2284

RSPB BOWERS MARSH WETLAND NATURE RESERVE

BASILDON

ESSEX

ARCHAEOLOGICAL EVALUATION AND EXCAVATION

AT THE NEW VISITOR CAR PARK

Essex County Council

FIELD ARCHAEOLOGY UNIT

August 2011

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CONTENTS

APPENDICES

FIGURES

(at the back of this report)

PLATES

(on the front cover and at the back of this report)

RSPB BOWERS MARSH WETLAND NATURE RESERVE
BASILDON, ESSEX

ARCHAEOLOGICAL EVALUATION AND EXCAVATION
AT THE NEW VISITOR CARPARK

Client: Haskoning UK Ltd, acting for the RSPB
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Grid ref.: TQ 575539 186708
Dates of fieldwork: 19/5/10 to 25/5/10, 14/7/10 to 16/7/10, 26/7/10 to 13/8/10
Site code: BABM 09
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SUMMARY

Elements of a Roman salt-producing site, or saltern, were investigated in advance of the construction of a new visitor car park for the RSPB Bowers Marsh nature reserve at Bowers Marsh, Basildon, Essex.

The remains of the saltern represent five phases of activity, broadly spanning a period from the 1st century AD to the late 4th century and perhaps later. The site was used for salt extraction during the 1st to mid 2nd century AD (phases A) and again in the mid 2nd to mid 3rd century (phase C), having seemingly been deliberately raised in height during the intervening phase B. The site then appears to have been use for cultivation during the late 3rd and 4th century (phase D), salt production having presumably ceased, before tidal deposits built up around the northern edge of the saltern sometime during the late 4th century or later (phase E). Features relating to the use of the site comprised a series of ditches, pits and post-holes, while numerous pieces of briquetage and baked clay, including fire bars, pillars and the remains of evaporation pans or brine storage vessels, imply the use of hearths for evaporating the brine. Carbonised cereal waste indicated the use of chaff and straw as kindling or fuel in the evaporation process.

The pottery from the site is characteristic of a low-status rural site with seasonal and/or functional use and it seems likely that there were no masonry structures on or near the saltern as the investigation found very little brick or tile.

The report concludes that the saltern lay at the tail end of a former creek and was one of three or more salterns on the dryland/wetland edge at the c. 2m contour line. The site is moderately-to-well preserved and appears to continues eastwards, beyond the edge of the investigation. It is very likely that further features, including hearths and post-holes for timber structures, survive within the un-investigated areas.

1.0 INTRODUCTION

This report presents the results of a programme of archaeological trial trenching and partial excavation undertaken in advance of the construction of a visitor car park for a new nature reserve at Bowers Marsh near Basildon. The archaeological work was recommended by the Essex County Council Historic Environment Management team (ECC HEM) and was commissioned by Haskoning UK Ltd, acting for the Royal Society for the Protection of Birds. The work was undertaken by the Essex County Council Field Archaeology Unit (ECC FAU) in accordance with a Written Scheme of Investigation (ECC FAU 2010) responding to a design brief prepared by ECC HEM (2010).

The trial trenching and excavation comprised the third and fifth phases respectively of archaeological work undertaken in connection with the new reserve, with previous phases comprising walkover surveys, a desk-based assessment, and archaeological test pitting and trial-trenching (Medlycott and Gascoyne 2006; Heppell 2009; Germany 2009).

Copies of this report will be sent to Haskoning UK Ltd, the RSPB, ECC HEM and the Essex County Council Historic Environment Record. A digital version of the report will form part of the Oasis on-line database of archaeological investigations at www.oasis.ac.uk. The site archive will be stored at Southend Museum.

2.0 BACKGROUND INFORMATION

2.1 Location, topography and geology

Bowers Marsh consists of 270ha of low lying agricultural land which will become part of network of new reserves in south Essex that are being created by the RSPB (Fig. 1). It will comprise a variety of wetland habitats including newly created inter-tidal, reed bed and coastal wet grasslands with a network of public access facilities. The outline habitat creation scheme proposes the construction of twenty hectares of inter-tidal habitat in the eastern part of the site, adjacent to Easthaven Creek, including ten hectares of salt marsh and a ten hectare tidal-exchange saline lagoon. In addition, approximately twenty acres of reed bed will be created that will act as a reservoir to supply water to two large coastal wet grassland units, along with two large ponds, a network of new ditches and scrapes and a visitor car park. The new car park will cover *c*. 4150m² and will be located in the south-western corner of an arable field.

