# UNION RAILWAYS LIMITED

# **BOARLEY FARM**

ARC BFM 97

An Archaeological Evaluation

Contract No. 194/870



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ARC BFM 97

An Archaeological Evaluation

**Final Report**Volume 1 of 1

Contract No. 194/870

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museum of LONDON Amuseum of London Archaeology Service September 1997

# BOARLEY FARM, NEAR MAIDSTONE, KENT

#### ARCHAEOLOGICAL EVALUATION

#### **SUMMARY**

As part of a wider programme of archaeological investigation along the route of the proposed Channel Tunnel Rail Link, Union Railways Limited (URL) commissioned the Museum of London Archaeology Service (MoLAS) to evaluate a strip of land situated near the base of the North Downs, to the east of the A229, near Maidstone, Kent. The site was centred on 55925/39444 on the URL site grid and 64 trenches were laid out to sample the evaluation area; two further trenches were added during the fieldwork. The site had been identified as having good archaeological potential during earlier fieldwalking.

Two areas of Late Iron Age - Early Roman occupation were identified (dated by "unRomanised" Iron Age pottery fragments); the first was situated on high ground to the west of the site. Here two animal burials (a cow and a sheep), a posthole, pit and ditch were recorded. This area had been heavily truncated by ploughing and only deep cut features survived. The second area was situated to the east of the site, on low ground, where a concentration of 34 postholes and four pits were recorded. The occupation layers associated with these features appear to have been truncated by ancient ploughing, possibly of Roman date, although the domestic refuse was still intermixed with the ploughsoil.

A very large medieval/post-medieval quarry pit, a pit and a boundary ditch were recorded on high ground to the south-west of Boarley Farm. To the east of Boarley Farm a medieval/post-medieval road appeared to be aligned north-east to south-west along the edge of the site. This road may have connected Boxley Abbey (to the south) with the Pilgrim's Way (to the north) and may predate Boarley Lane. It was quite well preserved; having been buried when the field was extended over it towards the present hedgerow.

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#### SECTION 1: FACTUAL STATEMENT

#### 1 BACKGROUND

#### 1.1 Introduction

- 1.1.1 The Museum of London Archaeology Service (MoLAS) was commissioned by Union Railways Limited (URL) to carry out an archaeological evaluation, between 21 April and 14 May 1997, on land to the east and west of Boarley Farm situated to the east of the A229, near Maidstone, Kent (Fig 1). The evaluation forms part of a larger programme of archaeological investigation along the line of the Channel Tunnel Rail Link, the aim of which is to assess the effect of the construction of the new railway upon the cultural heritage. An Environmental Assessment has been prepared (URL 1994). This evaluation is within CTRL route windows 20 and 21.
- 1.1.2 The work was carried out according to a Specification for Archaeological Investigations, prepared by URL, detailing the scope and methods of the evaluation including this report. The area of the evaluation is shown on Fig 2.
- 1.1.3 The site is situated near the base of the North Downs, with a section of the Pilgrim's Way aligned roughly parallel to the north. The Boarley Farm evaluation lay between two other CTRL evaluations; 'White Horse Stone' (ARC WHS97) to the west and 'Boxley Road' (ARC BXR97) to the east. To the south, at the eastern end of the Boarley Farm evaluation, lie the remains of Boxley Abbey.

## 1.2 Geology, landscape and landuse

- 1.2.1 The site lies within the undulating landscape of the North Downs. The solid geology of the area is chalk, the surface of which was scoured and weathered during the withdrawal of the ice sheets at the end of the last Glaciation (*c* 12,000 to 10,000 BC). These deposits were subject to freeze-thaw action which has broken them up into hollows, "pipes" and long, regular, parallel cracks. A glacial Head deposit, generally consisting of silty clay with flints, was then deposited over this landscape by solifluction infilling the weathered chalk surface and forming a "patterned" landscape with the cracks filled with Head deposits, running down the direction of slope. Normally these cracks are about 1.00 1.50m apart. Subsequent erosion has often removed the Head deposit and the weathered chalk, but at Boarley Farm a large area of the Head remained *in situ*.
- 1.2.2 Streams had cut into the chalk landscape resulting in two dry valleys and a valley still containing a stream which springs from the area of Boarley Farm. Here the chalk had been reduced by erosion to form a clay.

Specifically, from west to east, the natural was:

- Solid chalk 1507TT to 1515TT and 1517TT.
- A dry valley (infilled with colluvium) aligned north-east to south-west through 1515TT, 1516TT and 1520TT.
- The glacial Head deposit of silty clay with flints over a shattered and patterned chalk landscape 1519TT, 1520TT -1532TT.

- A dry valley (infilled with colluvium) aligned north-east to south-west through 1533TT to 1536TT.
- Weathered, solid chalk 1537TT, 1539TT to 1549TT, 1554TT, 1555TT.
- A wet valley (still containing a running stream, resulting in wet clay) aligned north-east to south-west 1550TT to 1553TT and 3027TT.
- Weathered solid chalk 1932TT and part of 1933TT.
- An eroded area, resulting in a colluvial chalky silt in the area around 1933TT, 1934TT, 1935TT, 1939TT and 3051TT to 3052TT.
- Weathered solid chalk 3028TT.
- Compacted mid redbrown clay with occasional flints 1938TT, 1940TT to 1944TT and 3029TT.
- 1.2.3 The site lies on four areas of high ground cut by several valleys. A section across the ground surface of the site, from west to east reads:
  - 68.15m Ordnance Datum (OD hereafter) 1507TT
  - 66.00m OD: 1508TT
  - 72.50m OD: 1510TT
  - 64.00m OD: 1518TT
  - 69.45m OD: 1522TT
  - 57.67m OD: 1534TT
  - 63.00m OD: 1540TT, but 57.00m OD: 1549TT
  - 46.20m OD: 1551TT
  - 54.69m OD: 1932TT
  - 56.82m OD: 3028TT

To the south of 1935TT the ground drops into a hollow at 1938TT (49.60m OD) before rising to 51.12m OD at 1942TT. At 1944TT the height is at 48.71m OD.

1.2.4 All fields were under arable cultivation. The area to the west of Boarley Farm showed evidence of modern agriculture (deep ploughing, deforestation) and in the higher areas the topsoil (0.25m-0.30m thick) directly overlay natural strata (now truncated). The only areas where deep stratigraphy (up to 0.80m) survived were in the dry valleys where possible ancient soil horizons were recorded. Numerous tree boles suggest that the area was wooded. To the east of Boarley Farm evidence of Late Iron Age - Early Roman agricultural landuse was recorded with a significant build-up of ploughsoil around 1933TT to 1935TT, 3051TT to 3052TT; in this area natural strata was up to 0.80m below modern ground level. On the clay knoll to the south (1941TT to 1943TT) topsoil directly overlay natural, but the edges of the field and the crest of the knoll, had been levelled, extended and graded. No evidence of recent deforestation was found in the eastern field and it appeared that this area had been cultivated during the Late Iron Age - Early Roman, medieval and post-medieval times.

#### 2 AIMS

- 2.1.1 The 'Specification for Archaeological Investigations' describes the general aims of the archaeological works, that all the evaluations shall aim to provide information to determine:
  - the presence/absence, extent, condition, character, quality and date of any subsoil deposits of archaeological interest which may be associated with, or in close proximity to, the recorded surface concentrations of prehistoric flint, Roman tile and prehistoric, Roman and medieval pottery.
  - the presence and potential of environmental and economic indicators preserved in any archaeological features or deposits.
  - the local, regional and national importance of such remains, and the potential for further fieldwork to fulfil local, regional and national research objectives.
- 2.1.2 More specifically the Specification for Archaeological Investigations (URL, 1997) states:
  - 1532TT, 1533TT and 1535TT were located to sample a surface scatter of Roman tile.
  - 1542TT to 1554TT were located to sample a surface concentration of prehistoric, Roman and medieval pottery and prehistoric worked flint.

#### 3 METHODS

#### 3.1 General

3.1.1 A detailed project design for the evaluation was agreed by URL with the County Archaeologist and English Heritage. The following summarises the archaeological aspects of the methodology and notes any deviation from the original specification.

# 3.2 Survey

- 3.2.1 The trench locations specified by URL (Fig 2) were established using a total station EDM from URL permanent ground markers.
- 3.2.2 Trench 1939TT was re-aligned on site as it ran under low level power cables. In addition two new trenches, 3051TT and 3052TT, were located to sample a concentration of postholes found in 1934TT. The three trenches 1939TT, 3051TT and 3052TT were positioned with tapes and later surveyed in.
- 3.2.3 The trenches have been plotted from digital information provided by URL using the AutoCAD graphics program with manual adjustments for the 1939TT, 3051TT and 3052TT. The trenches are located on the URL site grid.
- 3.2.4 Individual features in trenches were planned at 1:20 and occasionally 1:50, taking as a grid the line between the two survey pegs used to mark out the trench. Sections, drawn at 1:10, 1:20 and 1:50 were also positioned using these lines. These survey pegs were accurately positioned and marked out the western side of a north to south trench or the southern side of an east to west trench.

#### 3.3 Excavation

- 3.3.1 The area evaluated at Boarley Farm measured approximately 1.2km north-west to south-east. The north-west part was approximately 120m wide and the south-east part about 300m wide. Within this strip 66 trenches, each 30m in length and 1.50m wide, were excavated.
- 3.3.2 The trenches were all opened using a 360° tracked excavator to a depth of 1.20m unless archaeologically significant layers or the underlying geology was encountered. Variation orders allowed the depths of 1516TT and 1518TT to be deepened over a 4.00m length to expose the underlying chalk at the base of Dry Valley 1 (see section 5.2 below). These deepened trenches were excavated to a depth of *c* 2.20m while the central section of 1544TT was deepened to 3.50m below current ground level to expose the base of a quarry pit.
- 3.3.3 Where encountered, archaeological features were either half-sectioned (in the case of postholes and pits) or quarter sectioned (in the case the cow burial). Sample slots were

excavated across ditches and into any archaeological layer. Environmental samples were taken from large feature fills and layers containing archaeological material.

# 3.4 Recording

- 3.4.1 Recording was by the standard Museum of London single context recording system but with modifications to adapt the system to the large area under evaluation. The trenches were excavated and recorded from the west end of the site to the east (beginning with 1507TT), and the various layers that were encountered were numbered accordingly. Where a layer was judged to be the same in two or more trenches the same context number was used, if there was any doubt as to the equality of the layer a new context number was issued. In addition a trench sheet was completed for each trench, on the reverse of which a sketch plan and section of the entire trench length was drawn with measurements.
- 3.4.2 Plans were drawn at 1:20; sections/profiles drawn at 1:10, 1:20 and 1:50.
- 3.4.3 All trenches were levelled, each trench having a Temporary Bench Mark incorporated onto one of the survey marker pegs.
- 3.4.4 The trenches were photographed incorporating a scale, title board with the URL trench number and a north arrow. Individual features and sections were photographed with a scale only.

#### 4 RESULTS: GENERAL

# 4.1 Western part of the site

4.1.1 The high ground in the area of 1510TT, 1512TT, 1513TT and 1515TT revealed evidence of a Late Iron Age - Early Roman activity; the area containing a pit, a posthole and two animal burials. In 1510TT a cow and sheep were recorded, associated with some Late Iron Age - Early Romano British pottery, buried in pits cut into the chalk. Nearby there was a deep posthole containing some Roman tile. In 1512TT part of a large pit was excavated. A "V" shaped ditch, orientated roughly along the contour to the east (slightly downslope) from the above features, passed through 1513TT and 1515TT and dropped 1.80m in the 60m distance between the two trenches. All horizontal stratigraphy had been eroded or ploughed off in this area so only deep cut features survived.

# 4.2 West of Boarley Farm

4.2.1 In 1544TT part of a chalk quarry was excavated. Its exposed width was 15.00m east to west and the quarry cut into the chalk for 2.30m. The earliest backfill contained slag, ash and charcoal and may be associated with a nearby ironworking centre. On the eastern lip of the quarry pit was a smaller pit also containing slag. In 1554TT part of a shallow, flat bottomed ditch was excavated, aligned east to west. Dating these features proved difficult as the quantity of charcoal and metalworking waste in the quarry pit, and the size of the quarry pit itself, would tend to imply a medieval - post-medieval date, but only a few abraded fragments of prehistoric pottery were recovered from the backfills. Both the ditch and the backfilled quarry pit were sealed beneath a subsoil containing post-medieval peg tile.

## 4.3 East of Boarley Farm

- 4.3.1 On the low ground around 1934TT, 1935TT, 3051TT and 3052TT a concentration of 34 postholes and four pits indicate occupation of a Late Iron Age Early Roman date, based on pottery. From the postholes and pits an area of approximately 40m north-west to south-east by 80m north-east to south-west seems to have been under direct occupation, centred around 1934TT and 3052TT. The posthole and pit fills were identical to an ancient ploughsoil layer that appears to have truncated any associated occupation surfaces. Occupation debris was intermixed with the 0.60m thick ploughsoil layer. The ploughsoil and posthole fills were composed of a mid brown silt clay containing many snail shells. Sealing the ancient ploughsoil was up to 0.60m of subsoil, containing post-medieval finds, and topsoil up to 0.30m thick.
- 4.3.2 The eastern end of 1943TT contained a probable medieval/post-medieval road. This road was orientated north-east to south-west and aligned along the western side of the present hedge line. The road itself was set in a terrace cut, with the ground falling to the east, and was surfaced with flint nodules and sand. A disturbed area containing root fragments may indicate that there was a hedge line to the west of the road. In recent times the field has been extended and levelled towards the present hedge line, burying the road under 0.65m of overburden. It is possible that this road linked Boxley Abbey

with the Pilgrim's Way and was a precursor to the present Boarley Lane.

