measured 1m+ in length, and was 1.12m wide and 0.32m deep. It contained a single fill (3819), which consisted of approximately 70% pebbles and cobbles in a dark brownish grey silty sand matrix, similar material to that which formed the bank. No finds were recovered.

A corresponding section was hand excavated along the eastern side of the trench Fig. 12 - S.9). Here, another ditch (3815) was identified which was interpreted as the continuation of ditch 3820. Ditch 3815 was truncated to the south-east by a second ditch, 3812.

Ditch 3812 was 2.5m+ in length, 1.82m wide and 0.86m deep and contained two fills. The basal fill (3811) comprised 80% cobbles in a dark grey-brown silty sand matrix, probably derived from slumped in bank material, and the upper fill (3810), which consisted of 10% stone in a mid grey-brown silty sand matrix. A 3rd to 4th century Romano-British pottery rim sherd and animal bone was contained within the basal fill (3811).

Ditch 3812 had an associated bank along its southern edge. The bank was constructed of an upper deposit (3816), comprising pebbles and cobbles in a dark brownish grey silty sand matrix, and a lower layer (3817) of light, yellow-brown silty sand that may have been the patchy remains of a subsoil. A single, probable Neolithic, flint blade and four sherds of a fired clay object were recovered from deposit 3817. The evidence suggests bank 3816 and ditch 3812 represent a remodelling of the internal divisions of the enclosure that dated, based on the pottery sherd, to the Romano-British period.

Trench 39

Trench 39 was located in order to investigate a rather ephemeral east/west aligned linear anomaly identified by the geophysical survey.

Sample section: Mid point of trench, west facing (0.00 = 39.90m AOD)		
Orientation: North/south		**Dimensions:** 2m by 20m
Context	**Depth**	**Description**
3900	0.00 – 0.32m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
3901	0.32 – 0.62m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles
3902	0.62m+	Natural. Light grey-brown, slightly silty sand with cobbles

No archaeological feature or artefacts were identified during the excavation of Trench 39.

Trench 40

Trench 40 was located in order to sample across an area of magnetic variation identified by the geophysical survey.

Sample section: North end of trench, west facing (0.00 = m AOD)		
Orientation: North/south		**Dimensions:** 2m by 50m
Context	**Depth**	**Description**
4000	0.00 – 0.24m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4001	0.24 – 0.35m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles

4003	0.35m+	Natural. Light grey-brown, slightly silty sand with cobbles
Sample section: South end of trench, west facing (0.00 = 00.00m AOD)		
Context	**Depth**	**Description**
4000	0.00 – 0.25m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4001	0.25 – 0.55m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles
4003	0.55m+	Natural. Light grey-brown, slightly silty sand with cobbles

No archaeological feature or artefacts were identified during the excavation of Trench 40. The magnetic anomalies noted on the geophysical survey was caused by variations in the natural deposits with gravels and cobbles present at either end of the trench and a clay (4002) layer over the central section of the trench.

Trench 41 (Fig. 13, Plates 19 – 21 inclusive)

Trench 41 was located in order to investigate a linear anomaly identified by the geophysical survey.

Sample section: Mid point of trench, north facing (0.00 = 36.22m AOD)		
Orientation: East/west		**Dimensions:** 5m by 10m
Context	**Depth**	**Description**
4100	0.00 – 0.32m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4101	0.32 – 0.55m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles
4102	0.55m+	Natural. Light grey-brown, slightly silty sand with cobbles

The excavation of Trench 41 revealed two pit features, 4104 to the north and 4108 to the south. Pit 4104 was only partially revealed within the trench and had visible dimensions of 1.20m+ by 1.42m and was 0.65m deep. It contained two fills; the basal fill (4105) comprised mid brown-yellow silty clay with frequent limestone inclusions and occasional burnt limestone fragments and the upper fill (4103) consisted of mid yellowish brown silty clay, also with frequent limestone inclusions and occasional burnt limestone fragments. No finds were recovered.

The southernmost pit (4108) was also only partially revealed within the trench and had visible dimensions of 2.30m+ by 1.45m and was 0.58m deep. It contained two fills; the basal fill (4107) comprised mid brownish yellow silty clay with regular cobble inclusions, some of which were burnt and the upper fill (4106) consisted of mid yellowish brown silty clay with frequent limestone inclusions and cobbles. A single flint spall was recovered from the upper fill, 4106.

Trench 42

Trench 42 was located in order to investigate the possible intersection of features identified as magnetic anomalies during the geophysical survey.

Sample section: East end of trench, west facing (0.00 = 36.49m AOD)		
Orientation: East/west		**Dimensions:** 4m by 10m
Context	**Depth**	**Description**
4200	0.00 – 0.28m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4202	0.28m+	Natural. Light grey-brown, slightly silty sand with cobbles

No archaeological features or artefacts were identified in Trench 42.

Trench 43

Trench 43 was located in order to investigate two possible linear features identified by the geophysical survey.

Sample section: Mid point of trench, west facing (0.00 = 36.45m AOD)		
Orientation: North/south		**Dimensions:** 2m by 20m
Context	**Depth**	**Description**
4300	0.00 – 0.40m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4301	0.40 – 0.56m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles
4303	0.56m+	Natural. Light grey-brown, slightly silty sand with cobbles

No archaeological features or artefacts were recovered identified during the excavation of Trench 43. The geophysical anomalies were likely the result of variations in the composition of the underlying natural deposits.

Trench 44

Trench 44 was located in order to investigate a discrete magnetic anomaly and evaluate the eastern edge of the site.

Sample section: South end of trench, east facing (0.00 = 34.91m AOD)		
Orientation: North/south		**Dimensions:** 2m by 30m
Context	**Depth**	**Description**
4400	0.00 – 0.30m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4403	0.30m+	Natural. Light grey-brown, slightly silty sand with cobbles
Sample section: North end of trench, east facing (0.00 = 36.35m AOD)		
Context	**Depth**	**Description**
4400	0.00 – 0.21m	Topsoil. Dark reddish brown sandy silt with occasional pebbles
4401	0.21 – 0.51m	Subsoil. Mid orange-red-brown sandy silt with occasional pebbles
4402	0.51m+	Natural. Mid grey-brown sand with gravel

During the machine excavation of Trench 44 the edge of a pit was clipped and unfortunately machined out. A small 2m by 2m extension to the trench was therefore excavated eastwards in order to expose the remainder of the feature. The exposed pit (4404) measured 0.48m+ by 1.0m and was 0.18m deep. It contained a single fill (4405) comprising a dark grey-brown sandy, clayey silt that contained several sherds of an early Bronze Age Collared Urn and a secondary flint flake.

