Neolithic and Bronze Age Occupation and a Middle Iron Age to Early Roman Settlement at Low Park Corner, Chippenham, Cambridgeshire

Archaeological Evaluation Report

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Neolithic and Bronze Age Occupation and a Middle Iron Age to Early Roman Settlement at Low Park Corner, Chippenham, Cambridgeshire

Archaeological Evaluation

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Summary

Between the 6th and 15th January 2009 OA East conducted an archaeological evaluation on land at Low Park corner, Chippenham, Cambridgeshire in advance of the construction of agricultural buildings, an area of hard standing, a new access road, one dwelling, associated services and landscaping.

Twenty-eight trenches were excavated. The trenches were targeted, in the main, over features identified in the geophysical survey (Masters 2009). The site was on land between 16m and 20.5m AOD. There was a former stream, the Lee brook, which meandered roughly south to north along the eastern boundary of the site and this stream had a small associated flood plain. About half of the site comprised a gentle east facing slope to this stream. Directly to the north of the development area, the former Street Way, a prehistoric and Roman routeway, ran north-east to south-west.

The archaeology found in the evaluation comprised two main periods. The Neolithic and Bronze Age remains comprised several different components including a truncated Early Bronze Age cremation. There were features and layers related to occupation, with flint, pottery and other artefacts recovered from across the site. A limited number of pits were found dating to the Neolithic period, and a relatively large quantity of worked flint, including cores and flakes.

The second main archaeological period represented was a Middle Iron Age to Early Roman settlement found across the site parallel to the former Lee Brook. The settlement appears to have begun around the 4th or 3rd century BC, perhaps with sporadic occupation at first, and is largely represented by pits with no definite enclosures dating to this phase. The Late Iron Age to Early Roman period (from *c*.100BC to the middle 2nd century AD) shows far greater evidence for occupation, with possible ring gullies and structural post holes in four trenches over a 250m distance along the middle part of the site. The main occupation ran in a linear north to south direction for 400m and was *c*.150m wide. Fields ran off from this main occupation area to the west.

There was extensive evidence for iron working on the site, principally smithing, in both the Late Iron Age and Early Roman periods with the possibility of bog ore being extracted for smelting. Soil samples suggest that cereal crops including wheat were being grown in the area and the widespread cattle bones suggest cattle were the prime animal being reared, or consumed. Artefacts including two Early Roman brooches and pottery imports suggest the settlement was of average or above average wealth.

1 INTRODUCTION

1.1 Location and scope of work

1.1.1 The proposed development includes the construction of agricultural buildings, an area of hard standing, a new access road, one dwelling, associated services and landscaping (Fig. 3). To assess the impact of this proposal an archaeological evaluation comprising a geophysical survey and trial trenching was conducted at Land off Low Park Corner, Chippenham respectively in December 2008 and January 2009 (Figs. 1 and 3). To give an indication of the impact of development, Figure 3 has been drawn with the area of proposed development overlying the geophysical survey and evaluation trenches as well as showing the depths of archaeological features encountered below ground.

1.1.2 This archaeological evaluation was undertaken in accordance with a Brief issued by Eliza Gore (Gore 2008) of Cambridgeshire County Council (CCC; Planning Application 08/00252/FUM), supplemented by a Specification prepared by Richard Mortimer (Mortimer 2008) OA East (formerly Cambridgeshire County Council's CAM ARC).

1.1.3 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *Planning and Policy Guidance 16 - Archaeology and Planning* (Department of the Environment 1990). The results will enable decisions to be made by CCC, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.

1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography (with Steve Critchley)

1.2.1 The site is directly to the west of and partly within the flood plain of the former Lee Brook (Fig. 2). The solid geology is composed of the Cretaceous Middle Chalk which is overlain by Pleistocene Terrace deposits of the rivers Snail and Kennett. The site is mapped as containing the First Terrace in the lower portion of the site overlain upslope by the Second Terrace (BGS 1981). Both are described as being composed of water lain poorly bedded sandy flint and chalk rich coarse gravels. The Second Terrace deposits are described as being cryoturbated which was noted in some of the trenches. Within Trenches 3 and 21 (see Figure 3) natural ore from iron panning was retrieved and these samples were sent to David Starley for analysis.

1.2.2 Two distinct levels of sandy colluvium/subsoil were recorded intermittently across the site, one cut by Iron Age and Roman archaeological features, the other sealing them. There was also a possible periglacial channel within Trench 20 (Fig.3). The earlier subsoil layer could date to the Bronze Age or Neolithic periods and may represent the pre Iron Age ground surface. In contrast, the windblown sand/subsoil sealing the Iron Age/Roman features may be the result of fine windblown aeolian sands derived from the arable agricultural exploitation on the Terrace deposits soils. Where the excavation was sited is a classic area for the deposition of windblown sands against the escarpment to the east of the site which would cause wind velocities to fall and deposit the heavier sand component. It is important to note that the slope on the site was gentle and the generally thick layer of sandy subsoil was unlikely to be derived from

hillwash although a few of the gentle spreads may represent an infilling of slight hollows.

1.2.3 The former Lee brook meandered along the eastern boundary of the area, and it's river cobble bed was encountered at the base of Trench 4 (Fig.3) at the central eastern boundary and at the extreme north in Trench 9. Topographically, the development area falls from west to east and south to north with a difference of over 4m across the site. This general detail masks that there were subtle changes in height within the site. The ground level was at its highest at 20.67m at the extreme western side at Trenches 27/28. There was a small flat plateau here for 100m northwards and south-eastwards with ground level at 20.29m (Trench 25) and 20.45m (Trench 22). There is then a gentle fall eastwards to Trench 1 (18.53m) and northwards to Trench 14 (19.30m). There is then a moderate slope downwards from Trench 14 northwards to Trench 11 (16.53m) and eastwards Trench 9 (16.24m).

1.3 Archaeological and historical background

Introduction

1.3.1 Lying 5km north of Newmarket, Chippenham is mentioned in Domesday as *"Chipeham",* meaning '*Cippa's* farm' (Reaney, 1943). It lies between the valleys of the rivers Kennet and Snail, both of which give their names to neighbouring Parishes. Chippenham also contains the shrunken hamlet of Badlingham. The village is small, consisting of little more than a single street and the expanse of Chippenham Park, which was enclosed between 1696 and 1702 (Way 1997).

1.3.2 The proposed development site lies outside the south-eastern edge of Chippenham Park to the west of Stannel Wood which is shown on the 1820 OS draft 1" (Old Series). The area of Stannel Wood is shown as Stonehill on Spufford's map, The Lordship of Chippenham 1544, based on the map of 1712 (Fig. 2; Spufford 1965). The site was field walked as part of the Fenland Survey project but no artefacts were recovered (Hall 1996).

1.3.3 The text below deals with the main known settlements sites and features within and around the development area (Fig. 2). Find spots have not been included except for two Iron Age coins and a Roman brooch which were recovered by metal detectors within the development area and were reported to the Portable Antiquities Scheme (see below).

Earlier Prehistoric Evidence (Mesolithic to Bronze Age)

1.3.4 The site lies in a triangle of land, between the former Lee Brook running roughly south to north on the eastern boundary of the development area and the former Street Way, a prehistoric and Roman routeway running northeast to southwest directly to the north (Fig. 2). There were two watercourses within the parish (Fletcher 2002, 370). The Lee travelled across the parish meandering mainly in a south to north direction before joining the River Kennet whilst a second stream flowed into Chippenham fen within the extreme north-western part of the parish (Fig. 2). This is important as it has been suggested that lithic sites in Chippenham parish generally lie close to water (Hall 1996, 99). Three of the seven lithic sites Hall cites in 1996 were adjacent to the former Lee Brook (Hall 1996 sites 5 (HER 4339), 11 (HER 10233) and 12 (10234)) with the former *c.*100m to the south of the development area. Other lithic sites include Hall 1996 sites

6 (HER 7919) and 9 (HER 10231), 1km and 1.5km to the south and north of the development area respectively. Fieldwalking 1.5km to the south of the development area found 9 prehistoric flints including one core (HER 1079; Taylor 1992. More flint was recovered in Kennett parish 1km to the east of the development area (HER 10230; not on Fig) but not in significant quantities.

1.3.5 At least three major prehistoric routeways crossed Chippenham parish, Icknield Way which formed the southern boundary of the parish, Ditchway and Street Way (Fig. 2; Spufford 1965; Spufford 1966). It has been suggested that the numerous barrows and tumuli placed within Chippenham parish testify to the amount of prehistoric traffic on these routes (Spufford 1965, 7). The location of these barrows and tumuli seem to respect the routeways shown on the lordship of Chippenham 1544/map of 1712 (Fig. 2). The majority of the barrows and tumuli were on the south side of the parish with four areas of barrows recorded between 1.5km and c.3km of the development area (Fig. 2; Hall 1979 sites 1 (SAM 27180), 2 (SAM 27179), 3 (SAM 27178; Martin 1977) and 4 (SAM 27177; Leaf 1940). There are two areas of barrows on the north side of the parish (HER 7509 ; Leaf 1936 and 1940 and HER 10231; Hall 1979 site 9) *c*.2km and *c*.3km respectively from the development area. Some of barrows were placed in previously important areas for example barrows HER 10321. These were excavated by Leaf in the 1930's and were found to overlie a Mesolithic working floor and a Neolithic settlement (Leaf 1936 and 1940). In contrast the two tumuli excavated as part of the A14 By-Pass found burials and cremations excavated into slight mounds of natural origin (SAM 27178; Martin 1977; Hall 1979 site 3).

Iron Age

1.3.6 There are several known Iron Age settlements within Chippenham and the neighbouring parishes. These settlements seem to be placed near to water and the prehistoric routeways (e.g. Street Way). It is not a coincidence therefore that several of the settlements lay adjacent to the former Lee Brook including the site within the development area (this report). Prior to the present evaluation, two Iron Age coins including a coin of Tasciovanus have been discovered from the proposed development area (PAS database SF6754, SF6755). A large evaluation at Foxbarrow Plantation, 2km to the south-west of the development area, found an extensive Middle to Late Iron Age settlement directly adjacent to the west of the Lee (HER ECB 15491; Connor and Kenney 1998; Fig. 2). 2km to the north there was a further Early to Late Iron Age settlement adjacent to the west of the Lee (HER 10234; Hall 1996 site 12; Leaf 1940; Fig. 2).

1.3.7 It is possible that the settlement at Foxbarrow Plantation continued up to Street Way as extensive cropmarks were seen adjacent to the northwest of the evaluation. Other Iron Age sites seem to relate to Street Way. An Iron Age settlement was recorded 1.5km to the west of the development area just to the north of Street Way (Fig. 2; HER 11534 (Hall 1996 site 7). An Iron Age cremation was found adjacent to the north of Street Way, *c*.3km to the west of the development area within Snailwell parish (Hall 1996 Snailwell parish site 8; not on Fig). The cremation was placed in a timber cist 1.88m by 0.9m which was within a pit 1.95m by 2.5m by 1.2m deep. This cremation contained rich grave goods including a shield boss, bronze amulet, probable bridal and mostly imported pottery including *terra rubra* and *terra nigra* dating to the mid 1st century AD (Lethbridge 1954; HER 07420; not on Fig). 100m to the north of this cremation was an Iron Age settlement site and it is uncertain if this settlement continued to Street Way (Hall 1996, Snailwell parish sites 1 and 5; not on Fig.).

Roman

1.3.8 A Roman settlement is known to exist to the south of Stannel Wood, 100m to the south of the development area although the extent of the settlement is not known (HER 4339; Hall 1996, site 5; HER 04339). This settlement was on the opposite side of the former Lee Brook to the development area and so the connection between the development area and this site is uncertain. This is compounded by the discovery of a Hod Hill type Roman brooch in the development area (HER CB14503). There were only two other Roman settlements recorded by Hall in Chippenham parish, *c*.2km to the north-east and *c*.3km to the north respectively of the development area (Hall 1996 sites 8 and 13 (HER 10238)).

Anglo-Saxon

1.3.9 No definitively Saxon finds have been attributed to the area around the development area, although there are known to have been metal detecting finds from the Chippenham Estate that include objects dating to this period (Dr. Reynolds pers comm.).

Medieval and post-medieval

1.3.10 The development area lies within 200m of the southern part of the medieval Chippenham settlement on the east side of the former Bury Road (Fig. 2). The 1544 records show the site was within the open field called Pudmanhill No. 1 with ridge & furrow running roughly northwest to southeast (Fig. 2). Post-medieval map evidence shows the site had not been developed in recent times. The 1712 map shows agricultural use (CRO 71/P3). Most of the development area on the 1712 map had been divided into nine strips of varying sizes which were owned by five people. All the strips ran northwest to southeast. There was also a small inter common strip running parallel to the Lee with the farming strips running up to it. In addition to the road around the park, a separate road named Kennet Road encroached slightly within the field cutting two of the strips. The *c*.1818 plans of farms on Chippenham estates (R55/7/14/2) shows the development area as one field owned by Cawston. Cawston was a large landowner who owned Home Farm and a lot of land joining the park totalling *c*.500 acres of arable land and *c*.12 acres of Fen Pasture. The map says the arable land was the “best land in the parish). The 1842 Tithe Map (P44/27/1) shows the same area as the c.1818 map. The Lee is still shown. In recent times the development area has been used for arable farming although for the last 3 years it has been grassland.

1.4 Acknowledgements

1.4.1 The author would like to thank Gary Warren of R.F.Turner & Son who commissioned and funded the evaluation. The project was managed by Richard Mortimer who also edited this report. The brief for archaeological works was written by Eliza Gore and the evaluation was monitored by Kasia Gdaniec, of CAPCA (Cambridgeshire County Council).

1.4.2 I am grateful for specialist analysis from Nina Crummy, Natasha Dodwell, Chris Faine, Rachel Fosberry. Alice Lyons and Dave Starley. Steve Critchley kindly wrote on the

geology of the site and metal detected the trenches and spoil. Sally Thompson and Sarah Poppy of Cambridgeshire HER supplied information on the sites in the area. The Cambridgeshire Archives supplied access to the maps of the parish.

1.4.3 Gareth Rees surveyed in the trenches. Rob Atkins directed the evaluation with Jon House supervising with Peter Boardman, Graeme Clarke, Caoimhín Ó Coileáin and Steve Graham assisting. Louise Bush produced the illustrations. Helen Fowler organised the post-excavation cleaning, quantification and distribution of the artefacts to specialists and Rachel Fosberry the soil samples and ecofacts. Alice Lyons was very appreciative of the work of Stephen Wadeson who made a preliminary scan of the pottery and divided the pottery into periods and fabric types.

2 Aims and Methodology

2.1 Aims

2.1.1 The objective of this evaluation was to determine as far as reasonably possible the presence/absence, location, nature, extent, date, quality, condition and significance of any surviving archaeological deposits within the development area.

2.1.2 The brief required different evaluation techniques comprising a field walking or test pitting programme to characterise the artefact contents of the ploughsoil and a programme of linear trenching to adequately sample the development area.

2.2 Methodology

2.2.1 A fluxgate gradiometer survey took place by Pete Masters of Cranfield University comprising a 50% sample of the 7ha site. The scan results were immediately sent to Oxford East and the proposed evaluation trench plan was altered to take into account the geophysics results. The specification was then written and the scan results appended to the specification (Mortimer 2008). The geophysics produced good clear results and showed there was extensive archaeological remains with ditched enclosures and associated pitting (Masters 2009).

2.2.2 A 360-type machine with a 1.8m wide bucket was used under constant archaeological supervision. A total of 780 linear metres of trenching and 5 2x2m test pits were excavated representing an approximate 2.5% sample of the entire development area of seven hectares. It was proposed to excavate 6 x 50m trenches (300m), 6 x 30m trenches (180m), 10 x 25m trenches (250m) and 1 x 20m trench (20m) and these were opened up (Fig.1). A series of 5 2x2m test pits was opened down the eastern side of the area to investigate possible alluvial cover within the valley bottom. All trenches and test pits were labelled 'trenches' in the evaluation and were numbered 1 to 28 (Fig. 3).

2.2.3 As the site was under grass, topsoil and subsoil artefact sampling was undertaken across the site utilising the subsoil and topsoil excavated by the machine. Sampling took place at points at both ends of the longer trenches, at one end of the shorter trenches and at each test pit with 32 separate locations sampled.

2.2.4 The site survey was carried out by Gareth Rees using a Leica G.P.S. 1200.

2.2.5 Spoil, exposed surfaces and features and the topsoil/spoil heaps were scanned with a metal detector by Steve Critchley.

2.2.6 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour, monochrome photographs and digital photographs were taken of all relevant features and deposits. Most features were sampled in the evaluation although, after a site monitoring meeting with Kasia Gdaniec (CAPCA), it was agreed a representative sample were investigated in some trenches and in Trench 10 only one feature required excavation.

2.2.7 Environmental samples consisting of 19 bulk samples of between 5 and 30 litres were taken from the fills of ditches, pits, layers, a stake hole, a possible hearth, a human peri-natal burial and a cremation. In addition, within two parts of the sites, 16 samples, *c.*1 litre each, were taken from deposits and layers for possible hammer scale retrieval. These samples were from features or adjacent to features where metal working had been discarded as secondary deposits. In Trench 20, iron working slag was recovered from ditch 27, and soil samples were collected along the trench and were labelled A-L.

In Trench 15 samples were taken from four deposits within the pit (labelled by context number and letter). Iron ore was recovered from natural sand in Trench 3 and sent to Dr David Starley for analysis.

2.2.8 The evaluation took place in good excavation conditions. The weather was dry except for one day and none of the features were affected by high water tables.

3 RESULTS

3.1 Introduction

3.1.1 The following results are presented in trench order. A list of all contexts can be found in Table 1. Twenty-one trenches had archaeological features and these were planned (Figs. 4-7). A representative sample of the sections have also been illustrated. These four figures have grouped adjacent trenches together with their relevant sections (Figs. 4-7).

3.1.2 There was a topsoil layer consisting of a mid brown or a mid grey-brown sandy silt which was friable with very few inclusions. It was between 0.30 and 0.50m across the site. The bucket sampling of this topsoil only produced two flints and no other artefacts. Below this was a subsoil layer comprising a light orangey brown sandy silt, up to . 0.25m thick and lying across most of the site. From both metal detecting and bucket sampling a few artefacts were recovered from this layer which dated from the 18th century to the middle 19th century. This layer denoted ploughing in the later post-medieval period and sealed archaeological features on the site. Test pits within the area of the Lee Brook found topsoil overlaying alluvial silt deposits.

3.1.3 All recovered artefacts and ecofacts are reported on in the specialists reports in Appendices B and C.

3.2 Trench Results (Fig. 3)

Trench 1

3.2.1 Trench 1 was 30m in length and ran east to west within the extreme southern part of the site (Fig.7). Two ditches (with one and three recuts respectively) were encountered within the trench and represented boundary or enclosure ditches.

Ditch **3** with recut **5** on its eastern side ran north to south at the western end of the trench. These were small to moderate sized ditches up to l.0m wide and 0.45m deep. The only artefact recovered was a single flint flake in ditch **3**.

10m to the east were undated ditches **9**, **11**, **13** and **15** which all ran parallel to each other in a northwest to southeast direction. The ditches were small and shallow, from 0.40m to 0.70m wide and 0.12 and 0.26m deep. The backfills were similar (a mid brown sandy silt) and no relationships could be discerned in the excavated sections.

Trench 2

3.2.2 Trench 2 was a 2m by 1.8m test pit 40m to the north of Trench 1 (not illustrated). The natural subsoil lay 0.55m below modern ground level and comprised natural chalk with small patches of grey silt (271). This was sealed by an alluvial silt deposit 0.2m thick (270) which consisted of a light grey silty sand with yellow silty sand inclusions. The 0.35m thick topsoil (44) sealed this deposit.

Trench 3

3.2.3 Trench 3 was 19m long and aligned northeast to southwest (Fig. 7). It was sited over a large sub-rounded feature shown on the geophysical survey. This feature proved to be a possible quarry (**274**) and was seen to be at least 8m in length continuing into the south-western baulk. (Fig. 7, S.26). The quarry cut natural sands and silts and contained iron panning pieces up to 0.35m in length. This iron panning was unlikely to have been used for smelting iron (Appendix C2). It is more likely the sand was being extracted for use. The quarry was up to 0.77m deep and had an irregular base. It was infilled by three sterile layers and contained no artefacts. The lowest fills were bulk sampled (14 and 15) but produced no ecofacts or artefacts.

Trench 4

3.2.4 Trench 4 was a test pit on the eastern boundary 80m to the north of Trench 2 (Fig. 3). There was a layer of natural terrace gravels and sands 0.75m below the ground level which may represent an old stream bed. This was sealed by a mid brown-red silt layer (114), 0.16m thick, with frequent Fe oxide staining. A thin (0.1m) light yellowish brown silt layer (113) overlay this and was in turn sealed by a 0.14m thick light yellowish brown silt (112) which contained some Late Iron Age/Roman pottery, bone and flint. The topsoil sealed the top of this layer.

Trench 5

3.2.5 Trench 5 was c.35m to the west of Trench 4 (Fig. 7). It was 24.3m long and ran east to west. It was placed to sample a north to south ditch shown on the geophysical survey. This ditch can be seen running for 130m and represents the major boundary ditch with the flood plain of the Lee Brook to the east. This boundary was long-standing as it comprised a ditch and at least 4 recuts. The ditch shifted over a 3m area with the earliest ditch either ditch **39** or **43** and then ditch **41** or **37** and ditch **35** being the latest recut. All the ditches were of at least moderate size – *c*. l.0m wide and between 0.46m and 0.92m deep. All these ditches had a single backfill deposit, two of the ditches held only small quantities of animal bone in their backfill (**39** and **43**), ditch **35** had eight pottery sherds dating to the mid 1st century AD and moderate amounts of animal bone (0.41kg) and both **37** and **41** were undated.