#### 5 TRENCH DESCRIPTIONS

- 5.1 Late Iron Age Early Roman occupation area at the west of the site
  - *Trenches 1507TT to 1515TT and 1517TT (Fig 3)*
- 5.1.1 Modern ground surface fell from 68.27m OD at 1507TT to 65.84m OD at 1508TT, then rose to 72.52m OD at 1510TT before descending to 66.99 at 1515TT.
- 5.1.2 The natural in this area was of solid chalk [3]. There was no evidence of any buried or ancient soil, although some may have survived in the dry valley to the east (see 5.2.2 layer [12] below), and only deep cut features survived; the whole area has been severely truncated by deforestation/erosion and ploughing.
- 5.1.3 In 1510TT (Fig 3) at the crest of the knoll, a cow burial [23], [24], [25], sheep burial [28], [29], [30] and a posthole [26], [27] were recorded; pottery indicated a Late Iron Age Early Roman date. The cow burial cut [25] was probably oval in shape with visible dimensions of 1.30m x 1.30m and 0.60m deep before extending beyond the limit of excavation to the south. The cow burial was quarter sectioned revealing part of the spine and ribs of what appeared to be a fully articulated cow [24]; the bone being in very good condition. The head had been removed to enable the horns, complete with the cores, to be struck off. It was then thrown back into the cut. The fill [23] was composed of a light greyish brown silt, containing some Late Iron Age Early Roman pottery fragments.
- 5.1.4 The ?sheep burial cut [30] was shallow, cutting the chalk [3] only by 0.10m and the upper parts of the cut and sheep [29] had been slightly disturbed by plough action. The cut [30] itself was probably oval with visible dimensions of 0.55m x 0.60m before extending beyond the limit of excavation to the south. The hind quarters of what was identified as a probable sheep [29] were exposed, the bones being in a poor condition. The fill [28] was composed of a light greyish brown silt.
- 5.1.5 Posthole cut [27] was 0.25m in diameter, was cut into the chalk [3] to a depth of 0.33m and had a flat base. In the backfill [26] was a large fragment of Roman tile, weighing 250 grams, which may have been used as post packing.
- 5.1.6 In 1512TT (Fig 3) the base of a large pit, cut [11], with visible dimensions of 1.00m north to south x 1.60m east to west, was excavated before extending beyond the limit of excavation to the north. Only the base of the pit survived, the upper parts having been completely truncated by ploughing. The fill [10] was composed of a mid greyish brown silt containing many fragments of charcoal, ash and chalk.
- 5.1.7 Recorded in both 1513TT and 1515TT (Fig 4) was a "V" shaped ditch [22], which was 1.40m wide and 0.40m deep. The ditch [22] was traced in a straight line over the 60.00m between the two trenches, dropping from 69.20m OD in 1513TT to 67.21m OD in 1515TT. The fill [21] was composed of a very clean, mid grey brown sandy silt with occasional pebbles and many molluscs. It was sampled in 60mm spits for molluscs to identify the mode of accumulation, as well as being bulk sampled; the molluscs were

- more concentrated in 1513TT than in 1515TT. No finds were recovered from excavation samples, but the "V" shaped profile and the proximity to the other features, cut into the chalk nearby, would imply a Late Iron Age Early Roman date.
- 5.1.8 All trenches in this area (except 1510TT and 1512TT) revealed a thin subsoil (maximum thickness 0.30m in 1513TT) that was not uniform. It was composed of a mid-light reddish brown silt [2] in 1507TT, 1508TT, 1509TT and 1517TT; a chalk and silt mixture [8], [9] in 1511TT and 1514TT; and a very light grey chalky silt [19], [20] in 1513TT and 1515TT. This subsoil, when associated with features such as tree boles/root disturbance; [6] filling [7] in 1507TT, unnumbered in 1509TT and [151] in 1513TT, and the ditch [22] in 1513TT and 1515TT, clearly sealed them indicating that it has probably accumulated since the Roman period.
- 5.1.9 All trenches in this area revealed a modern ploughsoil [1] *c* 0.30m deep. In 1510TT and 1512TT it directly overlay the chalk.

# 5.2 Dry valley 1

Trenches 1516TT, 1518TT and 1520TT

- 5.2.1 The modern ground surface was at 66.79m OD at 1516TT falling to 62.49m OD at 1520TT.
- 5.2.2 Natural in this area was composed of colluvial chalk [18] up to 1.60m below modern ground surface. In 1516TT natural [18] was overlain by mid brown silty clay [14] (between 0.30 and 0.40m thick), which was in turn overlain by a slightly lighter coloured mid brown silty clay [13] (0.30m thick). Trenches 1518TT and 1520TT were not in the base of the dry valley but did help to clarify the profile (wide and shallow). In these trenches the colluvial chalk [18] was overlain by a clean mid red brown alluvial silt [16]. In Trench 1520TT this deposit contained a large sarsen/ironstone boulder measuring 0.80 x 0.60 x 0.20m (sarsen boulders were also recorded on the adjacent White Horse Stone evaluation). The alluvial silt [16] was in turn overlain by a 0.90m thick silt and flint nodule mixture [15] derived of material eroded from the Head deposit [31] to the east (see 5.3 Head deposit below).
- 5.2.3 Over layer [13] in 1516TT, a thin layer [12] (0.15m thick), of mid reddish brown silt was recorded which contained a fragment of Roman ceramic building material; it is possible that this was a colluvial layer deposited from the higher ground to the west. The surface of the layer sloped from 66.39m OD (0.40m below modern ground level) at the north end to 64.98m OD (0.52m below modern ground level) at the south. Layer [12] was sealed by subsoil [2] (0.10 to 0.27m thick) which was sealed by topsoil [1].
- 5.2.4 All trenches in this area revealed a modern ploughsoil [1] 0.25 to 0.30m deep.

## 5.3 Head deposit

Trenches 1519TT. 1521TT- 1530TT. 1532TT

- 5.3.1 The land surface rose from 67.27m OD at 1519TT to 69.45m OD at 1522TT and down to 58.05m OD at 1531TT.
- 5.3.2 All the trenches in this area revealed a light grey smashed and severely eroded chalk and flint [32] overlain and intermixed with a compact mid red brown silty clay with frequent flints occurring as both lenses and layers [31]. The chalk and flint layer [32] had been patterned by periglacial freeze/thaw action (see 1.2 Geology, landscape and landuse above). In these trenches the layer [31] (between 0.10 and 0.55m thick) was machined down in spits to expose the 'natural' [31].
- 5.3.3 No archaeological features or layers were identified in this area. All the trenches revealed a topsoil [1], generally 0.30m thick.

# 5.4 Dry valley 2

Trenches 1531TT, 1533TT to 1536TT

- 5.4.1 The land surface was 57.07m OD at 1533TT, 57.09m OD at 1534TT, 54.44m OD at 1535TT and 55.97m OD at 1536TT.
- 5.4.2 The natural was composed of a chalky colluvium [35] very similar to the layer [18]. In 1534TT to 1536TT it was approximately 1.30m below present ground level. Cutting into this layer was a shallow natural channel [60] *c* 3.00m wide which was also recorded in 1534TT and 1536TT. In 1534TT it contained a compact mid red brown silty clay primary fill with moderate flints [42] overlain by a compact light -mid brown sandy silt [40], containing some very abraded prehistoric pottery (found at a level of 1.10m below present ground level of 57.09m OD), which in turn was overlain by a flinty spread [40]. In the other trenches the natural [35] was overlain by a compact mid red brown silty clay with moderate flints [34] (0.20 to 0.30m thick) which spread out across the base of the valley. The edge of the dry valley was visible in the section of 1533TT.
- 5.4.3 Layer/fill [40] and layer [34] were overlain by a layer of a clean light brown sandy silt [38] =?= [39] (0.13 to 0.56m thick) in 1534TT and 1536TT. Layer [38] =?= [39] was overlain by a mid-red brown sandy silt [37] (slightly darker than layer [38] =?= [39]) which contained small flints, fragments of charcoal and peg tile, pottery sherds and fragments of slag. Layer [37] only appeared in 1534TT and 1536TT and was 0.11m to 0.25m thick. The pottery and tile were medieval/post-medieval in date and layer [37] appears to represent a colluvial layer or buried ploughsoil the top of which lies approximately 0.40 to 0.55m below modern ground level.
- 5.4.4 All the trenches showed a subsoil [33]=[36] of light to mid brown sandy silt which ranged in thickness from 0.20 to 0.85m and contained very few inclusions but pottery sherds dated from 1600 to 1850.
- 5.4.5 All the trenches showed a topsoil [1] (0.30m thick).

# 5.5 Area of medieval - post-medieval activity

Trenches 1537TT, 1539TT to 1549TT

- 5.5.1 The area forms part of a knoll (the land surface rising higher to the north-east, beyond the area of the evaluation) with the ground rising from 55.43m OD at 1541TT to 63.00 OD at 1540TT down to 53.00m OD at 1547TT.
- 5.5.2 In this area the natural was composed of a weathered chalk [43]. No ancient or buried soils were recorded and the archaeological features directly cut the chalk [43]. The chalk directly underlies topsoil in 1540TT, 1441TT, 1542TT, 1545TT, 1546TT, 1549TT and parts of 1548TT and 1543TT.
- 5.5.3 In 1544TT (Fig 5) a large quarry pit [146] was recorded. It was exposed for 15.00m east to west and was 2.30m deep with its base 3.50m below modern ground level of 57.58m OD. The primary fill [152] was composed of a light grey brown colluvial silty/chalk clay containing frequent charcoal fragments and ash, occasional slag and bone fragments. It may represent a combination of natural infilling and dumped waste presumably derived from a nearby iron working centre (perhaps a blacksmith's workshop at Boarley Farm). Over fill [152] were three dumped fills composed of light grey brown to red brown silty clays; [145], [144] and [56]. Fill [144] contained bone fragments and slag while fill [56] contained prehistoric pottery, bone fragments and charcoal. The prehistoric pottery was the only dating evidence recovered from the backfill of the quarry pit, but the size of the pit and the frequency of metalworking waste in the primary backfill [152] would tend to imply a medieval / post-medieval date; the character of the waste itself, based on immediate inspection, was not diagnostic.
- 5.5.4 Directly to the east of quarry pit [146] was a shallow pit/tree bole [154] filled with flint nodules and mid brown silt containing occasional bones and slag [153].
- 5.5.5 A shallow ditch, orientated north-west to south-east was excavated in 1554TT. The ditch [46] (1.30m wide x 0.20m deep) had a flat, wide base and the upper parts appeared to have been truncated/eroded. It is interpreted as a field boundary that has filled naturally with clean colluvial chalk [45]. There is no dating evidence for this feature.
- 5.5.6 A subsoil was visible sealing the archaeological features; in 1544TT, 1547TT and 1548TT it was composed of a light brown silty clay with flints [50]=[55] containing peg tile. In 1540TT, 1543TT and 1555TT it was composed of a light grey brown chalky silt [44], 0.12m thick, sealing ditch [46] in 1554TT.
- 5.5.7 Tree boles were recorded in 1547TT, where the tree bole was sealed by subsoil [50], and in 1555TT where the bole was sealed by subsoil [44]. In 1540TT the tree bole cut the subsoil [44] and seems to represent part of a torn out hedge line; along this hedge line in 1540TT an articulated dog skeleton, buried just under the topsoil, was exposed.
- 5.5.8 All trenches in this area revealed modern ploughsoil [1] approximately 0.30m thick.

## 5.6 Wet valley

Trenches 1550TT to 1553TT, 3027TT

- 5.6.1 The modern land surface was at 52.92m OD at 1553TT dropping to 46.20m OD at 1551TT. To the east of 1551TT a stream, that appears to spring just to the south of the present Boarley Farm buildings, was observed. The farmer indicated that the area of the paddock (not included in the evaluation) used to be very wet until the reservoir was built to the east of Boarley Lane, since then his ponds have dried up and the land is well drained.
- 5.6.2 Natural in this area consisted of an alluvial clay [47] which was light grey in colour, mottled orange with iron stains and generally occurring 0.45 to 0.50m below modern ground level.
- 5.6.3 Natural [47] was overlain by subsoil [50]=[55] (see 5.5.6 above), 0.25 to 0.30m thick.
- 5.6.4 A tree bole was visible in 1552TT which was sealed by subsoil [50]. A rooted out hedge line appeared to cross 1553TT, cutting the subsoil [50].
- 5.6.5 Topsoil [1], 0.22 to 0.30m thick was visible at the top of all the trenches.

# 5.7 Area to the east of Boarley Farm - northern part

Trenches 1932TT to 1935TT, 3028TT, 3051TT, 3052TT

- 5.7.1 The ground surface was 54.69m OD at 1932TT rising to 56.82m OD at 3028TT. To the south of this line the ground falls gently away to 51.91m OD. At the southern end of 1935TT, where there is some evidence for a post-medieval terrace, the ground drops to 50.35m OD.
- 5.7.2 Natural was composed of weathered chalk [43] in 1932TT and the eastern part of 3028TT; a dry weathered light grey silty chalk [68] in 1934TT, 1935TT, 3051TT and part of 3051TT; a heavy compact silty clay [143] in the central and southern parts of 3051TT and the western part of 3028TT. In 3028TT the clay [143] was overlain by a weathered chalk deposit [67], up to 0.29m thick, that appeared to be the result of natural erosion.
- 5.7.3 Trenches 1934TT, 1935TT, 3051TT and 3052TT (Fig 6) revealed a concentration of 34 postholes and four pits of which there were:
  - 24 postholes and one pit in 1934TT;
  - 9 postholes and one pit in 3052TT;
  - one posthole and one pit in 3051TT;
  - one pit in 1935TT.