The geology of Bowers Marsh consists of Tidal Flat deposits of "consolidated soft silty clay with layers of sand, gravel and peat" above London Clay (BGS Lexicon of Rock Units, www.bgs.ac.uk/Lexicon/lexicon.cfm? pub=TFD). A geoarchaeological survey of the near-surface geology recorded sub-tidal deposits of dark bluish grey clay (*c*. 1.4m+) below inter/supra tidal deposits of compact brown clay (*c*. 0.2m to 1.4m) and agricultural soil (*c*. 0 to 0.2m), representing a gradual transition from a marine to a terrestrial environment (Green and Young 2009).

2.2 Historical and archaeological background

A full archaeological and historical background for the Bowers Marsh reserve can be found in the desk-based studies previously produced for the scheme (Medlycott and Gascoyne 2006; Heppell 2009) and the following section considers only briefly the known evidence for salt-working in the vicinity of the site.

Late Iron Age and Roman salt extraction sites, often referred to as salterns or red hills, dot the coastline of Essex and are often identifiable as low mounds and/or spreads of briquetage fragments and reddish brown soil (Fawn *et al* 1990).

The results of an archaeological excavation of two early to mid Roman and one late Roman saltern at Stanford-le-Hope provide the best picture so far of how salt extraction was carried out along the coastline of Essex during the Roman period (Foreman 2009). The remains of those salterns included hearths, ponds, clay-lined tanks, fence lines, circular and rectangular buildings, and layers of red earth. The late Roman saltern yielded numerous finds and was perhaps used for domestic settlement as well as salt extraction. The excavation found few Late Iron Age and prehistoric remains, although further remains of those dates may have been sealed beneath later deposits. The ditches and ponds were probably used to funnel and trap seawater during high tides, the clay-lined pits to store concentrated brine, and the hearths to heat the brine in order to extract the salt. The layers of red earth were a by-product of the extraction process, and were possibly used to increase the heights of the salterns in order to protect them from flooding.

Roman salterns at Bowers Marsh are possibly represented by earthworks and Roman finds close to the dryland-wetland edge near Easthaven Creek (Heppell 2009, site FAU 15; EHER 7189 and 7190). The earthworks comprise sub-circular and irregular mounds and are situated in a field called 'Old Saltings', while Roman pottery, brick, tile, briquetage, lumps of hearth structure and a deposit of burnt material containing pieces of amphora were found 2m to 3m beneath the existing ground surface during the construction of Canvey Way bridge in the early 1970s.

3.0 AIMS AND OBJECTIVES

The aim of the trench-based evaluation works was to determine the presence or absence, date, character, condition and significance of any archaeological remains present within the footprint of the new car park. Following the discovery of significant remains in the south-eastern half of the car park a design solution was implemented whereby the ground levels will be raised across the car park, leaving only the main drainage runs to be excavated, thereby achieving the preservation in-situ of the greater part of the remains and the preservation by record of those areas that could not be left in-situ.

The objectives of the archaeological work were to investigate:

- Form, development and use of Late Iron Age and Roman salterns
- Reuse of Roman saltern sites during following periods
- The dryland-wetland edge, as a probable focus for human activity

The development of industrial production, including Iron Age and Roman salt extraction and the subsequent use of saltern sites, has been identified as an important area for further investigation and research by *Research and Archaeology: a Framework for the Eastern Counties* (Brown and Glazebrook 2000, 17 and 22).

4.0 METHOD

The investigation of the car park site consisted of three pieces of fieldwork.

1. Trial-trenching, to ascertain the presence and extent of any archaeological remains present;
2. Test-pitting, to obtain more information about the extent of the archaeological remains previously found by the trial-trenching;
3. Hand excavation of three drainage run following the implementation of a design solution allowing ground levels to be raised across the car park - the greater part of the site was then left un-excavated as it will not be disturbed by the construction works.

The trial-trenching consisted of four trenches, each measuring 1.8m wide and 20m long, and the excavation of five test-pits each measuring 1.9m wide and *c*. 3.5m long (Fig. 1). For the

excavation phase, the investigated drainage runs measured 0.5m wide and between 34m and 46m long. The trenches, test pits and drainage runs were all stripped of topsoil using a mechanical excavator equipped with a broad toothless bucket. A directional GPS with on-board map-based software was used to locate the various works. The error margin of the GPS varies but is always less than 0.2m.

