

A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE

SURVEY & TRIAL EXCAVATIONS 2001-2004

South Gloucestershire HER 14580



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The aerial photographs included in the report are reproduced courtesy of English Heritage.

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Introduction & Background

An invitation in 2000 to look at pottery and other artefacts found by David and Mary Isaac in fields called *Blacklands* at Hall End Farm (NGR ST 7041 8758) was, for the writer at least, the first indication that a significant rural Roman site existed at the hamlet of Hall End, close to the Ladden Brook and approximately midway between Wickwar and Rangeworthy in South Gloucestershire (*Figures 1 & 2*).

The artefacts, collected by the Isaac family from their fields called Great Blacklands and Little Blacklands over several generations and gathered together by Mary Isaac, the present landowner, include large numbers of coins, fibula brooches, pottery, quern stones plus structural iron and lead objects (detailed in the project archive), the great majority of Roman date. Other objects of note include a bronze handle, possibly for a spoon or patera and decorated with a Venus figurine and the heads of the seven Roman gods of the week (*Figures 15 & 16*), found by local metal detectorists Sylvia Mourner and May Brown in Great Blacklands. As a whole, the assemblage, combined with the field name evidence, indicated a significant Roman settlement that, as subsequent discussions were to establish, was investigated to the south of the Blacklands area, at approximately ST 7040 8754, by the late Anne Everton and a team from Avon County Council Community Environment Scheme (ACCES) during the 1980s. Unfortunately no records of that work have yet been traced although it is clear that Roman structures, deposits and finds were located during the work.

Fieldwalking over the cultivated part of the site, Little Blacklands (*Figure 3*), in 2000 revealed further extensive spreads of finds, mainly Roman pottery sherds, in the plough soil. It was decided at that time that some exploratory geophysical survey was the best way to establish whether the surface finds indicated significant buried deposits and structures. That work, funded by Avon Archaeological Unit and undertaken in 2001 by Prof. Mark Noel of GeoQuest Associates, consisted of two 100 m x 25 m transects (*Figure 4*) that identified a series of probable wall foundations representing several separate buildings plus enclosure ditches, a possible palaeochannel and a major track or road aligned from south to north. The results of the preliminary survey prompted a second stage of geophysical survey (*Figure 4*, Stage 2) in 2002 funded by South Gloucestershire Council and totalling

approximately 8 Hectares. The exceptional results of the survey defined the course of the Roman road through little Blacklands and Great Blacklands and produced an extensive area of well defined magnetic anomalies indicative of regular enclosures or tenements with roadside frontages containing well defined masonry foundations.

In view of the geophysical survey results, trial trenches were opened in 2002 (*Figure 3*) in areas under grass in Great Blacklands, to characterise the geophysical data. A subsequent stage of geophysical survey followed in 2004 (*Figure 4*), funded by English Heritage and South Gloucestershire Council, designed to try and establish the limits of the site. The 2002 trenches confirmed the character of the geophysical anomalies and located the Roman road plus well preserved stone buildings laid out adjacent to the west and east. A further two trenches were opened in 2004 in Little Blacklands, at the time cultivated for maize fodder. These trenches were designed to evaluate a possible palaeochannel indicated by geophysics adjacent to the Ladden Brook and to recover dating evidence that could define the origin of a defensive circuit of ditches indicated by the latest phase of geophysical survey (*Figures 5 and 6*; Stage 3).

These studies were accompanied by an examination of the documentary and aerial photographic sources for the site, a collation of the artefacts removed from the site through casual collection and metal detecting plus specialist reporting of finds and samples recovered from the trial trenches.

The archive to the project has been collated under the Sites & Monuments Record Number (SGSMR 14580). The artefacts have been returned to the landowners, David and Mary Isaac, whilst the written records and illustrative archive for the project is temporarily held by the Avon Archaeological Unit Limited. The written

records will be deposited with Bristol City Museum & Art Gallery for long term storage and curation.

Geology and Topography

The site is located on the south side of the Ladden Brook at NGR ST 7041 8758 where the local topography is low and rolling. The area of identified Roman settlement extends alongside the Roman road, which runs from SSW to NNE and follows the crest of a low semi-circular hill that rises to approximately 64 m above Ordnance Datum. Both the hill and the core area of Roman settlement are defined to the north by the Ladden Brook, which flows from east to west and within a narrow sinuous flood plain at approximately 57 m OD. The south side of the hill, and possibly the area of Roman settlement, is defined by a ditch that today extends from Hall End cottages to Wixoldbury Farm and which may represent a natural watercourse that has subsequently been canalised.

The underlying Geology is predominantly Carboniferous Coal Measures, variously sandstones and shales with coal seams, of the Bristol Coalfield syncline overlain by Triassic Mercian Mudstones (Keuper Marl) to the east of the site. Exposures of bedrock adjacent to the north side of the Ladden Brook indicate a local geological facies of sandstone conglomerate of a type similar to material used for Roman quernstones and possibly denoting the unconformity separating the Carboniferous and Triassic locally. The local Keuper Marl was until the 20th century one of the world's only sources of the mineral Celestite, Strontium Sulphate. The mineral was extracted from the upper 2 m or so of the marl in a highly destructive fashion until the early 1990s for producing red pigments, for colouring fireworks and flares, for use in television cathode ray tubes and in the process of refining sugar beet.

Soils

A variety of soil types indicative of the complex underlying geology are recorded in the vicinity of Hall End. The principal soil types represented include, 1) Swindon Bank Series,

generally represented by shallow brown earths that are stony and loamy and well drained over carboniferous fine-grained sandstone; 2) brown earths of the Dean

Series, generally loamy and closely linked with Swindon Bank series and, 3)

Whimple Series, consisting of gleyed brown earths, generally fine and loamy over reddish brown silty mudstone and imperfectly drained.

Documentary Evidence

The study area now lies entirely in the civil parish of Wickwar although before the 20th century was mainly in the parish of Yate with only the northern and western parts in Wickwar.

No documentary sources dating from the historic Anglo-Saxon period were located although nearby Tortworth, Avening, Thornbury and Yate are mentioned in Anglo-Saxon Charters (*Sawyer, S 147 in Miller 2004*) and the reference to the grant of 10 Hides of land at *Geate* (Yate), dated c. AD 777-779, includes a specific topographical reference to '*the highway at Yate*', which represents the substance of the grant. The specifics of the highway are not given but it was presumably a route beneficial to the parent monastery at St Mary's Worcester and possibly a reference to an older, Roman road. A later document (GRO/D340a/T144) witnessed by a Andrew Dudenham and dated 1310 includes reference to pasture called *Oldeburistrete*, a name that most likely refers to the site of the later Wixoldbury Farm and Old Close, sited adjacent and to the west of Blacklands. The place-name element 'oldbury' is usually interpreted to mean old town or fort and could in this context alongside the element '*strete*' imply the road to/from the old town. The settlement of Wicks Oldbury

may therefore derive its name from the farmstead or settlement on 'Oldeburistrete' and reflect a memory of a former town and the thoroughfare on which it lay.

The Roman Road

Margary (1967) identifies an 11 mile stretch of Roman road (*ibid*, 541a) between Engine Common (c. ST 700 847) near Yate and Berkeley Road (c. ST 728 002) near Stinchcombe in Gloucestershire, where he suggests it joined the Roman road between Sea Mills, Bristol and Gloucester (*ibid*, 541). The route postulated for the road north of Hall End is likely, although hard evidence for the stretch from Charfield Hill to Stinchcombe (Glos.) is limited. Margary notes that the road agger is clearest to the west of Wickwar West End, (see Aerial Photograph OS/89301/54/1989), and also identifies the road south of Hall End at Engine Common, although here the suggested route, following a hedgerow and the parish boundary, is at odds with the aerial photographs (see Aerial Photograph 3G/TUD/UK/19/5027/1946). Margary does not suggest any route south of Engine Common although the modern Ordnance Survey indicates the course from Rodford, southwest of Yate, as far as the base of Shortwood Hill near Pucklechurch. An extrapolation of this route would join the modern A431, the suggested Roman road between Bath and Sea Mills, at Bitton/Willsbridge, the latter often associated with the Roman settlement of *Traiectus*. Evidence of rural Roman settlement and industrial activity recently located adjacent to this route at Rodway Hill (SGSMR13062) supports the suggested route of the road and indicates the important if poorly understood role it is likely to have played in the overall development and pattern of Roman settlement in South Gloucestershire.

The medieval and later documents for both Yate and Wickwar shed little light onto the earlier landscape in this part of South Gloucestershire and whilst Great and Little Blacklands are both listed in an abstract of title dated 1797 (GRO/D2957/19919/242) that refers to an original document of 1685, the area of the Blacklands site is not

detailed in plan until around 1840 when it is shown on the Tithe maps for both Yate and Wickwar. By that time the majority of the land at Hall End had already been enclosed, presumably by 1685 if the abstract of title is correct, and Little Blacklands is listed in the Tithe as arable owned by a Frederick Ricketts. A 1759 map (GRO/D340a/P4) showing land of the Tortworth estate to the north of the site confirms that fairly extensive enclosure had already taken place by that date. The same map also appears to show stretches of the route of the Roman road to the north of Blacklands preserved in either later field boundaries or agricultural lanes.

To complicate matters the 18th and 19th century documents refer to two separate farms named Hallend. The first, belonging to a William Hobbs appears to represent the abandoned and ruined site at ST7045 8690, the site of the 1980's excavation work by Anne Everton. The second is the present Hall End Farm which has been used as a farm since around 1780 having previously been called '*Baynhams Tenement*' and occupied by a family of the same name whose presence in the area is documented from as early as 1540.

Aerial Photographs

A total of 108 aerial photographs of both the Hall End area and the course of the suggested Roman road to the north and south of the site, as far south as Yate and as far north as Charfield Hill, were examined as part of the study. The detailed results of the trawl can be found in the project archive. The photographs date from 1946 onwards although the earliest print showing both Little Blacklands and Great Blacklands dates from 1947 (RAF/CPE/UK/1961/frame 3151). Sadly a series of very clear small scale prints taken in 1954 (MAL/54081) cover only the southern part of the site and do not show Little Blacklands at all. The images do however show the abandoned farmstead of Hallend immediately to the south of the site and a short stretch of the Roman road preserved as a hedged trackway running north from the

farm towards Great Blacklands (MAL/54081 frame 9247/1954). The same prints also show a series of earthworks, possibly reflecting the position of a complex of buildings in the field called Bell Mead located immediately southeast of Great Blacklands.

These earthworks are very much less clear on later prints, possibly as a result of Celestite mineral extraction or cultivation. A total of 75 possible or confirmed archaeological features were identified from the various prints although those of particular relevance to the course of the Roman road include an image of Engine Common to the south of the site taken in 1946 (3G/TUD/UK/19 frame 5027), which clearly shows the course of the former Roman road as a vegetation mark. A second print taken in 1946 (RAF/106G/UK/1721 frame 2195) shows the course of the Roman road immediately to the north of the site around Barbers Court Farm, where it is preserved in places either as an earthwork or in field boundaries. Surprisingly the best image of the Roman road through the Blacklands site dates from 1989 (OS/89301/frame54) and shows the course of the road as a well defined parch mark that extends through the site and beyond it to the north, past Barbers Court Farm.

THE GEOPHYSICAL SURVEY

By Mark Noel of GeoQuest Associates

During May 2001 geophysical surveys were carried out on two sample areas within the fields of All Meads and Great Blacklands, at Hall End Farm (*Figure 4*; GeoQuest, 2001). The aim of this pilot project was to establish the character of subsoil archaeological features whose presence had been suggested by parchmarks associated with finds of Roman pottery and other artefacts. Patterns of geomagnetic anomalies, recorded by fluxgate magnetometer, provided convincing evidence for a number of substantial stone buildings, areas of industrial activity, a road and ditches, and silted palaeochannels beneath the floodplain of the Ladden Brook.

Encouraged by these results, a second phase of investigation was undertaken during March 2002 when detailed geophysical survey was deployed over a wider area (*Figure 4*). A fluxgate gradiometer was again used to map anomalies in subsoil magnetic susceptibility and thermoremanent magnetisation within Little Blacklands, the northern section of Great Blacklands, and the eastern half of All Meads where the pilot study had identified building remains. Following a preliminary analysis of geophysical data obtained in these areas, the survey was then extended to include blocks in the Laggar and Rushmore positioned to test for a continuation S of the Roman road detected in the fields at Blacklands.

In July 2004 the geophysical survey was extended (*Figure 4*) to a total of approximately 14ha by mapping fields to the west and east to determine the limits of settlement activity. Geophysical survey was also made of a field immediately north of the Ladden Brook, adjacent to Little Blacklands, in an effort to trace the northward continuation of the Roman road that forms the axis of the settlement. A pasture field forming the southern part of Great Blacklands, north of Rushmore and The Laggar was also surveyed, although it was believed that this area had been extensively quarried in recent times for the mineral Celestite.

FIELD METHODS

Baselines for the geophysical survey of each area were established between pairs of marker pegs or geographic features whose location was subsequently determined by English Heritage, using GPS. Measurements of vertical geomagnetic field gradient were recorded using a Geoscan FM36 fluxgate gradiometer at 0.5m intervals along zig-zag traverses spaced 1.0m apart. InSite software was used to process the gridded geophysical data into optimised grey-scale images in which positive magnetic anomalies appear dark grey and negative magnetic anomalies light grey. In

this context the majority of positive anomalies appear to reflect cut features infilled with topsoil having an enhanced magnetic susceptibility, such as pits, ditched and robbed-out wall footings. Most negative anomalies, on the other hand, correspond to wall footings, road surfaces and drains composed of local, relatively low susceptibility, sedimentary rocks.

GENERAL

Within the central part of the study area (Great and Little Blacklands) significant archaeological information appears to be present down to the theoretical limit of resolution (1m). In addition, the site is generally characterised by a very low density of surface ferrous litter, which has enabled detailed analysis of subtle magnetic anomalies arising from minor ditches, drains and wall footings. The most intense anomalies correspond to an area with metal slag in the topsoil ((NE Little Blacklands), a number of possible kiln sites on the periphery of the main settlement, and several zones of historic Celestine extraction and tipping within Bell Mead and the southern part of Well Vernal. These are distinguished by extremely intense (or out of range) readings appearing as saturated white or black areas in Figure 5.

RESULTS FROM THE 2001 FIELD SEASON

The central section of Great Blacklands is characterised by a strong texture of E-W oriented negative magnetic lineations, spaced at 2-3 m intervals, which may relate to a former ridge and furrow cultivation scheme. Alternatively, the texture could reflect an underlying change in soil susceptibility structure brought about by repeated ploughing in this direction. Geophysical data obtained from All Meads suggests that the archaeological activity terminates about 20 m S of the Ladden Brook, giving way to a 'smooth' geophysical terrain punctuated by diffuse positive magnetic anomalies. These lobate features almost certainly reflect silted ponds and palaeochannels related to earlier phases of the Ladden Brook (*Figure 5, F2*).

Two linear negative magnetic anomalies can be seen as distinct 1-2 m wide white lines traversing Little Blacklands along E-W axes. These anomalies have been interpreted as reflecting the traces of mineral exploration trenches (*Figure 6, F4 & F5*).

A striking feature of the geophysical image is the presence of a c. 10 m wide band of 'smooth' geophysical terrain which passes through the centre of All Meads, Little Blacklands and Great Blacklands in a NNE-SSW direction. This geophysical feature provides convincing evidence for the presence of a Roman road (R1) whose existence had been inferred the results of the pilot study. The road appears to be flanked along most of its length by ditches (now silted), as indicated by sections of linear positive magnetic anomalies. It is interesting to note that this road can be traced N as a textural anomaly across All Meads to the limit of the surveyed area on the S bank of the Ladden Brook. Thus, the road surface appears to be preserved beneath the plough soil and may be exposed in section above the Brook which normally flows at a level about 1.5 m below the ground surface at All Meads.

Within the SE corner of Great Blacklands the survey has located a cluster of negative linear anomalies, consistent with a building (S1). At least 2 intense magnetic dipoles are located immediately to the E, providing evidence for *in situ* fired structures, such as kilns or hearths, possibly associated with industrial activity.

In the centre of Great Blacklands the survey has mapped a set of distinct negative magnetic lineations, disposed in a grid pattern, which strongly suggest the wall footings for 1 or 2 elongated buildings with internal room divisions (S2 & S3). It is interesting to note that the anomaly pattern appears to straddle road R1, suggesting that the buildings may comprise a gatehouse to the Roman linear settlement now known to extend to the N.

Immediately NE of the conjectured gatehouse structure (S2-S3), and the axial road, the survey has mapped a set of 4 positive magnetic lineations which provide convincing evidence for a rectangular ditched enclosure, or tenement, measuring about 44 x 56 m (E3). Gaps in the geophysical anomalies suggest a number of entrances although some of these breaks may simply reflect local truncation of the ditches by ploughing.

Within enclosure E3 the survey results show that stone wall footings for two buildings survive at shallow depths beneath the topsoil (S4 & S5). Both buildings are rectangular in plan and of similar size (c.15 m), with internal wall divisions clearly visible as narrow negative magnetic anomalies. Strong positive magnetic anomalies within the wall partitions probably reflect a high susceptibility infill that may include fragments of roof tile and fired debris. A cluster of small magnetic dipoles adjoining the S wall of structure S5 may correspond to hearths, kiln waste, or other fired material.

A further ditched enclosure (E2) has been detected in opposition to E3, on the W side of road R1. A set of negative magnetic anomalies forms a rectilinear grid within this enclosure, indicating the footings for a substantial stone building measuring 44 x 15 m (S7). Careful examination of geophysical image enlargements (Figure 10) indicates a number of internal walled divisions inside this building, with a set of additional stone walled structures possibly extending S, as suggested by a boxwork of weak negative anomalies (S6: hatched in *Figure 10*).

Rectilinear positive magnetic anomalies to either side of the axial road R1 are a distinctive feature of the geophysical survey within Little Blacklands. These anomalies appear to define a succession of ditched enclosures, or tenements, each

fronting the roadway, which appear to extend back from the road for at least 50 m or more (*Figure 6*, E5 to E11). Several gaps can be seen to exist between the tenements, almost certainly reflecting side roads or access tracks off the main road R1. A good example is the 10 m wide feature between Features E5 and E6 (*Figure 6*), which can be traced W as a geophysical texture anomaly for a distance of about 80 m. Within each of these enclosure features, the survey has detected traces of structural remains, either in the form of distinct negative magnetic anomalies (i.e. wall footings *in situ*: S9, S10, S16), or as grid patterns of positive and negative anomalies. These latter examples are cross-hatched in *Figure 6* and probably reflect stone wall footings in a poorer state of preservation, or possibly those masked by a debris overburden (S8, S9, S11, S12, S15-S17). In the present context, each of these anomaly sets can be taken as providing evidence for the footings of stone buildings which fronted each tenement, adjacent to the roadway.

The geophysical image suggests the presence of several additional stone structures, evidence for which is seen in the form of rectangular patterns of positive and negative magnetic anomalies. Thus, although individual wall footings cannot be distinguished, the structure of these anomaly sets are consistent with stone footings beneath high susceptibility debris, such as roof tiles and soil. These features are located to the E of enclosures E9, E10 and E11 and are labelled S20 and S21. The latter structure is located near a known concentration of slag in the plough soil and it is interesting to note that this feature group includes several very intense magnetic anomalies. It seems possible that these anomalies reflect sites of metal working, such as furnaces or hearths, and pits containing residues from metal smelting (see enlargement, *Figure 10.b*). Further evidence for industrial activity has been detected in the form of a cluster of 9 strong dipolar magnetic anomalies (*Figure 6*, F1), consistent with thermoremanent magnetisation, within the westward extension of enclosure E7. The style of these anomalies suggests a group of kilns or hearths.

The Laggar and Rushmore

Interpretation of geophysical anomalies mapped in this area is made more complicated by the recent removal of historic field boundaries whose traces may survive in the subsoil. Moreover, a linear chain of intense magnetic dipoles arises from the modern wire boundary fence and is seen as the succession of black-white paired circles in the geophysical image. A massive magnetic dipole has been detected near the southern limit of this survey area, at the junction of 3 former field boundaries and probably marks the location of an iron post or other ferrous object with strong thermoremanent magnetisation.

In Figure 6 the route of the Roman road (R1) has been projected S from Blacklands a distance of 300 m towards a point near the location of the former Hallen Farm. This conjectured route has then been used to control interpretation of geophysical anomalies detected within The Laggar and Rushmore. A distinct 2 m wide negative magnetic anomaly, of linear form, has been detected in a position close to the former field boundary, E of the present fence line. This result suggests that the historic field boundary comprised a stone wall, the footings of which survive as a narrow band of rubble in the subsoil. Three sub-parallel, positive magnetic lineations, spaced about 10 m apart have been mapped immediately W of the present fence line and are consistent with ditches infilled with topsoil. The easternmost example almost certainly correlates with a former field boundary and is associated with a scatter of iron or brick debris (shown as cross hatching on *Figure 6*). The westernmost pair of linear ditches are found to accurately correspond to the flanks of projected road R1, implying that the Roman road did indeed continue as an engineered structure along the line conjectured in Figure 6.

An interesting network of rectilinear geomagnetic anomalies have been mapped within a 30 m wide block extending E from the modern fence line (hatched area, *Figure 6*,). These anomalies (S22) may mark the subsoil traces of minor historic buildings or allotments, which are thought to have existed in this vicinity. A sub-parallel pair of extremely weak and diffuse positive magnetic anomalies (F6) have been mapped extending W from the conjectured line of the Roman road and may signify flanking ditches to a further roadway.

Geophysical terrain near the western and eastern limits of this survey block is somewhat smooth and featureless, with a weak 'marbled' texture likely to be characteristic of the underlying geology. Superimposed on this terrain are a number of minor positive magnetic lineations which provide tentative evidence for sections of ditch (and possible enclosures) F7-F9. Thus, in contrast to the Blacklands and All Meads and contrary to the evidence of substantial structures and deposits understood to have been located near Hallen Farm in the 1980s, the geophysical survey provides no evidence for the presence of significant Roman archaeological features to either side of the conjectured road line beneath this part of the site.

2004 GEOPHYSICAL SURVEY

Great Blacklands South

A massive concentration of intense magnetic dipoles, cross-hatched on *Figure 6*, is present along the northern field boundary, south of the fence dividing the field from the adjoining northern part of Great Blacklands. Information provided by David Isaac indicates that this anomaly corresponds to a deposit of rubble and hardcore he placed in a trench or ditch to aid drainage. Intense magnetic fields arising from this feature have prevented the detection of weaker anomalies, of possible archaeological interest, over and adjacent to this area. Several smaller scatters of

magnetic dipoles almost certainly reflect further minor scatters of buried debris or sites of recent burning. The continuation south of the Roman road (R1) is clearly seen as a pair of positive magnetic lineations marking the lateral drainage ditches, and the trajectory suggests that the road continues beneath a sharp curve in the field boundary between Great Blacklands and The Laggar. Several fragmentary magnetic lineations can be traced for a maximum distance of about 60 m E of the road and probably represent traces of ditched enclosures, as seen in Little Blacklands (*Figure 6, F11*). Their fragmentary condition is presumably due to disturbance by ploughing or Celestite extraction. Elsewhere in this field, weak, curvilinear pattern of positive and negative anomalies probably represent vehicle tracks or soil disturbance due to mineral extraction.

Three distinct zones containing patterns of rectilinear magnetic anomalies have been detected to either side of the road and provide good evidence for structural remains (masked by rubble overburden) beneath these areas (S25, S26 & S27). Of these, feature S25 appears to comprise a rectangular walled structure, measuring about 30 m x 10 m, with traces of walled divisions, fronting onto the road.

The Laggar

A weak and diffuse pattern of sinuous magnetic anomalies have been detected in the extended geophysical survey, most of which can be attributed to underlying geological structure. Superimposed on this long-wavelength texture are a number of discrete positive magnetic lineations, of which F14 is the most prominent. Possible interpretations of this anomaly include: a section of tile land drain, or a length of minor, silted ditch.

A cluster of negative lineations forming a rectilinear pattern are present inside the curving field boundary, immediately W of the projected road line (S23). The style of these anomalies is similar to that seen in S24 of Great Blacklands and again may

indicate traces of stone structures beneath a rubble overburden. If this is the case, then it would appear that building remains along the road extend at least as far as the northern end of The Laggar field, and possibly 100 m further S to Feature S22.

The Grove

A strong texture of arcuate positive and negative magnetic anomalies is the dominant component of the geophysical image here, and probably reflects a set of buried scarps or composition changes in the underlying drift. These textural elements have been ignored in the archaeological interpretation which has focused on small-scale anomalies that are more likely to be of near-surface archaeological origin.

