



POST-EXCAVATION REPORT

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ROCKLIFFE PARK,
HURWORTH-ON-TEES

on behalf of

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Summary

This document presents the results of a watching brief, a programme of trial trenching and a limited archaeological excavation at Rockcliffe Park, Hurworth-on-Tees, near Darlington, County Durham (centred on NZ 3000 0900). The work was carried out in advance of, and during the course of, the construction of a golf course. The site covered an area of 113ha lying on the flood plain of the River Tees at the foot of the river terrace upon which the village of Hurworth-on-Tees stands and comprised five fields of arable farmland and one field of parkland.

The objectives of the simultaneous watching brief and trial trenching were to establish the presence or absence of archaeological remains across the development area. The investigation revealed a deposit of alluvium across the majority of the site, resulting from the periodical flooding of the area. The paucity of archaeological remains across the southern sector of the site suggested that this area had been exploited for its agricultural potential but had been unsuitable for habitation due to its proximity to the river. Significant archaeological remains were identified within one field adjacent to Rockcliffe Farm. This discovery prompted a subsequent archaeological excavation, which revealed the presence of a Romano-British rural settlement in this location dating from the 3rd to the 4th century A.D.

The excavation revealed a number of areas that had been enclosed by boundary ditches for the purpose of agriculture and potentially habitation. The presence of three corn-drying kilns and a millstone attested to the production and processing of cereal crops on site, which was affirmed through examination of the biological remains recovered from the site. A rare copper alloy dish and further domestic artefacts suggested that there may have been a household of relatively high status in the area but limits imposed on the excavation area meant that this was not unequivocally proven.

The excavation at Rockcliffe Park afforded the opportunity to examine a Romano-British rural settlement in the Tees Valley. This was an important study as there is a paucity of such site types in the vicinity, the nearest of similar date having been identified at Holme House near Piercebridge, Old Durham to the east of Durham city and Dalton-on-Tees, which lies to the south of Rockcliffe Park on the opposite bank of the river. As the excavation was limited, this report will be the final documentation of the site unless additional site work is carried out in the future and no further analysis of the site archive will be carried out.

1.0 INTRODUCTION

- 1.1 A programme of trial trenching and a watching brief leading to limited excavation took place between May 2007 and July 2007 on an area of land situated to the south of Hurworth-on-Tees, near Darlington, County Durham (centred on NZ 3000 0900) (Figure 1), in advance of, and during the course of, the construction of a golf course (Planning Application Ref. 06/0535/FULE). This document sets out the results of the trial trenching and watching brief and discusses the nature of the features encountered in the area of open excavation.
- 1.2 The development area was situated on the north bank of the River Tees and was entirely sited within a broad, southward looping meander of the river. Hurworth-on-Tees is a settlement with its origins in the medieval period, which lies approximately 4.5km south of the centre of Darlington.
- 1.3 The development comprised a new golf course incorporating lakes, elements of new wetland and woodland habitats and a new section of public footpath. The development area was located on land previously used for agricultural purposes and parkland.
- 1.4 The archaeological and planning background and potential impacts of the development have previously been discussed in detail in an archaeological Desk-Based Assessment (NAA 06/138).

2.0 LOCATION, TOPOGRAPHY AND GEOGRAPHY

- 2.1 The development area comprised 113ha of land within five fields of arable farmland and one field of parkland. The site was located on the flood plain of the River Tees at the foot of the river terrace on which the village of Hurworth-on-Tees stands (Figure 1). The site was bounded on the north by the farms of High and Low Rockcliffe and Rockcliffe, on the west by Middlesbrough Football Club's training ground and on the south and east by a meander of the river. A small number of the enclosure field boundaries survived as hedges in the south-eastern end of the site and a number of specimen trees and areas of planting from the 19th century parkland survived at the western end of the site.
- 2.2 The development involved the construction of a new 18-hole golf course and a driving range, enclosed to the south and east along the river edge by a hawthorn hedge. The various elements of the golf course included the greens, fairways, bunkers and tees and a number of lakes and wetland areas, up to 7m deep. The existing parkland trees and hedge around the south-eastern limit of the site were retained, but two other hedges were removed.

Geology and soils

- 2.3 Hurworth-on-Tees lies within an area of sandstone, mudstone and magnesian limestone all belonging to the Permian and Triassic period (IGS 1977). The drift geology is largely composed of boulder clay and morainic drift with alluvium, glacial sands and gravels and river terrace deposits being present within the valley of the River Tees (IGS 1979). The soils of the area generally comprise the stagnogley soils of the Crewe association, but the river meander within which the development was situated, contains deep, well-drained coarse loamy brown earths of the Wick 1 association (Jarvis *et al* 1984).

Topography and land-use

- 2.4 The village of Hurworth-on-Tees is situated at the top of a river terrace on the north bank of the River Tees. The village is approached from Croft Bridge to the west via Hurworth Place and along the ridge from Neasham to the east. The development area lay at the foot of the river terrace at a height of 25m OD and was effectively enclosed by a meander of the River Tees to the south, west and east. The majority of the development area was originally under arable cultivation, with a small percentage being parkland.

3.0 ARCHAEOLOGICAL BACKGROUND

- 3.1 A Desk-Based Assessment of the development area was undertaken prior to construction works occurring (NAA 06/138). This was based upon a review of existing available information and desk-based studies, and the results of a walkover survey of the development area. It identified a total of 91 archaeological sites, of which 61 were Listed Buildings, within a 1km radius of the proposed development.
- 3.2 The assessment identified two sites (two place-name sites) that lay within the development area, with a further four (Rockcliffe Hall, the site of the former Hurworth Grange, another place-name site and the site of a former bridge) lying close to the development boundary to the north-west. The nearest Scheduled Monuments were situated immediately to the south of the development site on the opposite bank of the River Tees, at a distance of less than 250m from the southern limits of the development area. These were the medieval village of Dalton-on-Tees (SM 23547) and its associated field systems (SM 23544), and the Roman rural settlement site (SM 35467) situated to the east of this. Whilst not being a Registered Historic Park or Garden, Rockcliffe Park was recognised in the Darlington Borough Local Plan as being of landscape or historic interest.

Prehistoric

- 3.3 The prehistoric period is poorly represented in the East Durham area in general, and no sites or findspots of prehistoric date were known within the near vicinity of the site. The post-glacial alluvial deposits in the area have yielded occasional faunal remains, such as bones of elk at Neasham, 2km to the north-east of the study area and in the River Skerne, 3km to the north-west

(Young 2004, 6). Evidence of Mesolithic activity is concentrated on areas of higher ground, such as the Cleveland Hills and Upper Tees Valley (Rowe 2004, 15); however a flint bladelet of probable Mesolithic date was recovered from the development area during the site inspection survey. It is considered that rivers were likely to have been used as route-ways during the Mesolithic period, and the blade may be derived from hunting activities. However, no sites of Neolithic, Bronze Age or Iron Age date have been recorded within or close to the proposed development area.

Romano-British

- 3.4 A Roman sarcophagus was recorded within the cellars of Rockliffe Hall immediately to the north of the development area, although its provenance is uncertain. A Roman coin has been found at Hurworth Grange and a possible Roman fort has been recorded in air photographs at Hilltop Farm indicating Roman activity in the area to the north of the development site. The site of a Roman settlement has been recorded some 500m east of Dalton-on-Tees, on the south side of the river.

Early medieval

- 3.5 There is some physical evidence for activity originating in the early medieval period within the area, and additional information for this period can be derived from place-name and historical evidence. Hurworth was not recorded in the Domesday Survey of AD 1086 because it lies north of the River Tees, however, the place-name, recorded as *Hurdewurda* in about AD 1158, derives from two Old English elements, *hurth* and *worth*, suggesting a pre-Conquest origin for the settlement. (Mills 1991, 184). Place-names within the wider vicinity of Hurworth also attest to pre-Conquest settlement or activity within the area. Additionally, Hurworth lies within an area once comprising part of the Wapentake of Sadbergh, the only such example situated north of the Tees. Wapentakes were Anglo-Scandinavian administrative units, established in areas settled by Danish Vikings under the Danelaw, which still functioned as administrative units in North Yorkshire up until the late 19th century.
- 3.6 The physical evidence for activity attributable to this period is to be found at All Saints' Church at Hurworth, at St Mary's Church at Eryholme, and at the church of St Peter at Croft, all of which contain sculptural fragments of pre-Conquest date (Pevsner 1953, 335; 1966, 159; *op cit*, 132). Although the occurrence of sculptural fragments does not infer that there were pre-Conquest churches present, it does indicate a significant level of mid to late pre-Conquest period activity somewhere within their vicinities.

Post-Conquest

- 3.7 As noted above Hurworth is not recorded in the Domesday Book. However, the settlements of Croft, and Eryholme (Hinde 1996, 328-329) are recorded as both are situated to the south of the River Tees. Given the presence of Anglo-Scandinavian sculpture at the church at Hurworth, it is likely that some form of settlement was present within the area prior to the Norman Conquest. However it is possible that much of the countryside within the vicinity of the

village was laid waste during the Harrying of the North in the winter of AD 1069, though neither Croft nor Eryholme are recorded as being laid waste.

- 3.8 The first historical record of Hurworth appears in an early Yorkshire Charter of AD 1158 (Ekwall 1936, 259). Hurworth does not appear in the Boldon Buke AD 1183 (Austin 1982) this being compiled before Bishop de Puiset had added the Wapentake of Sadberge to his holdings in Durham. The village was also recorded as *Hurwurd* in a Pipe Roll of AD 1196 (Ekwall 1936, 259), but does not appear in Bishop Hatfield's survey of *circa* AD 1382 (Greenwell 1857).
- 3.9 During the mid 12th century, a priory was founded for eight nuns of the Benedictine order in Neasham, to the north-east of the development site. As part of the priory estate, a carucate of land (at that time, approximately 120 acres) was held in Hurworth (VCH 1907, 106–8). It is quite possible that this land was the original Hurworth Grange (a farm belonging to a religious house), forerunner of the farm recorded on the First Edition Ordnance Survey six-inch map.

Post-medieval and modern

- 3.10 The post-medieval landscape within and around the study area retained its medieval form, with small villages surrounded by open fields, until the parliamentary enclosures of the late 17th and 18th centuries. The partition of common land was accompanied by a general trend of upgrading the existing buildings or replacing relatively insubstantial medieval buildings with new structures of brick and stone
- 3.11 The land within the development area was included on a tithe map of 1839 (Owen 2005), and the accompanying apportionment listed field names and usage, indicating a mixture of approximately 60% pasture and 40% arable. At the southern end of the development area in 1839 were fields named as 'Stone House Close' and 'Stoney Balt'. Stoney Balt refers to part of the flood defences and is probably a corruption of baulk, a raised bank. The baulk at this point was removed in the mid 19th century when Pilmore Bridge was constructed as part of the parkland.
- 3.12 By 1856, when the First Edition Ordnance Survey six-inch map was produced, the development area had been divided between a small number of farms. From west to east the identified properties were Hurworth Grange, Pilmore Farm, Pilmore House, High Rawcliff and Rawcliff. Hurworth Grange, Pilmoor Farm, and Pilmoor House, became part of the Rockcliffe Park estate. By the time of the Ordnance Survey map revision of 1912, many of the enclosure field boundaries had been removed. Sale particulars for the estate in 1948 indicate that the farmland had continued as a mixture of large arable fields and smaller pasture closes. Prior to construction works only seven parcels of land remained. Three of the surviving field boundaries accorded with divisions identified on the tithe map, but while these perpetuated the boundaries, the hedges themselves were modern. The farm names have been variously

recorded as Rawcliff (1855), Rawcliffe (1919), Rockcliffe (1962) and Rockcliffe (2000).

Rockcliffe Park

- 3.13 The recent history of Rockcliffe Park has been previously documented in detail (Owen 2005). In the 1820s Pilmore House, the forerunner of Rockcliffe Park, was occupied by Colonel George Skelly. By 1839 small formal gardens and parkland were laid out around Pilmore House, now in the ownership of the Surtees family. The estate was obtained *circa* 1851 by Alfred Backhouse and around ten years later he built a new house on the footings of the old. The majority of the parkland, with specimen trees and plantations, was laid out over the next twenty years. Upon the death (in 1898) of Rachel, Backhouse's wife, who survived him by ten years, the estate was held in trust and rented to a series of army officers. In 1905 the estate, now called Rockcliffe Park, was sold to Colonel Clayton Swan. Between 1918 and 1948 the estate was owned by Lord Southampton, during which time the parkland changed very little.
- 3.14 In 1948, Rockcliffe Park house was purchased by the Brothers of St John of God for use as a hospital and a year later Front Park, to the south of the house, was turned to arable land. As part of the hospital, the stable block was converted and a modern church constructed.
- 3.15 Given the general lack of archaeological sites and finds attributable to any period pre-dating the post-medieval period within the immediate vicinity of the site, and as a result of its physical location on low-lying ground contained within a river meander, the Desk-Based Assessment concluded that there was a low potential for the site to contain significant archaeological remains. However, a programme of evaluation was proposed comprising geophysical survey and trial trenching and a Written Scheme of Investigation for these works was prepared and submitted to the Archaeological Officers of Durham County Council, archaeological advisors to Darlington Borough Council.

4.0 AIMS AND OBJECTIVES

- 4.1 The potential impacts of the proposed development were considered to be from the excavation of the lakes and wetland areas, the landscaping works and any groundwork required for the construction of the drainage and irrigation network.
- 4.2 The principle aims of the trial trenching and watching brief were:
- to identify areas within the development with the potential to contain any unrecorded archaeological remains
 - to assess the effects of the proposed development and ancillary works upon archaeological sites and their settings

- to propose mitigation measures which could be built into the development proposals to avoid, reduce or remedy any potential adverse effects identified

5.0 METHODOLOGY

Trial trenching

- 5.1 The initial programme for trial trenching comprised forty, 50m by 2m trenches excavated within those areas of development that were subject to ground reduction works (Figure 2). These were located in areas 1, 2, 3, 5, 6 and 7 and their locations were refined in accordance with the information derived from a geophysical survey (Archaeological Services WYAS 2007). A further eleven trial trenches were excavated in areas where additional ground reduction works became necessary for the creation of wetland areas and the acquisition of topsoil. The location of these additional trenches was agreed through consultation with the Assistant County Archaeologist for Durham County Council, archaeological advisor to Darlington Borough Council. The location of each trench was set out on site by the project surveyor to M. J. Abbotts, using Trimble R6 GPS equipment with onboard Trimble Survey Controller, version 12, software. The data was processed using Topcon Civilcad, version 671. The trenches were stripped using a mechanical tracked excavator with a toothless bucket under constant archaeological supervision. The machine removed topsoil and subsoil to a level at which significant archaeological deposits were identified or down to natural, whichever was encountered first. In trenches where the subsoil exceeded a safe working depth of 1.2m a sample sondage was excavated by machine at one end of the trench, the depth at which natural gravels occurred was established and the sondage was immediately backfilled.

Watching brief

- 5.2 Topsoil stripping was undertaken in development areas 8, 9 and 10 under constant archaeological supervision (Figure 2). Four equidistant machine excavated test pits were cut at the northern limit of area 9 which established that the deposits beneath the topsoil comprised alluvial subsoil to an average depth of 1.00m below the surface, overlying natural sands and gravels. Topsoil stripping commenced along the northern edge of area 9 and proceeded southwards towards and through area 10. Topsoil stripping in area 8 was undertaken as a separate exercise and during the watching brief maintained on this area significant archaeological remains were encountered. These were the subject of a limited programme of archaeological excavation and recording (see below) before construction works were abandoned and the area reinstated.

Excavation

- 5.3 Topsoil was also removed in area 8 in accordance with the Written Scheme Of Investigation (NAA 07/30). This revealed a large number of significant archaeological features (Figure 3). In the development proposals this area was intended to be a reservoir for the golf course irrigation system. The construction of the reservoir would have required deep excavation work in order to achieve this function, thereby destroying those remains. In the south of area 8 the archaeological features were immediately visible beneath the topsoil, however it became apparent that the archaeology to the north of the area was overlain by a deep deposit of alluvial subsoil, of no use to the contractors for creating golf course features, that would require removal before the archaeological remains in the northern part of the site could be addressed. Following consultation with the Assistant County Archaeologist for Durham County Council, it was agreed that a partial excavation of area 8 would be undertaken in order to establish the nature of the archaeological remains. To the south of area 8 the archaeological features were immediately visible beneath the topsoil, however it became apparent that the archaeology to the north of the area was overlain by a deposit of alluvial subsoil. Removal of the subsoil was carried out in limited areas by machine and excavation was restricted to these areas labelled A, B and C (Figure 3).
- 5.4 Where archaeological features were identified, all exposed surfaces were cleaned by hand and features were then planned and photographed. Limited hand excavation was undertaken of extant stone-built features that would not have survived backfilling in order to ensure recovery of sufficient artefactual and environmental evidence to enable dating and assessment of the remains to be achieved. Where linear features were evident, restricted sample sectioning was undertaken in order to establish the nature, form and date of the features but to a lesser extent than the specified sample in the Written Scheme of Investigation. (NAA 07/30) Upon completion of these works, all exposed archaeological surfaces were protected with a geotextile membrane, and the area carefully backfilled in order to preserve unexcavated archaeological features *in situ*.

6.0 EXCAVATION RESULTS

Trial trenching (Figure 2)

- 6.1 Although the 51 trial trenches produced a paucity of archaeological finds they enabled the characterisation of the geology in the area to be achieved. The trenches to the north of the area revealed a shallow alluvial subsoil to a maximum depth of 0.1m overlying boulder clay whereas to the south of the sample area the subsoil reached a maximum depth of 2.1m and was found to overlie natural sands and gravels. This is consistent with the nature of soils on a floodplain within the curve of a major river. Evidence for scours, possibly

resulting from periodic flooding of the River Tees, was identified within four of the trial trenches.

- 6.2 Shallow linear gullies were noted within trenches 15 and 17 running northwest to southeast and northeast to southwest respectively. A fragment of residual Romano-British pottery was retrieved from the gully in trench 17 initially suggesting that this feature may represent part of a Romano-British field system. However, it seems more likely that both features represent drains leading to a recent ditch in areas 3 and 5.
- 6.3 Post-medieval features, probably associated with use of the land by Rockliffe Hall Estate, were located within a number of trenches. These comprised a cobbled track-way directly beneath the topsoil running from east to west in trench 46, three drains constructed from re-used house bricks in trenches 1 and 2, adjacent to Rockliffe Hall, and a number of field drains in trenches 21 and 32.

Watching brief (Figure 2)

- 6.4 The course of a wide scour was located running northeast to southwest in the northwest corner of area 9 and a flint blade of Mesolithic date was retrieved from the upper silts of this feature.
- 6.5 A series of seven plough furrows lay to the south of this scour within area 9. They were probably medieval in date, and ran from east to west respecting the field boundary that continued south from Blind Lane. This would suggest that this boundary was in existence during the medieval period.
- 6.6 A field drain was located running from east to west across area 9 for a distance of approximately 70m. In places it was roughly revetted with pieces of limestone, one of which was a re-used worked stone. (14AA, Figure 14) The fill yielded pottery that was post-medieval in date. Two modern animal burials were also recorded within areas 9 and 10, one of which was identified as a pig. The second burial was deemed to be in too poor a condition to merit the retrieval of the bones but was consistent in size and with either a pig or a sheep.
- 6.7 A large concentration of archaeological remains were identified in area 8 during the watching brief. These were subject to partial recording and excavation (see below) after which the area was protected by geotextile and topsoil reinstated over the entire area.

Excavation (Figure 3)

- 6.8 Development area 8 was subdivided into three excavation areas where archaeological remains had been exposed during topsoil stripping operations. Area A was located at the south-western corner of area 8 and comprised a tract of land measuring approximately 50m by 60m. Area B was situated within the

western section of the development area, to the north of area A and comprised exposed archaeological features extending for approximately 70m by 15m. Area C lay to the north of the development area and measured approximately 45m by 40m. Given that no stratigraphic links between the areas could be achieved as a result of the incomplete nature of the soil stripping works, each archaeological area is treated as a separate entity in the discussion below.

Area A (Figure 4)

Corn-drying kilns

- 6.9 Three corn-drying kilns were located within area A. Feature 565 represents the base of a distinctive T-shaped structure with a stone-built wall across the bar of the "T" at the northern end, to form the base for a platform upon which to place corn for drying (Figure 8, Plate 1). A circular stokehole was located at the southern end of the feature that contained a large quantity of charcoal. This was linked to the bar of the "T" shape by a narrow flue that was lined with clay and stones along each edge, both of which appeared to be heat-affected. It seemed that the flue had been narrowed at a later stage in order to allow more effective passage of hot air. Fairly well preserved grain assemblages were recovered from the four fills of 565, from which four cereal taxa were identified as barley, emmer/spelt wheat, naked wheat and oat. All of these cereal remains had been presumably charred accidentally during the drying stage of crop processing. No dateable finds were retrieved from the fills of 565 but its form is consistent with that of a Romano-British corn-drying kiln. Features 582 (Plate 2) and 608 had been heavily truncated, presumably by later ploughing activity, but would appear to have been similar in form and function to 565 despite the lack of grain recovered from the fills of these features. A fragment of tubula was retrieved from kiln 582 that had been re-used as part of its structure. Kiln 582 was later in date than ditch 644 as it was cut into the top of its fill.

Pits

- 6.10 Six pits were situated at disparate locations around area A. Pit 590, located near the centre of area A, contained the intact base of a large jar (Plate 3) in calcite gritted fabric that appeared to have been intentionally buried in its entirety. There was no evidence of burnt bone within the fill of the pot to suggest that it may have been a cremation, it was dated to between the mid 3rd century AD and mid 4th century AD. The fill of a shallow pit 624 contained a large quantity of Romano-British pottery sherds, including 96 sherds of a Huntcliff type jar and one sherd of a Cranbeck reduced ware bowl all dating from the late 3rd century AD to the early 4th century AD. This would suggest that it was latterly used as a refuse pit, although its original function may have been different. Similarly, the fill of oval pit 647, near the eastern edge of area A, contained a large quantity of charcoal and burnt clay mixed with silt but there was no evidence of burning *in situ* suggesting that it had also been used as a refuse pit. Pits 593 and 642, both located on the northern edge of area A,

were similar to one another in form, being shallow cuts that had been backfilled with flat pieces of stone. It is possible that they represent post settings for a building for which there was no further remaining evidence. A shallow pit (607) was encountered towards the south of area A. The fill contained pot sherds dating from AD 340 onwards but as the pit was so heavily truncated by later activity, it was impossible to ascertain its function. Feature 579 remained unexcavated but its form in plan would suggest that it may have been a pit.

Ditches

- 6.11 A number of ditches were located in plan within area A which were recorded using GPS and subsequently sample sectioned in order to establish their form and function. Ditches 578 and 636 represent two heavily truncated stretches of a curvilinear gully on the eastern edge of the excavated area, the fills of which produced Romano-British pottery from the late 3rd century AD. Ditches 575, 577, 644, 651 and 652 ran parallel to one another on an east to west orientation and their forms suggested that they may represent field boundaries in this area. Ditch 652 appeared to be a later re-cut of ditch 577 (Figure 9) and ditch 651 seemed to be the continuation of ditch 644 interrupted by a potential entranceway. Ditch 576 ran from north to south and appeared to have been cut by ditches 577 (Figure 9) and 644 suggesting that it may have been part of an earlier field system. No dateable finds were retrieved from the fills of the above ditches. Ditch 575 merged with a dark grey, charcoal-rich deposit at its eastern end. This deposit contained a ceramic spindle whorl (563AA), and a number of large stones, which may have been used in a nearby structure. It is possible that this deposit was a result of occupation in this area but there was no further evidence to support this interpretation.