Thirty of the postholes were between 0.15m and 0.30m in diameter, four of them were between 0.30m and 0.40m in diameter. Most of the postholes were clearly defined and up to 0.20m deep.

- Pit [93] in 1934TT was probably roughly circular and had a bowl shaped profile; half the feature extended beyond the limits of the trench,. Where it entered the trench it was excavated for 2.09m north to south and was 0.88m wide and 0.46m deep. The upper fill [91] produced a small fragment of abraded prehistoric pottery.
- Pit [123] in 3052TT was oval in shape with steep sides that showed evidence of slumping; it measured 1.70 x 1.20 and was 0.60m deep. Fill [122] contained very small fragments of abraded prehistoric pottery.
- Pit [140] in 3051TT was roughly circular in shape 0.63 x 0.68 and 0.30m deep. No datable finds were recovered.
- Pit [125] in 1935TT was roughly semi-circular in plan before extending beyond the limits of the trench. It measured 1.10 x 1.40 and was 0.40m deep and had a bowl shaped profile. No datable finds were recovered.
- The fills of the pits and postholes were composed of a mid reddish brown silty clay containing moderate amounts of snail shells, occasional charcoal flecks and flint pebbles. This appeared to be the same material as layer [62] which appeared to overlay the cuts in the occupation area.
- 5.7.4 No pattern or phasing of the postholes could be identified within the narrow limits of the trenches, but it was clear that the activity was situated on the area of dry silty natural [68]. Layer [62], interpreted as a ploughsoil by the type of snail inclusions, appeared to have truncated the occupation layers associated with the postholes and contained intermixed occupation debris in the form of animal bones, oyster shells and charcoal fragments. Layer [62] lensed in from the area of 1933TT and was lensing out in 3051TT; it did not appear in 3028TT. Layer [62] appeared to continue to the south, beyond 1935TT and was generally 0.20m to 0.30m thick, but in parts of 1935TT it was up to 0.60m thick. An area 2.50m x 1.00m of layer [62] was excavated in plan by hand in 1935TT (also the sections in 1933TT, 1934TT, 1935TT, 3051TT and 3052TT were hand cleaned) but no pottery was recovered.
- 5.7.5 By the evidence of the postholes and pits it seems that an area of approximately 40m north-west to south-east x 80m north-east to south-west was under direct occupation, centred around 1934TT and 3052TT. The oyster shell and abraded prehistoric pottery would tend to imply a Late Iron Age Early Roman date.
- 5.7.6 Layer [62] was sealed by 0.20 to 0.50m of clean light brown clayey silt [61] (1933TT, 1934TT, 1935TT, 3052TT); a light brown clayey silt [66] (3028TT) and layer [141]-[142] (3051TT, lighter in colour and more slity than layer [62]). Finds from this layer included peg tile and a post-medieval bronze buckle (1935TT). This subsoil layer did not occur in 1932TT where topsoil overlay natural.
- 5.7.7 All trenches in this area showed a modern ploughed topsoil roughly 0.30m thick.

## 5.8 Area to the east of Boarley Farm - southern part

- Trenches 1936TT to 1944TT, 3029TT (Fig 7)
- 5.8.1 Existing ground level was 54.05m OD at 1936TT dropping to 50.61m OD at 1937TT and then steadily falling away westwards to 1939TT where ground level is at 44.34m OD. Trenches 1941TT to 1943TT and 3029TT form a knoll at between 51.12m OD (1942TT) and 48.71m OD (1944TT). There was evidence for recent levelling of the field towards the hedgerows to the east and south; which included the truncation of the top of the knoll, as topsoil was seen to lie directly over natural in all or parts of 1941TT to 1944TT and 3029TT.
- Natural deposits were composed of light green grey heavy clay [82], [133]. Natural [133], in 1939TT, contained numerous molluses. At the top of the knoll, in 1941TT, 1942TT, 1943TT and 1944TT, clay [82] was overlain by a weathered clay and silt deposit composed of a light green grey blocky clay [84] and a light green grey sandy silt [83].
- 5.8.3 The area was heavily eroded. The top of colluvial material [147] and a glacial clay with flints [150], along with a natural gully, [136] were recorded in 1940TT.
- 5.8.4 Trench 1938TT showed a layer of possible buried ploughsoil [128] up to 0.26m thick, composed of mid reddish brown silty clay with occasional snail, charcoal and flint pebbles, which was similar to layer [62]. Layer [128] was overlain by a further ploughsoil [127] up to 0.60m thick. Layer [128] was similar to layer [149] and up to 0.60m thick in 1940TT being composed of a light greyish brown silty clay with occasional snails, charcoal, ceramic building material fragments and oyster shells.
- 5.8.5 The subsoil layer [66] (see 5.7.6 above) clearly occupied 1936TT, 1937TT, 1938TT and 1939TT and ranged from 0.20m to 0.55m thick. Where the ground surface rose up to the knoll (1940TT to 1944TT, 3029TT) there was no subsoil layer between the topsoil and natural [82].
- 5.8.6 Aligned through the eastern end of 1943TT was a probable medieval/post-medieval road [86]. It was 1.50m wide and orientated north-east to south-west, aligned along the western side of the present hedge line. If the road continued along the hedge line a length of approximately 260m would pass through the site. The road [86] was surfaced with a layer of large flint nodules and sand, set over a silty preparation layer [87] which appeared to be set in a terrace, cut into the sloping hillside. To the west of the road [86] was the remains of the now truncated medieval - post-medieval ploughsoil [88] composed of mid grey silty clay. Between the ploughsoil [88] and the road [86] a disturbed area, containing root fragments, may imply a hedge line. In recent times the crown of the knoll, to the west of the road, has been lowered and levelled with the removal of layer [85], a mid brown silty clay, which may have been dumped over the road, extending the field towards the present hedge line. The result is that the road [86] is now under 0.65m of overburden composed of 0.28m of layer [85] and 0.37m of topsoil. It is possible that this road linked Boxley Abbey with the Pilgrim's Way and was a precursor to the present Boarley Lane. Historic maps may clarify the line of this road and add weight to this argument.

- 5.8.7 In Trench 3029TT layer [129], a grey brown silty clay, may represent evidence of recent levelling with a 0.81m thick deposit at the southern end which raised and extended the present field towards the hedge line to the south. At the northern end of 3029TT natural clay [82] fell gradually away to form a possible hollow (1.37m down over a distance of *c* 4.00m). The possible hollow extended beyond the limit of excavation to the north and was filled with a darkish grey brown clay [131] overlain by a compact, light green brown silty clay containing oyster shells, animal bones and charcoal [130].
- 5.8.8 A field drain 180mm wide x 170mm high, capped with large (up to 0.28m wide) chalk blocks, drained from the low area around 1938TT and passed through the north end of 1939TT. The top of the drain was only 0.30m below the present ground surface and the drain [132] presumably emptied into the stream now on the west side of Boarley Lane. The date for this drain is post-medieval, probably of the 18th 19th century. Trench 1939TT also revealed a small, flint filled field drain [134], of a similar orientation to and south of drain [132].
- 5.8.9 All trenches in this area showed modern ploughsoil approximately 0.30m thick.

#### 6 ARCHAEOLOGICAL INVENTORIES

#### 6.1 Table 1: Events dataset

EVENT NAME:Boarley Farm

EVENT TYPE:ARC BFM 97

**EVENT TYPE:Evaluation** 

CONTRACTOR: Museum of London Archaeology Service

DATE:21/4/97-14/5/97

GRID:559250 394440 (URL grid)

PROJECT:CTRL

COUNTY:Kent

DISTRICT:Tonbridge and Malling

PARISH:

SMR:

SITE TYPE:Cultivated Land 3 - Operation to a depth >0.25m

PERIODS:Late Iron Age/Early Roman; Medieval/Post-Med

METHOD:Mechanical removal of topsoil; hand excavation and recording of archaeological features.

PHASING:Late Iron Age/Early Roman: two sites; Medieval/Post-Med; two areas of potential

ENVIRON: Small numbers of unidentified cereal seeds; articulated animal burials

FINDS:Small abraded pottery fragments; building materials; metal; a very small number of flints

GEOLOGY:Chalk

CONTEXT NUM:155

THREAT: CTRL

SAMPLE:1%

SUMMARY:**Late Iron Age - Early Roman**: Site 1: characterised by animal burials, pit ditch and posthole. Site 2: characterised by a concentration of pits and postholes truncated by an ancient buried ploughsoil. **Medieval/Post-Med**: Area 1: characterised by a very large quarry pit, a pit and a field boundary. Area 2: characterised by a metalled road.

ARCHIVE:

ACC\_NUM:

# 6.2 Table 2: Archaeological context inventory

Key:

LIA-ER Late Iron Age - Early Roman Med-PM Medieval to post-medieval

PM Post-medieval

TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
Site	1	Deposit	Modern ploughing		Topsoil for all areas
1507TT	2	Deposit	After Roman		Subsoil
1508TT	2	Deposit	After Roman		Subsoil
1509TT	2	Deposit	After Roman		Subsoil
1514TT	2	Deposit	After Roman		Subsoil
1516TT	2	Deposit	After Roman		Subsoil
1507TT	3	Deposit			Natural chalk bedrock
1508TT	3	Deposit			Natural chalk bedrock
1509TT	3	Deposit			Natural chalk bedrock
1511TT	3	Deposit			Natural chalk bedrock
1512TT	3	Deposit			Natural chalk bedrock
1513TT	3	Deposit			Natural chalk bedrock
1514TT	3	Deposit			Natural chalk bedrock
1515TT	3	Deposit			Natural chalk bedrock
1507TT	4	Deposit	Unknown	5	Fill of tree bole
1507TT	5	Cut	Unknown	4	Tree bole
1507TT	6	Deposit	Unknown	7	Fill of tree bole
1507TT	7	Cut	Unknown	6	Tree bole
1511TT	8	Deposit	Unknown		Subsoil
1511TT	9	Deposit	Unknown		Subsoil
1512TT	10	Deposit	LIA-ER	11	Fill of pit
1512TT	11	Cut	LIA-ER	10	Pit cut into chalk
1516TT	12	Deposit	?LIA-ER		Dry Valley
1516TT	13	Deposit	?Peri- Glacial		Dry Valley
1516TT	14	Deposit	?Peri- Glacial		Dry Valley
1518TT	15	Deposit	?Peri- Glacial		Dry Valley
1520TT	15	Deposit	?Peri- Glacial		Dry Valley
1518TT	16	Deposit	?Peri- Glacial		Dry Valley
1520TT	16	Deposit	?Peri- Glacial		Dry Valley
1520TT	17	Deposit	?Peri- Glacial		Dry Valley
1516TT	18	Deposit			Weathered chalk
1518TT	18	Deposit			Weathered chalk
1520TT	18	Deposit			Weathered chalk
1513TT	19	Deposit	After Roman		Subsoil
1513TT	20	Deposit	After Roman		Subsoil

TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
1515TT	20	Deposit	After Roman		Subsoil
1513TT	21	Deposit	After Roman	22	Subsoil
1515TT	21	Deposit	After Roman		Subsoil
1513TT	22	Cut	LIA-ER	21	"V" shaped ditch
1515TT	22	Deposit	LIA-ER		"V" shaped ditch
1510TT	23	Deposit	LIA-ER	24	Fill
1510TT	24	Burial	LIA-ER	24	Cow
1510TT	25	Cut	LIA-ER	23;24	Animal burial (cow) cut into chalk
1510TT	26	Deposit	LIA-ER	27	Fill of posthole
1510TT	27	Cut	LIA-ER	26	Posthole cut into chalk
1510TT	28	Deposit	LIA-ER	30	Fill of burial
1510TT	29	Burial	LIA-ER	30	Burial of sheep
1510TT	30	Cut	LIA-ER	29	Animal burial (sheep) cut into chalk
1517TT	31	Deposit			Glacial Head
1519TT	31	Deposit			Glacial Head
1521TT	31	Deposit			Glacial Head
1522TT	31	Deposit			Glacial Head
1523TT	31	Deposit			Glacial Head
1524TT	31	Deposit			Glacial Head
1525TT	31	Deposit			Glacial Head
1526TT	31	Deposit			Glacial Head
1527TT	31	Deposit			Glacial Head
1528TT	31	Deposit			Glacial Head
1529TT	31	Deposit			Glacial Head
1530TT	31	Deposit			Glacial Head
1531TT	31	Deposit			Glacial Head
1532TT	31	Deposit			Glacial Head
1533TT	31	Deposit			Glacial Head
1517TT	32	Deposit			Glacial Head
1519TT	32	Deposit			Glacial Head
1521TT	32	Deposit			Glacial Head
1522TT	32	Deposit			Glacial Head
1523TT	32	Deposit			Glacial Head
1524TT	32	Deposit			Glacial Head
1525TT	32	Deposit			Glacial Head
1526TT	32	Deposit			Glacial Head
1527TT	32	Deposit			Glacial Head
1528TT	32	Deposit			Glacial Head
1529TT	32	Deposit			Glacial Head
1530TT	32	Deposit			Glacial Head

TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
1531TT	32	Deposit			Glacial Head
1532TT	32	Deposit			Glacial Head
1531TT	33	Deposit	?After Roman		Subsoil
1533TT	33	Deposit	?After Roman		Subsoil
1535TT	33	Deposit	?After Roman		Subsoil
1533TT	34	Deposit	?Peri- Glacial		Subsoil
1535TT	34	Deposit	?Peri- Glacial		Subsoil
1536TT	34	Deposit	?Peri- Glacial		Subsoil
1533TT	35	Deposit	?Peri- Glacial		Layer
1535TT	35	Deposit	?Peri- Glacial		Layer
1536TT	35	Deposit	?Peri- Glacial		Layer
1534TT	36	Deposit	?After Roman		Subsoil
1536TT	36	Deposit	?After Roman		Subsoil
1534TT	37	Deposit	Med-PM		Layer
1536TT	37	Deposit	Med-PM		Layer
1536TT	38	Deposit	Unknown		Layer
1534TT	39	Deposit	Unknown		Layer
1534TT	40	Deposit	Unknown		Layer
1534TT	41	Deposit	Unknown		Layer
1534TT	42	Deposit	?Pre- historic	60	Fill/ Layer
1534TT	43	Deposit			Natural weathered chalk
1537TT	43	Deposit			Natural weathered chalk
1539TT	43	Deposit			Natural weathered chalk
1540TT	43	Deposit			Natural weathered chalk
1541TT	43	Deposit			Natural weathered chalk
1542TT	43	Deposit			Natural weathered chalk
1543TT	43	Deposit			Natural weathered chalk
1544TT	43	Deposit			Natural weathered chalk
1545TT	43	Deposit			Natural weathered chalk
1546TT	43	Deposit			Natural weathered chalk
1547TT	43	Deposit			Natural weathered chalk
1548TT	43	Deposit			Natural weathered chalk
1549TT	43	Deposit			Natural weathered chalk
1554TT	43	Deposit			Natural weathered chalk
1555TT	43	Deposit			Natural weathered chalk
1933TT	43	Deposit			Natural weathered chalk
3028TT	43	Deposit			Natural weathered chalk
1537TT	44	Deposit	Med-PM		Subsoil
1539TT	44	Deposit	Med-PM		Subsoil
1540TT	44	Deposit	Med-PM		Subsoil

1543TT	44	Deposit	Med-PM		Subsoil
TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
1554TT	44	Deposit	Med-PM		Subsoil
1555TT	44	Deposit	Med-PM		Subsoil
1554TT	45	Deposit	Med-PM	46	Fill of feature
1554TT	46	Cut	Med-PM	45	Feature
1547TT	47	Deposit	Unknown		Layer
1550TT	47	Deposit	Unknown		Layer
1551TT	47	Deposit	Unknown		Layer
1552TT	47	Deposit	Unknown		Layer
1553TT	47	Deposit	Unknown		Layer
3027TT	47	Deposit	Unknown		Layer
3028TT	47	Deposit	Unknown		Layer
1547TT	48	Deposit	Med-PM	49	Fill of tree bole
1547TT	49	Cut	Med-PM	50	Tree bole
1547TT	50	Deposit	Med-PM		Subsoil
1550TT	50	Deposit	Med-PM		Subsoil
1552TT	50	Deposit	Med-PM		Subsoil
1553TT	50	Deposit	Med-PM		Subsoil
3027TT	50	Deposit	Med-PM		Subsoil
1555TT	51	Deposit	Med-PM	52	Fill of feature
1555TT	52	Cut	Med-PM	51	Feature
1555TT	53	Deposit	Med-PM	54	Fill of feature
1555TT	54	Cut	Med-PM	53	Feature
1544TT	55	Deposit	Med-PM		Subsoil
1548TT	55	Deposit	Med-PM		Subsoil
1551TT	55	Deposit	Med-PM		Subsoil
1544TT	56	Deposit	Med-PM	146	Fill of quarry pit
1552TT	57	Deposit	Med-PM	58	Fill of tree bole
1552TT	58	Cut	Med-PM	57	Tree bole
1551TT	59	Deposit	Unknown		Layer
1534TT	60	Cut	?Pre-historic/ ancient	42	?Stream cut
1933TT	61	Deposit	PM		Layer
1934TT	61	Deposit	PM		Layer
1935TT	61	Deposit	PM		Layer
3052TT	61	Deposit	PM		Layer
1933TT	62	Deposit	LIA-ER		Ploughsoil with occupation debris
1934TT	62	Deposit	LIA-ER		Ploughsoil with occupation debris
1935TT	62	Deposit	LIA-ER		Ploughsoil with occupation debris
3051TT	62	Deposit	LIA-ER		Ploughsoil with occupation

					debris
TRENCH URL	CONTEXT	ТҮРЕ	PERIOD	ASSOC	COMMENTS
3052TT	62	Deposit	LIA-ER	ASSOC	Ploughsoil with occupation
303211	02	Берозіі	EH CEIC		debris
1933TT	63	Deposit	PM	65	Burial fill
1933T	64	Burial	PM	65	Sheep burial
1933TT	65	Cut	PM	63;64	Grave cut
1936TT	66	Deposit	Med-PM		Subsoil
1937TT	66	Deposit	Med-PM		Subsoil
1938TT	66	Deposit	Med-PM		Subsoil
1939TT	66	Deposit	Med-PM		Subsoil
3028TT	66	Deposit	Med-PM		Subsoil
3028TT	67	Deposit	?Peri-Glacial		Subsoil
1934TT	68	Deposit	?Peri-Glacial		Natural
1935TT	68	Deposit	?Peri-Glacial		Natural
3051TT	68	Deposit	?Peri-Glacial		Natural
3052TT	68	Deposit	?Peri-Glacial		Natural
1934TT	69	Deposit	LIA-ER	70	Fill of posthole
1934TT	70	Cut	LIA-ER	69	Posthole
1934TT	71	Deposit	LIA-ER	72	Fill of posthole
1934TT	71	Deposit	LIA-ER	73	Fill of posthole
1934TT	71	Deposit	LIA-ER	74	Fill of posthole
1934TT	71	Deposit	LIA-ER	75	Fill of posthole
1934TT	71	Deposit	LIA-ER	76	Fill of posthole
1934TT	71	Deposit	LIA-ER	77	Fill of posthole
1934TT	71	Deposit	LIA-ER	78	Fill of posthole
1934TT	71	Deposit	LIA-ER	79	Fill of posthole
1934TT	71	Deposit	LIA-ER	80	Fill of posthole
1934TT	71	Deposit	LIA-ER	81	Fill of posthole
1934TT	71	Deposit	LIA-ER	89	Fill of posthole
1934TT	71	Deposit	LIA-ER	97	Fill of posthole
1934TT	71	Deposit	LIA-ER	105	Fill of posthole
1934TT	71	Deposit	LIA-ER	155	Fill of posthole
1934TT	72	Cut	LIA-ER	71	Posthole
1934TT	73	Cut	LIA-ER	71	Posthole
1934TT	74	Cut	LIA-ER	71	Posthole
1934TT	75	Cut	LIA-ER	71	Posthole
1394TT	76	Cut	LIA-ER	71	Posthole
1934TT	77	Cut	LIA-ER	71	Posthole
1934TT	78	Cut	LIA-ER	71	Posthole
1934TT	79	Cut	LIA-ER	71	Posthole
1934TT	80	Cut	LIA-ER	71	Posthole

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1934TT	81	Cut	LIA-ER	71	Posthole
1936TT	82	Deposit			Natural clay
TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
1937TT	82	Deposit			Natural clay
1938TT	82	Deposit			Natural clay
1940TT	82	Deposit			Natural clay
1941TT	82	Deposit			Natural clay
1942TT	82	Deposit			Natural clay
1943TT	82	Deposit			Natural clay
1944TT	82	Deposit			Natural clay
3029TT	82	Deposit			Natural clay
1942TT	83	Deposit			Natural clay
1943TT	83	Deposit			Natural clay
1941TT	83	Deposit			Natural clay
1942TT	84	Deposit			Natural clay
1944TT	84	Deposit			Natural clay
1943TT	85	Deposit	Med-PM		Grading
1943TT	86	Road	Med-PM		North-south trackway
1943TT	87	Deposit	Med-PM		Grading
1943TT	88	Deposit	Med-PM		Subsoil
1934TT	89	Cut	LIA-ER	71	Posthole
1934TT	90	Cut	LIA-ER	94	Posthole
1934TT	91	Deposit	LIA-ER	93	Fill of posthole
1934TT	92	Deposit	LIA-ER	93	Fill of posthole
1934TT	93	Cut	LIA-ER		Pit cut with fills 91;92
1934TT	94	Deposit	LIA-ER	90	Fill of posthole
1934TT	95	Deposit	LIA-ER	96	Fill of posthole
1934TT	96	Cut	LIA-ER	95	Posthole
1934TT	97	Cut	LIA-ER	71	Posthole
1934TT	98	Deposit	LIA-ER	99	Fill of posthole
1934TT	99	Cut	LIA-ER	98	?Tree bole
1934TT	100	Deposit	LIA-ER	101	Fill of posthole
1934TT	101	Cut	LIA-ER	100	Posthole
1934TT	102	Cut	LIA-ER	100	Posthole
1934TT	103	Deposit	LIA-ER	104	Fill of posthole
1934TT	103	Deposit	LIA-ER	106	Fill of posthole
1934TT	103	Deposit	LIA-ER	107	Fill of posthole
1934TT	103	Deposit	LIA-ER	108	Fill of posthole
1934TT	104	Cut	LIA-ER	103	Posthole
1934TT	105	Cut	LIA-ER	71	Posthole
1934TT	106	Cut	LIA-ER	103	Posthole
1934TT	107	Cut	LIA-ER	103	Posthole

1934TT	108	Cut	LIA-ER	103	Posthole
1934TT	109	Deposit	LIA-ER	110	Fill of posthole
1934TT	110	Cut	LIA-ER	109	Posthole
TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
3052TT	111	Deposit	LIA-ER	112	Fill of posthole
3052TT	111	Deposit	LIA-ER	113	Fill of posthole
3052TT	111	Deposit	LIA-ER	114	Fill of posthole
3052TT	111	Deposit	LIA-ER	126	Fill of posthole
3052TT	112	Cut	LIA-ER	111	Posthole
3052TT	113	Cut	LIA-ER	111	Posthole
3052TT	114	Cut	LIA-ER	111	Posthole
3052TT	115	Deposit	LIA-ER	116	Fill of posthole
3052TT	115	Deposit	LIA-ER	117	Fill of posthole
3052TT	116	Cut	LIA-ER	115	Posthole
3052TT	117	Cut	LIA-ER	115	Posthole
3052TT	118	Deposit	LIA-ER	119	Fill of posthole
3052TT	118	Deposit	LIA-ER	120	Fill of posthole
3052TT	118	Deposit	LIA-ER	121	Fill of posthole
3052TT	119	Cut	LIA-ER	118	Posthole
3052TT	120	Cut	LIA-ER	118	Posthole
3052TT	121	Cut	LIA-ER	118	Posthole
3052TT	122	Deposit	LIA-ER	123	Fill of posthole
3052TT	123	Cut	LIA-ER	122	Posthole
1935TT	124	Deposit	LIA-ER	125	Fill of posthole
1935TT	125	Cut	LIA-ER	124	Posthole
3052TT	126	Cut	LIA-ER	111	Feature
1938TT	127	Deposit	LIA-ER		Subsoil
1938TT	128	Deposit	LIA-ER		Layer
3029TT	129	Terrace	Med -PM		Grading
3029TT	130	Deposit	Unknown		Subsoil
3029TT	131	Deposit	Unknown		Layer
1939TT	132	Drain	PM		Chalk built field drain
1939TT	133	Deposit	?Peri- Glacial		Layer
1939TT	134	Drain	PM		Flint filled field drain
1939TT	135	Cut	PM		Modern cut and fill
1940TT	136	Deposit			Natural deposit
3051TT	137	Deposit	LIA-ER	138	Fill of posthole
3051TT	138	Cut	LIA-ER	137	Posthole
3051TT	139	Deposit	LIA-ER	140	Fill of posthole
3051TT	140	Cut	LIA-ER	139	Posthole
3051TT	141	Deposit	Med-PM		Subsoil

3051TT	142	Deposit	LIA-ER		Snails and occupation debris
3051TT	143	Deposit	?Peri- Glacial		Layer
1544TT	144	Deposit	Med-PM	146	Fill of quarry
1544TT	145	Deposit	Med-PM	146	Fill of quarry
TRENCH URL	CONTEXT	TYPE	PERIOD	ASSOC	COMMENTS
1544TT	146	Cut	Med-PM	56	Large chalk quarry pit
1544TT	146	Cut	Med-PM	144	Large chalk quarry pit
1544TT	146	Cut	Med-PM	145	Large chalk quarry pit
1544TT	146	Cut	Med-PM	152	Large chalk quarry pit
1940TT	147	Deposit			Natural
1940TT	148	Deposit	Med-PM		Subsoil
1940TT	149	Deposit	Unknown		Layer
1940TT	150	Deposit	Unknown		Layer
1513TT	151	Cut	Unknown		Tree bole, no fill
1544TT	152	Deposit	Med-PM	146	Fill of quarry
1544TT	153	Deposit	Med-PM	154	Fill of pit
1544TT	154	Cut	Med-PM	153	Pit
1934TT	155	Cut	LIA-ER	71	Posthole

#### SECTION 2: STATEMENT OF IMPORTANCE

#### 7 CONCLUSIONS

# 7.1 Extent of archaeological remains

- 7.1.1 *Iron Age/Early Roman occupation area to the very west of the site:* 
  - archaeological remains dated to the Late Iron Age Early Roman period were found in 1510TT, 1512TT, 1513TT and 1515TT. The distance from the ditch in 1513TT to the cow burial in 1510TT is approximately 85m (east to west) and the distance from the cow burial to the pit in 1512TT is about 60m (north to south). It is reasonable to suggest that archaeological features could be encountered in the area of 1509TT to 1515TT (*ie* roughly 140m east to west x 120m north to south).