A set of parallel, positive and negative magnetic anomalies has been detected extending W from the eastern hedge line and can be traced for at least 80 m until being eclipsed by the stronger geological texture. The anomalies possibly indicate a wall with flanking ditches (F15), and the structural component appears to branch into further sections of wall extending S and SE. Within the eastern field 'lobe' the survey has mapped a dense concentration of strong positive and negative anomalies, corresponding to a raised area with more stoney soil (S27). The rectilinear style of this anomaly group suggests wall footings overlain by rubble, of similar character to features S24 and S26 adjacent to the Roman road in Great Blacklands.

A detailed examination of the grey scale image suggests that sets of weak, rectilinear magnetic anomalies are present in the central and northern parts of this field. Interpretation of these anomalies is hampered by the dominating geological texture although their form is suggestive of wall slots or enclosure ditches or possible archaeological interest (F16 & F17).

All Meads

Several discrete positive magnetic anomalies, typically 5-10 m in diameter, have been mapped within this field and may reflect sections of palaeochannel, silted pits or areas of burning. A number of dipole clusters have also been detected and may also indicate sites of burning or deposits of brick or iron debris. A substantial curvilinear, positive magnetic anomaly (F2) previously mapped on the floodplain has been found to develop into a complex 'hook and barb' shape further W on the floodplain.

Possible interpretations of this anomaly may include: a channel feature; a silted ditch or an earth bank levelled by ploughing (F18).

Field North of the Ladden Brook

Geophysical survey was undertaken here with the permission of the landowner, Mr. Andrew Cox, with the specific purpose of tracing the northward continuation of the road after its crossing of the Ladden Brook. The geophysical results indicate that extension of the Roman road as a metalled feature (i.e. with associated negative magnetic anomaly) is not indicated, implying either that the road was originally an earthen trackway or that the surface has since been removed in the course of land improvement or by stream erosion. However, about 20 m W of the projected road line a ditch-type magnetic anomaly has been detected (F19), raising the possibility that the road was wider or offset from the projected line, immediately after the river crossing. A cluster of discrete magnetic dipoles E of the ditch may reflect burnt material, brick or other debris of archaeological interest.

Elsewhere in this field short sections of parallel magnetic lineations, N of feature F19, may indicate land drains or ditches flanking the conjectured Roman road (F21), although further survey will be required to test this conjecture. In addition, an exceptionally weak pair of magnetic lineations has been traced traversing the field in

a SW-NE direction, possibly correlating with land drains, rather than archaeological features (F22).

Well Vernal

Survey here was carried out with the intention of tracing possible industrial and other activity on the broad floodplain W of the Ladden Brook. Of particular interest is the presence in this field of a pair of parallel, positive magnetic lineations, with curved terminations, close to the northern boundary (F23). These anomalies suggest large silted ditches that appear to be a continuation of a similar feature F10 in Little Blacklands to the W. The form of this large-scale double-ditch system may be indicative of an earlier defended enclosure. East of these ditches, the survey located a pair of weak and diffuse positive lineations which suggest a set of minor ditches or earthen roads (F24 & F25). A distinctive pattern of diffuse, lobate anomalies has been mapped on the lowest part of the Ladden Brook floodplain. These anomalies are presumed to represent sections of fossil stream channel, although those at the northern end of the field may also be associated with historic hedge lines (F27 & F28).

Bell Mead

Geophysical results from this field are dominated by intense magnetic disturbances associated with Celestite extraction undertaken in the early 1990's and iron debris that prevent a thorough archaeological exploration of the data. The only feature of possible archaeological interest comprises a network of linear anomalies near the centre of the field which may define a ditched enclosure (F29), plus minor linear anomalies near the eastern field boundary (F30). However, the latter features are likely to represent tile land drains inserted to improve the quality of the pasture.

TRIAL EXCAVATIONS (2002)

Four evaluation trenches (*Figure 3*, Trenches 1- 4) were opened between April and July 2002 in grassland in Great Blacklands. Each of the trenches was opened by hand and Trenches 1 and 2 were sited to examine the course of the suggested Roman road plus adjacent geophysical anomalies that indicated building foundations abutting the eastern side. Trenches 3 and 4 formed a single L-shaped cutting positioned across a set of large regular positive magnetic anomalies (*Figure 6*, S7) that indicated wall foundations adjacent to the western side of the road.

Trench 1 (*Figure 7.1*)

The trench was 20 m long, 1.8 m wide and aligned roughly east to west across the suggested line of the Roman road at ST706874. It was also designed to evaluate two possible buildings (GeoQuest features S5 and S7) located immediately west and east of the road line.

Removal of the turf and topsoil revealed an extensive layer of small to medium sized sandstone stones and rubble (105/106). Cleaning and only minor excavation of the deposit in the central part of the trench exposed a compacted metallised surface (Layer 106) approximately 11 m wide. Subsequent small-scale excavation (*Figure 7.1*, Sondage 1 and 2) of the deposit indicated that it was up to 100 mm thick and overlay undisturbed natural silt clay (134/135). The deposit appeared to have been initially bounded on the east side by a shallow ditch (131) that was subsequently filled and replaced by a small stone kerb (137). In Sondage 1 the stone metalling overlay a line of flat sandstone slabs (136, not excavated) laid end to end that possibly represented the top of a drain or heavy bottoming of the road.

The western end of the trench revealed two well preserved perpendicular wall foundations (107 and 148) formed of roughly coursed and faced sandstone rubble that coincided with geophysical feature S7. Wall 107 fronted the roadside and had a section of carved limestone gutter (110) set into compacted small stones and sandstone rubble (105) on the roadside of the wall. The gutter (*Figure 17*) was heavily eroded but appeared to represent part of a system at ground level designed to disperse rainwater from around an entrance area or possibly the entire building, as recorded in Cirencester (McWhirr 1986 pp 48-49).

A series of mixed soil and rubble deposits (111, 112 and 114) butting Walls 107 and 148 contained sandstone rubble, broken sandstone roof-tiles, fragmentary lime-based mortar and pottery of mid - late 4th century date. Excavation in this part of the trench was restricted to the removal of the rubble deposits and halted at the level of a series of floor deposits (142, 144, 146 etc.) that were preserved at a depth of up to 500 mm below the modern ground surface. Cleaning of these earlier deposits yielded 3rd century pottery sherds, iron nails, fragments of snapped lead and four coins (SF13, 17, 34 and 35) of mid – late 4th century date.

The foundations (108) of a second stone building (geophysical feature S5) were located at the eastern end of the trench. The wall formed the roadside frontage of a building that was heavily disturbed in part with an internal room to the east of the wall indicated by a deposit of small to medium sandstone rubble (109) containing sandstone roof tile fragments. Removal of the rubble deposit (109) yielded pottery of late 4th century date in addition to two coins (SF9 and SF16) also of later 4th century date and a bronze finger ring (SF19, *Figure 11.3*) of 3rd century type with a glass paste intaglio. The deposit sealed a pair of shallow gullies (117 and 119), the fill of which yielded a collection of 2nd century Roman pottery. No trace of any internal floor

contemporary with Wall 108 was evident although the deposits overlying the ditch fills seemed disturbed, possibly as a result of stone robbing.

2002 Trench 1 – Interpretation

The central part of the trench revealed a worn metalled road surface (106) up to 11 m wide that was sealed by only 350 mm of topsoil. In its latest form the eastern side of the road appears to have been defined by a small stone kerb (137) whilst the western side appeared to extend as far as a limestone gutter (110) set parallel to and outside Wall 107 and possibly indicating the position of an entrance as recorded previously at Cirencester (McWhirr, *ibid*). Two small archaeological cuttings (Sondage 1 and 2) indicated that the stone kerb had replaced an earlier boundary ditch (131), which defined the eastern side of an earlier road surface (130 and 138). The group of large sandstone blocks (136) revealed in Sondage 1 could indicate that the road formation had a 'heavy bottom' or the presence of earlier structural features that were not defined.

Wall 107 represented the east gable wall of geophysical survey building S7 although its relationship with Wall 148 was unclear, the latter possibly representing part of an earlier masonry structure.

Wall 108 was poorly preserved but appeared to represent the western gable wall of geophysical survey building S3. Features and deposits located to the east of the wall, in what should be the interior of building S3, had been disturbed and possibly robbed to reveal an earlier, possibly 2nd century, ditch (117) and adjacent gully, both aligned north to south.

Trench 2 (2002)

The trench (*Figure 7.2*) was 14 m long, 1.8 m wide and aligned roughly east to west, across the suggested line of the Roman road at 90 degrees. The cutting was sited to evaluate the location of a possible building, geophysical feature S3, which possibly straddled or overlay the road surface (geophysical feature R1) and which GeoQuest Associates suggested could represent some form of gatehouse structure.

Excavation of a thin layer of turf and topsoil revealed an extensive layer of small to medium sized sandstone rubble (207, 208 and 222) throughout the majority of the trench. Cleaning of this deposit over the central part of the trench exposed two different areas of metalling; a finely metalled surface (208) some 3 m wide on the eastern side, which was separated from an area of courser metalling to the west by a pair of shallow flat-bottomed gullies (218 and 219) and bounded on the east side by a low stone kerb (224). To the east of the low kerb lay a further area of larger stone and rubble metalling (225), possibly representing an extension to the road surface, which was also bounded on the east side by a second, more substantial, rubble kerb (205).

The western half of the trench, west of the two parallel gullies, revealed the remnants of a fine stone metalling (207) that overlay an irregular but worn rubble surface (222) which in turn butted a section of sandstone wall foundation (204) preserved to four courses of masonry and aligned north to south. The remains of a low rubble kerb (223) appeared to separate the western metalling from the pair of central gullies. A series of deposits (210, 214 etc.) located on the western side of Wall 204, possibly representing material inside a building, included a large heap of broken stone roof-tiles (210) plus mixed soil and sandy mortar deposits. Excavation in this area of the trench was halted at the upper surface of these intact deposits.

Although the extent of excavation in the trench was limited finds were recovered including pottery sherds of later Roman date from the fill of Gully 219 and sherds of slightly earlier, mainly 2nd- 3rd century date, from the road surface and mainly 4th century date from deposits overlying the dump of stone roof-tiles.

2002 Trench 2 – Interpretation

Part of a stone structure, indicated by Wall 204, and probably representing a building, was located at the western end of the trench. Deposits to the west (i.e. inside) of the wall included collapsed roofing materials overlying probable floor deposits although the latter were not excavated.

The eastern half of the trench was mainly occupied by two separate areas of road metalling (208/225), both of which were bounded along the east side by a stone kerb. At least three phases of surfacing were indicated although the reason why the road was narrower at this point, compared to that recorded in Trench 1, was unclear.

The function of the thicker stone and rubble layers (207 and 222) located between Wall 204 and Gullies 218/219 was unclear although they could represent coarser road deposits whose finer cover (i.e. 207) has largely been lost. If so, the overall combined width of the road at this point was approximately 11 m and it was possibly subdivided into two distinct lanes by a central gully or gullies. A possible alternative explanation of the same deposits is that the area of rubble to the west of Kerb (223) and the gullies could represent a yard or open area located at the front of a building, alongside a significantly narrower road indicated by surface 208/225.

2002 Trench 3

The trench (*Figure 8*) was 8.5 m long, 1.8 m wide and aligned roughly north to south, across the long axis of geophysical survey feature S7 (see *Figure 6*) at 90 degrees.

The cutting joined with Trench 4 below to form an L-shaped trench.

Removal of the topsoil revealed an extensive layer of mixed small to large sized sandstone rubble (302). Cleaning and selective excavation of this material at the northern end of the trench exposed a faced sandstone wall foundation (307) preserved to at least four courses of masonry. The eastern end of the wall returned to the north and possibly denoted the position of an internal corridor or doorway.

Excavation of the upper layer of small stone and rubble (302) in an archaeological sondage (Sondage 4) to the south of the wall revealed burnt floor deposits (306, 315 and 316) plus part of a flagstone floor (314). The southern side of the floor butted a narrow stone foundation (313), which formed the north side of a stone drain or flue. The southern side of the structure was formed by a similar narrow sandstone foundation (312) bonded with buff sandy lime-based mortar. Features revealed at the southern end of the trench, below the upper rubble, included a heap of broken and complete sandstone roof-tiles (305) and a charcoal-rich soil layer (310).

Notable finds from the trench included a large block of squared and tooled ashlar limestone (SF27, *Figure 11,24*) plus the handle and rim from a globular glass jug (*Figure 13*, SF19 and 20) of later 4th century date. Coins recovered from Deposits 303 and 304, the former overlying Structure 312/313, were all of later 4th century date. Other finds included pottery sherds of mainly 3rd and 4th century date plus large numbers of fragmentary stone roof-tile and structural ironwork, mainly nails.

2002 Trench 3 – Interpretation

Trench 3 was sited to provide a north-south transect across geophysical feature S7. The cutting confirmed the presence of substantial wall foundations that conformed to the general overall layout suggested by the geophysics. The majority of the trench appeared to cross part of an internal room, as indicated by the remnants of a flagstone floor (314) and soil layers 315 and 316. Wall 307 appeared to represent an internal wall and the position of a doorway or corridor running from north to south.

The southern end of the trench was only excavated to the top of the uppermost archaeological deposits which indicated a substantial deposit of collapsed and broken stone roof-tile (305) overlying possible soil floor layers (310 etc.).

The structure defined by Walls 312 and 313 appeared to represent a drain or flue some 400 mm wide that ran from west to east. The overall depth of the channel between the two walls was not established and the purpose of the structure was not clear, possibilities include a simple drain or part of a more elaborate structure such as a kiln or oven. The preservation of the masonry forming the structure and its relationship with Layer 303 indicates that the structure was disturbed or robbed prior to the deposition of the main rubble layer (Layer 302), which seems likely to have been formed from the collapse of Wall 307.

All the stratified dating evidence recovered from the trench indicates occupation and abandonment of the building during the later 4th century.

2002 Trench 4

The trench (*Figure 8*) was 9 m long, 2 m wide and aligned roughly east to west and sited to examine the western end and interior of geophysical survey feature S7.

Excavation of approximately 300 mm of turf and topsoil revealed a thick layer of small to medium sized sandstone and occasional limestone rubble (402) that extended throughout the trench. Cleaning and excavation of this material at the western end of the trench revealed two well preserved and perpendicular wall foundations (Walls 403 and 404), each of which was preserved to a maximum of six courses of masonry. The walls (*Figure 18*) formed the northeastern corner of an internal room and were butted by the disturbed remains of an associated flagstone floor (417).

A second room with intact soil (409, 411 and 412) and flagstone (410 and 418) floor surfaces was revealed below layers of rubble (402 and 405) in the central part of the trench. The room was 5 m wide and defined to the east and west by well preserved rubble walls (403 and 406) with the remnants of a floor (418) formed of flagstones and reused sandstone roof tiles.

Finds from the interior of the room included sections of carved limestone roof coping-stone (*Figure 12*, 17-20), a carved limestone block possibly representing an altar base (*Figure 12*, 24) and part of a decorative roof finial (*Figure 12*, 21). Other bulk finds consisted of mainly 3rd and 4th century pottery sherds plus two coins (SF1 and SF2) of late 4th to early 5th century date recovered from the demolition rubble.

Trench 4 – Interpretation

Trench 3 was sited to provide a transect from east to west across the interior of geophysical feature S7. The cutting confirmed the presence of a series of substantial wall foundations that conformed to the general layout suggested by the geophysics. The bulk of the trench revealed part of an internal room approximately 5 m wide containing remnants of a flagstone floor that was overlain by a thick layer of mortar-rich soil (409), possibly the result of subsequent stone robbing. Walls 403 and 406 appeared to represent shared internal walls.

The western end of the trench revealed the northeastern corner of a second internal room defined by a pair of bonded walls (403 and 404) with masonry preserved to at least six courses. This room also contained the remains of a flagstone floor although no evidence of its function.

Notable finds from the trench indicating the quality and status of the building included the sections of roof coping-stone and the carved roof finial (*Figure 12, 21*), which closely resemble objects recovered from a high status building at Barnsley Park, Gloucestershire (Webster & Smith, 1982. pp 136).

Trial Trenches 2004

In the light of the geophysical survey data from 2004 (*Figure 5 and 6*) two further trial trenches (*Figure 9*) were opened in June 2004. The main trench, Trench 1, was sited in the part of Little Blacklands cultivated for maize and was designed to confirm the defensive circuit indicated by geophysics (S20/f23) and if possible recover stratified dating evidence. To maximize the amount of data recovered by this unscheduled phase of trial excavation the second trench was sited on the flood plain of the Ladden, across the suggested course of a palaeochannel (geophysical feature f2) indicated by the 2002 geophysical survey, in order to locate and recover dating evidence and environmental data. Both trenches were mainly excavated to the top of the archaeology and both provided new information concerning the condition and quality of buried archaeological deposits in areas of the site not previously investigated.

2004 Trench 1

The trench (*Figure 9.1*) was 20 m long and sited along the east side of Little Blacklands north to south, adjacent and parallel to the hedge line in order to minimize damage to the maize crop. It was laid out across the line of the suggested defensive ditches (geophysical feature f10/f23) indicated by the geophysical survey, just inside the northeastern corner of the playing card-shaped enclosure.

The cultivation layer (101/103) was initially removed using hand tools and later, once the depth of the layer was appreciated, with the assistance of a JCB machine. The deposit was around 300 mm thick and overlay a series of mixed archaeological soil and rubble deposits throughout the trench. Further excavation revealed a sequence of well preserved features and structures consisting of a stone wall foundation (106), flanked on either side by deposits of broken sandstone roof tile (107 and 117). The wall foundation appeared to reflect the southern wall of a building that mainly extended to the north of the trench. Excavation of the deposit of roof tiles (107) on the south side of the wall indicated that they filled a shallow U-shaped ditch (Cut 129), which separated the wall from a metalled stone surface (113/128) formed of smoothed and compacted irregular small to medium sized sandstone stones and cobbles.

The metalled layer (113) was approximately 6 m wide and defined on the southern side by a raised stone kerb that formed the edge of an adjacent stone structure (Structure 136). The stones forming the metalled surface (113) were set into an underlying mixed soil deposit (128) that contained large amounts of redeposited natural clay. This deposit was not excavated.

The metalled surface (113) appeared to represent part of a track or road surface that crossed the trench on an east-west alignment. Both the metalling and the wall

foundation (106) were cut by a later linear cut feature (Feature 118) that possibly represented either a cultivation feature or a shallow gully. The same feature was recorded as Feature 142 towards the southern end of the trench.

The southern edge of the metalled surface was defined by a raised and stepped stone kerb that formed the northern edge of a dense surface of highly compacted sandstone rubble (Feature 136; *Figures 19 & 20*). The extent of the rubble surface was initially defined by a deposit of highly compacted ironworking waste (*Figure 9.4*, Layer 119), largely smelting and tap slag (see below), which filled a shallow bowl-shaped depression in the middle of the rubble surface (136). A large rectangular posthole (Feature 137) was located in the central part of the surface, defined and edged by a small number of larger sandstone cobbles and rubble. The posthole was up to 400 mm deep and cut into mixed earlier soil deposits. The southern edge of the structure (136) was also defined by a raised kerb of sandstone rubble that was set into a deposit of natural clay (Layer 123) and the fill (143) of an earlier cut soil feature. Neither the stone structure (136), nor the cut feature (143) were excavated.

The southern end of the trench was mostly occupied by a broad U-shaped ditch cut (Ditch 125; *Figure 20*) that was up to 1 m deep and aligned broadly east to west. The ditch was in excess of 5 m wide and cut into undisturbed natural clay in the base, although the south side of the cut was not located in plan. It was filled by a sequence of soil deposits (*Figure 9.3*), the earliest of which (Fill 124) consisted of gleyed blue-grey clay, indicative of waterlogged conditions. The sequence of later ditch fills (104, 109, 116 and 130) were cut by a smaller ditch (Cut 131) that was dug after the main ditch had been completely filled and which contained substantial amounts of industrial waste. The cut possibly represented a structural feature along the south side of industrial Structure 136. A substantial collection of stratified Roman finds

were recovered from the sequence of ditch fills including sherds of 4th century date from the secondary fill (116).

2004 Trench 1 – interpretation

The trench was sited to locate and evaluate the defensive circuit of ditches suggested by the geophysical surveys. In the event these ditches were not located and the cutting revealed a sequence of well preserved later Roman deposits and features that possibly overlie earlier features. The recorded deposits appear to represent the south wall (106) of a 3rd- 4th century building that was originally roofed with sandstone tiles and separated from a narrow road or lane (113) to the south by a small ditch (Cut 129), the fill of which contained a 2nd century coin (SF308) and 3rd century pottery. The alignment of the road surface suggests that it probably represented a side road that continued eastwards to join the main road that ran south to north. The side road (113) may also have defined the southern and northern boundaries of at least two of the tenements or enclosures that fronted the main road. Structure 136 (*Figure 21*) appeared to represent the packed rubble floor inside an earthfast timber structure, possibly originally open-sided, which flanked the south side of the lane. The overall size and layout of the structure was not established although the presence of very large amounts of iron smelting residues (see Ivan Mack, below) indicates that it represented an industrial structure that very likely incorporated iron smelting furnaces.

The industrial structure was bounded on the south side by a broad ditch, also aligned east to west and parallel to the metalled road (113). The ditch appeared large enough to have formed a principal boundary separating adjacent enclosures or building tenements that fronted the main road. The stratified finds recovered from the ditch fills date its filling to the later Roman period, broadly the 3rd - 4th century, with finds of 2nd - 4th century date recovered from the adjacent road metalling

The trench confirmed that well preserved deposits and structures dating from the later Roman period are preserved as shallowly buried archaeology in Little Blacklands, a field that the geophysical surveys indicate represents the focal area of Roman archaeology and one that has been intensively cultivated for fodder maize in recent years. As the full sequence of archaeological deposits and structures was not established it remains possible that features associated with the suggested defensive circuit indicated by geophysics are preserved at greater depth.

2004 Trench 2

The trench (*Figure 9.2*) was 14 m long and aligned north to south at the margin of the Ladden flood plain in an area where the earlier geophysical survey had indicated the loop of a palaeochannel (geophysical feature F2) as well as a complex of masonry structures (geophysical feature S14). This part of the study area had been previously cultivated for maize fodder. The principal objective of the trench was to confirm the presence of the palaeochannel and, if so, to determine whether it was contemporary with the Roman activity and establish its potential for the preservation of waterlogged archaeological and environmental deposits.

The removal of about 200 mm of turf and topsoil (201) revealed an extensive deposit of mixed black soil and rubble (204, 205 and 214) in the southern half of the trench and a compacted layer of larger rubble (208), mainly sandstone, in the northern half. The topsoil yielded a large number of pottery sherds including a decorated face-mask (SF400; *Figure 14.1*) from a flagon or jug, plus a collection of coins of 4th century date. Cleaning of Layer 204 revealed a sub-rounded stone feature (*Figure 9.2*, Structure 206) formed of pitched and flat smaller rubble built on the surface of the layer and seemingly representing the latest archaeological feature present in the

trench. Further deposits of rubble (207 and 214) were exposed at the southern end of the trench, Layer 207 producing a silvered Dobunnic coin (SF415) of 1st century BC to 1st century AD date.

Two small cuttings were excavated in the trench to evaluate the sequence of deposits. The first, Cutting A, was opened through Layers 204 and 214 and revealed a series of mixed black soil and rubble deposits (*Figure 9.6*, 215, 216 and 217) containing large amounts of late 2nd and 3rd century pottery and animal bone. These deposits overlay clean and undisturbed natural clay (210) at a depth of 350 mm. The second cutting, Cutting B, was opened through Layer 205 to reveal the southern side of a large cut feature (Cut 229; *Figure 9.2*) that was filled by a stratified sequence of deposits (*Figure 9.5*) containing very large amounts of 2nd to 4th century pottery, animal bone, metalwork and other finds. The earlier deposits below Fill 220, were permanently waterlogged and yielded waterlogged wood and vegetation plus large pottery sherds and other artefacts including part of a decorated Samian ware bowl (*Figure 12.2*) and a fine fibula brooch with enamel decoration (SF419, *Figure 11.1*) of late 1st to 2nd century type. Large bulk samples of these deposits were taken for environmental assessment. Due to the small size of the cutting and the permanent groundwater the base of the sequence of fill deposits was not reached although the edge of the cut feature appeared to coincide closely with the geophysical anomaly (geophysical feature F2) suggested to reflect a palaeochannel.

2004 Trench 2 – Interpretation

Trench 2 located extensive Roman deposits of late 2nd - 4th century date preserved at very shallow depth, in places less than 200 mm below the ground surface. The upper surface of the archaeology appeared to represent rubble from demolished structures in association with a thick deposit of black earth (204) containing large amounts of mainly domestic artefacts and finds. The presence of a small stone structure

(Structure 206) built above the demolition layer is of interest and raises the possibility of some early post-Roman activity on the site.