6 Artefact Record

The flint by Ian Brooks

A small assemblage of 44 flint artefacts was recovered during the course of the evaluation at Ripon Quarry. These artefacts were recovered from nineteen contexts spread across both extension areas. Only two contexts contained more than a few artefacts, however these were dominated by spalls and small chunks of little or no diagnostic value. Indeed the majority of the assemblage (25 artefacts, 56.8% of the assemblage) consisted of spalls or undiagnostic chips and chunks. The assemblage is summarised in Appendix 4.

The few flakes recovered were divided into four groups: primary flakes with completely cortical dorsal surfaces, secondary with partly cortical dorsal surfaces, tertiary with uncorticated dorsal surfaces and broken flakes. Where possible the flint colours are defined by the Geological Society of America's Rock-Color Chart (Goddard *et al* 1948). The description of the tools follows that of Inizan *et al* (1992).

There are no local sources of flint close to the site. The nearest possible primary (chalk) source for flint is the Yorkshire Wolds (Rawson *et al* 1978), some 85 km to the east of the site. The flint here, however, tends to be of relatively poor quality, often opaque, pale grey in colour and faulted. More importantly there are a series of derived sources available, particularly the tills and associated gravels of East Yorkshire, particularly those outcropping along the coast between Flamborough Head and Kilnsea (Brooks 1989, Henson 1985), also approximately 85 km to the east. These contain considerable flint resources, often of good quality which could be used for tool manufacture. Within the assemblage there is a preponderance of translucent and semi-translucent flint types which would suggest that the (East Yorkshire) till resources were the main source of raw material.

Only seventeen flakes were found during the course of the archaeological works at Ripon Quarry and these comprised four secondary flakes, seven tertiary flakes and six broken flakes. In addition there is a single tertiary blade, which at 70 mm long was the largest of the flint artefacts recovered. One feature of the assemblage is the number of heat damaged artefacts recovered. Eleven artefacts (25% of the assemblage) show some signs of heat damage, either in the form of discolouration or crazing, although it is not certain that the burning is contemporary with the knapping of the artefacts.

Only two artefacts have been modified with retouch. One of these is a small tertiary flake (only 16 mm long) with slight inverse retouch along one side. The other is the broken fragment of a probable scraper. This has a series of sub-parallel, long, semi-abrupt removals along the right hand edge suggesting that it was originally a well crafted tool with considerable post-use damage - only approximately 25% of the original tool survives.

The flint assemblage from Ripon Quarry is essentially undiagnostic consisting largely of broken flakes, spalls and chunks. Only the broken scraper suggests possible Early Bronze Age activity and the one blade hinting at possible earlier activity. It is likely that any prehistoric activity within the area of the evaluation was slight, although the presence of spalls and broken flint would suggest that a limited quantity of knapping was taking place in the area. The lack of cores or worked lumps in the assemblage, however, would suggest that this knapping may have been confined to the maintenance and modification of existing tools.

The prehistoric pottery by Terry Manby

Catalogue

Trench 36

Ditch 3613. Two small sherds and seven crumbs were recovered from ditch fill 3614. They are compact, medium hard and dark brown in colour. One piece has a smooth exterior surface. Wall thickness 10 mm. The attribution of such small pieces to any ceramic class would be speculative. However, the fabric character suggests a possible affinity with early Neolithic Plain Ware.

Trench 44

Pit 4404. Thirty six sherds, weighing 395gm, of an Early Bronze Age Collared Urn were recovered from fill 4405. The sherds range in size from the largest piece (84mm x 98 mm) down to small sherds, flakes and crumbs. Many pieces have freshly fractures edges and surface abrasion. There are no re-constructible profiles present and only two rejoining fragments were identified.

Based on fabric characteristics there are two sherd groups each having a related feature piece, these are:

1. A segment of a collar represented by two joining pieces. Flat topped rim, rounded edges and slightly expanded on the exterior face. Calculated rim diameter approximately 300mm.

Decoration: The exterior is impressed with whipped cord lines arranged as nested triangles in alternating blocks, imprints smudged and irregular in depth. A pair of faint twisted cord lines at varying spacing apart on top of the rim.

Fabric: A medium hard layered fabric, dark brown exterior surface, dark grey over rim. The interior is smoothed and exhibits traces of horizontally wiping. Grog

tempering with sparse angular rock fragments <3mm and an angular shale fragment <7 mm. Some sub-angular voids.

The lower edge of this fragment is freshly fractured and recent abrasion has affected some of the outer surface.

There are also eleven flakes split off through the wall thickness, some retaining a featureless surface. Total weight of this group is 175 g.

2. A fragment 70mm x 53 mm. Broken edges all round makes it impossible to suggest with any certainty whether it represents part of the collar or the neck of a collared urn. Flat wall profile, increasing from 12mm to 15 mm in thickness. Chipped and fissured surfaces.

Decoration: The exterior is impressed with cord whipped spaced diagonal lines 5 mm in width.

Body: There are nineteen small sherds and some crumbs, plain featureless surfaces, 14-15 mm wall thickness. Surfaces are generally eroded except for one sherd that has intact hard slightly soapy feel to surfaces.

A single fragment of base 22mm to 30 mm in thickness, orange exterior, grey core, internal surface abraded.

Fabric: Soft, hackly fracture, orange exterior, the oxidised layer extending into wall to a depth of 8mm, dark grey core and interior. Grog tempering with sparse angular rock fragments <3 mm, many surface voids.

Discussion

Collared Urns are the most widely distributed of the Early Bronze Age ceramic types found in the British Isles. They are principally associated with cremation burial, either inverted over or containing the bone deposit. There are also a small number of inhumation associations and non-burial contexts of occupational and ritual character (Longworth 1984, 47-48 & 76-78). Across Yorkshire, collared urns are numerous in burial contexts, principally from barrow and cairn excavations on the uplands of the North Yorkshire Moors, the Wolds and the Central Pennine watershed ridges (Manby et al 2003, 64).

No.1: The collar fragment derives from a vessel of large size; its calculated rim diameter of c.300mm is at the higher end of the Collared Urn size range. A diameter between 250mm to 300mm proportionally relates to an urn in the height range of 350mm to 380mm (Longworth 1984, Fig.19, 27, 33 & 36).

The filled triangle decorative motif on the collar (Longworth's Motif H21: 1983, 9, Fig. 9) would be consistent with a vessel of his Secondary Urn series. However, with so little of the profile apparent, assignment to his North Western regional style (Longworth 1983, 30-33)

would be speculative. Likewise, placing it within Colin Burgess's Middle group of Collared Urn Development (Burgess 1986, 144, Fig.1). The same repeating triangle motif, executed in simple twisted cord impression and bounded by horizontal lines, does however, decorate the collar of a large North-western Style urn from Thornton-in Craven (Manby et al 2003, Fig. 25.2).