# 7.1.2 *Dry valley 1:*

• a possible buried soil centred round 1516TT and 1518TT, possibly relating to the Late Iron Age - Early Roman activity to the west.

# 7.1.3 *Dry valley 2:*

• a possible buried soil, containing post-medieval finds centring round 1534TT and 1536TT, overlying a deposit containing occasional abraded prehistoric pottery.

## 7.1.4 *Area of ?medieval activity centred around:*

- a pit and a very large quarry pit was found in 1544TT.
- a shallow ditch was found aligned through 1554TT, orientated north-west to southeast.

#### 7.1.5 *Area to the east of Boarley Farm, northern part:*

- a concentration of postholes and pits, probably dating to the Late Iron Age Early Roman period was found in 1934TT, 1935TT, 3051TT and 3052TT. The area of intense occupation appears to be roughly 40m north-west to south-east and 80m north-east to south-west.
- the postholes were associated with, and probably sealed by, a snail-rich possible buried ploughsoil that contained occupation debris in the form of charcoal, oyster shells and animal bones. The snail layer did not seem to extend much beyond the area of the postholes to the north, east and west but may extend further to the south (see 7.1.6 below).

- 7.1.6 *Area to the east of Boarley Farm, southern part:* 
  - a possible buried ploughsoil in 1938TT and 1940TT, occupying the immediate low-lying area to the north of these two trenches.
  - a medieval/post-medieval road (1943TT) which passes down the western side of the eastern hedgerow (and therefore possibly passes through the site for up to 260m).
  - a possible hollow filled with clay containing oyster shells, animal holes and charcoal was recorded at the northern end of 3029TT. It is an extensive feature, although it is not known whether it is natural or man-made.
  - a post-medieval field drain was recorded in 1939TT; it had been dug from the low lying area around 1938TT, probably to the stream to the western side of Boarley Lane. This drain may survive for up to 60m across the site.

# 7.2 Nature of archaeological remains

- 7.2.1 Except where indicated above (the layers in 7.1.2 Dry valley 1; 7.1.3 Dry valley 2; and 7.1.5 Area to the east of Boarley Farm, northern part) the archaeological remains are cut features sunk directly into the natural strata. In 1934TT, 1935TT, 3051TT and 3052TT the cuts were sealed by a possible buried ploughsoil.
- 7.2.2 Where there was a layer directly below topsoil, that layer (where finds were present) always contained post-medieval material. It was only below this subsoil that archaeological remains were recorded.
- 7.2.3 A medieval/post-medieval road was recorded in 1943TT.

#### 7.3 Character of the remains

- 7.3.1 The Boarley Farm evaluation has identified two areas of Iron Age Early Roman activity.
  - the first centres on 1510TT, 1512TT, 1513TT and 1515TT where the association of a possibly ritually buried sheep and a cow, along with a posthole, a pit containing burnt material and a large linear "V" shaped ditch, may indicate a site of ancient religious/cultural significance centred on the top of a low knoll.
  - the second centres on 1934TT, 1935TT, 3051TT and 3052TT where many small, relatively shallow postholes and a number of circular/oval pits suggest a small settlement situated on low ground near running water. The postholes and pits are overlain by a buried ancient ploughsoil that truncates the suggested settlement occupation layers but is mixed with occupation debris.
- 7.3.2 The evaluation has identified two areas of ?medieval/post-medieval activity:
  - the area around 1544TT and 1554TT with cut features interpreted as a large quarry pit (1544TT) and a field boundary ditch (1554TT). The quarry is set into the hillside to the

west of Boarley Farm where there would be very little topsoil to remove before quarrying for chalk could begin.

• a road orientated north-east to south-west was recorded in 1943TT. It is probable that this road pre-dates Boarley Lane.

# 7.4 Date of occupation

- 7.4.1 The pottery assemblage from Boarley Farm could not be considered 'Romanised'. Instead the fabrics represent traditions of the pre-Roman period that spans the later 1st century BC to the later 1st century AD and dates the activities of the areas around 1510TT and 1934TT (the two areas are roughly 950m apart). The absence of any Roman pottery finds may suggest that the material is either pre- or early post-conquest in date.
- 7.4.2 Despite the small size of the assemblage the fabrics present are consistent with our current understanding of the pottery for this period. The Medway valley is regarded as an overlap zone for the traditions of east and west Kent, attested by the presence of both flint- and shell-tempered fabrics. Precise dating of pre- and post-conquest groups is notoriously difficult due to the lack of well stratified sequences and independent datable artefacts. In addition the pottery recovered consisted of very small, abraded pieces that lacked distinguishing characteristics.
- 7.4.3 Medieval/post-medieval finds included metal working waste, small fragments of peg tile and metal finds that may date landuse activity, directly to the west of Boarley Farm, centred around 1544TT. In addition post-medieval finds (metalwork, pottery and ceramic building material) were found in the subsoil both to the east and directly to the west of Boarley Farm. The farmer stated that he has traced records of the farm back to the 15th century when it formed part of a larger estate.

#### 7.5 Environmental evidence

- 7.5.1 Charred cereal grains were represented by just several fragments in two samples; one from an Iron Age pitfill [11] and the other from an undated context [62]. This material does not provide any useful information on human activities at the site. The few uncharred seeds in three samples are probably recent intrusions, given the soil conditions at the site and the presence of modern roots. Variable quantities of terrestrial molluscs were present in the flots with particularly high numbers in samples from the Iron Age ditch fill [21] and pitfill [11]. Molluscs in natural deposits may provide information on the character of the contemporary local environment.
- 7.5.2 The possibly complete animal burials would provide information on the nature of the activity in the region of 1510TT.

## 7.6 Truncation by ploughing and other activities

- 7.6.1 The topsoil to the east and west of Boarley Farm contains quantities of struck and burnt flint, prehistoric, Roman, medieval and post-medieval pottery along with Roman and medieval post-medieval tile. None of these finds are *in situ* due to the ploughed nature of the fields and there is plenty of evidence for plough truncation. In all or part of 1510TT, 1512TT, 1519TT, 1520TT -1530TT, 1532TT, 1540TT, 1541TT, 1542TT, 1545TT, 1546TT, 1549TT, 1932TT, 1941TT to 1944TT and 3029TT all stratigraphy has been either removed by the plough or truncated through natural erosion following deforestation.
- 7.6.2 Truncation was also observed where there is only a single subsoil between natural and topsoil (1507TT to 1515TT, 1516TT, 1531TT, 1533TT, 1537TT, 1539TT, 1543TT, 1544TT, 1547TT, 1548TT, 1550TT to 1554TT, 1936TT, 1937TT, 1939TT, 3027TT, and 3029TT) which, where finds have been present, has indicated a post-medieval date, with ceramic building material and pottery ploughed into the layer.
- 7.6.3 Only in Dry Valley 1 (1516TT and 1518TT possible buried soil/colluvial layer) and Dry Valley 2 (1534TT, 1535TT possible buried soils) and 1933TT, 1934TT, 1935TT, 1938TT, 1940TT, 3051TT and 3052TT (buried ploughsoil) did any untruncated archaeological stratigraphy appear to survive.

#### 8 IMPORTANCE OF THE ARCHAEOLOGICAL REMAINS

#### 8.1 Survival and condition

- 8.1.1 The best area of archaeological survival is around 1933TT to 1935TT, 3051TT and 3052TT. However the cut features appear to have been horizontally truncated by ancient ploughing.
- 8.1.2 Around 1510TT to 1515TT; 1544TT and 1554TT the archaeological remains survived only in the form of truncated cut features. Of the animal burials encountered in 1510TT the cow bone was in very good condition, the sheep bone less so.
- 8.1.3 The road in 1943TT appeared to survive well and be in good condition.
- 8.1.4 Very few struck or burnt flints were recovered. Pottery only survived as small abraded fragments within a limited number of cut features; large diagnostic pieces from all periods being absent. Metalworking waste was found in the backfill of the quarry pit in 1544TT; post-medieval pottery, metalwork and ceramic building material came from the topmost subsoil. Most of the cultural remains for the site appear to have been recovered from the modern topsoil during the fieldwalking survey.
- 8.1.5 In general the environmental bulk samples revealed little interesting or uncontaminated material. The spit sampling of the mollusc-filled Late Iron Age Early Roman ditch could provide information on the nature of the local habitat. The monolith and bulk sampling of the snail-rich layer [62] that appeared to seal the Late Iron Age Early Roman postholes around 1934TT helped identify the layer as a ploughsoil (from the types of snail recovered).

#### 8.2 Period

- 8.2.1 The periods represented at the Boarley Farm evaluation fall into the Late Iron Age Early Roman 1st century BC to 1st century AD and medieval to present.
- 8.2.2 The nature of the Iron Age and the Late Iron Age Early Roman transition periods in Kent is not well understood. An area of activity to the west of the site centred around 1510TT seems to have extended into the Roman period, as a piece of ceramic building material was found in a posthole, but the lack of any surviving stratigraphy and the limited area excavated make it difficult to assess the exact length of time this area was in use. The settlement area centred round 1934TT also appears to be Late Iron Age Early Roman, giving way to plough land, probably through the Roman period.
- 8.2.3 It seems clear that the main area of occupation for the medieval/post-medieval periods is that of the present Farm buildings, an area outside that of the present evaluation. Evidence for medieval/post-medieval quarrying, metalworking, road building and use along with farming was spread all over the fields surrounding Boarley Farm, but no evidence of direct occupation from these periods was found.

# 8.3 Rarity

- 8.3.1 Iron Age sites in Kent are comparatively rare and the antiquarian evidence is poor. Champion and Overy state "there have been few large scale excavations carried out to modern standards, and our knowledge of this period lags far behind most other regions of southern England" (Champion and Overy 1989, 33). The Boarley Farm evaluation has revealed two different areas of Iron Age Early Roman occupation; one area on high ground probably concerned with ritual/cultural activity, the other area on low ground, probably concerned with agriculture. The relative closeness (*c* 950m) of these two sites, if contemporary, adds to their importance as they probably had an influence upon each other. They both occupy similar positions along the base of the North Downs, but perform different functions.
- 8.3.2 For the medieval/post-medieval period, the site revealed a large quarry pit, itself not an uncommon feature and a road. The nature, date and importance of the road remains vague but it appears to have been wide (over 2.00m) and probably connected the Pilgrim's Way with Boxley Abbey, pre-dating the present Boarley Lane. If this is the case then the road is a rare survival from the medieval landscape as it could indicate field boundaries, method of road construction, evidence of maintenance/weight of traffic and duration of use.

#### 8.4 Fragility/vulnerability

- 8.4.1 The archaeological remains at Boarley Farm are generally of a fragile nature.
- 8.4.2 The Iron Age Early Roman occupation to the very west of the site is predominantly sealed by 0.30m of topsoil and has already been badly disturbed by ploughing. This area may be seen as being high risk should ground disturbance occur.
- 8.4.3 The area of Iron Age Early Roman occupation to the east of Boarley Farm is sealed by 0.50 to 1.00m of material and may be seem as being low risk should ground disturbance occur.
- 8.4.4 The ?medieval quarry pit and ditch to the west of Boarley Farm are sealed by subsoil and topsoil, generally totalling 0.50m in depth, and may be seem as being low/medium risk should ground disturbance occur.

#### 8.5 Diversity

8.5.1 There are two areas of possibly contemporary Iron Age - Early Roman occupation; one concerning possible ritual/cultural elements on high ground, the other being agricultural on low ground. There are two areas of probable medieval/post-medieval survival: a quarry pit with evidence of metalworking in the backfill to the west of Boarley Farm and a road aligned north-east to south-west to the east.

#### 8.6 Documentation

8.6.1 There appear to be good records relating to the medieval/post-medieval phases of Boarley Farm and the surrounding land (OAU for URL 1994).

# 8.7 Group value

8.7.1 The Late Iron Age - Early Roman occupation areas at Boarley Farm appear to be part of a series of sites on land at the base of the North Downs of a more or less similar date likely to be affected by the rail route (URL 1994, Vol. 1 Section 5.22 and Vol.2 Drawings OELK/900 -1804/3025 - 3029).

#### 8.8 Potential

- 8.8.1 The potential of the Iron Age Early Roman archaeology is high; the evaluation has identified two moderately well preserved sites in reasonably close proximity, both with different functions.
- 8.8.2 Even though the western area on high ground, centred on 1510TT, has been severely truncated there appear to be cut features which give a good indication of the nature and function of the site. It is probable that this area of high archaeological potential extends beyond the limit of the evaluation site to the north of 1510TT. This area has a high potential for environmental/cultural evidence, due to the probable completeness of the animal burials and the nature/ritual of their internment, but truncation and contamination of the deposits by modern plant roots limits the potential of palaeoenvironmental research. There is a low potential for pottery and other finds. Further work in the strip between 1509TT to 1515TT (*ie* roughly 140m east to west x 120m north to south) would help to delimit the zone of activity, along with locating and projecting outlying features such as ditches.
- 8.8.3 The area of settlement centred round 1934TT appears to have been horizontally truncated by ancient ploughing, possibly of Roman date, that has disturbed the associated occupation layers. The finds potential for this area is low, with only a small number of worked flints and abraded pieces of pottery being recovered. It is probable that much of the settlement is enclosed within the limits of the evaluation. The area of high archaeological potential covers 1934TT, 1935TT, 3051TT and 3052TT (roughly 40m north-west to south-east x 80m north-east to south-west) but a larger area investigated could help locate outlying rubbish dumps/pits.
- 8.8.4 The undated hollow on high ground in 3029TT (containing animal bones and oyster shells) could also relate to the occupation centred on 1934TT.
- 8.8.5 The potential of the site for medieval/post-medieval archaeology is relatively low. From this period there is the quarry pit and ditch in 1544TT and 1554TT respectively, which appear to indicate a zone of activity, roughly 60m x 80m, although the ditch in 1554TT was not recorded in 1540TT. The quarry pit contained metalworking waste, which

- indicates nearby industry but this was probably carried out in the area of Boarley Farm, outside the area proposed for CTRL construction activity.
- 8.8.6 To the east of Boarley Farm is the road that passes through 1943TT and is probably orientated north-east along the western side of the present hedge line. The date of this road is not precisely known but it appears to survive almost intact. The road has potential to indicate many aspects of the medieval landscape and it is possible that a length of up to 260m is located within the area of the evaluation.