Area B (Figure 5)

Enclosure ditches

- 6.12 An extensive enclosure ditch was identified within area B following the removal of alluvial overburden 552. The full extent of the enclosure could not be ascertained due to the restrictions on the area that was excavated, however, it appeared that ditch 507 (Plate 4) represented the southern and eastern flanks of the enclosure that extended northwards beyond the limits of the excavated area. The pottery sherds recovered from the fills of 507 were identified as late 3rd century in date. On the inner edge of the enclosure was a discontinuous gully, represented by 543 and 603, which ran parallel to 507 and was probably contemporary with it. Within the excavated section through 507 and 543 a series of three stakeholes were identified, cut into the ridge between the enclosure ditch and the gully, possibly representing the base of a palisade (Figure 10). A further three north-south aligned linear features (595, 596 and 599) were located on the outside of the enclosed area to the west and the eastern-most of these features appeared to respect enclosure ditch 507. It was impossible to ascertain the form and function of these features as they

remained unexcavated. Feature 600 appeared to be the end of a linear gully within the enclosed area but this could not be proven as it remained unexcavated. Feature 586 appeared, in plan, to be a large ditch running north-east to south-west with smaller ditch 584 branching off it to the south. This ditch crossed enclosure ditch 507 but the relationship between them was not resolved due to restricted nature of the excavation.

Pits

- 6.13 A total of six pits were located in the vicinity of enclosure ditch 507, two of which (601 and 602) were within the enclosed area whilst the remaining four (523, 597, 598 and 604) were situated just outside. Pit 523 was the only pit that was excavated and this was determined to have been cut by enclosure ditch 507. A copper alloy dish (522AA, Figure 18, Plates 5 and 6) of Romano-British date was retrieved from the fill of 523 along with a relatively large quantity of potentially Romano-British pottery, which would suggest that it was a refuse pit. The dish represented a piece of tableware, probably intended to contain fruit or wine and its closest parallel has been located in Germany.

Quenching troughs

- 6.14 Two oval features, 521 (Figure 11, Plate 7) and 562, were identified to the east of enclosure 507, the fills of which included a large quantity of burnt clay and heat-affected stones. There was no evidence of burning *in situ* on the base or sides of the cuts so it seems likely that they had an alternative primary function, potentially as quenching troughs for a nearby forge, and were re-used for the deposition of burnt material. It is possible that these troughs were supplied with water by adjacent ditches 584 and 586.

Area C (Figure 6)

Ditches

- 6.15 A number of inter-cutting ditches (Plate 12) were located on the western half of area C which appeared to represent the enclosure of an area of land to the north. Narrow ditches 613 and 615 (Figures 6 and 12) ran parallel to one another on a north to south alignment. These features may have been contemporary but no dateable evidence was recovered from their fills. They had similar dimensions of an average depth of 0.3m and an average width of 0.7m. Ditch 567 was a curvilinear enclosure ditch with a width of 1m and a depth of 0.11m, pottery sherds from here were dated to between the late 3rd century 4th century AD. A single posthole (640) was identified adjacent to ditch 567 and may have been associated with it. Ditch 569, which was 1m in width and 0.27m in depth, cut ditch 567 and may have represented the enlargement of the enclosed area in a southern direction. Ditch 558 was V-shaped in section with a maximum depth of 0.48m and an average width of 3.8m. It ran from west to east turning sharply in a southern direction and may have been a boundary ditch enclosing an area of land to the south. It

represented a re-cut of ditch 556 (Figure 12), which was on the same alignment and measured 1.35m in width and 0.35m in depth. Ditches 655 and 664 were identified in plan (Figure 6) but remained unexcavated due to the restrictions placed on the excavation.

Corn-drying kiln

- 6.16 The flue of what may have been a further corn-drying kiln was located to the north of area C, represented by cut 534. The linear flue measured 1.92m in length and was constructed of roughly shaped limestone pieces. The fill comprised a large quantity of burnt clay and charcoal. Environmental sampling revealed the presence of sediment encrusted cereal grains of barley and emmer/spelt wheat. The feature, which had been heavily truncated, underlay stone floor surface 511 and cut the fills of gully 615 and ditch 567.

Stone floor surface

- 6.17 A floor surface (511, Plate 8, Figure 7), which comprised of large limestone slabs, was located towards the northern limit of area C. This overlay corn-drying kiln 534, the fills of gullies 613 and 615 and the fill of ditch 567. Disparate patches of similar surfacing were also identified (510 and 512) which appeared to be part of the same surface truncated by later agricultural activity. A posthole (514, Plate 9) and an east to west aligned beam slot 515 were cut into stone surface 511 which would seem to indicate that it formed an internal floor surface of a structure. Further postholes 520, 524, 527 and 530, which all lay in the vicinity of floor surface 511, may also have been associated with this structure and formed an enclosed area around the scattered patches of floor surfacing. The overlying occupation layer (502) yielded a large quantity of Romano-British pottery dating from AD 360 onwards and a broken Roman millstone (502AC, Figure 15, Plate 10) that may give an indication as to the function of the building. The millstone was manufactured from millstone grit and the D-shaped apertures passing right through the stone suggest that it was from an over-driven mill.

Cobbled surface

- 6.18 A cobbled surface (508, Figure 7, Plate 11) located to the east of floor surface 511 appeared to represent a pathway aligned from east to west. Deposit 509 appeared to be a continuation of this pathway to the west and was constructed of flat pieces of sandstone rather than cobbles. An occupation layer 504 overlying 508 and 509 produced pottery sherds dating from AD 340 onwards. The pathway overlay dark brown, sandy silt spread 503 that extended approximately 12m to the south and probably represented a wet area necessitating the laying of the pathway. A large quantity of Romano-British pottery also dating from AD 340 onwards was retrieved from spread 503, which also underlay floor surface 511, suggesting that cobbled surface 508 and floor surface 511 may be contemporary.

Fence-line

6.19 The line of a fence, represented by cut 560 (Figures 6 and 12), was located running parallel to cobbled pathway 508. Although there was no evidence of postholes along the length of 560, there was a stakehole within the western terminal of the cut and potential packing material slumped against its northern edge. Pottery sherds retrieved from the secondary fill (559) of 560 were dated to AD 360 onwards. The fence-line 560 cut deposit 503 which also underlay cobbled surface 508. This suggests that fence-line (560) may be contemporary with cobbled pathway 508.

Pits

6.20 A sub-circular pit (548) measuring 1.3m in diameter and 0.19m in depth was located to the south of the excavated area. A large quantity of degraded Romano-British pottery, dating from the late 3rd to the 4th century AD, was retrieved from the fill and it would appear to be a refuse pit. This pit underlay deposit 502 which overlay all the features in area C and it was impossible to relate it stratigraphically to the other features in the area.

7.0 ASSESSMENT OF THE SITE ARCHIVE

Initial analysis

7.1 As part of the assessment of the site records the following level of analysis has been undertaken:

- A provisional matrix for construction area 8, the area of site encompassing excavation areas A, B and C has been drawn up showing the stratigraphic relationships of all 163 contexts encountered in these areas.
- Plans and sections were checked against context record sheets to ensure cross-referencing. Catalogues of context and finds records have been put onto a computerised database.
- Catalogues of slide and print photographs, and illustrations have been input onto a computerised database.

Table 2 : The quantification of the site record

Context descriptions (including trial trenches)	278
Plans	23
Sections	58
Colour slides (films)	12
Black and White photographs (films)	12

7.2 Recommendations for further analysis

As the excavation at Rockcliffe Park, Hurworth-On-Tees was halted prior to its completion, and the site backfilled, thereby preserving the unexcavated elements of the site *in situ*, it is not considered appropriate that any further analysis be undertaken upon the site archive at this stage. The report will remain as a Post-Excavation Assessment report to be submitted to Durham County HER and will not be published. However, should any further archaeological fieldwork be carried out at the site in the future, it is recommended that the results of that work be combined with the results of this project with a view to producing full post-excavation analysis and publication reports.

7.3 Storage and curation

The written, drawn and photographic records and soil samples are currently held by NAA. The soil samples were sent to Palaeoecology Research Services and a representative proportion has been processed for this assessment. The artefacts recovered from the samples are included within the relevant specialist assessments.

8.0 SPECIALIST FINDS ASSESSMENTS

8.1 Processing and quantification

Washing of the bulk finds, including animal bone, was completed following the excavation. All finds have been recorded, marked where appropriate, packed in labelled bags and placed in labelled museum storage boxes. A finds database was produced in order of context number. This database tabulates the artefact type, quantity and includes a brief description. The finds assemblage from Hurworth is summarised below.

Table 2 : Finds assemblage

Type	Quantity
Ceramic	14
Ceramic building material	20
Copper alloy	5
Fired clay	5
Flint	49
Glass	5
Industrial waste	3
Iron	10
Pottery	631
Sample	127
Stone	1
Worked stone	2

Flint (Appendix B)

Peter Rowe

Summary

8.2 The assemblage is composed entirely of flint. There are no examples of quartz, chert or other fine-grained stone types such as tuff. The flint has a fairly homogenous character, mainly consisting of light brown items and is likely to be derived from local glacial deposits, river gravels or beach pebbles from the Yorkshire coast. The predominant technologies are the production of small blades and squat flakes. There are no cores but there is one core preparation flake. Blades make up almost 25% of the knapped assemblage and those present are all small examples with parallel sides and thin sections. Three of the blades are complete while the other six represent distal ends, proximal ends and mid-sections possibly resulting from the production of microliths. The flakes are generally squat and fairly circular with a high incidence of retouch and edge use suggesting that they were produced for basic cutting or scraping tasks. There are two scrapers, one of which is heavily retouched and likely to be Mesolithic or early Neolithic in date. The second scraper is a small circular thumbnail type based on a squat flake of brown flint. It is typical of the early Bronze Age period and has particular associations with Beaker assemblages. Two other finished tool types were recognised. The first is a fabricator, which is a Neolithic phenomenon of unknown purpose. The second is an incomplete fragment of a small point possibly representing the tip from a projectile of the later Neolithic or early Bronze Age. Although the lithics are largely unstratified they demonstrate a previously unreported prehistoric presence in this area that might be further revealed by future fieldwork.

8.3 **Recommendations**

There are five flints that require illustration to accompany the post-excavation report (Figure 13). The material should be permanently curated with the site archive.

Quernstones (Appendix C)

Liz Wright

Summary

8.4 Two quernstones were recovered from the site at Rockliffe Park. The first (14AA, Figure 14) is part of an irregular boulder of igneous rock with some smoothed and utilised surfaces, probably used as a saddle quern. It is likely that the rock originated as an erratic in a deposit of glacial drift, probably not far from its find spot, as the artefact is extremely heavy even in its final broken form. The artefact presents a number of approximately planar surfaces, some of which appear relatively unaltered and some of which exhibit traces of use

wear. One of the altered faces has parallel sides, is very flat and exhibits a noticeable polish probably as it has been used as the dorsal surface to the face obviously used for grinding. The second of these faces appears un-weathered but finely chipped or fractured with some smooth glaze. The third altered surface is uneven and convex and shows rough brown weathering on some areas but is also polished from use and scored. This surface was probably used as a saddle quern. The score marks are unlikely to have resulted from use of the quern because this is not the natural direction of the stone. Traces of heating, which appear on the dorsal face may have assisted in the destruction of the artefact, which otherwise would have been unlikely to have been damaged.

- 8.5 The second worked stone (502AC, Figure 15, Plate 10) comprises of 17 conjoining fragments of the upper stone of a Roman millstone manufactured from millstone grit, possibly from Derbyshire. The millstone measures 680mm in diameter and has a cylindrical central eye. It also displays two D-shaped apertures that pass right through the stone, probably designed to house the driving mechanism. This would suggest that it was over-driven and therefore by human or animal power rather than by water. On the grinding face of the stone a circular groove with a diameter of about 320mm passes through both apertures, suggesting that the apertures also housed hoppers and that the groove served to distribute the fed grain evenly around the grinding surface of the millstone as it turned. A slight lip at the edge of the grinding face would suggest that this stone was slightly larger than the lower stone with which it was paired. One fragment of the stone displays smooth, undulating polish from secondary use within a floor surface. Three minor fragments show evidence of proximity to heat or fire.

Recommendations

- 8.6 The objects require illustration to accompany the post-excavation assessment report (Figures 14 and 15) and should be deposited with the remainder of the site archive, otherwise no further work is recommended.

Roman Pottery (Appendix D)

John Dore

Summary

- 8.7 The assemblage consisted of 513 sherds weighing 10.9 kg. No Samian was present and all of the material dates from the middle of the third century to the middle of the 4th century AD. The classes of vessels represented in the assemblage are 85% jars, 5% bowls, 4% mortaria, 1% dishes and 5% are unassigned. The fabrics present include 35g of Black Burnished Ware 1, 5885g of Calcite Gritted (Huntcliffe Ware), 3077.8g of Calcite Gritted Ware, 102g of Crambeck Parchment Ware, 648.5g of Crambeck Reduced Ware, 316.6g of Crambeck White Ware and 843.1g which remains unassigned.

Recommendations

- 8.8 A selection of the pottery will require illustration to accompany the post-excavation assessment report (Figure 19) and should be deposited with the remainder of the site archive, otherwise no further work is recommended.

Small finds (Appendix E)

M. C. Bishop

Summary

- 8.9 The total number of small finds assessed from Rockcliffe Park was 16. This comprised five copper alloy items, ten ferrous objects and one ceramic item.
- 8.10 The copper alloy finds included a Roman coin which was possibly 4th century in date and a notched ring which was flat on one side and moulded on the other, potentially not Roman. There was also a small fragment of curved sheet which was possibly part of a Roman dish and a fragment of a small Roman buckle plate (502 AA, Figure 16) from a strap fastener decorated with incised lines parallel with the edges, as well as opposing crescents and dots. The most significant copper alloy find was that of a large dish (522AA, Figure 18, Plates 5 and 6) that had been formed by spinning on a lathe and then tinned on the inside. It is most likely to have been a piece of tableware, probably intended to contain fruit or wine. As such it is a high status item and a rare find. Fragments of similar vessels have been found at Fishbourne in Sussex and from Colchester, but the only complete bowl of a similar form has been located in the Guttman Collection, Germany, although the provenance of this example is unknown. The ferrous objects included three undiagnostic fragments of blade and a circular-sectioned spindle which are possibly not Roman. There were also four nails and two parts of a stylus, which were Roman in date. The ceramic find comprised approximately half a spindle whorl formed from a coarse red fabric, of Roman date (563AA, Figure 17).

Recommendations

- 8.11 No further work is recommended. However, there are some display requirements associated with the copper alloy dish. These include the installation of a case designed to give protection to the archaeological material, regular monitoring of the relative humidity levels within the case, checks on the desiccant used within the case and the provision of a support stand. The buckle, dish and spindle whorl should be illustrated to accompany the post-excavation report.

Clay pipe and glass (Appendix F)

Gail Hama

Summary

- 8.12 A collection of five fragments of glass and 15 clay pipe stems came from five contexts. The weight and, in the case of the clay pipe fragments, the stem bore diameters, were recorded. All the glass fragments were of modern, 20th century, date. The clay pipes had stem bore diameters that gave a date range of mid to late 18th century.

Recommendations

- 8.13 The assemblage has no archaeological potential, no further work is required and the material may be discarded.

Ceramic building material

Gail Hama

Summary

- 8.14 An assemblage of 117 fragments of ceramic building material was recovered from 10 contexts. Only seven of the fragments were Romano-British in date. These comprised three tile fragments displaying criss-crossed slashed lines, two of which were box flue tiles and the third being a flat tile, a possible tegula, a slightly convex tile and two plain flat tile fragments. Non-diagnostic chips and fragments accounted for 106 items in the assemblage and there was also a modern pantile fragment and a single fragment of handmade brick.

Recommendations

- 8.15 No further work is required on the assemblage and the collection should be retained and deposited with the appropriate museum service.

Industrial residue (Appendix H)

Jane Cowgill

Summary

- 8.16 Coal was the only fuel type identified but it is possibly occurred naturally in this area. The presence of hammerscale in the magnetic element extracted from the samples indicates that iron smithing occurred nearby but the quantity is very small. Lightly fired clay fragments were also recovered displaying surfaces that may have been shaped or moulded, but it is unclear whether these are hand-made or natural.

Recommendations

- 8.17 No further work is recommended.

Biological remains (Appendix I)

Alexandra Schmidl and Deborah Jaques

Summary

- 8.18 Biological remains from 32 bulk samples and a small quantity of hand-collected bone were assessed for their bioarchaeological potential. The processed samples revealed charred plant remains in the form of charcoal fragments and there were also remains of cereals and associated weeds. The charcoal fragments were deemed to be in good condition but too small to be identifiable. The crop plants that were identified included barley, emmer/spelt wheat and naked wheat, indicating that crop processing had been carried out in this area. The vertebrate remains were identified as the skeleton of a relatively large pig that was probably of modern date as the bones were in good condition.

Recommendations

- 8.19 Should further work be undertaken at the site in the future the seven deposits yielding larger assemblages of charred plant remains could be further analysed to provide information regarding the agriculture and the ecology of the fields in which they grew. This may also provide further information that would be particularly useful in the interpretation of corn-drying kiln 565.

Conservation (Appendix J)

Jennifer Jones

Summary

- 8.20 Five copper alloy objects and ten iron objects were received for examination and conservation assessment. Following visual examination and X-radiography, the iron objects were identified as six nails, two plate fragments, a bolt and some slag. It was concluded that the ironwork was generally highly corroded and that several of the pieces (500AD and 502AD) also displayed signs of cracking and spalling. The copper alloy objects were identified as a button, a fitting, a plate fragment, a buckle plate and a vessel base with associated fragments. The copper alloy was found to be moderately to highly corroded and some pieces (502AA and 522AA) were identified as fragile.

Recommendations

- 8.21 Further investigative conservation could be used to define the surface decoration on the copper alloy buckle plate (502 AB), with EDXRF to establish whether there was surface plating. It may also be possible to resolve the identification of iron object 502AD, which has been recorded as a possible nail. It is recommended that the objects continue to be stored in pierced polythene bags in an airtight container at a stable temperature and below 20% relative humidity to inhibit further corrosion. The relative humidity should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

9.0 STATEMENT OF POTENTIAL

- 9.1 As the excavations at Rockcliffe Park were halted before the completion of the site, the archived information will not be prepared for a publication report. If this were deemed necessary at some point in the future, there are a number of further methods of investigation that could be carried out on the archive. It has been suggested that further analysis could be carried out on the biological remains. This would comprise examination of the charred cereal remains from corn drier 565, pit 521 and flue 534 to provide more information on past agricultural activities in the area. Radiocarbon dating of the above contexts could also be carried out to confirm and refine the period that has been assigned to these contexts. Hall and Huntley (2007) have stated that Romano-British sites in the north of England are of a type and period most in need of further archaeobotanical investigation, so the collation of such information could provide useful additional data. In addition, further investigative conservation could be used to define surface decoration on copper alloy buckle plate (502 AA) with EDXRF to determine whether there was surface painting and also the identification of iron object 502 AD could be resolved.

10.0 DISCUSSION

Trial trenching (Figure 2)

- 10.1 Although the 51 trial trenches excavated at the site enabled a characterisation of the natural deposits comprising the site to be made, and revealed evidence for scouring resulting from periodic flooding of the River Tees, archaeological features were poorly represented. Two drains were identified in trenches 15 and 17, both leading to a ditch situated within construction areas 3 and 5, suggesting a post-medieval date for these features. A fragment of Roman-British pottery was, however, recovered from the drain in trench 17, this being considered to be residual as no other artefactual evidence attributable to this period was recovered from either feature. Further post-medieval features included a cobbled track-way identified in trench 46, three drains constructed

from re-used bricks in trenches 1 and 2, and a number of field drains in trenches 21 and 32.

Watching brief (Figure 2)

- 10.2 A watching brief carried out over areas 8, 9 and 10 of the development area revealed a general paucity of archaeological features in the latter two areas, whereas area 8 contained a large number of features attributable to the Roman period which resulted in the excavation discussed above. In area 9 a series of relict plough furrows, probably of medieval date, were identified. These were orientated east to west and respected a former field boundary running southwards from Blind Lane. A drain was identified in area 9, also running east to west, and was traced for a total length of 70m. It was crudely revetted in places and the finds recovered from its fill were dated to the post-medieval period. Two recent animal burials were noted in areas 9 and 10, one identified as a pig, the other being in too poor condition to recover. A flint blade of Mesolithic date was recovered from the upper fill of a wide fluvial scour which crossed both areas 9 and 10. The results of the watching brief suggest that development areas 9 and 10 were solely used for agricultural purposes up until the present day, probably as a result of their propensity to flood. Area 8, however, was situated on a slightly more elevated position within the landscape, and given that the area just to the north of the site is presently occupied by farm buildings, would seem to be situated within an area subjected to fewer episodes of flooding.
- 10.3 The excavation in area 8 at Rockcliffe Park provided the opportunity to examine a rural Romano-British settlement on the north bank of the River Tees. The areas excavated revealed a spread of archaeology over an area approximately 150m by 80m and extending beyond the limits of excavation in all directions. However, the restrictions on excavation mean that it has been impossible to phase the site as a whole because the archaeology revealed during development works was discontinuous between the excavated areas.

Area A (Figure 4)

- 10.4 Area A revealed evidence for agricultural activity in the form of a series of boundary ditches, the earliest of which (576) ran in a north-south direction and was cut by two parallel east-west ditches 577 (Figure 10) and 644. Ditch 575 also ran parallel to 577 and 644 but no dateable finds were recovered from the fills of any of these ditches. Ditch 577 had also been re-cut, represented by ditch 652 (Figure 10). As these ditches did not form a coherent enclosure it is only possible to interpret them as series of drainage or boundary ditches. It is possible that these ditches represent an earlier Iron Age phase of activity on the site but the lack of dateable finds means that this interpretation is conjectural.
- 10.5 A later phase of activity within Area A was represented by a series of three corn-drying kilns, two of which could be seen to overlie the backfill of the ditches described above. Feature 565 was a large, T-shaped structure (Figure 8,

Plate 1) which overlay ditch 575, and 582 (Plate 2) was a less substantial kiln overlying ditch 644. The third kiln was cut into natural deposits and no relative phasing can be proposed for this structure. Environmental sampling recovered grain assemblages from the fills of kiln 565 represented by four types of cereal : barley, emmer/spelt wheat, naked wheat and oat which had been accidentally charred during processing of the crops. This range of cereal types suggests that a high intensity of grain production was being carried out on the site, potentially implying a large number of dependents in the area.