No. 2. The decorated sherd and its related fragments, are unfortunately too small to establish anything of a wall profile or to determine a proportionate size. From their fabric character, especially the surface oxidisation layer penetrating deeply into the wall thickness arising from the firing process, the contention is that it represents a second Collared Urn in the Ripon Quarry Pit 4404 assemblage. Admittedly, large Collared Urns of similar rim size to the collar fragment No 1, can exhibit colour and fabric variations arising from the firing of such large pots, and also they can have fabric effects caused by a partial re-firing arising from the insertion of any hot pyre debris. However, both the oxidised exterior fabric and wall thickness of the decorated fragment No. 2 would argue against it representing the collar of such a large urn as No. 1.

The Ripon Quarry finds come from a geo-environmental interface landscape between the Pennine uplands and the Vale of Mowbray, where north of the River Wharfe the Devensian Age ground moraine mantles the underlying parallel north-south geological belts of Triassic sandstone, Magnesian Limestone and Millstone Grit. Few barrows have survived intact in this region (Manby et al 2003, 97-98) and research into the Bronze Age occupation as been limited. The wider distribution of Early Bronze Age burials sites, including those with Collared Urns associations, have been concentrated in the uplands of eastern Yorkshire and the Central Pennine watershed with only sparsely scattered finds across the intervening central lowlands and its upland margins (Manby 1986, 67-70 & 95-106, Fig. 2). Southwards of the Ripon Quarry site, on the same Magnesian Limestone belt, an inverted large Collared Urn cremation burial was a secondary insert into the earlier barrow of Greenhowe, North Deighton, (Wood 1971, 17. Fig.10.3). Eastwards into the lowlands there have been Collared Urn associated cremation burials in Vale of Mowbray round barrows; in a primary central position at Hutton Moor (Lukis 1869, 120, Pl.VI) and as secondary inserts into the Stapley Hill barrow, Kirklington (Manby 1971, 176, Fig. 1).

Dating

Within Stuart Needham's scheme (1996, 130-133) the use of Collared Urns in burial practice extends across Period 3 – c.2050-1700 cal BC and into Period 4 – c.1700-1500 cal. BC, with the type first appearing in southern England as early as 2100-2000 cal BC. (Needham 1996, 127). In Yorkshire, Collared Urn associations can be placed broadly within phases EBA 1 and EBA 2 of a corresponding period framework (Manby et al 2003, 61-64) but refining the sequence requires a body of close context dates and linkages. However, the rarity of defined Early Group urn characteristics across Northern England, has been seen as support for the initial heartland of Collared Urn usage to lay south of a Mersey-Humber line (Burgess 1986,

148-149). At this time, Food Vessels were the premier funerary ceramics across northern England and Scotland, but the subsequent adoption of Collared Urn usage with accompanying cremation practises across Yorkshire and the rest of northern England and Scotland was during the period of Middle Group urn development.

The majority of C14 determinations for Collared Urn contexts from England are derived from oak charcoal and have too wide a range of standard deviation for precision dating of stylistic development and also to confirm the typo-chronological schemes of Longworth (1984) or Burgess (1986). This qualification applies to most of the few determinations available for the Yorkshire Collared Urn associations (Manby 2003, 64) and a sufficiently large database of reliable dates, obtained from short-life samples, such as cremated bone, has yet to be created.

In contrast for Scotland, there is a series of reliable Collared Urn determinations, resulting from the National Museums' of Scotland dating programme utilising cremated bone, that fall between c.2000/1900 to c1600/1500 cal BC (Sheridan 2003, 206-207 and 2007, 164-168, Fig. 14.1).

A cremated bone dating programme has been undertaken for Lancashire Collared Urns, including many of the North-western style, and a summary consideration of the results (Barrowclough 2007, 133-137 & 229-230) appears to be comparable with the Scottish Collared Urn series.

The Romano-British pottery by Ruth Leary

Introduction

The pottery was examined in context groups and catalogued according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004). The fabrics were recorded in broad groups and source suggested where appropriate. Reference was made to the National Fabric Collection where appropriate (Tomber and Dore 1998). Details of fabric variations were recorded where appropriate and forms were described. The full catalogue is presented in Appendix 5.

The fabrics and forms

Twenty ceramic fragments (343g.) were recovered during the course of the excavations (from the northern extension area only) and these were scattered thinly across the trenches. A group of five sherds in an oxidised ware with rare inclusions of medium quartz and argillaceous inclusions, probably clay pellets, came from Trench 28 (context 2805). These sherds were very abraded and flat and probably come from the base of a jar although it is also possible that they come from a flat surfaced fired clay object. If they are from a pottery vessel, this is likely to be pre-Roman in date. Similarly four sherds from Trench 38 (context 3817) come from a flat object which seems to have a rounded edge suggesting it is not a from a pot but a fired clay object.

At least five pottery vessels of Romano-British date were identified. A very abraded rim fragment in white ware comes from a mortarium with a bead rim, level with a well hooked flange from Trench 36 (context 3612). This is similar in form to some early to mid-2nd century mortaria from Aldborough (Hartley 1971 fig. 18 no. 9, Tomber and Dore 1998 ALD WH). The flange bears a very abraded maker's stamp and specialist study may allow this to be identified and a more precise date range given.

Four sherds from Trench 37 (context 3708) came from a small jar in a gritty fabric with moderate coarse, ill-sorted, sub-angular quartz and sparse, coarse to medium, rounded grey-brown and cream inclusions. This vessel appeared handmade and was oxidised inside and reduced outside. Its date is difficult to ascertain without diagnostic formal features since wares of this type could date from the pre-Roman and Roman period. A local source within Yorkshire is likely.

A grey ware rim and upper bodysherd from Trench 38 (context 3811) is in a gritty grey ware with sparse, coarse, subangular quartz and comes from a jar. The fabric is likely to originate within Yorkshire, perhaps quite close to the site. The jar has a rather rectangular shaped long, everted rim with a grooved rebate just inside the rim tip. The well-made rim of this vessel contrasts with related pre-Roman forms and the details of the form compare well with recently excavated Dales type jars at Green Hammerton where it was associated with a Dales jar dating to the 3rd to mid-4th century (Leary in prep.). Jars of this type were excavated at Aldborough (Jones 1971 fig. 9 nos 27 and 43) where they were grouped with the cupped-rim jars (see also Myres et al 1959 fig. 11 nos 24 and 26 at Aldborough). Although difficult to date precisely, this form appears to post-date the pre- and early Roman everted rim native jars and have strong affinities with the Dales and Knapton type jars of the 3rd to mid-4th centuries.

Vessels in similar forms and fabrics were also present at Dalton Parlours and were given a date range in the 3rd to 4th centuries (Sumpter 1999, 144 fig. 98 no. 67). At Ilkley it was suggested the form developed from an Antonine jar form (Hartley 1966 fig 11 no. 57). Related jar forms in gritty grey ware were also found at Piercebridge in contexts with a similar date range (Croom *et al.* 2008 fig. 9-29 no. 9, fig. 9.36 no. 201, D9-52 nos 345, 348 and 349 from early 4th and late 3rd groups) and Croom *et al* note that the ware continued to be a significant group as late as the early 5th century, although the forms illustrated in the late 4th -5th century contexts are typologically somewhat later than this vessel (2008, 230). Snape *et al* point out parallels for this form (2002, 97 no. 63) dating to the sub-Roman period at York (Monaghan 1997, no. 3237) but these are not close and are more likely to be later derivations.

