant and diverse insect remains. Taxa present included:

Aphodius sp.
Gymnetron sp.
Meligethes sp.
Melolontha ? hippocastanea
Oxystoma ? subulatum
Phyllopertha horticola
Phyllotreta atra
Phyllotreta nigripes
Pterostichus sp.
Tanysphyrus lemnae

This is a very diverse assemblage characteristic of waterside locations, and could represent a well or pond like environment (*T. lemnae* suggests stagnant water with *Lemna*, i.e., pondweed). This context may contain an archaeologically interesting accumulation of insect remains and is strongly recommended for full analysis.

8.28 Context [284], Sample <26>

This sample produced a moderate flot, with a suite of taxa characteristic of stagnant water conditions. Taxa present included:

Agabus bipustulatus
Athous sp.
Cyphon sp.
Halipus sp.
Helophorus flavipes
Limnebius truncatellus
Xantholinus linearis/longiventris

This assemblage represents a potentially interesting group of slow/stagnant water taxa, and is characteristic of wet woodland assemblages. While probably of little archaeological interest it may warrant further analysis.

8.29 Context [286], Sample <27>

This sample produced a moderate flot, with a suite of taxa characteristic of stagnant/slow flowing water. Taxa present included:

Helophorus sp.
Hydrobius fuscipes
Hydroporus palustris
Laccobius sp.
Ochthebius sp.

This assemblage comprised only aquatic taxa. Further analysis is not recommended in view of the insecure date for the pond, feature [247].

Discussion

- 8.30 The assemblages of insect remains recorded in contexts [204], [214] and [284] are all characteristic of slow moving or stagnant water bodies.

Charcoal

Method

- 8.31 Four hand-collected samples of charcoal fragments from Area B were assessed. The >4mm fraction was separated by sieving, and the transverse section of a representative sample of fragments was examined.

Results

- 8.32 The charcoal fragments from contexts [210] and [322] were non-oak timber and roundwood respectively; the roundwood was in very poor condition. The fragments from contexts [360] and [460] were oak timber. The results are summarised in Table 2.11.

Discussion

- 8.33 The charcoal fragments were generally fragile and in poor condition. The non-oak roundwood from context [322], which was presumably used as structural material, could be identified to species and would probably produce a sample suitable for radiocarbon dating; likewise the fragments from context [210]. None of these samples is suitable for analysis of woodland management, however, further work would identify the type of woodland resources available and the particular species used for the structure related to context [322].

Recommendations

- 8.34 The contexts sampled for plant macrofossil remains have little potential to provide significant environmental information, due to the dearth of both charred and waterlogged material. No further analysis is recommended.
- 8.35 No further pollen analysis is recommended due to the insecure dating of the monolith sample.
- 8.36 The assemblages of insect remains assessed from contexts [204], [214] and [284] are of adequate size and diversity to indicate that full analysis would provide further information regarding the environmental nature of the contexts sub-sampled.

- 8.37 Further work on the non-oak charcoal samples from context [322] and [210] would enable identification of the types of woodland resources available for fuel and structural building, and the particular species used for the structure related to context [322].

9. Conclusions and recommendations

- 9.1 The archaeological investigations exposed elements of the late Iron Age to late Roman rural landscape. The two main centres of settlement were preserved south of the site boundary. In the excavated areas, the immediate environs of these settlements were revealed, providing information about their size and nature.
- 9.2 In the southeast part of the site, previous investigation had identified a late Iron Age/Romano-British settlement. Boundaries and enclosures relating to this settlement were exposed. Later Roman ditches were observed extending into this area, indicating an attempt to integrate this earlier rural landscape into the field system established further to the east.
- 9.3 To the southeast, a late Roman rectilinear enclosure system was identified. Enclosures, trackways, and a wooden building relating to this settlement were all exposed. The settlement was not only greater in size than the earlier centre, but also displayed evidence of considerable expansion and changing use during its occupation. The centre of settlement appeared to be more widely spread than in the late prehistoric area, and a high proportion of domestic refuse in the form of pottery, glass, jewellery remains, and a quern fragment, was recovered.
- 9.4 The site can contribute to advancing a number of research priorities. A key element of this site is its potential for exploring the transition from the late Iron Age landscape to a Roman one. The need to better understand late Iron Age landscapes was highlighted in Haselgrove *et al* (2001, C2.2), and this is particularly true for a region where much of the archaeology of this period remains poorly understood (*ibid.*, E2). It is important too for any palynological data to be integrated with the settlement data (Haselgrove 2002, 69). The wider move from Iron Age to Roman was highlighted as one of the key Processes of Change in the English Heritage Archaeology Division Research Agenda (English Heritage 1997, 44, PC4).
- 9.5 There is a wider need to use sites such as this to improve our understanding of Roman rural economy, and situate rural settlement within the development of the wider Roman economy. The importance of better understanding such civilian settlement was highlighted in the English Heritage research agenda for Roman archaeology in Britain (James 2001, 88; Evans 2001, 49) and the need for increased research into the articulation of the rural economy has also been highlighted (Taylor 2001, 56). This is an area for which an improved understanding of the artefactual record of this site has much potential.

- 9.6 Within the region, rural settlement in the Romano-British period is characterised by a move away from small, native Iron Age sites and toward larger, Romanised centres. Evidence suggests that this process is visible between the two foci of settlement on the site. This is significant, as the change in rural economy is more usually observed on separate sites, rather than within one landscape (Roberts 2005, 217). Although the survival of bone and environmental artefacts from the site is poor, a comparatively large and well-dated ceramic assemblage exists, which may aid understanding and interpretation of this process.
- 9.7 It is recommended that a scheme of full analysis of the excavated material from the excavation works is carried out. In addition, the ceramics from the previous evaluation should be reassessed in light of the larger assemblage now recovered from the site. This analysis will provide information to extend understanding of settlement and land-use in this area of the country during the later prehistoric and Roman periods. It is proposed that the results should be published in *The Yorkshire Archaeological Journal* or another suitable archaeological journal. An Updated Project Design has been included as Appendix 5, detailing the tasks to be undertaken to achieve this.

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