- 10.6 The heavily truncated remains of a curvilinear ditch, represented by 578 and 636, were located towards the eastern end of area A. The continuation of the ditch was broken by an entranceway but the feature seemed to be enclosing an area of land to the south-east of this, possibly for domestic use. Pottery sherds retrieved from the fill of the ditch dated from the late 3rd to 4th century AD, which is broadly contemporary with finds recovered from a series of pits located nearby within area A. The presence of refuse pits and post-pads within the area suggests that there was a domestic building nearby. Further evidence for this was the recovery of a flue tile that had been re-used within the structure of kiln 582. This may be corroborated further by the existence of 563, which represents a substantial spread of refuse material and yielded finds comprising a ceramic spindle whorl (563AA) and a large quantity of pottery sherds also dating to the late 3rd to 4th century AD. The deposit of refuse material was located just outside the area enclosed by a curvilinear ditch, 636/638, indicating that this enclosure may have had a domestic, rather than agricultural, function.

Area B (Figure 5)

- 10.7 The most significant feature located within area B was ditch 507 (Plate 4, Figure 10), which appeared to represent the southern and eastern flanks of an enclosure extending to the north. The full scale of the enclosed area could not be established due to the restrictions imposed on excavation but it stretched approximately 25m in an east to west direction and approximately 15m in a north-south direction within the excavated area. Finds recovered from the fill of ditch 507 have been dated to the late 3rd century AD.
- 10.8 A discontinuous gully (543/603) was identified to the north of ditch 507. It ran parallel with the southern arm of the enclosure and was probably contemporary with it, resulting in a double-ditched enclosure. A series of three stake-holes were identified cutting into the ridge formed between ditch 507 and gully 543 which may represent the base of a fence or palisade constructed for the purpose of delineating the enclosed area to the north (Figure 10).
- 10.9 A total of six pits were located within area B, two of which were within the area of the enclosure whilst the remaining four were situated just outside it. Pit 523 was the only pit that was excavated and was determined to have been cut by enclosure ditch 507 (Figure 10), suggesting that it belongs to a phase of activity prior to that of the enclosure. However, the pottery recovered from the

fill of pit 523 was of a comparable date to that which came from the fill of the ditch. A copper alloy dish (522AA, Figure 18, Plates 5 and 6) of Romano-British date was also retrieved from the fill of pit 523. It represents an item of tableware and was probably used to contain fruit or wine. The presence of this bowl supports the idea that there was a domestic building of relatively high status in the area as similar vessels in England have been found at the villa site at Fishbourne in Sussex and from the town of Colchester.

- 10.10 It is difficult to assign the features in area B to specific phases, as excavation was limited, resulting in a lack of stratigraphic relationships established. It is possible that pit 523 was associated with a domestic residence of high status as indicated by the recovery of the copper alloy dish and that this pre-dates the enclosure represented by ditch 507, with associated gullies and stakeholes.

Area C (Figure 6)

- 10.11 Through examination of stratigraphic relationships in Area C it can be established that the earliest phase of activity is represented by two parallel gullies, 613 and 615, which were likely to be contemporary features. A curvilinear ditch 567 (Plate 12) cut the layer overlying gullies 613 and 615 (Figure 12) and enclosed an area of land running to the north of the excavated area. The pottery recovered from the fill of this ditch was identified as Crambeck reduced ware dating to the late 3rd to 4th century AD. Ditch 569 was a re-cut of 567 (Figure 12), possibly undertaken to extend the enclosed area, by encompassing a wider space to the south and west. It would also appear that ditch 556 was a continuation of 569.
- 10.12 The next stratigraphic relationship that can be established was ditch 558 cut 556/569 (Figure 12) at the southern edge of Area C. This ditch turned a relatively abrupt right angle and would seem to represent the north-eastern corner of a square or rectangular enclosure. No dateable finds were recovered from the fill of this feature.
- 10.13 Following the infilling of the various boundary ditches in Area C, the greatest concentration of activity appeared to be centred on the northern edge of the area (Figure 7). The flue of a small corn-drying kiln, 534, was identified overlying the fills of ditches 576 and 615. This was later heavily truncated by the addition of a stone floor surface (Plate 8) which survived in disparate areas and is represented by contexts 510, 511 and 512. A posthole 514 (Plate 9) and an east-west aligned beam-slot, 515, were cut into stone surface 511 and would seem to indicate that it formed the internal floor surface of a structure. Further postholes 520, 524, 527 and 530 (Figure 7), which all lay in the vicinity of floor surface 511, may also have been associated with this structure forming a covered area around the remaining patches of floor surfacing. The overlying occupation layer (502) yielded a large quantity of Romano-British pottery dating from AD 360 onwards, providing a date for the abandonment of the building. The presence of 17 conjoining fragments of a Roman millstone (502AC, Plate 10) of millstone grit suggests that this building may have been a

granary. The millstone displays two D-shaped apertures that pass right through it and were probably designed to house part of its driving mechanism. It would have been over-driven which implies that it was probably rotated by human or animal power rather than being part of a water-driven mill. One large fragment of millstone was incorporated into floor surface 511 where it acquired a smooth undulating polish.

- 10.14 A cobbled surface (508, Plate 11) located to the east of floor surface 511 appeared to form a pathway aligned from east to west. It is stratigraphically contemporary with the floor surface and probably acted as an access route to the potential structure described above. Feature 508 overlay extensive sandy silt spread 503 which probably represented a wet area necessitating the laying of a more stable surface to provide access to the building. Deposit 509 appeared to be continuation of 508 and was constructed of flat pieces of sandstone rather than cobbles.
- 10.15 The line of a fence, represented by cut 560 (Figure 6), was located running parallel to cobbled pathway 508. Although there was no evidence of postholes along the length of 560, there was a stakehole within the western terminal of the cut, and potential packing material slumped against its western edge. The fact that this fence-line follows the course of the cobbled pathway would suggest that they are broadly contemporary. This can be corroborated by the finds retrieved from the fill of 560 that have been dated to AD 360 onwards. This date ties in with the finds recovered from 502 that represent the occupation layer overlying floor surfaces 510, 511 and 512 and cobbled surfaces 508 and 509, indicating that they are all of the same phase of activity. It is possible, according to the stratigraphic relationships established, that enclosure ditch 558 was also contemporary with the phase of activity described above but further excavation would be required to prove this.

11.0 CONCLUSION AND RECOMMENDATIONS

- 11.1 In summary, each of the three areas excavated at Rockliffe Park would appear to display more than one phase of activity. However, the finds recovered from deposits excavated in each area are broadly contemporary indicating a general date of late 3rd to early 4th century AD for the majority of the site, with later activity occurring from AD 360 onwards. In area A the stratigraphy allows the potential for an earlier Iron Age field system (represented by ditches 575, 576, 577, 644 and 652) but the lack of any dateable finds from these contexts means that this cannot be proven.
- 11.2 It is important to view the site at Rockliffe in its context within the archaeological landscape of the mid-Tees Valley. The nearest site of comparable date is that of the Romano-British settlement 500m east of Dalton-On-Tees on the south side of the river, which is a Scheduled Monument (SM 31387). This site included two villa buildings, ancillary structures and a roadway all enclosed by a sub-rectangular ditched enclosure. According to the

pottery recovered from excavations of the buildings and enclosure ditches at Dalton, it was occupied from the 2nd century AD onwards and the presence of local ware pottery suggests that it may have been occupied after the Roman period (Stobbs 2001). The examination of one of the buildings at Dalton revealed that it had been used for the storage and processing of cereal and may provide a parallel for the traces of a building identified in area C at Rockliffe. A further comparison may be sought between the winged courtyard house excavated at Dalton and the potential for a similar building in the vicinity of the excavated area at Rockliffe. The possibility for such a building is perhaps indicated by the presence of high status finds and associated building material. However, the relatively short occupation span in comparison with that at Dalton, and the fact that the majority of the site was covered with a thick deposit of alluvial silt may indicate that the site was abandoned fairly quickly, possibly due to natural causes. The site at Rockliffe is on the edge of a floodplain in a meander of the River Tees and would probably be liable to flooding. The deep deposit of silty alluvium overlying the entire site may attest to periodic flooding of the area. Further villa sites in the area are situated at Holme House, near Piercebridge and Old Durham, to the east of Durham City. Another potentially high status settlement site was recently discovered at Faverdale, on the north-western outskirts of Darlington. The settlement site at Rockliffe Park is important as it can, potentially, be added to a short list of such sites in the north-east of England.

- 11.3 The presence of Piercebridge Roman fort is frequently cited as the reason for Romanised rural farmsteads/settlements being established in the locality of the Tees Valley, which could then supply many of the needs of the fort from its immediate hinterland. Such complexes of *villae rusticae* are well known from the German and Raetian *limites* (Jütting in Wamser *et al.* 2000). The fort stands to the west of the Roman road of Dere Street and was found to have an associated river crossing that has since been washed away. Excavation has dated the main phase of the fort to around AD 300, continuing in use for at least a hundred years. Its construction has been attributed to the Constantian reorganisation at this time (Harper 1968). These dates would make the settlement at Rockliffe broadly contemporary with the fort at Piercebridge and it could be that it grew as a result of the same period of expansion in the area. It is suspected that there was an earlier fort at Piercebridge, as it stands in such a strategic position, but this has not yet been proven through excavation.
- 11.4 Alternative reasons (beyond inundation) for the demise of the settlement are difficult to sustain. Although it was long held that the so-called Barbarian Conspiracy of AD 367 may have been responsible for much destruction in the north of England, Evans (1984) has shown that in fact much of the 'evidence' for this destruction is at best tendentious and at worst non-existent. He hypothesises that the invasion bypassed the north altogether and this would render such a large-scale incursion an unlikely direct cause for the end of Rockliffe, although it is conceivable that there could have been an indirect, economic effect brought about by the resultant disruption. In reality, the latter part of the 4th century saw a decline in some (but by no means all) of the

previously thriving communities of Roman Britain, whether rural or urban (Hartley and Fitts 1988, 112-16), although it is still not clear whether this amounts to a true reflection of decline, or merely a change in the nature of the manifestation of, and evidence for, continued occupation.

- 11.5 In the end, successive withdrawals of elements of the Roman army (*ibid.*, 111) might conceivably have irreparably affected communities dependent upon them and if, as seems likely, the Rockliffe site was linked with Piercebridge in this way, its fate may well have been sealed. However, as a dramatic alternative to the more mundane explanation of natural causes, it lacks sufficient convincing supporting evidence.
- 11.6 As the on-site investigation at Rockliffe Park, Hurworth-On-Tees was restricted to a partial excavation, the report will remain at the level of a Post-excavation Assessment and it is not anticipated that the assessment will be published. Were further work to be carried out at some stage in the future, additional analysis of the site archive resulting from this phase of work could be undertaken and incorporated into a combined programme of analysis with a view to publication. However, at the present time, further analysis of the archive is not recommended. The site archive will be deposited at the Bowes Museum with the exception of the copper alloy dish which will be placed on display in Rockliffe Hall once arrangements have been made for its proper curation.

APPENDIX A :

Context and finds catalogue

Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
1	9, 10		topsoil			9	4				27	3	1	43		
2	9, 10		subsoil											1		
3	9, 10		cut of pig burial													
4	9, 10		pig skeleton													
5	9, 10		fill of pig burial 3								1			1		
6	9, 10		fill of sheep/pig burial 8													
7	9, 10		sheep/pig skeleton													
8	9, 10		cut of sheep/pig burial													
9	9, 10		fill of gully 10											1		
10	9, 10		cut of gully													
11	9, 10		secondary fill of drain cut 13		silty	1										
12	9, 10		primary fill of drain cut 13		stone lining											
13	9, 10		cut of drain													
14	9, 10		secondary fill of drain cut 16		silty									1		1
15	9, 10		primary fill of drain cut 16		stone lining											

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
16	9, 10		cut of drain													
17	9, 10		deposit		natural gravel											
100			VOID													
101			layer	40	silty											
102			layer	40	sandy											
103			deposit		natural in all trenches											
104			layer		topsoil in all trenches											
105			layer	34	silty											
106			layer	34	silty											
107			layer	39	silty											
108			layer	39	sandy											
109			VOID													
110			layer	38	silty											
111			layer	38	gravel											
112			layer	38	sandy											
113			layer	37	silty sand											
114			layer	36	silty											
115			layer	36	silty sand											
116			VOID													
117			layer	35	silty sand											
118			layer	35	silty sand											
119			layer	33	silty sand											
120			cobbled surface	46												
121			layer	46	sandy silt											
122			layer	45	silty sand											
123			layer	44	sandy silt											
124			layer	44	silty sand											
125			layer	47	sandy silty clay											
126			layer	47	sandy gravel											
127			layer	47	sandy											
128			layer	47	sandy											
129			layer	31	sandy silt											
130			layer	31	sandy clay											
131			layer	32	sandy silt											

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
132			layer	32	sandy silt											
133			fill of furrow 134								1					
134			cut of furrow													
135			layer	28	silty sand											
136			layer	27	sandy silt											
137			layer	21	silty sand											
138			deposit	21	clay											
139			layer	22	silty clay											
140			layer	22	clay											
141			layer	22	clay											
142			layer	26	sandy											
143			layer	26	silty											
144			cut of gully	17												
145			fill of gully 144	17									2	1		
146			layer	20	silty											
147			layer	20	sandy											
148			layer	20	sandy											
149			layer	20	sandy											
150			layer	17	silty sand											
151			deposit	17	sandy clay											
152			layer	18	silty											
153			layer	18	silty											
154			deposit	18	gravel											
155			layer	14	sandy silt											
156			layer	16	silty sand											
157			layer	16	silty sand											
158			layer	19	silty sand											
159			layer	19	silty sand											
160			layer	29	silty sand											
161			layer	29	banded sand and clay											
162			deposit	15	sandy silt											
163			cut of gully	15												
164			fill of gully 163	15												
165			layer	23	silty sand											
166			layer	24	silty sand											

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
167			layer	25	silty sand											
168			layer	51	clayey sand											
169			layer	50	clayey sand											
170			layer	50	sandy clay											
171			layer	50	sandy											
172			layer	49	silty sand											
173			layer	49	sandy											
174			layer	48	silty sand											
175			layer	48	sandy											
176			deposit	48	clay											
177			layer	2	silty sand											
178			layer	2	silty sand											
179			layer	3	sandy clay											
180			layer	6	silty sand											
181			layer	6	clayey sand											
182			layer	7	silty sand											
183			layer	8	silty sand											
184			layer	8	silty sand											
185			layer	4	sandy											
186			deposit	4	mineral material											
187			layer	4	sandy clay											
188			layer	4	sandy clay											
189			layer	4	sandy clay											
190			deposit	11	sandy											
191			deposit	12	silty sand											
192			layer	9	sandy											
193			layer	10	clayey sand											
194			layer	13	sandy											
195			layer	13	sandy											
196			layer	1	sandy clay											
197			layer	1	sandy clay											
198			layer	30	silty											
199			layer	12	silty sand											
500	8		layer		topsoil in areas A, B and C	1	1	2	7		15	2		54		
501	8		deposit		natural in area C											

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
502	8		deposit		alluvial subsoil in area C	4	7	2	1					84		1
503	8		deposit		silty sand, possible trample from occupation									48		
504	8		deposit		cleaning around cobbled area 508, 509 (same as 502)									57		
505	8		fill of posthole 514												1	
506	8		fill of ditch 507													
507	8		cut of enclosure ditch		enclosure											
508	8		cobbled area		linear											
509	8		area of sandstone pieces adjacent to 508													
510	8		disparate patches of stone floor slabs													
511	8		area of stone floor slabs													
512	8		area of stone floor slabs													
513	8		VOID													
514	8		cut of posthole													
515	8		cut of beamslot		adjacent to posthole 514											
516	8		secondary fill of pit 521												4	
517	8		VOID													
518	8		VOID											2		
519	8		fill of posthole 520												2	
520	8		cut of posthole													
521	8		cut of pit													
522	8		fill of pit 523					1							4	
523	8		cut of pit													
524	8		cut of posthole													
525	8		fill of posthole 524												1	
526	8		fill of postpipe 657		within posthole 524									3		
527	8		cut of posthole													
528	8		fill of posthole 527													
529	8		fill of posthole 530												1	
530	8		cut of posthole													
531	8		fill of pit 532											5	4	
532	8		cut of pit													
533	8		secondary fill of flue 534												4	

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
534	8		cut of flue													
535	8		deposit		bank of redeposited material											
536	8		fill of pit 537												3	
537	8		cut of pit													
538	8		primary fill of flue 534		stone lining											
539	8		VOID													
540	8		VOID													2
541	8		primary fill of pit 521											2	4	
542	8		fill of gully 543												4	
543	8		cut of gully		orientated north - south											
544	8		fill of enclosure ditch 507		section 114					4				1	4	
545	8		fill of enclosure ditch 507		section 121									1		
546	8		cut of gully													
547	8		fill of gully 546												3	4
548	8		cut of pit													
549	8		fill of pit 548												60	
550	8		VOID													
551	8		group number for stakeholes 659, 661 and 663													
552	8		deposit		alluvial subsoil within areas A and B		2		2						7	
553	8		cut of ditch													
554	8		fill of ditch 553													4
555	8		fill of ditch 556													4
556	8		cut of ditch													
557	8		fill of ditch 558													4
558	8		cut of ditch													
559	8		secondary fill of fenceline 560												5	
560	8		cut of fenceline		east - west orientation											
561	8		fill of pit 562												2	
562	8		cut of pit													
563	8		layer		silty clay	2	1								49	4
564	8		primary fill of fenceline 560													

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
565	8		cut of corn dryer													
566	8		fill of ditch 567											2	4	
567	8		cut of ditch													
568	8		fill of ditch 569												4	
569	8		cut of ditch													
570	8		tertiary fill of corn dryer 565							1					4	
571	8		secondary fill of corn dryer 565												4	
572	8		quaternary fill of corn dryer 565								1			1	4	
573	8		cut of pit													
574	8		fill of pit 573												2	
575	8		cut of ditch													
576	8		cut of ditch													
577	8		cut of ditch													
578	8		cut of ditch		continuation of ditch 636											
579	8		cut of sub-circular pit													
580	8		post setting													
581	8		post setting													
582	8		cut of collapsed corn dryer													
583	8		fill of ditch 584													
584	8		cut of ditch													
585	8		fill of ditch 586												3	
586	8		cut of ditch													
587	8		fill of ditch 588												1	
588	8		cut of ditch		possible continuation of ditch 586											
589	8		fill of pot within pit 590											78	1	
590	8		cut of pit													
591	8		fill of pit 590													
592	8		fill of collapsed corn dryer 582		collapsed corn dryer	2									4	
593	8		cut of pit													
594	8		fill of pit 593													
595	8		unexcavated ditch													

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
596	8		unexcavated gully													
597	8		unexcavated pit													
598	8		unexcavated pit													
599	8		unexcavated gully													
600	8		unexcavated gully													
601	8		unexcavated pit													
602	8		unexcavated pit											3		
603	8		unexcavated gully		parallel to enclosure ditch 507											
604	8		unexcavated pit													
605	8		stone wall within cut of corn dryer 565													
606	8		stone flue lining within corn dryer 565													
607	8		cut of feature		function unknown											
608	8		cut of flue													
609	8		stone lining of flue 608													
610	8		fill of flue 608												3	
611	8		deposit		alluvial deposit forming ground surface in areas A and B									4		
612	8		fill of ditch 613													
613	8		cut of curvilinear ditch													
614	8		fill of curvilinear ditch 615													
615	8		cut of ditch													
616	8		group number for curvilinear ditches 613, 615													
617	8		secondary fill of feature 607		function unknown										3	
618	8		clay lining of flue 608													
619	8		unexcavated pit													
620	8		fill of posthole 621													
621	8		cut of posthole													
622	8		primary fill of feature 607											1		
623	8		fill of pit 624			1								89	4	
624	8		cut of pit													

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Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
625	8		VOID													
626	8		primary fill of corn dryer 565												4	
627	8		fill of ditch 575		section 140											
628	8		VOID													
629	8		fill of post setting 630													
630	8		cut of post setting													
631	8		fill of post setting 632													
632	8		cut of post setting													
633	8		fill of ditch 576													
634	8		fill of ditch 577													
635	8		fill of ditch 575		section 144						1					
636	8		cut of ditch		continuation of ditch 578											
637	8		fill of ditch 636												4	
638	8		fill of ditch 578											2	4	
639	8		fill of posthole 640													
640	8		cut of posthole													
641	8		unexcavated linear stone feature													
642	8		cut of ditch													
643	8		fill of ditch 642													
644	8		cut of ditch													
645	8		fill of ditch 644													
646	8		layer		silty									17		
647	8		cut of pit													
648	8		secondary fill of pit 647												1	
649	8		primary fill of pit 647		burnt clay											
650	8		fill of ditch 651													
651	8		cut of ditch		enclosure / boundary ditch											
652	8		cut of ditch													
653	8		fill of ditch 652													
654	8		fill of fenceline 655													
655	8		cut of fenceline													
656	8		layer		silty sand											
657	8		cut of postpipe													
658	8		fill of stakehole 659													

Context	Area	Group no	Description	Trench	Notes	cbm	ceramic	cu alloy	fe	fired clay	flint	glass	ind waste	pottery	sample	worked stone
659	8	551	cut of stakehole													
660	8		fill of stakehole 661													
661	8	551	cut of stakehole													
662	8		fill of stakehole 663													
663	8	551	cut of stakehole													
664	8		unexcavated ditch													
			Total	10	5	20	15	5	10	5	46	5	3	632	108	2

Appendix B :

Flint assessment

Peter Rowe

Introduction

This report summaries an assemblage of 49 lithics collected during fieldwork at Rockliffe Park, Hurworth in 2007. Eleven of these are naturally occurring fragments consistent with material available in local glacial deposits such as boulder clay or sand and gravel. The remainder are the result of prehistoric knapping. The majority of the flints are from topsoil contexts.

The entire assemblage has been catalogued using Microsoft Excel. The following variables have been catalogued:-

- raw material type (e.g. flint, chert, agate)
- raw material colour
- percentage of cortex
- cortex type (e.g. reduced, chalky)
- patina colour and percentage
- type of artefact (e.g. flake, blade, core)
- reduction sequence (i.e. primary, secondary, tertiary)
- interpretation (e.g. scraper, arrowhead)
- period
- maximum dimensions
- method of knapping (e.g. hard hammer percussion)
- whether burnt
- whether damaged

The catalogue is available with the site archive.

Table B1 : Assemblage composition

Flint Type	Contexts	Quantity
Blades or blade fragment	1, 5, 500, 502	9
Core trimming flake	1	1
Debitage	1, 500, 502	12
Flakes(worked/unworked)	1, 500	4/7
Fabricator	502	1
Irregular burnt fragment	1	1
Natural Pebble	1, 500, 568, 572	11
Scraper	500, 635	2
Tool Fragment	1	1
Total		49

General character

RAW MATERIAL

The assemblage is composed entirely of flint. There are no examples of quartz, chert, jasper or other fine-grained stone types such as tuff. The flint has a fairly homogenous character, mainly consisting of light brown items with many examples retaining cortical surfaces. When cortex is present it is worn from glacial action and is extremely thin in section. The source of the flint is likely to be small pebbles derived from local glacial deposits, river gravels or beach pebbles from the Yorkshire coast.