Most significantly the trench located the edge of the suggested palaeochannel (Cut 229) and a stratified sequence of deposits therein, the lower part of which were permanently waterlogged. The palaeochannel produced a large number of finds including pottery of 2nd to 3rd century date plus metalwork and animal bone indicating that the feature was contemporary with the later Roman settlement and possibly long-lived. Environmental samples confirm the presence of waterlogged vegetation and wood and highlight the high environmental and archaeological potential of the waterlogged deposits in the flood plain of the Ladden Brook. In view of this there is special potential for the preservation of timber structures at the point where the Roman road originally crossed the Ladden.

THE FINDS

***Note** – It should be noted that the two 2004 trial trenches were not designated Trenches 5 and 6 as they should have been, but Trenches 1 and 2, thereby duplicating context numbers allocated during the 2002 season.*

Fortunately the Small Find numbers for the six trenches overall are unique with numbers up to SF54 from the 2002 trenches and SF300 – SF426 from the 2004 trenches.

The Coins and Other Artefacts by Dr Mark Corney

The Iron Age Coin and the Roman Coins

The coins are not illustrated

CONTEXT	SF No.	
207	415	AR Photographed over FE core. Contemporary forgery of the Dobunni. The coin is poorly struck and corroded but may belong to the 'Dobunnic M' series, VA1175-1.
209	413	Æ Dupondius or As. Vespasian or Titus. AD69-81. Obv. Bust R. Legend illegible. Rev. Illegible Very worn and corroded.


A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

CONTEXT	SF No.	
129	308	<p>Æ Sestertius. Marcus Aurelius as Caesar. AD139-161.</p> <p>Obv. Bare head R. Legend illegible. Rev. Standing Figure. Legend illegible.</p> <p>Very worn and edges of flan heavily corroded.</p>
104	301	<p>Æ Sestertius. Marcus Aurelius. AD161-180.</p> <p>Obv. Bust R. Legend illegible. Rev. Victory attaching shield to palm tree. [TR POT XX IMP III COS III] SC</p> <p>RIC 934.</p>
114	311	<p>Æ Sestertius. Marcus Aurelius. AD161-180.</p> <p>Obv. Bust R. [M AVREL ANTONINVS AVG] ARM PAR[TH MAX] Rev. Fortune seated L. [TR P]OT [XXIII IMP V] COS III SC. FORT RED (in ex.).</p> <p>RIC 962</p>
207	14	<p>AR Denarius. Caracalla AD198-217</p> <p>Obv. Bust R. ANTONINVS PIVS AVG. Rev. Mars standing R holding spear. PONTIF TR P X COS II.</p> <p>RIC 100 (AD207)</p>
206	1	<p>Base AR Antoninianus. Postmus AD259-268.</p> <p>Obv. Radiate bust R. IMP C POSTVMVS PF AVG. Rev. Serapis standing L. SERAPIS COMITI AVG</p> <p>RIC 329.</p>
114	303	<p>Æ Antoninianus. Tetricus I AD270-273.</p> <p>Obv. Radiate bust R. IMP C TET[RICVS PF AVG] Rev. Illegible</p>
304	7	<p>Æ Barbarous Antoninianus 'minim' 7mm in diameter Obv. Crude radiate head right. Rev. illegible</p> <p>cAD275-280</p>
105	2	<p>Æ 3. Licinius I. AD308-324.</p> <p>Obv. Bust R. IMP LICINIVS PF AVG. Rev. Genius standing L. GENIO POP ROM Mint mark: S F PLN London.</p> <p>RIC 3</p>

A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

CONTEXT	SF No.	
201	407	<p>Æ 3. Constantine I. AD307-337</p> <p>Obv. Head right. [CONSTANT]INVS AVG Rev. Camp gate. [PROVIDE]NTIAE AVGG</p> <p>Mint mark: Illegible.</p> <p>As HK 12</p> <p>Mint period AD 324-30</p>
200	412	<p>Æ 3. Constantine II. AD337-340</p> <p>Obv. Head right. CONSTANTINVS IVN NOB C Rev. Two soldiers standing either side of two legionary standards. GLORIA [EXERCITVS]</p> <p>Mint mark: Illegible</p> <p>As HK 49</p> <p>Mint period AD 330-335</p>
106	29	<p>Æ 3. Constantine II. AD337-340</p> <p>Obv. Head right. CONSTANTINVS IVN N C Rev. Two soldiers standing either side of one legionary standard. GLORIA EXERCITVS</p> <p>Mint mark: Illegible</p> <p>As HK 88</p> <p>Mint period AD 335-337</p>
201	204	<p>Æ 3. Commemorative. AD330-335</p> <p>Obv. Helmeted head left. CONSTANTINOPOLIS Rev. Victory on prow.</p> <p>Mint mark: TR·P</p> <p>HK 66</p>
106	25	<p>Æ 3. Commemorative. AD330-335</p> <p>Obv. Helmeted head left. [CONSTAN]TINOPOLIS Rev. Victory on prow.</p> <p>Mint mark: TR[]</p> <p>As HK 66</p>
104	37	<p>Æ 3. Commemorative. AD330-335</p> <p>Obv. Helmeted head left. CONSTAN[TIN]OPOLIS Rev. Victory on prow.</p> <p>Mint mark: illegible</p> <p>As HK 66</p>

A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

CONTEXT	SF No.	
106	33	<p>Æ 3. Commemorative. AD330-335</p> <p>Obv. Helmeted head left. [CONSTANTINOPOLIS] Rev. Victory on prow.</p> <p>Mint mark: illegible</p> <p>As HK 66</p>
205	414	<p>Æ 3. Commemorative. AD330-335</p> <p>Obv. Helmeted head left. VRBS ROMA Rev. Wolf and twins Mint mark : TRS</p> <p>HK 58</p>
106	30	<p>Æ 4. Commemorative. AD330-335 (copy)</p> <p>Obv. Helmeted head left. VRBS [ROMA] Rev. Wolf and twins Mint mark : illegible</p> <p>Copy as HK 58</p>
111	35	<p>Æ 4. Helena. AD337-341</p> <p>Obv. Head right. [FL IVL HE]LENAE AVG. Rev. Pax standing L. [PAX PV]BLICA</p> <p>Mint mark : illegible</p> <p>As HK104</p>
301	8	<p>Æ 4. Constans. AD337-350</p> <p>Obv. Head right. [CONSTAN]S PF AVG Rev. Two victories [VICTORIAE DD AV]GG Q NN</p> <p>Mint mark :  TRS</p> <p>HK 158</p> <p>Mint period AD341-348</p>
105	38	<p>Æ 4. Constans. AD337-350</p> <p>Obv. Head right. CONSTAN[S PF AVG] Rev. Two victories [VICTOR]IAE DD AVG Q NN</p> <p>Mint mark : illegible</p> <p>As HK 138</p> <p>Mint period AD341-348</p>

A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

CONTEXT	SF No.	
101	18	<p>Æ 2. Constantius II. AD337-361</p> <p>Obv. Head left. DN CONSTANTIVS PF AVG Rev. Emperor dragging captive from hut. FEL TEMP REPARATIO</p> <p>Mint mark : illegible</p> <p>As CK 28</p> <p>Mint period AD348-350</p>
112	13	<p>Æ 2. Magnentius. AD350-353</p> <p>Obv. Head right. [DN MAGNEN]TIVS PF AVG Rev. Emperor galloping right. [GLORIA RO]MANORVM</p> <p>Mint mark: RPLG CK214</p>
303	29	<p>Æ 3. Constantius II. AD337-361</p> <p>Obv. Head right. DN CONST[ANTIVS PF AVG] Rev. Fallen horseman. [FEL TEMP REPA]RATIO</p> <p>Mint mark: illegible</p> <p>As CK72</p> <p>Mint period AD350-355</p>
201	406	<p>Æ 3. Constantius II. AD337-361</p> <p>Obv. Head right. DN CON[STANTIVS PF] AVG Rev. Fallen horseman. [FEL TEMP REPARATIO]</p> <p>Mint mark: illegible</p> <p>As CK72</p> <p>Mint period AD350-355</p>
112	34	<p>Æ 3. Copy of Constantius II.</p> <p>Obv. Head right. Rev. Fallen horseman.</p> <p>Copy as CK72.</p> <p>Circa AD350-360</p>
206	6	<p>Æ 3. Copy of Constantius II.</p> <p>Obv. Head right. Rev. Fallen horseman.</p> <p>Copy as CK72.</p> <p>Circa AD350-360</p>

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CONTEXT	SF No.	
201	402	<p>Æ 3. Valens. AD364-378</p> <p>Obv. Head right. DN VALENS [PF AVG] Rev. Victory left. SECVRITAS REIPVBLICAE</p> <p>Mint mark: <u>OF II</u> CON*</p> <p>CK523</p>
201	403	<p>Æ 3. Valens. AD364-378</p> <p>Obv. Head right. DN VALENS PF AVG Rev. Victory left. [SECVRITAS] REIPVBLICAE</p> <p>Mint mark: PCON</p> <p>CK504</p>
304	3	<p>Æ 3. Valens. AD364-378</p> <p>Obv. Head right. [DN VALEN]S PF AVG Rev. Victory left. SECVRITAS REIPVBLICAE</p> <p>Mint mark: illegible</p> <p>As CK97</p>
111	17	<p>Æ 3. Valens. AD364-378</p> <p>Obv. Head right. DN VALENS PF AVG Rev. Emperor dragging captive GLORIA [ROM]ANORVM</p> <p>Mint mark: illegible</p> <p>As CK92</p>
104	36	<p>Æ 3. House of Valentinian. AD364-378</p> <p>Obv. Head right. Illegible Rev. Victory left. [SECVRITAS REIPVBLICAE]</p> <p>Mint mark: illegible</p> <p>As CK97</p>
206	4	<p>Æ 3. House of Valentinian. AD364-378</p> <p>Obv. Head right. Illegible Rev. Victory left. [SECVRITAS REIPVBLICAE]</p> <p>Mint mark: illegible</p> <p>As CK97</p>

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CONTEXT	SF No.	
106	16	<p>Æ 3. House of Valentinian. AD364-378</p> <p>Obv. Head right. DN VALENS PF AVG Rev. Emperor dragging captive GLORIA [ROM]ANORVM</p> <p>Mint mark: illegible</p> <p>As CK92</p>
100	300	<p>Æ 3. Gratian. 367-383</p> <p>Obv. Head right. [DN GRATIANVS AVGG AVG] Rev. Emperor holding labarum [GLORIA NOVI SAECVLI]</p> <p>Mint mark: illegible</p> <p>As CK503</p>
402	2	<p>Æ4. House of Theodosius. AD388-402</p> <p>Obv. Head right. Illegible Rev. Victory advancing left. Illegible.</p>
103	3	<p>Æ4. House of Theodosius. AD388-402</p> <p>Obv. Head right. Illegible Rev. Victory advancing left. Illegible.</p>
201	405	<p>Æ 3. Illegible Probably 4th century.</p>
301	5	<p>Æ4. Illegible Probably 4th century.</p>
105	22	<p>Æ4. Illegible Probably 4th century.</p>
201	401	<p>Æ4. Illegible Probably 4th century.</p>
109	9	<p>Æ4. Illegible Probably 4th century.</p>
206	5	<p>Æ4. Illegible Probably 4th century.</p>

Discussion

Of the 44 coins submitted, 38 can be identified with certainty. The assemblage is dominated by issues of the fourth century, comprising just over 76% of the identifiable total. Table 1 presents the coin finds as values 'per mill', (Casey 1974). Although the overall sample is rather small for such analysis, it is presented here in anticipation of a full analysis of the casual coin finds from the site.

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Period	1	2	3	4	5	6	7	8	9	10
No.	1	-	-	1	-	-	1	2	-	1
Per Mill.	26.31			26.31			26.31	52.63		26.31

11	12	13	14	15	16	17	18	19	20	21
-	-	2	1	1	1	11	6	8	-	2
		52.63	26.31	26.31	26.31	289.47	157.89	210.52		52.63

Table 1. The Roman coins expressed as per mills.

Objects of Copper Alloy

Brooches

Context 219. SF419. Fig 11,1. Colchester Derivative with the sprung pin held in the 'Polden Hills' manner and the chord fixed through a pierced, vertical moulding at the head of the bow. The upper part of the pin is missing. The brooch is 53mm in length and well-made. The wings are decorated with deep, cast vertical flutings with the upper bow retaining enameled decoration in a central vertical panel of lozenges flanked by triangular enameled panels. Separated from the upper bow by a crisp inverted 'V' moulding, the lower bow has single moulded vertical central groove terminating in a simple moulded foot. The catch Photograph retains the lower part of the pin.

This form of the Colchester Derivative is a type well known in the West Midlands and the Severn Valley. The overall range of enameled brooches of this and related types are well illustrated by the assemblage from Nor'nour on the Isles of Scilly (Dudley, 1967). A close parallel for the Hall End brooch is known from Croft Ambrey hillfort in Herefordshire (Mackreth in Stanford 1974). The type probably originates in the later first century and continues into the first half of the second century. In discussing another similar example from Chichester, Mackreth (1981) notes that the Polden Hill manner of fixing the spring and pin passes out of use by the mid-second century.

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Context 200. SF12. Fig. 11, 2. Upper part of bow and spring from a Trumpet brooch. The remaining portion of the upper bow has a moulded decoration. The piece appears to have been deliberately broken and hammered flat. The Trumpet is a predominantly western British form and a recent review of the type by Mackreth (in Timby, 1998) has established an overall date range of cAD80-180.

Context 303. SF6. (Not illustrated). Pin fragment. Possibly from a brooch.

Finger Ring.

Context 109. SF19. Fig. 11, 3. Complete finger ring with damaged glass paste intaglio. The ring is of ovoid form and the damage to the surface of the intaglio precludes any positive identification of the original design. The type is well known in Roman Britain and the available evidence points to a 3rd century date.

Belt Fittings.

Context 111. SF48. Fig. 11, 4. 'D' shaped buckle with part of sheet metal belt Photograph. Buckles of such simple form are difficult to date on purely stylistic criteria. However, the type, coupled with repousse decorated Photographs are thought to be associated with late Roman military and official issue belt sets of the 4th century AD (Clarke, 1979; Corney and Griffiths in prep.). The Photographs can be rectangular or oval (Simpson 1976). Very little of the Photograph survives and no decoration is visible on the surviving fragments.

Context 30. SF4. Fig. 11, 5. 'Lancet-shaped' strap-end. Part of a Lancet-shaped strap-end, 40mm in length. The piece is incomplete, missing the strap terminal and point. The type is clearly associated with military and official issue belt sets of later Roman type (Clarke, 1979; Corney and Griffiths in prep.). The available dating evidence points to a mid – late 4th / early 5th century date.

Miscellaneous Copper Alloy Objects.

Context 20. SF51. Fig. 11, 6. Washer or fitting of unknown function.

Context 102. SF47. Not illustrated. Corroded strip.

Context 103. SF46 Not illustrated. Fragment of cu alloy sheet. Possibly part of vessel.

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Objects of Lead.

Context 103	Not illustrated. Splash.
Context 106	Not illustrated. Offcut.
Context 111	Not illustrated. 2 splashes.
Context 112	Not illustrated. 5 offcuts.
Context 114. SF23.	Not illustrated. 1 splash. Not illustrated. 1 folded sheet. Not illustrated. 1 sheet fragment. Not illustrated. 3 offcuts. Not illustrated ?Washer.
Context 200	Not illustrated. Splash.
Context 201	Not illustrated. 1 folded sheet.

Objects of Iron (other than nails and hobnails).

Context 102. SF45	Fig. 11, 7. Curving length of blade from a small reaping or pruning hook. The tip and socket are missing. Manning (1985) type 2 with a hooked blade (ibid. p56-7.).
Context 104. SF49	Fig. 11, 8. Angular hooked fitting of rectangular section, incomplete.
Context 104. SF302	Fig. 11, 9. Large, ovoid loop, approximately 400mm x 500mm, wrought from a single piece of iron, with straight bar 400mm in length with a knobbed terminal. Heavily corroded, dimensions and drawing taken from X-ray (X-ray (9739). Probably from a composite swivel loop associated with suspension of kettles and cauldrons. A very close parallel, 'from Gloucestershire', is illustrated by Manning, 1985, S4, Photograph 64, p138.
Context 119. SF315	Not illustrated. Possible stud head. Heavily corroded.
Context 201. SF44	Not illustrated. Fragment of split rod.

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Context 201. SF426	Not illustrated. Split pin. Post-Roman.
Context 205. SF410	Not illustrated. Washer. Post-Roman.
Context 206. SF20	Not illustrated. Scissor or shear blades. Post-Roman.
Context 217. SF417	Not illustrated. Rod of square section, 233mm in length.
Context 304. SF12	Not illustrated. Hooked object. ?Post-Roman.
Context 304. SF13	Fig. 11, 10. Large complete nail of Manning type 1B. (Manning 1985, 134). The shank is of tapering square section and the head is flat.
Context 310. SF15	Fig. 11, 11. Incomplete leaf-shaped strap or fitting. 124mm in length, maximum width 25mm. The object has two circular holes, one retaining a flattened dome headed stud. Superficially the object resembles part of a component of a window grille, however none of the published examples show two rivet/stud holes (Manning 1985, Photograph R60). Function uncertain.
Context 401. SF16	Fig. 11, 12. Small buckle with oval loop and ovoid Photograph with hooked end. Post-Roman/modern.
Context 408. SF17	Fig. 11, 13. Part of a barb-spring barrel padlock. Manning (1985, 95-6) cites a number of examples of this type, dating from the early second century to the fourth century. Heavily corroded, drawing taken from X-ray (X-ray 9729).

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Table 2. Nails

<i>CONTEXT</i>	<i>COMPLETE</i>	<i>FRAGMENTS</i>	<i>CLENCHED</i>	<i>HOBNAILS</i>	<i>TOTAL</i>
100	2		1		3
102	4	5			9
103	4	21	2		27
104	12	11	1		24
105	2	3		3	8
106	9	23	4	6	42
107		2			2
109	3	3	2		8
111		9			9
113	2	3	2		7
114	6	13		11	30
123		1			1
130		1			1
201	7	46	2		55
203		1			1
204	2	7	3		12
205	1	4	1		6
206	1	8			9
207	3	7	1		11
209	1	2			3
210	5	3			8
212	1	1			2
213	2	1			3
215		1		1	2
217	2				2
301	3	12	2	1	18
302	4	2			6
303	1	13			14
304	1	23			24
305	1	1			2
308	1	6			7
309	1				1
310	1				1
401	2	1			3
405	4	2	1		7
407		1			1
409	1	1			2
410		2			2
411	4	2			6
415		1			1
TOTAL	93	243	22	22	380

STONE

A) Tesserae

Context 109	Not illustrated. Possible tessera of chert.
Context 201 20mm	Not illustrated. Tessera. Pennant sandstone. 25mm square and thick.

B) Roofing Material

All tiles or objects re-worked from roofing tiles are of Pennant Sandstone.

Re-used roof-tile.

Context 206	Fig. 11, 14. Portion of tile cut down to roughly circular shape. Large counter or small pot lid. A range of similar items from Frocester Court villa have been interpreted as weights. The Hall End example, at 202g, is rather heavy for a 7 unciae weight (Price, 2000).
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Roof-Tiles

Context 101	Fig. 12, 15. Part of hexagonal tile with complete nail-hole and rebate for seating of adjacent tile.
Context 305. SF32	Fig. 12, 16. Complete hexagonal tile with nail-hole.

Roof Coping-Stones.

All in Oolitic Limestone.

Context 405. SF24	Fig. 12, 17. 'V' profiled roof coping-stone. Incomplete. Width 167mm, depth 85mm.
Context 405. SF25	Fig. 12, 18. 'V' profiled roof coping-stone. Incomplete. Width 180mm, depth 85mm.
Context 405. SF26	Fig. 12, 19. 'V' profiled roof coping-stone. Incomplete. Width 185mm, depth 85mm.
Context 407. SF30	Fig. 12, 20. 'V' profiled roof coping-stone. Incomplete. Width 190mm, depth 98mm.

The four coping stones all display a very similar profile and could all derive from the same structure. The profiles of each stone are closely paralleled with coping stones from the late Roman temple at Henley Wood, Yatton, North Somerset, Watts and Leach, 1996, 127, fig. 108.

Roof Finial

Oolitic Limestone.

Context 405. SF23 Fig. 12, 21. Middle portion of four-way arch or 'Quadrifons' type roof finial. The fragment displays the upper parts of three of the four round headed arches and an upper story with simple moulded cornice. This type of finial is known from a number of sites in western Britain and has been discussed at length by Lowther (1979). Complete examples may be cited from Dewlish villa, Dorset (*ibid.* Photograph VI), Llantwit Major villa, Glamorgan (*ibid.*; Nash-Williams, 1953) and the temple complex at Nettleton, Wiltshire (*ibid.*; Wedlake, 1982). The available evidence points to a later third or fourth century date for the type.

C) **Architectural Pieces**

All pieces are of Oolitic Limestone.

Context 302. SF31 Fig. 12, 22. Incomplete dressed block with chamfered face.

Context 302. SF33 Fig. 12, 23. Incomplete dressed block with chamfered face.

Context 311. SF27 Fig. 12, 24. Large block of fine-grained Oolitic limestone carefully dressed on three faces with complex moulding around the base. Possible altar or monumental base.

D) **Quern Stones**

All querns from the site are fragmentary and are manufactured from Devonian Upper Old Red Sandstone conglomerate containing quartz pebbles, with some of chert and jasper. Often identified as coming from The Forest of Dean, Roe (1997, 199) notes that this material also occurs in extensive outcrops to the west of the River Wye between Penallt and Trellick. All the fragments have been well-dressed with smoothed surfaces with few tooling marks visible.

Context 109. SF11 Fig. 12, 25. Lower stone from rotary quern, part of central pivot hole surviving. 420mm diameter.

Context 113. SF24 Fig. 12, 26. Upper stone from rotary quern. 380mm diameter.

Context 113. SF27 Fig. 12, 27. Fragmentary upper stone from rotary quern.

E) **Miscellaneous Stone Objects**

Whetstones.

Four whetstones were recovered, all being manufactured from a fine-grained, micaceous sandstone most likely from a Palaeozoic source. None of the examples reported upon here have been subject to thin-section analysis and all identifications are based upon macroscopic examination. All appear to be derived from 'water worn pebbles' and 'slab'-shaped stones similar to those described in detail by Roe from the temple complex at Uley (Roe, 1997, 197-8). Four samples from Uley were thin-sectioned and a source in either South Devon or The Forest of Dean suggested (*ibid.*).

Context 104 Fig. 12, 28. Incomplete whetstone of rectangular section.

Context 207 Fig. 12, 29. Incomplete whetstone of square section.

Context 407. SF22 Fig. 12, 30. Incomplete whetstone of ovoid section.

Tr1 u/s Fig. 12, 31. Incomplete whetstone of ovoid section.

Other stone objects.

Context 206 Fig. 12, 32. Incomplete sandstone object of ovoid section.

Context 409. SF10 Fig. 12, 33. Water smoothed large pebble. ?Rubber stone.

GLASS

Context 104. Sample 500 Fig. 12, 34. Spherical bead in pale green glass. 3mm in diameter. Roman.

Abbreviations

RIC *Roman Imperial Coinage.*

HK *Late Roman Bronze Coinage, Part i.*

CK *Late Roman Bronze Coinage, Part ii.*

THE POTTERY

by Dr Jane Timby

Introduction

The initial trial trenching carried out at Hall End in 2002 resulted in the recovery of some 3576 sherds most of which were Roman but accompanied by some medieval pieces. The archaeological work carried out in 2004 resulted in the recovery of a

further 2876 sherds of Roman pottery weighing 28.3 kg. The assemblages largely date to the later Roman period but span the 2nd - 4th centuries. The sherds are fairly well fragmented, the overall average sherd weight being just 9.8 g. This may be a consequence of some 65% of the assemblage by count coming from layers, rubble spreads or cleaning horizons. The remaining sherds came from nine defined features with two particularly large groups, one from a ditch in 2004 Trench 1, the other from a palaeochannel in 2004 Trench 2.

Methodology

The 2002 trial trench assemblage was scanned only and a sherd count made. A short summary of the results is given below. The 2004 assemblage was analysed in more detail and sorted into fabrics based on firing colour combined with the type, size and frequency of the inclusions visible in the paste. Known regional or imported traded wares were coded using the National Roman fabric reference collection (Tomber and Dore 1998). Other wares were given fairly generic codes. A detailed fabric breakdown and description of these wares, mostly presumed to be of local origin, was not carried out as it was felt this would not enhance the report at this stage. A summary of the codes used can be found in Table 1. The sorted fabrics were quantified by sherd count and weight for each context and the data entered on to an Excel spreadsheet a copy of which is deposited with the site archive.

Rimsherds were coded according to form.