The latest vessels came from Trench 20 (context 2004) and comprised rim sherds from two Huntcliff jars with hooked rims and internal lid seatings with two bodysherds in the same ware decorated with two grooved wavy lines, probably from one of the Huntcliff jars. This form gives a date after cAD360/70. These were made in East Yorkshire.

Chronology

The pottery indicates activity from the early 2nd century and the 3rd to 4th continuing at least as late as cAD360/70 and possibly extending into the early 5th century. The handmade fragments may indicate pre-Roman activity but their status is uncertain.

Site status

Only jars and one mortarium are present on the site with most of the vessels probably made within Yorkshire. The limited range of vessel types and lack of traded goods suggest a site of low status.

Conditions

The gritty grey ware jar from Trench 38 (3811) had a thick layer of sooting on the body while one of the Huntcliff jars from Trench 20 (2004) was quite worn around the lid seating.

The ceramic building material, fired clay and daub by John Tibbles

Introduction and Methodology

With regard to the ceramic building material, it should be noted that the diversity of size and colour within the brick and tile caused during the manufacturing process, must be taken into consideration when comparing examples with other assemblage and local typologies. The varying sizes and colours can be attributed to the variation in the clays used, shrinkage during drying, firing within the kiln or clamp and the location of the brick/tile within the kiln. The dating of brick and tile can be highly contentious due to its re-useable nature and therefore any date range given is that of known dates where such material has been recorded.

Assessment of the submitted assemblage was based on a visual scan and examination using a x15 magnification lens. Information regarding dimensions, shape and fabric was recorded where applicable. All of the material was subject to basic quantification by count and weight.

The assemblage was recovered from six contexts (see Table 1 below). Two material categories were identified: daub/fired clay and ceramic building material.

Table 1: Ceramic building material, daub and fired clay

Context	Material	No. of Fragments	Weight (g)
2801 – Sample 31	Daub/Fired Clay	4	6g
2805	Daub/Fired Clay	36	314g
2805 – Sample 41	Daub/Fired Clay	16	33g
3002 – Sample 32	Daub/Fired Clay	6	5g
3612	Daub/Fired Clay	2	0.5g
3801	Ceramic Building Material	2	74g
4405	Daub/Fired Clay	10	9g
	Total	76	441.5g

The Assemblage

The daub/fired clay

The daub/fired clay assemblage consisted of 74 fragments, with a combined weight of 367.5g. Diagnostic features such as the presence of rod and sail impressions and original surfaces were taken into account to aid identification. Non-diagnostic material was determined by the lack of rod and sail impressions and original surfaces (featureless).

The daub/fired clay was recovered from five contexts. All the material was of a similar fabric:

Soft, friable, 'crumbly' with hairline cracks. Moderate fine quartz grains, frequent fine mica flecks and occasional fine black flecks (0.1mm – 0.25mm).

The majority of the assemblage (73%) was featureless and comprised small rounded '*granules*' and amorphous pieces with abraded surfaces. Rod or sail impressions were not evident. However, one and two possible original surfaces of a '*flattish*' appearance, were noted on two and eighteen fragments respectively.

All of the fragments were affected by exposure to indirect heat/high temperatures. Six pieces bore discolouration/sooting? indicative of direct heat exposure and/or burning.

The ceramic building material

The two fragments of ceramic building material were both recovered from context 3801. Both were heavily abraded. No evidence of exposure to heat or high temperatures was noted.

One fragment displayed the remnants of one original surface. However, the fragment bore no diagnostic features, such as a complete dimensions, to enable identification of form. This fragment is considered to be of Romano-British fabric.

The remaining fragment had a complete thickness of 18mm to 21mm. Based on the curvature, it was identified as an imbrex. The fragment was slightly flared in form, which suggests it came from the end of the imbrex, possibly the apex. No evidence of re-use, such as mortar over breaks, was noted although this information may have been lost due to the abraded nature of the fabric.

Discussion

In isolation the assemblage of daub/fired clay and ceramic building material from the evaluation excavation is of little archaeological significance and the abraded condition of the majority of the fragments and their small size limits the potential to ascertain use.

The lack of rod or sail impressions and original surfaces does lead to an ambiguous interpretation of the daub/fired clay assemblage. The heat discolouration/burning noted on the daub/fired clay may indicate oven or hearth material. However it should also be

considered that this may have been a result of high temperature destruction, i.e. if the material was part of a wattle and daub structure such as a wall or partition.

Daub/fired clay has a broad date range, from the prehistoric through to the late medieval period. However, this assemblage is considered to be of prehistoric to Romano-British date. Refined dating would be contemporary with any associated pottery.

The paucity of other forms of Romano-British ceramic building material, does not suggest a substantial building within the vicinity. The fragments recovered may have been used within smaller structures for example a hearth or as post-packing.

Recommendations

No further work is deemed necessary on the assemblage, however this material should be considered with any larger assemblage recovered should further work be undertaken.

Unless the landowner requests its return, the assemblage should be deposited within the relevant museum with the remainder of the site archive.

Iron objects by Gail Hama

Introduction

Five iron objects were found during the evaluation and the assemblage was submitted for a full report following MAP2 guidelines (English Heritage,1991). X-radiography was carried out and the results used to inform this report.

Discussion

All five items derive from the same context, 3612, the fill of pit 3611. The iron was in poor condition with heavy corrosion products and little metal core surviving. None of the objects are complete: three are nail fragments while the other two pieces could not be identified. Nails are ubiquitous finds on sites dating from the Roman period onwards. The nails from this site have sub-rectangular shanks and are not machine cut indicating that they were manufactured before the early 19th century. Their fragmentary condition and lack of diagnostic features makes it impossible to refine the date range.

The assemblage is of no archaeological value and can be discarded.

Catalogue

1 Fe nail shank, bent; tip and head missing; sub-rectangular in section

L 40mm, W 4mm, Th 3mm

Context 3612, Sample 22, XRK09/185

2 Fe nail shank? Sub-rectangular in section

L 25mm, W 3mm

Context 3612, Sample 22, XRK09/185

3 Fe nail shank, head and tip missing

L 42mm, W 3mm

Context 3612, Sample 22, XRK09/185

4 Fe flattened strip which widens in the middle, slight groove on one side; incomplete

L 27mm, W 3-6mm, Th 2mm

Context 3612, XRK09/185

5 Fe fragment, round in section

L 25mm, D 4mm

Context 3612, XRK09/185

7 Environmental Record

Carbonised plant macrofossils and charcoal by Diane Alldritt

Introduction

Thirty-seven flots from the evaluation were examined for carbonised plant macrofossils and charcoal. Charred material sorted from a single sample retent was also analysed for identifiable remains. A bag of peat-like material, more closely resembling organic-rich silt, was returned to ASWYAS and has the potential for preservation of waterlogged material. Samples were analysed from a total of twelve trenches, with no firm dating evidence available at the time of writing.