## 9 BIBLIOGRAPHY

Pollard, R. J., 1988, The Roman pottery of Kent

URL, 1994, *Union Railways Limited, Channel Tunnel Rail Link: Assessment of Historic and Cultural Effects. Final Report.* (Four volumes. Prepared for URL by OAU).

#### **POTTERY**

By Louise Rayner with R. P. Symonds & R. Stephenson

#### 1 Introduction

1.1 The evaluation produced a total of 27 sherds (153g) of Late Iron Age - Early Romano-British and post-medieval date. The sherds are in very poor condition; mostly fragmentary, abraded pieces, with the average sherd weight just under 6g. The pottery was examined using a x20 binocular microscope and recorded using standard MoLAS codes on pro-forma sheets. Quantification of the material was by sherd count and weight. Pottery was recorded from eight contexts.

#### 2 Fabrics

- 2.1 The fabrics identified fall into three broad temper types which have been defined on the basis of their main inclusions, and were not divided into defined fabric types. None of the fabrics recorded could be considered 'Romanised'. Instead they represent fabric traditions of the pre-Roman period, that continued to be used into the 1st century AD.
- 2.2 The post-medieval material has been assigned to known fabric types when possible. Only the fabrics present are listed here; no further analysis has been undertaken.

## 2.3 Table 3: Fabric groups

FABRIC	COUNT	WEIGHT
Flint-tempered fabrics	8 sherds	20g
Shell-tempered fabrics	5 sherds	18g
Sand-tempered fabrics	3 sherds	5g
Earlswood ware	1 sherd	4g
Kingston-type ware	1 sherd	1g
Biscuit-fired delftware	5 sherds	1g
Post-med redware	4 sherds	104g

## 3 Forms

3.1 No forms could be discerned due to the undiagnosite nature of the material. Only 1 rim sherd was present; a lid-seated rim from a jar or wide-mouthed bowl. No other feature sherds are present and no decoration is present on any of the sherds.

## 4 Chronology

4.1 All of the fabric types identified were established prior to the Roman conquest. Flint tempered fabrics have a long tradition of use, throughout the Iron Age in the Medway valley and across East Kent (Pollard 1988, 31). The presence of a shell tempered lid-

seated rim suggests a Late Iron Age - Early Romano-British date, as this fabric is in widespread use from the later 1st century BC to the later 1st century AD. (op.cit.). The size of the group, lack of diagnostic sherds and condition of the material makes precise dating impossible at present.

## **5** General comments

Despite the small size of the assemblage the fabrics present are consistent with our current understanding of the pottery for this period. The Medway valley is regarded as an overlap zone for the traditions of east and west Kent, attested by the presence of both flint- and shell-tempered fabrics. Precise dating of pre- and post-conquest groups is notoriously difficult due to the lack of well stratified sequences and independent datable artefacts. The assemblage from Boarley Farm would appear to fit into the ceramic tradition that spans the later 1st century BC to the later 1st century AD. The absence of any Roman finds from this site may suggest the material is either pre- or early post conquest in date.

## **6** Assessment of Potential

6.1 The present assemblage is of little potential when considered in isolation. However, when examined in conjunction with other material from this area it will contribute to our understanding of the ceramics for this period.

# 6.2 Table 4: Bulk dataset, pottery

Key:

LIA Late Iron Age

ERB Early Romano British R-B Romano British

Med. Medieval PM Post-medieval

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENT
site	0	Pot	2	100g	PM1600-1900.
site	1	Pot	4	9g	2 shs. Med. 1230-1400; 2 shs. PM 1800-1900
1510TT	23	Pot	3	2g	abraded; fragmentary pieces; LIA-ERB.
1534TT, 1536TT	36	Pot	5	1g	PM 1600-1850.
1534TT, 1536TT	37	Pot	1	<1g	abraded; R-B
1534TT	42	Pot	1	<1g	fragmentary pieces; prehistoric.
1547TT	48	Pot	1	<1g	abraded; prehistoric.
1544TT	56	Pot	6	32g	LIA-ERB
1933TT-1935TT, 3052TT	61	Pot	1	<1g	fragmentary pieces; prehistoric.
1933TT	63	Pot	2	7g	LIA-ERB
3052TT	122	Pot	1	<1g	v. tiny fragments; abraded; prehistoric.

#### **BUILDING MATERIALS**

By Terence Paul Smith

#### 1 Introduction

- 1.1 This site produced a total of 51 fragments of ceramic building material or possible ceramic building material, exclusive of daub. Of these, seven were tiny unidentifiable fragments of ceramic, possibly but not certainly, building materials. Of the rest, the vast majority is in the form of more or less small fragments, much of it, therefore, not of identifiable form.
- 1.2 The material has been examined under x10 magnification and divided into fabric groups; these have been given numbers and where there is correspondence with MoLAS fabric numbers, these too have been given.
- 1.3 Where possible material has also been classified by form that is, by type and usage; much, however, was too fragmentary for this to be done.
- 1.4 Dates have been assigned wherever possible and related to pottery dates where these are available for a given context.

## **2** Ceramic Building Materials: Fabrics

2.1 Eleven distinct fabrics were identified, six of Roman date and five of medieval or post-medieval date. They are numbered consecutively. Seven of them correspond to MoLAS fabrics - that is to fabrics encountered within the London area; two are close to, though not identical with, MoLAS fabrics.

### 2.2 Roman Fabrics:

- Fabric 1 (= MoLAS fabric 2454): Cream, yellowish, yellowish-grey, or pinkish, usually well-fired and hard fabric with varying amounts of red quartz plus scatter of iron oxides and limestone; all the material from this site was in a red silty variant. This fabric is closely related to:
- Fabric 2 (= MoLAS fabric 3022): yellowish-white, pink, orange, or light brown with frequent red or normal quartz and occasional iron oxides and limestone.
- Fabric 3 (= MoLAS fabric group 2815): varying shades or orange, red, or brown with differing amounts of quartz (some very sandy, some quite fine) and occasional scatters of limestone and tiny black iron oxides.
- Fabric 4 (= MoLAS fabric 3200): reddish pink with variable quantities of streaks, lenses, and swirls of creamy white clay; also very rounded black or red iron oxides.
- Fabric 5: Smooth orange-red fabric with little quartz and with occasional red iron oxides; some stony inclusions.
- Fabric 6 (near MoLAS fabric 3068): orange to light brown with smooth matrix with

- common quartz and scatter of red iron oxides; common cream silty bands of which this fabric (6) possessed far more than the usual MoLAS fabric (3068).
- Fabrics 1 and 2 are closely related, the latter being a more sandy version of the former; the red silty variant of fabric 1 is already known from London. They are of mid to late 1st-century date. Materials in these fabrics were manufactured in the Eccles area of Kent, perhaps as an estate product in association with the Roman villa there. They were traded to London as well as being used within Kent itself. At this site they were recovered from contexts 0, 1, 12, 37 and 129.
- Fabric 3 is equivalent to a MoLAS group (2815) which embraces the individual fabrics 2452, 2459, 3004, and 3006. These mostly date from the mid 1st century down to the mid or late 2nd century. (One variety [2459c] continued into the 3rd century but is not represented at this site.) Materials in these fabrics were manufactured at various kiln sites on either side of Watling Street between London and St Albans (*Verulamium*) and perhaps also at kiln sites to the south-west of London. At this site they were recovered from contexts 0, 1, 26, and 127.
- 2.5 Fabric 4 is associated with the *Classis Britannica*, the Roman fleet in Britain, materials in the fabric sometimes (though not on the fragments from this site) being stamped CLBR. The fabric can be matched with the Fairlight Clay found in the central Weald, which is where materials in this fabric must have been made; at present, however, no kiln site has been located. The materials have been found widely in Kent, in east Sussex, in London, and in northern France. They date from the 2nd and early 3rd centuries.
- 2.6 Fabric 5 is a fabric which does not occur in London. Its date range and the place of manufacture of materials in the fabric are not currently known; it may well be a fabric local to Kent.
- Fabric 6 is similar to MoLAS fabric 3068 except for the greater abundance of cream silty bands. It is perhaps only a variant of that fabric, which may be dated to the period AD 50 to 125. Place of manufacture of materials in the fabric is not at present known; it is possibly a local Kentish fabric.
- 2.8 Medieval and post-medieval fabrics
  - Fabric 7 (= MoLAS fabric 2271): various shades of red or orange red with hard, well fired texture and little quartz.
  - Fabric 8 (= MoLAS fabric 2276): similar to fabric 7 but with distinctive fine moulding sand.
  - Fabric 9 (= MoLAS fabric 2278): light brown or creamy white fabric with hard, well fired texture and sometimes (as at this site) with a marbled appearance.
  - Fabric 10: Brown with fine red streaks and a few iron oxides and some calcium carbonate; very coarse moulding sand.
  - Fabric 11(similar to MoLAS fabric 2278): this is very similar to fabric 9 but with an even more marbled appearance and with numerous tiny black iron oxides.

- 2.9 These fabrics are all of medieval or post-medieval date. It is not possible to be more specific, except to state that fabric 8, distinguished by its fine moulding sand, is, at least in London, of *late* medieval or later date: it does not appear before the late 15th century. Most are familiar within the London area and almost certainly represent local manufacture; fabrics 10 and 11 are perhaps of Kentish provenance, although fabric 11 may be no more than a variant of MoLAS fabric 2278.
- 2.10 Fabric 7 was recovered from contexts 0, 1, and 63; fabric 8 from contexts 0 and 44; fabric 9 from context 66; fabric 10 from context 66 and fabric 11 from context 66.

#### 3 Forms

- 3.1 All the material was very fragmentary and in some cases, therefore, it was not possible to identify forms (types and uses) of materials.
- Amongst the Roman materials were bricks (context 0, fabrics 3 and 4); tegulae (context [0], fabric 2; context [36], fabric 5; context [129], possible example, fabric 1); imbrices (context [0], fabrics 3, possible example, and 4; context [12], fabric 1; and one flue tile (context [26], fabric 3); a thin (13 mm) fragment from context [0] in fabric 3 *may* be part of the plain wall of a further flue tile. The definite flue tile from context [26] was combed in a basket-weave pattern using a six-toothed comb.
- 3.3 Roman bricks were used for a variety of purposes, including the building of hypocaust supports (*pilae*), the laying of floors over hypocausts, turning arches, and providing lacing or bonding courses in stone rubble walls. The tegulae and imbrices are roofing tiles which were used in tandem: the tegulae are flat tiles with side-flanges and the imbrices are slightly tapering curved tiles placed over the junctions of adjacent tegulae. Flue tiles were used to create the conduits within the walls in connection with a hypocaust heating system; the 'decorated' surfaces were in fact functional, serving as a mortar or plaster key.
- 3.4 All the medieval or post-medieval material came from plain roofing tiles. All was fragmentary, so that no full dimensions or details such as peg- or nail holes and/or nibs for fixing over laths were preserved. None of the fragments showed glaze.

#### 4 Daub

- 4.1 Daub was recovered from contexts [2] (1513TT) and [56] (1544TT), all very fragmentary and in tiny quantities. No wattle or other impressions were present in this meagre material.
- 4.2 The daub from context [2] was pinky-beige in colour and had some crushed shell in the matrix; it was probably this that gave it its light colouring. The daub from context [56] had a fine grey-coloured matrix.

4.3 The set of daub from context [2] lay in the subsoil of the trench and is impossible to date, whereas [56] was associated with pottery of Late Iron Age - Early Romano-British date, and this is probably the date of the daub itself.

## 5 Stone

- 5.1 Some stone, all of it in quite small pieces, was recovered from contexts [1], [63], and [124]. Most was rubble, although a fragment of Kentish Rag from context [63] had one flat face and may have been part either of a paving slab or of an ashlar (squared building block). No tooling was preserved on the flat face.
- The rubble consisted of fragments of iron-rich red sandstone from contexts [1] and [124], and of Kentish Rag from contexts [63] and [124]. Kentish Rag was quarried from Roman times onwards in the Maidstone area of Kent. Red sandstone was available at various sources in the county.
- 5.3 It is impossible to date such fragmentary and featureless stones, although that from context [1] (1508TT) was associated with medieval and post-medieval pottery; those from context [63] were associated with Late Iron Age Early Romano-British pottery, although the context was contaminated in that it also contained medieval or post-medieval plain roofing tile.

## 6 Context and dating

6.1 Details of dating, where ascertainable, have been given above on the basis of fabric types and forms. Not surprisingly, context [0], representing unstratified material, was mixed. But two other contexts were also mixed with regard to different building materials and/or the pottery present: contexts [1] (1518TT) and [36] (1534TT or 1536TT). Material from other contexts (within specific) was consistent within itself and/or with the associated pottery.