Summary of 2002 assemblage

Pottery was recovered from 52 recorded contexts across the four trial trenches investigated. In total, some 3576 sherds were noted. The pottery was of variable condition; material from the upper levels was quite fragmented and abraded with worn edges and surfaces. Material from other contexts was better preserved and in a number of cases several sherds from the same vessels were present. General

ground conditions have caused some loss of surface treatment and deterioration of some of the softer fabrics. As might be expected the chronological emphasis is very much towards the later Roman period. At least four contexts contained sherds of later Roman shelly ware, usually regarded as a good indicator of occupation in the last quarter of the 4th century and possibly beyond (AD 360+) (contexts 109, 111, 304, 402). Several other wares typical of 4th-century occupation were also present, notably tableware from the Oxfordshire and New Forest industries, and products of the Dorset and South-west black burnished industries. All the groups were dominated by micaceous grey and black coarse wares, which have been noted elsewhere in varying quantities in Gloucestershire. The Oxfordshire wares include several stamp-decorated vessels generally seen as dating to the middle-late 4th century along with colour-coated and whiteware mortaria. Other wares of note include a fair amount of residual, or curated, samian ware with forms typical of the 2nd - early 3rd century. Other imports include a small amount of Dressel 20 olive oil amphora from Southern Spain and at least one sherd of black samian and one sherd of Moselle black slip beaker. More local or regional products include small amounts of Severn Valley ware, South-west white-slipped ware, Nene Valley colour-coated ware and Savernake ware. Occasional sherds in amongst the later groups hint at occupation back into the 2nd century but no obvious 1st-century sherds were noted. At least one context, 213, appears to be early-mid 2nd century from two beaker sherds, one from a cornice rim beaker, the other a poppy-head type. Other sherds of note include a storage jar sherd from (207) which has been fashioned into a large disk, possibly for use as a pot lid;

at least two sherds had evidence of repair from drilled rivet holes and the substantial part of a burnt South-west black burnished jar with herring-bone decoration was recovered from (144) (SF 28).

The 2004 Trenches

Fabrics and forms

The assemblage comprises a mixture of continental imports, regional imports and wares of local or unknown provenance. The continental imports are relatively limited with Central Gaulish samian, Moselle black slipped ware and Dressel 20 (Baetican) amphorae. Most of the samian forms appear to be quite late with examples of bowls Dragendorff (Drag.) 31 and 37, dishes Drag. 79, cups Drag. 33 and mortaria (Drag. 45). The fairly limited spectrum of imported material may partly be a reflection of the later Roman date for most of the excavated assemblage when importation of many finewares had ceased being replaced by British products. Overall samian accounts for 1.3% by sherd count, 1.8% by weight. Figures between 1 and 2% are fairly typical for rurally based sites in the West Country, for example Shapwick, Somerset (Timby forthcoming), Kingscote, Glos (Timby 1998) and Groundwell Ridge, Wilts (Timby 2004).

A greater diversity of material is apparent in the regional traded wares with products from Dorset, Oxfordshire, Hampshire, Cambridgeshire, Surrey and Wiltshire. The most commonly occurring import in this group are vessels from the Dorset black burnished industry accounting for 12.4% by sherd count (13.3% by weight). This is quite a low figure but appears to conform to that expected from the distribution on these wares in this region (*cf* Allen and Fulford 1996, fig. 1). The forms range from 2nd-century types such as the flat rim bowl and jars with acute lattice decoration, through the 3rd century with jars, plain-rimmed dishes and a single grooved rim dish into the later 3rd-4th century with flanged bowls, later jars and a single fish dish. The commonest form appears to be the plain-rimmed dish.

The next main suppliers to the site are the Oxfordshire kilns represented by colour-coated wares, white wares and mortaria. Collectively these account for 3.1% by count, 2.8% by weight. Forms include Young (2000) types C8, C45, C51, C68, beaker and mortaria in the colour-coated wares and mortaria forms M17 and M22 in the whiteware.

Most of the other imports are present in very small quantities but include New Forest colour-coated ware indented beaker, Overwey white ware jars, a single sherd of Lower Nene Valley colour-coated ware, three sherds of Savernake ware from Wiltshire, two sherds of oxidised sandy ware probably from North Wiltshire, a few sherds of South-west oxidised ware with plain, white-slipped and red-burnished surfaces and nine sherds of late Roman shelly ware from the Midlands. This latter ware is of particular interest as it indicates activity on the site from the last quarter of the 4th century and possibly beyond. Apart from the Wiltshire wares, which are more likely to be residual from the 2nd century, the other wares probably arrived at the site in the later 3rd - 4th centuries.

The local wares are overwhelmingly dominated by grey or black micaceous wares, which account for 59.3% by sherd count, 52.5% by weight of the total assemblage. These wares are well recognised in the region and have been documented from sites across the Severn Valley, the percentages increasing down towards Bristol suggesting a potential source in this general locality. The ware appears from the later 2nd century and continues through to the 4th century. Many of the forms imitate the black-burnished wares with jars, flanged bowls, plain-rimmed dishes accompanied by other types such as handled jugs, lid-seated jars and tazzae. Of particular interest in this group is the discovered of a small hand moulded face (Fig. 14, 34) from a jug or flagon. Although quite crudely formed the head appears to be male with a beard and hair represented by circular impressions. The eye sockets contain two irregular

lumps of glass pushed in before firing, one opaque grey-white and crazed, and the other green.

Also local and moderately well represented are Severn Valley wares, both reduced and oxidised types. The fabric contains a higher range of impurities, grog and organic material, compared with SVW found to the north and from the Malvern region suggesting possibly a more local source. Forms are limited to jars, beakers, a curved wall dish and a flanged hemispherical bowl.

The remaining wares in the assemblage have been grouped into generic groups according to colour, texture and inclusions. These include miscellaneous grey and oxidised sandy wares, a black grog-tempered wheelmade ware; grog tempered and limestone-tempered wares, an unknown colour-coated ware and buff sandy ware. Of particular note is a ring-necked flagon in a fine oxidised fabric (Figure 12,2; SF 422) probably dating to the later 1st-early 2nd century.

Pottery Site discussion

The assemblage was recovered from two trenches with 822 sherds (7.9 kg) coming from Trench 1 and 2057 sherds (20.4 kg) from Trench 2. As noted above some 65% of the assemblage was recovered from cleaning, layers or rubble spreads. The range of material suggests occupation spanning the early 2nd century through to the 4th century.

2004 Trench 1

Pottery recovered from the ploughsoil or cleaning horizons (contexts 100-103, 105, 108, 112) contained a range of material, the emphasis being towards the later Roman period. The remaining assemblage recovered from rubble spreads or layers and mainly comprised fairly small groups. Rubble spread (107) produced 75 sherds

amongst which are 5 sherds of later Roman shelly ware (ROB SH) alongside Oxfordshire colour-coated ware (OXF RS) and Overwey ware (OVW WH) suggesting it accumulated after AD 360/70. Layers (114, 117) and (119) produced mostly unfeatured sherds which might suggest a 3rd-century date or later. Layers (120) and (123) with small sherds of OXF RS date to after the mid 3rd century.

Several features in Trench 1 yielded pottery the most prolific being Ditch 125 with some 464 sherds (5136 g), over half the trench assemblage. This includes a range of late wares including the Moselle black slipped beaker, a flanged bowl and disk-necked flagon in OXF RS and the sherd of Lower Nene Valley colour-coat. There are no late ROB SH sherds and a date in the later 3rd-4th century is likely for the abandonment /filling of this ditch. Of the other features gully 126 produced six sherds of grey micaceous ware and is therefore likely to be later 2nd century or later. Ditch 129, unexcavated pit 143, unexcavated gully 118 and posthole 128 are all probably 3rd century.

2004 Trench 2

As with Trench 1 pottery from the cleaning horizons yielded a diverse range of material spanning the 2nd to 4th century. Of particular note is the ceramic face from cleaning layer (201) (see below). Layer (204) contained a sherd of OXF RS beaker decorated with vertical comb impressions suggesting a date from the later 3rd or 4th centuries. Layer (205) also with OXF RS is probably of similar date. Rubble spread (207) produced some 261 sherds (2324 g) amongst which are two sherds of later shelly ware and a sherd of New Forest colour-coat indicating a date from the last quarter of the 4th century. Layer (210) is also 4th century. The group of 58 sherds from (215) appears to be earlier with samian, a flat-rimmed DOR BB1 bowl and a Wiltshire oxidised beaker all indicating a mid-late 2nd-century date. Similarly the 94

sherds from layer (216) and the 70 sherds from (217) support a date from the later 2nd or early 3rd century.

Stone spread 206 with a sherd of Oxfordshire mortarium (Young 2000, type M17) and Moselle beaker is probably mid 3rd century or later. Palaeochannel 229 produced the largest assemblage from a single feature in Trench 2. This yielded 428 sherds (5190 g) of quite mixed chronology with 2nd to 4th century wares. At the early end of the spectrum is a grog-tempered handmade jar, early ?Durotrigian sandy ware, the oxidised rung-necked flagon, Dressel 20 amphorae, barbotine decorated grey fineware and Savernake ware. At the later end of the range are sherds of New Forest ware, OXF RS and late DOR BB1. However, sherds of ROB SH and OVW WH are absent suggesting material was not still accumulating after the mid 4th century.

Illustrated sherds

1. Figure 14, 34 - Detached face-mask probably from a flagon or jug. Hand moulded in a pale brown to grey very micaceous sandy ware (GWMIC). The face is that of a male. The hair and beard are formed from impressed small rings encircling the face. The mouth seems to have been impressed from the left using a small rod. The finger-pressed eye sockets contain two irregular fragments of glass; the left is an opaque grey-white; the right a bright green. The two pieces do not exactly match in size, shape or colour. The character of the piece is very much 'native' as opposed to the Figures found on the Oxfordshire flagons which are mould made and invariably female with very Romanised appearances. This would fit with the postulated local origin for the fabric. Cleaning layer (201). SF 400.
2. Figure 14, 35 – rim and decorated body sherd from Samian bowl of South Gaulish type Dragendorff (Drag.) 37, AD 70-90. 2004 Trench 2, Ditch 125.

Ceramic building material

Approximately 80 fragments of ceramic building material (CBM) and 13 pieces of fired clay / daub were recovered in 2002 with a further 34 fragments in 2004. The CBM was for the most part extremely abraded and few pieces could be recognised to original form. Most of the 2004 finds came from Trench 1 with some 11 pieces from Trench 2. All the pieces, apart from one post-medieval tile fragment from (100), appear to be Roman in origin. Where recognisable the pieces are largely roof tile (imbrices and tegulae), but three fragments of combed box-flue came from (104) suggesting the presence of a building with a hypocaust system. One piece from (109) may have been reshaped into a disk.

The Glass

by Harriet Foster

Catalogue of Glass Objects

Roman Blue-Green Glasses

Bottles

1. 2004 Tr 1 (102) SFs 319 and 320. Fig. 13,1. Two base frs, one handle fr, one rim fr, square bottle. Blue-green glass. Rim fr and handle fr join. Rim is circular with a horizontal profile: thickness 5.5mm. Rim diam 4 mm. Thickness of glass at base 6.5mm.
2. 2002 Tr 2 (201) SF 41. Fig 13,5 Base fr, prismatic bottle. Blue-green glass, many exterior scratches to base. Thickness 7mm.
3. 2004 Tr 2 (207) (222) SFs 424 & 421. Base fr and very small ?body fr, prismatic bottle. Blue-green glass. Patch of slight wear and remains of straight indentation on base. Thickness 3.5-5 mm.

4. 2002 Tr 2 (201) SF 40. Body fr, cylindrical bottle. Pale bluish green, many scratches to exterior surface. Thickness 3-4 mm. Diam of vessel approx. 70 mm.
5. 2002 Tr 1 (112) SF 42. Fig. 13.2 . Two joining rim frs, prismatic/cylindrical bottle. Blue-green glass. Rim is circular with a horizontal profile: thickness 12 mm. Rim diam 950mm.

Other

6. 2004 Tr 1 (217) SF 418. Fig. 13,3. Tubular rim fr, bowl. Vertical rim bent out and down. Pale blue-green glass. Rim diam 110mm. Dim. 30x12(max)/8(min) mm. Thickness 1 mm.
7. 2004 Tr 2 (205) SF 411. Upper body and rim fr, collared jar. Out-bent rim, edge bent down but lower section missing. Globular body. Pale bluish glass. faint tool marks visible under part of rim which has broken off. Thickness 1-1.5 mm. Rim diam 110 mm.
8. 2002 Tr 2 (201) SF 39. Fig. 13,6. Small body fr, ?bowl/jar. Pale blue-green glass. Remains of a shallow vertical rib apparent. Thickness 0.25-0.75 mm. Dim. 10 x 20 mm

Late Roman Vessels

Drinking vessels

9. 2002 Tr. 3 (308) SF 19. Body fr ?cup/beaker. Slightly convex side. Pale greenish colourless, occasional bubbles, slight weathering on outside edge. Thickness 0.5 mm. Dim. 21x 9 mm.
10. 2002 Tr 1 (100) (105) SFs 21 & 53. Two body frs, convex cup/bowl. Very pale greenish colourless, bubbly, slight weathering. Thickness 1-2 mm.

11. 2002 (301) SF 21. Fig. 13,11 One rim, one base and eight body frs, conical beaker, with out-turned, cracked off rim. Very light abraded bands on one body frs. Pale greenish, bubbly, streaky glass. Slight weathering. Thickness 0.5-1 mm.
- a. (301) SF 21. Fig. 13, 12 Two joining body frs, one rim fr, as no. 11. Abraded bands on two body frs. Rim diam approx. 60 mm.
 - b. (301) SF 21. Two body frs, as no. 11. Abraded band on larger piece.
 - c. (304) SF 20. One rim fr, five body frs, as no. 11. Very pale yellowish green, two zones of abraded bands.
12. 2002 (301) SF 21. One base and four body frs, conical beaker. Pale yellow greenish glass, very many small bubbles. Concave base fr attached to small piece of body and has a long strain crack. Thickness 0.5-1.5mm. Base diam. 40 mm.
13. 2004 Tr 1 (104) SF 316. Fig. 13,13. Rim fr, beaker with fire rounded rim. Pale greenish colourless, some bubbles. Thickness 1mm. Rim diam 70 mm. Later 4th century.
14. 2002 (304) SF 20. Rim fr and four body frs, ?bowl. Pale yellowish green. Possible fire damage (pitting on largest body fr and rim fr) and indented surface? Fire rounded rim folded inwards – crease edge still visible. Some weathering to exterior. Thickness 1.5-3.5 mm.
15. 2004 Tr 1 (102) SF 318. Fig. 13,14. Small body fr. Very pale greenish colourless. 0.5 mm. Possible incised decoration in horizontal 'V' shape.

Other

16. 2004 Tr. 2 (207) SF 425. Fig. 13, 15 Body fr, barrel shaped bottle. Remains of 2½ zones of horizontal corrugation and 2 plain zones. Very pale yellowish greenish, bubbly, slight weathering, slightly wear on outer surface (scratches). Thickness 1 mm. Present height 19.5 mm.

17. 2002 (304) SF 20. Rim fr, shoulder/neck fr, three body frs and two joining base frs, cylindrical bottle. Pale greenish glass, very bubbly. Rim cracked off, not ground. Base of bottle flat. Cylindrical neck. Thickness 1-4 mm.
18. 2002 (301) SF 21. Fig. 13, 9 Base of rod handle, jug. Greenish, bubbly glass. Diameter handle at attachment 15-18 mm.
19. 2002 (301) SF 21. Fig. 13, 10 Two frs from either end of handle and two cylindrical neck frs, one with lower part of out-turned rim extant and one with part of neck ring remaining, globular jug. Folded upper attachment of handle shows thumb rest and possible remains of neck ring. Lower attachment shows at least three horizontal pinched projections. Greenish, very bubbly, several strain cracks. Diam of neck approx. 150mm. Diam of rim approx 20 mm. Thickness 0.5-1 mm (body) 3mm (neck).
20. 2002 Tr. 3 (308) SF 19. Fig. 13, 8. Two frs, joining, body and base of rod handle, 'D' shaped in section. Greenish, very bubbly, strain cracks. Part of large handle from lower attachment of jug with globular body. Very partial remains of ?trail or ?pinched extension at point of contact with vessel body. Present height 29 mm. Thickness (body) 3 mm.

Objects

21. 2002 Tr 2 (201) (206) SF 8. Fig. 13, 17. Two glass beads, one fully extant, one fragmentary, opaque blue. Extant bead is diamond shaped in cross-section: diameter 3.5-4 mm. Length 5.5 mm.
22. 2004 Tr 1 (113) SF 307. Fig 13, 16. Gaming counter, plano-convex shape, three quarters extant. Opaque red. Diam 14 mm. Height 6 mm.

Other (date uncertain)

23. 2002 Tr. 2 (201) Two frs, globular mass of opaque blue glass.
24. 2002 Tr 2 (206) SFs 7 and 10. Two glass chips, opaque blue.
25. 2004 Tr 1 (114) SF 309. Two glass chips, opaque blue.
26. 2002 Tr 2 (206) SF 43. Body fr, very pale yellowish/green colourless glass.

Discussion of Roman glass finds

This is a small but interesting assemblage comprising a total of 64 Roman glass vessel fragments which come from a minimum of 17 vessels. Glass objects are represented by one gaming counter (no. 22) and two beads (no. 21). Several small glass chips (nos. 24 & 25) may represent further fragmentary beads or may belong to the lump of fused glass recovered (no. 23). Interestingly the majority of the glass vessels comprise 4th century material (nos. 9-20), typically made from a greenish yellow shade of glass, ranging from slightly tinted material (e.g. pale greenish colourless) to stronger shades, the colouration probably being caused by various impurities introduced in the raw materials. In fact, there is a small group of material which can be dated to the second half of the 4th century - early 5th century, suggesting the use of glass on the site into the last decades of the Romano-British period. Earlier Roman material of the 1st to 3rd centuries A.D. (nos. 1-8) in blue-green glass (the colour being imparted by iron impurities in the glassmaking sand) is represented by at least three bottles (prismatic and cylindrical forms), a tubular rimmed bowl and a tubular rimmed jar. Colourless glass, formed by the use of decolourised and highly refined raw materials, and typical of tablewares of the 2nd and 3rd centuries, is not found in this assemblage. The small amount of earlier Roman material is surprising; typically glass assemblages which span the Roman period tend to be made up of a smaller proportion of late Roman glass vessels. This, coupled with the fact that many of the glass fragments are fairly small and several vessels are represented by one or only a small number of fragments, may be suggestive of the systematic removal of glass from the site during its occupation for the purpose of recycling. Post-Roman activity in which the material was collected and/or ploughed out, as certainly seems to have occurred within the vicinity of 2002 Trench 1 which yielded Roman glass vessel finds, may also be an explanation for the

small and fragmentary nature of the assemblage but such a practice would not necessarily favour the removal of early Roman over later Roman vessels.

Earlier Roman vessel forms were recovered only from Trenches 1 and 2. Later Roman material was recovered predominantly from Trench 3 although a few other fragments were found in Trenches 1 and 2. This pattern could hint at the varying chronological spans over which different areas of the site were occupied although this suggestion is made tentatively given that this is such a small assemblage which may have been affected by post-depositional factors and that glass vessels may have been used and then deposited long after they were fashioned.

Blue-green wares

A minimum of three examples of cylindrical or prismatic bottles are represented by nos. 1-5. This vessel type, produced in a variety of sizes, was ubiquitous across the Roman Empire and is therefore probably the most common type of glass vessel recovered from Roman contexts today. Given their shape and colour (i.e. not actively decolourised) it is likely that these vessels functioned as storage wares. The possible exception to this would be no. 4 which appears to have been decolourised to some extent and so may have been used as a tableware. No. 1 (Fig. 13,1) is of a square shaped bottle (Isings 1957, form 50), surviving fragments coming from its base, rim and handle at the point of attachment to the neck. They demonstrate the presence of a folded rim with a horizontal profile below which the handle, probably a ribbon handle, was fixed. These bottles, typical from the mid 1st to the end of the 2nd century A.D., usually feature designs in relief on the base such as concentric circles and sometimes letters. However, not enough of the base from this vessel has survived to identify the presence or absence of any such stamps. Nos. 2 (Fig. 13,2) and 3, constituting basal fragments, may be from the same bottle as no. 1 or may represent other examples.

No. 4 is of a form with a cylindrical body (Isings 1957, form 51) very common in the late 1st to early 2nd century A.D. and sometimes featuring wheel-cut lines to the exterior, this decoration suggesting its use as a tableware in some instances. No such decoration was found on no. 4 but its exterior is highly scratched, a common observation with this vessel type, probably resulting from abrasion with the container (e.g. possibly some form of crate) in which these bottles were kept.

No. 5 (Fig. 13,3) is from a prismatic or cylindrical bottle but its exact shape cannot be determined; the rim type represented by this fragment is found on cylindrical, square and hexagonal forms. However, its rim diameter is significantly greater than that of no. 1 suggesting it was from a larger bottle. For further information about blue-green prismatic and cylindrical bottles refer to Price & Cottam (1998: 191-202) or an extensive discussion of those recovered from Colchester is given in Cool & Price (1995: 179ff).

Two other blue-green vessels were also identified. The first, no. 6 (Fig. 13,4), comes from a tubular rimmed bowl (Isings 1957, forms 44 and 45) which was very common in Britain from the late 1st to mid 2nd century A.D. As well as being produced in blue-green glass, strong monochrome colours were also favoured, e.g. dark blue. A close parallel in shape and size would be the bowl no. 650 from Colchester (Cool & Price 1995: 96).

Of broadly similar date is the collared jar, no. 7 (Fig. 13,5) which had a globular body and an out-turned rim (Isings 1957, form 67c), the edge of which was bent out and almost certainly down but its tip is missing. This too was a very common vessel and was also produced in strong colours. For another find with similar dimensions see no. 57 in Bushe-Fox (1932: 84) from Richborough, Kent.

No. 8 is a body fragment from a vessel with shallow vertical ribs (Fig. 13,6). Both tubular rimmed bowls and collared jars described above may have such decoration, suggesting their use as tablewares, and so it is possible that no. 8 belongs to either no. 6 or no. 7. The fragment is so small that it offers no clue as to the exact shape of the vessel body from which it came.

Later Roman wares

The most common vessel types of the 4th century in the North Western provinces are drinking vessels in the form of hemispherical or convex cups and conical beakers with cracked-off rims (Isings 1957, forms 96 and 106). Interestingly in this assemblage conical beakers seem to dominate, being represented by a minimum of three, possibly four, vessels (nos. 11-12). Conical beakers and convex cups are widely found in Britain (e.g. see Price & Cottam 1998: 117-119 & 121-3) and are usually decorated with lightly abraded bands and in less common instances with coloured blobs, indents, trails and facet- or Figure-cutting. At least two, possibly three, of the conical beakers (nos. 11 and 11a-c) were decorated and these featured either one or two zones of lightly abraded bands (Figs. 13, 7 & 13, 8). One rim fragment (no. 13) from a beaker with a fire-rounded rim was also identified (Fig. 13, 9). The usual date range for this form is the mid 4th century to early 5th century. Although fairly common, these beakers are not found in the same quantities as those with a cracked off rim. The vessel form features a concave base, sometimes a tubular base ring. Unfortunately the base of the vessel in this instance is absent. Complete vessels of this type were recovered from the hoard at Burgh Castle, Norfolk (Harden 1983) although fragments have been recovered from several other sites, the most similar to no. 13 in terms of colour, glass quality and thickness being two samples from Bath (Shepherd 1985, nos. 18 and 20). Two possible convex cups are represented by nos. 9 and 10. These vessels are usually thin walled as the body

fragment no. 9 demonstrates. No. 10 is from a thicker walled convex-shaped vessel, possibly a bowl (e.g. see Price & Cottam 1998: 126-128).

Two further vessels are worth discussing here, both of late Roman date but of unusual form or presenting the possibility of interesting decoration. No. 14 is of very poor quality glass, being bubbly, yellowish green and subject to weathering and pitting to its exterior surface. This pitting, and the slightly warped nature of the body fragment may have resulted from fire damage. The rolled in rim and general appearance of the glass suggests it is later 4th century in date, probably from a wide open mouthed vessel such as a bowl.

No. 15 is equally challenging given the tiny size of the sherd but of interest due to the possible remains of incised decoration it shows. The surface of the vessel is considerably scratched making it difficult to identify securely the decoration as such. This is not helped by the bubbly nature of the glass. What suggests that the fragment has in fact been deliberately incised is the pattern of very short hatched lines which make up a horizontal 'V' shape (i.e. '<') and appear to differ from the continuous and superficial nature of the accidental scratches. Such incised decoration can be found on late Roman shallow bowls that depict hunting, biblical or mythological scenes (Isings 1957, form 116). The most famous example from Britain is the 'Wint Hill' bowl from Banwell, Somerset (Harden 1960). Unfortunately too little of no. 15 remains to ascribe it confidently to such a vessel but it is a tentative suggestion.