Three metres to the east of this boundary was an alluvial layer (55) representing flood deposits at least 5m wide and deepening downwards to 0.5m thick at the eastern baulk. It was a mid grey silty sand with a single bone and flint recovered from it. A soil sample from this layer (1) produced a single grain and some burnt bone. A small shallow undated ditch (**85**) ran parallel and cut the western edge of this layer.

Trenches 6 and 7

3.2.6 This was an 'L' shaped trench along the eastern boundary nearly 100m to the north of Trench 5 (Figs. 3 and 7). Trench 6 ran for 26.3m east to west and Trench 7 for 51.5m north to south. The geophysics had highlighted several features in this part of the site (Fig. 3). Trench 6 was placed over the north to south boundary ditch which continued from Trench 5, whilst Trench 7 was targeted over probable east to west enclosure ditches and pits. Both trenches had moderate to dense archaeological remains - more than had been suggested in the geophysical survey.

3.2.7 At the extreme eastern end of Trench 6 were three shallow undated ditches (**182**, **184** and **186**) running in a line roughly north to south. It is likely they were a boundary ditch and two recuts but the similar backfills meant that the relationships between the features were uncertain. The ditches were all just over l.0m wide and between 0.26m and 0.50m deep. The only artefact recovered was a single animal bone.

3.2.8 Directly to the west were three further ditches (**194**, **196** and **192**) and a pit (**190**) in the area where the geophysical survey showed a long standing boundary ditch (Fig. 7, S.25). The earliest feature was pit **190** which pre-dated the main boundary. The pit was sub-rounded, 1.26m in diameter and up to l.0m deep with two fills; the upper contained a significant part of a single vessel dated to the middle 1st century AD. Ditches **196** and recuts **194** and **192** all ran roughly north to south on the line of the boundary ditch and were up to 2.7m wide and up to *c*.0.9m deep. Only a few artefacts were recovered, including nine pottery sherds dating to the early to middle 1st century AD.

3.2.9 Directly to the west of these ditches was a possible structure. This comprised of a possible ring gully (**200**) and seven postholes over a distance of 11.5m (Fig. 7). This interpretation is tenuous as ditch **200** does not appear to curve and no corresponding ring gully was seen on the western side. It is perhaps more likely that these features were not related. The thin north to south ditch (**200**) was 0.6m wide, it was not excavated but a piece of mid 1st to 2nd century pottery was recovered from the top of the deposit. Two undated adjacent postholes (**202** and **204**) to the west of the ditch were 0.25m and 0.55m in diameter and 0. l0m and 0.45m deep respectively. To the west was sub-rounded pit **199**, 1.65m by 1.44m and 0.38m deep which had two separate fills. A few mid 1st century AD pottery sherds and animal bone pieces were found from the upper deposit and only bone from the basal fill. Directly the west was a line of three undated postholes running north to south (**205**, **208** and **210**) which may represent a fence line or part of an internal feature within the possible structure. All the postholes were of a similar sub-rounded size c.0.5m diameter and between 0.07 and 0.24m deep. An undated posthole **212** lay to the west of it.

3.2.10 At the corner of Trenches 6/7 was the possible eastern corner of a feature (**311**) though the angle between the two parts of the feature may suggest they are not related and represent two different ditches. Where excavated, the ditch was fairly shallow and was 0.96m wide and 0.34m deep with two mid 1st century AD pottery sherds recovered from its fill. A shallow undated ditch butt-end (**315**), 0.15m deep, lay directly to the north. Adjacent was ditch **293** which ran east to west and was 1 .55m wide and 0.38m deep. Small quantities of bone and mid to late 1st century AD pottery was found within the upper fill but the lower deposit was sterile. To the north of ditch **293** was the undated infilling of a natural hollow or a pit (**354**). This hollow or pit was 3.04m in diameter but just 0.15m deep. Pit **348** to the north was sub-rectangular in shape 0.9m by 0.7m and 0.38m deep. It was filled with a black sandy silt with large quantities of charcoal. This may have been a secondary deposit as no signs of scorching of the natural were seen. A few artefacts were recovered comprising a handmade Iron Age pottery sherd, some bone and fired clay pieces. A soil sample (19) was taken from this deposit and recovered a few grains as well as burnt bone and fired clay. A second undated pit or ditch butt-end (**333**) lay 3.5m to the north and was 0.31m deep. Four sherds of mid 1st century AD pottery was recovered from its fill.

3.2.11 At the far northern end of Trench 7 were three features. Ditch **352** ran east to west, 2.5m wide but just 0.25m deep. It was undated and was cut by a pit or well (**350**) 2.75m in diameter and more than 0.8m deep from the machined surface. It had vertical edges but excavation had to cease due to health and safety concerns. No artefacts

were recovered from its fill. To the north was sub-rounded pit **313**, 2.95m by 1.75m and 0.42m deep. It was filled with a dark grey sandy silt and contained five sherds of handmade Iron Age and wheel made mid 1st century AD pottery, as well as some bone, fired clay and flint.

Trench 8

3.2.12 Trench 8 was a test pit to the east of Trenches 6/7 near the eastern boundary. The natural gravel lay 0.90m below ground level. This was sealed by an 0.45m thick alluvial layer (48) and a deep topsoil layer 0.45m thick.

Trench 9

3.2.13 Trench 9 lay 80m to the north of Trench 8. Natural terrace gravels were encountered l.0m below ground level. Above the gravel was a 0.10m thick layer (319) of cobbles and gravel with light brownish grey silt in between the cobbles. Presumably this formed the stream bed. This layer was overlain by a 0.35m thick layer (318) comprising a light brownish grey sandy silt. This was sealed by a similar layer which was slightly darker and sandier (317). An 0.35m thick topsoil layer (316) covered this.

Trench 10

3.2.14 Trench 10 was 25m long and lay near the northern boundary of the site (Figs. 3 and 7). It was placed over a number of ditches and pits including a corner of a possible large sub-rectangular enclosure. After consultations with Kasia Gdaniec, only one feature was excavated within the trench, although pottery and some other artefacts were recovered from the majority of features on cleaning the trench. Seven of the eight features within the trench were only assigned fill numbers.

3.2.15 At the extreme southern side of the trench was undated ditch 338 which ran northwest to southeast and was 0.70m wide. Running at a slightly different angle directly to the north were two adjacent ditches 339 and 340, 1.15 and 0.80m wide respectively. Middle 1st century to early/mid 2nd century AD pottery was recovered from ditch fill 339. Undated pit 341 was partly within the western baulk of the trench. Directly to the north was a large ditch 342 which corresponded to the corner of the probable enclosure. It was 1.45m wide, ran roughly east to west and several mid 1st century to early/mid 2nd century AD pottery sherds, bone pieces, fired clay and flint were found in its upper fill. Adjacent to the north were two rounded pits (**344** and **345**) which were partly in the eastern and western baulks respectively. Pit **344** was excavated and was 1.5m in diameter and 0.17m deep. There was a single backfill deposit comprising a mid brown sandy silt with a little ash. Artefacts from this fill included a small number of hand made Iron Age pottery sherds, some bone and fired clay. A bulk sample (18) was taken from this deposit and found only some burnt bone and fired clay.

3.2.16 A small quantity of bone and hand made Iron Age pottery was recovered from the cleaning of pit 345. To the north there was an undated sub-rectangular pit (346) measuring 1.45m by 1.35m.

Trench 11

3.2.17 At the extreme north-eastern end of the site a small test pit was excavated. Sealing the natural was a colluvium layer (322), 0.30m thick, consisting of a mottled yellowish brown sandy silt with occasional gravels and a flint scraper was recovered from this layer. This layer was sealed by another colluvium deposit which was 0.2m thick and contained two Neolithic pottery sherds and two flint flakes. In the 0.45m thick topsoil layer above there was a Roman pottery sherd.

Trenches 12 and 13

3.2.18 Trenches 12 and 13 were in the northern part of the site, they formed an 'L' shape and were 24.35m and 23m long respectively. They were placed over an area which geophysical survey showed as containing large numbers of possible pits, some of which were quite large (Fig. 3).

3.2.19 In the eastern end of Trench 12 there was a buried soil layer (358) which was more than 6m in length and 0.38m deep. In the eastern half of the trench there were three substantial possible quarry pits (**126**, **128** and **131**). The easternmost pit (**131**) cut layer 358 on its eastern side but the layer did not extend beyond pit **128** (Fig. 6, S.18). Pit **131** was >3.4m long, >0.4m wide and 0.65m deep with a flat base. Recovered from the two fills was a small amount of handmade Iron Age pottery, animal bone and flint. Pit **128** cut pit **131** on its western side and was 2.9m long, <0.70m wide and 0.70m deep with a flat base. Small quantities of artefacts were recovered from the fill including handmade Iron Age pottery. 5m to the west of pit **128** was large sub-rounded pit (**126**), 3.1m long, >1.8mwide and 1.10m deep. The bottom half of the pit was steep sided. The pit had five fills with a thin 0.06m deep dark brownish grey silty sand at the base (142) sealing the natural. This layer was overlain by an 0.52m deep fill of redeposited natural slumping comprising a sterile light yellowish orange silty sand (141) which was then sealed with a further sterile silt deposit (125). The pit was then backfilled with deposits from at least two sources with a layer (124) tipped in from its western side - a dark brown sandy silt with frequent animal bone (0.85kg) - with the top layer (123) a dark brown silty sand which contained an Early Roman brooch (SF 8, dated 43-80AD) and a few sherds of mid 1st to early/mid 2nd century AD pottery, flint and bone (0.22kg).

3.2.20 At the junction of Trenches 12 and 13 was a buried soil layer (213) more than 9m by 4m in extent, comprising a light yellowish brown sand. This layer had a quantity of finds within its surface (Fig. 6, plots 1 to 10). These finds were mostly flint pieces but included a hand made Iron Age pottery sherd and an egg shaped clay object (SF 10).

3.2.21 Archaeological features cut layer 213 including posthole **215**. This posthole may be linked to the only other posthole in the area (**173**) *c*.4m to the east and just within Trench 12. Postholes **173** and **215** were similar in size, both sub-rounded, 0.43m and 0.55m in length and 0.20 and 0.26m deep respectively. Cutting layer 213 were four pits **175**, **220**, **222** and **217** (Fig. 6 and Fig. 6, S.32). Three of these pits (**175**, **220**, **217**) were similar, small to medium sized and between l.0m and 1.9m in length and 0.3m and 0.35m deep and all filled with a mid brown sandy silt. Within their backfills all three pits contained a few artefacts. Pit **175** produced some flint, **217** a single hand made Iron Age pottery sherd and struck flint and **220** an early to mid 1st century AD pottery sherd and more struck flint. Pit (or possibly ditch) **222** was at least 1.5m in length, 0.55m deep and filled with a dark grey sandy silt containing mid 1st century AD pottery sherds, bone and fired clay.

3.2.22 To the north of pit **217** were two substantial intercutting pits (**226** and **265**), oval or sub-rounded in shape and steep sided (Fig. 6, S. 32). Pit **265** cut pit **226**, and both were

more than 1.8m in length (1.75m and 2.5m wide respectively) and more than 0.55m deep (though not fully excavated). Pit **226** had at least three backfill deposits with 263 comprising a mid yellowish brown sandy silt with a single hand made Iron Age pottery sherd recovered along with some flint and bone. This deposit was sealed by a dark grey sandy silt (224) with 2 sherds of mid 1st century AD pottery, bone and flint and the upper fill (225) was a mid brown sandy silt with handmade Middle and Late Iron Age sherds, animal bone and flint. A soil sample (10) from 224 produced 3 grains, a single spelt glume base and a single seed. Pit **265** had a single hand made Iron Age pottery sherd, bone and flint.

3.2.23 Directly to the north of pit **265** was undated pit **228**. It was 1.8m long, >l.0m wide and 0.5m deep. Artefacts recovered consisted of a single flint and animal bone. Directly to the north of pit **228** was another buried soil layer (262) up to 0.70m thick; it contained struck flints. This deposit was cut by a shallow undated east to west ditch (230) near the north baulk (Fig. 6, S.32). The ditch was 1.5m wide and 0.50m deep. Most of the features within Trench 13 were sealed by a buried soil layer 223 (0.3m deep), a subsoil layer and topsoil with a combined depth of 0.80m.

Trenches 14 and 15

3.2.24 Trenches 14 and 15 formed a 'T' shape and were situated within the north-western part of the site with Trench 14 being 50m long and Trench 15 31m long. The trenches were placed over what the geophysical survey showed was a probable enclosure (Fig. 3). The alignment of the features revealed in the trenches and geophysics results do not match completely, though they would do so if moved by c.4m.

3.2.25 Only two features were recorded in Trench 14, ditch **329** and pit **331**. Ditch **329** ran north to south in the western half of the trench. It was 1.6m wide and 0.62m deep and its single fill contained a small quantity of animal bone. Pit **331** was 7m to the east and was sub-rounded 0.4m in diameter and only 0.11m deep. A small number of hand made Iron Age pottery sherds and struck flint was recovered within its fill.

3.2.26 Trench 15 contained a single Early Bronze Age cremation deposit (an infant of about 18 months) placed in a small pit (**300**) within the northern half of the trench. This pit was 0.30m in diameter and 0.12m deep and was filled with a mid to dark brownish grey sandy silt. The cremation deposit lay immediately below the topsoil only 0.35m below ground level and had been affected by ploughing. This deposit was collected as a single bulk sample (16). A few Early Bronze Age collared urn pottery fragments were also recovered from the sample.

3.2.27 A group of 5 features lay at the extreme southern end of Trench 15 (**284**, **281**, **289** and **286**), all cut by a large enclosure ditch **278** (Fig. 6, S. 41). Of these six features only one, ditch **284**, produced any dating evidence. Two ditches (**284** and **281**) ran parallel east to west, they were *c.* 1.00m wide, and were 0.48m and 0.44m deep respectively. Residual Neolithic plain ware pottery was recovered from the lower fill of ditch **284** along with struck flint and animal bone; only just bone and flint were recovered from **281**. To the south were two adjacent features, pit **286**, more than 0.66m in diameter and 0.22m deep and posthole **289** more than 0.32m in diameter and 0.4m deep. Animal bone was recovered from **286** and nothing from **289**. East to west ditch **278** was 2.76m wide and 0.83m deep. It contained two silt fills (277 and 276) and a thick deposit (275) which may have been deliberate backfill. This last fill contained a little struck flint.

3.2.28 Directly to the south of this group of features was a shallow undated pit **298**, 0.56m in diameter and 0.56m deep. To the south of pit 298 was a linear pit (**249**) more than 1.8m

in length, 1.84m wide and 0.98m deep (Fig. 6, S. 35). This pit had near-vertical sides and a flat base. It appeared to have been backfilled rapidly with six separate deposits tipped in from the north. The lowest deposit (248) was a mid brown sandy silt containing a small amount of iron slag and hand made Iron Age pottery. This was sealed by 247, similar to 248 but with frequent small stones; it also contained slag and a little animal bone. Fill 246 was a thin redeposited natural lens and this was sealed by black charcoal deposit 245, 0.5m by 0.4m and 0.1m thick. A soil sample from this fill (15) produced charcoal and hammerscale from iron working. This was then sealed by a mid brown silty sand (244) and a light brown silty sand (243) with the upper deposit containing Neolithic pottery sherds and a little bone. 1 litre soil sample deposit were taken from layers 243, 244, 247 and 248 for hammer scale analysis. These produced some hammerscale in all contexts.

Trench 16

3.2.29 Trench 16 was 45m long and in the extreme north-western part of the development area. The trench ran east to west over an area that geophysics had shown as ditched enclosures (Fig. 3). Five ditches and four pits, one containing the remains of an infant , were recorded (Fig. 5).

3.2.30 On the western side there were three adjacent ditches running parallel to each other north to south (**154**, **156** and **159**). Again, if the trench plan were moved 4m to the west these ditches would align with three ditches shown on the geophysical survey. The ditches were of a similar size, between 1.2m and 1.7m wide and 0.60 and 0.76m deep, although ditches **156** and **159** had a 'U' shape profile while ditch **156** was 'V' shaped (Fig. 5, sections 27 and 28). The basal fill of ditch **154** comprised an 0.06m thick mid greyish brown sandy silt with some charcoal, possibly slightly ashy (153). A large quantity of early to mid 2nd century pottery was recovered from this fill (1.55kg) comprising parts of at least four vessels. A soil sample (8) produced 2 grain fragments and some oyster shell. The upper fill (152) was a mid reddish brown silty sand which contained large quantities of domestic refuse. This comprised sherds from more than 30 different vessels – the vast majority Early Roman in date, up to the early to mid 2nd century (2.5 kg in all) but also including some hand made Iron Age sherds. The pottery included a range of types with some imported wares such as a *Terra Nigra* sherd with a possibly previously unknown stamp. Other finds included 0.43kg of bone, 15 oyster shells, fired clay and some residual struck flint. Ditch **156** contained a single relatively sterile deposit including a sherd of hand made Iron Age pottery and some bone. Ditch **159** contained sherds of hand made Iron Age and mid 1st to early-mid 2nd century pottery and some animal bone. Pit **161** was adjacent to the east of ditch **159**. It was sub-rounded, 1.5m long and just 0.28m deep; only a few scraps of bone were recovered from its fill.

3.2.31 Six metres to the east was a similar sub-rectangular pit **163**, 1.48m long, 0.82m wide and 0.24m deep. The remains of a neonatal infant lay at the surface and only skull, ribs and vertebra bones were recovered. Single pieces of Neolithic pottery and flint were also recovered.

3.2.32 Seven metres to the east there were two adjacent features (**165** and unnumbered). Only a very small part of the later lay within the trench. Probable pit **165** was partly within the trench and was 1.6m wide and 0.30m deep. It contained a single fill of dark greyish brown sandy silt with some charcoal containing a few pottery sherds and a little struck flint. A soil sample (9) recovered 3 grains as well as some rodent vertebrae.

3.2.33 A probable boundary ditch and its recut (**169** and **167**) lay to the east of pit **165** and ran northwest to southeast. The ditches were of a similar size with the recut (**167**) 1.5m wide and 0.41m deep cutting **169** on its eastern side. A single handmade 1st to early/mid 2nd century AD pottery sherd, struck flint and animal bone were recovered from ditch **167**.

Trench 17

3.2.34 Trench 17 was 24m long, it ran north to south in the central part of the site (Fig. 5). Three features (**117**, **122** and **260**) were recorded within the trench. Ditch **117** ran east to west and the geophysical survey shows this as a large boundary ditch which ran for at least 120m. The ditch was 2.30m wide and 0.7m deep with a rounded profile. The lower fill (120) was a mid orange reddish brown sandy silt 0.26m thick; no finds were recovered. It was overlain by a mid reddish brown sandy silt (116) which in contrast held 3.2kg of late 1st to early 2nd century AD pottery and 0.77kg of bone. The pottery represented at least 13 vessels and included a substantial part of a jar. To the south was a large, shallow sub-rounded pit **122,** 3.0m in diameter but only 0.15m deep (Fig. 5, S. 39). It contained small amounts of handmade Iron Age pottery, animal bone and struck flint. This pit was cut by a posthole or stakehole (**260**), 0.38m in diameter and 0.14m deep. It was filled with a dark greyish blueish grey sandy silt (259) and an environmental sample (11) found numerous wheat grains as well as small fish vertebra.

Trenches 18, 19 and 20

3.2.35 Trenches 18, 19 and 20 were conjoined in a rough 'S' shape, directly to the south of Trench 17 (Fig. 5). Trench 18 was 26.6m long and ran east to west. The earliest deposit was a buried soil layer 267/268 in the eastern part of the trench, it extended over 7.7m and was 0.30m deep. Struck flints were recovered from this layer, implying a Bronze Age or Neolithic date for the soil. The layer was cut by pit **110** which was 2m in diameter and 0.68m deep (Fig. 5, S. 10). Its fill, a mid to dark greyish brown sandy silt fill, contained quantities of mid 1st century AD pottery, a Roman tile fragment, fired clay and animal bone. A similar pit, 1.5m in diameter, lay directly to the west (**108**) and truncated a thin north to south ditch, 0.5m wide (Fig. 5). Neither feature was excavated although Early Roman pottery was recovered from the surface of pit **108**.

3.2.36 Trench 19 ran north to south for 25m; no archaeological features were recorded. Trench 20 was 26.8m long and ran east to west. It contained an 11m wide probable periglacial channel (256) which ran roughly north to south and was filled with a light grey silt. This was overlain by a buried soil directly to the west (261) which comprised a mid reddish brown sandy silt which extended over more than 10m and was up to 0.14m thick. This buried soil was cut by a north to south ditch (**27**), 2.7m wide and 0.88m deep (Fig. 5, S. 4). This ditch may align with a long boundary ditch seen in the geophysical survey. The ditch was 'V' shaped with moderately steep sides. The lower fill (56), 0.48m deep, was a sterile mid reddish brown sandy silt, the upper fill (26) a mid to dark reddish greyish brown sandy silt. The upper fill contained quantities of domestic and industrial material and as a consequence the whole ditch within the trench was excavated. The material comprised 1.86kg of slag, 1.19kg of animal bone, 0.23kg of pottery and a little fired clay and flint. The date of this group was early to mid 1st century AD. There was also an object which showed possible copper working evidence (SF 2) and an iron object (SF 3). Two bulk samples were taken of this deposit (6 and 13). The two soil samples produced 5 cereal grains only. Twelve 1 litre soil samples

were taken from the subsoil layer to the west of the ditch and then every metre eastwards to see if there was any concentration of hammerscale in any direction. The results of this were negative.

Trench 21

3.2.37 Trench 21 lay in the southern part of the site, it was oriented north to south and ran for 20m (Fig. 4). The trench was placed over a dense area of geophysical anomalies. The earliest deposit within the trench was a buried soil layer (111) extending over some 7m at the centre of the trench. Struck flint was found on the surface of this deposit and plotted F1-F8; some burnt stone (0.41kg) was also recovered.