POST-DEPOSITION DAMAGE

The material has some damage from movement in the soil comprising edge chipping, particularly from topsoil contexts 1 and 500. Polishing was also visible on the surface of many of the items. Where this is present it occurs in small patches and is similar in appearance to a mark left by a graphite pencil. This sort of polishing is consistent with the movement of the flint within a soil matrix. Patination is only present on burnt items.

BURNING

There are three pieces which are burnt (all from topsoil or subsoil deposits). These are all heavily fired, with total patination of surfaces, shattering, pot-lid fracturing and surface crazing.

Technology

ASSEMBLAGE COMPOSITION

Discounting the natural pebbles and burnt pieces, the predominant technologies are the production of small blades and squat flakes.

There are no cores present but there is one core preparation flake from Context 1. This has a prepared crest running along its length and slightly to one side of its axis to encourage the detachment of a long flake or blade along the resultant ridge. This form of preparation is typical of industries reliant on small pebbles as a source of raw material.

Blades make up almost 25% of the knapped assemblage. Those present are all small examples with parallel sides and thin sections. Three of the nine blades are complete whilst the others represent distal ends, proximal ends and mid-sections. This may be the result of the production of microliths, although at least one of the pieces was snapped following deposition. None of the blades have edge use or retouch.

The flakes present tend to be squat and fairly circular. There is a high incidence of retouch and edge use suggesting that flakes were expediently produced for basic cutting or scraping tasks. Context 1 produced a long flake with retouch along one edge and around its tip. This is a good example of the ad hoc and chronologically undiagnostic nature of the flake industry.

There are two scrapers. A heavily retouched example was recovered from context 500. This has previous blade scars on its dorsal surface and is likely to be Mesolithic or early Neolithic in date. The retouch along its right edge forms a slight waist to the item. There is some more modern edge damage along its left hand edge.

The second scraper is a small circular thumbnail type from context 635. This is based on a squat flake of brown flint and has invasive retouch along both edges and its distal end. This class of scraper is typical of the early Bronze Age period and has particular associations with Beaker assemblages (Edmonds, 1995, p. 141).

Two other finished tool types were recognised. The first is a fabricator from context 502, an alluvial subsoil. This is bifacially worked on thin slightly curving blank. There is a slight polish to its proximal end, typical of the worn appearance of this class of artefact. Fabricators are a Neolithic phenomena and their exact purpose is not known.

The other tool, from context 1, is incomplete, being a fragment of a small point which has been subject to shattering from burning. The point is unifacially worked and is possibly the tip from a projectile of the later Neolithic or early Bronze Age.

Conclusion

The earliest technology represented is a blade industry characteristic of the Mesolithic or early Neolithic utilisation of the landscape. The Neolithic period is also represented by a fabricator, whilst the Bronze Age is represented by a thumbnail scraper and a burnt projectile point.

The assemblage is small but is in keeping with other multi-period collections from the banks of the Tees, including those noted by Don Spratt and his colleagues at Ingleby Barwick (Spratt et al, 1976) further downstream.

Although the lithics are largely unstratified they demonstrate a previously unreported prehistoric presence in this area that might be further revealed by future fieldwork.

Recommendations

There are five flints that could be drawn to illustrate this report. Other than this the material should be permanently curated with the site archive.

Table B2 : Suggested illustrations

Fig No.	Context No.	Description
1.1	1	Core preparation flake
1.2	1	Retouched flake
1.3	500	Scraper
1.4	635	Thumbnail scraper
1.5	502	Fabricator
1.6	1	Burnt projectile point

APPENDIX C :

Quernstones

Elizabeth Wright

14AA

Part of an irregular boulder of igneous rock with some smoothed and utilised surfaces, probably used as a saddle quern. The rock is a very dense, heavy, igneous rock in the form of a hexagonal column, almost certainly a basalt and most probably originating in a dyke of the Whin Sill. There are some discernable small phenocrysts, some pale ones probably of feldspar and dark phenocrysts, most probably of augite. Some unaltered areas of original surface have weathered to the brownish crust rich in hydrated iron oxides typical of weathered basalt. It is likely that the boulder originated as an erratic in a deposit of glacial drift, probably not far distant from its find spot, as the artefact is extremely heavy even in its broken final form.

The overall measurements of the quern are 380 mm long, 250 mm wide and between 110 and 170 mm thick. The artefact presents a number of approximately planar surfaces, some of which appear relatively unaltered and some of which exhibit traces of use wear. Three of the faces began as planar faces of the original hexagonal basalt column. The first face, 3340 mm long and 130 to 180 mm broad is a weathered original face of the column and is not noticeably modified. The surface contiguous to this is parallel sided and measures 310 mm by 120 mm. The surface is very flat and smooth and exhibits a noticeable polish. The surface does not seem to have been used either as a whetstone or as a quern and as this surface acts as a dorsal surface to the face obviously used for grinding, it is possible that the polish has arisen as a result of movement of the quern when in use, which is not unusual. There is a patchy dark colouration on the surface which may have arisen as a result of heat or fire in a reducing atmosphere.

The third surface facet appears unweathered but finely chipped or fractured, whilst at the same time showing some smooth glaze. It may have been broken or modified but later subjected to polish when the quern was in use. The remaining surface whilst somewhat uneven and convex shows rough brown weathering on some areas, but is also both polished from use and scored. This surface was probably used as a saddle quern. Long parallel unidirectional score marks are gouged into the surface at an angle of perhaps 20 degrees to the long sides and appear to lie below the wear polish. It is unclear if these result from an attempt to shape or flatten the surface before use or if they result from glacial score marks suffered by the original rock outcrop before transportation or by the plucked boulder during glacial transportation. The score marks seem unlikely to have resulted from use of the quern because this is not the natural direction of use of the stone. The quern is not complete and perhaps only about three

quarters of it remains. This can be ascertained from the lack of polish at the broken edge of the grinding surface. It is likely that the fire or heat, of which traces appear on the dorsal face, may have assisted in the destruction of the artefact, either accidentally or intentionally, which otherwise would have been unlikely to have been damaged.

502 AC

A number of conjoining fragments, 17 in all, constituting when reassembled about three quarters of the upper stone of a Roman millstone manufactured from millstone grit. The rock is a medium grained, feldspathic gritstone with sub-angular grains and pebble inclusions up to 10 mm in size, the feldspar being pink. The rock is very well cemented and has some iron content. The rock bears some resemblance in hand specimen to the Ashover grit of Derbyshire, though nearer sources to Teesdale cannot be ruled out. During the Roman period, millstones from the south Pennines were travelling as far as London and the south east of England, witnessed by the discovery of the millstone grit millstone in the Blackfriar's boat on the Thames.

The millstone measures 680 mm in diameter and has a cylindrical central eye 100 mm in diameter. On either side of the eye and diametrically opposite to each other, two D-shaped apertures pass right through the stone, positioned with the flat part of the D towards the rim of the stone and the curved part towards the eye. It seems probable that the apertures were designed to take the part of the drive mechanism for the millstone, which, it seems was top driven, probably suggesting that this was not a water driven mill, but one more probably turned by animal or human power. On the grinding face of the stone a circular groove 25 to 35 mm wide and 8 to 10 mm deep and having a diameter of about 320 mm passes through both apertures, suggesting that the apertures also housed hoppers and that the groove served to distribute the fed grain evenly around the grinding surface of the millstone as it turned. As the D-shaped apertures and eye of the millstone lie in a straight line, so that these apertures constituted a weak area in the stone, it is fairly unusual to find the central part of the millstone surviving and demonstrating its details with such clarity. With many such stones, the original shape of the apertures whether round, square, dove tailed or D-shaped is often uncertain, and it is often unclear whether or not the outer apertures interconnected with the central eye or whether the central eye or outer apertures were intended to function as or support hoppers. In this case a turning axel must have been inserted in the central eye, but this may well also have connected with the hopper apertures.

The D-shaped apertures measure 110 mm by 60 mm and 100 mm by 60 mm. The edge height of the stone is 45 to 50 mm and thickness at the central eye 48 to 50 mm. A slight lip at the edge of the grinding face on this upper stone suggests that the stone was slightly larger than the lower stone with which it was paired and operated. One large fragment of the millstone has some smooth undulating polish from secondary use (perhaps in the area of flooring where it was found). Parts of the upper surface of the millstone have been broken or destroyed. Three small fragments show minor blackening or reddening, evidence of proximity to heat or fire.

APPENDIX D :

Roman pottery

John Dore

The assemblage consisted of 513 sherds weighing 10.9 kg. No Samian was present.

No material earlier in date than the middle of the 3rd century AD was present. The latest material dates to no earlier than around the middle of the 4th century AD. No further work is required on the assemblage.

Chart D1: Vessel Classes.

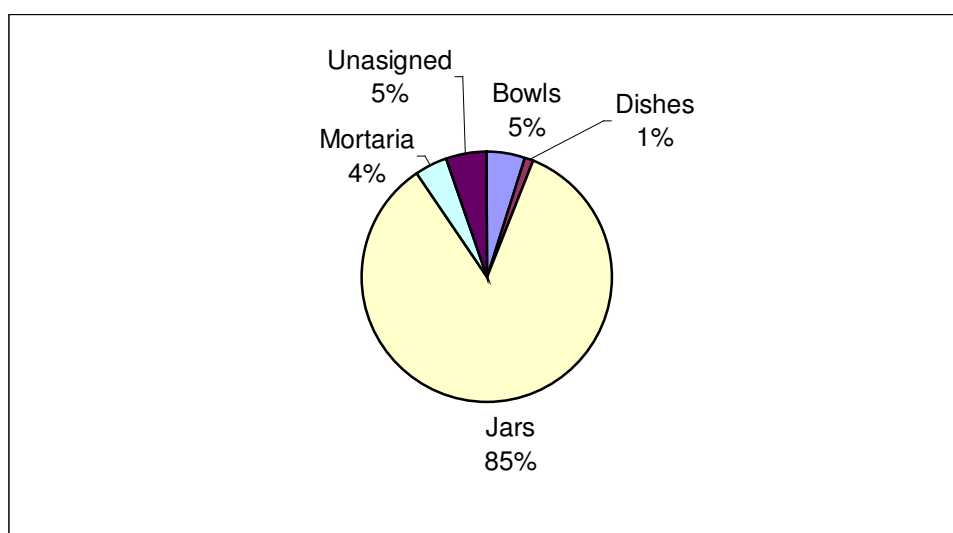


Table D1: Fabrics

Fabric	NFRC Code*	Weight
BB1	DOR BB1	35
Calcite Gritted (Huntcliffe Ware)	HUN CG	5885
Calcite Gritted		3077.8
Crambeck Parchment Ware	CRA PA	102
Crambeck Reduced Ware	CRA RE	648.5
Crambeck White Ware	CRA WH	316.6
Unassigned		843.1

Catalogue (Arranged by context)

CONTEXT 1 (TOPSOIL)

Total weight: 276g. Contains a number of medieval and post-medieval sherds not examined in detail.

CONTEXT 2 (SUBSOIL)

1 handle (51g); medieval.

CONTEXT 5 (FILL OF SHEEP BURIAL 3)

1 wall-sherd cup (5g); post-medieval.

CONTEXT 9 (FILL OF GULLY 10)

1 wall-sherd (13g); medieval.

CONTEXT 14 (SECONDARY FILL OF DRAIN CUT 16)

1 base-sherd plate (6g), porcelain with transfer print; post-medieval.

CONTEXT 145 (FILL OF GULLY 144)

1 wall-sherd (5g), sandy pale yellow fabric; Roman?

CONTEXT 500 (TOPSOIL)

2 rim-sherds (183g) jar in calcite gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163; AD 340+.

1 rim-sherd (33g) dish in calcite-gritted ware; illustrated (25).

1 rim-sherd, 1 wall-sherd (102g) mortarium in Crambeck Parchment ware (CRA PA); Gillam Type 290; AD 360+.

Also a number of medieval and post-medieval sherds, porcelain etc.

CONTEXT 502 (ALLUVIAL SUBSOIL IN AREA C)

45 rim and wall-sherds (908g) representing at least 3 jars in calcite gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163, AD 360+; one example illustrated (26). Also a number of medieval and post-medieval sherds, porcelain etc

CONTEXT 503 (SILTY SAND, POSSIBLY TRAMPLE FROM OCCUPATION)

2 rim-sherds (238g) bowl in Crambeck reduced ware (CRA RE); Gillam Type 231; AD 360+; illustrated (27).

2 rim-sherds (212g) bowl in Crambeck reduced ware (CRA RE); Gillam Type 204; illustrated (28).

32 rim- and wall-sherds jar in calcite-gritted ware (HUN CG); Huntcliff Type; Gillam Type 163; AD 340+.

1 rim-sherd (36g) dish in calcite-gritted ware; type as illustration 25 (possibly same vessel).

CONTEXT 504 (CLEANING AROUND COBBLED AREA 508, 509 - SAME AS 502)

54 rim- and wall-sherds (1703g) representing at least 4 jars in calcite-gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163 (as illustration 26); AD 340+.

1 wall-sherd (19g) mortarium in Crambeck white ware (CRA WH).

CONTEXT 526 (FILL OF POSTPIPE 657)

1 rim-sherd, 1 wall-sherd (81g) jar in calcite-gritted ware (HUN CG); Huntcliff Type; Gillam Type 163 (as illustration 26); AD 340+.

CONTEXT 531 (FILL OF PIT 532)

5 wall-sherds (56g) jar in calcite-gritted fabric.

CONTEXT 541 (PRIMARY FILL OF PIT 521)

3 wall-sherds (97g) jar in sandy black fabric with pale brown surface.

CONTEXT 544 (FILL OF ENCLOSURE DITCH 507)

1 rim-sherd (31g) dish in BB1 fabric (DOR BB1); Gillam Type 329; illustrated (29).

CONTEXT 545 (FILL OF ENCLOSURE DITCH 507)

1 wall-sherd (5g) in calcite gritted fabric.

CONTEXT 547 (FILL OF GULLY 546)

3 wall-sherds (31g) jar in calcite gritted fabric.

CONTEXT 549 (FILL OF PIT 548)

65 rim- and wall-sherds (444g) jar in calcite-gritted fabric; late 3rd – 4th century AD.

1 wall-sherd (38g) jar in gritty black fabric with brown surface.

CONTEXT 552 (ALLUVIAL SUBSOIL WITHIN AREAS A AND B)

5 wall-sherds (37g) calcite gritted fabric

1 rim-sherd (4g) modern porcelain.

CONTEXT 559 (SECONDARY FILL OF FENCE-LINE 560)

8 rim- and wall-sherds (189g) jar in calcite-gritted ware (HUN CG); Huntcliff Type; Gillam Type 163 (as illustration 26) AD 360+.

CONTEXT 563 AB (SILTY CLAY)

1 wall-sherd (4g) BB1 fabric (DOR BB1).

CONTEXT 561 (FILL OF PIT 562)

2 wall-sherds (14g) calcite gritted fabric.

CONTEXT 563 (SILTY CLAY)

33 rim- and wall-sherds (826g) representing at least 3 jars in calcite gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163 (as illustration 26); AD 340+.

1 rim-sherd (37g) bowl in Crambeck reduced ware (CRA RE); late 3rd – 4th century AD.

CONTEXT 566 (FILL OF DITCH 567)

2 rim-sherds (72g) bowl in Crambeck reduced ware (CRA RE); Gillam Type 231; late 3rd-4th century AD illustrated (30).

CONTEXT 572 (QUATERNARY FILL OF CORN DRIER 565)

1 wall-sherd (4.5g) in calcite gritted fabric.

CONTEXT 585 (FILL OF DITCH 586)

3 wall-sherds (48g) calcite gritted ware.

CONTEXT 587 (FILL OF DITCH 588)

1 rim-sherd (274g) mortarium in Crambeck white ware (CRA WH); Gillam Type 290; AD 360+; illustrated (31)

CONTEXT 589 (FILL OF POT WITHIN PIT 590)

1 wall-sherd (24g) in Crambeck white ware (CRA WH); probably same vessel as illustration 31.

5 wall-sherds (6g) calcite gritted fabric.

c. 100 wall- and base-sherds from a large jar in calcite gritted fabric.

CONTEXT 602 (UNEXCAVATED PIT)

2 wall-sherd, 1 base-sherd (327g) jar in gritty dark grey fabric with pale grey margin and a patchy dark grey surface.

CONTEXT 611 (ALLUVIAL DEPOSIT FORMING GROUND SURFACE IN AREAS A AND B)

5 wall-sherds (112g) in calcite gritted fabric.

CONTEXT 622 (PRIMARY FILL OF FEATURE 607)

1 wall-sherd (3.2g) in calcite gritted fabric.

CONTEXT 623 (FILL OF PIT 624)

96 rim- and wall-sherds (1189g) large jar in calcite gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163; AD 340+; illustrated (32).

1 rim-sherd (13g) bowl in Crambeck reduced ware (CRA RE); Gillam Type 229; late 3rd – 4th century AD; illustrated (33).

CONTEXT 638 (FILL OF DITCH 578)

1 rim-sherd, 1 wall-sherd (32g) jar in calcite gritted fabric (HUN CG); Huntcliff Type; Gillam Type 163 (as illustration 26); AD 340+.

CONTEXT 646 (SILTY LAYER)

8 rim- and wall-sherds (143g) jar in calcite-gritted fabric (HUN CG); Huntcliff Type;

Gillam Type 163 (as illustration 26); AD 340+.

1 base-herd (27g) mortarium in soft white fabric (CRA PA?)

1 rim-herd (45g) jar in Crambeck reduced ware (CRA RE); late 3rd – 4th century AD; illustrated (34).

2 rim-herds (45g) jar in Crambeck reduced ware (CRA RE); late 3rd – 4th century AD; illustrated (35).

APPENDIX E :

Small finds assessment

M. C. Bishop

Introduction

This assessment of the recorded finds ('small finds') from the excavation at Rockliffe Park, Hurworth (RPH07) has been undertaken to accord with MAP2 Appendix 4 'Assessment Report Specification' (English Heritage 1991).

The total number of finds from the site considered in this assessment report is sixteen. This comprised five copper-alloy items, 11 ferrous objects, and one ceramic item. All had been assessed for conservation and examined using X-radiography by the conservation laboratory at the University of Durham.

Objects were studied with reference to the X-rays to facilitate identification and to permit recommendations for further work to be formulated. All of the finds were appropriately packaged for short- to medium-term storage in accordance with museum and conservation guidelines.

Catalogue

COPPER ALLOY

500 AA. Coin. Roman (possibly 4th century(?) otherwise indecipherable). D: 13mm.

500 AE. Notched ring, flat on one side (the underside) and moulded on the other (upper?). Not necessarily Roman. D: 23mm; H: 7mm.

502 AA. Small fragment of curved sheet (from dish?). Roman? L: 22mm; W: 12mm.

502 AA. Fragment of a small buckle plate from a strap fastener, decorated with incised lines parallel with the edges, as well as opposing crescents and dots. It resembles (but is slightly smaller than) some of the decorated buckle plates sometimes thought (from their iconography, usually incorporating fish or peacocks) to have Christian connections (cf. Mawer 1995, 124 D1.Br.1–5), although no central design is present on the small portion that survives. Roman. L: 22mm; W: 10mm.

522 AA. A large dish that has been formed by spinning on a lathe and has been tinned on the inside. One fragment of rim survives and this shows that the vessel stood only some 40mm high, the rim being formed by turning the metal of the body inwards. The

vessel has a broad flat base with a cast ring on the underside and has been formed by spinning, indicated a small dimple in both the inside and the underside of the bowl marks where the vessel was gripped to be spun. This mechanised technique was used in the Roman world for everything from tableware to helmets and required the vessel to be shaped over a mandrel using a lathe. The alternative would have been to raise it with hammers over a former but this would have been far more time-consuming (and thus expensive) than spinning, once polishing had been included in the process (since the hammer marks would have to be removed to achieve the comparable finish as a spun vessel). The drawback with spinning is that it can introduce weaknesses into the metal and these often become apparent once it has corroded and this may well be why so much of the rim is missing, since the body metal is thinner here.

The vessel has been tinned on the inside. This can be seen as a faint sheen on the inside of the bowl. There is more tin around the basal footring, but this appears to have been a result of it having been soldered in place (it is very slightly eccentrically placed in comparison with the centring dimple). The process of tinning would have involved a wash of molten tin alloy (since the melting point of tin is much lower than that of copper alloy, the vessel suffers no harm in this process) and would have helped protect the inside of the vessel from corrosion from whatever was put in it and conversely, prevent the copper from tainting the contents. Anything acidic (wine, fruit juice) might have had such an effect and this may give us a clue to the role of the dish. It is most likely to be a piece of tableware, intended to contain fruit or perhaps wine. As such, it is a high status item and likely to have belonged to a well-to-do household.

The most striking thing about this vessel is the rarity of finding such an item largely intact in an excavated context. Fragments of such vessels are known (generally recognized from rims, and comparable examples are known from the 'palace' site at Fishbourne in Sussex (Cunliffe 1971, figure 51,153) and from the town of Colchester (Crummy 1983, No.2030)) but complete ones are unusual. A similar (but far from identical) unprovenanced vessel was included in the Guttman Collection (Hermann Historica 2003, Los 129). Thus the rarity and likely high-status nature of the Rockliffe Park dish makes it especially noteworthy. Roman. D: 290mm; H: 40mm.

IRON

500 AB. Circular-sectioned spindle. Probably not Roman. L: 103mm; D: 19mm.

500 AC. Part of a stylus? Roman. L: 89mm; Th: 9mm.

500 AD. Fragment. Sub-rectangular in section, possibly part of a blade. Not necessarily Roman. L: 32mm; W: 30mm; Th: 9mm.

500 AF. Fragment. Sub-rectangular in section, possibly part of a blade. Not necessarily Roman. L: 35mm; W: 22mm; Th: 7mm.

500 AG. Small fragment. Undiagnostic, although possibly part of a blade. Not necessarily Roman. L: 22mm; W: 21mm; Th: 9mm.

500 AH. Part of a stylus? Roman. L: 40mm; Th: 8mm.

500 AI. Nail. Head. Roman. L: 20mm; W: 11mm.

502 AD. Nail. Roman. L: 116mm; Th: 12mm.

552 AA. Nail. Head and part of shank. Roman. L: 15mm; Th: 9mm.

552 AB. Nail. Part of shank. Roman. L: 35mm; Th: 9mm.

563 sample AB. Nail. Near complete. Roman. L: 61mm; Th: 9mm

CERAMIC

563 AA. Approximately half of a ceramic spindlewhorl formed from a coarse red fabric (similar to 'legionary ware'). Cf. an example (although in greyware) from Colchester (Crummy 1983, No. 2005). D: 34m

Discussion

The dish (522 AA) is an unusual find and difficult to parallel in both form and the degree of preservation from an excavated site in Roman Britain and is undoubtedly a high-status artefact. The buckle plate is superficially of a more common type but equally significant in what it suggests about the affluence of any nearby settlement and it at least resembles other similar items with supposed Christian iconography. A spindlewhorl and possible stylus might also have a bearing on the nature of the site. Portions of possible blade are undiagnostic, as are nails, although the latter are at least likely to be Roman.

Assessment

Most of the finds are of no great significance, the spindlewhorl (563 AA) being typical of standard finds from a Roman site, although the buckle plate (502 AA) may be slightly more unusual. The dish (522 AA), however, is arguably at least of regional significance, given the rarity of almost complete vessels like this in excavated contexts and its apparent high-status nature.