Given the small nature of the assemblage as a whole, it is surprising to find that a number of late Roman storage wares (e.g. bottles, jugs) are also represented. These consist of nos. 16-20. No. 16 (Fig. 13, 10) is a body fragment from a type commonly referred to as a 'Frontinus bottle' (Isings 1957, forms 89 and 128) which is a cylindrical bottle with a corrugated body (barrel shaped) featuring a rolled-in rim and sometimes a basal stamp e.g. FRONTINVS and derivatives of this name, Felix,

ECVA / EQVA or concentric circles. Recently it has become apparent that at least two manufacturing regions can probably be recognised on the basis of the distribution of bottles with the 'FRO' stamp and its variations and those with the 'ECVA' or 'EQVA' stamp. 'FRO' stamped bottles appear to be more common in North East France (Arveiller-Dulong *et al.* 2003) and 'ECVA' stamped bottles are mainly concentrated in the Rhineland (e.g. Carroll 2001: 90). Of those fragments found in Britain with an identifiable basal stamp, nearly all have variations of the 'FRO' stamp suggesting the dominance of barrel shaped bottles of North Eastern Gaulish origin (Foster 2004: 129). Although found in earlier Roman contexts (having one reeded handle), this type was more common in the late 3rd and 4th centuries A.D. (having two ribbed handles). The colour of fragment no. 16 suggests it is from a later Roman vessel.

No. 17 comes from a late Roman cylindrical bottle, possibly of the type with two looped 'dolphin' handles (Isings 1957, form 100) although evidence for these handles was not found amongst any of the associated fragments. The rim has been cracked-off but left un-worked and it appears that the cylindrical neck may have had a constriction where it joined the body of the vessel, as with the dolphin handled cylindrical bottle from Shakenoak Villa, Oxfordshire (Harden 1973: 104, nos. 232 & 233). This vessel type was quite common on late Roman settlements, probably dying out by the last quarter of the 4th century.

A small fragment from a rod handle at the point where it would have joined the vessel body is represented by no. 18 (Fig. 13, 11). This type of handle is found on two uncommon late Roman vessel types, a tubular rimmed convex cup and small globular jugs. From the small piece of vessel body remaining it is possible to say that it would have been slightly thin-walled but the exact vessel type cannot be identified. Two types of globular jugs are known: one with a small body and one rod handle as mentioned above (Price & Cottam 1998: 165-6) and another, sometimes called a

'diota' with a larger body and two handles, although these more typically feature ribbon handles. Fragments from the upper part of the latter type vessel (neck and handle) and from the lower handle terminal (pinched projections) are represented by no. 19 (Fig. 13, 12). A close parallel would be no. 57 from Frocester Court Roman Villa, Gloucestershire (Price 2000: 114). This vessel type was in use in the second half of the 4th century but is a relatively rare find today, examples being confined mainly to Britain and so perhaps produced here. A similar version with a cracked off rim and no neck ring is found elsewhere in the North Western Roman provinces (Isings 1957, form 129). No. 20 (Fig. 13, 13) has also come from a late Roman globular bodied jug, probably of similar date, although its exact form cannot be extrapolated from the handle attachment alone.

Glass objects / Other

No. 23 is a globular mass of blue opaque glass which appears to have resulted from fire damage as there seems to be a thin layer of a ferrous type material adhering to its surface in places. It is possibly of Roman date but this is not certain. This is also the case with the small body fragment represented by no. 26. Tiny opaque blue fragments represented by nos. 24 & 25 may belong to the fused mass of glass or may come from glass beads.

Two definite blue beads (no. 21) were recovered: one wholly extant and diamond shaped in cross-section (Fig. 13, 14), the other in a fragmentary state although sufficient survives to suggest that it too was possibly diamond shaped. Beads are a common find on Roman sites. For a recent discussion of the many types recovered from Wroxeter refer to Cool (2000:185-6).

Perhaps of most interest is the plano-convex opaque red gaming counter (no. 22, Fig. 13, 15). Roman glass gaming counters recovered in Britain are often black or white (Cool *et al.* 1995: 1553), for example the set recovered from London reported

in Shepherd (2000: 135), and occasionally have coloured spots, for example those from Lankhills in Clarke (1979: 251) and Lullingstone in Cool & Price (1987: 123-4). Opaque red counters with spots were found in the set from the latter site but examples of wholly opaque red counters from Roman contexts are very rare indeed. Only one example is known and that is from Annetwell Street, Carlisle (unpublished, information from Hilary Cool). Monochrome counters appear to have been increasingly replaced by bone examples from the 3rd century, whilst polychrome counters seemingly are more typical of the late Roman period (Cool *et al.* 1995: 1553). The date of the context from which this counter came, a metallised road surface (113), is not clear and so further commentary as to how this counter fits in with the chronological observations made above is not possible.

THE MAMMAL AND BIRD BONE

By Lorrain Higbee

Introduction

Animal bone was recovered by hand from all trenches in the 2002 and 2004 evaluations, the total quantity is 960 fragments, this is a raw fragment count and does not take into account any of the quantification methods employed by zooarchaeological analysis, these methods reduce the assemblage to only 117 countable bones. The majority (c. 59%) of this material comes from various layers and rubble spreads, with smaller quantities (c. 26%) from cut features (ditches and gullies), surfaces and a palaeochannel. Bone was also recovered from topsoil and during surface cleaning over machined surfaces.

Methods

A detailed account of the methods used throughout the analysis of the Blacklands assemblage can be found in the site archive. In summary, a selective suite of mammalian skeletal elements were recorded as standard and used in counts

following Davis (1992), these are termed 'parts of the skeleton always counted' (or POSAC's). In addition to the POSAC's selected by Davis the following elements were also counted: horn cores with a complete transverse section and the zygomatic part of the skull. The recording of avian bones was limited to bones from the wing and leg but these were only recorded if they retained one complete articular surface. The above methods of quantification reduce the over-recording of fragmented material to give a truer indication of species proportions. The number of specimens identified to species (or NISP) was calculated for all taxa but the minimum numbers of individuals (or MNI) were only calculated for the most common taxa. Any non-countable elements from less common species or elements displaying butchery marks, pathological changes or of anomalous size were also recorded but not used in counts. Vertebrae (centra) were recorded to general size categories (e.g. cattle-size or sheep-sized), this information was collected in order to take account of epiphyseal fusion but again this information was not used in counts. Non-countable bones are shown in parenthesis in Table 1.

The following methods were also used in analysis of the assemblage: Behrensmeier (1978); Boessneck (1969); Cohen and Serjeantson (1996); Davis (1987); Dobney and Reilly (1988); Grant (1982); O'Connor (1989); Payne (1973, 1985 and 1987); Payne and Bull (1982); Silver (1969); and Von den Driesch (1976).

Results

Recovery, preservation and taphonomy

The entire assemblage was recovered by hand during the normal course of excavation; hand-recovered assemblages are typically biased in favour of large, easily observed fragments and therefore the bones from larger species, whilst small fragments and therefore the bones from smaller species tend to be overlooked by

this method (Payne 1992). This bias is reflected in the low frequency of bird bones and the total absence of small mammal, fish and amphibian bones.

Each bone fragment was assigned to a preservation category based upon a modified version of Behrensmeyer's (1978) weathering stages. Approximately 74% of fragments are in a good state of preservation and were assigned to category 1. A further 22% exhibit very moderate signs of weathering in the form of exfoliation or abrasion to their cortical surface. Some teeth were also assigned to this category; these had cracked or broken occlusal (biting) surfaces, some of this damage was due to deterioration of dentine and cement, both relatively soft calcified tissues that deteriorate more easily than dental enamel. Only 4% of bones were poorly preserved (categories 3 and 4) and most of these are from the palaeochannel indicating that weathering caused by fluvial transport is a significant factor in this instance.

Butchery marks were recorded on only 10% of fragments, the majority occur on cattle bones but this is probably a result of size related butchery techniques. In addition to chop and cut marks, one pig incisor had been modified to form a point, this evidence illustrates that some bones may have been selected, on the bases of their natural morphology, for the manufacture of bone tools and other objects.

Gnaw marks were recorded on only 6% of bone fragments and with the exception of a few pig and cattle bones from palaeochannel deposits, there are no discrete concentrations of gnawed bones, indeed the rest are scattered across contexts. This suggests that whilst a small number of bones were exposed to scavenging before burial, the majority were rapidly buried.

Species frequencies

In common with most hand-recovered assemblages from archaeological sites in Britain, the Blacklands assemblage is dominated by bones from domestic livestock species, together these three species account for 90% of NISP (Table 1). In terms of relative frequency, sheep is the most common of the livestock species, accounting

for c. 51% of NISP; cattle is also relatively common at c. 40% of NISP whilst pig accounts for only c. 9% of NISP. Similar frequencies are suggested by MNI (Table 2) although the proportion of sheep is significantly higher at c. 67% and the proportion of cattle is lower at 25% of MNI.

The assemblage is small and the above results must therefore be treated with caution. The basic pattern of relative frequency is similar to some Roman settlements in the county, for example Barnsley Park near Cirencester (Noddle 1985) and Vinyards Farm, Charlton Kings (Noddle 1992) both of which are characterised by a high proportion of sheep. However, this pattern differs from a number of other sites in the county, which generally have species frequencies that are comparable to general national trends. The importance of cattle in the Romano-British economy and diet is well known (King 1978, 1984 and 1999; Grant 1989), and the species frequencies recorded from a number of other Roman settlements in the county, reflect this importance. For example, high proportions of cattle have been recorded for the assemblages from Haymes, Cleeve Hill near Cheltenham (Noddle 86); Portway near Gloucester (Noddle 1984); Home Farm, Bishops Cleeve near Cheltenham (Maltby 1999); Cowhill near Oldbury-on-Severn (Higbee 2004) and Bank Farm, Dumbleton (Higbee forthcoming). King (1978) suggests that the dietary preference for beef was imported to Britain by central European legions of the Roman army, thus military sites, which are likely to be more Romanised, would have higher proportions of cattle and to a lesser extent pig than say rural civilian sites which are more likely to continue the native Iron Age tradition, that is a dietary preference for mutton. The basic sequence of site types with increasing proportions of cattle and pig suggested by King (1999: 180), is as follows: rural settlements, villas, secondary urban centres, urban sites, legionary sites. It would appear that the Blacklands assemblage is similar to 'native' rural settlements but it is worth emphasising that this interpretation is based upon limited evidence.

Other domestic species include horse and a non-countable fragment from a dog, together these species account for c. 8% of NISP. Loose horse teeth are common and scattered across contexts; one is a deciduous third premolar (or dp4) from an individual less than 2½ years of age. The non-countable fragment of dog bone is a fragment of maxilla from rubble spread (105).

Deer is represented by non-countable fragments of antler from layer (303), it was not possible to positively determine the species of deer represented by these fragments but the general size of the refitted cross section suggests that it comes from red deer (*Cervus elaphus*). Part of the antlers surface shows evidence of charring and it is assumed that antler was collected for the manufacture of objects.

A small number of bird bones were recovered they account for only c. 2% of NISP and include an ulna from a small corvid, most probably jackdaw (*Corvus monedula*), and a coracoid and ulna from a small species of wader, similar in size to snipe (*Gallinago gallinago*).

Body part distribution, age, butchery and biometry

The body part distribution of livestock species is given in Table 2. This illustrates that whilst most parts of the beef and mutton carcass are represented in the assemblage, loose teeth are common but there are some notable absences, for example radii, metacarpals and femora. The body part distribution for pig shows considerable bias towards loose teeth. This data is of limited analytical value due to small sample size and cannot be used to assess patterns of carcass utilisation.

Epiphyseal fusion data and tooth eruption/wear data are given in Tables 3 and 4.

This information is also of limited analytical value due to small sample size but indicates the presence of cattle over 2-2½ years; lambs, young and adult sheep, and young pigs. It is likely that the age structure of livestock species will reflect the animals supplied to the settlement and not the actual husbandry regimes of the rural hinterland. Chop and cut marks were recorded on 10% of fragments and most occur

on cattle bones. There is insufficient information to assess butchery techniques or make comparisons with other assemblages. However, the location of most chop and cut marks indicates that they were caused during dismemberment or reduction on the carcass and cattle vertebrae generally had their transverse processes removed suggesting division of the carcass into left and right sides. One non-countable fragment of sheep horn core had been chopped through its basal section suggesting that horn cores were detached from the skull presumably for further working of the horn sheath. One pig incisor was recorded as worked, the root having been modified to form a point.

Measurements are presented in appendices 1 and 2 (archive only); the information is limited and generally fits with expected ranges for Roman livestock species in the region.

Summary and conclusions

The Blacklands assemblage is well-preserved and dominated by domestic livestock species. Sheep is the most common species overall followed by cattle and then pig. The pattern of relative frequency for these three species contrasts with the majority of larger Roman assemblages from rural settlements in the county, which tend to have a high proportion of cattle and fewer sheep. The assemblage does however, fit with King's (1999) model for a 'native' rural settlement but this interpretation is based upon limited evidence.

Problems of small sample size also limit interpretation of the evidence from body part distribution, age, butchery and biometry which could be used to assess carcass utilisation patterns, kill-off patterns, procurement and improvements in husbandry.

Table 1. Number of specimens identified to species (or NISP) from Blacklands, Hall End Farm.

Taxon	NISP
cattle	42
sheep/goat	51 (1)
sheep	3 (1)
pig	9 (2)
horse	9
dog	(1)
deer	(1)
small corvid	1
small wader	2
unidentified bird	(1)
cattle-sized	(6)
sheep-sized	(4)
Total	117 (17)

Summary of Plant Macrofossils

By Kath Hunter

Seven samples were selected for assessment. Four of these were taken from a palaeochannel to the north of the settlement in 2004 Trench 2, possibly representing an earlier course of the Ladden Brook. The remaining three samples were taken from a ditch in 2004 Trench 1 (Hunter 2005)

All of the samples assessed contained small quantities of fragmented charcoal. Four of the samples also contained other charred plant remains (2004 Sample numbers 500,502,600,603). The cereal remains were poorly preserved with only one grain retaining sufficient characteristics to suggest it might be of a wheat type (c.f. *Triticum* sp.). A single Broad bean seed (*Vicia faba*) was also present.

Two samples (2004 601, 602) contained well-preserved waterlogged plant remains including weed seeds that suggested damp or wet environments, including rush type (*Juncus* sp.) and sedge (*Carex* sp.). However the presence of narrow-fruited cornsalad (*Valerianella dentata*) and orache type (*atriplex* sp.) seeds may also be evidence of a disturbed or arable habitat close by. Insect remains were noted in three samples (2004 Samples 501, 601, 602) and a few fish bones were noted in two

samples (2004 Samples 600, 601). Several of the samples had fragments of larger bones some of which appeared to be mammal bone.

No further work has been recommended on the assessment samples due to the paucity and the poor condition of the plant remains. However their presence has highlighted the potential for further deposits of preserved plant remains from elsewhere in and around the settlement. As this settlement is potentially important both locally, and possibly nationally, it has been strongly recommended that a more comprehensive programme of sampling from a wider range of features (for example pits, wells, cess-pits ditches ponds and hearths) be carried out in conjunction with any further excavations in the area. This should also take into consideration the potential for environmental remains to be preserved by other means (Such as mineralised deposits, for example in cesspits or middens, also silicified remains from hearths and bonfires). The information from such a study might then be able to suggest evidence of the local environment, agricultural/industrial practices, diet and economy in relation to spatial and temporal changes associated with the settlement. Any such sampling programme should be drawn up in consultation with the relevant specialists for all the environmental remains and the English Heritage regional scientific advisor.

The Flint

By Peter Makey

The flint assemblage totals only 3 struck pieces (10.3g) from 3 separate contexts.

The pieces comprise a broken flake that has been utilised (2002 layer 103) and a utilised chipping (2004 layer 105) and a un-retouched chunk (2002 topsoil 201). All 3 pieces are of probable prehistoric date and are clearly in residual contexts. The raw material appears to be from a local till or gravel deposit. Both the utilised pieces are of types commonly encountered on occupation sites and in unstratified assemblages, although wear from utilisation is more frequently associated with domestic material.

The assemblage is consistent with a general background scattering of lithic material that might be encountered on any archaeological site in England. The use of poor material may be an indicator of raw material shortages, however the assemblage is too small to be of any further potential.

Summary of the Technology Slags and Residues

By Dr Ivan Mack

Methodology

Approximately 70 kg of material provisionally identified as industrial residues from the 2004 evaluation trenches was available for examination. The classification of the slag fragments was based purely on external morphology, and as such would be open to amendment subsequent to any mineralogical or chemical analysis. Also provisionally identified were lead objects, and crucible fragments.

Description

Table 1 shows the full record of slag types by context. Present in the assemblage were:

General ironworking slags: (620 g). This was material of ironworking origin that either due to small size or indeterminate morphology, it was not possible to identify a specific process. With the dominant residue types present on the site being related to iron smelting, it is likely that the majority of the macro-slugs derive from iron smelting, though the interpretation of this group would rely on further chemical analysis.

Smelting slag: (45,808g) This was the dominant group of macro slags present in the assemblage. These were lumps of high density iron rich slag ranging in size from 40 mm to over 180 mm, and in weight up to 3000-4000 g. This material was typical of

the slag seen at other bloomery smelting sites. The smelting slag was very uniform throughout all contexts and showed little variation except in terms of gas porosity.

Tap slag: (19,175g) This is smelting slag with a flowed, ropey upper surface indicating that the slag has frozen during 'tapping' from the furnace.

Furnace or Hearth Lining HL/FL: (280g) This is vitrified clay which may have formed part of a furnace or hearth, and which often has a fused or slag attacked surface. As it can form during domestic burning it is not a technologically diagnostic residue, but given the association with large quantities of slag it is likely that this is the remains of iron-smelting furnaces. A distinction has been made in this case between the heat affected clay (HAC, see below), which may or may not have been part of the actual structure of the furnace, the HL/FL which is the remains of the furnace or hearth lining.

Heat affected clay: (115g) This may have resulted from either metallurgical or domestic burning and as such is non-diagnostic.

'Gromp': (1,705g) This term refers to irregular lumps of metallic iron which have passed through the smelting furnace. These are typically high carbon steels or cast irons and traditional wisdom would describe these as an accidentally produced waste, as it is supposed that the goal of early ironworkers was to produce a malleable low carbon steel.

Hearth Bottoms HB/PCB: (1,873g) A few examples of circular slag blocks with convex bases and flat or concave upper surfaces are present in the assemblage. These are typically formed during the smithing of iron artefacts, as iron oxide falling from heated artefacts reacts with fuel ash and silica in the hearth. The morphology of

these slags is different from the rest of the slag assemblage, being less dense (less iron oxide component) and with porosity on a much smaller scale. The characteristic shape is formed by the slag freezing in the base of the hearth.

Smithing Slag Lumps SSL: (1,190 g) These are fragments of smithing slag which have not yet reached the size of a complete hearth bottom.

Iron Object: (20 g) A single iron/steel artefact was found in the assemblage. It appears to be an oval Photograph c.40mm long with the remains of two curved arms at either end, but no other distinguishing features.

Lead strip: (60 g) Two fragments of thin lead or lead-tin strip were found. One was approximately 3mm wide and 40mm long the other was 15mm-20mm wide but had been folded over on itself several times.

Lead runner: (310 g) Several small pieces of lead were found in a cast but unformed state indicating evidence for the melting and casting of lead or lead alloys.

Crucible: (50g) Two small fragments of crucible were found in context 104. One of these has a clearly slag attacked inner surface. Both show green/green-blue oxide deposits indicating that the crucibles were likely used for copper or copper alloy working.

Discussion

The total assemblage is indicative of local iron working but tentative evidence for other processes is apparent. The two crucible fragments have traces of copper alloy adhering but confirmation of the composition of this alloy would only be possible with

further chemical analysis such as XRF or SEM-EDS. These crucibles indicate that copper was being melted and alloyed on the site, as was lead, as evidenced by numerous lead fragments and artefacts. Lead may have been used as an alloying element in bronze as in small amounts it is beneficial for casting. XRF or SEM-EDS of these lead fragments would also confirm composition, ie. whether alloyed with tin.

Three small fragments of bright green/blue/turquoise slag were provisionally identified as 'glass working slag'. The colour and appearance of these slags is similar to malachite and azurite, both copper ores, so it seems likely that these are some form of copper rich slag. Further chemical and mineralogical analysis would be crucial in understanding the origin of these small slag fragments.

Based on external morphology alone over 90% of the slag material appears to be derived from bloomery iron smelting, and is typical of the kind of slag seen in the period. The uniformity of the slag assemblage is unusual and may suggest that there was very little change in technology or production practices throughout the period of smelting.

Very little of the assemblage suggests secondary manufacture or repair of artefacts and with further chemical or mineralogical analysis, the slags which appear to be more typical of smithing may prove to be merely the result of small variations in the composition of the smelting slags. Alternatively they may represent background scatter from elsewhere in the settlement.

The slag deposits are likely to have been produced from material re-deposited from elsewhere, and the largest deposits found during the excavation of the two trenches were in upper ditch fills and overlying later floor layers. The slag is likely to have been generated nearby in the settlement as the quantities are relatively significant

and more than general background scatter, but based on the evidence recovered so far there is no way to determine whether they relate to the structure identified in trench 1. From the geophysical survey several large scatters of 'iron or burnt debris' surround the southern half of the site. If these are subsequently shown to be slag deposits then not only may the deposits in trench 1 represent another slag dump but also it would indicate that there was potentially several hundred tons of industrial wastes around the southern part of the site. The geophysical survey shows several anomalies with the look of furnaces, some very close to trench 1, but none of the archaeological features in the trench directly relate to metallurgical activities in themselves.

There is a crucial opportunity for targeted additional research given that the smelting furnaces may be present here in abundance and are currently not under threat from development. Typically slags are recovered from small-scale developer funded excavations in isolation from related archaeology and therefore of limited archaeological significance. Based on the evidence here, the combination of furnaces, extensive slag deposits, and other related archaeology, may indicate an early industrial complex of national importance. Immediate recommendations would include detailed geophysical surveys of features identifiable as furnaces or 'kilns', preferably by a practitioner with experience of surveying early ironworking sites, and additionally a site visit from an archaeometallurgical specialist may be very helpful for the planning and implementation of further work.

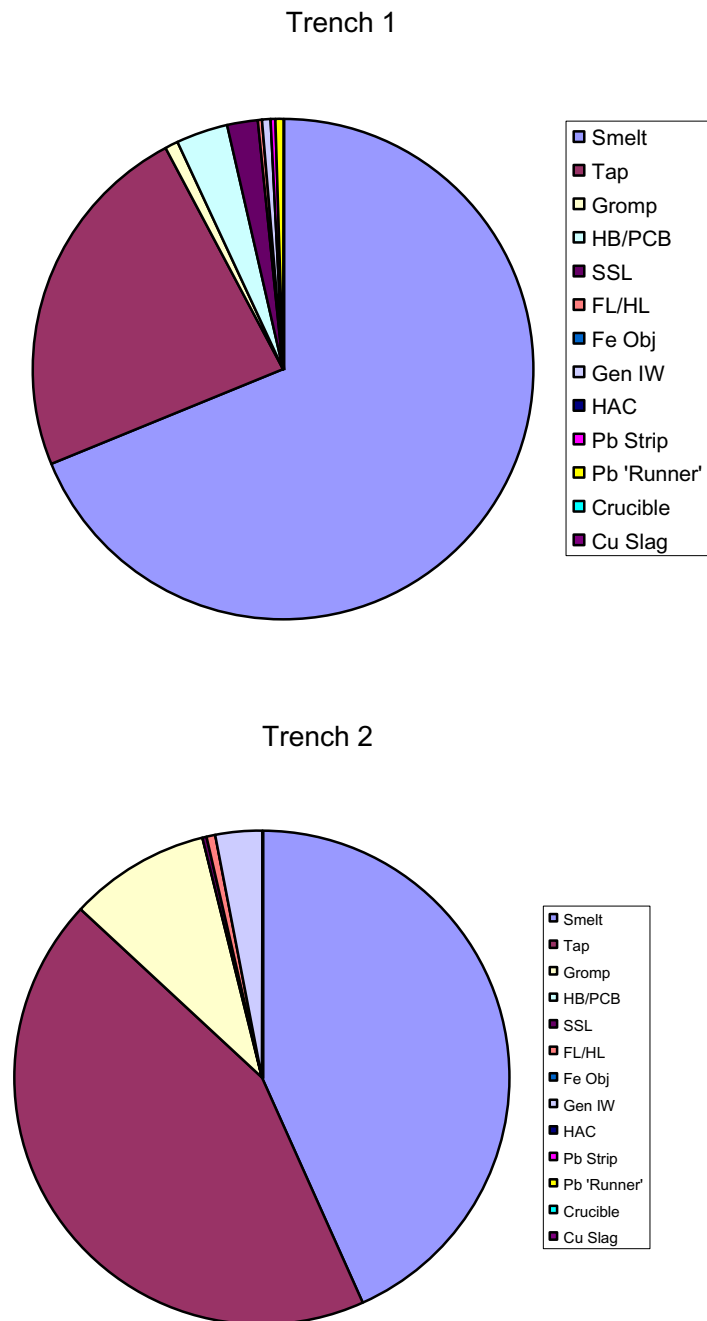
Technology Conclusions

1. Bloomery iron-smelting with slag tapping was practiced extensively on the site
2. Geophysical evidence seems to indicate the presence of several furnaces within the immediate area as well as large slag deposits
3. It is not clear whether the structure excavated is related to ironworking practices

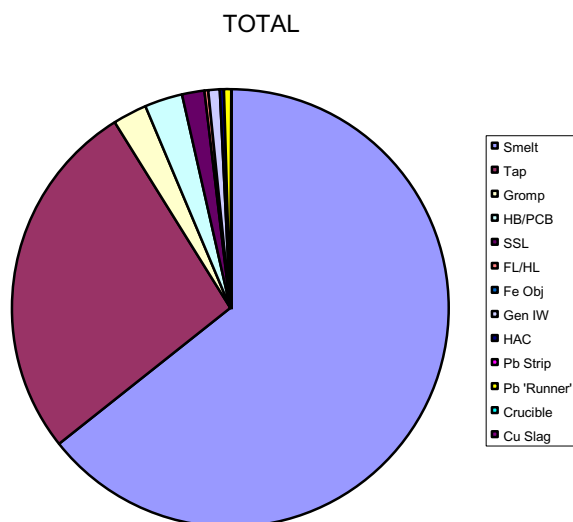
A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

4. It is likely that iron-smithing was being carried out elsewhere on the site
5. Non-ferrous alloying and artefact production was being practiced in the immediate vicinity
6. The evidence so far examined would put the site in a position of national importance.