# 7 Assessment of potential

7.1 The material is so fragmentary as to be of little value for drawing further conclusions.

## 7.2 Table 5: Bulk dataset, building materials

Key: Ceramic Building Material - CBM

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENT
site	0	CBM	12	632	Topsoil between 1533TT and 1529TT
1511TT	0	CBM	1	175	Subsoil
1514TT	0	CBM	1	44	Subsoil
1515TT	0	CBM	1	22	Subsoil
1507TT	1	CBM	4	4	
1508TT	1	CBM	1	2	
1511TT	1	CBM	1	18	

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENT
1518TT	1	CBM	3	36	Topsoil
1533TT	1	CBM	1	15	
1535TT	1	CBM	2	43	
1513TT	2	CBM	3	70	
1516TT	12	CBM	1	98	
1510TT	26	CBM	1	250	
1534TT, 1536TT	36	CBM	3	124	
1534TT, 1536TT	37	CBM	1	42	
1537TT, 1539TT, 1540TT, 1543TT,	44	CBM	1	68	
1554TT, 1555TT					
1554TT	45	CBM	1	1	
1933TT-1935TT, 3051TT, 3052TT	62	CBM	1	8	
1933TT	63	CBM	2	16	
1936TT	66	CBM	3	54	
1937TT	66	CBM	6	74	
1938TT	127	CBM	1	44	
3029TT	129	CBM	3	118	
1513TT	2	DAUB	2	6	
1544TT	56	DAUB	5	6	
1933TT	63	STONE	2	255	
1935TT	124	STONE	2	635	

#### **ANIMAL BONES**

By Alan Pipe

#### 1 Introduction

- 1.1 This report discusses the animal bones from the Boarley Farm evaluation.
- 1.2 The condition of the bone, which relates directly to the potential value of the assemblage for further study, was described using a scale of 1 to 5 where 1 corresponds to bone in excellent condition with no surface damage, and 5 describes bone with sufficient surface erosion to prevent identification of species, skeletal element, butchery marks, fusion lines, and measurement points.
- 1.3 The bones were identified in terms of species and skeletal element ('bone') using MoLAS reference collections. When accurate identification was impossible due to excessive erosion and fragmentation, material was assigned to the approximate categories unidentified fish, unidentified mammal, 'cattle-sized mammal', 'sheep-sized mammal' and 'long-bone fragment'.

## 2 Results

- 2.1 The condition of the bone was generally poor to moderate with sufficient surface erosion to obscure some surface detail, butchery marks, and measurement points. There was negligible inter-context variation in terms of condition; using the scale of 1 (excellent) to 5 (very poor), this material is predominantly in the 3-4 range. The bone from context [130] was, however, assessed as in condition 1 (excellent) with negligible surface damage.
- 2.2 The bones were moderately fragmented with approximately 75% of the material in the 25-75mm size range. The remainder are mainly larger than 75mm.
- There was a total of 166 fragments/0.76 kg of bone; only 34 of these were identifiable to species. The species represented are unidentified fish (possibly cod) (1 fragment), unidentified bird (possibly mallard/domestic duck) (1 fragment), cattle (16 fragments), sheep/goat (7 fragments), pig (3 fragments), dog (1 fragment), and horse (5 fragments). The remainder of the material was evenly divided between 'cattle-sized', and 'sheep-sized' mammal with a few fragments of 'unidentified mammal' long-bone.
- A well-preserved but unidentified fish, probably cod, otolith was recovered from [23]; a fragment of an unidentified bird, possibly mallard/domestic duck, metacarpal (wing) was recovered from [130]; cattle/ 'cattle-sized mammal' bones were recovered from [23], [29], [56], [62], [122], and [130], and are represented by elements from the head (horn-core, teeth, hyoid), vertebrae/ribs, upper limb (humerus, femur), lower-limb (tibia), and feet (phalange); sheep/goat/ 'sheep-sized mammal' were recovered from

[23], [56], [59], [62], and [63], and are represented by elements from the head (maxilla, mandible, teeth), ribs, upper-limb (scapula, humerus), and lower-limb (astragalus); pigs were recovered from [23], [56], and [130], and were represented by elements of the head (maxilla, mandible, and mandibular tooth); dog was represented by a mandible from [153]; and horse was represented by upper-limb (femur), vertebrae and a phalange from [29].

- Only one bone, a fragment of 'sheep-sized mammal' rib fragment from [153], showed clear evidence of butchery. There is clear evidence of gnawing by dog(s) on a cow femur from [130]. A measurable cattle first phalange and sheep/goat mandible were recovered from [23]; a measurable pig mandible was recovered from [56]. No complete bones were recovered from any context.
- 2.6 The bones are predominantly derived from adult animals, although all the heavily eroded horse material from [29] is juvenile. Context [130] contained a ?cod otolith in good condition together with epiphysial fusion evidence from cattle femur, tibia, and calcaneum. A sheep/goat mandibular tooth-row from [23], and a cow mandibular deciduous premolar 4 from [130] showed clear wear-stages suitable for estimation of age-at-death.

## 3 Summary

- 3.1 The small quantity, and variable preservation state, of this material indicate only limited potential of this material for further analysis. The recovery of mainly robust material from the larger domestic mammals may reflect poor preservation rather than the real absence of more fragile species.
- 3.2 Contexts [23], and [29] are respectively burials of a cow and a sheep/goat dated as Late Iron Age Early Roman. Fills [56], and [122] also both include prehistoric pottery.

## 3.3 Table 6: Bulk dataset, animal bone

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENTS
1510TT	23	BONE	80	230	
1510TT	29	BONE	40	58	
1544TT	56	BONE	7	26	
1544TT	153	BONE	5	28	
3052TT	62	BONE	6	56	
1933TT	63	BONE	4	4	
3052TT	122	BONE	1	6	
3029TT	130	BONE	23	350	

#### PLANT REMAINS

By John Giorgi

#### 1 Introduction

- 1.1 Six environmental soil samples were collected during the evaluation and assessed for the presence of charred plant remains. The size of each sample was ten litres. Five samples were from dated, mainly Iron Age, features; sample <1> from an Iron Age pit fill [11]; sample <2> from the fill [23] of a Iron Age bovine burial; sample <3> from the fill [21] of a 'V' shaped ditch; sample <4> from the backfill [144] of a (?post) medieval quarry pit; and sample <5> from the fill [122] of an Iron Age pit. Sample <6> was from an undated layer [62], which sealed a prehistoric occupation deposit.
- 1.2 The aim of the assessment was to evaluate the quality of preservation and the abundance and diversity of charred plant remains in the samples.

#### 2 Methods

- 2.1 The samples were processed in a flotation machine using sieve sizes of 0.25mm and 1mm for the recovery of the flot and residue respectively. The residues were dried and sorted for biological and artefactual remains.
- Once dried, the material from each flot was scanned under a binocular microscope. Modes of preservation, abundance and diversity of organic remains were noted. The results of the assessment are summarised in figure 1. Abundance was recorded as follows: + = 1-10 items, ++ = 11-100 items, +++ = >100 items.

## 3 Results

- 3.1 *Iron Age Pitfill [11] 1512TT (sample <1>, flot vol. 60ml.)*: The flot consisted mainly of small charcoal fragments, root fragments and terrestrial molluscs. Occasional indeterminate charred cereal grain fragments and uncharred seeds, eg. *Chenopodium* spp. (goosefoot etc.) were also present.
- 3.2 Iron Age Bovine Burial Fill [23] 1510TT (sample <2>, flot vol. 5ml.): This flot consisted mainly of root fragments and terrestrial molluscs. A small number of small charcoal fragments and several uncharred seeds were also present.
- 3.3 Iron Age fill [21] 1513TT of a V-shaped Ditch (sample <3>, flot vol. 120ml.): A very large number of terrestrial molluscs plus root fragments were present in this flot. Occasional small charcoal fragments and a few uncharred seeds were also noted.
- 3.4 (?Post)-medieval Quarry Pit Backfill [144] 1544TT (sample <4>, flot vol. 2ml.): The flot consisted virtually entirely of small charcoal fragments. A few terrestrial molluscs and a small quantity of root fragments were also present.

- 3.5 Late Iron Age Early Roman Pit Fill [122] 3052TT (sample <5>, flot vol. 10ml.): This flot contained mainly root fragments plus occasional small charcoal fragments and terrestrial molluscs.
- 3.6 Undated layer [62] 1933TT sealing prehistoric occupation deposit (sample <6>, flot vol. 10ml.): This flot contained occasional indeterminate charred cereal grain fragments, small charcoal fragments and a moderate amount of root fragments and terrestrial molluscs.

# 3.7 Table 6: Summary of organic remains noted in the flots

SAMPLE	1	2	3	4	5	6
CHARRED PLANT REMAINS						
Indet. cereal fragments	+					+
Charcoal	+++	+	+	++		
UNCHARRED PLANT REMAINS						
Seeds	+	+	+			
Root fragments	+++	++	+++	+	++	+++
MOLLUSCS	+++	++	+++	+	++	++

#### 4 Statement of Potential

4.1 Charred cereal grains were represented by just several fragments in two samples, one from an Iron Age pitfill [11] and the other from an undated context [62]. This material cannot provide any useful information on human activities at the site. The few uncharred seeds in three samples are probably recent intrusions, given the soil conditions at the site and the presence of modern roots. Variable quantities of terrestrial molluscs were present in the flots with particularly high numbers in samples from the Iron Age ditch fill [21] and pitfill [11]. Molluscs in natural deposits may provide information on the character of the contemporary local environment.

## 5 Recommendations

- 5.1 Due to the low abundance and poor condition of the charred plant remains, no further analysis of the plant remains from these samples is necessary.
- 5.2 The recovery of terrestrial molluscs in sample <3> of the Iron Age ditch fill [21] may provide information on the nature of the local habitat, although as the sample was processed by flotation, some of the snails may have been lost through the 1mm sieve.

# 5.3 Table 8: Environmental dataset, plant remains

TRENCH	CONTEXT	SAMPLE NUM	METHOD	SUMMARY	COMMENTS
1534TT	60	1	flotation (0.25mm sieve)	uncharred seeds+; roots+++; charred grain+; charcoal+++; molluscs+++;	poor botanical potential
1510TT	23	2	flotation (0.25mm sieve)	uncharred seeds+; roots++; charcoal+; molluscs+++;	poor botanical potential
1513TT	21	3	flotation (0.25mm sieve)	uncharred seeds+; roots+++; charcoal+; molluscs+++;	poor botanical potential for flora; ?molluscs for nature of local enviro
1544TT	144	4	flotation (0.25mm sieve)	roots+; charcoal+++; molluscs+;	poor botanical potential
3052TT	122	5	flotation (0.25mm sieve)	roots+++; charcoal++; molluscs++;	poor botanical potential
1933TT	62	6	flotation (0.25mm sieve)	roots+++; charred grain+; charcoal+; molluscs++;	poor potential for flora and fauna

## **FLINT**

By Jonathan Cotton

## 1 Summary

- 1.1 Six pieces of flint were recovered from the evaluation, of which four are burnt unworked pieces.
- One of the worked flints is a single-platform pyramidal bladelet core, heavily patinated. This is probably Mesolithic in date.
- 1.3 The other is a flake with cortex. It has steep retouch at the proximal end and is possibly an awl.
- 1.4 Although the bladelet core is of interest, no further work is necessary on this tiny collection.

## 1.5 Table 9: Flint dataset

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENT
site	1	FLINT	1	6	Burnt 1507TT
1507TT	4	FLINT	1	7	Burnt
1507TT	4	FLINT	1	102	
1933TT	63	FLINT	1	10	
3052TT	111	FLINT	2	12	Burnt. P/h 113

#### SEDIMENTARY SAMPLES

By Graham Spurr, with Dr Peter Allen

#### 1 Introduction

1.1 Two monolith tin samples were taken from a stratigraphic section exposed in trench 1935TT at the Boarley Farm evaluation. The aim of the stratigraphic sampling was to provide a more detailed analysis of the different sedimentary units present in order reconstruct the nature of the palaeo-environmental conditions influencing their deposition and the site as a whole.

#### 2 Methods

2.1 Monolith tins were placed vertically into the side of 1935TT in a staggered, overlapping fashion to retrieve continuous stratigraphic samples. The number of tins used was dependent upon the depth and/or significance of the stratigraphic sequence and the suitability of the stratigraphy for sampling. Each monolith tin was plotted on the section drawing of the relevant trial pits and related to Ordnance Datum (OD) by the supervising archaeologist. The monolith tins were then sealed and transported to the MoLAS Environmental laboratories. Once at the laboratories the monolith tins were described to standard sedimentary criteria (e.g. Gale and Hoare, 1991).

## 3 Results

## 3.1 Table 10: Sedimentary analysis of monoliths taken from 1935TT

SEDIMENTARY	OD	DESCRIPTION (FROM BASAL UNITS UPWARD):
UNIT	HEIGHT	
A	50.88m to	7.5YR 6/1 grey silt becoming 7.5YR 5/2 brown and wetter
	51.76m	with depth; blocky structure; fine roots throughout;
		occasional fragments of mollusc evident in upper part of unit;
		occasional subangular to subrounded flint clasts (1-20mm)
		randomly throughout; chalk pellets randomly throughout with
		an increase in chalk content with depth; very poorly sorted.

## 4 Interpretation

4.1 Essentially the monolith tin samples, although crossing three contexts as described by the archaeologists on site, seem to indicate a predominantly colluvial deposit (probably reworked through farming practices given the proximity of the settlement area and the roots throughout the unit) infilling a chalk-based dry valley.