Methodology

Bulk environmental samples were processed by ASWYAS using an Ankara style water flotation system (French 1971). The flots were dried before being sorted under a low powered binocular microscope. Charred material was recovered in varied amounts, with the smallest flots containing only trace amounts of <2.5ml detritus, whilst some of the more abundant flots produced up to 180ml of wood charcoal, cereal grain and other material. Modern root fragments were also recorded, but generally in quite low amounts from <2.5ml to up to 30ml in rare cases. Occasional modern seeds and earthworm egg capsules encountered in a small number of the samples should not be a cause for concern.

Charcoal suitable for identification was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. Wood charcoal was generally recovered in a very good state of preservation. The reference photographs of Schweingruber

(1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

Results

Results for Trenches 20, 28, 29, 30, 32, 33 and 35 are presented in Appendix 6 Table 1, for Trenches 36 and 37 in Table 2, and for Trenches 38, 41 and 44 in Table 3. All results are discussed below.

Discussion

Summary

The thirty-seven samples from Ripon Quarry produced a mixed assemblage of wood charcoal, cereal grain, weed seeds and charred heathland plant material, which varied widely in distribution and in both preservation and the quantities recorded across the twelve examined trenches. Quite large caches of carbonised cereal grain, some in a very poor state of preservation were recovered from pit and post-hole contexts 3803 and 3805 in Trench 38, and from pit contexts 3619 and 3612 in Trench 36. Wood charcoal was present on a wider scale, and often in abundance, particularly in post-hole 3805 in Trench 38, and in pit fills 3207 and 4405 in Trench 32 and Trench 44 respectively, with slightly smaller amounts also recorded from Trench 36 and Trench 37. Other plant material provided evidence for possible waterlogged preservation, in particular from decomposed peat layer context 2004 in Trench 20. Results will be discussed by trench in more detail in the following.

Trench 20, Sample 10 (2004)

This sample from the possible decomposed peat layer (2004) produced evidence for organic preservation, probably as a result of waterlogged or damp soil conditions, in the form of small wood fragments, numerous dry seeds of *Sambucus nigra* (elder) and occasional beetle body parts. The context was probably not fully formed peat, but did exhibit elements consistent with a silty organic sediment formed by waterlogging. A second (unprocessed) bag of organic-rich silt from this context was returned to ASWYAS for further analysis by an appropriate soil specialist.

Trench 28, Samples 31 (2801), 41 (2805) and 42 (2805/10)

Pit sample 31 (2801) was barren of identifiable carbonised plant material, producing only a single non-marine mollusc shell. Context 2805 similarly produced no identifiable remains, whilst 2805/10, taken from a possible subsoil layer, produced a single fragment of *Quercus* (oak) charcoal. This was most likely a chance or accidental inclusion in the deposit from activities occurring elsewhere and is not particularly significant.

Trench 29, Sample 28 (2904)

This single sample taken from a possible linear feature produced very small trace amounts of carbonised material, which included two grains of *Hordeum vulgare* sl. (barley) cereal. These

grains were probably a windblown intrusion in the feature, and should be considered as trace evidence, but they do at least suggest agricultural activity occurring in the vicinity.

Trench 30, Sample 32 (3002)

This sample was barren of environmental material.

Trench 32, Samples 20 (3207) and 21 (3209)

The upper (3207) and lower (3209) fills of pit 3208 produced large quantities of wood charcoal, all of which was identified as *Alnus* (alder). No other environmental material was recorded from this pit. The charcoal was recovered in quite large 'chunks' up to 3cm in size, and could indicate the use of the feature as a fire-pit or similar. It is interesting that only one type of wood was selected for burning, perhaps reflecting its ready availability in the local environment, or maybe suggesting a single burning event.

Trench 33, Sample 40 (3306)

Burnt layer 3306 contained a single fragment of poorly preserved indeterminate wood charcoal together with small fragments of tealeaf sized charcoal detritus, indicating burning in the vicinity, perhaps sweepings from a fireplace or a natural occurrence. Few conclusions could be drawn from the sample.

Trench 35, Sample 30 (3504)

Ditch fill 3504 produced very few charred remains, amongst which were a single rhizome fragment and a single *Triticum spelta* (spelt wheat) cereal grain. This provided a trace, tentative indication for agricultural activities occurring in the vicinity. However, these remains may well be windblown or accidental inclusions in the ditch deposit and should be treated with caution.

Trench 36, Samples 15 (3614), 16 (3604), 17 (3606), 18 (3608), 19 (3610), 22 (3612), 23 (3617), 26 (3619) and 27 (3612)

Post-hole fills 3604 and 3606 produced no identifiable environmental material, whilst pit/post-hole fill 3608 contained a single bud fragment only, which was probably a trace inclusion. Ditch fill 3617 was also barren of environmental material.

Small amounts of wood charcoal were recovered from ditch fills 3614 and 3610, which also both contained trace amounts of indeterminate cereal grain. Both these fills probably reflect wind-blown or accidental inclusions from burning and agricultural activities occurring nearby.

Three pit fill samples taken from this trench proved quite rich in carbonised plant material, containing large caches of cereal grain, together with weeds of agricultural or disturbed ground and small quantities of wood charcoal. Two samples from pit fill 3612 produced evidence for *Triticum spelta* (spelt wheat) and *Avena* sp. (oat) cereals together with a large

amount of poorly preserved indeterminate grain. Arable field weeds from 3612 included *Chrysanthemum coronarium* (crown daisy), *Persicaria maculosa* (redshank) and *Fallopia convolvulus* (black bindweed). An almost identical range of evidence was recorded from pit fill 3619 with the addition of a small amount of *Hordeum vulgare* sl. (barley). Fuel waste in the form of rhizome fragments and *Corylus* (hazel) and *Prunus* sp. (cherry) wood charcoal was also present in both contexts.

Both pit fills 3612 and 3619 therefore, appear to contain deposits of waste from cereal processing activities, particularly representative of the final stages of drying prior to storage, consumption or milling (van der Veen 1989), which may have been dumped in the pits, or perhaps accidentally burnt *in situ* during drying. The appearance of spelt wheat in the archaeobotanical record, taken in very broad terms, is usually assigned firmly in the Iron Age and Roman periods in England, with some evidence for its earlier use in the Bronze Age (Greig 1991). It would be interesting to radiocarbon date the grain from Trench 36 (or Trench 38) to test if it fits this general pattern of evidence.