The archaeological work was carried out in accordance with the Institute of Field Archaeologists' *Standard and Guidance for Archaeological Field Evaluation* and the Association of Local Government Officers' *Standards for Field Archaeology in the East of England* (IFA 2008; Gurney 2003). The ECC FAU is a registered archaeological organisation with the Institute of Field Archaeologists. The ECC FAU uses its own recording system to record all archaeological deposits and features.

5.0 FIELDWORK RESULTS

The remains of a Roman salt-producing site, or saltern, were situated in the south-east half of the proposed new car park, principally in trenches 2 and 4, test pits 1, 2 and 5 and the majority of drains 1, 2 and 3. Tidal deposits, varying in thickness from 0.7m to 1m+, in test pits 3 and 4, the western end of drain 2 and the northern end of drain 3 implied low-lying areas surrounding the saltern, while dumps of soil in trench 2, the western end of drain 1, and the southern ends of drain 3 and trench 4 suggest some of these areas had seemingly been deliberately infilled, potentially either to raise ground levels and protect the site against flooding, as convenient place to dispose of domestic and industrial rubbish/ waste, or both.

The remains of the saltern can be separated into five phases (A to E) using a combination of dating evidence and stratigraphic relationships. Detailed descriptions of individual deposits and features can be found in Appendix 1.

5.1 Phase A: 1st to mid 2nd century AD (Fig. 7)

The earliest remains included post-holes and pits in drain 1 (116, 118, 144 and 147), a series of baked clay spreads and a ditch in drain 2 (90, 126 and 132), and a gully, post-holes and pits in drain 3 (130, 171, 174, 188 and 190). Dumps of soil in low-lying, presumably marshy or wet, areas in trenches 2 and 4 and drains 1 and 3 also belonged to this phase.

Pits 116 and 144 overlapped and extended into drain 1 (Fig. 2; Plate 6). They had varied profiles and were up to 0.3m deep. Post-holes 118 and 116 lay not far from the pits and were both small and shallow.

Ditch 132 in drain 2 was a 0.8m-deep feature with a moderately-sloping profile (Fig. 3; Plate 2). The fill sequence consisted of re-deposited dumps of water-lain silts/ mud (124 and 137), brownish grey / greyish brown soil (123, 125, 138 and 140), and compressed reeds or straw (141). Fill 123 was distinctively loose and ashy. Baked clay spread 126 extended into the ditch and formed the penultimate fill.

Gully 130, pits 171 and 188, and post-holes 174 and 190 in drain 3 all contained deposits of brownish grey and greyish brown silt clay and were small and shallow, apart from pit 188, which was about 0.48m deep (Fig. 4; Plates 7 and 8). Post-hole 190 cut or was cut by the base of pit 188. Spreads of soil (152 and 207), possibly representing the dumping of unwanted refuse, lay near gully 130 and pit 188.

Frequently sloping deposits in the eastern end of trench 2 (Fig. 6, sections 10 and 11, deposits 65 to 69), the southern end of drain 3 (Fig. 4, deposits 153, 154, 197, 197 and 1984), the southern end of trench 4 (Fig. 6, sects 7 and 8, deposits 58, 59, 62 and 64), and the north-western end of drain 1 (Fig. 2, deposits 109, 111 to 114, 119, 120 and 180 to 182) again implied the dumping of soil into adjacent low lying areas. Moderate to high densities of charred cereal waste in some of these contexts (58, 65 and 69) suggested the use of chaff and straw as kindling or fuel for the hearths used in the salt extraction process, with wind-blown debris and deliberately raked-out material becoming incorporated into these soils.

Many of the phase A deposits and features contained varying amounts of pottery, baked clay briquetage, oyster shells and animal bone, with pieces of Early Shell tempered ware in the secondary fill of ditch 132 suggesting either the use of the site during the Late Iron Age period or the presence of activity of this date somewhere nearby. The briquetage assemblage from this period included pieces of fire bar, pan base, and pedestal.

5.2 Phase B: Mid 2nd century (Fig. 8)

A layer of red earth covered much of the saltern and most of the phase A deposits and features (Fig. 2, deposit 84/106/108/110; Fig. 3, deposit 89/96/122; Fig. 4 deposit 129/136/203; Fig. 5, deposit 14; Fig. 6, sect. 9, deposit 57). It consisted of pinkish brown-grey, loose/friable, silt clay with occasional flecks and fragments of baked clay and charcoal and was up to 0.25m thick. It produced few plant macrofossils and was often ash-like in consistency.