APPENDIX F:

Clay pipe and glass assessment

Gail Hama

Introduction

A collection of tobacco pipe stems and glass fragments were recovered during excavations at Rockliffe Park, Hurworth. This report provides a summary of the assemblage.

Methodology

Five fragments of glass and 15 clay pipe stems came from five contexts. The weight and, in the case of the clay pipe fragments, the stem bore diameters, were recorded.

Discussion

All the glass fragments were of modern, 20th century, date. The clay pipe stems had stem bore diameters that gave a date range of mid-late 18th century.

Statement of potential and recommendations

The assemblage has no archaeological potential. No further work is required and the material can be discarded.

Illustration requirements

No illustrations are required.

Catalogue

- 1 Area 9. Topsoil. One fragment of clear window glass; two sherds of green bottle glass. All modern. Weight 10g
- 1 Area 9. Topsoil. Four clay pipe stems, one with spur. Stem bore diameters: 6, 5 and 4
- 500 two fragments of clear frosted bottle glass. Modern. Weight 7g
- 500 one clay pipe stem with spur. Stem bore diameter: 4
- 502 seven clay pipe stems. Stem bore diameters: 4

552 two clay pipe stems. Stem bore diameters: 4

563 sample AB. Clay pipe stem. Stem bore diameter: 4

APPENDIX G :

Ceramic building material assessment

Gail Hama

Introduction

A small quantity of ceramic building material was recovered during excavations at Rockliffe Park, Hurworth. This report provides a catalogue and summary of the finds, and assesses their significance.

Methodology

An assemblage of 117 fragments with a total weight of 1,575g was recovered from 10 contexts. The material has been recorded and catalogued. The character of any original surfaces was also noted.

Discussion

Only seven fragments of ceramic building material were Romano-British in date. Of these, three (from Contexts 502, 563 and 592) had criss-crossed slashed lines characteristic of box flue and flat tiles from this period: the example from Context 592 was part of a flat tile. The fabric of those from Contexts 563 and 592 were similar being buff coloured and having gritty inclusions. A possible tegula also came from Context 592. Plain flat tile fragments of Romano-British character came from Contexts 502 and 623, while a slightly convex tile came from Context 571. This fragment also had broad combed lines on its upper surface. The decoration is similar to that found at Thornbrough Farm, North Yorkshire (Isserlin 2002, 523, figure 227.7). A non-diagnostic flat tile fragment with flanged edge (Context 563) may be Roman in date.

Non-diagnostic chips and fragments accounted for 106 items in the assemblage; two non-diagnostic tile fragments derived from Contexts 500 and 502, the latter possibly modern. A modern pantile fragment came from Context 11. A single fragment of handmade brick was found in the topsoil (Context 1, area 9).

Although the presence of Roman tiles may indicate the presence of buildings in the vicinity the paucity of the material is such that it is not possible to state this categorically or to determine the likely nature of these structures.

Statement of potential and recommendations

No further work is required on the assemblage. The collection should be retained and deposited with the appropriate museum service.

Illustration requirements

No illustrations are required.

Catalogue

- 1 Area 9. Topsoil: 8 non-diagnostic chips, possibly tile. Weight 46g; 1 hand-made brick fragment, oxidised with reduced core. W 72mm; weight 153g
- 11 modern pantile fragment. Weight 146g
- 500 non-diagnostic tile fragment, dense oxidised fabric with a few dark inclusions. Weight 60g
- 502 non-diagnostic fragment, possibly modern. Very hard dark red oxidised fabric with reduced core. Weight 25g
- 502 two fragments of Roman flat tile, one with incised criss-cross patterns. Dense oxidised fabric, orange. Th 12-14mm, weight 43g
- 516 sample AA: 49 non-diagnostic chips. Weight 50g
- 541 sample AA: 48 non-diagnostic chips. Weight 22g
- 563 flat tile fragment with criss-crossed rows of four slashed lines. Roman. Buff coloured fabric with reduced core, calcite grit inclusions. Th 14mm, weight 120g
- 563 non-diagnostic flat tile fragment with flanged edge. Dense oxidised fabric with sanded base. Th 24mm, weight 209g
- 571 sample AA: single curved fragment of Roman tile. Broad longitudinal combed lines. Dense oxidised fabric, pale orange. Th 16mm, weight 72g
- 592 flat tile fragment. Decorated with criss-crossed rows of four slashed lines. Buff coloured fabric with reduced core, calcite grits and occasional stones. Roman. Th 17mm; weight 416g
- 592 tegula with right-angled cut. Dense oxidised fabric, orange. Th 18mm, weight 157g
- 623 flat tile fragment. Soft buff coloured oxidised fabric, gritty inclusions. Roman. Th 22mm; weight 56g

APPENDIX H :**Industrial residue assessment***Jane Cowgill*

Fired clay, fuel and the magnetic elements of some sample residues from Rockcliffe Park, Hurworth (RPH 07).

Introduction.

A very small assemblage from this site was available for recording. The initial group of finds appear to have been lost in the post, those recorded below were recovered by processing a few remaining samples.

Table H1 : Catalogue

Context	Sample	Type	Count	Weight	Comments
516	AA	Coal	8	<1g	
516	AA	Magnetic matter	-	<1g	11+ plate hammerscale
533	AA	Daub?	-	276g	See comments below.
533	AA	Magnetic matter	-	2g	1 spheroidal hammerscale
541	AA	Coal	28	1g	
541	AA	Magnetic matter	-	1g	No hammerscale.

Discussion.

Coal was the only fuel type recorded, although if it occurs naturally in the area this may not be significant. Hammerscale was recovered from two samples in the magnetic element extracted, but although this does indicate that iron smithing occurred nearby (from which it is a by-product) the quantity found is very small. The small ball or spheroidal scale from context 533 may have moved down through the soil from a horizon above.

The fired clay consists of fragmentary pieces of clay that has only been lightly fired in an oxidising atmosphere. It has tentatively been catalogued as daub even though there is very little evidence for an organic-based temper (often dung was used) and there are no definite wattle imprints. There are a few surfaces that may have been shaped or moulded but whether these are hand-made or natural is unclear.

APPENDIX I :

Biological remains assessment

Alexandra Schmidl and Deborah Jaques

Summary

Biological remains from 32 bulk sediment samples and a small quantity of hand-collected bone, recovered from deposits encountered during monitoring and excavations at Rockliffe Park, Hurworth-on-Tees, County Durham, were submitted for an assessment of their bioarchaeological potential. The excavations revealed features related to a possible rural Romano-British settlement (perhaps with an earlier, Iron Age, phase) indicated by features including corn-drying kilns, ditched enclosures, fence lines, pits, postholes and two possible quenching troughs.

Charred plant remains, in the form of charcoal fragments, were recovered from all of the processed samples, with some also yielding small numbers of remains of cereals and associated weeds. The condition of the charcoal was, in general, quite good, but most of the individual fragments were too small to be readily identifiable. Seven of the deposits gave small grain assemblages and many of the cereal remains were also too poorly preserved for close identification but, amongst the identifiable components of the assemblages, grains and chaff clearly showed the most abundant crop plants to be barley, emmer/spelt wheat and naked wheat. All of these remains most likely derived from crop processing activities undertaken nearby.

Fourteen of the deposits gave sufficient suitable material for radiocarbon dating to be attempted.

Only one context from the entire site produced vertebrate remains all of which were identified as representing a single pig skeleton. Although of good preservation, this skeleton was most likely of modern origin; given the excellent condition of the bones and the relatively large size of the individual represented.

Provided that their dating can be refined, the seven deposits yielding larger assemblages of charred plant remains could be fully analysed to provide information regarding the agricultural and the ecology of the fields in which they grew. The analysis may also provide additional information of specific value in the interpretation of the Romano-British drying kiln.

Methods

BULK SEDIMENT SAMPLES

The sediment subsamples were processed by NAA prior to delivery to PRS, and the unsorted 'flots' (hereafter termed washovers) and biological remains recovered from the residues 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 washover fractions.

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

All of the biological remains recovered were identified as closely as possible within the constraints of an assessment and their suitability for radiocarbon dating by accelerator mass spectrometry (AMS) was also considered.

Nomenclature for plant species follows Stace (1997). Cereal identifications follow Jacomet (2006) and charcoal identifications follow Schoch *et al.* (2004).

VERTEBRATE REMAINS

For the hand-collected vertebrate remains records were made concerning the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

Fragments were identified to species or species group using the PRS modern comparative reference collection.

Results

BULK SEDIMENT SAMPLES

In general, the assessment samples gave rather small quantities of biological remains; almost exclusively plant material. Ancient plant remains recovered were preserved by charring and largely consisted of tiny fragments of poorly preserved unidentified charcoal and some cereal grains. Apart from these, most of the samples also contained rootlets and uncharred seeds/fruits which were almost certainly modern contaminants.

Details of the results from recording of the plant remains are presented in Tables I1 and I2, together with notes regarding any material suitable for radiocarbon dating.

VERTEBRATE REMAINS

A single deposit, Context 4, produced a collection of bone amounting to 256 fragments. These represented the remains of a single pig skeleton. Preservation of the bones was extremely good and all were darkish brown in colour. Fresh breakage damage was noted on the two mandibles and on skull fragments.

Most of the skeleton was represented, including fore and hind limbs, vertebrae and ribs. There were fragments of the back part of the skull (parietal, occipital, petrous and orbit) and parts of both maxillae, but the nasal and premaxilla bones were absent, as were the front parts of both mandibles. Given the fresh breakage damage, these fragments had probably been truncated during excavation. A few of the smaller bones – carpals/tarsals and phalanges – were lacking and these were probably missed during hand-collection of the remains.

Only the early fusing elements (i.e. the distal humerus and proximal radius) were beginning to fuse, whilst the teeth showed very little wear. On the basis of tooth eruption and the epiphysial fusion data, this individual was probably almost a year old when it died.

Discussion and statement of potential

Most of the botanical remains recovered from the subsamples were modern rootlets and unidentifiable charcoal fragments (presumably fuel waste). Some of the larger charcoal fragments from Context 516 (Area B – fill of pit 521) could be identified as alder/birch/hazel (*Alnus/Betula/Corylus*).

Small numbers of poorly preserved (distorted and eroded) charred cereal grains were recorded from one deposit in Area A (Context 637 – fill of ditch 636), another in Area B (Context 544 – fill of enclosure ditch 507), four deposits in Area C (Context 505 – fill of posthole 514; Context 519 – fill of posthole 520; Context 557 – fill of ditch 558; and Context 568 – fill of ditch 569) and two from unspecified areas (Context 536 – fill of pit 537; Context 617 – secondary fill of feature 607). In addition, larger and slightly better preserved (in most cases preservation was recorded as poor to fair) grain assemblages were recovered from four deposits in Area A (Contexts 570, 571, 572 and 626 – fills of corn drier 565), two from Area B (Contexts 516 and 541 – fills of pit 521) and one deposit in Area C (Context 533 – fill of flue 534). At least four cereal taxa were identified: barley – *Hordeum distichon* L./*H. vulgare* L., emmer/spelt wheat – *Triticum dicoccum* Schübl./*T. spelta* L., naked wheat – *Triticum aestivum* L./*T. durum* Desf./*T. turgidum* L. and oat – *Avena*. All of the cereal remains were presumably charred accidentally during some stage of crop processing or food preparation.

Many of the cereal remains were too poorly preserved for close identification but, amongst the identifiable components of the assemblages, grains and chaff clearly showed the most abundant crop plants to be barley and emmer/spelt wheat, together

with traces of naked wheat. This composition is consistent with a Romano-British date for the deposits (Greig 1991, van der Veen and O'Connor 1998). Small numbers of charred remains of common weeds of arable fields (e.g. brome, fat-hen, knotweed, stinking chamomile, wild radish), were also present; probably harvested accidentally with the cereals crops.

Traces of charred root and rhizome fragments were recorded from five of the samples; two deposits in Area A (Contexts 626 and 637), one in Area B (Context 522 – fill of pit 521), another in Area C (Context 533 – secondary fill of 534) and one deposit from an unspecified area (Context 563 – layer). These may have derived from the burning of peat or turves (see Hall 2003). The fill of flue 534 (Context 533) also contained other remains, such as caryopsis of heath-grass (*Danthonia decumbens* (L.) DC.) which would perhaps favour an origin in turf; detailed recording of the plant assemblage from this deposit may, therefore, provide evidence of resources other than wood used as fuel at the site.

Other plant remains present which were not charred (mostly rootlets) were probably modern intrusions or contaminants (see Tables 1 and 2).

Only one context (Context 4; area unspecified) from the entire site produced vertebrate remains all of which were identified as representing a single pig skeleton from an animal aged around one year. Although of good preservation, this skeleton was most likely of modern origin; given the excellent condition of the bones and the relatively large size of the individual represented.

Recommendations

Full analysis of the assemblages of charred cereals remains from corn drier 565 in Area A (Contexts 570, 571, 572 and 626), pit 521 (Contexts 516 and 541) and flue 534 (Context 533), could make a valuable contribution to the interpretation of the ?Romano-British crop-drying kiln and would also provide information on agricultural activities in the area; rural Roman/Romano-British sites have been identified by Hall and Huntley (2007) as one of the site type and period combinations most in need of further archaeobotanical investigation in northern England. Given the poor preservation of many of the cereal remains, processing of all of the remaining sediment from the deposits could be undertaken to 300 microns to ensure recovery of any diagnostic cereal chaff and smaller seeds/fruits which may be present.

If closer dating of the deposits cannot be obtained by other means, radiocarbon dating of these contexts could be attempted (employing AMS dating of short-lived plant structures, e.g. cereal grains) to confirm and refine their currently assigned period.

No further work is recommended on the current bone assemblage.

Retention and disposal

All of the remains recovered thus far from the samples from Contexts 516, 533, 541, 570, 571, 572 and 626, together with any remaining sediment from these deposits, could be retained.

Additional sediment from any deposits not listed above may be discarded – unless required for purpose other than the study of biological remains or specifically for the recovery of additional material for radiocarbon dating.

The hand-collected vertebrate remains need not be retained.

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.

Table 11 : Summary of the biological remains in the washovers from processed sediment samples, with notes on any material suitable for submission for radiocarbon dating, presented in context number order grouped by Area (deposits for which no area information was available are shown last). Key: 'kg/litres' = amount of sediment processed in kilograms and litres; 'wt' = weight of washover in grammes; '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.

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
570/AA	A	tertiary fill of corn drier 565	10.5/7	2	a few fragments of charcoal (to 3 mm), ~30 poorly preserved sediment encrusted cereal grains (barley - <i>Hordeum distichon</i> L./ <i>H. vulgare</i> L., emmer/spelt wheat - <i>Triticum dicoccum</i> Schübl./ <i>T. spelta</i> L., naked wheat - <i>Triticum aestivum</i> L./ <i>T. durum</i> Desf./ <i>T. turgidum</i> L.)	No	mostly rootlets, a few seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>)	Yes	Yes	a little sand
571/AA	A	secondary fill of corn drier 565	10/8	5	grain assemblage of ~350 poorly preserved grains (mostly barley - <i>Hordeum distichon</i> L./ <i>H. vulgare</i> L., with a few remains of emmer/spelt wheat - <i>Triticum dicoccum</i> Schübl./ <i>T. spelta</i> L. and naked wheat -	-	mostly rootlets, a few seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>)	Yes	Yes	-

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
					Triticum aestivum L./T. durum Desf turgidum L.), two achenes of black-bindweed (Fallopia convolvulus (L.) Á. Löve), one caryopsis of brome (Bromus), one seed of chickweed (Stellaria media (L.) Vill.), two achenes of knotweed (Persicaria), five mericarps of wild radish (Raphanus raphanistrum L.)					
572/AA	A	quaternary fill of corn drier 565	11/7.5	2	a little charcoal (to 3 mm), ~40 poorly preserved grains (mostly barley - Hordeum distichon L./H. vulgare L., with a little emmer/spelt wheat - Triticum dicoccum Schübl./T. spelta L. and oat - Avena), one mericarp of wild radish (Raphanus raphanistrum L.)	No	mostly rootlets, three earthworm egg capsules, a few seeds of orache/goosefoot (Atriplex/Chenopodium)	Yes	Yes	a little sand
589/AA	A	fill of pot within pit	2.5/2.5	<1	a little charcoal (to 3 mm)	No	mostly rootlets	No	No	a little sand

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
		590								
592/AA	A	fill of collapsed corn drier 582	10/8	<1	~30 poorly preserved grains (mostly barley – <i>Hordeum distichon</i> L./H. <i>vulgare</i> L.), two achenes of dock (<i>Rumex</i>)	-	mostly rootlets, one earthworm egg capsule, a few seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>)	No	No	-
610/AA	A	fill of flue 608	9.5/8	1	a little charcoal (to 3 mm)	No	mostly rootlets, three earthworm egg capsules, two fruit stones of raspberry (<i>Rubus idaeus</i> L.)	No	No	a little sand
623/AA	A	fill of pit 624	13/8	1	a little charcoal (to 3 mm), four pieces of rhizome/rootlet/twig	No	mostly rootlets, five earthworm egg capsules, one centipede	No	No	a little sand
626/AA	A	primary fill of corn drier 565	11.5/9	1	a little charcoal (to 3 mm), five grains of barley (<i>Hordeum distichon</i> L./H. <i>vulgare</i> L.), five grains of oat (<i>Avena</i>), four unidentifiable cereal grains, two glume bases of spelt wheat (<i>Triticum spelta</i> L.), one spikelet fork of spelt wheat, one achene of dock (<i>Rumex</i>), five seeds of fat-hen (<i>Chenopodium album</i> L.), one seed of field penny-cress	No	rootlets, five earthworm egg capsules, one centipede, one millipede, many seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>)	Yes	Yes	a little sand

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
					(Thlaspi arvense L.), one achene of stinking chamomile (Anthemis cotula L.), one mericarp of wild radish (Raphanus raphanistrum L.)					
637/AA	A	fill of ditch 636	9.5/7	<1	a little charcoal (to 3 mm), one unidentifiable cereal grain	No	rootlets, one earthworm egg capsule	Yes	No	a little sand
638/AA	A	fill of ditch 578	9.5/7	<1	a little charcoal (to 3 mm)	No	rootlets	No	No	a little sand
648/AA	A	secondary fill of pit 647	5.5/3	<1	a little charcoal (to 3 mm)	No	rootlets	No	No	-
516/AA	B	secondary fill of pit 521	25.5/19	5	a little charcoal (to 20 mm), many unidentifiable cereal grain fragments, ~170 poorly preserved (puffed and incrustated) cereal grains (mostly barley - Hordeum distichon L./H. vulgare L., with a few of naked wheat - Triticum aestivum L./T. durum Desf./T. turgidum L. and oat - Avena), a few rachis segments of barley, on achene	alder/birch/hazel (Alnus Betula/ Corylus)	mostly rootlets, six earthworm egg capsules, a few seeds of orache/goosefoot (Atriplex/Chenopodium), one achene of knotgrass (Polygonum aviculare L.)	Yes	Yes	-

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
					of dock (Rumex)					
522/AB	B	fill of pit 523	11/8	<1	a little charcoal (to 3 mm), one piece of rhizome/rootlet	No	mostly modern rootlets, one earthworm egg capsule, one seed of orache/goosefoot (Atriplex/Chenopodium)	No	No	a little sand
541/AA	B	primary fill of pit 521	24.5/18	2	a little charcoal (to 3 mm), ~70 poorly preserved sediment encrusted cereal grains (some of which could be identified as barley - <i>Hordeum distichon</i> L./H. <i>vulgare</i> L.)	No	mostly modern rootlets, five earthworm egg capsules, some seeds of orache/goosefoot (Atriplex/Chenopodium)	Yes	No	a little sand
542/AA	B	fill of gully 543	11.5/8	<1	a little charcoal (to 3 mm)	No	mostly rootlets, one achene of dock (Rumex), a few seeds of orache/goosefoot (Atriplex/Chenopodium)	No	No	a little sand
544/AA	B	fill of enclosure ditch 507	11.5/8	<1	a little charcoal (to 3 mm), two poorly preserved unidentifiable cereal grains, one achene of dock (Rumex)	No	mostly rootlets	Yes	No	a little sand, slag/cinder
554/AA	B	fill of enclosure ditch 507	8.5/6	<1	a little charcoal (to 3 mm)	No	mostly rootlets	No	No	a little sand
505/AA	C	fill of posthole 514	6/4	< 1	a little charcoal (to 3 mm), one tiny fragment of unidentifiable cereal grain	No	mostly rootlets, five earthworm egg capsules	No	No	a little sand

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
519/AA	C	fill of posthole 520	6.5/4	<1	two very poorly preserved unidentifiable cereal grains	-	mostly rootlets, a few seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>), one achene of knotgrass (<i>Polygonum aviculare</i> L.)	Yes	No	a little sand
525/AA	C	fill of posthole 524	6/4.5	<1	-	-	-	No	No	sand, coal, slag/ cinder
529/AA	C	fill of posthole 530	2.5/2	<1		-	modern rootlets	No	No	a little sand
533/AA	C	secondary fill of flue 534	20/16	2	a few fragments of charcoal (to 3 mm), ~30 poorly preserved sediment encrusted cereal grains (barley - <i>Hordeum distichon</i> L./ <i>H. vulgare</i> L., emmer/spelt wheat - <i>Triticum dicoccum</i> Schübl./ <i>T. spelta</i> L.), two glume bases of emmer/spelt wheat, one caryopsis of cat's-tail (<i>Phleum</i>), one achene of dock (<i>Rumex</i>), two caryopses of heath-grass (<i>Danthonia decumbens</i> (L.) DC.), one achene of lesser hawkbit	No	mostly rootlets, a few seeds of orache/goosefoot (<i>Atriplex/Chenopodium</i>)	Yes	Yes	a little sand

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
					(Leontodon saxatilis Lam.), one nut of sedge (Carex), one achene of stinking chamomile (Anthemis cotula L.), one mericarp of wild radish (Raphanus raphanistrum L.), two charred twig fragments					
555/AA	C	fill of ditch 556	14/8	<1	a little charcoal (to 3 mm)	No	mostly rootlets, one fly puparium, a few seeds of orache/goosefoot (Atriplex/Chenopodium)	No	No	a little sand
557/AA	C	fill of ditch 558	11/8	<1	a little charcoal (to 3 mm), one grain of barley (Hordeum distichon L./H. vulgare L.), one grain of emmer/spelt wheat (Triticum dicoccum Schübl./T. spelta L.) one grain of naked wheat (Triticum aestivum L./T. durum Desf./T. turgidum L.), one unidentifiable cereal grain	No	rootlets	Yes	No	a little sand
566/AA	C	fill of ditch 567	13.5/8	<1		-	modern rootlets, a few culm fragments, one seed of ivy-leaved speedwell (Veronica	No	No	a little sand, slag/cinder

Context/Sample	Area	Context description	kg/l	wt	Identifiable ancient plant remains (charred)	Charcoal IDs	Notes including on likely modern contaminants (waterlogged)	A	D	Other
568/AA	C	fill of ditch 569	12.5/8.5	<1	one grain of ?barley (Hordeum distichon L./H. vulgare L.)	-	hederifolia L.) modern rootlets, one earthworm egg capsule, several centipedes, a few seeds of orache/goosefoot (Atriplex/Chenopodium)	No	No	a little sand
531/AA	-	fill of pit 532	12/8	1	a little charcoal (to 3 mm)	No	modern rootlets, two earthworm egg capsules, a few seeds of orache/goosefoot (Atriplex/Chenopodium), one achene of dock (Rumex)	No	No	a little sand, slag/cinder
536/AA	-	fill of pit 537	12/8	<1	five poorly preserved cereal grains (probably emmer/spelt wheat - Triticum dicoccum Schübl./T. spelta L.)	-	mostly rootlets, a few seeds of orache/goosefoot (Atriplex/Chenopodium)	Yes	No	a little sand
547/AA	-	fill of gully 546	10/8	<1		-	mostly rootlets, one earthworm egg capsule, one achene of common nettle (Urtica dioica L.)	No	No	a little cinder/ slag
563/AA	-	layer	11.5/8	<1	one nut of sedge (Carex), one piece of rhizome/root	-	mostly rootlets, three earthworm egg capsules	No	No	a little sand, slag/cinder
574/AA	-	fill of pit 573	6/4	<1	a little charcoal (to 3 mm)	No	mostly rootlets	No	No	a little sand
617/AA	-	secondary fill of feature 607	12.5/9.5	1	a little charcoal (to 3 mm), one grain of ?oat (Avena), one caryopsis of brome (Bromus)	No	mostly rootlets	Yes	No	a little sand

Table 12 : Rockliffe Park, Hurworth-on-Tees, County Durham: Summary of the submitted biological remains recovered from the residues from processed sediment samples, with notes on any material suitable for submission for radiocarbon dating, presented in context number order grouped by Area (deposits for which no area information was available are shown last). Key: 'kg/litres' = amount of sediment processed in kilograms and litres; 'wt /g' = weight in grammes; 'size /mm' = maximum dimension of charcoal fragments present; '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.