3.2.38 Within the southern part of the trench were six features (**17**, **19**, **21**, **23**, **28** and **30**) within a 5m area. There were two postholes (**17** and **21**) possibly part of a structure. Both the postholes were 0.5m in diameter and were 0.10 and 0.18m deep respectively. Postholes **17** and **21** both contained four Early Roman pottery sherds dating to the mid/ late 1st century. A soil sample (4) from posthole 21 produced a single cereal grain.

3.2.39 Between the two postholes was an east to west ditch (**23**), 1.2m wide and 0.39m deep. Handmade Iron Age pottery was recovered from both ditch fills as well as a little animal bone. Pit **19** lay partly within the baulk, was 1.5m long and 0.51m deep with steep sides and a flat base. A single sherd of handmade Iron Age pottery, some flint and animal bone were recovered from its single fill. Directly to the north were two undated ditches (**30** and **28**) running east to west. These were roughly the same size (c.1m wide and 0.28m deep) with the former cutting the latter.

3.2.40 Ditch **86** (also numbered **49**) ran east to west within the centre of the trench. This ditch was 1.94m wide and 0.28m deep. A moderate amount of early to mid 1st century AD pottery was recovered from its fill (51), as well as some iron slag and iron ore fragments possibly of sufficient quality for smelting (see Appendix C2).

3.2.41 To the north of ditch **49**/**86**, two flint flakes were seen pressed into the natural soil (F9 and 10). Two sub-rounded pits (**88** and **90**) lay in the northern part of the trench, 0.90m and 1.10m long and 0.23m and 0.15m deep respectively. Pit **90** was undated whilst **88** contained Neolithic pottery and a single struck flint.

3.2.42 All the features apart from those within the southern area were sealed by a buried soil layer (94). This layer was up to 0.42m thick and may represent the later Roman/post Roman ground level or an agricultural layer. This layer was overlain by sub-soil layer 93, 0.40m thick , and topsoil layer 92, up to 0.40m thick.

Trenches 22 and 23

3.2.43 Trenches 22 and 23 were located in the south-western part of the site next to the road and formed an inverted 'L' shape. They were placed over an area which geophysics showed had extensive pitting within enclosure ditches. Trench 22 was 24.3m long and Trench 23 60m long. Both trenches proved to be dense with features of several different phases (Neolithic to Roman period) comprising pits, ditches, a possible ring gully, and a fire.

3.2.44 Trench 22 comprised 12 pits and a single ditch (Fig. 4). These pits had a similar appearance in plan and similar upper fills. Five of the pits (**138**, **231**, **232**, **233** and **325** were excavated with the remainder (after consultation with Kasia Gdaniec) recorded only in plan. The ditch was excavated in Trench 23 (**178**) (see below).

3.2.45 Pit **138** was sub-rounded, more than 1.7m long, 1.3m wide and 0.70m deep (Fig. 4, S. 20). It was steep sided with a slightly sloping base to the north-east. There were four fills. The basal fill was a redeposited natural silting (137), sealed by a light yellowish brown silty sand (136) which contained small amounts of hand made Iron Age pottery, bone and flint. This was overlain by a dark black-brown sandy silt containing some burnt material (258) and the uppermost fill was a light yellowish brown silty sand (135) with a few artefacts including hand made Iron Age pottery.

3.2.46 Three intercutting pits (**231**, **232** and **233**) lay to the west of pit **138**. The earliest was pit **231**, 2.95m long, >1.7m wide and 0.85m deep with steep sides and a flat base. Eight deposits filled the pit, tipping from the west and indicating rapid backfilling. These fills varied from sterile to a burnt, dark orange/red/black sand. Small numbers of artefacts were recovered from three of the fills, comprising handmade Iron Age pottery, bone and flint. Pit **231** was cut by pit **232**, which was 1.1m in diameter and 0.65m deep. It had steep sides and a slightly rounded base. There were three fills comprising two dark reddish brown sandy silt layers with a redeposited natural lens in between. Small amounts of hand made Iron Age pottery, bone and flint were found in two of the layers. The latest pit **233** was sub-rounded, 1.75m wide and 0.5m deep and backfilled with three deposits varying from light to dark reddish brown sandy silt. As with the other pits small amounts of hand made Middle Iron Age pottery, bone and flint were found in the deposits.

3.2.47 In the centre of the trench was a sub-rounded or oval pit (**325**), >1.0m long, 0.96m wide and 0.44m deep with near vertical sides and a flat base. Small quantities of early to mid 1st century AD pottery, flint and bone were found in its two fairly sterile fills.

3.2.48 Trench 23 contained c.24 archaeological features, many intercutting, about half of which were excavated. In the intersection between Trenches 22 and 23 was a mix of five intercutting features (**236**, **302**, **304**, **306** and one unnumbered). A section was excavated through four of these features. The earliest feature was the unexcavated pit which was more than 2m in length. This was cut by a very large sub-rounded pit (**304**) >2.8m long, 2.0m wide and 0.60m deep (Fig. 4). The pit was filled by a light yellow-brown sand. Two similar pits, **236** and **302**, cut **304**, the former on its south-western side and the latter on its north-eastern side. Pit **302** was sub-rounded to oval in shape, 1.7m long, 0.86m wide and 0.16m deep and filled with a mid grey brown sand. Pit **236** was adjacent to the southwest of pit **302**. It was sub-circular in shape, 1.3m long, 1.06m wide and 0.38m deep. The lower fill (235) was a light yellow brown sand and the upper deposit (234) a mid grey brown silty sand. A hand made Iron Age pottery sherd came from the upper deposit. A further pit **306** cut pit **236**, this was sub-circular *c*.0.5m in diameter and 0.12m deep; no artefacts were recovered from its fill.

3.2.49 To the south of these features was ditch **178** which ran roughly north to south with a slight curve to the southwest. It was 1.35m wide and 0.35m deep and no artefacts were recovered from within its two fairly sterile fills. Directly to the south of ditch **178** was a shallow undated curving gully (**180**), 0.38m wide and 0.21m deep and filled with a light yellowish brown silty sand.

3.2.50 Cutting gully **180** was undated ditch **335** which ran north to south. It was 0.76m wide and 0.32m deep. Cutting the ditch on its western side were five intercutting pits (**308**, **327**, **337** and two unnumbered). Stratigraphically, the next in the sequence were an unexcavated pit (unnumbered) and pit **337**. Pit **337** was sub-circular, more than 0.22m in diameter and 0.11m deep and with a single sherd of mid 1st to early/mid 2nd century AD pottery recovered from its fill. It was cut by pit **327** which was sub-circular, 0.84m in

diameter and 0.30m deep. Within its single mid grey brown sandy fill were small quantities of pottery, flint and animal bone.

3.2.51 Pit **308** cut both an unnumbered pit and undated ditch **335.** It was sub-circular, 0.84m in diameter and 0.24m deep. Within its backfill, which comprised a mid yellow brown sandy silt, was a complete neonate burial (birth ± 2mos). .

3.2.52 The second unexcavated pit (unnumbered) cutting ditch **335** was at least 1.65m in length and 2m wide. This was truncated on its south side by another unexcavated pit. Directly to the west of this was pit **104**. This was 1.76m in length and 0.35m deep and filled by a single mid orangey brown sandy silt containing some hand made Iron Age pottery and animal bone.

3.2.53 To the south was a further group of three intercutting pits (**98**, **100** and **102**, Fig. 4, S.8). The earliest feature was a large sub-rounded pit (**108**) *c*.2m in diameter and 0.94m deep. It had near-vertical edges and a flat base. The basal fill (97) was 0.22m thick and comprised a mid yellowish brown sandy silt with frequent natural flint and 0.29kg of burnt flint and a little struck flint. A soil sample (2) produced a single pea. This layer was sealed by a light yellowish brown silty sand (96) which was overlain by a mid brown sandy silt with occasional burnt flint and (residual) Neolithic pottery.

3.2.54 Cutting pit **98** on its northern and southern sides were pits **100** and **102** (Fig. 4, S. 8). Pit **100** was oval, more than 1.8m long, at least 1.2m in diameter and 0.32m deep, it was filled with a mid brown sandy silt containing a single flint blade and small quantities of fired clay. Pit **102** was also oval, more than 1.65m in length, 1.2m wide and 0.6m deep. It was filled with a mid brown sandy silt containing a large quantity of burnt flint (2.81kg), some worked flint, Neolithic pottery and animal bone. This pottery is again residual. The heavily burnt nature of the burnt flint implies deliberate production for industrial reasons or from large-scale cooking activities (see Appendix C4).

3.2.55 Three metres to the south of these pits was a further unexcavated pit and then a boundary or enclosure ditch with a recut running southeast to northwest (Fig. 4). Both ditches were more than 2m wide. Early to mid 1st century AD pottery was recovered from the top of one of the ditches (355). Directly to the south were a further two unexcavated ditches, the earliest narrow, 0.5m wide, and running southeast to northwest, and the latest, north-east to south west and around 2m wide.

3.2.56 About 10m to the south was an undated fire pit (**133**) with an internal stake hole **145**. It was sub-rounded in shape 1.7m by 1.5m and 0.2m deep and was excavated by opposing quadrants. A stakehole (**145**) was within the eastern quadrant, it was 0.12m in diameter and 0.11m deep, and filled with a mid yellowish grey silty sand. This stakehole was cut by the pit (**133**). The basal fill (143) was a mid greyish red sand and this was presumably burnt material. The upper fill (132) was a dark to black reddish grey silty sand. Soil sample 7 found only moderate charcoal.

Trench 24

3.2.57 Trench 24 was 50.2m long, and aligned northwest to southeast parallel to the road. It contained three relatively shallow undated ditches (**140**, **147** and **149**) (Fig. 4). Ditch **140** ran roughly north to south at the northwestern end of the trench and may have been the continuation of ditch **80** (Trenches 25/26; Fig. 3). Ditch **140** was 1.2m wide and 0.32m deep. There were two parallel ditches (**147** and **149**), *c*.6m apart on the southeastern side of the trench. They were 0.75m and 1.15m wide and 0.22m and 0.08m deep respectively.

Trenches 25 and 26

3.2.58 Trenches 25 and 26 lay in the middle western part of the proposed development area and formed a 'T' shape (Figs. 3 and 4). The geophysical survey showed these trenches to be in an area of fields or paddocks. Three ditches were recorded within the trenches (**80**, **82** and **151**). North to south ditch **80** is likely to have been the long field boundary shown on the geophysics (about 2m to the west) and may be the extension of ditch **140** in Trench 24. Ditch **80** was 1.76m wide and 0.62m deep and two handmade Iron Age pottery sherds, daub fragments and a few animal bones were recovered from its single fill. Running roughly perpendicular, and to the east of it, ditch **82** could have been an internal boundary of the field. It was smaller, 0.84m wide and 0.32m deep, and contained a single Iron Age scored ware pottery sherd and a few animal bones. At the far western end of Trench 26 was a shallow undated north to south ditch (**151**), just 0.7m wide and 0.2m deep. A subsoil layer (57) overlaid all features within the trenches. A small part of this was left within Trench 26 (Fig. 4). It was up to 0.4m deep and finds included a lead weight (SF 7) and a 19th century pottery sherd.

Trenches 27 and 28

3.2.59 Trenches 27 and 28 were at the far western part of the development area and formed an 'L' shape. Both trenches were 30m long and no archaeological features were encountered in either.

3.3 Finds Summary

3.3.1 Five Early Roman metal objects were found on site during the evaluation including two immediately post-Conquest brooches. One of the brooches was of a military type and the other military or immigrant civilian. It should also be noted that two Iron Age coins and a Hod Hill brooch have been found on the site prior to the evaluation by metal detectors. Some of the Hod Hill type brooches also have military affiliations (pers. comm Nina Crummy).

3.3.2 2.5kg of metal working waste, chiefly from iron smithing, were recovered from three separate features in different parts of the site which date to the Late Iron Age and Early Roman periods (Trenches 15, 20 and 21). Analysis of the hammerscale from the environmental bulk and 1 litre sampling suggest a significant scale of ironworking on the site. It is uncertain if ore was being extracted from the site for iron production but ore recovered from Trench 21 may have been rich enough for iron production although the sample from Trench 3 was not.

3.3.3 A significant assemblage of 106 pieces of struck flint and 4kg of burnt flint was recovered. The worked flint comprised 75 flakes, 13 blades, 9 cores, 6 retouched pieces and 3 shattered hammerstone or pounder fragments. The date range of the flints is Mesolithic/Early Neolithic possibly through into the Iron Age. A significant proportion of the early flints relate to contemporary features or buried soil layers although some are residual within later features. The burnt flint relates to specific features and shows deliberate production for either industrial processes or large-scale cooking.

3.3.4 Very small quantities of Neolithic (13 sherds (84g)) and Early Bronze Age pottery (10 sherds (25g)) were found on site. Some of the Neolithic pottery may come from

contemporary features though the majority of the material is residual. The Early Bronze Age collared urn was found within an infant cremation.

3.3.5 A small assemblage of Middle Iron Age pottery (46 sherds (912g)), coming from jars or bowls relates to occupation on the site in this period and was mostly recovered from pits.

3.3.6 Late Iron Age and Late Pre-Roman Iron Age pottery comprises 81 and 200 sherds respectively (1383g and 3680g). The Late Iron Age pottery comprised jars and bowls, some with comb decoration and some burnished. There was a fairly large range of pottery in the LPRIA assemblage, found in both handmade and wheel thrown types and including a butt-beaker and several decorated vessels. There were a few imports in this period such as an amphora from Italy. Most of this pottery was found in contemporary features, some as primary deposits.

3.3.7 The Early Roman pottery assemblage (411 sherds (6567g)) included several Gaulish imports including a *Terra Nigra* vessel with a possible new stamp. Most of these vessels were found within features, some as probably primary deposits as relatively unabraded sherds were common.

3.3.8 Small quantities of daub and fired clay (59 pieces (535g)) were recovered from 14 different contexts. Some had lining surviving probably from domestic or industrial structures.

3.3.9 Only two Mid to Late Roman sherds and two post-medieval/modern sherds were recovered, showing very little post Early Roman activity on the site.

3.4 Environmental Summary

3.4.1 Two neonate burials and one infant cremation were found in the evaluation. The cremation of a *c.*18 month old infant was found with Early Bronze Age collared urn. The neonate burials within pits were probably Late Iron Age and Early Roman in date.

3.4.2 The hand collected animal bone assemblage comprised 320 fragments with 167 (52%) identifiable to species (9.62kg). There were 57 cattle, 59 sheep/goat, 21 pig, 29 others (including horse, rabbit and fish), and one bird. Further animal bone was recovered from the bulk samples. There were a few modern burrows found in the excavations and thus a few modern contaminants but these were fairly obvious (e.g. the rabbit). In all, the bone survived in very good condition.

3.4.3 19 environmental bulk samples were taken of which 10 litres were processed. On the whole they did not prove very productive in terms of charred grain or other seeds. The majority of the samples only contained sparse charred grains. An exception was sample 11 where numerous wheat grains were found. The bulk samples were productive in the recovery of human neonate bones, animal bones, charcoal for potential carbon dating and hammerscale.

4 Discussion and Conclusions

4.1 The overview results of the geophysics survey and the trench evaluation

4.1.1 The results of the evaluation have given us a useful overview of the site in terms of layout, dating and type and status of occupation (as well as how well the archaeological features survived in the the proposed development area). The evaluation has shown the earliest features relate to a well-used Neolithic and Bronze Age occupation area. The Middle Iron Age occupation may have been sporadic, or not very intensive, though by the Late Iron Age it had became permanent and continued through to perhaps the mid 2nd century AD. This settlement was a linear domestic settlement with agriculture and industrial metal working taking place. It was perhaps this latter that gave the settlement its chief wealth and status. Through the artefacts recovered it can be seen to have been of slightly above average status.

4.1.2 The 50% geophysics cover of the development area has given us a general plan of the central part of this prehistoric and Roman site. The evaluation trenches have shown that the geophysical survey proved to have identified most of medium or large ditches and pits on the site. The survey has shown that most of the far eastern area of the field (up to *c*.50m width) was largely devoid of archaeological features. This part of the development area was shown in the subsequent evaluation (and study of the the 1712 map) to be the route of the former Lee Brook which largely flowed south to north as well as its related flood plain on its western side.

4.1.3 The geophysical survey has shown that the chief archaeological occupational evidence on the site is within a linear band, north to south and more than 400m long and *c*.150m wide. The settlement will continue to the north and south outside the development area. The contour survey shows this occupation strip to be on a slight west to east slope overlooking the Lee Brook. Long-standing north to south boundary ditches delineated where the flood plain stopped and settlement began. Within the settlement area the geophysical survey shows there was extensive pitting as well as ditched enclosures. Most of this linear occupation strip was found to be busy or in some places extremely busy with archaeology remains (Trenches 22, 23, 6, 7, 12, 13 and 10) although within the centre of this strip (Trenches 17, 18 and 20) there were far fewer archaeological remains and in the case of Trench 19 there were none.

4.1.4 Within the western half of the proposed development area, to the west of the linear strip, the geophysics indicated field and enclosure ditches. This land was flat or relatively flat. The evaluation found most of the fields/enclosures did not have contemporary structures and occupation evidence within them except in the central western area. Here, around Trench 16 and the southern part of Trench 15, within a probable large sub-rectangular enclosure, there were moderately dense archaeological remains, some with relatively large quantities of unabraded refuse. This would indicate this area was used for domestic purposes in the Late Iron Age and Early Roman periods. In contrast there were very few ditches with mostly sterile fills, and no internal features in the field/enclosure system within Trenches 24, 25, 26 and 14 and no features at all within Trenches 27 and 28.

4.1.5 The evaluation has shown that in most areas the archaeological features have survived well beneath topsoil, subsoil (found across most of the site) and in a few areas a post-Roman buried soil. The depths below ground level where these features were found varied from 0.34m to 1m (see Fig. 3). in the area of the proposed road corridor, barns and house structures the heights varied from 0.34m to 0.56m. The Bronze Age

cremation and neonate pit burial (Trenches 15 and 16) lay at only 0.35 – 0.40m below ground level in at the top of the ridge overlooking the valley.

4.1.6 Most features were found in good condition although a few rodent and larger animal burrows had disturbed a some of the features. Possible ring gullies and post holes were found in four trenches over a 250m distance along the middle part of the site and this has shown that structural features have survived. It is likely that the preservation of these features will be good enough to produce structural plans.

4.2 Prehistoric to Roman activity and occupation

Neolithic to Bronze Age

4.2.1 Buried soil layers were found across the which dated to this period. Within these layers flint, pottery and other artefacts were recovered including an egg-shaped clay object. These layers represent old surface layers in several parts of the site. A few pits that may date to the Neolithic period were also found, for example pits **88** and **90** in Trench 21, though none held significant finds assemblages. Many other features across the site contained residual Early Neolithic material. This and the the relatively large numbers of worked flint found across the site dating from the Mesolithic or Early Neolithic show this site was well used with knapping and other activities having taken place.

4.2.2 A comparable site to Chippenham is at Fordham *c*.5km to the west. Work on the recent Fordham By-Pass found burials, pits and land surfaces dating to the 4th millennium BC (Mortimer forthcoming).

4.2.3 Other comparable sites include the Isleham to Ely Pipeline where a series of sites, most identified by surface flint scatters, were sampled by fieldwalking and test-pitting to the northwest of Isleham village, along the pipeline route (Gdaniec *et al* 2007). Two sites were subjected to further excavation and one of these (Site 6) compares well to the remains at Chippenham. The site surrounded a palaeochannel of the River Snail and comprised a flint scatter of Early Neolithic and Late Neolithic/Early Bronze Age date and a group of small burnt flint and charcoal-filled pits, dating to the Early Bronze Age.

4.2.4 The Early Bronze Age infant cremation (**300**) was placed near the top of an east facing ridge at about 19.2m OD. This was well above the flood plain of the Lee Brook and *c*.150m to the west of the stream. It is perhaps significant that the prehistoric route way called Street Way lies less than 100m to the north-west of the burial. The placing of burials near to or overlooking routeways and/or waterways has been noted in other parts of Chippenham parish (see section 1.3.5 above; Fig. 2). The two areas of barrows on the north side of the parish seem to respect Lee Brook, both sets of barrows were a few hundred metres to the west of the Lee (HERs 7509 and 10231; Fig 2). In contrast the four groups of barrows on the south side of the parish (SAMs 27177-80) were further away, between *c*.1km and 2km to the south (Fig. 2).

4.2.5 In all, the numbers of Neolithic and Bronze Age burials found in Chippenham and neighbouring parishes is high and there is a need to address the reasons why so many were placed here. There have been very few developments within Chippenham parish (compared with, for example, Ely or Fordham) and it is therefore likely that a considerable number of Neolithic and Bronze Age burials are to be found in the parish. It is possible that further early burials may lie within the development area - other

barrows and tumuli nearby have seen several people buried and/or cremated within a relatively small area (see section 1.3.5 above).

Middle Iron Age to Early Roman

4.2.6 The site seems to have become a permanent settlement around the 4th or 3rd century BC though this may have been small-scale or sporadic at first. The geophysical survey and trenching imply that this settlement continued beyond the development area to both the south and north. It is even possible that the settlement continued to the east, beyond the former Lee brook, within Stannel Wood and to the south-east (in the latter area Roman artefacts have been found less than 200m away (HER 4339; Fig. 2).

4.2.7 It is one of several prehistoric and Roman sites directly linked to the Lee Brook and Street Way (see sections 1.3.6-1.3.8 above; Fig. 2). There were contemporary settlements on the banks of the Lee and along the Street Way spaced within 2km of each other. These settlements may each have been occupied by one or two extended families.

4.2.8 The Middle Iron Age seems to have been largely represented by pits with no definite enclosures dating to this phase. Through the Late Iron Age, from *c.*100BC, into the Early Roman period (*c.*mid 2nd century AD) there is evidence for increasingly dense occupation. There were roundhouses and other structures on site (seen by ring gully in Trench 23, a possible ring gully from within Trench 6 and post holes within Trenches 6, 12 and 13) and relatively large primary dumps of domestic and industrial waste were recovered from features within Trenches 16 and 20 implying domestic and industrial activity close to these locations.