Finds from the red earth layer again comprised pieces of pottery, briquetage, baked clay, tile, animal bone and vitrified slag. They also included a whetstone and a rubbing stone for a saddle quern. Identifiable items of briquetage included pieces of pan base, rim and fire bar.

5.3 Phase C: Mid 2nd to mid 3rd century (Fig. 9)

Mid 2nd to mid 3rd century deposits and features comprised stake hole 142, Ditch 167/170, layers 128/155 and 204, and numerous dumps of soil and other material in adjacent low-lying areas. All of the features cut the phase B layer of red-earth.

Ditch 167/170 extended across the south-eastern end of drain 1 and the centre of drain 3 (Figs 2 and 4; Plates 4 and 5). For most of its exposed length it consisted of a steep-sided slot beneath gradually sloping sides, although in section 167 it had a broader and more rounded profile. Tip lines (83 and 85) or dumps (162) of grey ash-like soil and charcoal in both sections suggested that it had been deliberately backfilled. Stake-hole 142, in drain 2, lay above phase A ditch 132 and was long, thin and tapered (Fig. 3).

A tidal deposit (204) of yellowish/greenish brown clay sealed phase A features 171 and 174 towards the north end of drain 3 (Fig. 4), while a thin spread of light grey soil and ash (128/155) lay to the south of ditch 170 (Fig. 4).

Seven deposits near the western end of drain 1 (Fig. 2, deposits 107, 158 to 160, and 177 to 179), thirteen near the southern end of drain 3 (Fig. 4, deposits 94, 97 to 102, 134, 135, 156, and 199 to 201), five within the western two-thirds of trench 2 (Fig 5. sects 4 and 5, deposits 45, 46, 47; Fig. 6, sect. 12, deposits 70 and 71), and thirty-six near the southern end of trench 4 (Figs. 5 and 6, sects, 6, 10 and 11, deposits 13, 18 to 28, 30 to 32, 54, 55 and 58 to 63 (deposits 12, 29, 33 to 41 and 56 not illustrated)) indicated dumping of soil in adjacent low-lying areas. The deposits mainly consisted of greyish brown or brownish grey silt clay with varying amounts of baked clay and charcoal. The exceptions to this consisted of red earth (135, 199 and 201), charcoal (45 and 46), dumps of baked clay fragments (30, 97, 99, 102, 134, 156 and 200), and redeposited tidally-lain silts/ mud (13, 40, 55 and 61).

Ditch 167/170 contained most of the phase C finds and environmental remains, including pig and sheep / goat bones, and the skeleton of a cow or a bull which extended into section 170. Other finds included a whetstone, lumps of septaria and burnt sandstone and briquetage including part of a scoop and fragments of wedge and pedestal. Moderate to high densities of charred cereal waste in both excavated ditch sections and in deposit 60, in the low-lying area of trench 4, implied the continuing use of chaff and straw for kindling or fuel as in phase A. Deposit 158 at the western end of drain 1 contained a large fragment of Late Iron Age triangular loom but this was probably residual as the context overlay deposits containing Roman pottery.

5.4 Phase D: Late 3rd/4th century (Fig. 10)

A layer of dark soil in drain 1 (Fig. 2, deposit 79/105/183), drain 2 (Fig. 3, deposit 82/95/104), drain 3 (Fig. 4, deposit 93/127/133/192/202) and trench 4 (Fig. 5, deposit 208) covered most of the deposits and features of the previous periods.

The layer contained numerous pieces of late 3rd/4th century and earlier pottery, small amounts of briquetage, brick and tile, and vitrified slag. Part of a Venus figurine and a nail cleaner were also present. The layer contained few carbonised macrofossils and is interpreted as an agricultural soil horizon that presumably accumulated or was deliberately laid down after salt production had ceased.

5.5 Phase E: Late 4th century and later

Tidal deposits sealed earlier deposits and features in the western end of drain 2 (Fig. 2, deposit 103), the northern end of drain 3 (Fig. 4, deposit 191), and the whole of trench 2 (Fig. 5, sect. 4, deposits 43 and 44). They contained very few finds and were seemingly deposited after the saltern site had been abandoned, including the later agricultural phase.