Figure 14 - 2004 Trenches - Distribution of Slag and Residue Types



A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004



A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

Context	2004	Smelt	Tap	Gromp	SSL	FL/HL	Fe	Obj	Gen	IW	HAC	Pb	Strip	Pb	'Runner'	Crucible	Cu	Slag
					12													
101	5688	2687			5													
102	7882	3448											15		250			
103	661	303		150		100				70								
104	1305	1415											45				50	
105		250																
106	200	420		350		120		20										
107	2100	90																5
108	130	130					10											5
					30													
109	4153				8	920	45				80							
111		10		50														
112		20								75								
113	692	30																
114	1000	475														55		
115		65																
118	250	60								60								
119	1552	418																
120	4900	775								25						5		
130	6920	2325									30							5
132	75	80																
					14													
133	1440	700			40		50											
138	1390						120											
201	3209	3334		150			15											
202				175														
203		100																
204		40									5							
206	911	1530		830			20			75								5
207	484	460																
209	369					50				250								
210	397									65								
211	100																	
215		10																
217							20											
					18													
TOTAL	45808	19175		1705	73	1190	280	20	620	115		60		310		50		20
					18													
Trench 1	40338	13701		550	73	1140	225	20	230	110		60		310		50		15
Trench 2	5470	5474		1155	0	50	55	0	390	5		0		0		0		5

Technology Residues -Table 1

DISCUSSION & GENERAL CONCLUSIONS

Location and Communications

The Hall End settlement site is located on a low ridge, the long axis of which is aligned north to south, and defined on the northern side by a meander of the Ladden Brook. The settlement appears to extend along the line of the Roman road, Margary 541a (Margary, 1967), south of the Brook, for a distance of at least 800 m and covers an area in the region of 12ha (c.30 acres). Where it passes through the settlement and south of the site the road is defined by a pair of ditches that were on average 8-10 m apart although an outer pair of ditches, about 20 m apart, are also visible on the geophysical survey to the south of the core area, traces of which can also be discerned intermittently within the core area of settlement, in places seemingly overlain by later structures. Evidence from 2002 Trench 1 indicates that the metalled surface of the road was approximately 10 m wide in Great Blacklands where it passed between two masonry buildings. This large width, equivalent to approximately 34 Roman *pedes*, lies within but at the upper end of Davies' (Davies, 2002) distribution of Roman road widths and equivalent to widths recorded along Watling Street, although the extent to which the large width at Hall End is due to its location, at the heart of the roadside settlement, is unclear.

Overall the road, Margary 541a, runs north to south, parallel to the west facing foot of the Cotswold escarpment from Bitton/Keynsham (*Traiectus*) in the south and joins Margary 541, the modern A38, close to the village of Stinchcombe in Gloucestershire. Thereafter the route continued north to the early military complex and succeeding *Colonia* at Gloucester (*Glevvm*). To the south, at Keynsham, the road joins Margary 4, giving access to Bath (*Aquæ Sulis*) and the port and Severn ferry crossing at Sea Mills (*Abona*). South of Keynsham/Bitton, a presumed crossing

of the River Avon, the road appears to have continued to the southwest, to the important lead mining complex at Charterhouse-on-Mendip (reference). The date of the formal construction of this route (541a) has yet to be established, but, on the limited evidence from other roads in the south west, it may be as late as c. 65-85 AD. As yet, no equivalent east-west routes are known in the vicinity of Hall End.

Site Morphology, Date, Function and Significance of the Enclosure

The main enclosure identified by geophysics is square in plan with rounded corners (Figure 6, F10 and F23) and defined by a pair of ditches enclosing an area of approximately 6.5 ha (16.5 acres). The axis of the site is north-south, aligned on the road. Only one entrance, on the north side, can be discerned on the current data although at least one other, on the south side, will undoubtedly have existed, now masked by the present field boundaries. The evidence for the enclosure circuit is derived from three principle sources:

Geophysical Surveys

This shows the northern and northeastern course of the circuit and the rounded north-east corner and part of the eastern line most clearly. Here the survey clearly shows a pair of parallel ditches, approximately 7-8m apart although there is no signature indicative of an accompanying wall or robber trench and an earth rampart is therefore assumed. One most notable feature is an apparent offset of the ditches either side of the presumed northern entrance, allowing the passage of road Margary 541a, and, whilst the assumed position of the southern entrance is masked by a modern field boundary, its location can be fixed precisely by the clear line of the roadside ditches. The lack of parallel ditches suggestive of roads or tracks to the east

and west of the enclosure suggests that no entrances were provided on these sides and in this respect the enclosure strongly resembles the 2nd century AD earthwork at Neatham in Hampshire (Millett & Graham 1986).

Modern Field boundaries.

The western line of the main enclosure circuit is defined by the present field boundaries of 'Little Blacklands' and 'Great Blacklands'. The south-west angle is preserved in the corner boundary between 'Great Blacklands' and 'The Grove'; and the southern line by the boundary sub-dividing 'Great Blacklands', where David Isaac recalls filling a trench or ditch. This fossilisation of the circuit suggests the enclosure survived as a physical feature into the medieval period and possibly beyond. The eastern line of the circuit is also reflected in the field boundaries dividing both 'Blacklands' from 'Well Vernal' and 'Bell Mead' although here the field boundaries and the gradiometry do not agree in precise detail.

Earthworks

The south-west corner of the enclosure, along with part of the southern and western sides are still visible as low earthworks. This is most clear around the south-west corner where a modern pond at the junction of 'The Grove', 'Great Blacklands' and 'The Laggar' may have formed in the former ditch of the circuit (Corney, pers. comm.). Further subtle earthworks of unknown origin are visible in the southern part of 'Great Blacklands', 'The Grove' and 'Well Vernal' (*ibid*). The northern line of the enclosure circuit appears to have been reduced at a later stage in the development of the site. Immediately to the east of the north entrance, the gradiometer survey recorded the plan of a substantial stone structure, Geophysical Feature S16, measuring some 20 m by 12 m and partly overlying the inner ditch and

the presumed position of the associated rampart. This slighting may not have been applied to the rest of the circuit as, significantly, the remaining three sides are still preserved in the modern field boundaries and, as noted above, still feature as low earthworks.

Although rectilinear or square ditched enclosures of the form located at Hall End may appear to be superficially similar to Roman military constructions, the available dating evidence would not support this interpretation. The Roman coin list begins with Flavian issues and the apparent absence of Claudian or Neronian issues and associated pre-Flavian military metalwork argues against an early military origin. Additionally, the area enclosed, at 6.5 ha (16.5 acres) is large for a fort whilst the offsetting of the ditches as recorded at the northern entrance is also rare in a military context in Britain, but does have parallels with other sites of a probable 'official', but primarily non-military function. The morphology of the archaeology and the current dating evidence suggests a somewhat later context, most probably in the 2nd century AD, and is not without parallel elsewhere in southern Roman Britain. The construction of *mansiones* and *mutatio*s, associated with the *cursus publicus* and local administrative functions is well attested in Roman Britain (Black 1995). Earthwork enclosures associated with such structures are known at a number of sites such as *Cunetio* (Corney 1997), Neatham (Millett & Graham 1986) and Crab Farm, Shapwick (Papworth 1997). The available dating evidence for these three sites all points to construction in the latter part of the 2nd century and all are most likely associated with *mansiones*. At *Cunetio* the circuit encloses 6ha (14.7 acres); Neatham 2.7ha (6.6 acres) and Crab Farm 3.5ha (8.5 acres). At the latter site, the enclosure is of triple ditch form and the south west entrance bears strong similarities with Hall End, being marked by a pronounced offsetting of the ditch system either

side of the main road forming the axis of the site (Papworth 1997, Figure 6.). At Neatham, Crab Farm and *Cunetio* the earthwork circuits are all backfilled by the end of the 3rd century. In view of these significant similarities it is likely that the enclosure at Hall End is associated with the 2nd century AD consolidation of the province, commencing under Hadrian (117-138) and continued by his successors. Hall End would be an ideal location for a *mansio* or *mutatio* that additionally functioned as a local market and service centre for what is now the bulk of South Gloucestershire.

Internal Morphology of the Enclosure

Inside the core enclosed settlement a series of rectilinear enclosures or compounds, set at 90° to the main road, strongly suggest organisation and planning. These plots also extend beyond the southern line of the defences where they also appear to define a series of rectilinear plots. At least one side street or lane, up to 60m in length and 6-7m wide is visible on the west side of 541a, between E5 and E6 in 'Little Blacklands' and evidence of a similar side road was indicated by a cobbled surface in 2004 Trench 1. The geophysical data and trial trenches indicate that most of these plots or properties contained principal stone or timber buildings fronting onto the main north-south road with further associated buildings and structures, for example the probable ironworking structure located in 2004 Trench 1, set out to the rear of the properties and off the side streets.

Stone Structures

A number of stone buildings are visible on the geophysical survey, most of which are within the circuit of the earthwork enclosure at the road frontage although not necessarily contemporary with it. Three of these structures were confirmed by the 2002 trial trenches. To the north of the enclosure circuit, close to the south bank of

the Ladden Brook, a complex of structures, Geophysical Features S13-14 and S18-19, reflect an area of particular interest. On the west side of the road, Feature S14 takes the form of a three-sided courtyard building, approximately 25 m by 25 m in plan with a south range subdivided into a series of small, evenly sized rooms. To the north of this building a further east-west structure has at least three large rooms. In plan, this complex is similar to known *mansiones* from Roman Britain and beyond (Black, 1995) although its location, outside the main earthwork enclosure, is difficult to reconcile with this interpretation unless it post-dates the main period of the defended area. *Mansiones* will generally have included bath-suites and the location of this structure, adjacent to the modern Ladden Brook and possibly immediately adjacent to a former channel of the same (Geophysical Feature F2) would have allowed easy access to a reliable water supply for a bath house. Alternatively, the riverside location does have some parallels with the rural religious complex at Nettleton on the Fosse Way in west Wiltshire. Here, a large courtyard building, set beside a stream and probably including a bath suite, may have been a 'guest house' associated with the adjacent temple of Apollo (Wedlake, 1982; Corney, 2001). Certainly, many 'Small Towns' can have a number of *foci* including religious as well as secular functions (Burnham and Wachter, 1990).

Within the enclosure, Geophysical Feature S7 is also worthy of comment. This large building, at least 40 m in length and 20m wide, is aligned east-west and was evaluated and confirmed by 2002 Trenches 3 and 4. Overall the building is of a complex plan with a central range of at least three rooms with a possible *porticus* on the north side, the ends of which are obscured by a modern field boundary and a south range that appears to be divided into at least five rooms. If the suggested northern *porticus* also had projecting wings then this structure could represent an

example of a large winged corridor structure within a 'Small Town'. Similar buildings have been noted at many 'Small Towns' (Burnham and Wachter, 1990, p20, fig. 3) and, where dated, they are generally of 3rd or 4th century date and have been interpreted as official and/or administrative buildings (*ibid*). Such structures can be built to a very high standard and feature rich decorative schemes including mosaics and painted wall plaster (*ibid*). Similar qualities are suggested at least by the architectural and masonry fragments and finds, in particular the assemblage of late Roman vessel glass, recovered from 2002 Trenches 3 and 4.

Other stone structures indicated by the magnetometer survey appear to range from relatively simple strip buildings, Geophysical Features S1-3, S10 and S25, to more complex structures such as S4-5 and S16. The latter may reflect private houses or even specialist workshops etc, whilst the former are typical of combined dwellings and commercial properties encountered in most Romano-British urban sites ranging from *Civitates* to 'Small Towns' (Burnham and Wachter, 1990, p18).

Industrial Activity

'Small Towns' appear to have frequently had a strong industrial base in addition to potential administrative, market and religious functions. The large number of geophysical anomalies indicative of hearths/ovens/kilns would be consistent with other sites of this type. Iron and lead working is especially common and is indicated at Hall End by numerous casual finds as well as the remains of structures and the extensive range of iron and non-ferrous residues located in 2004 Trench 1 (see Ivan Mack above). In each case they will have represented an important part of the servicing of the rural economy. However, the evidence for these technologies from Hall End to date does not suggest that the site was a specific or specialised industrial centre such as Charterhouse-on-Mendip or *Ariconium* north of the Forest of Dean.

The Later Roman period and General Conclusions

At Hall End, the coin list continues down to the end of Roman Britain with issues of the House of Theodosius. This is supported by the presence of late Roman shelly wares in the ceramic assemblage reported by Jane Timby. In the later Roman period sites such as Hall End appear to have taken an increasingly important role in local administration, especially in tax collection and associated official business. Being located in the heart of the late Roman province of Britannia Prima, such activities are likely to have continued into the early 5th century. The evidence from other 'Small Towns' in western Britain supports this, with sites such as Wycomb and Dorn, both in Gloucestershire, producing very late dateable assemblages (Timby 1998). Whether the site continued to be defended at this late date is unclear on the present evidence. At *Cunetio* in Wiltshire, the 2nd century earthen circuit is levelled by the late 3rd century and at some point after c. AD360 a new, massive walled circuit erected (Corney, 1997). Similarly at Dorn a rectilinear walled enclosure is constructed, probably in the 4th century (Timby 1998).

Whether Hall End continued to be defended is uncertain although the evidence indicates that part of the northern defences went out of use when Geophysical Feature S16 was built over their line. However, the survival of the west, south and eastern sides of the defensive circuit in modern field boundaries could be explained by a partial realignment on the north side and the retention of the remaining earlier circuit. Generally, later Roman 'Small Town' defences are built of stone and to date at least there is no hard evidence for such at Hall End.

The evidence gathered from the site clearly indicates that the Roman roadside settlement at Hall End was a significant 'Small Town' with both an administrative and market/manufacturing function. Known and probable villas and rural settlements in South Gloucestershire such as Tockington, Horton, Cromhall, Lower Woods, and Badminton would have looked to the site for local services. In addition to these known sites the writer has little doubt that further villa and other 'non-villa' settlements still await discovery in the hinterland of South Gloucestershire and that the apparent absence of substantial Roman activity in this area, typified by the distribution plan of Aston and Isles (1986, fig. 5.1), reflects a general lack of large scale aerial reconnaissance or organised field survey as opposed to a genuine lack of Roman settlement and related activity.

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A ROMAN ROADSIDE SETTLEMENT AT HALL END, SOUTH GLOUCESTERSHIRE
SURVEY & TRIAL EXCAVATIONS 2001-2004

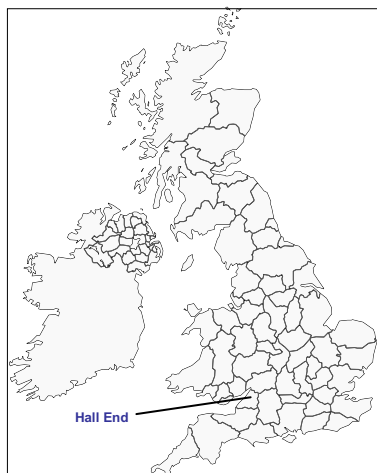
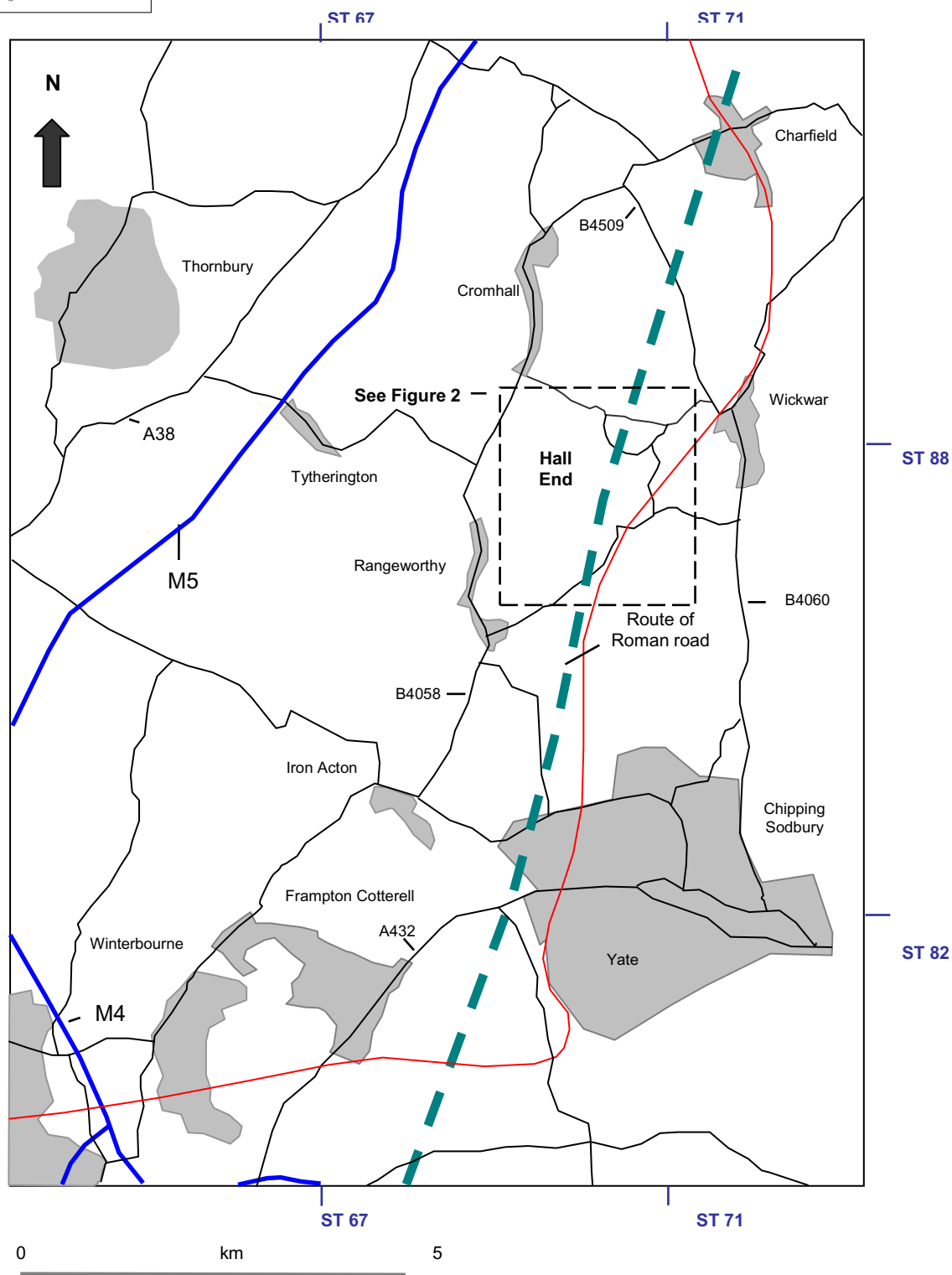
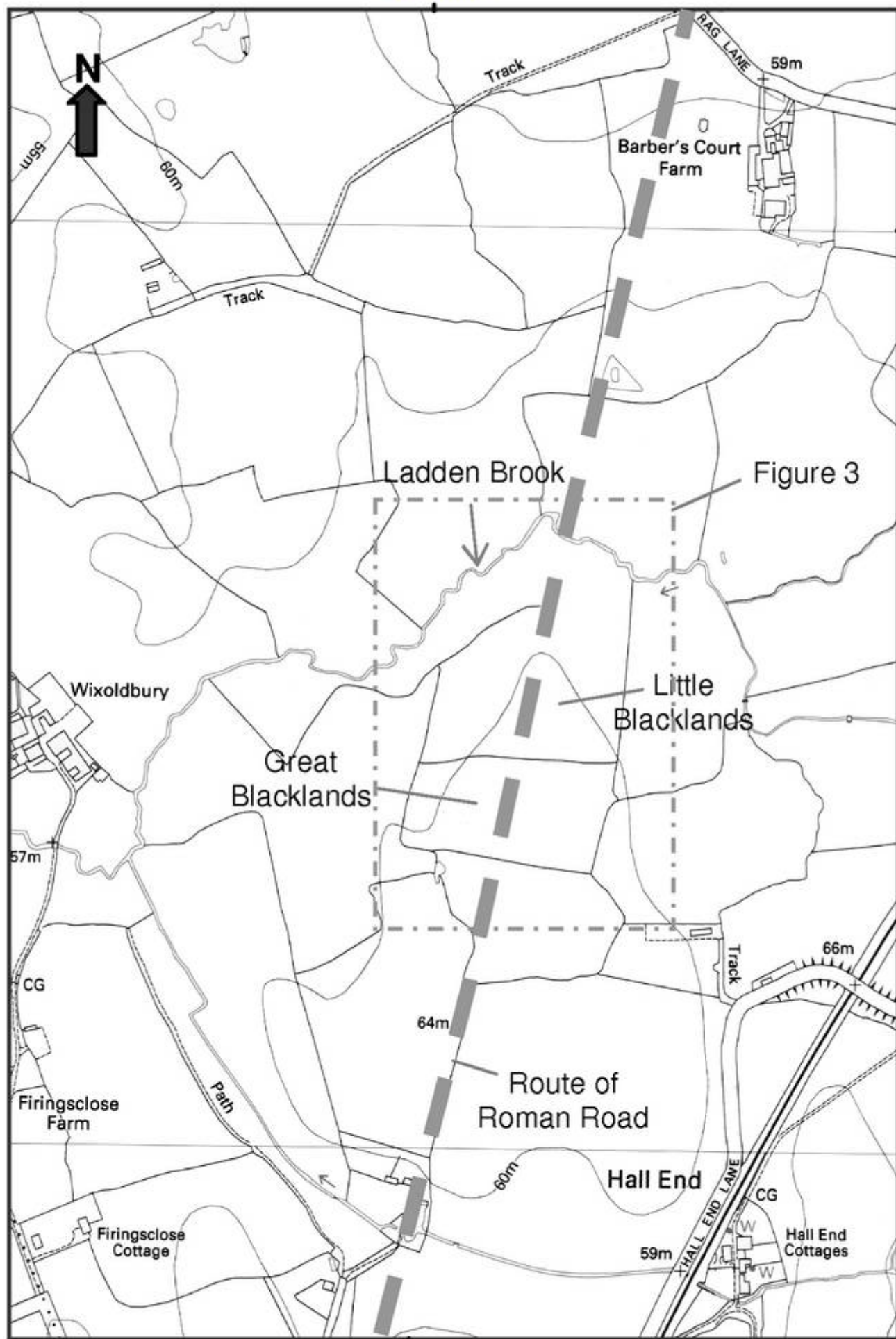