4.2.9 There was widespread evidence for iron working on the site in both the Late Iron Age and Early Roman periods with possible bog ore being extracted (see Appendix C2). This is rare for the period with very little Iron working known from Cambridgeshire (as opposed, for example, to the Northamptonshire limestone areas around Rockingham forest).

4.2.10 Soil samples imply that there were cereal crops including wheat being grown in the area and the widespread cattle bones imply livestock farming. A very large number of pits were recorded, a possible well and two neonatal burials. It is uncertain what the functions of the pits were although many appear to have been storage pits and some may represent extraction pits for sand. The lack of charred cereal grain on site may suggest that the storage pits may not have been for grain, and it has been suggested that they could have been ice pits for meat storage (pers. comm. Mark Hinman).

4.2.11 One of the questions which need addressing is the comparative wealth of the finds assemblage, with Iron Age coins, brooches (possibly with military origin) and imported pottery. This is in contrast with the relative poverty within Ely area settlements (Evans *et al* 2007). It is possible that the pre-Roman and Early Roman production if Iron at this site may well have given it its its importance, and its wealth, with these failing by the second century as the big Roman production centres were set up elsewhere.

4.2.12 This is the first Iron Age/Roman settlement to have been examined in any scale within Chippenham parish and so direct comparisons with neighbouring sites can not be made. At the only other investigated site in Chippenham (Foxbarrow Plantation), virtually nothing and all that it produced was a plan and surface finds (Connor and Kenney 1998).

4.3 Significance

4.3.1 The evaluation found important remains dating from the Neolithic to the Early Roman period. The evidence points to two separate main occupations at the site.

4.3.2 Firstly, during the Neolithic and Bronze Age there was a ritual and occupational use of the site which may be viewed as locally to regionally important.

4.3.3 Secondly, there was a Middle Iron Age to Early Roman settlement which may also be viewed as locally and regionally important, in particular the possibility that the site was producing iron by smelting both before and immediately after the Conquest.

4.3.4 The evaluation has shown that geophysical survey and trenching have given a good overview of the site and that the settlement survives in good condition. Domestic and industrial remains survive in quantity with several primary assemblages recovered. There is good potential for reconstruction of pottery remains.

4.4 Recommendations

4.4.1 Recommendations for any future work based upon this report will be made by the County Archaeology Office.

Appendix A. Health and Safety Statement

A.1.1 OA East will ensure that all work is carried out in accordance with relevant Health and Safety Policies, to standards defined in *The Health and Safety at Work, etc. Act, 1974* and *The Management of Health and Safety Regulations, 1992,* and in accordance with the manual *Health and Safety in Fieldwork Archaeology* (SCAUM 1997).

A.1.2 Risk assessments prepared for the OA East office will be adhered to.

A.1.3 OA East has Public Liability Insurance. Separate professional insurance is covered by a Public Liability Policy.

A.1.4 Full details of the relevant Health and Safety Policies and the unit's insurance cover can be provided on request.

Appendix B. Trench Descriptions and Context Inventory

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
1	0	1	layer	topsoil	0		
2	0	1	layer	topsoil	0		
3	3	1	cut	ditch	0	0.94+	0.22
4	3	1	fill	ditch	0		
5	5	1	cut	ditch	0	0.78	0.45
6	5	1	fill	ditch	0		
7	5	1	fill	ditch	0		
8	9	1	fill	ditch	0		
9	9	1	cut	ditch	0	*c*.0.4	0.26
10	11	1	fill	ditch	0		
11	11	1	cut	ditch	0	*c*.0.5	0.21
12	13	1	fill	ditch	0		
13	13	1	cut	ditch	0	0.49	0.17
14	15	1	fill	ditch	0		
15	15	1	cut	ditch	0	*c*.0.7	0.12
17	17	21	cut	post hole	0	0.5+	0.1
18	17	21	fill	post hole	0		
19	19	21	cut	pit	0	1.5	0.51
20	19	21	fill	pit	0		
21	21	21	cut	pit	0	0.5	0.18
22	21	21	fill	pit	0		
23	23	21	cut	ditch	0	1.2	0.39
24	23	21	fill	ditch	0		
25	23	21	fill	ditch	0		
26	27	20	fill	ditch	0		
27	27	20	cut	ditch	0	2.7	0.88
28	28	21	cut	ditch or pit	0	0.8	0.28
29	28	21	fill	ditch or pit	0		
30	30	21	cut	ditch	0	1	0.27
31	30	21	fill	ditch	0		
32	35	5	fill	ditch	0		
33	35	5	fill	ditch	0		
34	35	5	fill	ditch	0		
35	35	5	cut	ditch	0	1.04	0.92
36	37	5	fill	ditch	0		
37	37	5	cut	ditch	0	0.8+	0.58
38	39	5	fill	ditch	0		
39	39	5	cut	ditch	0	0.28+	0.64
40	41	5	fill	ditch	0		
41	41	5	cut	ditch	0	0.98+	0.54
42	43	5	fill	ditch	0		
43	43	5	cut	ditch	0	0.7+	0.46
44	0	2	layer	topsoil	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
45	0	3	layer	topsoil	0		
46	0	4	layer	topsoil	0		
47	0	8	layer	topsoil	0		
48	0	8	layer	subsoil	0		
49=86	49	21	cut	ditch			
50=87	49	21	fill	ditch			
51=87	49	21	fill	ditch			
52	0	5	layer	topsoil	0		
53	0	5	layer	topsoil	0		
54	0	5	layer	subsoil	0		
55	0	5	layer	buried soil	0	5.08	0.7
56	27	20	fill	ditch	0		
57	0	1	layer	subsoil	0		
58	0	22	layer	topsoil	0		
59	0	22	layer	subsoil	0		
60	0	23	layer	topsoil	0		
61	0	24	layer	topsoil	0		
62	0	24	layer	subsoil	0		
63	0	24	layer	topsoil	0		
64	0	24	layer	subsoil	0		
65	0	27	layer	topsoil	0		
66	0	27	layer	subsoil	0		
67	0	28	layer	topsoil	0		
68	0	28	layer	subsoil	0		
69	0	26	layer	topsoil	0		
70	0	26	layer	subsoil	0		
71	0	26	layer	topsoil	0		
72	0	26	layer	subsoil	0		
73	0	25	layer	topsoil	0		
74	0	25	layer	subsoil	0		
75	0	19	layer	topsoil	0		
76	0	18	layer	topsoil	0		
77	0	18	layer	subsoil	0		
78	0	25	layer	subsoil	0		
79	80	26	fill	ditch	0		
80	80	26	cut	ditch	0	1.72	0.62
81	82	26	fill	ditch	0		
82	82	26	cut	ditch	0	0.84	0.32
83	0	24	layer	subsoil	0		
84	85	5	fill	ditch	0		
85	85	5	cut	ditch	0	1.1	0.28
86	86	21	cut	ditch	0	1.94	0.28
87	86	21	fill	ditch	0		
88	88	21	cut	pit	0	0.9	0.23
89	88	21	fill	pit	0		
90	90	21	cut	pit	1.1	0.5	0.15
91	90	21	fill	pit	0		
92	0	21	layer	topsoil	0		
93	0	21	layer	subsoil	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
94	0	21	layer	buried soil	0		0.42
95	98	23	fill	pit	0		
96	98	23	fill	pit	0		
97	98	23	fill	pit	0		
98	98	23	cut	pit	0	2.5	1.2
99	100	23	fill	pit	0		
100	100	23	cut	pit	1.8	1.2+	0.32
101	102	23	fill	pit	0		
102	102	23	cut	pit	1.8	1.65+	0.6
103	104	23	fill	pit	0		
104	104	23	cut	pit	0.85	1.76	0.35
105	0	23	layer	topsoil	0		
106	0	23	layer	subsoil	0		
107	0	20	layer	topsoil	0		
108	0	18	fill	pit	0		
109	110	18	fill	pit	0		
110	110	18	cut	pit	0	2	0.94
111	0	21	layer	buried soil	0		
112	0	4	layer	buried soil	0		0.14
113	0	4	layer	buried soil	0		0.1
114	0	4	layer	buried soil	0		0.16
115	0	8	layer	topsoil	0		
116	117	17	fill	ditch	0		
117	117	17	cut	ditch	0	2.3	0.7
118	119	23	fill	pit	0		0.3
119	119	23	cut	pit	0		0.3
120	117	17	fill	ditch	0		
121	122	17	fill	pit	0		
122	122	17	cut	pit	0	3	0.15
123	126	12	fill	pit	0		
124	126	12	fill	pit	0		
125	126	12	fill	pit	0		
126	126	12	cut	pit	3.1+	1.8+	1.1
127	128	12	fill	pit	0		
128	128	12	cut	pit	2.9	0.7+	0.7
129	131	12	fill	pit	0		
130	131	12	fill	pit	0		
131	131	12	cut	pit	3.4+	0.4+	0.65
132	133	23	fill	pit	0		
133	133	23	cut	pit	1.7	1.5	0.2
134	0	17	layer	subsoil	0		
135	138	22	fill	pit	0		
136	138	22	fill	pit	0		
137	138	22	fill	pit	0		
138	138	22	cut	pit	1.7+	1.3	0.7
139	140	24	fill	ditch	0		
140	140	24	cut	ditch	0	1.2	0.32
141	126	12	fill	pit	0		
142	126	12	fill	pit	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
143	133	23	fill	pit	0		
144	145	23	fill	stake hole	0		
145	145	23	cut	stake hole	0	0.12	0.11
146	147	24	fill	ditch	0		
147	147	24	cut	ditch	0	0.75	0.22
148	149	24	fill	ditch	0		
149	149	24	cut	ditch	0	1.15	0.08
150	151	26	fill	ditch	0		
151	151	26	cut	ditch	0	0.7	0.2
152	154	16	fill	ditch	0		
153	0	16	fill	ditch	0		
154	154	16	cut	ditch	0	1.6	0.76
155	156	16	fill	ditch	0		
156	156	16	cut	ditch	0	1.2	0.6
157	159	16	fill	ditch	0		
158	159	16	fill	ditch	0		
159	159	16	cut	ditch	0	1.7	0.62
160	161	16	fill	pit	0		
161	161	16	cut	pit	0	1.5	0.28
162	163	16	fill	pit	0		
163	163	16	cut	pit	1.48	0.82	0.24
164	165	16	fill	ditch	0		
165	165	16	cut	ditch	0	1.6	0.4
166	167	16	fill	ditch	0		
167	167	16	cut	ditch	0	1.5	0.41
168	169	16	fill	ditch	0		
169	169	16	cut	ditch	0	0.7+	0.38
170	0	3	layer	topsoil	0		
171	0	3	layer	subsoil	0		
172	173	12	fill	post hole	0		
173	173	12	cut	post hole	0.43	0.4	0.2
174	175	12	fill	pit	0		
175	175	12	cut	pit	1.3	0.95	0.32
176	178	23	fill	ditch	0		
177	178	23	fill	ditch	0		
178	178	23	cut	ditch	0	1.3	0.35
179	180	23	fill	ditch	0		
180	180	23	cut	ditch	0	0.38	0.21
181	182	6	fill	ditch	0		
182	182	6	cut	ditch	0	0.7+	0.26
183	184	6	fill	ditch	0		
184	184	6	cut	ditch	0	1.04+	0.5
185	186	6	fill	ditch	0		
186	186	6	cut	ditch	0	0.62+	0.32
187	190	6	fill	pit	0		
188	190	6	fill	pit	0		
189	190	6	fill	pit	0		
190	190	6	cut	pit	0	1.26	1
191	192	6	fill	ditch	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
192	192	6	cut	ditch	0	2.7	0.49
193	194	6	fill	ditch	0		
194	194	6	cut	ditch	0	1.9+	0.42
195	196	6	fill	ditch	0		
196	196	6	cut	ditch	0	0.66+	0.4+
197	199	6	fill	pit	0		
198	199	6	fill	pit	0		
199	199	6	cut	pit	1.65	1.44	0.38
200	0	6	fill	ditch	0		
201	202	6	fill	post hole	0		
202	202	6	cut	post hole	0	0.25	0.1
203	204	6	fill	post hole	0		
204	204	6	cut	post hole	0	0.55	0.46
205	206	6	fill	post hole	0		
206	206	6	cut	post hole	0.5	0.4	0.24
207	208	6	fill	post hole	0		
208	208	6	cut	post hole	0.5	0.4	0.12
209	210	6	fill	post hole	0		
210	210	6	fill	post hole	0.5	0.45	0.07
211	212	6	fill	post hole	0		
212	212	6	cut	post hole	0	0.4	
213	0	13	layer	buried soil	0		
214	215	13	fill	post hole	0		
215	215	13	cut	post hole	0.55	0.5	0.25
216	217	13	fill	pit	0		
217	217	13	cut	pit	1.9	1.15	0.35
219	220	13	fill	pit	0		
220	220	13	cut	pit	1	0.65	0.3
221	222	13	fill	pit	0		
222	222	13	cut	pit	1.5+	0.95+	0.55
223	0	13	layer	buried soil	0		
224	226	13	fill	pit	0		
225	226	13	fill	pit	0		
226	226	13	cut	pit	2.5	1.8+	0.55+
227	228	13	fill	pit	0		
228	228	13	cut	pit	1.8+	1+	0.5
229	230	13	fill	ditch	0		
230	230	13	cut	ditch	0	1.5	0.5
231	231	22	cut	pit	2.95	1.7+	0.85
232	232	22	cut	pit	0	1.1	0.65
233	233	22	cut	pit	0	1.89	0.5
234	236	22	fill	pit	0		
235	236	23	fill	pit	0		
236	236	23	cut	pit	1.3+	1.02	0.38
237	233	22	fill	pit	0		
238	233	22	fill	pit	0		
239	233	22	fill	pit	0		
240	232	22	fill	pit	0		
241	232	22	fill	pit	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
242	232	22	fill	pit	0		
243	249	15	fill	pit	0		
244	249	15	fill	pit	0		
245	249	15	fill	pit	0		
246	249	15	fill	pit	0		
247	249	15	fill	pit	0		
248	249	15	fill	pit	0		
249	249	15	cut	pit	1.8	1.84	0.98
250	231	22	fill	pit	0		
251	231	22	fill	pit	0		
252	231	22	fill	pit	0		
253	231	22	fill	pit	0		
254	231	22	fill	pit	0		
255	231	22	fill	pit	0		
256	231	22	fill	pit	0		
257	231	22	fill	pit	0		
258	138	22	fill	pit	0		
259	260	17	fill	stake hole	0		
260	260	17	cut	stake hole	0	0.38	0.14
261	0	20	layer	buried soil	0		
262	0	13	layer	buried soil	0		0.7
263	226	13	fill	pit	0		
264	265	13	fill	pit	0		
265	265	13	cut	pit	1.85	1.75	0.55+
266	0	18	layer	topsoil	0		
267	0	18	layer	buried soil	0		
268	0	18	layer	buried soil	0		
269	0	3	fill	pit	0		
270	0	2	layer		0		
271	0	2	layer		0		
272	274	3	fill	pit	0		0.34-0.4
273	274	3	fill	pit	0		0.32-0.38
274	274	3	cut	pit	8+	1.8+	0.77
275	278	15	fill	ditch	0		
276	278	15	fill	ditch	0		
277	278	15	fill	ditch	0		
278	278	15	cut	ditch	0	2.76	0.83
279	281	15	fill	ditch	0		
280	281	15	fill	ditch	0		
281	281	15	cut	ditch	0	0.34+	0.44
282	284	15	fill	ditch	0		
283	284	15	fill	ditch	0		
284	284	15	cut	ditch	0	1+	0.48
285	286	15	fill	pit	0		
286	286	15	cut	pit	0	0.66+	0.22
287	0	15	layer	topsoil	0		
288	289	15	fill	post hole	0		
289	289	15	cut	post hole	0	0.32	0.4
290	293	7	fill	ditch	0		

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
291	293	7	fill	ditch	0		
292	293	7	fill	ditch	0		
293	293	7	cut	ditch	0	1.55	0.38
294	0	12	layer	topsoil	0		
295	0	13	layer	Topsoil	0		
296	0	13	layer	subsoil	0		
297	298	15	fill	post hole	0		
298	0	15	cut	pit	0	0.56	0.15
299	300	15	fill	cremation	0		
300	300	15	cut	cremation	0	0.4	0.12
301	302	23	fill	pit	0		
302	302	23	cut	pit	1.7	0.86	0.16
303	304	23	fill	pit	0		
304	0	23	cut	pit	2.85+	2.02	0.6
305	306	23	fill	pit	0		
306	0	23	cut	pit	0	0.5	0.12
307	308	23	fill	pit	0		
308	308	23	cut	pit	0	0.84	0.24
309	192	6	fill	ditch	0		
310	311	6	fill	ditch	0		
311	311	6	cut	ditch	0	0.96	0.34
312	313	7	fill	pit	0		
313	313	7	cut	pit	2.95	1.75	0.42
314	315	7	fill	ditch	0		
315	315	7	cut	ditch	0	0.55	0.15
316	0	9	layer	topsoil	0		
317	0	9	layer	subsoil	0		
318	0	9	layer	buried soil	0		
319	0	9	layer	natural	0		
320	0	11	layer	Topsoil	0		
321	0	11	layer	buried soil	0		
322	0	11	layer	buried soil	0		
323	325	23	fill	pit	0		
324	325	22	fill	pit	0		
325	325	22	cut	pit	1+	0.96+	0.44
326	327	23	fill	pit	0		
327	327	23	cut	pit	0	0.84	0.3
328	329	14	fill	ditch	0		
329	329	14	cut	ditch	0	1.6	0.62
330	331	14	fill	post hole	0		
331	331	14	cut	post hole	0	0.4	0.11
332	333	7	fill	ditch	0		
333	333	7	cut	ditch	0	1.04+	0.31
334	335	23	fill	pit	0		
335	335	23	cut	pit	0	0.76	0.32
336	337	23	fill	pit	0		
337	336	23	cut	pit	0	0.22+	0.11
338	-	10	fill	ditch	0	0.7	
339	-	10	fill	ditch	0	1.15	

Cont	Cut	Trench	Category	Feature Type	Length	Width or diameter	Depth
340	-	10	fill	ditch	0	0.8	
341	-	10	fill	pit	1.05	0.3	
342	-	10	fill	ditch	0	1.45	
343	344	10	fill	pit	0		
344	344	10	cut	pit	1.5	0.9	0.17
345	0	10	fill	pit	1.6	1.02	
346	0	10	fill	pit	1.45	1.35	
347	348	7	fill	pit	0		
348	348	7	cut	well	0.9	0.7	0.32
349	350	7	fill	well	0		
350	350	7	cut	pit	2.75	1.8+	0.8+
351	352	7	fill	ditch	0		
352	352	7	cut	ditch	0	2.3	0.25
353	354	7	fill	pit	0		
354	354	7	cut	pit	3.04	1.3	0.15
355	356	23	fill	ditch	0		
356	356	20	fill	ditch	0		
357	0	3	layer	natural	0		
358		12	layer	Buried soil			

Table 1 Context list

APPENDIX C. FINDS REPORTS

C.1 Metalwork

By Nina Crummy

Summary

4.4.2 The assemblage is small but includes two Early Roman brooches, one of military type, the other associated with both the military and the post-conquest immigrant civilian population.

Condition

4.4.3 The objects are generally in a stable condition. Both the copper-alloy and lead objects are only lightly covered by corrosion products. Corrosion on the ironwork varies from a slight surface coating to a thicker encrustation incorporating some soil.

4.4.4 Objects of all materials are packed to a high standard of storage in crystal boxes or polythene bags, supported by pads of foam. The bags and boxes are stored in airtight Stewart boxes with silica gel.

The assemblage

4.4.5 The assemblage consists of one lead object, six copper-alloy objects and one iron object. They are briefly catalogued below.

4.4.6 Two items bear upon the interpretation of the site. Both are Roman brooches that date to the immediately post-conquest period. One is of Aucissa type (SF 4), a form used in Britain by the invading Roman army during the period from the conquest to *c.* AD 60/5, the terminal date being undoubtedly bound up to some extent with the Boudican revolt. These brooches therefore provide evidence for troop movements during the Claudian to early Neronian period. In rural contexts their recovery may mark the locations of forts or smaller military establishments, or may represent administrative military tasks such as the requisitioning of provisions or tax-gathering. As soldiers were required to pay for their equipment, the recovery of military items in rural contexts may also mark the location of land owned by veterans.

4.4.7 The second brooch is a Nauheim derivative, a form that also occurs on sites with a military connection but not exclusively used by military personnel, as attested by examples from early Flavian female burials and sites with little or no evidence of military activity.

4.4.8 The remaining items include three objects with Roman features. One strip was found in ditch fill 25 and two objects from ditch fill (26). The latter included a small burnt copper-alloy fragment and may perhaps derive from pyre debris or metal-working, although accurate interpretation of this type of material is impossible without the supporting evidence provided by either a larger assemblage of similar scrap or archaeological features. It is perhaps significant that a significant assemblage of metal working debris was found in this context (see Appendix C2 below). An iron object also came from this

context. The other artefacts are of medieval to modern date or have no datable features.

Summary catalogue

SF 1. (25) ditch **23** Tr. 21. Copper-alloy strip. Length (bent) 33mm width 44mm.

SF 2. (26) ditch **27** Tr. 20. Small burnt copper-alloy scrap, probably either pyre debris or metal-working debris. 13 by 12 mm.

SF 3. (26) ditch **27** Tr. 20 . Iron strip fragment with hooked terminal. Length 80 mm.

SF 4. (83). Copper-alloy Aucissa brooch. Length (bent) 34 mm. Date-range AD 43-*c.* 60/5.

SF 5. (78) subsoil Tr. 25 . Copper-alloy sheet fragment with incised vegetal decoration. Length 26 mm. Probably post-medieval.