Trench 37, Samples 38 (3702) and 39 (3706)

Gully fill 3706 was barren of environmental material. In contrast, pit fill 3702 contained a small quantity of wood charcoal, all of which was found to be Prunoideae type (cherry Family), together with a scattering of *Triticum* sp. (wheat) cereal grain, and occasional *Calluna* (heather) stems. This material may represent a dumped deposit of waste from cereal drying, or perhaps waste from cooking *in situ* over a fire-pit. The heather stems may reflect the cutting and burning of peat or heathland for fuel. The Prunoideae wood probably grew as shrubs, small trees or as a hedgerow type plant and indicated gathering of wood for fuel from an open landscape, probably with few substantial trees available.

Trench 38, Samples 11 (3802), 12 (3803), 13 (3805), 14 (3807), 33 (3817), 34 (3811), 35 (3814), 36 (3819) and 37 (3818)

Samples taken from the buried soil or bank material (3817 and 3818) were barren of environmental material, as were ditch fills 3814 and 3819. The lower ditch fill 3811 contained two small fragments of heather stem, most likely chance windblown inclusions. This series of deposits provided very little environmental indication of human activity in the vicinity.

In contrast, the series of pit and post-hole fills examined from Trench 38 produced large concentrations of very nicely preserved plant material in three out of the four features examined. The upper fill (3802) of pit/posthole 3804 was the least productive containing two degraded cereal grains, possibly wheat but too damaged to identify fully. The lower fill (3803) of this feature provided agricultural evidence in the form of oat, barley and spelt wheat, with a small amount of birch and cherry type wood charcoal. This probably represented waste from cereal drying activities occurring nearby or *in situ* in the pit.

The fill (3805) of posthole 3806 contained some of the best preserved plant remains seen from the assemblage as whole, in particular with the recovery of large amounts of *Corylus* (hazel) roundwood and other fragments up to 4cm in size. The hazel included specimens of small branch wood with up to six growth rings, suggesting the possibility that hazel was a managed woodland resource at this time. Given the posthole context within which the hazel was found, and the size of the charcoal fragments, hazel could have been used as wattling or for similar construction or fencing purposes. Context 3805 also contained a small amount of degraded barley cereal grain, perhaps reflecting general agricultural waste gathering within a working area, and a single very rare find of a complete *Triticum spelta* (spelt wheat) grain preserved within its glume base. Whilst a single piece of chaff is not enough to draw strong economic conclusions, it does however, provide further evidence of agricultural produce moving through the site during this period of activity.

Trench 41, Samples 24 (4105) and 25 (4107)

The lower fill (4105) of pit 4104 produced no identifiable plant material, whilst context 4107, the lower fill of pit 4108, contained a single *Hordeum vulgare* sl. (barley) cereal grain only. The cereal grain was most probably an accidental inclusion in the deposit as no other remains, for instance wood charcoal, were present to suggest cereal drying or other processing waste was deliberately deposited in the pit.

Trench 44, Sample 29 (4405)

Pit fill 4405 produced abundant quantities of wood charcoal recovered in large well preserved fragments up to 2cm in size. The charcoal was almost exclusively identified as *Quercus* (oak) apart from a single piece of *Corylus* (hazel). No other plant material was recorded from the pit, probably indicating that it was being used as a fire-pit or similar, perhaps for cooking or general heat. The combination of oak and hazel suggested mixed deciduous woodland being exploited for fuel, with lighter open areas of woodland in the vicinity. Oak would have been a preferred source of fuel in prehistory having a higher calorific value than most other European woods thereby producing a long lasting and even source of heat, providing it was well ventilated (Gale and Cutler 2000).

It would be interesting to compare any radiocarbon dates for this feature with those from contexts in Trench 36 or Trench 38 producing cereal grain, as it is likely pit 4404 is earlier (possibly fairly early Prehistoric given the suggested abundant use of oak) based upon archaeobotanical comparisons alone.

Conclusion

The environmental samples produced an interesting range of carbonised plant material, with concentrations of wood charcoal and cereal grain located in several key areas of the site, particularly Trench 36 and Trench 38. Evidence for agricultural activity was also recorded in Trench 37, but in lower amounts. Carbonised cereal grain, identified as mostly spelt wheat, with lesser amounts of barley and oats indicated involvement in a mixed arable economy,

with at least some stages of agricultural processing, such as drying prior to storage or consumption, occurring. The range of cereal grain recorded points toward a broadly Iron Age to Roman date for the activity in Trenches 36, 37 and 38, or perhaps earlier, which it would be interesting to test through radiocarbon dating. Spelt was most probably used for human consumption whilst oats, and perhaps barley, would have provided an important source of fodder for over-wintering livestock.

Wood charcoal recorded from Trench 44 suggested a possibly early date for pit 4404, with abundant oak and a little hazel recorded. This indicated mixed deciduous woodland being exploited for fuel. In contrast, pit and other contexts recorded in Trenches 32, 36 and 38 produced no evidence for oak woodland, but instead a range of open woodland, scrub and shrub types including hazel, alder and birch types were identified. Posthole fill 3805 contained hazel small branch roundwood, which could have been used for wattling or similar and may have been a managed resource. Evidence for the use of heath or peat land resources was quite scarce, with wood charcoal appearing to be the main source of fuel. Radiocarbon dating may be able to more closely define any changes in woodland use over time although may not directly reflect the availability of certain types within the landscape due to human selection.

Animal bone and molluscs by Jane Richardson

Only 116 animal bone fragments were recovered during the evaluation and many of these are undiagnostic or only identifiable to a lower-order category such as 'large mammal'. Cattle and horse bones are present, but given the poor state of bone preservation, it is not surprising that the larger-sized taxa predominate. One oyster shell was retrieved from the topsoil. No further interpretation of this small, and poorly dated, assemblage is warranted.

Table 2. Animal bones and molluscs by context (italicised entries indicate bones recovered from soil processing)

Area	Context	Taxa	Element	Quantity
Trench 2	200	Oyster	Right valve	1
Trench 20	2004	Cattle	Distal humerus (fused)	1
		Large mammal	Long bone fragments	9
Trench 28	*2802*	*Undiagnostic*	*Undiagnostic fragments (1 burnt)*	*2*
	2805	Small mammal	Long bone fragments (all burnt)	24
	2805	*Undiagnostic*	*Undiagnostic fragments (all burnt)*	*20*
Trench 32	3202	Horse	Tooth fragments	19
Trench 38	3801	Large mammal	Long bone fragments	11
Trench 38	3811	Cattle	Tibia shaft fragment	1
		Cattle	Proximal metatarsal	1
		Large mammal	Skull fragments	3
		Large mammal	Long bone fragments	19
		Small mammal	Long bone fragments	2

Area	Context	Taxa	Element	Quantity
		Undiagnostic	*Undiagnostic fragments*	*4*
Total				117

8 Recommendations for Further Work

The combined evidence from the scoping report, the geophysical survey and the evaluation excavations indicate that extraction in the proposed southern extension area is unlikely to endanger any significant archaeological deposit and so does not require any further investigation.