6.0 FINDS, by Alan J. Jacobs

The overall artefact assemblage consisted of 4406 items, weighing a total of 66kg. The assemblage consisted primarily of Roman pottery which included 319 definable forms. In addition fragments of late Iron Age pottery, Roman brick and tile, medieval/post medieval brick/tile, briquetage, baked clay, fuel ash slag, stone, glass, pipe clay, iron fragments, a copper alloy Roman coin, animal bone, bird bone, and mollusc shell were recovered. Finds were retrieved from ninety-five contexts. All of the material has been sorted into context and recorded by count and weight. Modern materials have been discarded. The finds are described below and tabulated in Appendix 2.

6.1 Pottery

All fabrics are defined by the Essex County Council Type Series (Going 1987) with additions from the Stansted excavations (Wallace et al 2004, 285-312), unless otherwise stated.

The Roman pottery assemblage consisted of 2765 sherds weighing 35kg. These were divided into fifty-seven fabrics using the ECC type series (Appendix 2). With 319 definable forms, recovered from a total of eighty-three contexts, estimated vessel equivalent was 28.48. These forms date from the Late Iron Age/Early Roman period until the 4th century. No Medieval, post medieval or modern pottery was present.

Contexts yielded groups weighing an average of 428 grams whilst the individual sherd size over all averaged 13g. This is fairly characteristic of red hill sites, with much of the pottery redeposited, burnt and abraded. There were very few conjoining sherds with only two contexts with sherds of the same definable form (contexts 58 and 59). A considerable amount of residual pottery was present in later contexts, particularly grog tempered and black surfaced wares (fabric 53 and 34/45). Whilst the bulk of the pottery could only be assigned a broad Roman date, distinctive forms allow for a good basic phasing of the site. There were also some very distinctive and useful individual groups.

A total of just two contexts contained pottery that would indicate Late Iron Age activity (contexts 138 and 139); these were in the lowest level of ditch 132 and contained Early Shell tempered ware (ESH fabric 50). This fabric was present in the form of a Neckless Jar with a finely moulded rim (G5.1), and could date from the late Iron Age to the end of the 1st century; however, no other specifically Roman fabric was present in these contexts.

The Roman material was dominated by Black Surfaced Ware (BSW, fabric 34/45) which made up 22% of the assemblage by count and 20% by weight. This was present in nearly all contexts from which pottery was recovered, and dated from the mid 1st to the 4th century. A wide range of forms were represented, including neckless jars (G3 and G5 forms), dating from the 1st to early 2nd century. A range of small oval bodied jars were the most common form (G10, G16, G22, G24 and G26) and had a broad date range of 2nd to 4th century. The most common examples were mainly variations of G24 with oval pointed and occasionally undercut beaded rims. Less common forms consisted of bowls or dishes imitating BB1 and BB2 forms (B1, B2 and B4 forms); these fell largely within a date range of 125/30 to 250 AD. A few less-common examples of earlier (A2, A4.6 and B8) and later (B3) forms were also present.

The second most common fabric recovered from Bowers Marsh was Sandy Grey Ware (GRS fabric 47) which made up 16% of the assemblage by count and 14% by weight. This fabric was present in nearly all contexts from which pottery was recovered, and dated from the mid 1st to the 4th century. A wide range of forms were represented, including high shouldered everted rim, neckless jars with flattened D shaped rims and jars with recurved profile and a hooked and beaded rim (G5, G9, G10, G12, G19 and G23 forms), which dated from the 1st to early 2nd century. A range of small oval bodied jars (G24, G25, G27 and G28) were present. These were dominated by versions of G24 with oval pointed and occasionally undercut beaded rims, and had a broad date range of 2nd to 4th century. A number of storage jars (G32, G34, G35, G36 and G45), were also recovered dating from the

3rd to 4th or 4th century. A slightly earlier example of a large high shouldered storage jars, (G45), was dateable to the 2nd to 3rd century.

Slightly less common examples consisted of bowls or dishes imitating BB1 and BB2 forms (B1, B2); these fell largely within a date range of 125/30 to 250 AD. A few less common later examples (B5 and B6 forms) were also present that date from the mid 3rd to the 4th century. Finally a single example of the rim form of a small lid (K2.1/1) was recovered; this had a general Roman date but was in a late 3rd to 4th century context.