SF 6. (134). Copper-alloy knobbed conical ferrule with rivet holes for attachment. Length 19 mm. Post-medieval to modern.

SF 7. (57) subsoil Tr. 1. Small lead disc, possibly a weight. Diameter 12 mm. Probably late medieval, post-medieval or modern.

SF 8. (123) ditch **126** Tr. 12. Copper-alloy Nauheim derivative brooch. Length 38 mm. Date-range AD 43-*c.* 80/5.

Recommendations

4.4.9 A full report on the Roman brooches, setting them in their local, regional and inter-provincial contexts, should form part of any published report, with due regard to the wider research agenda identified within the site assessment.

4.4.10 To ensure their long-term survival, the Roman brooches should be cleaned and stabilised by a professional archaeological conservator. It is recommended that this work be carried out at Colchester Museum, contact emma.hogarth@colchester.gov.uk

C.2 Metalworking debris

By David Starley

Introduction

4.4.11 The small amount of metalworking debris totalling 2.5kg was examined, classified, and categorized into the main identifiable industrial processes. The only metallurgical process unambiguously identified was iron smithing. Further evidence of smithing, in the form of hammerscale was more widely distributed over the site and gave the best indication of the significant scale of ironworking on the site. The apparent quarrying of 'bog iron' ore, was not supported by any structural evidence of furnaces, or by types of slag typically produced as a waste product of the iron smelting process.

Excavation Background

4.4.12 The geology of the site (TL 672 691) was reported (Rob Atkins pers. comm.) to be Cretaceous middle chalk overlain by Pleistocene terrace deposits of water-lain, poorly bedded, sandy flint and chalk rich coarse gravels. Above this a sandy colluvium sealed some archaeological features, whilst other such material had been cut through by the

archaeological features. A magnetometer survey of alternate strips across this 7 ha site revealed a series of well defined field boundaries and strong magnetic anomalies, with most features being provisionally interpreted as being of Iron Age to Roman date. In January 2009 a series of 28 trenches were excavated to evaluate the surviving archaeology.

4.4.13 Features of relevance to the bulk slag examined in this report include:

The top fill (26) of N/S oriented ditch (27) which, in addition to the industrial debris examined in this report produced 2 small finds described by the metalwork specialist. The first was a small burned copper-alloy scrap (SF2) measuring 13x12mm and the second an iron strip fragment with hooked terminal with a length of 80mm (SF3). The fill also contained Belgic type pottery indicating a date of early to mid 1st century AD.

Quarry pit (249) in which the lower two fills contained industrial debris. Pottery from this feature was provisionally identified as Late Iron Age.

Context (51). Ditch **49**/**86** Trench 21. Pottery shows a date of early to mid 1st century AD.

Context (357), the natural within trench 3 which contained iron panning and had been cut by a probable quarry (274), 0.77m deep and at least 8m long, possibly for the extraction of the iron-rich "bog ore" form smelting.

Methodology for assessment of bulk debris

4.4.14 All material provided by Oxford Archaeology East was visually examined. This amounted to one small box of finds, although further iron panning/ bog ore had been recovered from the site, but not sent, as the one piece was thought to be representative. The material was classified using the standard categories of the former English Heritage Ancient Monuments Laboratory. Visual observation of the exterior was backed up by examination of fresh fracture surfaces, the use of a geological streak plate and magnet. Table 2 presents a summary of these findings, based on the categories.

Cont	Slag type	Wt (g)	Comments	Interpretation	Tr	Context description	Dating evidence
26	smithing hearth bottom	225	small (85x80x20mm) and dense	iron smithing	20	upper fill of ditch **27**. Sandy silt with dark reddish patches	e-mC1AD ceramics t
26	smithing hearth bottom	189	small(90x70x25mm) and dense	iron smithing	20	as above	as above
26	smithing hearth bottom	50	very small (50x35x15mm)but well-formed	iron smithing	20	as above	as above
26	dense slag	103	dense and thin, possibly smelting, more probably. smithing	iron smithing/smelting	20	as above	as above
26	undiagnostic ironworking slag	542		undiagnostic iron working	20	as above	as above
26	vitrified hearth lining	184	some oxidized fired (red) some reduced (grey) clay backing	high temp heating	20	as above	as above
26	iron concretion	5	2 small flat fragments concreted together		20	as above	as above
26	cinder	60		high temp heating	20	as above	as above
26	fired clay	480		high temp heating	20	as above	as above
26	flake hammerscale	<1	very occasional	iron smithing	20	as above	as above

Cont	Slag type	Wt (g)	Comments	Interpretation	Tr	Context description	Dating evidence
26	smithing hearth bottom	225	small (85x80x20mm) and dense	iron smithing	20	upper fill of ditch **27**. Sandy silt with dark reddish patches	e-mC1AD ceramics t
51	possible ore	20	iron-rich nodule, possibly sufficiently rich as source of iron		21	Fill of ditch **49**/**86**	as above
51	undiagnostic ironworking slag	64		undiagnostic iron working	21	Fill ditch **49**/**86**	as above
247	smithing hearth bottom	136	crescent-shaped slag lump, with adhering furnace bottom and burned stone inclusions. Atypical smithing hearth bottom	iron smithing	15	deposit in quarry pit (249)	late Iron Age
248	undiagnostic ironworking slag	400		undiagnostic iron working	15	deposit in quarry pit (249)	late Iron Age
248	flake hammerscale	<1	very occasional	iron smithing	15	deposit in quarry pit (249)	late Iron Age
357	possible ore	396	iron-pan containing high proportion of sand/sediment, probably too lean to be used as viable ore		3	natural within "iron ore quarry"	undated
total		2854					

Table 2 Chippenham: Summary of evidence for specific metallurgical activities by context

Classification of debris

4.4.15 Some forms of slag are visually diagnostic, providing unambiguous evidence for a specific metallurgical process. Other debris, although often more frequently encountered, is less distinctive and it is not possible to determine which metallurgical, or other high temperature process, it derives from. For the small assemblage from Chippenham the diagnostic material all derives from iron smithing.

1. Diagnostic – iron smithing

4.4.16 Evidence for iron smithing comes in two forms; bulk slags and micro slags. Of the bulk slags, the most easily recognisable are **smithing hearth bottoms**, which have a characteristic plano-convex section, typically having a rough convex base and a vitrified upper surface which is flat or even slightly hollowed as a result of the downward pressure of air from the tuyère. Compositionally, smithing hearth bottoms are predominantly fayalitic (iron silicate) and form as a result of high temperature reactions between the iron, iron-scale and silica from either the clay hearth lining or possibly sand used as a flux by the smith. **Flake hammerscale** (Starley 1995) consists of fish-scale like fragments of the oxide/silicate skin of the iron dislodged during working. It is normally regarded as an excellent indicator - not only that smithing took place but also its location, because the small fragments are less likely to be deliberately removed from the scene of the activity. **Spheroidal hammerscale** results from the solidification of small droplets of liquid slag expelled during hot working, particularly when two objects are being fire-welded together or when a slag-rich bloom of iron is first worked into a billet or bar.

2. Diagnostic – iron smelting

4.4.17 Two types of **possible ore**; the iron pan/bog ore and the iron-rich nodule, were identified during the assessment. Such material was used for iron smelting (i.e. the reduction of ore to metal) in the past, with bog ores in particular providing a source of easily smelted ore in regions where other iron minerals are rare. The piece examined did appear to contain a high proportion of silt/sand, probably making it non-viable,

although, it may be that the material found on site represented only the unwanted, leaner, and therefore unselected material. Unfortunately, the site provided no unambiguous structural evidence, in the form of furnaces, which should have been evident in the magnetometer plot or in the form of diagnostic slag types such as **tap slag** of **furnace bottom**. The only fragment considered to possibly derive from iron smelting was that categorised as **dense slag**, a small flat lump, but this could equally have derived from iron smithing.

3. Diagnostic – copper-alloy casting

4.4.18 Debris diagnostic of copper-alloy casting may include **crucibles, mound fragments,** casting **sprues**, **spills** and **dribbles** in addition to slag and hearth lining with attached copper alloy corrosion. None of these categories were identified in the Chippenham assemblage to support the suggestion that the burned copper-alloy fragment found in the metalwork assemblage indicated non-ferrous metalworking. Such damage may have occurred when an artefact was caught in an intense conflagration. A possible crucible was also reported from the fill of ditch 154 in Trench 16 (pers. Com., Rob Atkins). However, after subsequent examination by David Dungworth of English Heritage, this was interpreted as a non-metallurgical ceramic fragment, but which had non-ferrous corrosion attached, possibly indicating copper alloy working.

4. Undiagnostic – ferrous metalworking

4.4.19 The category **undiagnostic ironworking** slag is of fayalitic composition, similar to bloomery smelting or smithing slag. Most of this category at Chippenham was from context 26, which also contained smithing hearth bottoms and it is likely that this also derives from smithing. The **iron concretion** may be waste from iron working or a fragment of a completed artefact.

5. Undiagnostic – probably metalworking

4.4.20 Several of the categories of material can be produced by a wide range of high temperature activities and are of little help in distinguishing between these processes. Material listed as **vitrified hearth/furnace lining** may derive from either iron working or from non-ferrous metal working, although there was a lack of brightly coloured glazes or copper corrosion which would provide a strong indication of the latter. It forms as a result of a high temperature reaction between the clay lining of the hearth/furnace and the alkali fuel ash or fayalitic slag. The material may show a compositional gradient from unmodified fired clay or brick on one surface to an irregular cindery material on the other. Interestingly the backing clay on the Chippenham material varied from red to grey, indicating both oxidising and reducing conditions. It is possible that both oxidising and reducing zones existed within a single smithing hearth. An associated material classed as **cinder**, comprises only the lighter portion of such lining, a porous, hard and brittle slag formed by the reaction between the alkali fuel ash and fragments of clay that had spalled away from the heath/furnace lining, or another source of silica, such as the sand sometimes used as a flux during smithing.

6. Undiagnostic – high temperature

4.4.21 The **fired clay** without any surface vitrification, found within the assemblage could have derived from structures associated with metallurgical purposes, or from those used for other high temperature activities.

Hammerscale in soil samples

4.4.22 In addition to 14 one litre "industrial" samples taken from trenches 15 and 20, hammerscale was also identified in the flotation and sieve residues of a number of larger environmental samples (Tables 3 and 4).

Context	Sam-ple	Flake	Spheroidal	Microscopic	Tr	Context Description	Extent
Subsoil	A				20	Subsoil	
Subsoil	B				20	Subsoil	
Subsoil	C			1	20	Subsoil	
Subsoil	D	2			20	Subsoil	
Subsoil	E			1	20	Subsoil	
Subsoil	F	2			20	Subsoil	
Subsoil	G	2	1		20	Subsoil	
Subsoil	H				20	Subsoil	
Subsoil	I				20	Subsoil	
Subsoil	L		1		20	Subsoil	
243	d	34	2	1	15	top fill of pit 249	1.9m in section 0.1-0.25m deep
244	c	32	1	6	15	fill of pit 249	1.8m in section 0.3m deep
247	b	28	2	2	15	fill of pit 249	1.6m in section 0.1-0.4m deep
248	a	12	1	2	15	lowest fill of pit 249	1.1m in section 0-0.4m deep

Table 3 Industrial samples, quantification of hammerscale by R. Fosberry

Cont	Sam No	Sample type	Wt (g)	Flake %	Spher-oidal %	Tr	Context description	Extent of context	Dating evidence
22	4	flot (0.3mm)	<1	15	5	21	fill of pit 21	single fill of pit 0.5m diameter 0.18m depth	mid 1st century AD
25	3	flot (0.3mm)	<< 1	15	0	21	fill of ditch 23	top fill of ditch c0.2m thick; Ditch 1.2m wide 0.39m deep	late Iron Age
26	6	flot (0.3mm)	<< 1	20	2	20	upper fill of ditch 27. sandy silt with dark reddish patches	whole 1.8m section in trench excavated	e-mC1AD ceramic
153	8	flot (0.3mm)	<< 1	20	2	16	fill of ditch 154	basal fill of ditch 0.06m thick; ditch 1.6m by 0.76m	e/mC2 AD
164	9	flot (0.3mm)	<< 1	0	0	16	fill of ditch 165	single fill of ditch 1.6m wide and 0.4m thick	undated
224	10	flot (0.3mm)	<< 1	2	2	13	fill of pit 226	A middle fill of pit; pit 2.5 x 1.8 x 0.55m	mid C1 AD
22	4	sieve (0.5mm)	70	40	5	21	fill of pit 21	single fill of pit 0.5m diameter 0.18m depth	mid 1st century AD
25	3	sieve (0.5mm)	4	50	5	21	fill of ditch 23	top fill of ditch c0.2m thick; Ditch 1.2m wide 0.39m deep	late Iron Age
26	13	sieve (0.5mm)	1	20	2	20	upper fill of ditch 27. sandy silt with dark reddish patches	whole 1.8m section in trench excavated	e-mC1AD ceramics
26	6	sieve (0.5mm)	6	30	2	20	upper fill of ditch 27. sandy silt with dark reddish patches	whole 1.8m section in trench excavated	e-mC1AD ceramics
55	1	sieve	2	0	0	5	buried soil layer	extends 5.08m 0.7m deep	undated

		(0.5mm)							
89	5	sieve (0.5mm)	<1	5		21	fill of pit 88	single fill of pit 0.9m diameter 0.23m deep	Neolithic pottery
97	2	sieve (0.5mm)	1	5	0	23	fill of pit 98	top fill of pit 0.55m thick; pit 2.5m diameter 1.2m deep	undated
132	7	sieve (0.5mm)	<1	2	2	23	fill of fire pit 133	top fill of fire pit 0.1m thick; pit 1.7m x 1.5 diameter 0.2m thick	Neolithic
153	8	sieve (0.5mm)	1	2	0	16	fill of ditch 154	basal fill of ditch 0.06m thick; ditch 1.6m by 0.76m	e/mC2 AD
164	9	sieve (0.5mm)	3	30	0	16	fill of ditch 165	single fill of ditch 1.6m wide and 0.4m thick	undated
224	10	sieve (0.5mm)	3	5	1	13	fill of pit 226	A middle fill of pit; pit 2.5 x 1.8 x 0.55m	mid C1 AD
245	12	sieve (0.5mm)	7	10	0	15	fill of pit 249	charcoal deposit c.0.5 x 0.4 x 0.1m within pit 1.8m + X 1.84 x 0.98m	late Iron Age
272	14	sieve (0.5mm)	1	10	0	3	fill of quarry pit 274	top fill extends 8m+ 0.34-0.4m thick	undated
273	15	sieve (0.5mm)	1	10	0	3	fill of quarry pit 274	bottom fill extends 8m+ 0.32-0.38m thick	undated
343	18	sieve (0.5mm)	2	10	0	10	fill of pit 344	single fill of pit 1.5m x 0.9m+ x 0.17m	late Iron Age
347	19	sieve (0.5mm)	4	0	5	7	fill of pit 348	single fill of pit 0.9m x 0.7m x 0.32m	late Iron Age

Table 4 Environmental samples, quantification of hammerscale by D. Starley

Conclusions

4.4.23 The assessment of metalworking debris on the predominantly Iron Age to second century AD Roman rural site of Chippenham, Cambs examined a total of 2.5kg of debris and hammerscale from 37 samples. Of the diagnostic debris, iron smithing was the main activity represented by both smithing hearth bottoms and hammerscale. There is no reason to believe that the less specific, non-diagnostic, other types did not also derive from iron smithing. Despite the apparent extraction of iron-rich 'bog ore' from the site, none of the slag examined during this assessment provided any evidence for the smelting of iron from this or any other ore. Whilst Cambridgeshire is not known as a major centre of iron smelting an any period, compared, for example to ore bearing regions of the Jurassic ridge to the west, the use of localised sources, particularly bog ore, where iron minerals are often naturally collected into small but viable deposits should not be discounted in any further work on this site or others in the vicinity

4.4.24 It is unfortunate that, despite parts of the site being protected by the overlying colluvium, none of the slag appeared to have been found, during this evaluation, in its primary contexts, only where re-deposited within the fills of ditches. This makes it difficult to assess the scale of the activity or its exact location. The best clue to the scale of the smithing activity comes from the hammerscale found in the samples taken both for industrial and environmental purposes. Hammerscale was obtained from a total of 9 Trenches, (3, 7, 10,13,15,16, 20, 21 and 23).The actual quantities within most of these samples are low, but when scaled up to take account of the size of the contexts from which they were obtained, it becomes evident that iron smithing must have been undertaken on a significant scale, probably serving more than local needs. It would also seem likely that the hammerscale within the ditch fills contributed significantly to the enhanced magnetic signals for these features, as shown on the magnetometer plots. The highest potential focus of smithing activity identified by the evaluation would appear to be in the region of Trench 21 where quantities of magnetic residues from both ditches and pits were larger and contained a high proportion of hammerscale.

4.4.25 No evidence for non-ferrous working was identified in the material examined by the specialist. However, finds examined elsewhere including a burned copper alloy

fragment and a pot fragment to which copper corrosion was attached, may hint that copper alloys were also worked at Chippenham.

4.4.26 No surviving evidence of fuel used was noted during the examination of the bulk metalworking slag. However one of the environmental samples containing a significant quantity of hammerscale was recorded as being from a charcoal deposit (Trench 15, context 245). Further, the non-clinkery nature of the slags suggests the use of charcoal rather than coke and provides some evidence, if any were needed, that the slag is not modern intrusive material.

Suggestions for Future work

4.4.27 No further work on the material from this evaluation is recommended.

4.4.28 If the opportunity for further excavation arose, then the site, with its colluvium protected stratigraphy, could potentially offer a valuable opportunity to study the role of metalworking on a rural site through the Iron Age / Roman transition.

C.3 Worked stone

By Rob Atkins

4.4.29 There was a single worked stone piece. Context 99999 Trench 10 SF 11. Part of a limestone ?rubbing stone. Survives 120mm in length, 74mm wide and c.38mm thick. One side of the stone is worn very smooth.

C.4 Flint

By Barry Bishop

4.4.30 In total 106 pieces of struck flint were recovered, comprising 75 flakes, 13 blades, 9 cores, 6 retouched pieces and 3 shattered hammerstone or pounder fragments. The raw materials consisted of thermally fractured alluvially-rounded nodular flint fragments.

4.4.31 Technologically at least two distinct industries were identified. The earliest was represented by the blades, two of the cores, both of which had produced blades, and a small proportion of the flakes. These all exhibited technological attributes characteristic of Mesolithic or Early Neolithic industries. Retouched pieces potentially attributable to these periods would include a serrated blade and a competently made steep end-scraper. The presence within this group of both recorticated and unrecorticated pieces suggests this dating may be further sub-divided, with both Mesolithic and Early Neolithic material present (cf the Early Neolithic hollow, Fordham By-pass), although confirmation of this would require a more detailed examination of the material.

4.4.32 The bulk of the material, however, consisted of a rather crudely produced flake and core-tool industry more characteristic of later second or first millennium BC industries. These include most of the flakes, which tended to be small, squat and with wide obtuse striking platforms, the remainder of the cores, which included irregularly reduced flake cores with randomly aligned striking platforms, along with fragments of similar examples. The remainder of the retouched pieces, which comprised two edge-chipped flakes, a notch and a piercing tool, were also likely to belong to this phase.

Burnt Flint

4.4.33 Fragments of otherwise unmodified burnt flint weighing just under 4kgs were recovered from 11 separate contexts. The largest quantity, weighing just under 3kg, came from context [101]. This material had been extensively burnt to the degree that it had become fire-crazed and attained a uniform light grey colour. The size of this assemblage, combined with the degree and uniformity of its burning, suggests deliberate production, such as may accrue from a variety of industrial processes or from large-scale cooking activities. Much of the material from the other contexts was similarly burned and these may either represent scattered residues from the same source or indicate that similar processes had been undertaken at other locations.

Conclusions and recommendations

4.4.34 This flint assemblage is important as it demonstrates activity over a long period of time, persistent occupation away from the fen edge but adjacent to the Lee brook. Very few moderate or large flint assemblages have been recovered from the immediate area with the exception of the Fordham By-Pass. This Chippenham assemblage has the potential to inform on Mesolithic and Early Neolithic as well as Bronze Age/Iron Age occupation/activity.

C.5 An assessment of the Neolithic, Bronze Age, Middle Iron Age, Late Pre-Roman Iron Age and Early Roman pottery

By Mark Knight and Alice Lyons

Introduction

4.4.35 A total of 763 sherds, weighing 12661g of Neolithic, Bronze Age, Iron Age, Late pre Roman Iron Age and Roman pottery was recorded (Table 5). The pottery was recovered from ditches, pits and various subsoil and topsoil layers. The assemblage as a whole is in good condition and has a mean sherd weight (MSW) of *c*. 17g.

	Sherd count	Weight (g)	Mean sherd weight (MSW)	Weight (%)
Neolithic	13	84	6.50	0.66
Early Bronze Age	10	25	2.50	0.20
Middle Iron Age	46	912	19.80	7.20
Late Iron Age	81	1383	17.10	10.92
Late Pre Roman Iron Age	200	3680	18.40	29.07
Early Roman	411	6567	16.00	51.87
Romano-British	2	10	5.00	0.08
Total	*763*	*12661*	*16.60*	*100.00*

Table 5 Assemblage breakdown by chronological period

Methodology

4.4.36 The assemblage scanned and broad fabric groups and vessel types identified. The sherds were counted and weighed to the nearest whole gramme.

Neolithic, Bronze Age and Middle Iron Age pottery

by Mark Knight

Introduction

4.4.37 The prehistoric pottery assemblage comprised 32 sherds weighing 230g (MSW 7.2g). Most of the sherds were small but in good condition and the majority of the pieces were made of hard robust fabrics. Three fabric types were identified and these were differentiated by three principle opening materials or tempers: flint (Fabric 1), grog (Fabric 2) or sand (Fabric 3). Feature sherds included five rim, two neck and two collar fragments and decoration was only present on one sherd.