The proposed northern extension area stands in contrast to this, particularly the land to the east of the Bellflask trackway, where further work prior to the commencement of quarrying is recommended. The scope of this work is outlined below.

- A range of radiocarbon dates for the archaeological remains excavated so far could be obtained. This will bring greater resolution to the timeframe of the site and hopefully establish a date range for the occupation of the enclosure.
- If available the land under the maize crop along the northern edge of the site at the time of the evaluation should be subject to geophysical survey. This will allow for a more accurate costing of further excavations as for now, it must be assumed that the enclosure extends much further north.
- A strip and record excavation of any part of the extension area where ground disturbance is likely should be undertaken prior to the commencement of any quarrying. This must be completed with sufficient time allowed for the resulting hand excavations. Particular attention should be paid to the area around Trench 20 and if more evidence of waterlogged deposits are encountered they should be comprehensively sampled and investigated for possible votive offerings.
- The results thus far obtained and those from future excavations should be combined and presented in a single report including all relevant specialist reports. The site as a whole should be considered within its wider landscape setting and should be compared and contrasted with other archaeological sites within the environs of the River Ure.

9 Discussion

The evaluation excavations carried out at the proposed southern extension area confirmed the conclusions of the scoping report (Josephs 2009) and the results of the subsequent geophysical survey (Webb 2009) in that no conclusive evidence of human activity on the site

was identified. This is considered to be the consequence of the low lying nature of the land, the majority of which lies between 28m and 30m above OD, which has meant that the area has been prone to intermittent flooding and therefore never attracted any sustained human activity. Only a single feature, a possible ditch (203) in Trench 2, was recorded in any of the trenches, and even this feature is considered likely to be of natural origin, perhaps due to water action, rooting or maybe animal burrowing, due to its rather irregular form.

Significantly the land within the proposed northern extension area is slightly higher at between 34m and 38m above OD and, therefore critically predominantly above the suggested maximum height of the river floodplain (36m aOD) (Josephs 2009). This has resulted in evidence of human activity dating back over millennia.

The earliest evidence of human occupation on site consisted of a fire-pit/hearth (3208) in Trench 32. The flintwork recovered from this feature is predominantly undiagnostic but a potential microlith hints at Mesolithic date. During the Mesolithic human society consisted of hunter-gatherer groups and these communities are thought to have been highly mobile with temporary camps being struck as and when seasonal resources became available elsewhere. Hunting trips would have been a regular feature of Mesolithic life with hunting parties radiating out from an occupation site. Ethnographic studies suggest hunting trips might have extended over days with the need for overnight camp sites (Chapman 1982). Two environmental samples from the pit fills produced substantial amounts of *Alnus* (alder) derived charcoal strongly suggesting *in situ* burning. Alder is indicative of a wet environment (Mithen 1999) suggesting firewood was collected locally. If the pit/hearth identified in Trench 32 dates to the Mesolithic then it may represent such a short term camp site probably related to the exploitation of resources offered by the river.

Mesolithic sites often appear as palimpsests indicating they were returned to year after year as points on a seasonal round. Although the fire-pit/hearth suggests a single phase of occupation it is quite possible that similar features could be located intermittently across the gravel terrace. The geophysical survey lends weight to this possibility as several other discrete anomalies are visible within 10m of the fire-pit/hearth.

Residual flintwork constitutes the only evidence for Neolithic activity on site. Farming practices arising with the domestication of some plants and animals had become more prevalent during the Neolithic, leading to a more sedentary lifestyle for many communities. However, environmental evidence from many Neolithic sites indicate that wild resources were still vital to Neolithic peoples (Edmonds 1999). Hunting and gathering would still have taken place and the low level residual flint from site likely represents such seasonally attuned activities.

Evidence for Bronze Age activity on site was identified in Trench 44 and tentatively in Trench 33. The excavation of Trench 44 revealed a pit feature that contained several sherds of two Collared Urns. This particular vessel form is one of a range of distinctive vessel types

current during the early part of the Bronze Age (Parker-Pearson 1996). They are characterised by heavy collared rims atop straight, or slightly convex, sided bodies and flat, often disproportionately small, bases. They vary markedly in size and capacity. Fabrics are generally grog-tempered and vessels usually have carefully-smoothed exterior surfaces. Decoration is confined to the collar and shoulder, and comprises twisted cord, whipped cord and sometimes comb impressions arranged in geometric blocs or herringbone fashion.

Collared Urns are widely distributed across Britain, being often used to hold the cremated remains of the dead, which were then interred in cremation cemeteries or sometimes as secondary burials within, or associated with, barrow monuments. Funerary activity does not, however, appear to be the use to which the urn at Ripon was put as no evidence of cremated bone was recovered during excavation or from the processed environmental sample. It is likely then that Ripon vessel originated from a domestic context. The role of Collared Urns within domestic contexts is, however, more speculative, though the size-range is likely to have been significant.

The excavation of Trench 33 revealed the potential remains of a large spread of burnt stone, possibly a mound. Burnt mounds are typical of the Bronze Age (Barfield and Hodder 1981 and 1989) but later Iron Age examples are also known (Hedges 1975; Pasmore and Pallister 1967). Further excavation of this feature is required to confirm its identity and to conclusively date it.

No artefacts to indicate Iron Age activity on site were recovered during the excavations, however, the undated pit alignment investigated in Trenches 27, 28 and 32 is a monument typical of this period (Richardson 2005). Pit alignments obviously served as land divisions but their discontinuous nature indicates the boundaries they defined were not meant to be physically preclusive. Cunliffe (1991) has suggested they may have been used to define territory, whilst still allowing movement across the boundary. Excavations carried out by ASWYAS on a similar monument close to the Ferrybridge Henge, West Yorkshire suggested that the pit alignment delineated a boundary between the Neolithic to Bronze Age ritual landscape of the henge and the settled, agricultural landscape of the late Iron Age and Romano-British periods (Richardson 2005). That the ritual landscape at Ferrybridge still resonated with the later populations is attested to by the recovery of Romano-British finds from the henge ditch. The Ripon alignment may have served a similar function by separating as-yet unidentified Iron Age settlement to the south-east and the ritual landscape of the Thornborough Henges to the north-west.

Alternatively, the Ripon alignment may be more concerned with the River Ure. Similar correlations have been noted at St Ives, Cambridgeshire (Pollard 1993) and Plant's Farm, Maxey (Gurney *et al.* 1993). The Ripon pits are aligned on a bend in the River Ure, pointing to an area that is still wet and boggy today. Trench 20 was the closest excavation to this wet area and revealed a dark grey-black layer (2004); a context that was probably not fully formed peat, but did exhibit elements consistent with a silty organic sediment formed by

waterlogging (Alldritt, this report). The bone and Romano-British pottery recovered from this deposit may simply be discarded refuse but alternatively may represent incidents of structured, (votive?) deposition.