The third most common fabric recovered from Bowers Marsh was Grey Fine Ware (GRF fabric 39) which made up 14% of the assemblage by count and 10% by weight. This was present in nearly all contexts from which pottery were recovered, and dated from the mid 1st to the 4th century. A number of forms were present, similar to those for fabric 47, but without such an extensive range. These forms included a round bodied jar with a restricted out turned rim (form G8) dating from the mid to late 1st century, and a number high shouldered neckless jars (form G9) dating from 125/130 AD to 160/170 AD. The bulk of the forms represented in this fabric consisted of a range of small oval bodied jars (G23, G24 and G28). These were once again dominated by versions of G24, with oval pointed and occasionally undercut beaded rims, and had a broad date range of 2nd to 4th century.

Two examples of shallow sided convex bowls (C2.1 and C2.2) were also present, dating from the 1st to early 2nd century. Later examples of globular bowl jar forms (E2) were recovered from a single context (169) and dated from the late 2nd to 4th century. Less common than the jars were examples of bowls or dishes imitating BB1 and BB2 forms (B2); these fell largely within a date range of 125/30 to 250 AD. The most common forms were later examples (B5 and B6 forms) that date from the mid 3rd to the 4th century. Finally two examples of 1st-century globular beakers were recovered from a late 3rd to 4th-century context (H1). These were evidently residual.

The fourth most common fabric recovered from Bowers Marsh were the four Grog tempered wares (GROG, GROGC, GROGRF and GROGRS, fabric 53) which made up 10% of the assemblage by count and 15% by weight. This fabric was present primarily in early contexts, and dated from the Late Iron Age to the end of the 1st century. A limited range of forms were represented, with much of the material residual in later contexts. These forms were predominantly neckless jars (form G3, G4 and G5) dating from the mid to late 1st century. A single example of a squat neckless ledge rimmed jar (form G6.1/1) of similar date was also recovered. Only three other forms were represented in this fabric: a squat almost biconical

jar, (G18) a high shouldered jar with a concave neck and beaded rim (G20, cam 221 or 224) and a large high shouldered storage jar (G44), all dating to the 1st century.

The remaining coarse wares represent much smaller individual elements of the assemblage. Black Burnished ware 1 (BB1) was represented by only a handful of sherds that comprised less than 1% of the assemblage by count and weight. Black Burnished ware 2 (BB2) by comparison comprised 3% of the assemblage by count and 4% by weight. A limited range of forms were present dating from the mid 2nd to the mid 4th century, and comprising mainly bowls or dishes (form B1, B2, B3, B4 and B6). The only other form present was that of the cooking pot (G9), in a number of variations dating from 125/30 to 400 AD although most of the examples were of mid 2nd to mid 3rd century date. This is a distinctive feature of Black Burnished wares, where only a limited range of forms are exported and copied across most of the province.

Rettendon Ware forms were present in only seven contexts (7, 79, 82, 95, 104, 133 and 160) and comprises just 4% of the assemblage by count and 4% by weight. A very narrow range of forms are represented in this fabric, mainly oval bodied jars with oval pointed and occasionally undercut bead rims (G24) and smaller numbers of oval jars with out turned squared off rims (G25, G27 and G30); these date from the late 3rd to the 4th century. A single form (G35) could be clearly dated to the 4th century. Storage Jar fabric (44) was present in just four contexts (42, 48, 79 and 122) and consisted of just 4% of the assemblage by count and 9% by weight. Just three forms were present (G42, G44 and G45) dating from the 3rd to 4th, 2nd to 3rd and 1st to 4th century respectively.

Hadham Wares were present in the form of Hadham Grey wares (fabric HAR), consisting of just 2% of the assemblage by count and 2% by weight. Just three forms in three contexts (14, 83 and 104) were identifiable, that of a dish or bowl with a flange rim (form B5) of 3rd to early 4th century date, a shallow dish with upturned rim (B10) of 2nd to 4th century date and a single jar (G26), with a frilled rim dating to the 3rd to 4th century. Hadham White Slipped oxidised ware (HAW) consisted of less than 1% of the assemblage by both count and weight. Only a single definable form was recovered (Q3), that of a neck sherd of an unguentaria, an unusual form dating from the 1st century. Hadham Oxidised wares (HAX) consisted of just 2% of the assemblage by count and 2% by weight; no clearly definable forms were present. Small amounts of Hadham Black Surface ware (HAB) were also present; only abraded body sherds were recovered and consisted of less the 1% of the assemblage by both count and weight.