## 5 Bibliography

# GALE, S J & HOARE, P G, 1919, QUARTERNARY SEDIMENTS, BELHAVEN HALSTEAD

#### TERRESTRIAL MOLLUSCS

By Kevin Rielly, with Jane Sidell

#### 1.1.1.1.1 Introduction

- 1.1.1.1.1 Samples for mollusc analysis were collected from several features on this site. The specific research aim considered was the characterization of local ecological conditions. Additionally, bulk samples were collected for conventional environmental study. These are mentioned in this assessment.
- 1.1.1.1.1.2 The samples collected for specific mollusc analysis were placed in buckets, soaked in water and disaggregated using hydrogen peroxide. They were then sieved through a 0.250mm sieve and air-dried. The snails were then removed from any remaining matrix. The additional bulk samples were processed through a 1mm sieve, with the flots retained on a 0.250mm sieve. The molluses from these samples were picked out with the remainder of the biological material.
- 1.1.1.1.1.3 The mollusc assemblages from both sample suites were scanned under a low power binocular microscope. Individual shells were identified to species or genus level where possible in order to quantify species diversity. However, this assessment does not aim to provide an exhaustive identification list, but rather comments on abundance and diversity which can then be used to assess the potential of the material for full analysis. Codes were assigned for abundance ratings, and are as follows:

#### 1.1.1.1.4

1-10	individual apices	1
11-20	individual apices	2
21-50	individual apices	3
50+	individual apices	4

## 1.1.1.1.2 Results

1.1.1.1.2.1 Seven samples were collected specifically for mollusc analysis. These were from:

1513TT	Context [21]	Late Iron Age - Early Roman ditch fill	3 samples (M)
1935TT	Context [62]	Late Iron Age - Early Roman layer	2 samples (M)
1935TT	Context [124]	Late Iron Age - Early Roman pit fill	2 sampleS (M)

## 1.1.1.3 1513TT, sample sequence and thickness

sample 3M	12-18cm
sample 2M	6-12 cm
sample 1M	0-6cm (basal)

## 1.1.1.3.1 Table 11: Results of mollusc analysis, fill [21] 1513TT

CONTEXT SAMPLE	[21] 1M	[21] 2M	[21] 3M
Pomatias elegans	1	1	
Discus rotundatus	1	2	
Trichia sp.	1	2	2
Clausiliidae		1	1
Vertigo sp.		1	
Zonitidae		1	
Cepaea sp.		1	

1.1.1.3.2 This table demonstrates that the best assemblage was present in the middle sample, which has a higher species diversity and abundance. Preliminary suggestions regarding the ecology point towards a shaded environment, but with material possibly transported from open ground and also disturbed ground/ploughsoil.

1.1.1.3.3 Table12: Results of mollusc analysis, from deposit [62] 1935TT

[62] 1M	[62] 2M
1	2
	1
1	3
	1
	1
1	1
	1
	[62] 1M 1

1.1.1.3.4 Sample 2 demonstrates reasonable potential in view of the species diversity and abundance. The assemblage from sample 1 is small and potentially unreliable. A preliminary scan of the ecological habitats suggests similar conditions to those indicated from the ditch fill; i.e. a mixture of open and disturbed, with a shaded element. This latter is slightly less expected than in a ditch fill where it might be representing very local conditions.

1.1.1.3.5 Table 13: Results of mollusc analysis, from pit fill [124] 1935TT

CONTEXT SAMPLE	[124] 1M
Pomatias elegans	1
Discus rotundatus	1
Trichia sp.	1
Vallonia sp.	1
Clausiliidae	1

1.1.1.1.3.6 This material is from a Late Iron Age - Early Roman pit fill, and as such cannot be expected to provide a clear picture of the local conditions, unless it was left open and allowed to silt naturally. However, the assemblage is comparable with the others recovered from this site, and therefore may have potential for addressing the aim of characterizing the local conditions. However, this is a relatively small assemblage, and again may be statistically unreliable.

## **1.1.1.1.4** Bulk samples

1.1.1.4.1 Eleven samples were collected containing molluscs, but not specifically for mollusc analysis. These were from:

1512TT	Pit fill [10]	sample 1B
1510TT	Late Iron Age - Early Roman backfill [23]	sample 2B
1513/5TT	Late Iron Age - Early Roman ditchfill [21]	sample 3B
1544TT	Medieval dumped infill [144]	sample 4B
1515TT	Prehistoric pit fill [122]	sample 5B
3052TT	Prehistoric ?colluvium [62]	sample 6B
1513TT	Late Iron Age - Early Roman ditch fill	sample 7B
1513TT	Late Iron Age - Early Roman ditch fill	sample 8B
1515TT	Single sample	sample 9B

1.1.1.4.2 Table 14: Results of bulk samples from various features

			, ,,,			
CONTEXT SAMPLE	[10] 1B	[23] 2B	[21] 3B	[144] 4B	[122] 5	[62] 6B
Pomatias elegans			4	1	1	
Discus rotundatus			1	1		
Trichia sp.	1			1	1	1
Cochlicopa sp.	1					
Clausiliidae			2			1
Zonitidae						
Cepaea sp.		1	1	1		1
Helix sp.			1		1	
Ceciliodes acicula	1					

1.1.1.4.3 These assemblages, again are all rather small, although sample 3 was slightly larger, Nevertheless, these are all statistically unreliable samples, with generally one individual of each species. It would not be possible to reconstruct ecological conditions from such small and doubtless biased assemblages.

1.1.1.4.4 Table 15: Results of bulk samples, from ditch fill [21] 1513/15TT

CONTEXT SAMPLE	[21] 7B	[21] 8B	[21]9B
Pomatias elegans	3	3	4
Discus rotundatus			1
Trichia sp.	1	2	3
Helix sp.	1	1	1
Clausiliidae	2	2	
Zonitidae		1	1
Ceciliodes acicula			
Cepaea sp.	1	1	

1.1.1.4.5 These samples contain slightly larger assemblages. The dominance of *P. elegans*, which is notoriously robust, suggests that there may be a case of differential preservation, and the more fragile elements of the death assemblage may not have preserved. Additionally, these samples are all from bulk samples which were processed according to standard procedures, i.e. the residue from which the molluscs derive was caught on a 1mm mesh. This may have led to the

loss of smaller species which could refine the ecological characterization. However, it should be noted that the species diversity observed in these samples is not greatly reduced from those processed through a .250mm mesh. With these Additionally, these samples are all from bulk samples which were processed according to standard procedures, i.e. the residue from which the molluscs derive was caught on a 1mm mesh. This may have led to the loss of smaller species which could refine the ecological characterization. However, it should be noted that the species diversity observed in these samples is not greatly reduced from those processed through a .250mm mesh. Nevertheless, it is possible to suggest that the amount of *P.elegans* represents disturbed ground, probably local to the ditch. Several of the species represent shaded conditions, i.e. *D. rotundatus* and members of the Zonitidae; these are likely to reflect conditions in the ditch itself. Although these samples are still relatively small and biased, it may be possible to get some useful information from further work.

## 1.1.1.5 Statement of potential

1.1.1.5.1 The two types of sample do cause some problems in that the assemblages will not be directly comparable, however, it is felt that there is some potential for further analysis. The question of the local conditions is an important one, as ecological information places the archaeological features within a wider context. Additionally, it may provide information for activities such as arable cultivation. The samples collected specifically for mollusc analysis will be the preferred assemblage because sampling was targeted and recovery is higher. However, the bulk samples have large assemblages which could provide useful supporting datasets, especially if snails from the flots are used.

#### 1.1.1.1.6 Recommendations

1.1.1.1.6.1 Proposals for further analysis are, to an extent, dependent on the further fieldwork. This assessment has demonstrated good preservation and interesting species diversity, but the assemblages from the targeted samples are rather small, whilst those from the bulks are potentially biased in favour of larger species. If excavation takes place, then further samples should be taken, but of greater volume. If there is to be no further fieldwork, then it would be worth undertaking some semi-quantitative analysis on these assemblages. This is an interesting period for looking at landuse and ecology, and it is possible that these assemblages are rather unusual (K. Wilkinson, pers comm) in this type of situation, where a much more open country fauna could be expected. Full counts should be made on the targeted samples, and the assemblages from the flots and residues derived from the bulk samples should be combined. Full counts should be made on these, but much caution would need to be observed as the assemblages are likely to be biased, with species such as *Carychium* and the Zonitidae underrepresented. It would probably not be possible to present the data in a conventional mollusc diagram, but it is thought that the information would contribute significantly to the interpretation of the site.

#### **SMALL FINDS**

By Jackie Keily (supervised by Angela Wardle)

## 1 QUANTIFICATION

1.1 A total of 13 small finds came from this site, the majority of which, were retrieved from context [1], modern ploughsoil. They are discussed below by material.

## 1.2 Table 16: Finds dataset, lead

Context	Special No.	Object	Period
1	1	-	
1	2	Waste	
1	3	Waste	
1	4	Spoon	post-medieval
61	12	Waste	

1.3 Three of the lead artefacts are fragments of waste, two showing signs of having been trimmed and the third being a fragment of runnel. One lead fragment is unidentified. This is a piece of thin lead sheet or foil that has been crumpled. Small find <4> is the upper portion of a handle, almost certainly from a spoon. The initials W T S are engraved on it.

## 1.4 Table 17: Finds dataset, iron

TRENCH	Context	Special No.	Object	Period
site	1	5	=	
site	1	6	-	
site	1	7	-	

- 1.5 All three iron objects are fragments and are, as yet, unidentified.
- 1.6 A number of fragments of bulk iron also came from the site. Two iron nails came from contexts [1] and [59]. Eight fragments of iron slag came from contexts [1], [37], [130] and [153]. Context [153] contained five of these fragments; evidence for metal working in the area. The date of the metalworking could not be established from initial inspection of the slag itself.

# 1.7 Table 18: Finds dataset, copper alloy

TRENCH	Context	Special No.	Object	Period
site	1	8	-	
site	1	9	-	
site	1	10	-	
site	1	11	Spoon/Fork	post-medieval
1933TT	61	13	Buckle	

1.8 Small find <11> is the end of a copper-alloy spoon or fork, as only the handle end remains it is impossible to say which. Context [61] produced a double frame buckle. The other three fragments of copper alloy remain unidentified.

# 2 Storage and curation

2.1 The metal artefacts require storage in a controlled and monitored low humidity environment.

## 2.2 Table 19: Bulk dataset, metal

TRENCH	CONTEXT	MATERIAL	COUNT	WEIGHT	COMMENT
site	1	METAL	1	60	Nail, Metal Detected
1536TT	1	METAL	1	94	Slag
1536TT	37	METAL	2	54	Slag
1544TT	153	METAL	5	620	Slag
1544TT	153	METAL	1	12	Nail

#### ARC BFM 97 Latest text

Fig 2 Trench location plan (ARC TGS 97)	Fig 2	Trench	location	plan	(ARC	TGS	97)
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Fig 3 South facing section of cow burial [25] 1510TT North facing section of sheep burial [30] 1510TT West facing section of pit [11] 1512TT cut [25] skeleton [24] [23] cut [30] sheep bones [29] [28] cut [11] [10] head of [24] chalk [3] [3] Fig 4 South facing section of ditch [22] 1513TT cut [22] [21] some snails [20] [1] Fig 5 West facing section, sequence of deposits in 1516TT showing natural deposits [18]-[13], possible buried soil [12] under subsoil [2] and topsoil [1] [1] [2] [12] [13] [14] [18] Fig 6 West facing section, sequence of deposits in 1534TT showing natural [35] with ?natural stream [60], fill [42], and possible buried soil [40] [1] [36] [37] [39] [40] [41] [42] cut [60] [35]

Fig 7 South facing section of quarry pit [146] 1544TT cut [146] [1] [43] [43] [43] [55] [56] [144] [145] [152] cut [146] [153] cut [154] [152] East facing section of ditch [46] 1554TT [1] [43] [44] [45] cut [46]

Fig 8

Fig 9 East facing section of natural [68] cut by posthole [106] and sealed by layers [62], [61], and [1] 1934TT

uncertain	boundar	v
unccitain	Oddildai	y

[1] [61] [62] [106] [68]

limit of excavation

Fig 5 West facing section showing natural [18] and possible buried soil [12]

[1] [2] [12] [13] [14] [18]

limit of excavation

Fig 6 West facing section showing natural [35] with ?natural stream [60] and possible buried soil [40]

[1] [35] [36] [37] [39] [40] [41] [42] cut [60]

limit of excavation

## Old text:

Fig 3 ARC BFM 97 Late Iron Age - Early Roman area with animal burials (1510TT), pit (1512TT) and ditch (1513TT - 1515TT)

Fig 4 ARC BFM 97 ?medieval quarry pit (1544TT) and field boundary ditch (1554TT)

Fig 5 ARC BFM 97 Late Iron Age - Early Roman area of postholes and pits (1934TT, 1935TT, 3051TT, 3052TT)

Fig 6 ARC BFM97 undated feature (3029TT), ?medieval road (1943TT) and Postmedieval field drain (1939TT)

Fig 7 ARC BFM97 West facing section in 1516TT, showing natural [18] and possible buried soil [12]

[18] [14] [13] [12] [2] [1]

Fig 8 ARC BFM97 West facing section in 1534TT showing natural [35] with natural ?stream [60] and possible buried soil [40]

[35[ [0] [42] [41] [40] [39] [37] [36] [1]

Fig 9 ARC BFM97 East facing section in 1934TT showing natural [68] cut by posthole [106] sealed by layers [62], [61] and [1]

[68] [106] [62] [61] [1]

N S (north and south are back to front here)

Also figs 7 (south end of 1516TT) and 9 (middle of 1934TT) need putting on Fig 2