Neolithic

4.4.38 Three of the five identified rims belonged to flint and sand tempered vessels that had profiles typical of early Neolithic bowl forms (simple [pit fill 101], out-turned [sub soil layer 321], and externally thickened [pit fill 243]). The first two of these rims came from S-profiled bowls whilst the third was too incomplete to assign a shape. Two detached neck fragments from [pit fill 89] and [ditch fill 152], also of Fabric 1 type, probably came from coarse carinated forms. Pit fills [95] and [162] and ditch fill [282] produced small plain body sherds that shared the same flint and sand-rich fabric. The range of rim and vessel forms in combination with the distinctive fabric suggests that these sherds represent the remains of a plain Mildenhall-type assemblage. Analogous plain or 'coarse' Mildenhall forms were found amongst finer decorated vessels at the type-site Hurst Fen (Clark *et al* 1960) as well as the equally impressive Kilverstone site (Knight 2006).

Early Bronze Age

4.4.39 Cremation [299], held the very bitty remains of what appeared to be a small Collared Urn. All of the fragments were undecorated but included two collar fragments as well as the tip of a simple rim. Multiple large rounded pieces of grog protruded from the broken edges of the sherds and the fabric was softer and less abrasive (less sand inclusions) than the other two fabrics from the site (Fabrics 1 & 2).

Middle Iron Age

4.4.40 The largest and heaviest sherds came from the fill ([237]) of pit [233]. These comprised four thick walled fragments belonging to at least two different vessels. One of these vessels had a cordon of light fingertip impressions around its shoulder. Both sets of sherds appeared to have been parts of medium-sized slack-shouldered jars or bowls diagnostic of the early part of the Middle Iron Age. Sherds made of the same compact fabric (Fabric 2) were also located within various ditch fills ([24] of [23], [152], [159] and

the fill ([224]) of pit [226]. Another substantial Middle Iron Age heavily grog tempered (Fabric 3) storage jar vessel body sherd was found in a fill ([81]) of ditch [82].

Fabric Series

Fabric 1 – Very hard with abundant sand and frequent poorly sorted small, medium and large flint.

Fabric 2 – Very hard (compact) with abundant sand and occasional small flint/stone.

Fabric 3 – Medium hard with common large grog and rare sand.

The Late Iron Age, Late Pre Roman Iron Age and Early Roman pottery

by Alice Lyons

Late Iron Age

4.4.41 A larger number (81 sherds, weighing 1383g, MSW 17g) of Late Iron age (3-1BC) pottery fragments were recovered (Table 6). All this pottery are made from durable sandy reduced wares, most have quartz and flint temper although some are tempered with grog and flint. Although some rim sherds from slack shouldered jar/bowl forms were found most of this material consists of body fragments from undiagnostic jar/bowl vessel types, several of which were burnished externally. Several more substantial jar (storage jars) fragments were found, these are typically decorated with vertical combing.

Late Pre Roman Iron Age

4.4.42 In the Late Pre Roman Iron Age (1BC to mid 1st century AD) the quantity of pottery deposited at this site (200 sherds, weighing 3680g, MSW 18.4g) dramatically increased (Table 6). At this time the potters wheel was being introduced (Hill 2002) and as a result the types of fabrics and vessels began to develop more quickly than seen in the prehistoric period. Sandy reduced ware fabrics, similar to their Late Iron Age predecessors are found, but with a grog temper. Also newly developed and used at this time were the Grey ware fabrics (with a range of tempers constituting grog, quartz and flint) that are forerunners of the Romano-British Sandy grey ware fabrics that became ubiquitous as pottery production became industrialised in the mid 2nd century AD (Gibson and Lucus 2002). These vessels are both handmade and wheel made, sometimes wheel made and hand finished – but it was a time of technological advance with wheel made pottery becoming standard.

4.4.43 The types of vessels used were changing also (influenced by continental styles) and include: plain everted rim necked jars (Thompson 1982, B1-1), plain everted rim necked jars with a girth-groove (*ibid*, B1-5), jars with rippled everted rims (*ibid*, B2-1), wide mouthed jars with everted rims and bulges between cordons on shoulder (*ibid*, B3-1), tall jars with cordons on shoulder (*ibid*, B3-6), carinated wide mouthed cups/bowls with multiple cordons (*ibid*, E1-2). Other continental or 'Belgic'-type forms were also found including the Butt beaker (*ibid*, G5). All of these vessel types are ones that Thompson (1982) has identified as being typically produced in grog-tempered fabrics in the Late Pre Roman Iron Age era in South-Eastern England. It is only fairly recently with the analysis of several Late Pre Roman Iron Age assemblages that it has

been accepted that these forms were also in wide-spread use in the Cambridgeshire area (Lyons in prep a and b).

4.4.44 Also of interest is a locally produced Sandy reduced ware undecorated body sherd from a jar/bowl that has metal working debris adhering to the exterior of the vessel. Although this vessel is not a crucible it is possible the metal working debris has accidentally stuck to the pot, indicating that metal working was taking place close by.

4.4.45 As links with the Roman empire increased amphora, two-handled vessels used to import luxury goods (Tyers 1996, 83-103), were imported. Three small fragments (62g) from an early Italian amphora (Tomber and Dore 1998, 97; ITA AM 1) used to import wine were retrieved from this site.

Early Roman

4.4.46 Most pottery (411 sherds, weighing 6567g, *c*. 16g MSW) was deposited in Early Roman deposits (mid 1st to early/mid 2nd century; Table 6). The majority of this material was represented by the pre-industrialised wheel made Sandy grey wares that were introduced during the previous era and developed (becoming finer and harder) at this time. Although some older ('Belgic') vessel types were still in use particularly the wide mouthed everted-rim jars with bulges between cordons and shoulder (Thompson 1982, B3-1), more Romanised medium mouthed jars with globular bodies and rolled out-turned rims (Willis et al, 69, fig 7, 34, 36, 37) were gaining in popularity.

4.4.47 Several Gaulish imports were also identified in this period group. A Terra Nigra (Tomber and Dore 1998, 11; CNG TN) base sherd from a platter with a (new) stamp was recovered, probably imported from the Massif Central area of France in the mid 1st century AD. Also a North Gaulish white ware (Tomber and Dore 1998, 22) flagon body sherd was identified which was probably traded during the mid to late 1st century AD. These wares, although found in very small quantities, do show that the community at Chippenham did have access to non-local high status classes of pottery.

4.4.48 The majority of the pottery in this period group was recovered from two deposits ([152] and [153]) within ditch [154]. These ditch fills may have filled up over a number of years as some earlier Late Pre Roman Iron Age pottery was also found in its fills but the presence more Romanised fabrics and forms indicate an Early Roman date for the final disuse of the ditch.

Romano-British

4.4.49 Two sherds (10g) of intrusive Romano-British pottery was also recovered. One is a Sandy grey ware undiagnostic jar sherd, the other a Nene Valley colour coat (Tomber and Dore 1998, 118) fragment from a small bowl.

Discussion

4.4.50 This is a small, largely stratified, pottery assemblage that is in good condition and largely nonresidual. The pottery was recovered from several evaluation trenches and a small number of features (ditches and pits) in a concentrated area. The date range of the assemblage indicates continuous settlement, or land-use, at Chippenham from the Neolithic to the Early Roman era. The pottery assemblage hints at a community who existed well above subsistence level (Evans 2003, 105) and who used some imported

specialist wares and good quality ?locally produced 'Belgic' type coarse wares to store, cook and eat their food. Moreover, it is worthy of note that no Gaulish samian (red glossy tablewares) which arrived in Britain in large numbers with the coming of the Roman army, have so far not been retrieved from this site. This may be explained by the location of the site as away from urban centres and military influence samian was not common in this area until the later 1st century and even then was vulnerable to fluctuation in supply (Tyers 1996, 56).

4.4.51 Several other aspects of the assemblage are also worthy of further consideration.

4.4.52 Of most interest is the relatively rare opportunity this assemblage offers to study the transition from handmade Iron Age to wheel made Early Roman pottery in a settlement context. This period covers a time of great social and technological development which is reflected in the pottery. Indeed, it has the potential to answer several questions such as: a) Where and how are the pottery vessels used being produced? b) Are vessels being traded over long distances or primarily locally manufactured? c) Are these fabrics and forms typical of domestic settlement in the region? d) What is the status of the people who used them? e) If the assemblage is not typical of domestic use is there any evidence that it could be a military camp, industrial centre or ritual complex?

4.4.53 Another aspect of interest within this assemblage is that sand has been used as the main temper (material added to the raw clay to strengthen it) in all periods. It is apparent that the community at Chippenham did not manufacture or chose to use shell tempered ware pottery. This pattern of fabric use is similar to that recorded on the Isle of Ely (Hill with Horne 2003, 145-184) at this time. More shell tempered wares seem to have been used in the south and west of the region which may have been a deliberate choice and reflect a social, tribal or topographical boundary (Percival in prep a and b).

4.4.54 Also noteworthy (although not directly related to the fabric and form of the pottery) is how this material was deposited. Most of the pottery was discarded in pits during the prehistoric period, while in the Late iron Age and Late Pre Roman Iron Age the pottery was found in both ditches and pits (slightly more common in pits) and the Early Roman Era the pottery was mostly found in ditches. This reflects a change in how pottery was deposited by the different generations of people who lived at Chippenham.

4.4.55 However, this data contained within his report is the result of a primary scan, a more detailed study may help to address some of the research potential within this assemblage.

Future work

4.4.56 This assemblage should be fully catalogued which will allow for an accurate assessment of the fabrics and forms. The pottery should be compared more fully to the range of published sites that have been excavated in the area, placed in its regional context and a report written suitable for publication in the local journal. A total of 5 days work.

4.4.57 If more pottery is recovered a programme of thin section fabric analysis may be worthwhile to establish if pottery sources remained constant through time or were traded and if so from where.

Cont	Cut	Trench	Cat	Feature	Make	Pottery type	Number of sherds	Wt (g)	Pottery date	Context date
18	17	21	Fill	post hole	WM	BEAK	1	12	C1	M/LC1
18	17	21	Fill	post hole	WM	MJAR	2	33	MC1-E/MC2	M/LC1
18	17	21	Fill	post hole	HM	SJAR	1	44	C1	M/LC1
20	19	21	Fill	pit	HM	JAR/BOWL	1	4	C3-C2BC	C3-C2BC
22	21	21	fill	pit	HM	JAR/BOWL	1	18	C1	MC1
22	21	21	fill	pit	WM	JAR/BOWL	1	64	MC1	MC1
22	21	21	fill	pit	HM	JAR/BOWL	2	102	C1	MC1
24	23	21	fill	ditch	HM	SJAR	32	511	C4-C3BC	C4-C3BC
24	23	21	fill	ditch	HM	JAR/BOWL	1	8	C3-C2BC	C3-C2BC
25	23	21	Fill	ditch	HM	JAR/BOWL	15	158	C3-C2BC	C3BC
26	27	20	Fill	ditch	HM	WJAR	5	55	E-MC1	E/MC1
26	27	20	Fill	ditch	HM	SJAR	1	7	C1	E/MC1
26	27	20	Fill	ditch	HM	WJAR	3	61	E-MC1	E/MC1
26	27	20	Fill	ditch	HM	WJAR	1	87	LC1BC-M/LC1AD	E/MC1
32	35	5	Fill	ditch	WM	JAR	1	4	MC1-E/MC2	MC1
32	35	5	Fill	ditch	WM	MJAR	5	79	MC1-E/MC2	MC1
32	35	5	Fill	ditch	HM	JAR/BOWL	2	20	E-MC1	MC1
51	49	21	Fill	ditch	HM	JAR/BOWL	1	5	C1	E/MC1
51	49	21	Fill	ditch	HM	JAR/BOWL	1	21	E-MC1	E/MC1
51	49	21	Fill	ditch	HM	JAR/BOWL	18	178	E-MC1	E/MC1
51	49	21	Fill	ditch	HM	JAR/BOWL	1	5	E-MC1	E/MC1
51	49	21	Fill	ditch	HM	SJAR	1	17	C1	E/MC1
51	49	21	Fill	ditch	HM	BEAK	1	23	MC1	E/MC1
78	49	25	layer	subsoil	HM	JAR/BOWL	1	5	C2-C1BC	C2-C1BC
79	80	26	fill	ditch	HM	JAR/BOWL	1	5	C3-C2BC	C2BC
79	80	26	fill	ditch	HM	SJAR	1	15	C2-C1BC	C2BC
81	82	26	Fill	ditch	HM	SJAR	1	121	C4-C3BC	C4-C3BC
103	104	23	Fill	pit	HM	SJAR	1	16	C1BC	C1BC
107	0	20	layer	topsoil	HM	JAR/BOWL	1	1	C2-C3BC	MC1
107	0	20	layer	topsoil	HM	SJAR	1	67	C1BC-C1AD	MC1
107	0	20	layer	topsoil	HM	JAR/BOWL	1	5	MC1-E/MC2	MC1
108	0	18	Fill	pit	HM	JAR	1	76	MC1-E/MC2	MC1-E/MC2
109	110	18	Fill	pit	HM	JAR/BOWL	8	204	C3-C2BC	MC1
109	110	18	fill	pit	WM	JAR	3	60	MC1	MC1
109	110	18	fill	pit	HM	BOWL	1	19	C1BC-MC1	MC1
112	0	4	layer	buried soil	HM	AMP	3	62	C1BC-C3AD	C1BC-C3AD
116	117	17	Fill	ditch	HM	JAR/BOWL	1	75	C3-C2BC	LC1-EC2
116	117	17	Fill	ditch	HM	JAR/BOWL	1	16	C3-C2BC	LC1-EC2
116	117	17	Fill	ditch	HM/WM	JAR/BOWL	19	165	M/LC1	LC1-EC2
116	117	17	Fill	ditch	WM	FLAG	2	35	M/LC1	LC1-EC2
116	117	17	Fill	ditch	WM	JAR	3	149	M/LC1	LC1-EC2
116	117	17	Fill	ditch	WM	JAR/BOWL	1	48	MC1-E/MC2	LC1-EC2
116	117	17	Fill	ditch	HM	JAR/BOWL	5	108	E/MC1-E/MC2	LC1-EC2
116	117	17	Fill	ditch	WM	LID	5	163	M/LC1	LC1-EC2
116	117	17	Fill	ditch	WM	FLAG	2	2	MC1-E/MC2	LC1-EC2
116	117	17	Fill	ditch	HM	JAR	104	2099	EC2	LC1-EC2

Cont	Cut	Trench	Cat	Feature	Make	Pottery type	Number of sherds	Wt (g)	Pottery date	Context date
116	117	17	Fill	ditch	HM	SJAR	4	115	EC2	LC1-EC2
116	117	17	Fill	ditch	HM	JAR	8	270	MC1	LC1-EC2
116	117	17	Fill	ditch	WM	JAR/BOWL	1	18	MC1-E/MC2	LC1-EC2
121	122	17	Fill	pit	HM	JAR/BOWL	6	47	C3-C1BC	C3-C1BC
123	126	12	Fill	pit	WM	JAR/BOWL	1	16	MC1-E/MC2	MC1-E/MC2
127	128	12	Fill	pit	HM	JAR/BOWL	3	118	C3-C2BC	C3-C2BC
129	131	12	Fill	pit	HM	JAR/BOWL	1	6	C3-C2BC	C3-C2BC
135	138	22	fill	pit	HM	SJAR	1	36	C3-C2BC	C3-C2BC
136	138	22	Fill	pit	HM	JAR/BOWL	4	38	C3-C2BC	C3-C2BC
136	138	22	Fill	pit	HM	JAR/BOWL	1	11	C3-C2BC	C3-C2BC
152	154	16	Fill	ditch	HM	JAR/BOWL	2	20	E/MC1	E/MC2
152	154	16	Fill	ditch	HM	JAR	2	36	C1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	BEAK	14	144	MC1	E/MC2
152	154	16	Fill	ditch	WM	BEAK	1	17	M/LC1	E/MC2
152	154	16	Fill	ditch	WM	BEAK	1	3	M/LC1	E/MC2
152	154	16	Fill	ditch	HM	JAR/BOWL	4	56	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	BEAK	12	29	MC1	E/MC2
152	154	16	Fill	ditch	WM	WJAR	13	320	MC1	E/MC2
152	154	16	Fill	ditch	WM	BOWL/CUP	5	136	M/LC1	E/MC2
152	154	16	Fill	ditch	WM	JAR/BOWL	7	123	M/LC1	E/MC2
152	154	16	Fill	ditch	HM	JAR/BOWL	3	53	C1	E/MC2
152	154	16	Fill	ditch	WM	JAR	1	1	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	MJAR	3	102	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR	1	31	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR	1	2	C1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR/BOWL	5	236	M/LC1	E/MC2
152	154	16	Fill	ditch	WM	JAR	3	40	E/MC2	E/MC2
152	154	16	Fill	ditch	HM	JAR	4	88	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR/BOWL	102	381	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR/BOWL	1	11	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR	2	49	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	NJAR	1	12	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	BEAK	7	19	MC1-MC2	E/MC2
152	154	16	Fill	ditch	HM	JAR/BOWL	1	1	C3-C2BC	E/MC2
152	154	16	Fill	ditch	HM	JAR/BOWL	1	23	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR/BOWL	1	10	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	PLAT	1	14	MC1	E/MC2
152	154	16	Fill	ditch	WM	JAR	16	128	E/MC2	E/MC2
152	154	16	Fill	ditch	WM	BOWL/CUP	11	115	M/LC1	E/MC2
152	154	16	Fill	ditch	WM	JAR	1	13	MC2	E/MC2
152	154	16	Fill	ditch	WM	JAR	6	54	MC1-E/MC2	E/MC2
152	154	16	Fill	ditch	WM	BEAK	1	5	MC1-E/MC2	E/MC2
153	154	16	Fill	ditch	WM	WJAR	6	174	E/MC2	E/MC2
153	154	16	Fill	ditch	WM	JAR	2	18	E/MC2	E/MC2
153	154	16	Fill	ditch	WM	FLAG	1	35	E/MC2	E/MC2
153	154	16	Fill	ditch	WM	SJAR	36	1321	E/MC2	E/MC2
155	156	16	Fill	ditch	HM	SJAR	1	59	C3-C2BC	C3-C2BC
157	159	16	Fill	ditch	HM	JAR/BOWL	1	3	C4-C3BC	C3BC
157	159	16	Fill	ditch	HM	JAR/BOWL	2	46	C1-E/MC2	MC1-E/MC2

Cont	Cut	Trench	Cat	Feature	Make	Pottery type	Number of sherds	Wt (g)	Pottery date	Context date
157	159	16	Fill	ditch	HM	SJAR	6	201	C3-C2BC	C3BC
157	159	16	Fill	ditch	WM	JAR/BOWL	1	11	MC1-E/MC2	MC1-E/MC2
157	159	16	Fill	ditch	WM	MJAR	1	22	MC1-E/MC2	MC1-E/MC2
166	167	16	Fill	ditch	HM	JAR/BOWL	1	11	C1-E/MC2	C1-E/MC2
171	0	3	layer	subsoil	HM	BOWL	1	16	MC1-E/MC2	MC2
171	0	3	layer	subsoil	WM	MJAR	1	24	MC2	MC2
171	0	3	layer	subsoil	HM	SJAR	1	39	C1BC-ADC2	MC2
188	190	6	Fill	pit	WM	WJAR	68	1337	MC1	MC1
191	192	6	cut	ditch	HM	JAR/BOWL	5	97	E/MC1	E/MC1
195	196	6	fill	ditch	WM	JAR/BOWL	1	10	MC1-E/MC2	MC1
195	196	6	fill	ditch	HM	JAR/BOWL	3	30	MC1	MC1
197	199	6	fill	pit	HM	JAR/BOWL	2	37	C3-C2BC	C3-C2BC
197	199	6	fill	pit	WM	JAR/BOWL	1	7	MC1-E/MC2	MC1
197	199	6	fill	pit	HM	JAR/BOWL	4	75	E/MC1	MC1
200	0	6	Fill	ditch	WM	JAR	1	4	MC1-E/MC2	MC1-E/MC2
213	0	13	layer	buried soil	HM	JAR/BOWL	2	22	C2-C1BC	C2-C1BC
216	217	13	Fill	pit	HM	JAR/BOWL	1	2	C4-C3BC	C4-C3BC
219	220	13	cut	pit	HM	JAR/BOWL	1	6	E/MC1	E/MC1
221	222	13	fill	pit	WM	JAR/BOWL	1	27	C1	MC1
221	222	13	fill	pit	WM	JAR/BOWL	1	34	MC1	MC1
224	226	13	Fill	pit	WM	JAR/BOWL	1	4	MC1-E/MC2	MC1
224	226	13	Fill	pit	HM	JAR/BOWL	1	2	MC1	MC1
225	226	13	Fill	pit	HM	JAR/BOWL	1	42	C2-C1BC	C2-C1BC
234	236	22	Fill	pit	HM	SJAR	1	3	C2-C1BC	C2-C1BC
240	232	22	Fill	pit	HM	JAR/BOWL	1	15	C3-C2BC	C3-C2BC
248	249	15	Fill	pit	HM	SJAR	1	20	C2-C1BC	C2-C1BC
251	231	22	Fill	pit	HM	JAR/BOWL	1	2	C2-C1BC	C2-C1BC
252	231	22	Fill	pit	HM	JAR/BOWL	2	12	C3-C2BC	C3-C2BC
263	226	13	fill	pit	HM	JAR/BOWL	1	34	C3-C1BC	C3-C1BC
264	265	13	Fill	pit	HM	JAR	2	154	C4-C3BC	C4-C3BC
291	293	7	Fill	ditch	HM	SJAR	1	102	C1	M/LC1
291	293	7	Fill	ditch	WM	JAR	2	5	MC1-E/MC2	M/LC1
310	311	6	Fill	ditch	WM	JAR	1	18	MC1-E/MC2	MC1
310	311	6	Fill	ditch	HM	JAR/BOWL	1	9	MC1	MC1
312	313	7	Fill	pit	HM	SJAR	1	11	C1-E/MC2	MC1
312	313	7	Fill	pit	WM	JAR/BOWL	1	4	E/MC1	MC1
312	313	7	Fill	pit	HM	JAR/BOWL	2	17	C3-C2BC	C3-C2BC
312	313	7	Fill	pit	HM	JAR/BOWL	1	5	C2-C1BC	MC1
323	325	23	Fill	pit	HM	JAR/BOWL	3	20	E/MC1	E/MC1
330	331	14	Fill	Posthole	HM	JAR/BOWL	1	5	C2-C1BC	C2-C1BC
333	333	7	cut	ditch	WM	BOWL	1	8	MC2-C2	MC1
333	333	7	cut	ditch	HM	JAR/BOWL	2	13	C1BC-E/MC1	MC1
333	333	7	cut	ditch	HM	JAR/BOWL	1	1	M/LC1	MC1
336	337	23	Fill	pit	WM	JAR/BOWL	1	5	MC1-E/MC2	MC1-E/MC2
339	0	10	fill	ditch	WM	JAR	1	4	MC1-E/MC2	MC1-E/MC2
342	0	10	fill	ditch	WM	JAR	1	2	LC1-C4	LC1
342	0	10	fill	ditch	HM	JAR/BOWL	2	11	C2-C1BC	LC1
342	0	10	fill	ditch	HM	JAR/BOWL	1	5	C3-C2BC	C3-C2BC
343	344	10	fill	pit	HM	JAR	4	115	C3-C2BC	C3-C2BC

Cont	Cut	Trench	Cat	Feature	Make	Pottery type	Number of sherds	Wt (g)	Pottery date	Context date
345	0	10	Fill	pit	HM	JAR/BOWL	2	18	C3-C2BC	C3-C2BC
347	348	7	Fill	pit	HM	JAR/BOWL	1	12	C2-C1BC	C2-C1BC
355	0	23	Fill	ditch	WM	JAR/BOWL	5	38	C1	E/MC1
355	0	23	Fill	ditch	HM	JAR/BOWL	1	59	C1BC-MC1	E/MC1
99999	0	0		subsoil	HM	JAR/BOWL	1	9	MC1	MC1

Table 6 Middle/Late Iron Age to Early Roman pottery analysed by Alice Lyons

C.6 Post-medieval and modern pottery

4.4.58 Two pottery sherds were found, from context 78 there was a China White Ware sherd dating after 1830 while from context 320 there was a 19th century flower pot sherd.