Figure 1 - UK and General Site Location



ST7050



ST8800

Figure 2

Hall End - Site Location Plan 2

ST8700

ST7050

0 m 400

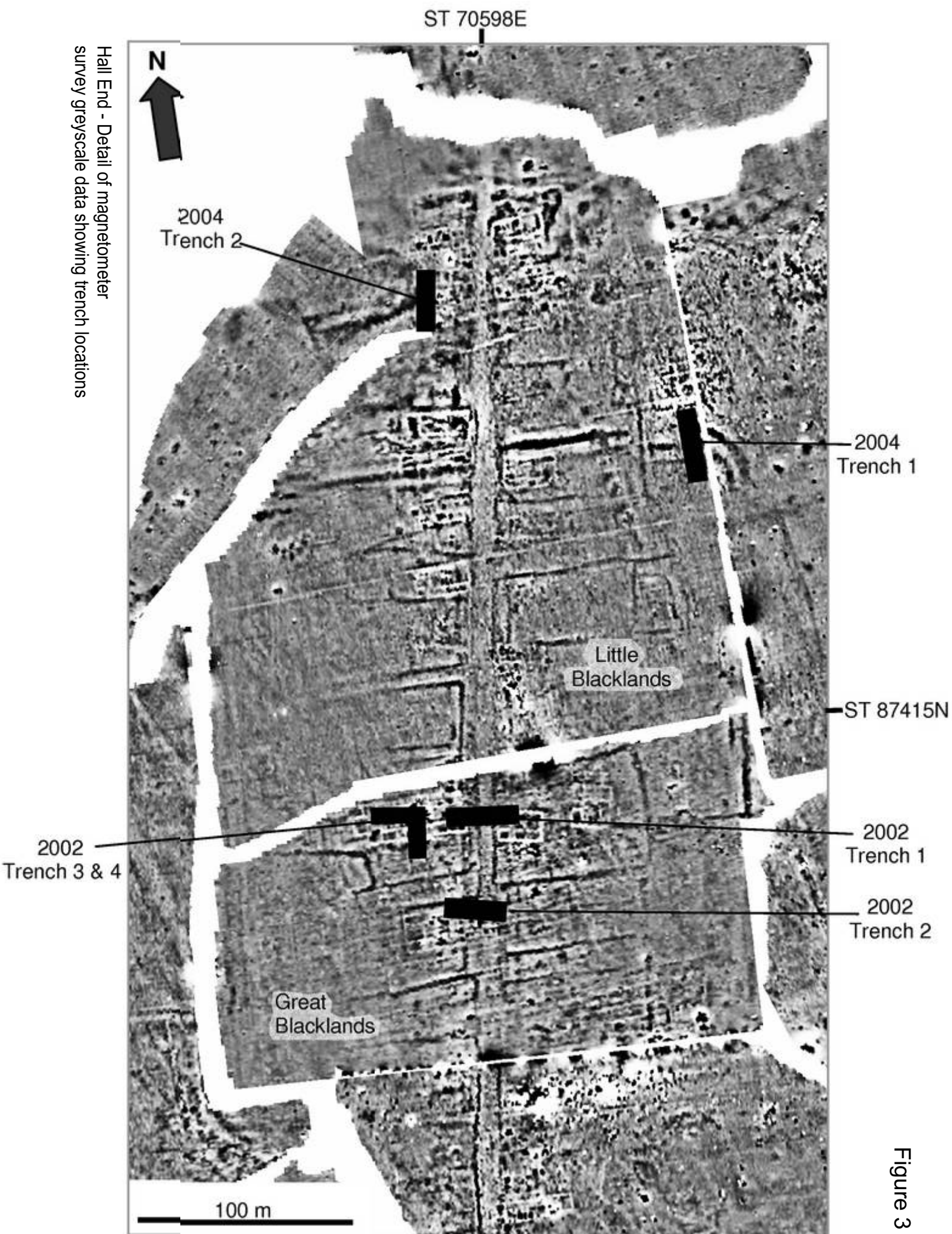


Figure 3

Figure 4

Hall End - Geophysical Survey Areas 2001-2004

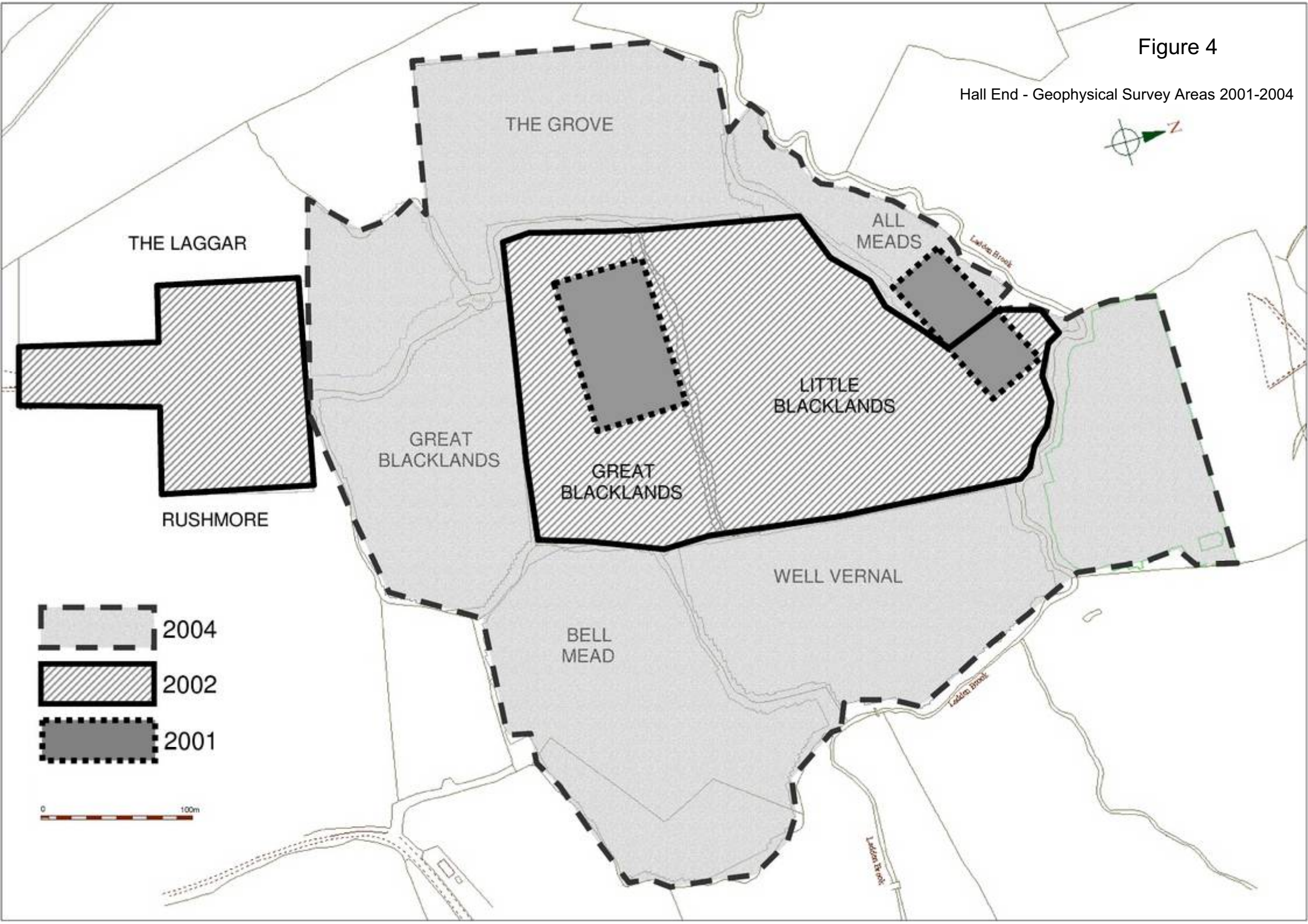


Figure 5

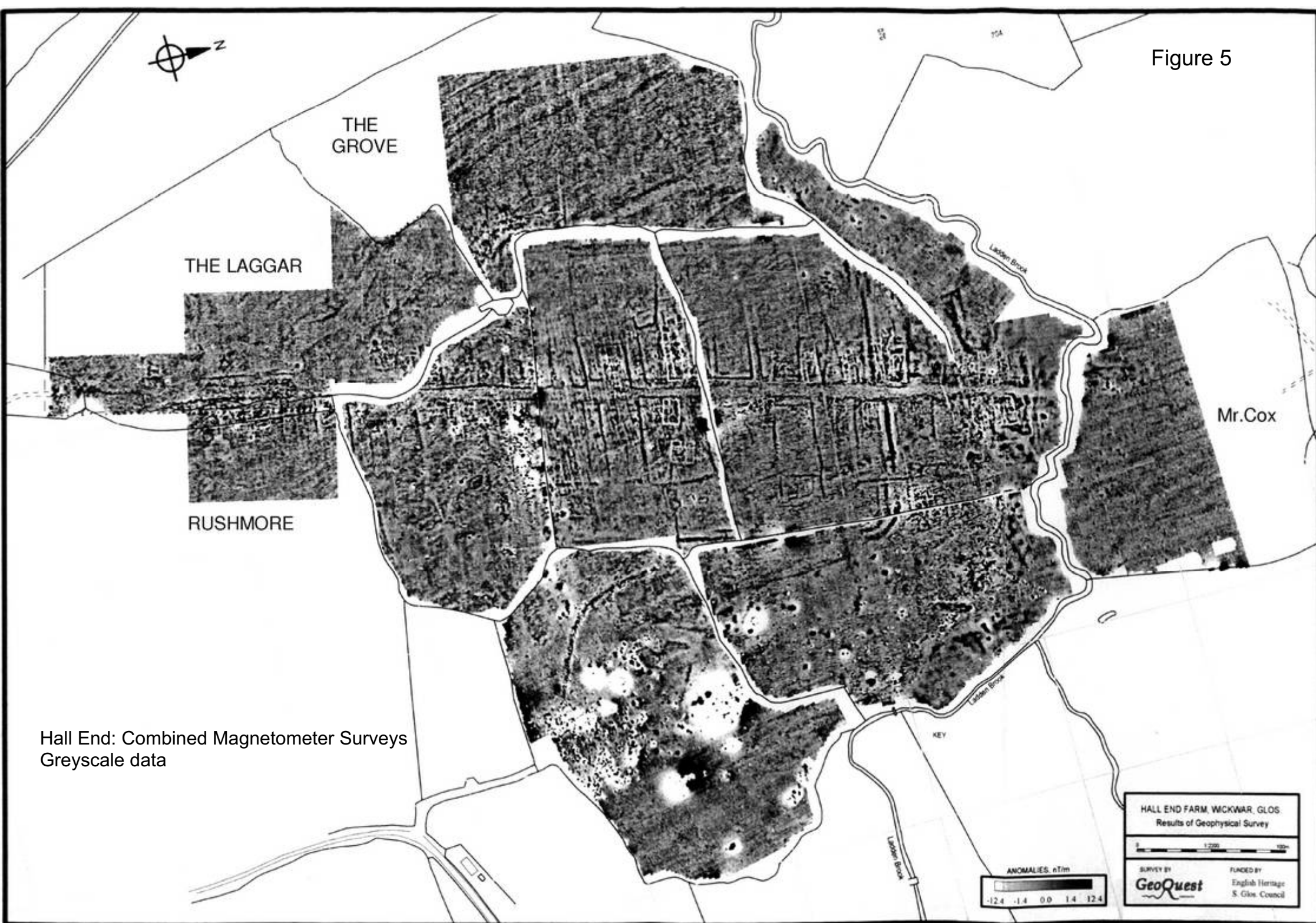









Figure 6



Hall End: Interpretation of Geophysical Features

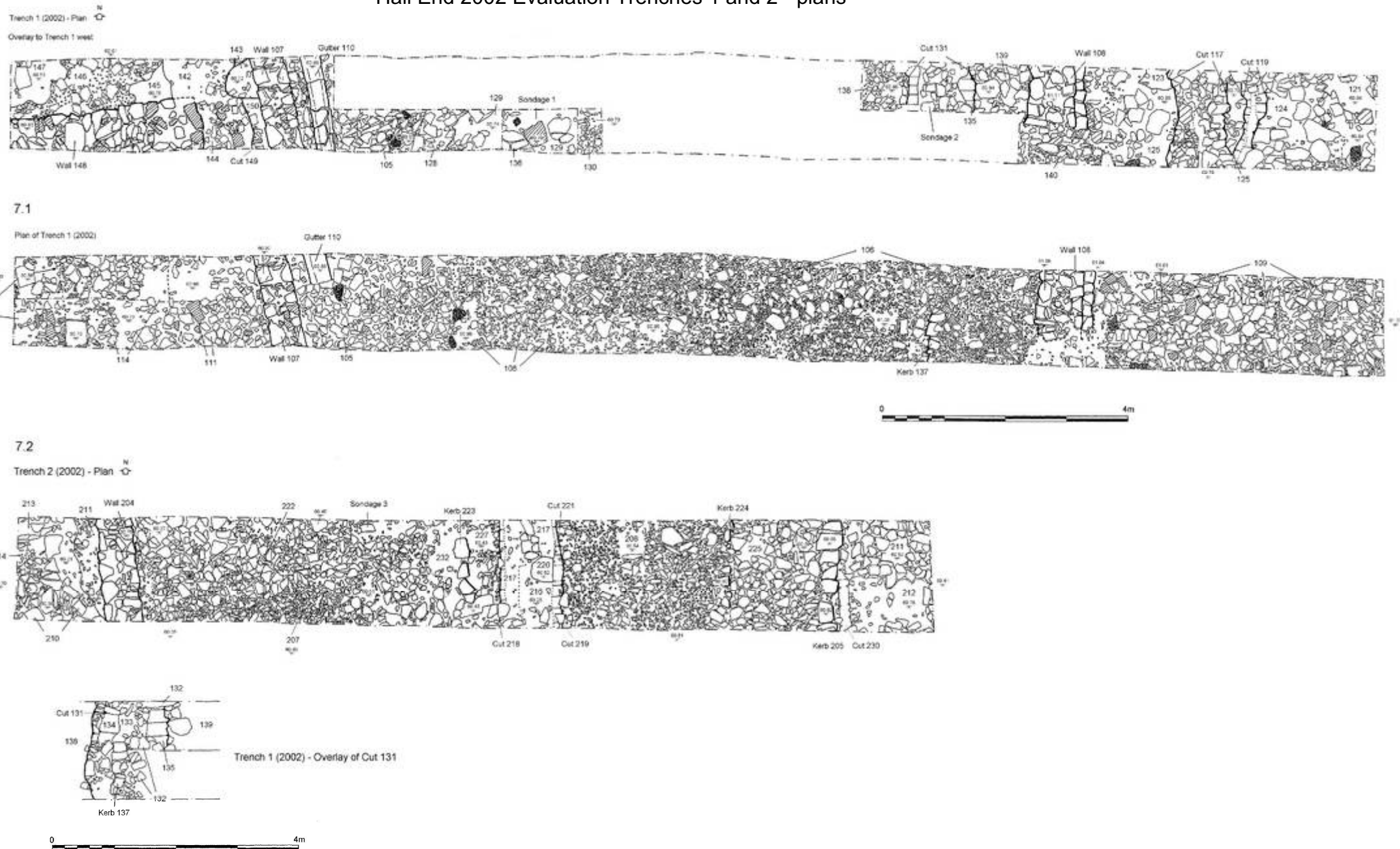
-  Soil-filled ditch
-  Soil-filled pit or channel fill
-  Burnt feature
-  Rectilinear cluster of anomalies (building/structure?)
-  Mineral trench
-  Wall footing or trackway
-  Scatter of iron or burnt debris