Wet, marshy locations across England and Wales have been recognised as foci for Iron Age ritual activity (Cunliffe 2005, 566-570, Haselgrove 1999, 123). It is possible that such areas served as a liminal zone between the land and the living and the water inhabited by spirits with the marshy areas being locations where the spirits or gods could be served or placated (Cunliffe 2005, 566). The fact that the pottery is Romano-British does not negate a ritual aspect to its deposition as it may indicate old ideas and beliefs had not been entirely forgotten by the local agricultural communities who may have been only superficially Romanised.

A possible second pit alignment was identified in Trench 41 but no evidence for its continuation was found in Trench 42 which also sampled across the geophysical anomaly. Further excavation of this anomaly is required confirm its identity and perhaps date it.

Potentially, archaeological evidence of the Romano-British period was the most commonly encountered during the excavations. Other than at the marshy edge of the River Ure, Romano-British activity appears to be focused on the rectangular enclosure. Dating evidence was recovered from ditch 3812, in the form a rim sherd from a splay-rimmed cooking pot, and from pit 3611, which produced a sherd of early to mid 2nd century AD mortaria. These finds securely date the remodelling of the internal division of the enclosure and at least one phase of activity within it.

Given that the internal division was remodelled during the Roman-British period, it is possible that the enclosure has its origin in the later Iron Age. This scenario appears even more likely when the finds assemblage from ditch 3609 (=3618), which consisted of a few abraded sherds of prehistoric pottery and four flints, is taken into consideration. Clearly, the enclosure requires further investigation consisting of scientific dating and a complete sample excavation in order to bring greater resolution to its use and occupation.

10 Conclusions

The evaluation excavations carried out at both areas of the proposed extensions to Ripon Quarry support the conclusions of the scoping reports (Josephs 2009) and the subsequent geophysical survey results (Webb 2009).

The southern extension area was confirmed to be an alluvial based environment with the geophysical anomalies corresponding with variations in the natural deposits, which consisted of mixed bands of cobbles, pebbles, finer gravels, sands and silty clay, rather than palaeochannels. Deep alluvial subsoils up to 1.2m deep in places indicated that up until comparatively recently, when the landscape was drained, this area fell within the River Ure's floodplain and was, therefore, unfit for human occupation.

In sharp contrast, excavations in the northern extension area identified evidence of human activity dating to the Mesolithic, Neolithic, Bronze Age, Iron Age and Romano-British periods. The widespread distribution of the remains suggests that almost all of the terrace at one time or another has been utilised by human communities.

The trenching carried out on the northern extension was a 2% sample of the area as a whole, therefore, targeted implementation of the 2% contingency could be used to test the validity of some of the discrete anomalies apparent on the geophysical survey. It is thought, however, that due to the widespread nature of the archaeological remains, further evaluation excavations would not reduce the area of the site that would need to be monitored when the site is stripped prior to quarrying. The strategy employed to deal with the archaeological remains from this point must balance the inherent inadequacies of 'keyhole' evaluation excavations against the long-term aim of the client to strip the site completely, which offers a better opportunity to understand the archaeological remains in their wider setting.

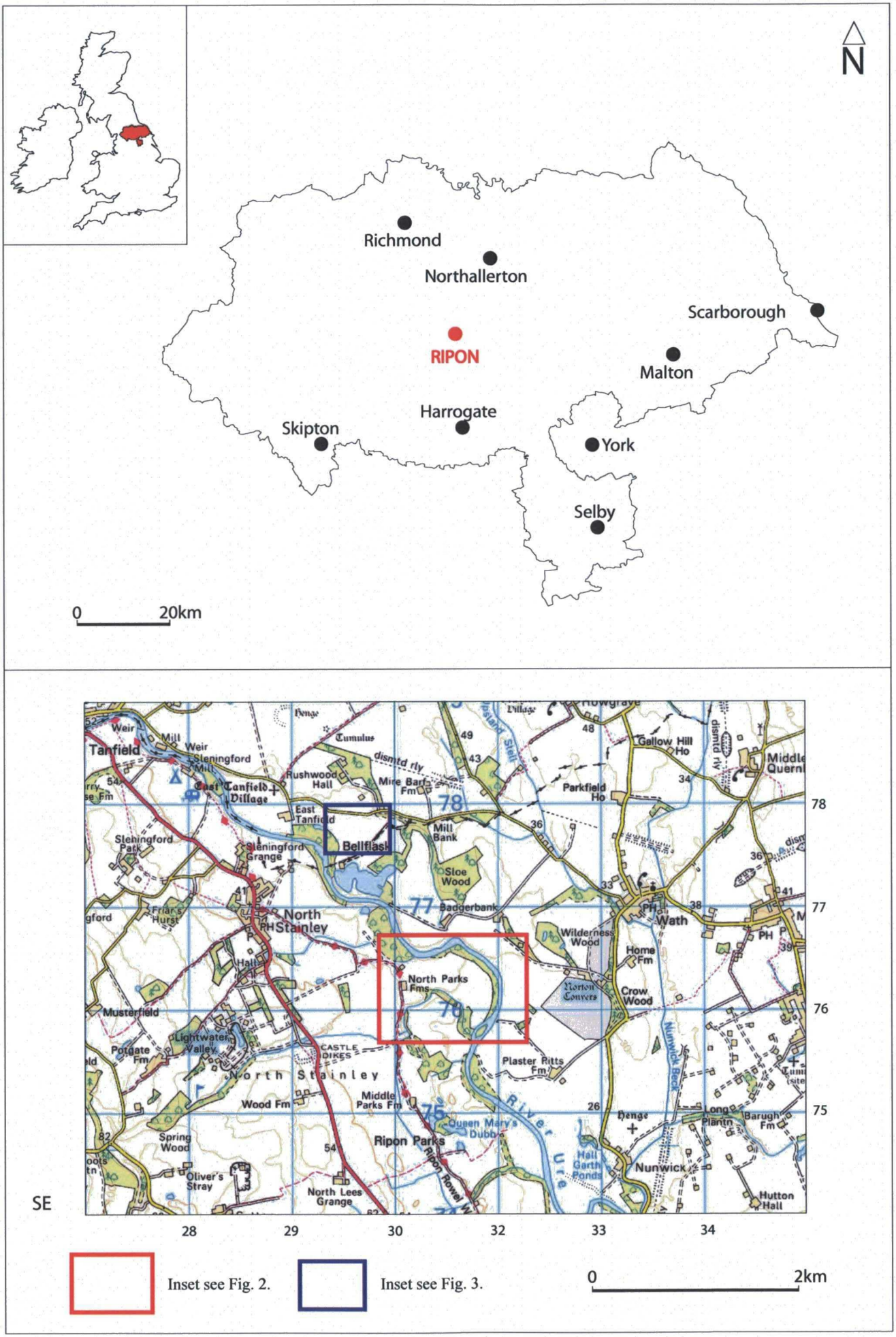

Fig. 1. Site location