C.7 Roman tile

4.4.59 One tile fragment was recovered from context 109 (33g).

C.8 Daub and fired Clay

By Rob Atkins

4.4.60 A small collection of 59 pieces of daub and fired clay (0.535kg) were recovered from 14 different contexts. The vast majority of the fragments were very small undiagnostic pieces although there were several small fragments with lining surviving.

Summary Catalogue Daub

79 1 piece (30g) Surface present

221 4 pieces (153g) One piece pressed against object such as wooden stake. Two others had surfaces present.

Fired clay

26 2 pieces 24g lining would have been from a domestic or industrial feature such as a hearth.

32 4 pieces 9g

99 1 piece 1g

51 3 piece 22g

109 9 small pieces 83g Lining surviving on three pieces would have been from a domestic or industrial feature such as a hearth.

127 1g

152 7 undiagnostic fragments 37g

195 2 undiagnostic 3g

221 7 undiagnostic fragments 48g

312 7 pieces 66g lining?

342 3 fragments lining evident on two pieces and one possible finger print 19g

343 7 undiagnostic fragments Finger prints on two pieces 33g

347 1 undiagnostic fragment 6g lining

Conclusions and Recommendations

4.4.61 This was a small very abraded collection of fired clay and daub. There was no hearths or ovens found in the evaluation and this collection is therefore therefore marks secondary deposition after probable long periods in midden heaps etc. It is probable that an excavation would provide further evidence.

APPENDIX D. ENVIRONMENTAL REPORTS

D.1 Human bone

By Natasha Dodwell

4.4.62 Immature human bone has been identified in three contexts ([162], [299] and [307]) from the excavations at Low Park Corner, Chippenham (Table 7). The bone from each context has been scanned and an inventory of skeletal elements made. The stage of dental development (Ubelaker 1989) and the length of long bones and the stage of development and fusion of elements, particularly the skull and spine (Scheuer and Black 2000) were used to estimate the age of each individual. This information is summarised in the table below.

4.4.63 The remains of two neonates were recovered from contexts [162] and [307]. In the first context the neonate is represented only by skull fragments, ribs and unfused neural arches although more bone may be present in any sample that was taken from the feature. The skeleton in the latter context was far better preserved with almost the entire skeleton surviving, including many loose epiphyses. A partially formed deciduous molar crown and incisor were also recovered. In neither case is it possible to state with certainty if the child was still born close to term or was a live birth that lived for a few weeks/months.

4.4.64 A small quantity (4g) of white, well-calcined cremated bone was recovered from [299]. Skull fragments, fragments of limb shafts and a permanent molar crown are identifiable and represent the cremated remains of a third immature individual who died at c. 18 months ±6months.

Cont /Cut	Feature	Tr	Age	type	wt	Largest frag.	Elements present	Other artefacts/ecofacts present
162 **163**	Grave? Rectangular 1.48x 0.82x 0.24	16	Neonate (around birth-6mos)	unburnt			Skull, ribs, vertebrae	Neolithic pottery and flint. Probably residual No sample taken
299 **300**	Cremation Round 0.4m diameter 0.12 deep	15	Infant (18mos ± 6mos)	cremated	4g	14mm	Femur shaft, skull frags. & molar crown	Early Bronze Age pottery (collared urn) and moderate charcoal less than 2mm in length (Sample 16)
307 **308**	Pit 0.84m diameter 0.24m deep	23	Neonate (birth ± 2mos)	unburnt			Skull, all limb bones, pelvis, thorax, extremities & 2 teeth	No pottery although pit was stratigraphically late ?Early Roman. A few degraded cereal grains and a few charcoal pieces less than 2mm in length (Sample 17)

Table 7 Human bone

4.4.65 No further work needs to be undertaken on the skeletal material although the remains of these three immature individuals obviously need to be discussed with reference to contextual information.

D.2 Faunal

By Chris Faine

Introduction

4.4.66 The faunal material in question was recovered from an evaluation at Low Park Corner, Chippenham carried out in December 2008 by Robert Atkins. Identifiable faunal material was recovered from 45 contexts, with a further 29 contexts containing no identifiable elements. Three hundred and twenty fragments were recovered, with 167 identifiable to species (52% of the total sample).

4.4.67 There were small bone fragments recovered from soil samples (see Rachel Fosberry below) including at least 1 fish bone but these have not been included in this report.

The Assemblage

4.4.68 Recovery*:* the bones forming this assessment were collected by hand. It is important to note that small bones including fish were recovered from the soil sample program (see Fosberry below) on site but these are not reported here.

4.4.69 Residuality and contamination: no information regarding residuality or contamination is available to the author at this time.

4.4.70 Context: Faunal material was recovered from a variety of features including pits and linear features dating from the Late Iron age/early Roman periods.

Preservation

4.4.71 The preservation of the assemblage is extremely good (see above) although frequently fragmented. No gnawing was seen on any element with burning being observed on a single portion of large mammal skull from context **123**.

Storage and quantity

4.4.72 The hand collected animal bones are stored in 3 long bone boxes measuring 38x25.5x13cm. The bones are washed and bagged by context. The total weight of the hand-collected bone is 9.62 Kg.

Assessment

4.4.73 Methods: All “countable” bones were recorded on a specially written MS Access database. The overall species distribution in terms of fragments (NISP) is shown in Table 8. The numbers of ageable mandibles and measurable bones are recorded in Tables 9 and 10. The counting system is based on a modified version of the system suggested by Davis (1992) and used by Albarella and Davis (1994*)*. Completeness was

assessed in terms of diagnostic zones (Dobney & Reilly, 1988). Ageing was assessed via tooth wear (Grant, 1982).

4.4.74 Variety: As one would expect the assemblage is dominated by domestic mammals remains , with sheep/goat remains being the most prevalent (N: 59), and cattle being the next most common taxon (N: 57). Juvenile sheep/goat remains were present in context **121**. A relatively large number of ageable mandibles were also recovered (N: 8). Numbers of horse remains are also relatively high, although many of these consist of loose teeth which has the effect of artificially raising the NISP. Pig remains are limited to 7 contexts, with contexts **26** and **252** containing neonatal remains, suggestive of on -site breeding. A single dog radius was recovered from context **252**. Wild fauna include a partial rabbit skeleton in context **225** and carpometacarpal from a large corvid (most likely a raven) from context **264**. A single fragmented anuran amphibian tibia (possibly frog) was recovered from context **116**.

Cattle	Sheep/Goat	Pig	Others	Bird	Total
57	59	21	29	1	**167**

Table 8 Number of "countable" bones (NISP)

Cattle	Sheep/Goat	Pig	Total
3	8	1	**12**

Table 9 Number of ageable mandibles

Cattle	Sheep/Goat	Pig	Others	Bird	Total
21	21	0	11	1	**54**

Table 10 Number of measurable elements

Potential and recommendations

4.4.75 This is a small assemblage that as it stands requires little further work, with the possible exception of analysing the available mandibles. However, the quite wide range of species and good preservation, along with the location of the site and phases represented, means that a larger assemblage could provide valuable information in an area with few significant Romano-British bone assemblages. Indeed there is a lack of later Iron-Age faunal remains even from significant sites in the area such as Landwade Road, Fordham (Connor, 1996) and the Fordham Bypass (Mortimer, forthcoming). Whilst any assemblage obtained from full excavation would most likely not be comparable in size to these, it would provide valuable evidence on Late Iron Age/Roman settlement in the surrounding area.

D.3 Shell

4.4.76 Shell was recovered from two contexts within ditch **154** which dated to the early/mid 2nd century AD. There were 15 and 2 oyster shells respectively from contexts 152 and

153. In addition a small amount of shell was obtained from context 153 within the environmental sample.

D.4 Environmental Assessment

By Rachel Fosberry

Introduction

4.4.77 Nineteen bulk samples were taken from features within the evaluated areas of the site in order to assess the quality of preservation of plant remains, bones and artefacts and their potential to provide useful data as part of further archaeological investigations. A further fourteen samples were processed for the retrieval of metalworking residues. A single cremation sample and a grave sample were processed for the recovery of human skeletal remains

Methodology

4.4.78 The volume of bulk soil samples collected was between 5 – 30L. Up to 10L of each bulk sample were processed by water flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present (Table 11). The flots were collected in a 0.3mm nylon mesh and the residues were washed through a 0/5mm mesh. Both flot and residue were allowed to air dry. The metalworking samples were processed by washing the sample through a 0.3mm sieve. A magnet was dragged through the dried residue prior to sorting for ecofacts (e.g. animal bone, fish bone, charcoal, shell, etc..) and artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x16 magnification. Identifications were made by the author without comparison to the OA East reference collection and should be seen as provisional. Nomenclature for the plant classification follows Stace (1997).

Quantification

4.4.79 For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50, ### = 51+ specimens

4.4.80 Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Preservation

4.4.81 The plant remains were preserved by carbonisation.

Sample No.	Context No.	Cut No.	Feature Type	Sample Size (L)	Comments	Flot Volume (ml)	Preservation	Cereals	Chaff	Legumes	Weed Seeds	Small Bones	Charcoal <2mm	Charcoal > 2mm	Flake Hammerscale	Spheroidal hammerscale	Flot comments	Residue Volume (ml)	Small animal bones	Large animal bones	Fishbone	Marine molluscs	Pottery	Residue comments
1	55		layer	20	buried soil, dark material w ith some flint and bone	10	charr ed	#	0	0	0	0	0	0			single grain, no charcoal	1.5	0	##	0	0	0	some bone burnt
2	97	98	pit	30	early Iron Age pit very little debitage but look anyw ay although not very promising	10	charr ed	0	0	#	0	0	0	+			single pea, sparse charcoal	1.4	0	0	0	0	0	burnt stone not removed
3	25	23	ditch	10	ditch fill, late Iron Age / early Roman. Lots of pot and bone	20	charr ed	0	0	0	0	#	+	+	++	+	sparse charcoal, amphibian bone, Fe w ire – plastic coated	1.4	0	0	0	0	0	
4	22	21	post hole	10	post hole cut into ditch [23], lots of pot for a small hole	15	charr ed	#	0	0	0	0	+	++	+++	++	single grain, moderate charcoal	0	0	0	0	0	#	
5	89	88	pit	10	neolithic feature, no idea w hat it is	60	charr ed	0	0	0	0	0	++	++	+		moderate charcoal, single flake probably intrusive	0	0	0	0	0	0	
6	26	27	ditch	10	look for possible evidence of smithing. Lots of smelt material and some domestic w aste as w ell	10	charr ed	#	0	0	0	0	+	++	+++	+	5 grains, moderate charcoal	0.8	0	##	0	0	#	
7	132	133		30	site of fire, majority of best material in first tw o buckets how ever finds came from edge of fire majority of 3rd bucket	15	charr ed	0	0	0	0	0	++	++			moderate charcoal	2	0	0	0	0	0	
8	153	154	ditch	10	basal fill of ditch w ith lots of pot, possibly domestic w aste	10	charr ed	0	0	0	0	0	0	0	+++	+	2 grain fragments, sparse charcoal	1	0	0	0	#	#	Oyster
9	164	165	ditch	10	very dark fill of ditch terminus	15	charr ed	#	0	0	0	#	+	+	+		3 grains, sparse charcoal, bone frags, small vertebra – prob rodent	1	0	##	0	0	#	
10	224	226	ditch	20	dark upper ditch fill	10	charr ed	#	#	0	#	0	0	0	+	+	3 grains, single glume base (Spelt) and single seed. Sparse charcoal	0.8	0	##	0	0	#	
11	259	260	stake hole		very burnt fill of stake hole	5	charr ed	###	0	0	0	0	+	+	-	-	numerous w heat grains, some very degraded, very clean flot w ith sparse charcoal fragments.	0.5	#	0	#	0	0	Small fish vertebra
12	245	249	pit	5	black in pit	45	charr ed	0	0	0	0	0	+++	+++	+	+	charcoal rich, mainly fine flecks, bone epiphyses	1.2	0	##	0	0	0	charcoal, burnt stone
13	26	27	ditch	10	please look for hammerscale, taken near base of fill	1	charr ed	0	0	0	0	#	+	0	-	-	sparse charcoal	0.8	0	0	0	0	0	
14	272	274	pit	10	fill of quarry? Or possibly a buried soil layer	1	none	0	0	0	0	0	0	0	+	-	no cpr	0.8	0	0	0	0	0	
15	273	274	pit	10	fill of quarry? Or possibly a buried soil layer	1	none	0	0	0	0	0	0	0	-	-	no cpr	2	0	0	0	0	0	strange iron-looking concretions
16	299	300	crema tion	5	cremation	1	charr ed	0	0	0	0	0	++	0			charcoal flecks	2	0	##	0	0	##	
17	307	308	grave	10	possible baby burial. Disarticulated so bit could have been missed, unlikely to be a burrow ing type	2	charr ed	#	0	0	0	#	+	0			few small frags of HSR, rodent bones, few cereal grains (very degraded)	0	0	0	0	0	0	
18	343	344	pit	10	Iron Age pit? A little fired clay and ash	10	charr ed	##	0	0	0	#	+	+	+			1.4	0	##	0	0	#	burnt bone, fired clay
19	347	348	pit	30	burnt material, very dark brow n / black, ash?	15	charr ed	#	0	0	#	#	+	+	+		Few grains, Lithospermum arvense (Corn gromw ell)	1.2	#	##	0	0	0	burnt bone, fired clay

Table 11 Environmental bulk samples

4.4.82 Plant Remains

Cereals

4.4.83 Charred cereal grains are present in nine samples. Preservation was variable.

Chaff elements occur in only one sample, Sample10, Context 224 and is comprised of a single glume base of Spelt wheat (*Triticum Spelta*)

Weed seeds

4.4.84 Weed seeds are extremely rare. Only two seeds were recovered, one of which remains unidentified. The other seed is that of corn gromwell (*Lithospermum arvense*)

Legumes

4.4.85 A single pea (*Pisum sativum*) is present in Sample 2, Context 97.

Ecofacts and Artefacts

Bone

4.4.86 Small fragments of animal bone are present in the majority of the residues. A single fish vertebra was recovered from Sample 11, Context 259. Occasional small mammal and amphibian bones were noted in the flots.

Human Skeletal Remains

4.4.87 The grave sample contains numerous small bone elements of a neonate which have been reintegrated with the hand-excavated material. The cremation sample produced a small amount of cremated bone including a tooth which will hopefully be diagnostic

Pottery

4.4.88 Small sherds of pottery were recovered from seven of the residues.

Magnetic Residues

4.4.89 The majority of the samples contained magnetic residues consisting of flake and spheroidal hammerscale.

Other finds

4.4.90 An oyster (*Ostrea* sp.) is present in Sample 8, Context 153

Contamination

4.4.91 Modern roots were present in most of the samples

Discussion

4.4.92 The samples examined from this evaluation produced a low abundance of charred material in the form of charcoal fragments with some cereal grains and occasional weed seeds. This suggests that most of the samples represent general scatters of burnt debris rather than discrete purposeful deposits. The exception is Sample 12, Context 259 which contains numerous wheat grains. This feature was originally interpreted as a stake hole but these results may suggest an alternative use.

4.4.93 The other remains of fragments of animal bone and fish bone along with the charred grain and legume are probably derived from the deposition of small quantities of burnt domestic refuse.

4.4.94 The small volume of charcoal content of these samples does not provide evidence of fuel used for metalworking.

Conclusions and recommendations

4.4.95 The preliminary appraisal of a selection of samples from this site have shown that there is potential for the recovery of plant remains. If further excavation is planned, it is recommended that a schedule for environmental sampling should be appended to the updated project design and would include targeted sampling for metalworking residues. Bulk sampling should be undertaken as investigation on the nature of cereal waste and weed assemblages is likely to provide an insight into to utilisation of local plant resources, agricultural activity and economic evidence from this period.

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Maps Consulted

1712 CRO R58/16/1

c.1818 Farms CRO R55/7/14/2

1842 Tithe map CRO P44/27/1

APPENDIX F. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	Oxfordar3-54614		
Project Name	Neolithic and Bronze Age occupation and a Middle Iron Age to Early Roman Settlement at Low Park Corner, Chippenham, Cambridgeshire		
Project Dates (fieldwork) Start	06-01-2009	Finish	25-01-2009
Previous Work (by OA East)	No	Future Work	Unknown

Project Reference Codes

Site Code	CHP LPC 08	Planning App. No.	08/00252/FUM
HER No.	CHER ECB 3204	Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt	Direction from Local Planning Authority - PPG16
Development Type	Farm Infrastructure

Please select all techniques used:

☐ Aerial Photography - interpretation	☐ Grab-Sampling	☐ Remote Operated Vehicle Survey
☐ Aerial Photography - new	☐ Gravity-Core	☒ Sample Trenches
☐ Annotated Sketch	☐ Laser Scanning	☐ Survey/Recording Of Fabric/Structure
☐ Augering	☐ Measured Survey	☒ Targeted Trenches
☐ Dendrochronological Survey	☒ Metal Detectors	☒ Test Pits
☒ Documentary Search	☐ Phosphate Survey	☐ Topographic Survey
☒ Environmental Sampling	☐ Photogrammetric Survey	☐ Vibro-core
☐ Fieldwalking	☐ Photographic Survey	☐ Visual Inspection (Initial Site Visit)
☒ Geophysical Survey	☐ Rectified Photography	

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
ritual +?occupation	Neolithic -4k to -2k	2 human,pot +flints	Neolithic -4k to -2k
settlement	Iron Age -800 to 43	domestic/industrial	Iron Age -800 to 43
settlement	Roman 43 to 410	domestic/industrial	Roman 43 to 410

Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	
District	East Cambridgeshire DC	Land adjacent to B1085 Low Park Corner opposite Chippenham Park Chippenham	
Parish	Chippenham		
HER	Cambridgeshire		
Study Area	7ha	National Grid Reference	TL 672 691

Project Originators

Organisation	OA EAST
Project Brief Originator	Eliza Gore, Cambridgeshire County Council
Project Design Originator	Richard Mortimer, OA East
Project Manager	Richard Mortimer
Supervisor	Rob Atkins

Project Archives

Physical Archive	Digital Archive	Paper Archive
Cambridgeshire County Store	OA East	Cambridgeshire County Store
CHP LPC08	CHP LPC 08	CHP LPC 08

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☒	☒
Ceramics	☒	☒	☒
Environmental	☒	☒	☒
Glass	☐	☐	☐
Human Bones	☒	☒	☒
Industrial	☒	☒	☒
Leather	☐	☐	☐
Metal	☒	☒	☒
Stratigraphic		☐	☐
Survey		☒	☒
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☒	☒	☒
None	☐	☐	☐
Other	☐	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☒ GIS	☒ Context Sheet
☒ Geophysics	☒ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☐ Spreadsheets	☒ Map
☐ Survey	☐ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☒ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

Drawing Conventions

Plans

Limit of Excavation

Illustrated Section S.14

Archaeological Deposit

Excavated Slot

Modern Deposit

Archaeological Spread

Cut Number 118

Deposit Number 117

Surface Find

Sections

Limit of Excavation

Cut

Cut-Conjectured

Deposit Horizon

Deposit Horizon - Conjectured

Intrusion/Truncation

Top Surface/Top of Natural

Break in Section/
Limit of Section Drawing

Cut Number 118

Deposit Number 117

Ordnance Datum 18.45m OD

Inclusions

Convention Key

Figure 1: Location of trenches (black) with the development area outlined (red)