Context / Sample	Area	Context description	kg/l	wt /g	size /mm	IDs	Modern root/rootlets /g	Notes	A	D
570/AA	A	tertiary fill of corn drier 565	10.5/7	-	-	-	<1		No	No
571/AA	A	secondary fill of corn drier 565	10/8	<1	13	No	<1		No	No
572/AA	A	quaternary fill of corn drier 565	11/7.5	2	7	No	<1		No	No
589/AA	A	fill of pot within pit 590	2.5/2.5	-	-	-	<1		No	No
592/AA	A	fill of collapsed corn drier 582	10/8	1	10	No	1		No	No
610/AA	A	fill of flue 608	9.5/8	<1	6	No	<1		No	No
623/AA	A	fill of pit 624	13/8	-	-	-	1		No	No
626/AA	A	primary fill	11.5/9	3	13	No	<1	three charred pieces	No	No

Context / Sample	Area	Context description	kg/l	wt /g	size /mm	IDs	Modern root/rootlets /g	Notes	A	D
		of corn drier 565						of rhizome/root/rootlet (to 10 mm)		
637/AA	A	fill of ditch 636	9.5/7	3	13	No	<1	four charred pieces of rhizome/root/rootlet (to 10 mm)	No	No
638/AA	A	fill of ditch 578	9.5/7	-	-	-	<1		No	No
648/AA	A	secondary fill of pit 647	5.5/3	-	-	-	<1		No	No
516/AA	B	secondary fill of pit 521	25.5/19	-	-	-	<1		No	No
522/AB	B	fill of pit 523	11/8	<1	5	No	-		No	No
541/AA	B	primary fill of pit 521	24.5/18	<1	5	No	<1		No	No
542/AA	B	fill of gully 543	11.5/8	<1	10	No	<1		No	No
544/AA	B	fill of enclosure ditch 507	11.5/8	-	-	-	<1		No	No
554/AA	B	fill of enclosure ditch 507	8.5/6		-	-	-		No	No
505/AA	C	fill of posthole 514	6/4	<1	5	No	-		No	No
519/AA	C	fill of posthole 520	6.5/4	-	-	-	-		No	No
525/AA	C	fill of posthole 524	6/4.5	1	10	No	<1		No	No
529/AA	C	fill of posthole 530	2.5/2	<1	10	No	-		No	No
533/AA	C	secondary fill of flue 534	20/16	-	-	-	-		No	No
555/AA	C	fill of ditch 556	14/8	<1	10	No	-		No	No
557/AA	C	fill of ditch	11/8	<1	5	No	<1		No	No

Context / Sample	Area	Context description	kg/l	wt /g	size /mm	IDs	Modern root/rootlets /g	Notes	A	D
		558								
566/AA	C	fill of ditch 567	13.5/8	<1	5	No	-		No	No
568/AA	C	fill of ditch 569	12.5/8.5	<1	2	No	<1		No	No
531/AA	-	fill of pit 532	12/8	2	10	No	2		No	No
536/AA	-	fill of pit 537	12/8	<1	10	No	-		No	No
547/AA	-	fill of gully 546	10/8	<1	5	No	-		No	No
563/AA	-	layer	11.5/8	<1	10	No	2	six charred pieces of rhizome/root/rootlet (to 12 mm)	No	No
574/AA	-	fill of pit 573	6/4	<1	5	No	-		No	No
617/AA	-	secondary fill of feature 607	12.5/9.5	-	-	-	<1		No	No

APPENDIX J :

Conservation assessment

Jennifer Jones

Quantification and condition

Fifteen objects (5 copper alloy and 10 iron) were received for examination and conservation assessment. The ironwork was found to be mainly highly corroded, with several pieces (500AD, 502AD) also cracking and spalling. The copper alloy was moderately to highly corroded, with some pieces fragile (502AA, 522AA).

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 either having both the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

X-Radiography

The objects were briefly visually examined to assess their condition and stability, to determine the material from which they were made, and to look for surface and technological detail. All objects except the vessel base, 522AA, were sorted into groups of a similar density, which were X-rayed together, using four XR plates.

Details of the artefacts examined, including an 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, were added to the site database

When viewing the XR plates, they should be orientated with the bright spot (a lead marker) in the top left hand corner, to correspond to the annotated XR sleeve.

Recommendations

Further investigative conservation could be used to :

Define surface decoration on the CuA buckle plate, with EDXRF to determine whether there was surface plating.

Resolve the identification of iron object 502AD.

Storage

The objects should continue to be stored in pierced polythene bags in an airtight container at a stable temperature and below 20% relative humidity (RH), to inhibit further corrosion. Several of the iron objects are clearly unstable and have continued to corrode following excavation. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

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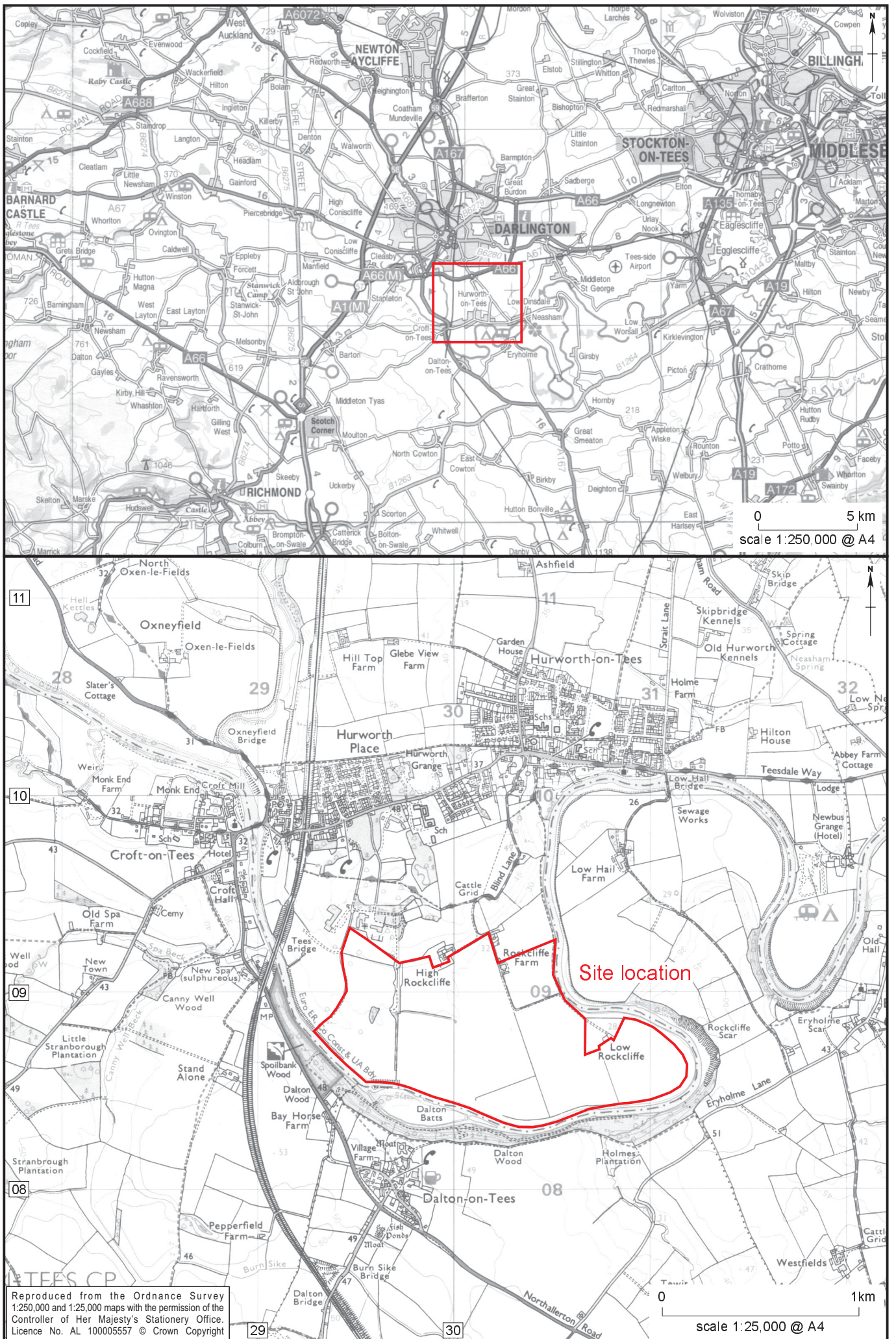


Figure 1 Rockcliffe Park, Hurworth-on-Tees: site location

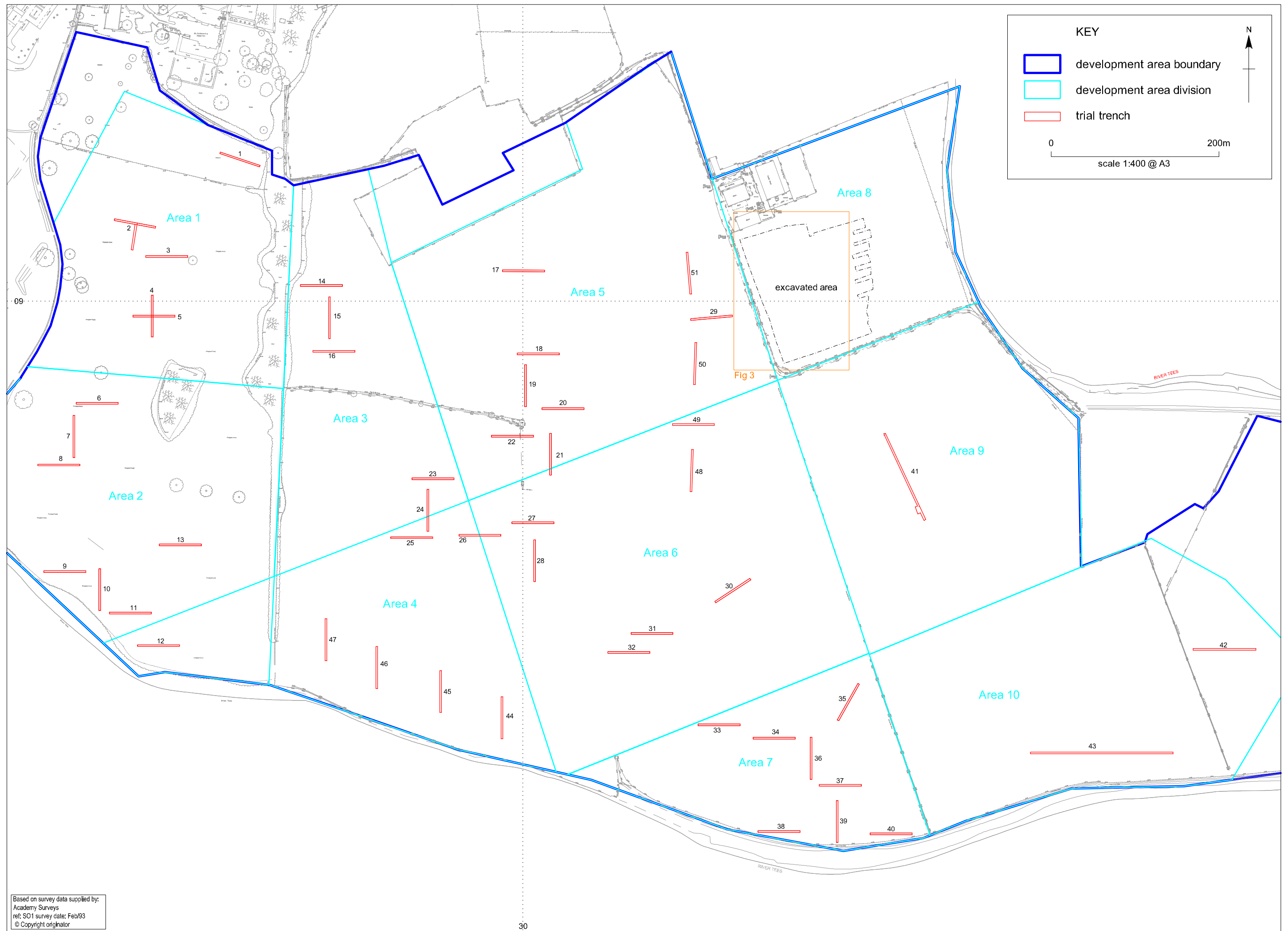
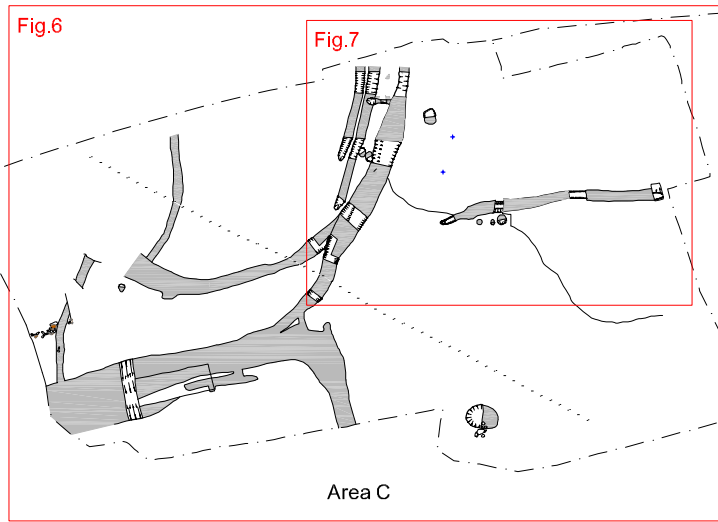
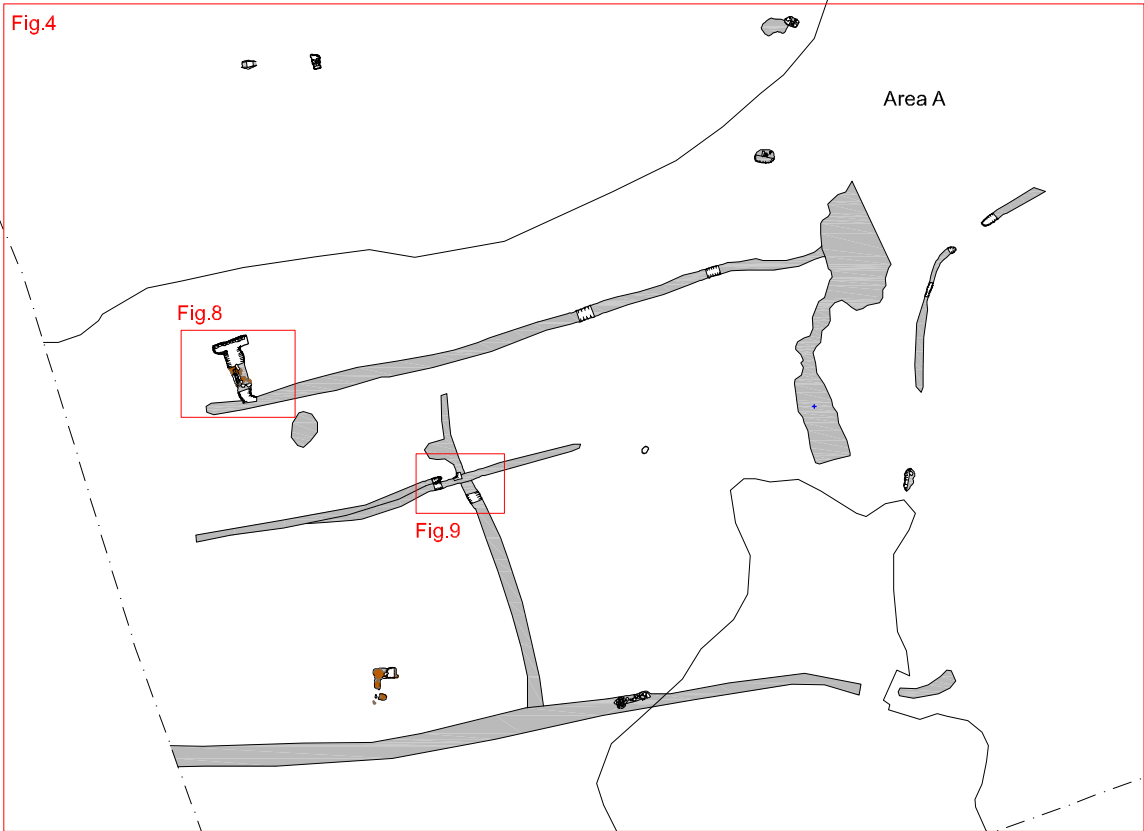
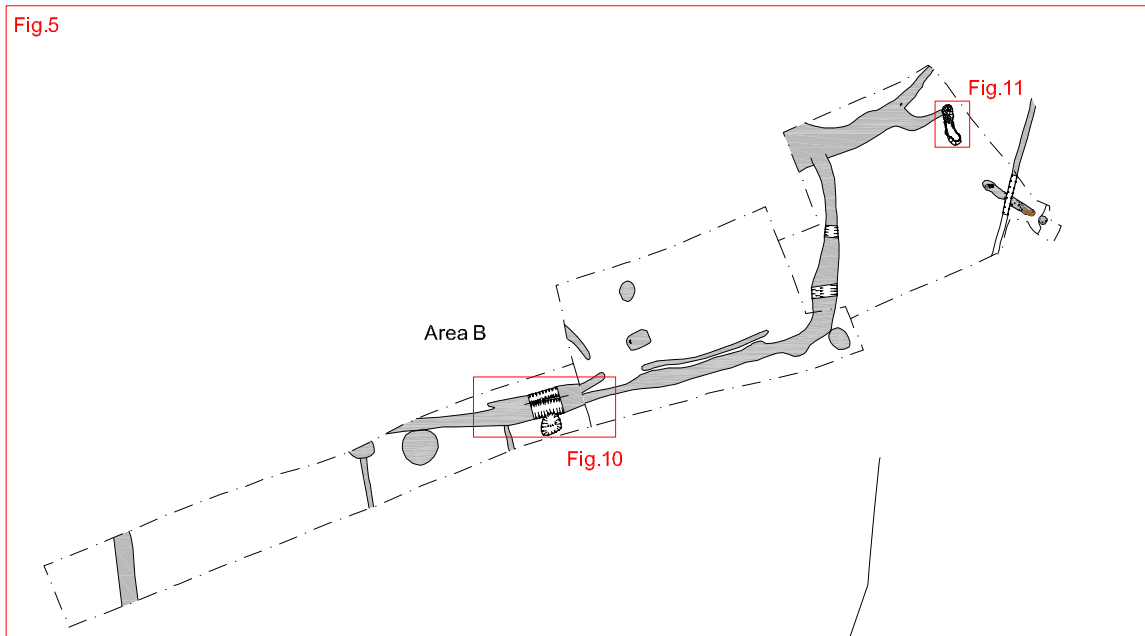


Figure 2 Rockliffe Park, Hurworth-on-Tees: trial trench locations



stripped area



0 25 m
scale 1:500 @ A3



Figure 4 Rockliffe Park, Hurworth-on-Tees: Area A plan

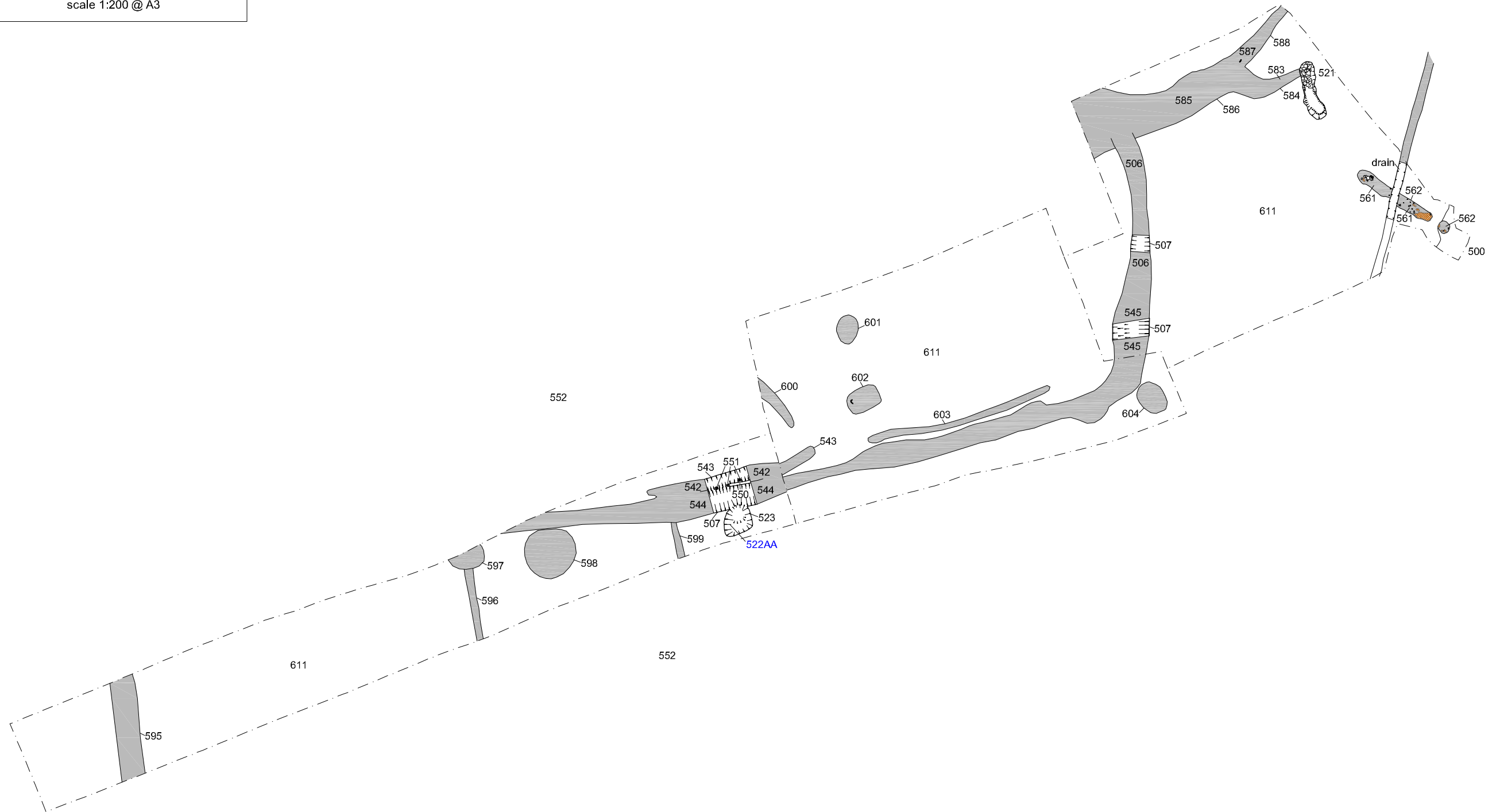
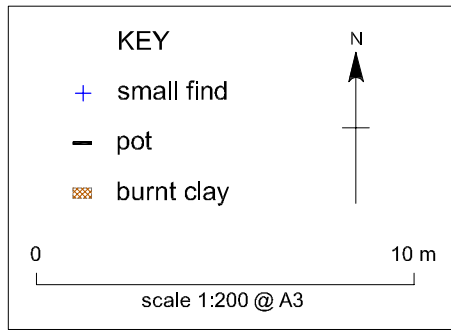