S=Structure E=Enclosure R=Road F=Feature

0 100m



Hall End 2002 Evaluation Trenches 1 and 2 - plans



Trench 4

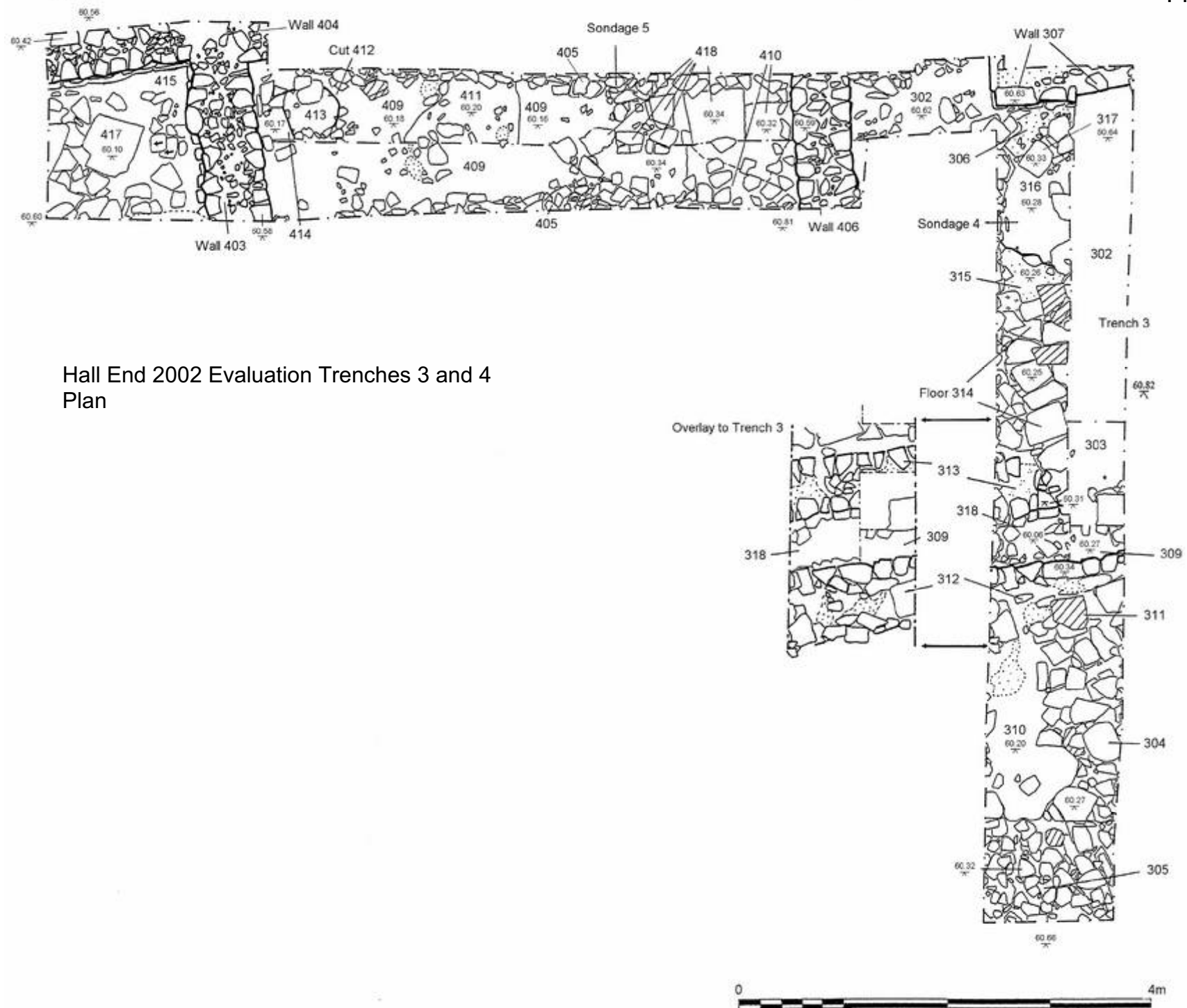


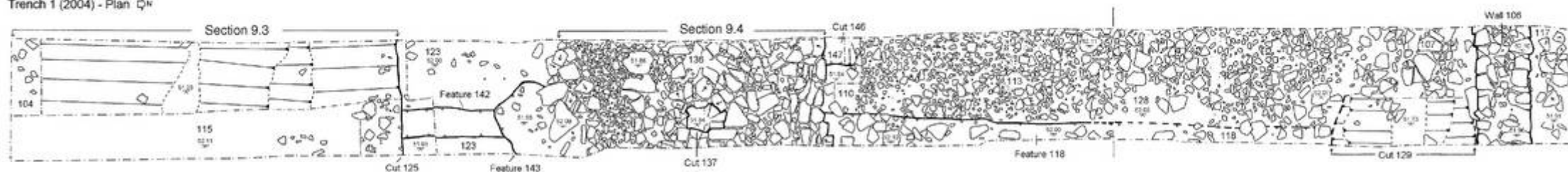
Figure 8

Hall End 2002 Evaluation Trenches 3 and 4
Plan

Hall End 2004 Evaluation Trenches 1 and 2 - Plans

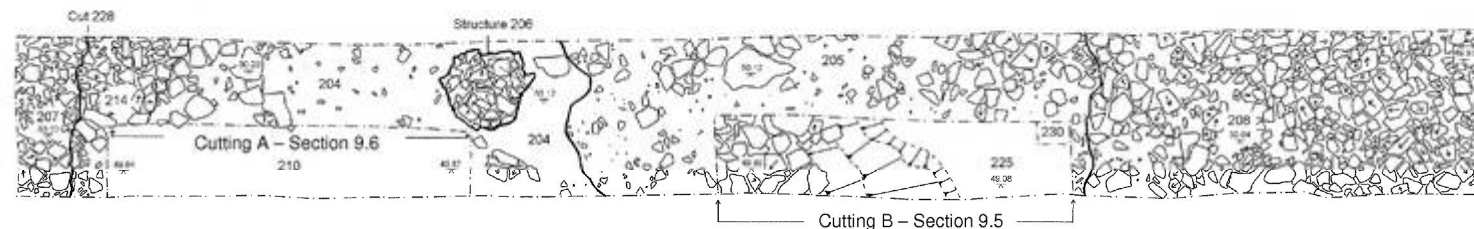
9.1

Trench 1 (2004) - Plan



9.2

Trench 2 (2004) - Plan



Hall End 2004 Evaluation Trenches - Section Drawings

Figure 9.3 – 2004 Trench 1, Ditch 125

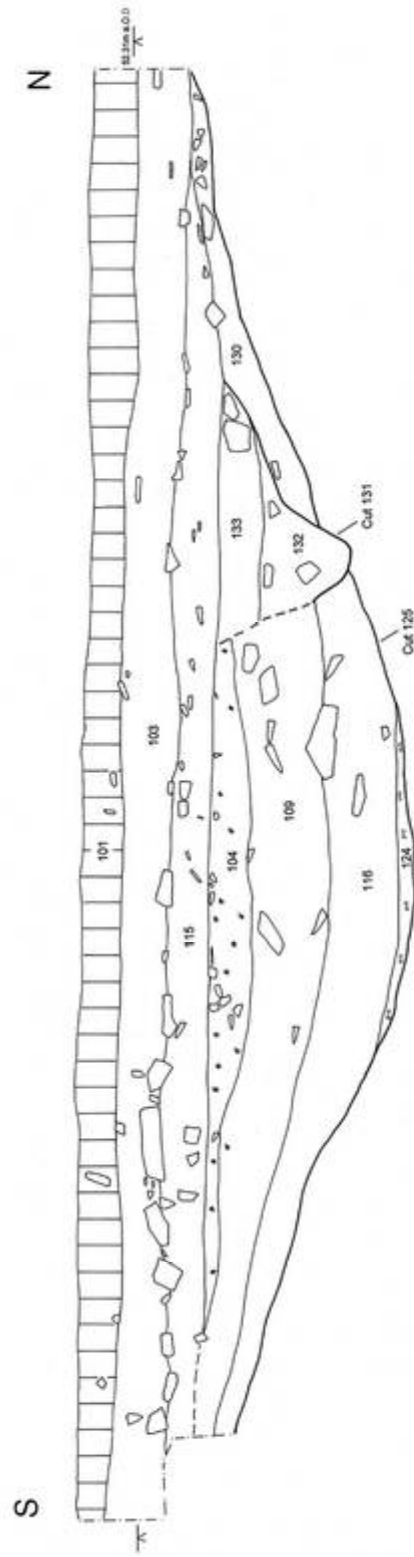


Figure 9.4 – 2004 Trench 1, Structure 136

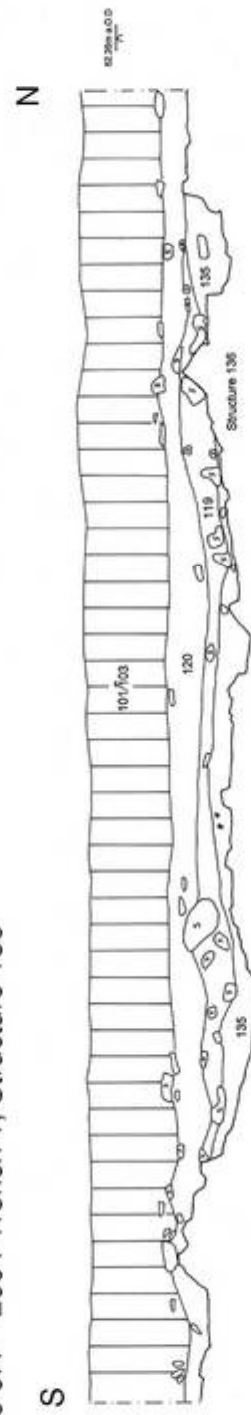


Figure 9.5 – 2004 Trench 2, Cutting B, Cut 229

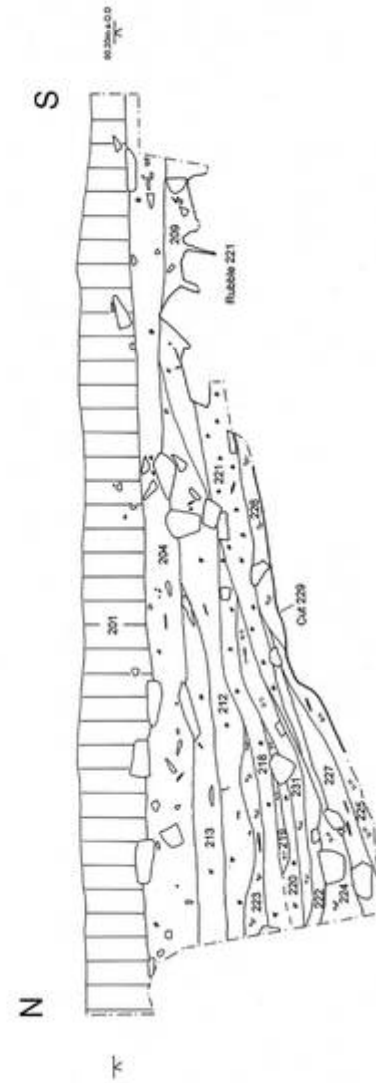


Figure 9.6 – 2004 Trench 2, Cutting A, East facing section

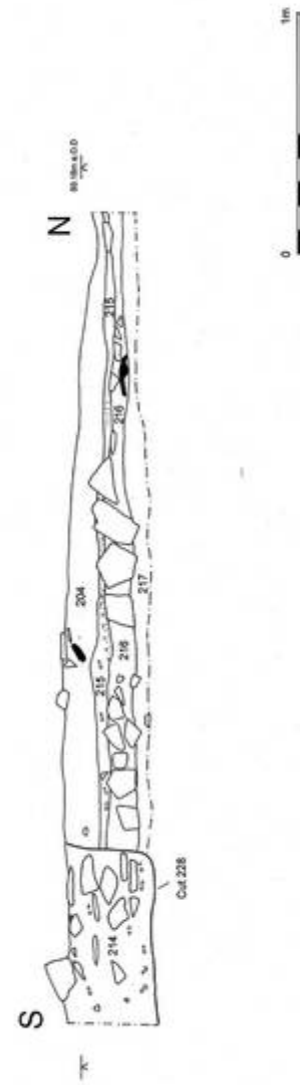


Figure 10

Hall End : Details from Magnetometer surveys

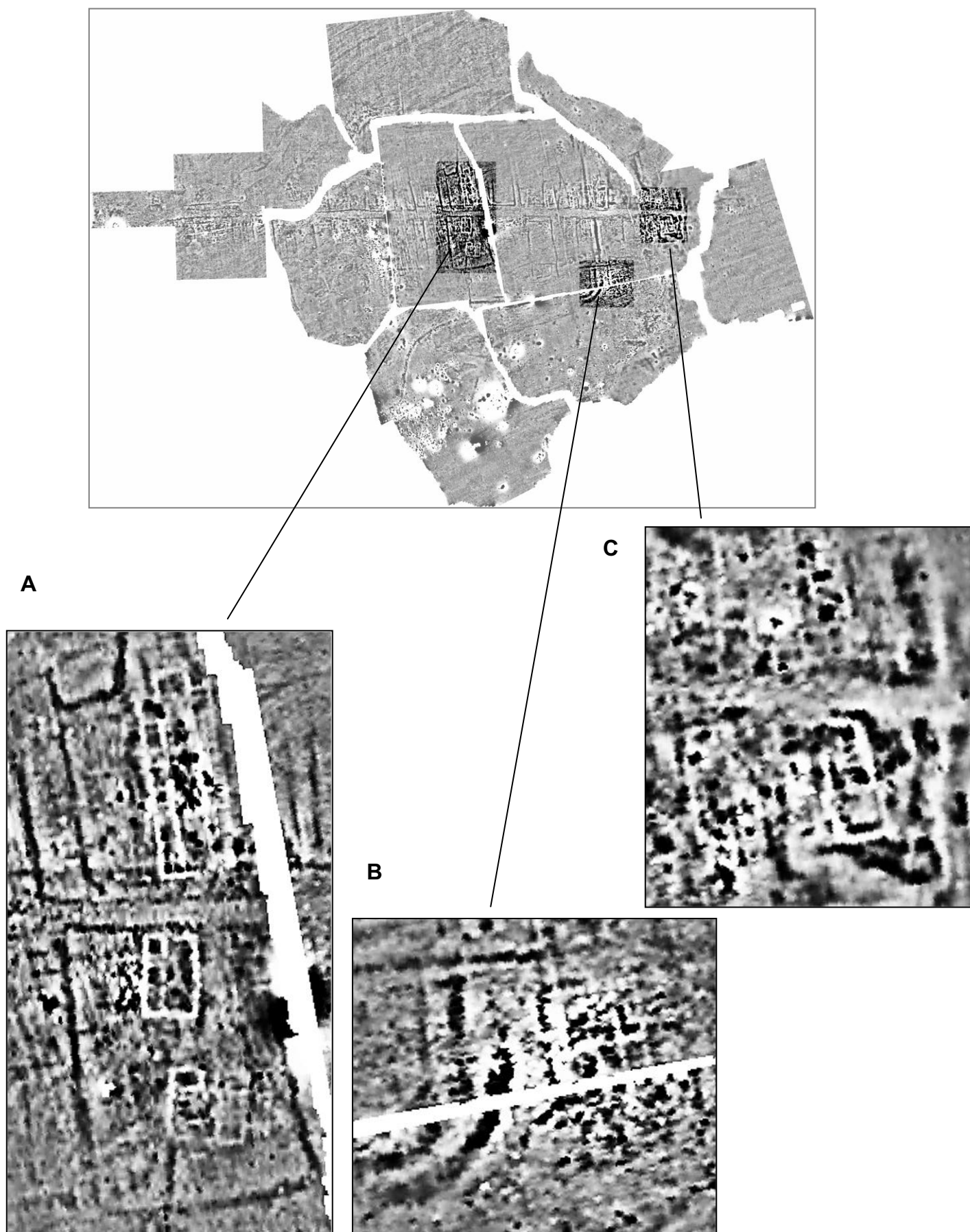
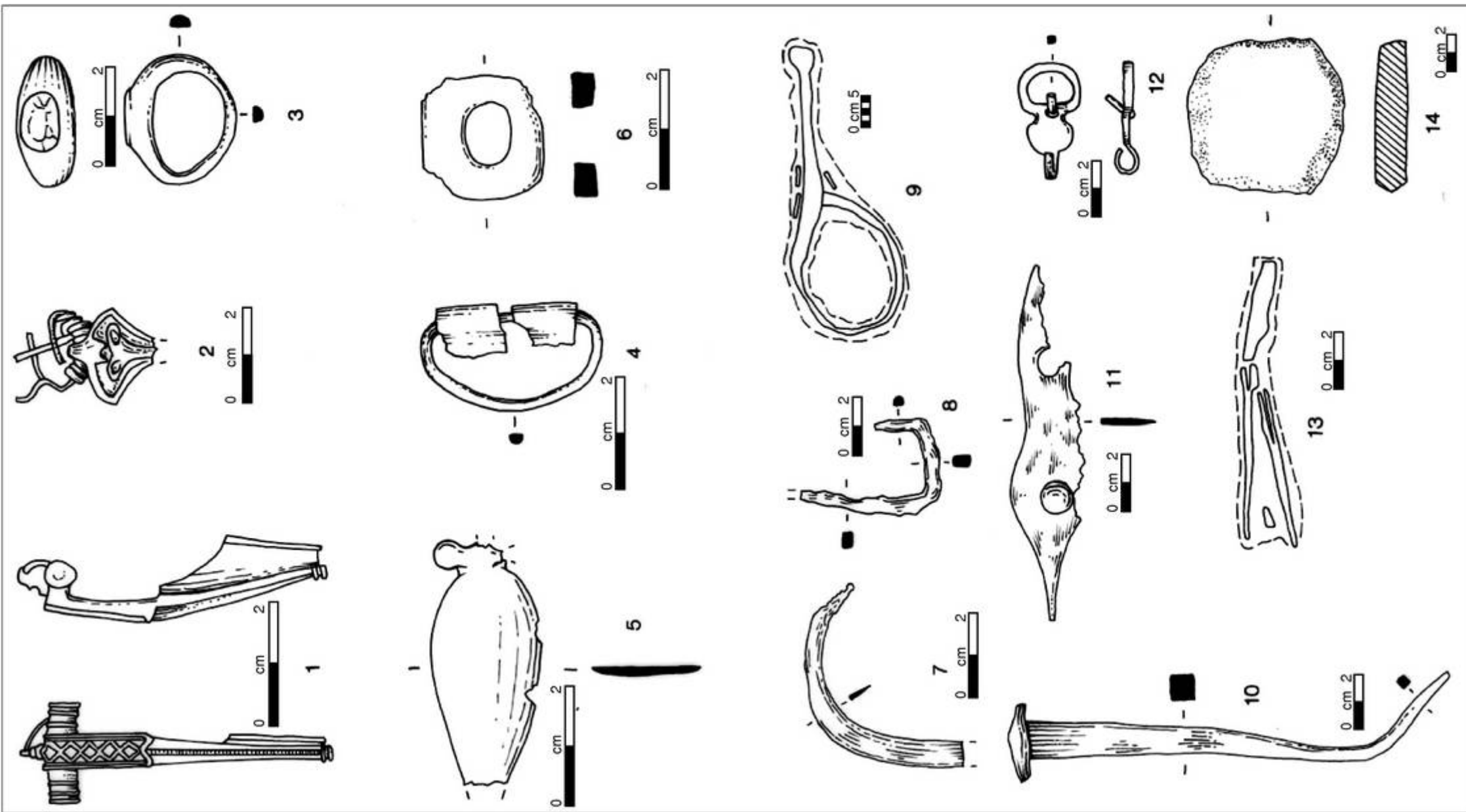


Figure 11

Finds Illustrations - Metalwork



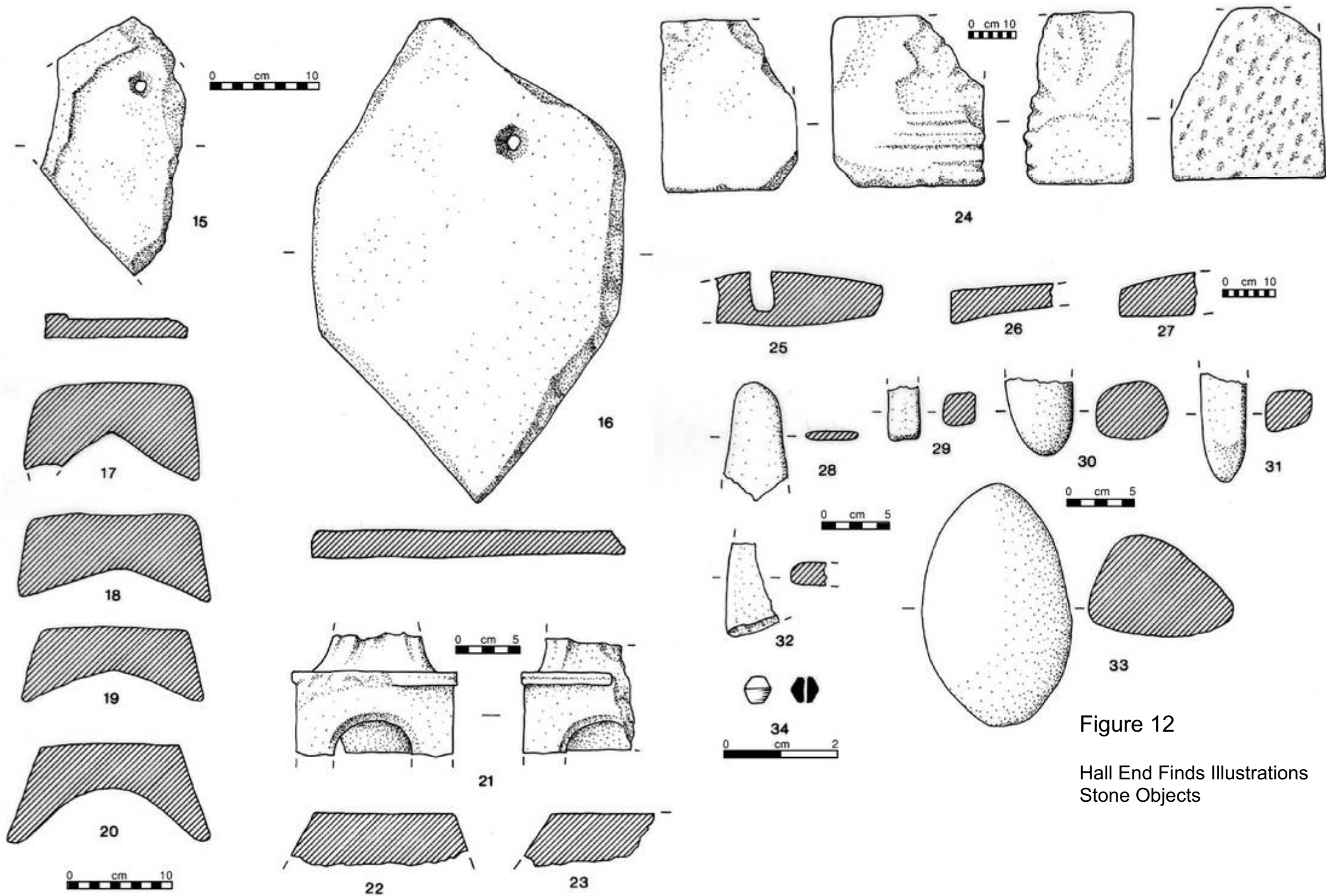


Figure 12

Hall End Finds Illustrations
Stone Objects

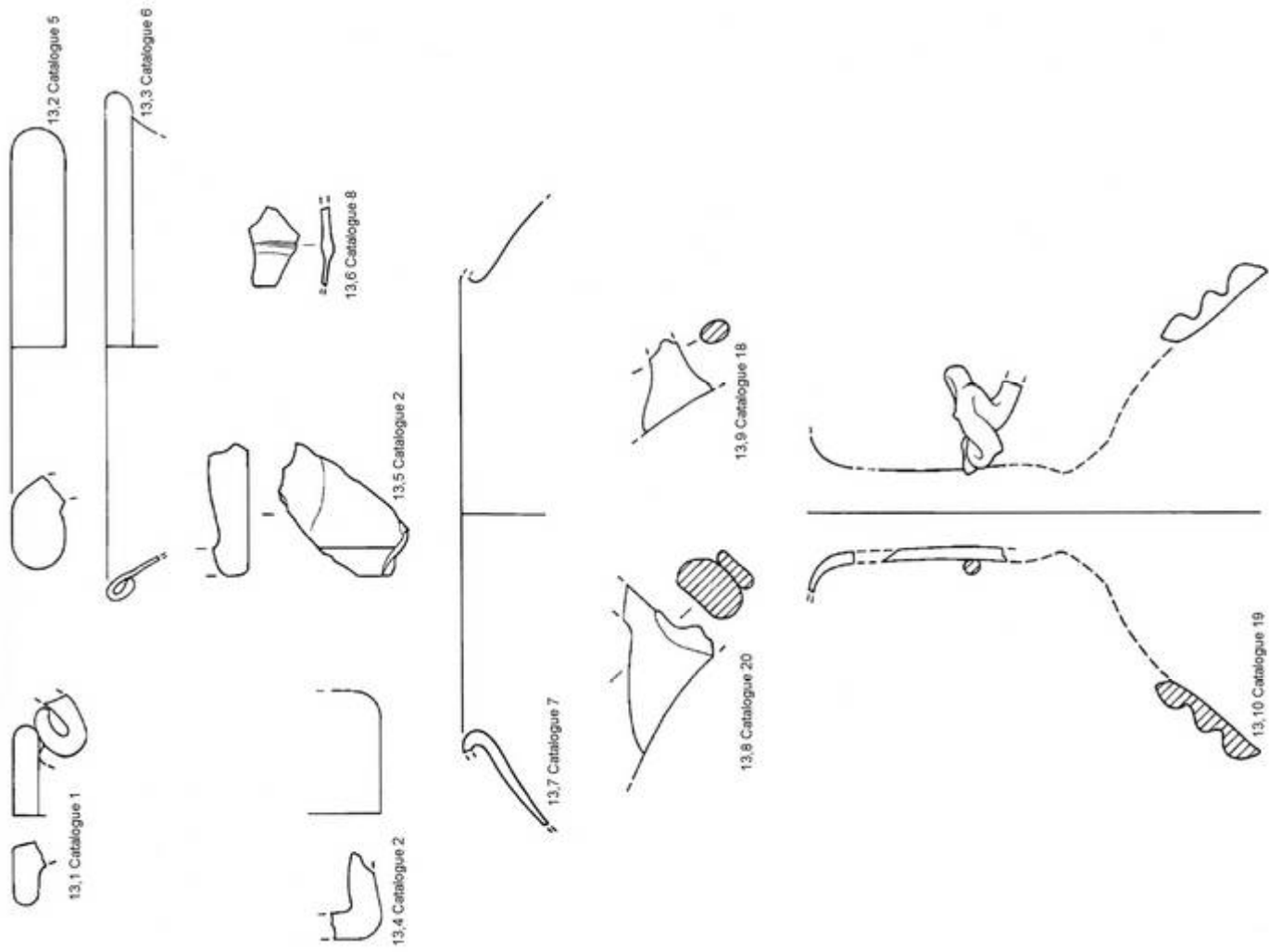


Figure 13

Hall End Finds Illustrations

Glass objects



Figure 14,34

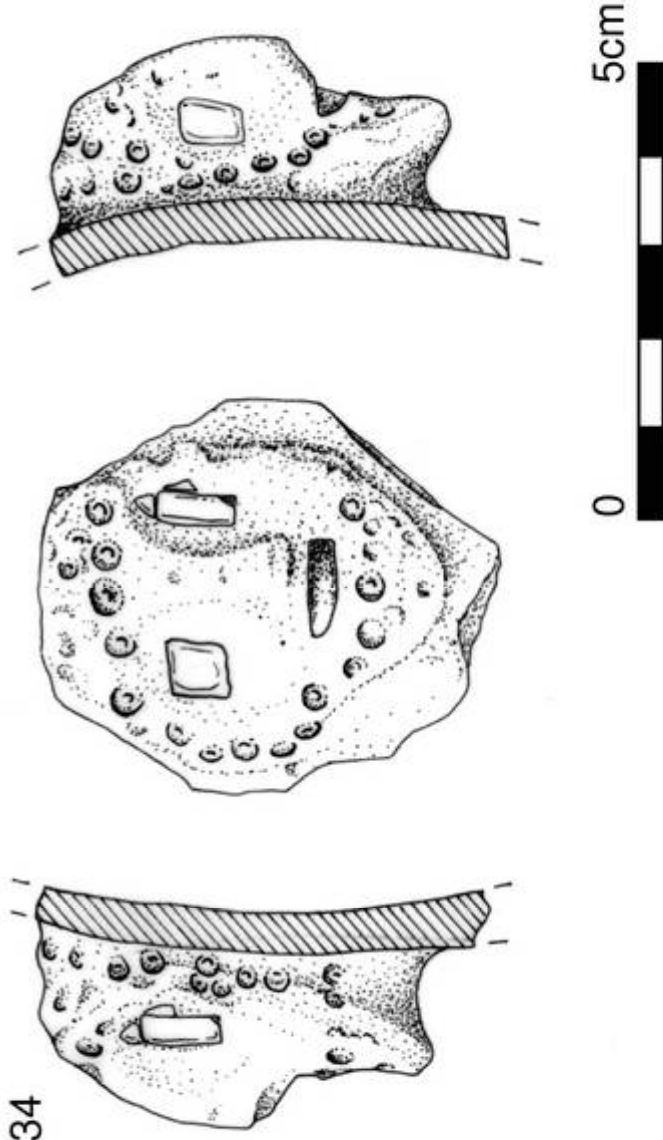


Figure 14,35

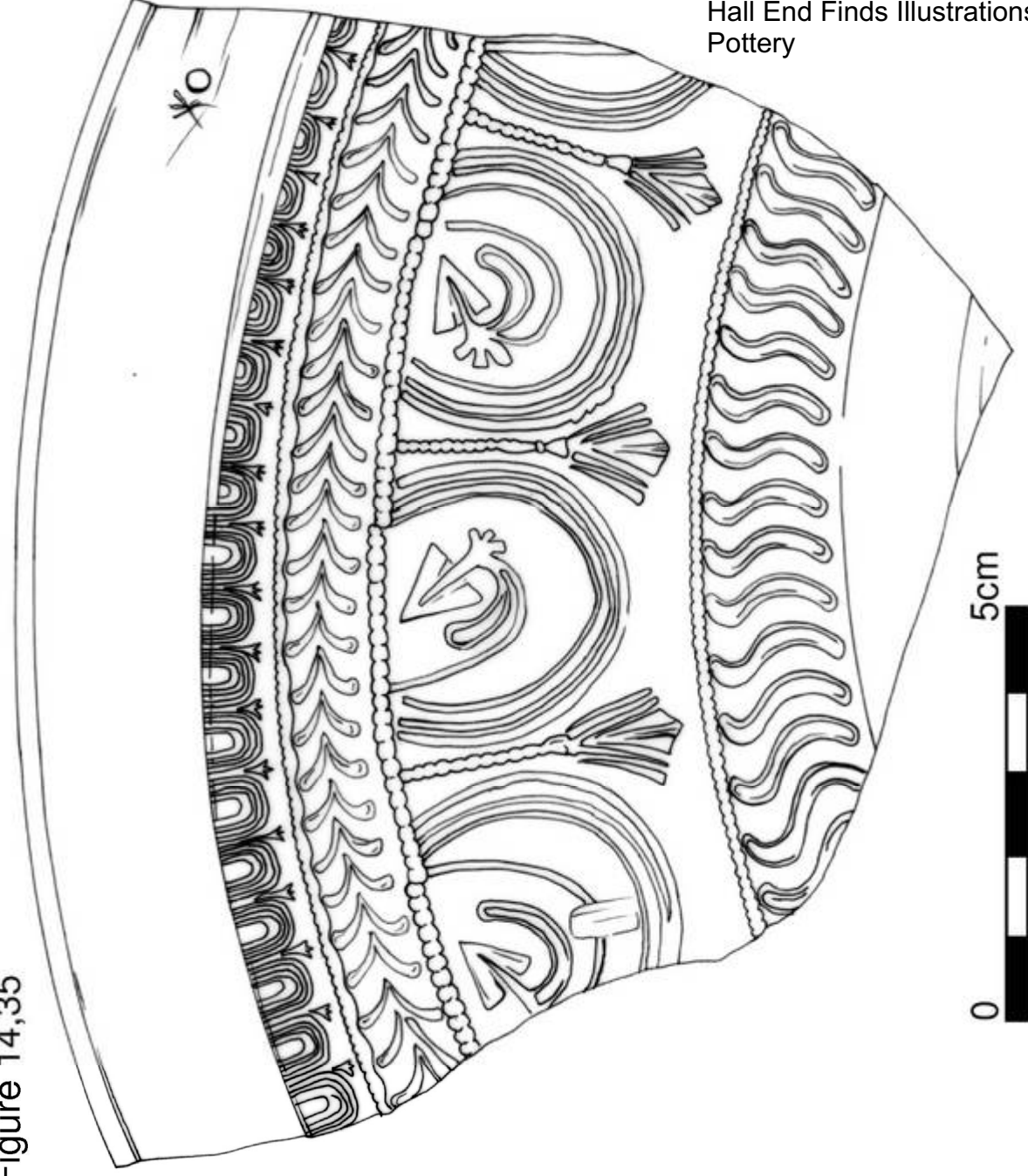


Figure 14

Hall End Finds Illustrations
Pottery

Figure 15

Hall End Finds
Decorative Venus figure



scale in cms

Figure 16

Hall End finds
reverse side of Venus figure
showing the Roman gods of the week



scale in cm

Figure 17

Hall End 2002 Trench 2
showing wall foundation and
limestone gutter



Figure 18

Hall End 2002
Trenches 3 and 4
during excavation





Figure 19
Hall End 2004 Trench 1
as excavated



Figure 20

Hall End 2004 Trench 1
Ditch 125 in east facing
section



Figure 21

Hall End 2004 Trench 1
Structure 136