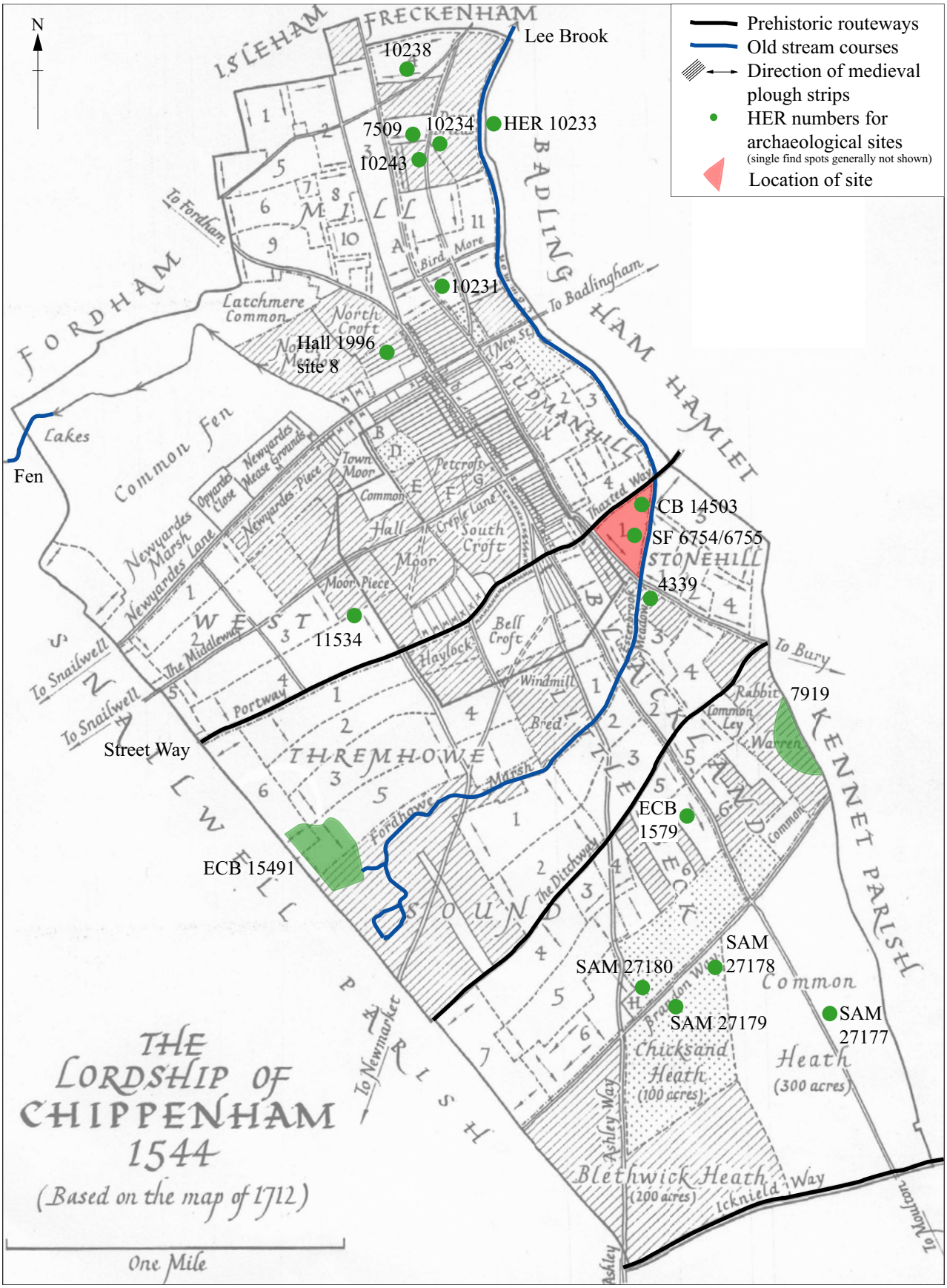


Figure 2: Map of the Lordship of Chippenham 1544 (based on map of 1712) with known archaeological sites, old stream courses and prehistoric routeways highlighted

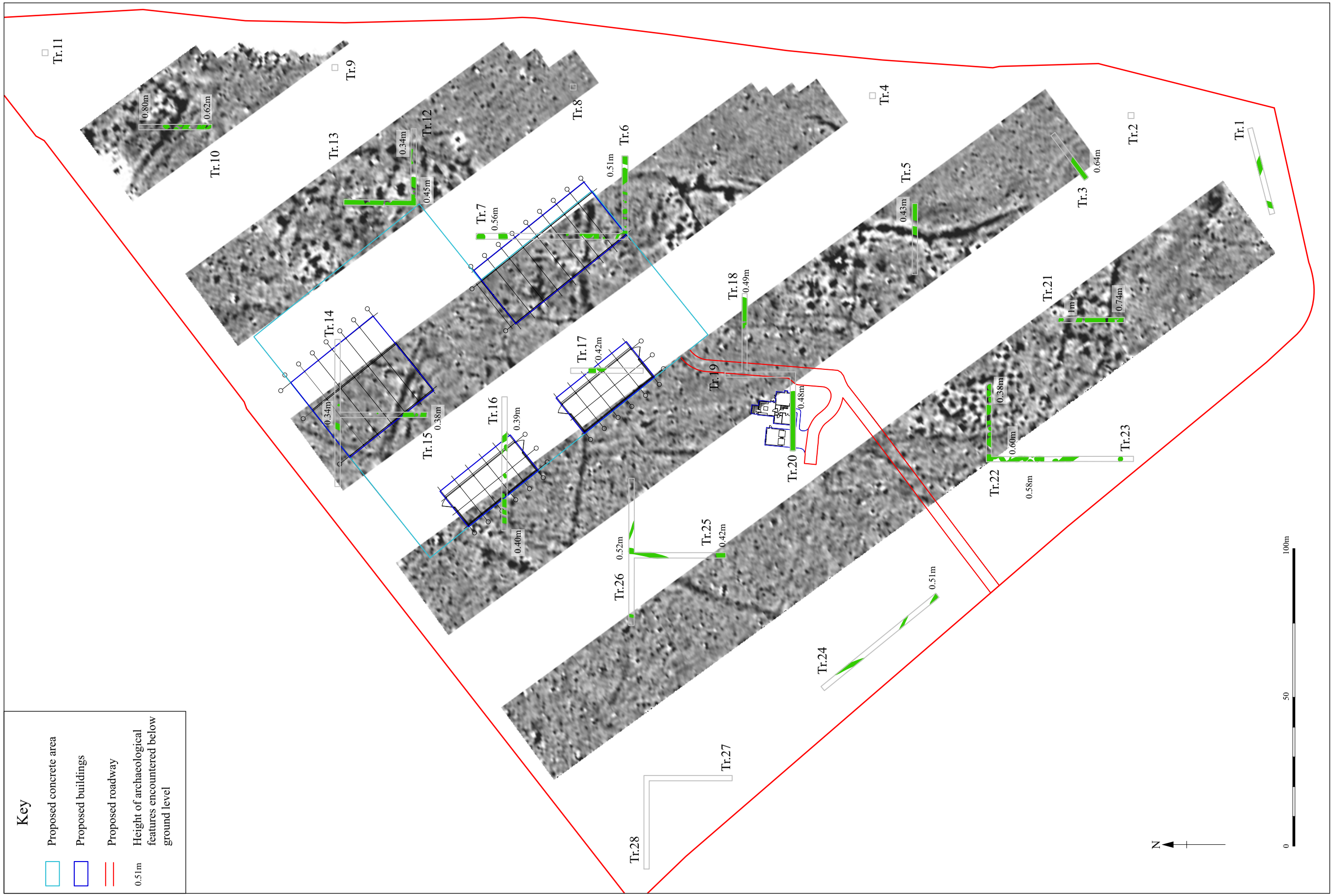


Figure 3: Trenches overlaying geophysical plot with proposed development outlines and heights of archaeological features at ground level (at scale 1:1,250)

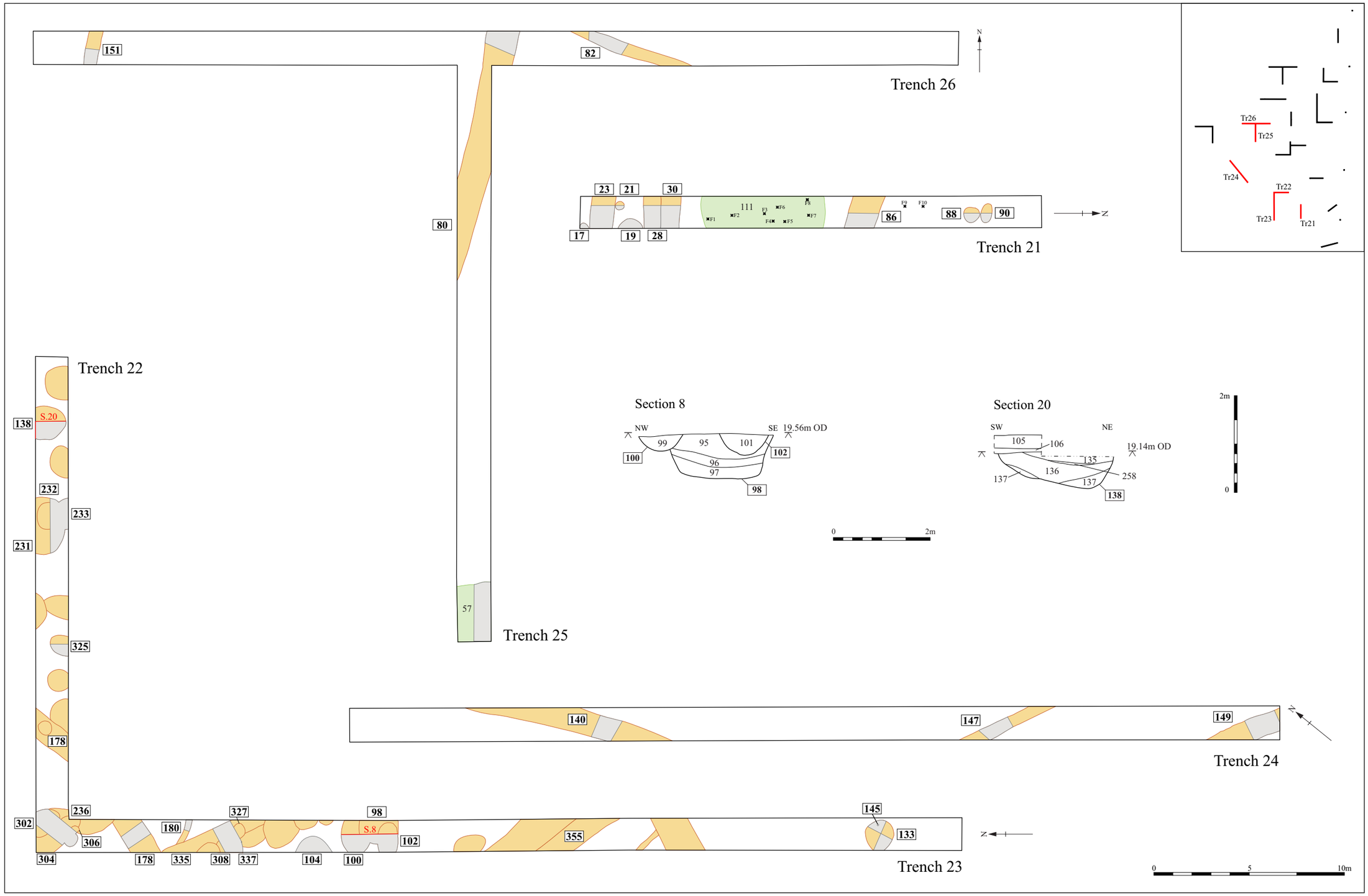
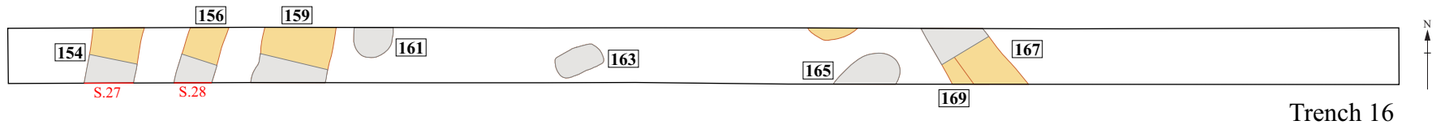
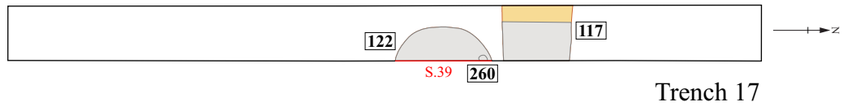


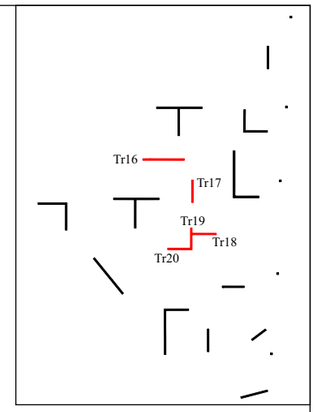
Figure 4: Trenches and their associated sections



Trench 16



Trench 17



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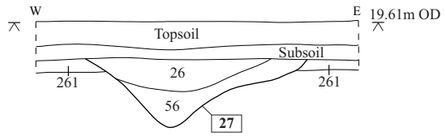

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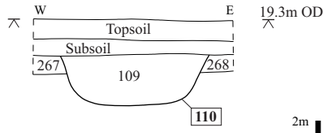
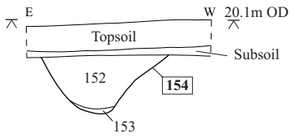


Section 27



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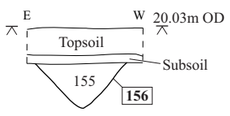

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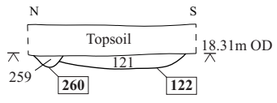
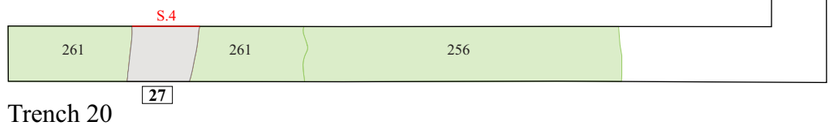
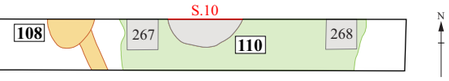




Trench 20

Trench 19



Trench 18

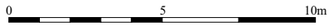


Figure 5: Trenches and their associated sections

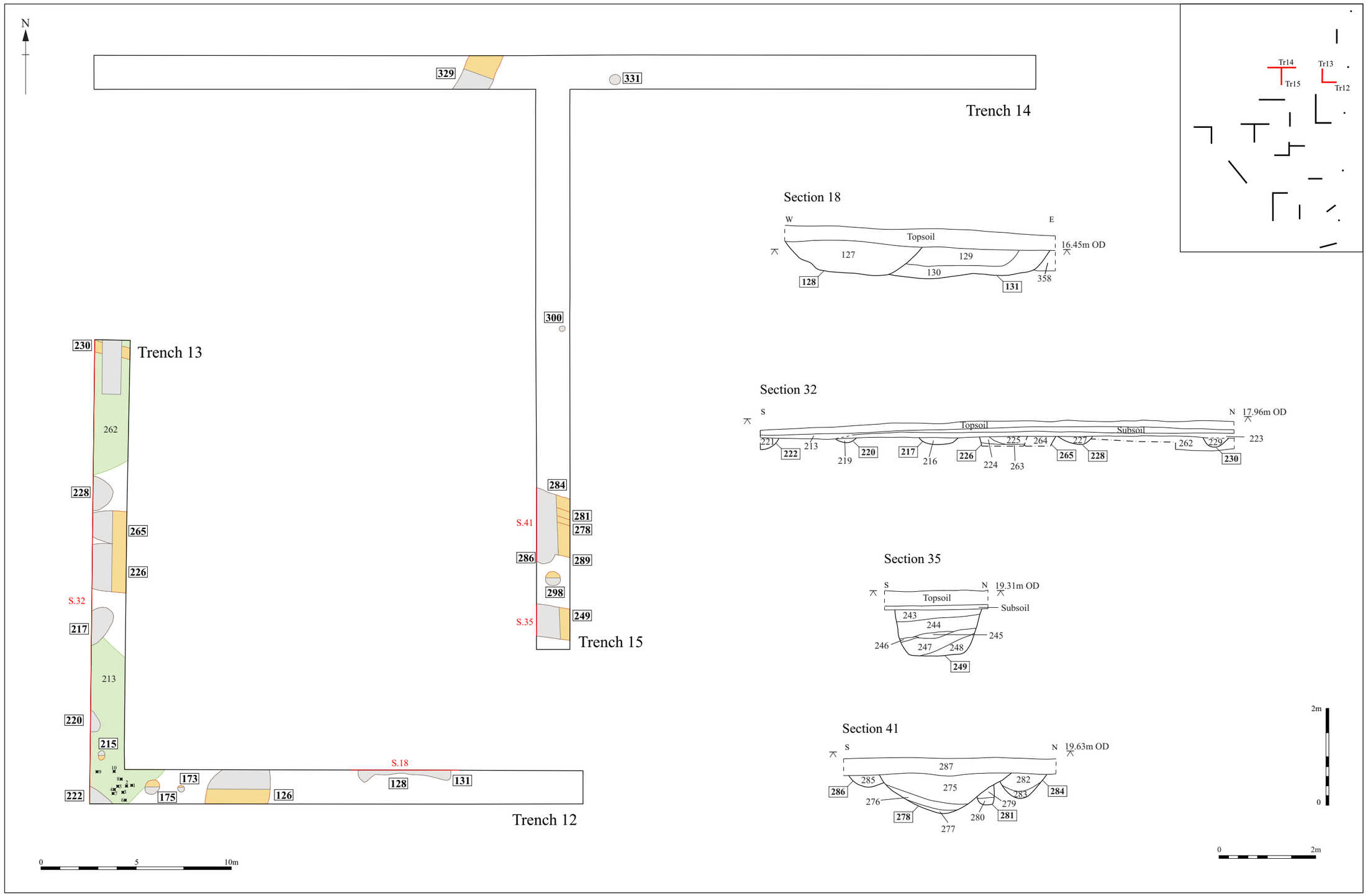


Figure 6: Trenches and their associated sections

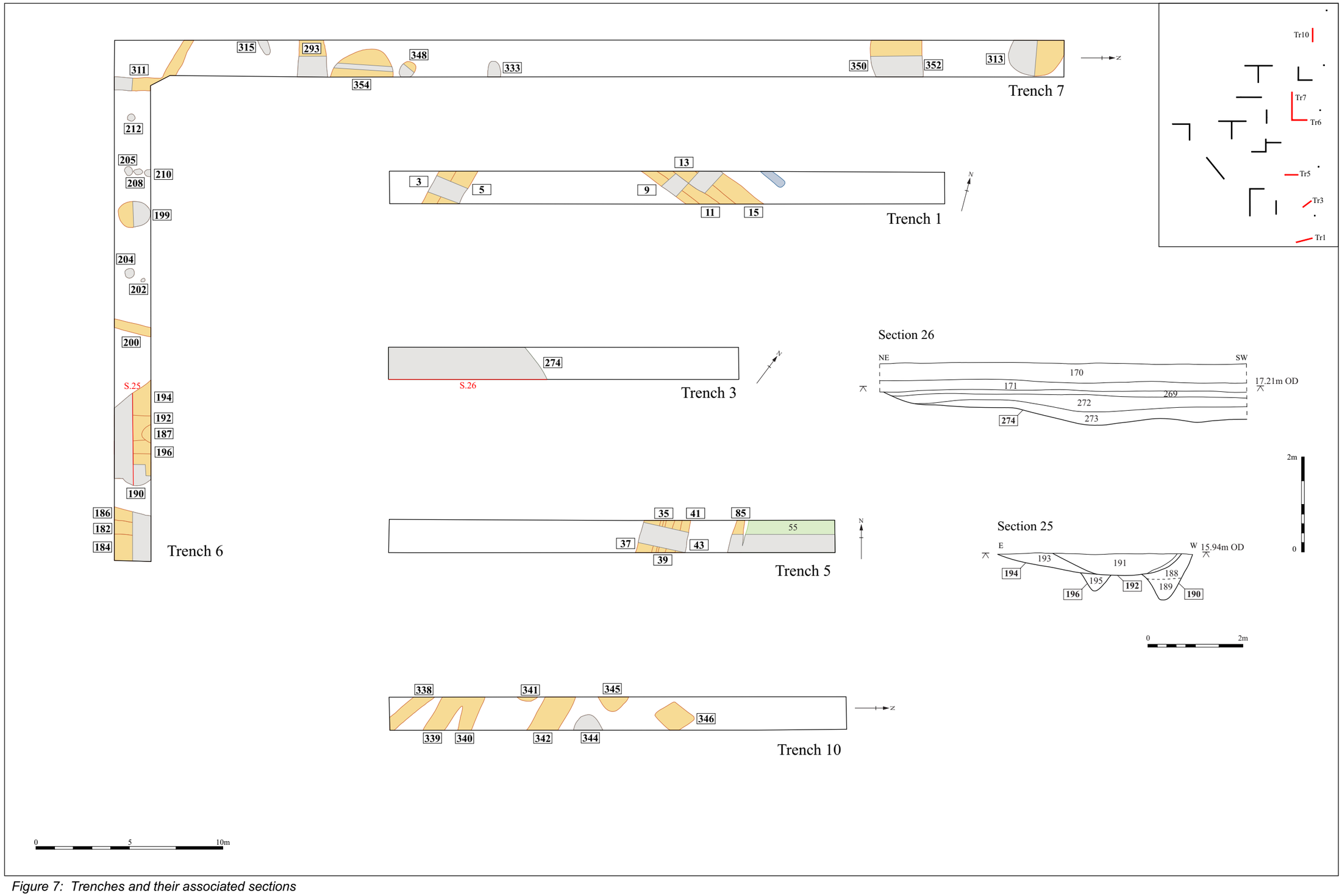


Figure 7: Trenches and their associated sections

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