Figure 5 Rockliffe Park, Hurworth-on-Tees: Area B plan

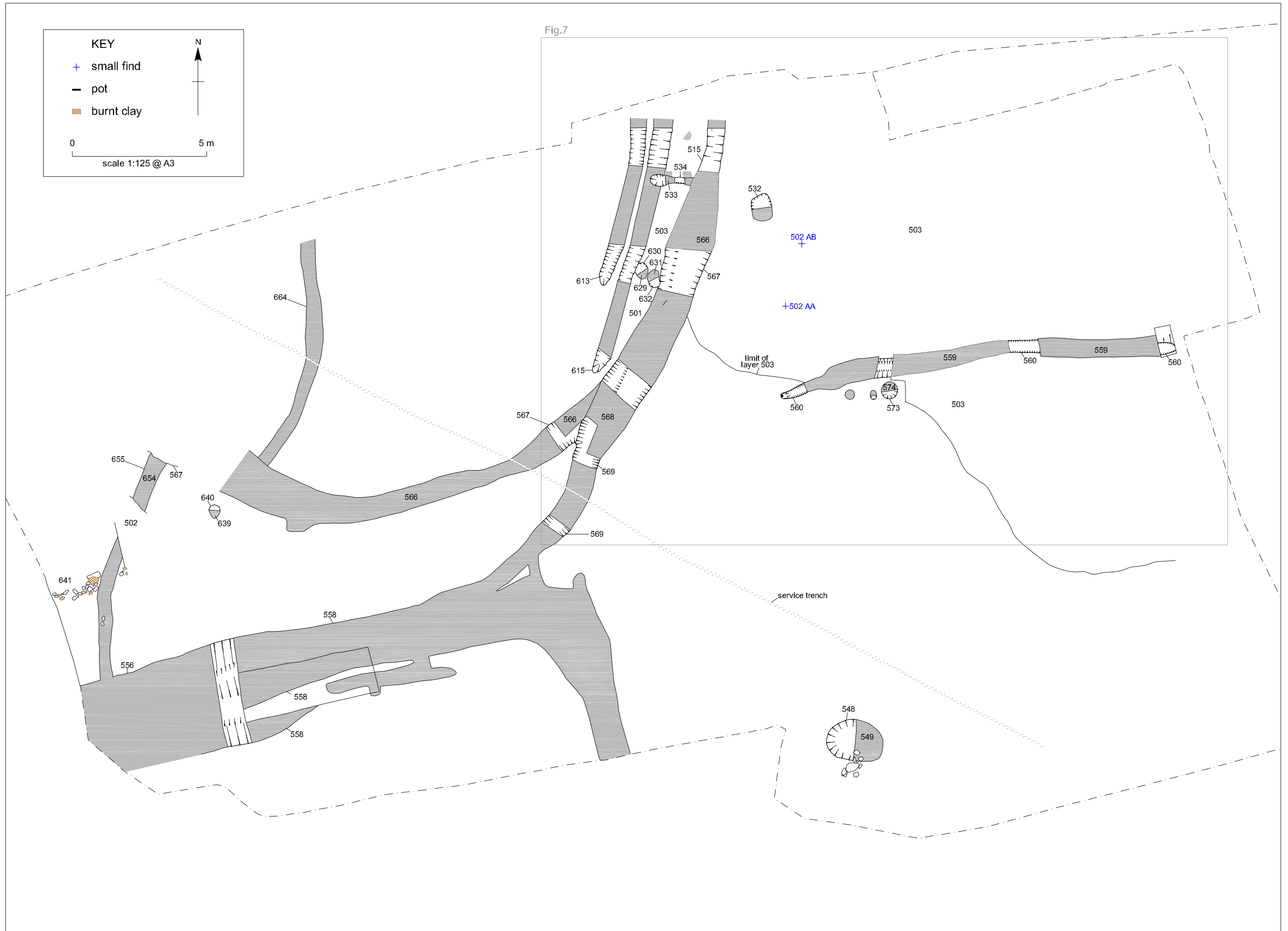


Figure 6 Rockliffe Park, Hurworth-on-Tees: Area C plan



Figure 7 Rockliffe Park, Hurworth-on-Tees: Area C detail of later features

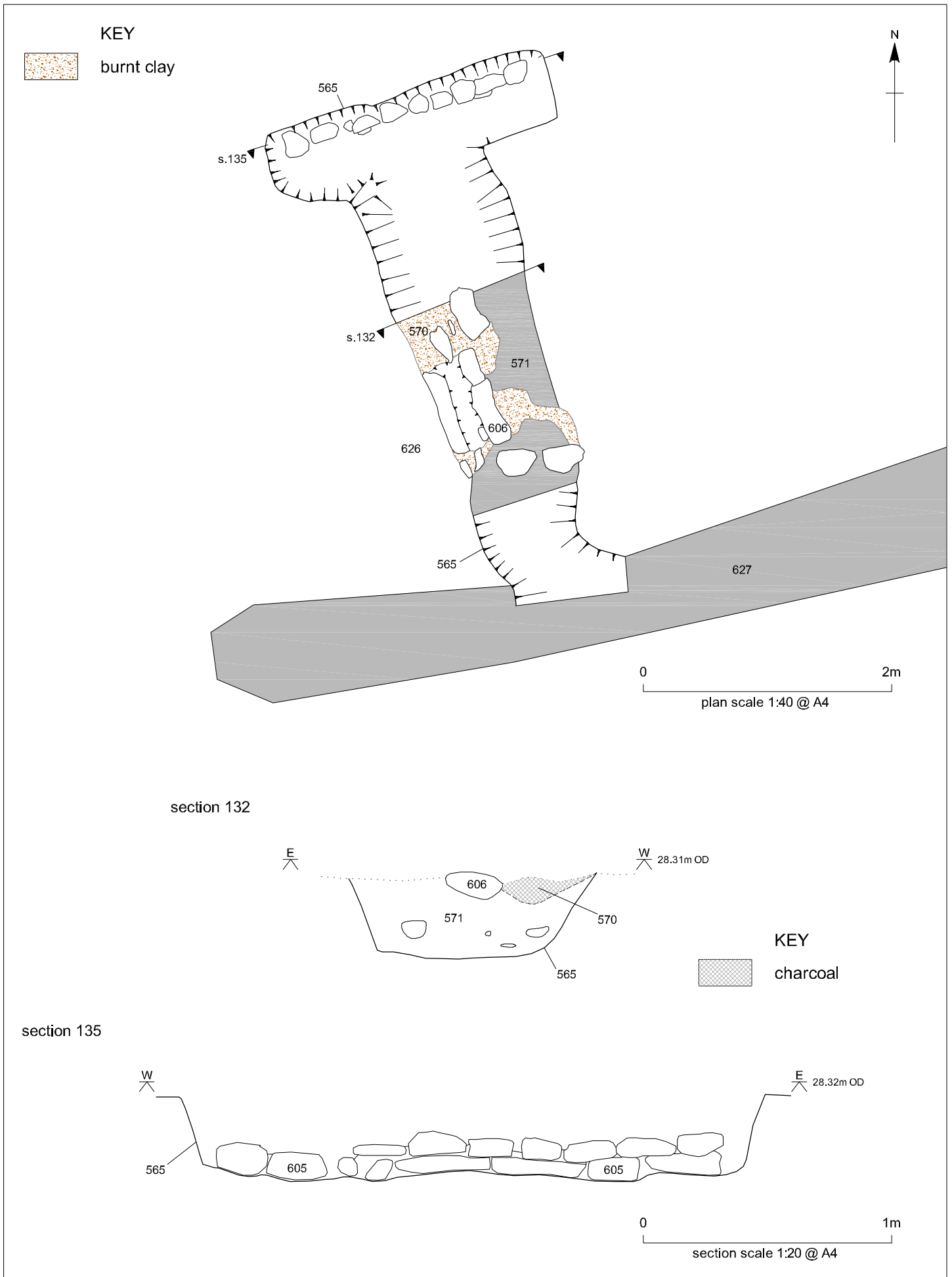


Figure 8 Rockliffe Park, Hurworth-on-Tees: corn drying kiln, Area A

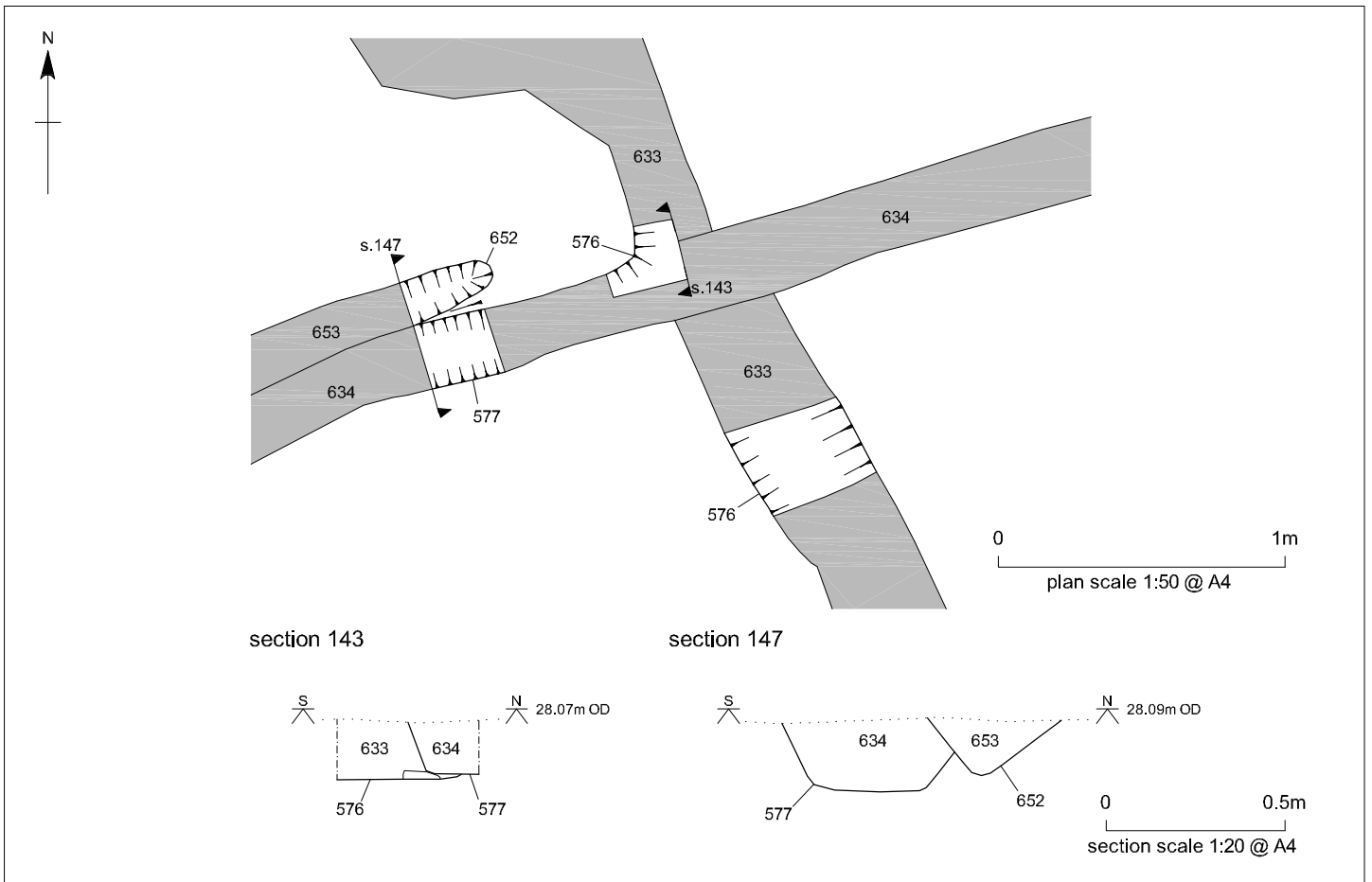


Figure 9 Rockliffe Park, Hurworth-on-Tees: ditch intersection, Area A

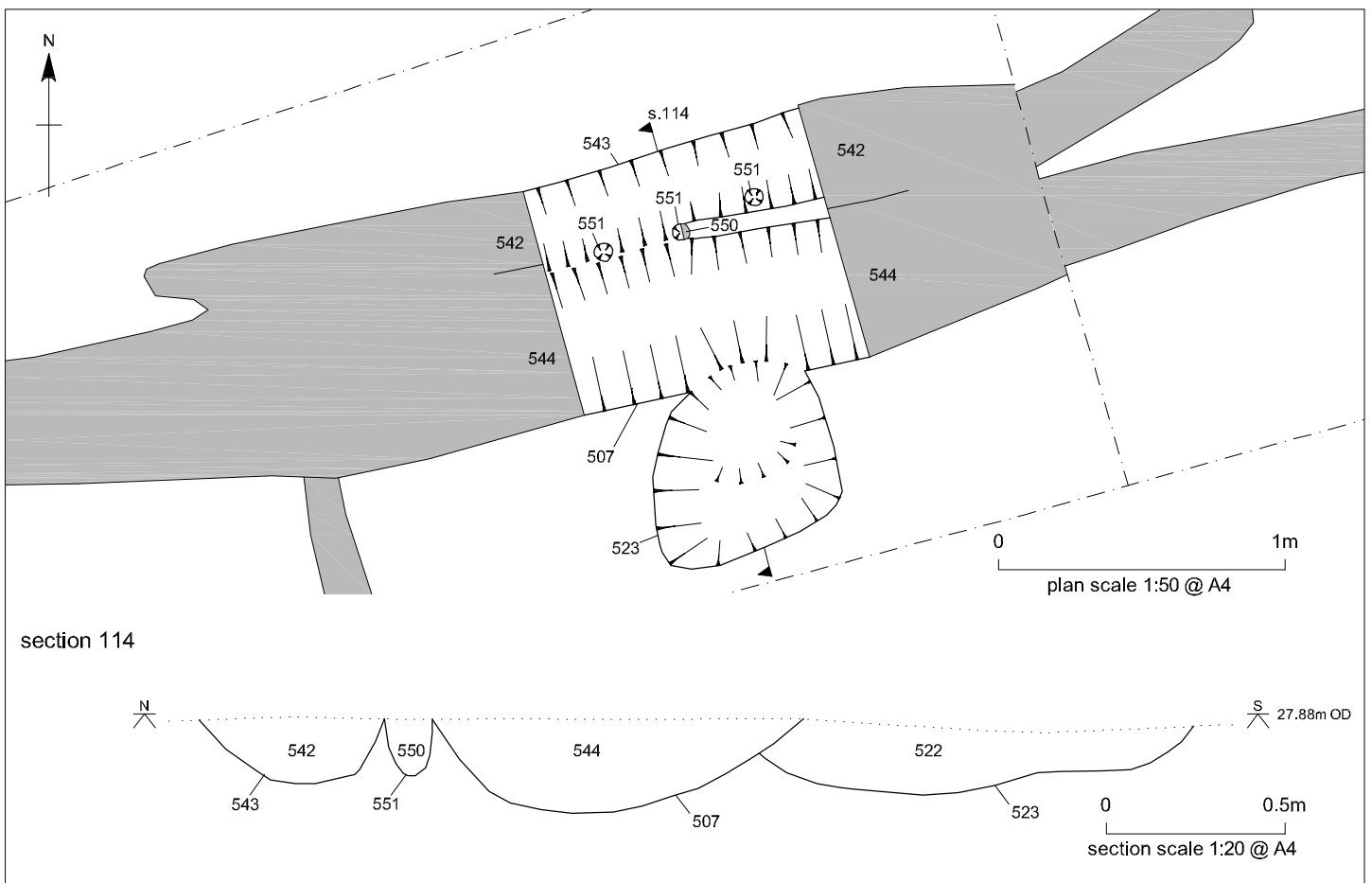


Figure 10 Rockliffe Park, Hurworth-on-Tees: ditch sections, Area B

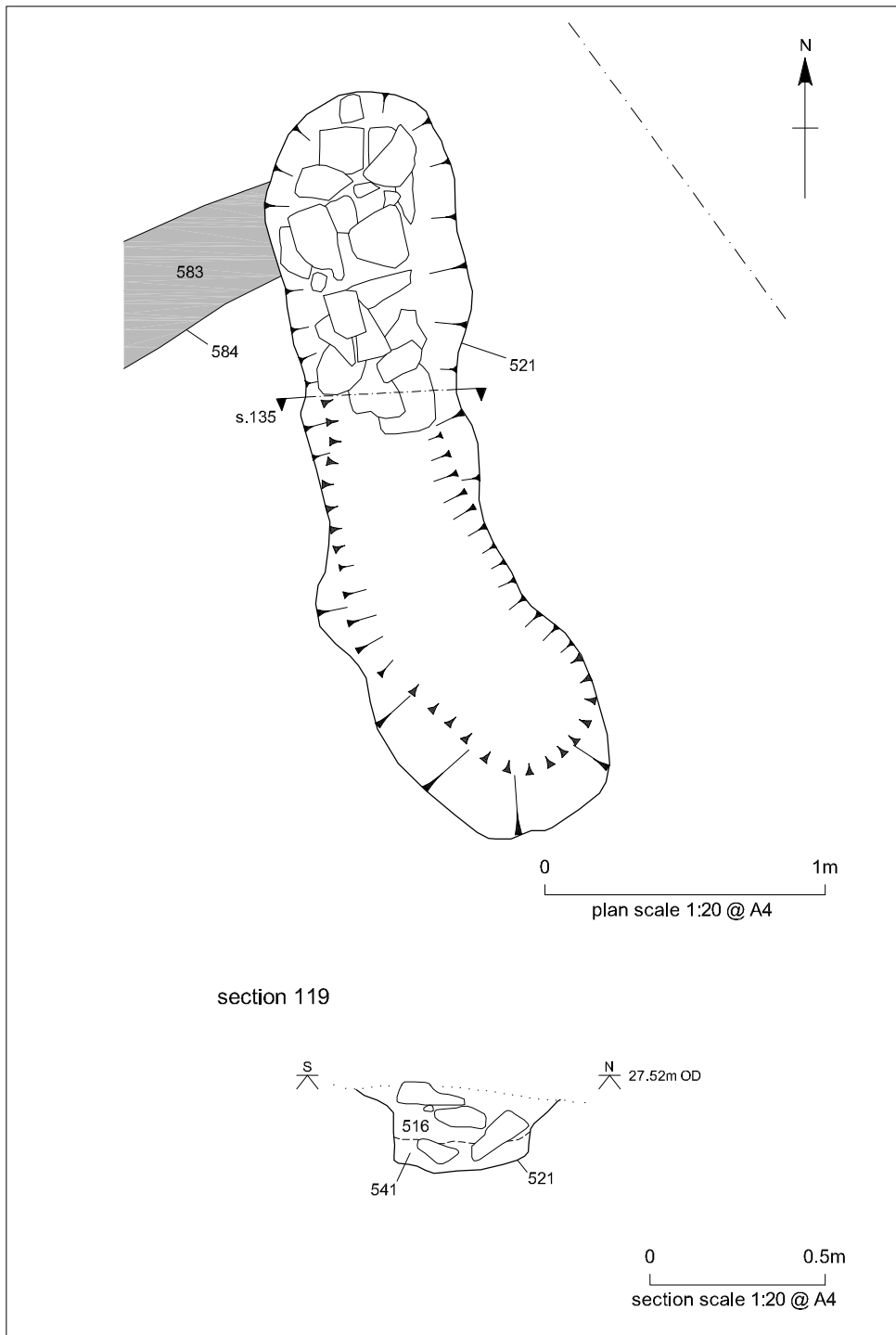


Figure 11 Rockliffe Park, Hurworth-on-Tees: quenching trough, Area B

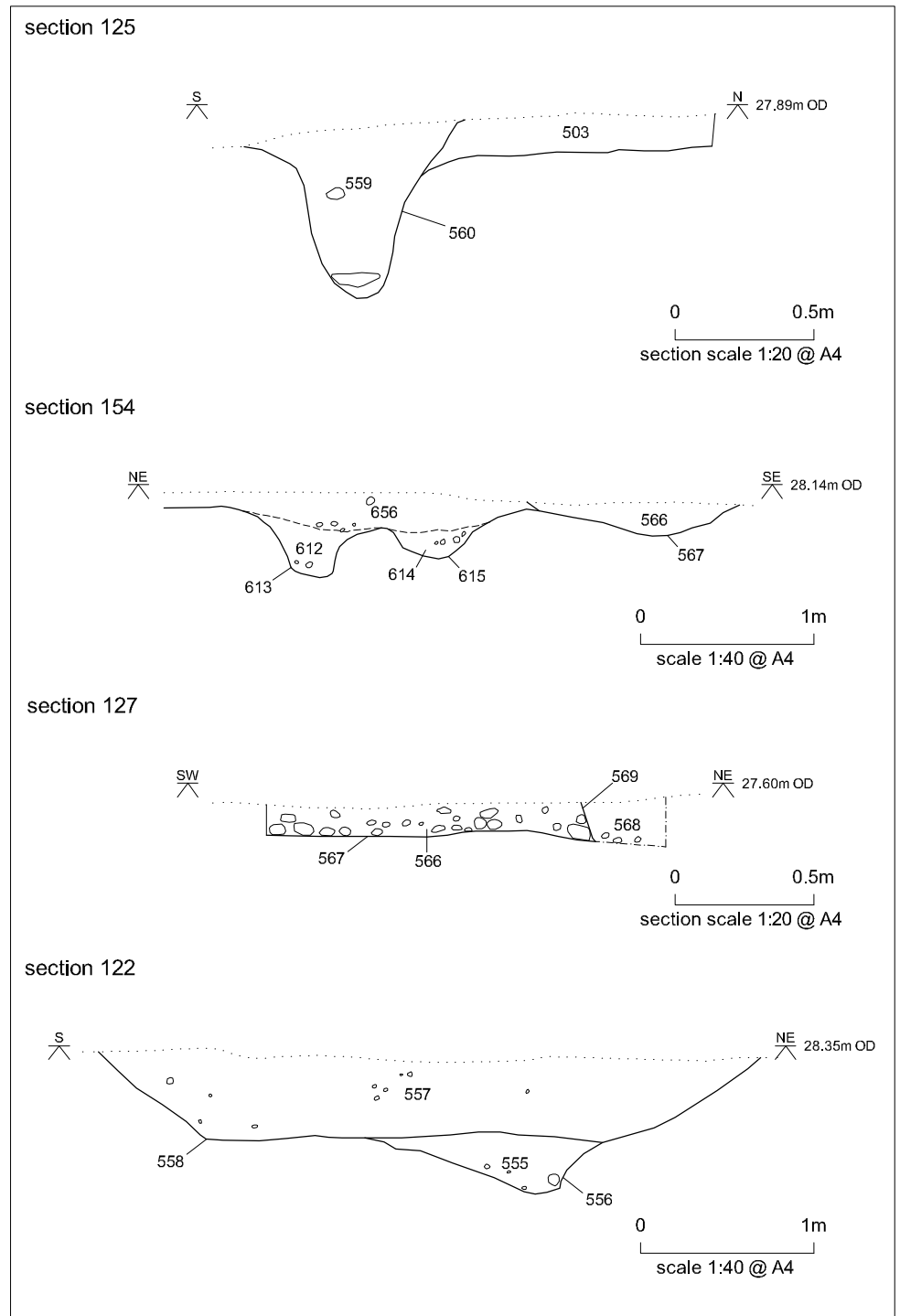


Figure 12 Rockliffe Park, Hurworth-on-Tees: ditch sections, Area C

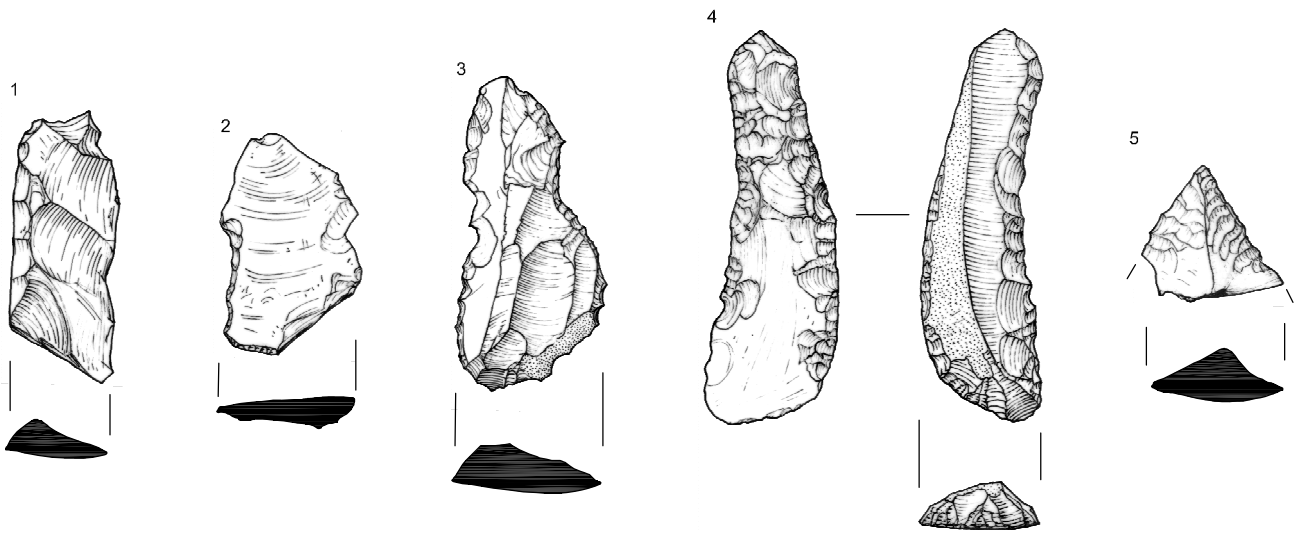


Figure 13 Rockliffe Park, Hurworth-on-Tees: flint (scale 1:1)

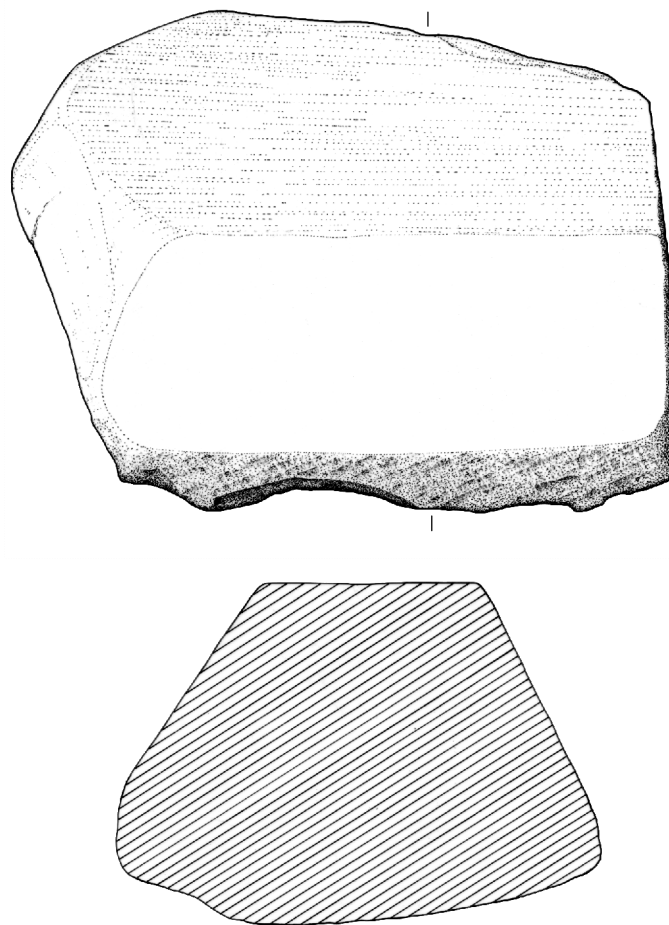


Figure 14 Rockliffe Park, Hurworth-on-Tees: utilised cobble (scale 1:4)

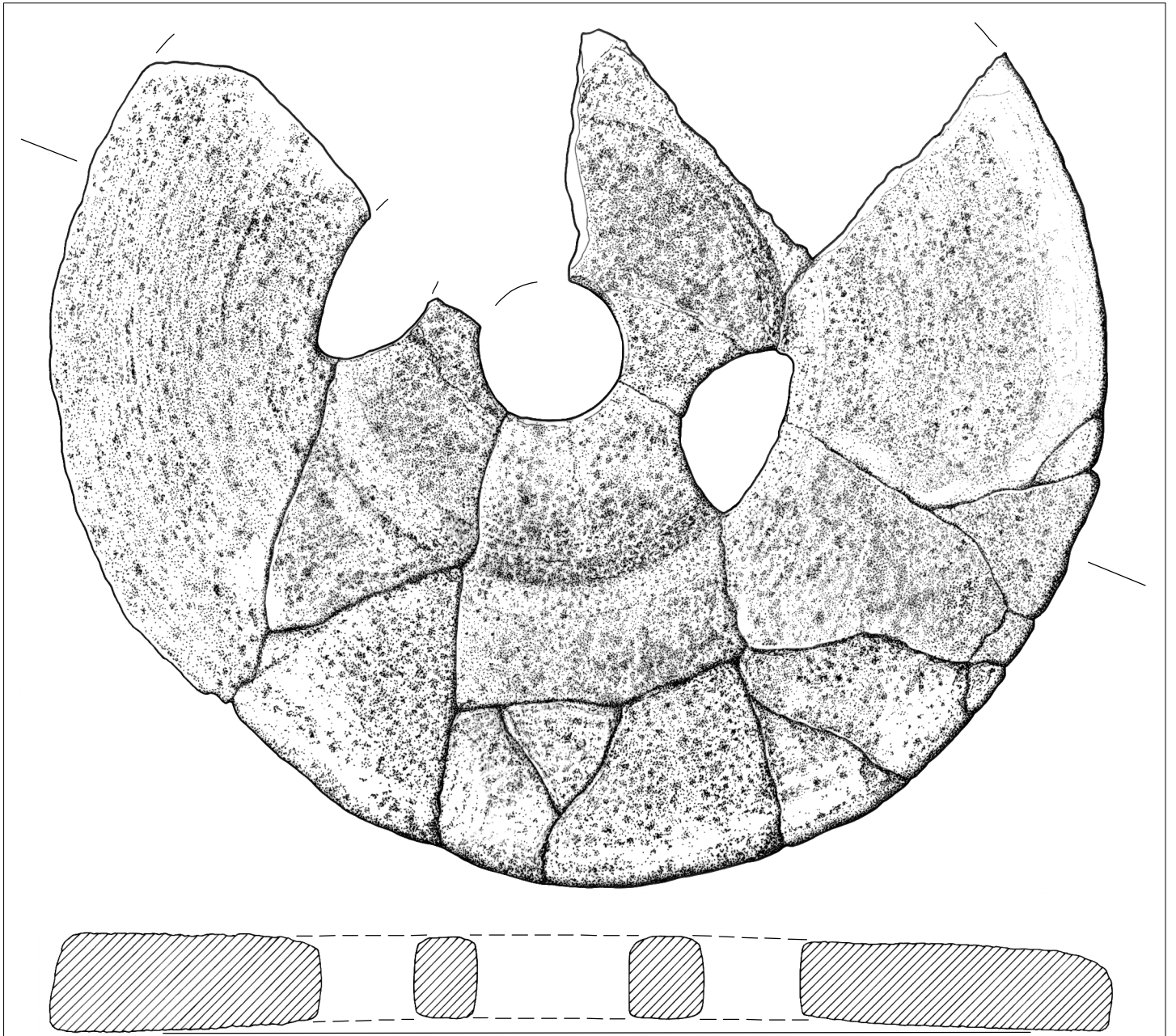
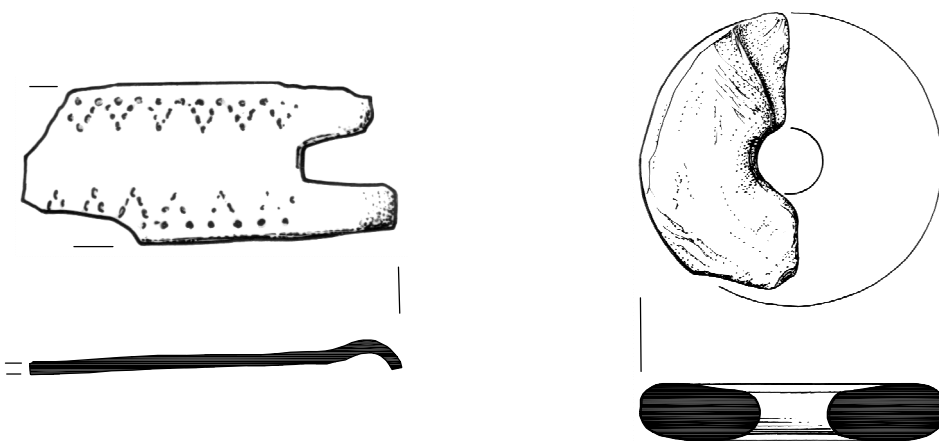


Figure 15 Rockliffe Park, Hurworth-on-Tees: millstone (scale 1:4)



Figures 16 and 17 Rockliffe Park, Hurworth-on-Tees: buckle plate (scale 2:1) and spindle whorl (scale 1:1)

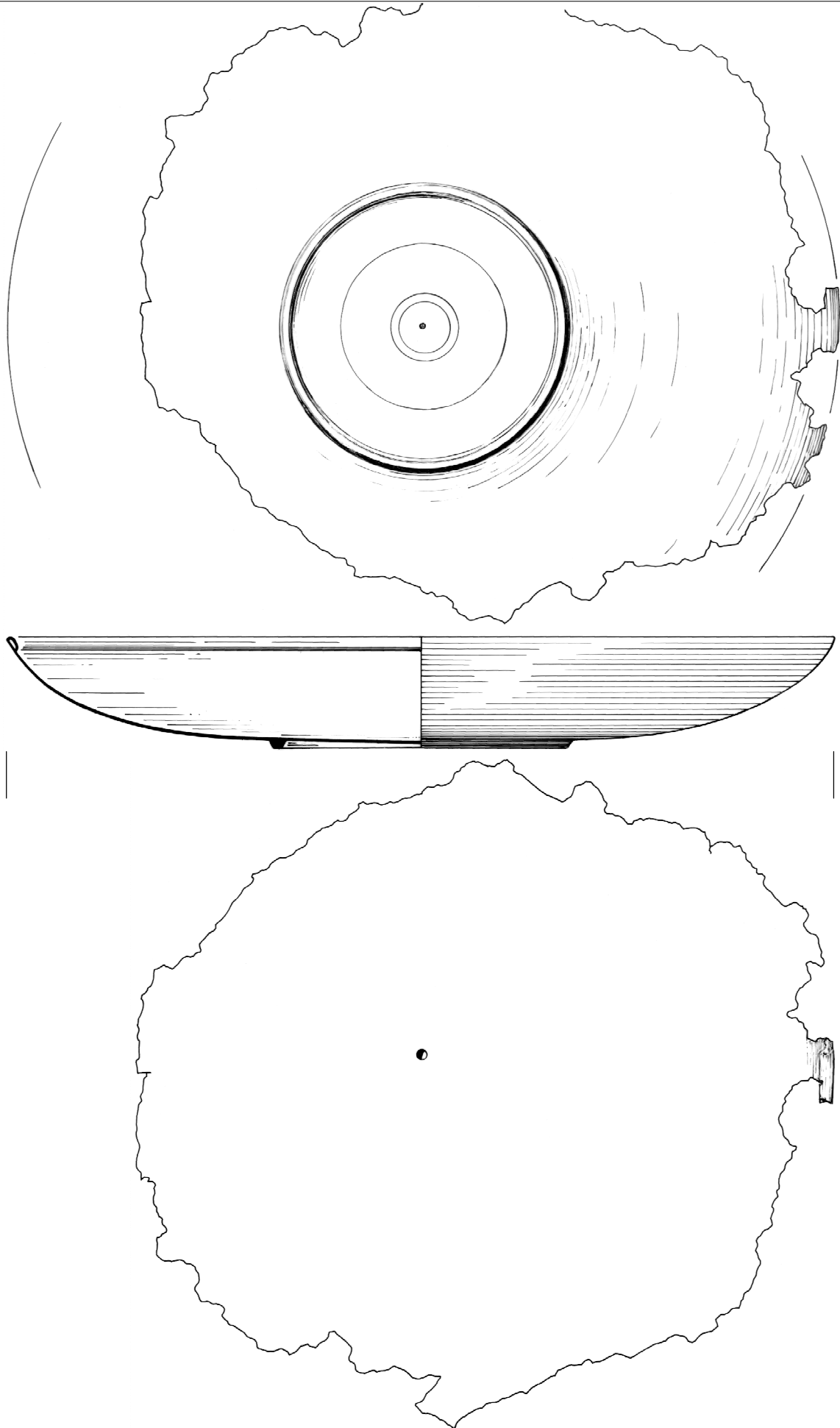


Figure 18 Rockliffe Park, Hurworth-on-Tees: copper alloy dish (scale 1:2)

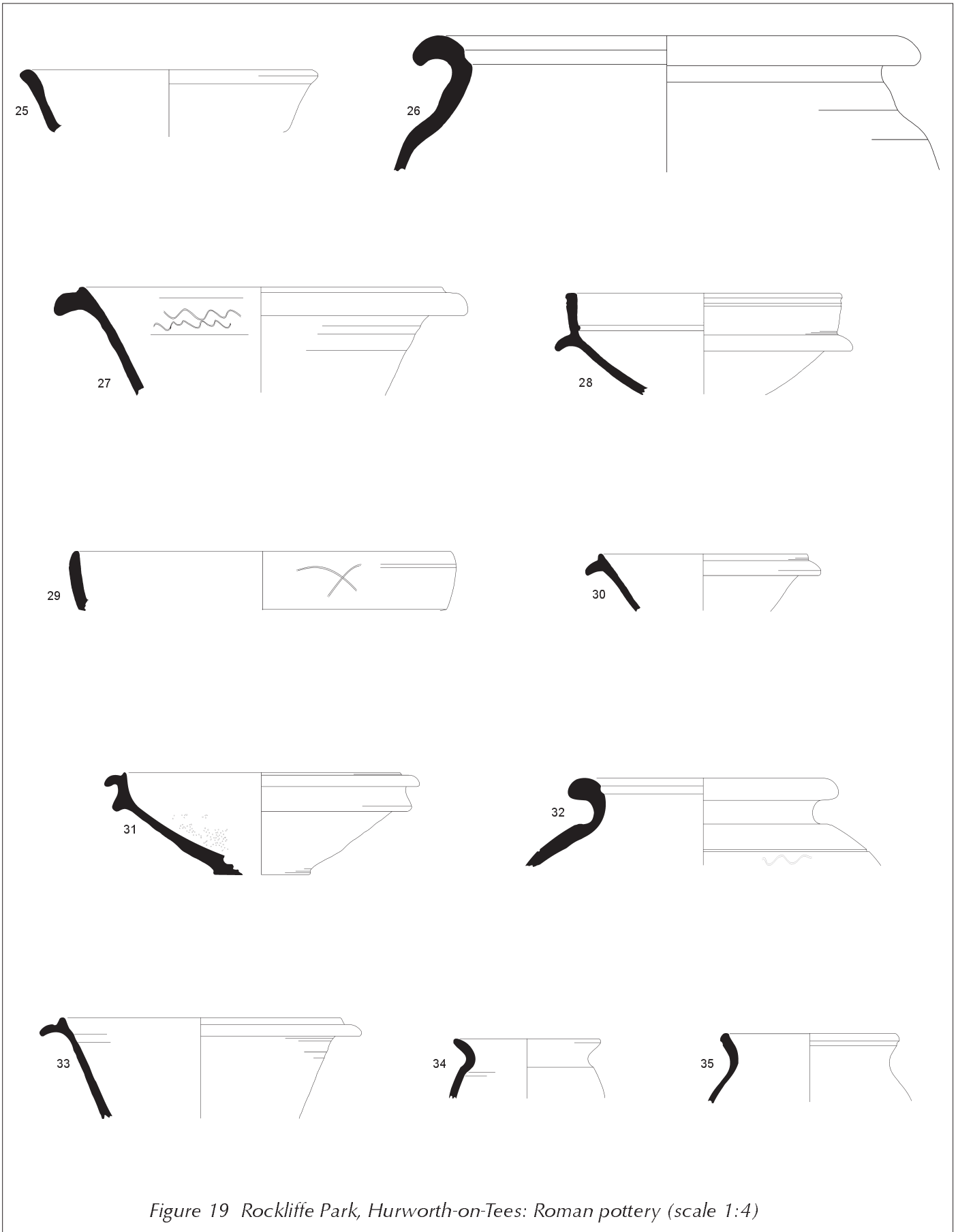


Figure 19 Rockliffe Park, Hurworth-on-Tees: Roman pottery (scale 1:4)



*Plate 1 Rockliffe Park, Hurworth-on-Tees:
north-west facing view of corn-drying kiln 565*



*Plate 2 Rockliffe Park, Hurworth-on-Tees:
east facing view of corn-drying kiln 582*



*Plate 3 Rockliffe Park, Hurworth-on-Tees:
south facing view of pot 589AB within cut 590*



*Plate 4 Rockliffe Park, Hurworth-on-Tees:
west-facing view of enclosure ditch 507 and associated gully 543/603*

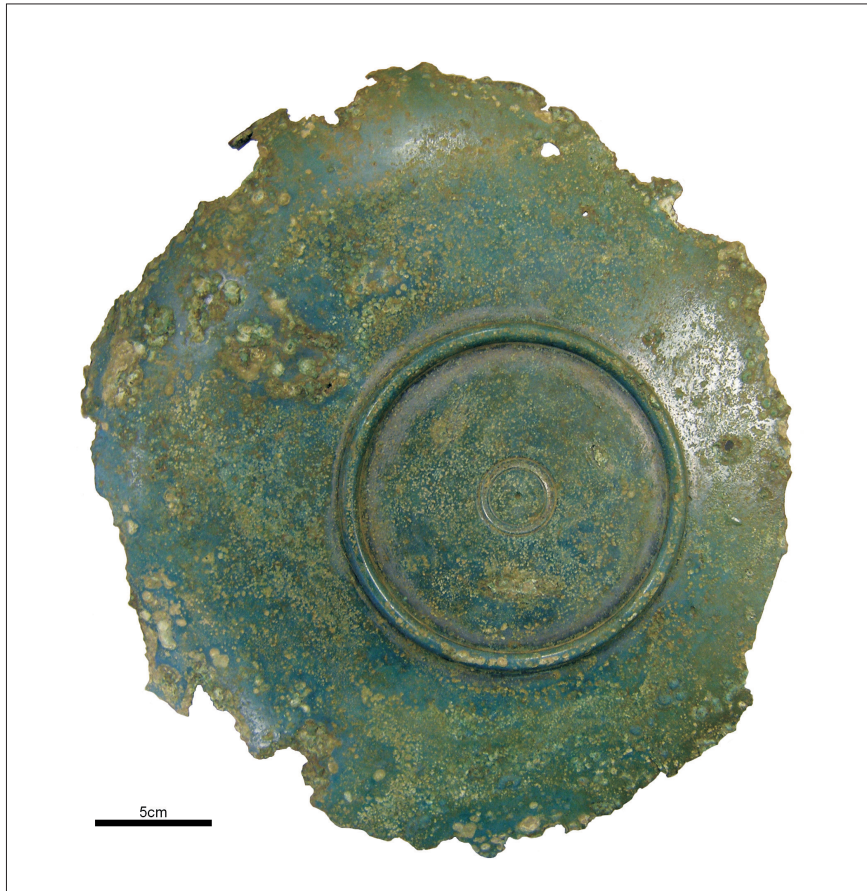


Plate 5 Rockliffe Park, Hurworth-on-Tees: base of copper alloy dish



Plate 6 Rockliffe Park, Hurworth-on-Tees: side view of copper alloy dish



*Plate 7 Rockliffe Park, Hurworth-on-Tees:
south facing view of quenching trough 521*



*Plate 8 Rockliffe Park, Hurworth-on-Tees: south-east facing
view of stone floor surface 511*



Plate 9 Rockliffe Park, Hurworth-on-Tees: north-west facing view of posthole 514



Plate 10 Rockliffe Park, Hurworth-on-Tees: north facing view of millstone 502AC in situ



*Plate 11 Rockliffe Park, Hurworth-on-Tees:
south-west facing view of cobbled surface 508*



*Plate 12 Rockliffe Park, Hurworth-on-Tees: east facing view of
enclosure ditches 558, 567 and 569*