A single sherd of Porchester D (PORD) was recovered. This was of mid 3rd to late 4th century date, as well as a single sherd of Silty Ware (SILT), and both consisted of less than 1% of the assemblage by both count and weight. Red miscellaneous wares (RED and REDM, fabric 21) consisted of just 1% of the assemblage by count and 2% by weight. Forms represented included neckless jars (G17) of mid to late 1st century date, jars with a recurved profile and a hooked and beaded rim (G19) of first to mid 2nd century date and a single form of a lid with an s-shaped profile and bifid rim (K3) of a more general Roman date.

A variety of unsourced or miscellaneous fabrics were recovered from site. All consisted of less than 1% of the assemblage by both count and weight (MWSGS, MWSRS, MWSRF, MSR, UWW, BUF and BUFM) and none could be defined to specific forms. Unsourced colour coat (UCC) were present in the single form (H20) of a bag-shaped beaker, dating to 130 to 170 AD.

Mica Dusted Wares (MIC) comprised just 5% of the assemblage by count and 4% by weight. This distinct fabric had several definable forms present, including a platter (form A4.3) dating to the 1st century. Several examples of dishes or bowls were also recovered (B1) dating to the late 1st to early 2nd century, as well as several beaker fragments including one definable form (H3) of a globular beaker.

Other extra regional pottery included North Kent Oxidised Ware (NKO) and North Kent Grey ware (NKG). No forms were identifiable and they consisted of less than 1% of the assemblage by both count and weight.

Colchester wares were represented by three distinct fabrics (COLB, COLBM and COLC), and all comprised less than 1% of the assemblage by count and weight. Colchester Buff ware (COLB) were represented by a single form of a ring necked flagon (J3), dating from the later 1st to 2nd century. Colchester Buff ware mortaria (COLBM) contained a single definable mortaria form (D11) dating to the second half of the 2nd century. Colchester Colour Coat (COLC) lacked any clearly definable form beyond body sherds of small beakers, again dating to the 1st to 2nd century.

Verulamium wares were present in four distinct fabrics (VRW, VRWM, VRB and VRR). All comprised less than 1% of the assemblage by count and weight. Verulamium region white ware (VRW) were represented by a single form of a large bowl with out turned beaded rim (C16.5/1), dating from the early to mid 2nd century. Verulamium region white ware mortaria (VRWM) in a form (D1) dating to the first half of the 2nd century. Verulamium region red ware (VRR) were represented by a single rare form of a beaker with a bifid frilled rim (H17), dating

from to the 2nd century. Verulamium region buff ware (VRB) lacked any clearly definable form beyond body sherds of small beakers.

Nene Valley wares were represented by three distinct fabrics (NVC, NVM and NVP) and all comprised less than 1% of the assemblage by count and weight. Nene Valley colour coated ware (NVC) were represented by a rimless shallow dish and a shallow dish with flared sides (B1 and B2), dating from the later 2nd to mid 3rd century, and a hemispherical bowl imitating a Dragendorff 38 form (C7), dating to the 3rd to 4th century. Nene Valley mortaria (NVM) consisted of a single form (D14) dating from 260 to 360 AD. Finally, Nene Valley Painted ware (NVP) lacked any clearly definable form beyond body sherds of lids or bowls, again dating to the 3rd to 4th century.

Oxford wares were represented by five distinct fabrics (OXRC, OXRCM, OXSWM, OXW and OXWM) all comprised less than 1% of the assemblage by count and weight. The majority of these fabrics were represented merely by body sherds; only Oxford Red colour coat mortaria (OXRCM) has a single definable form represented by that of a mortaria (D12) dating from 240 to 400 AD.

Other non regional pottery included New Forest grey ware (NFG). This fabric dates from the mid 3rd to the end of the 4th century. No forms were identifiable and this fabric consisted of less than 1% of the assemblage by both count and weight.

Imported Mica Dusted Wares (IMIC) comprised less than 1% of the assemblage by count and weight. This distinct fabric had only two definable forms present, a platter or a dish (form A4.3) dating to the 1st century and a carinated beaker (form H10), again of 1st century date. Several examples of dishes or bowls were also recovered (B1) dating to the late 1st to early 2nd century. Other imported pottery included Ceramique a leponge (CEP) and North Gaulish Fine white ware (NGWF); no specific forms were identifiable beyond the body sherds of small vessels that dated to the 1st to 2nd century. Both fabrics consisted of less than 1% of the assemblage by both count and weight.

The only examples of Amphorae recovered consisted of abraded body sherds of South Spanish amphoras (ABAET; Tomber and Dore 1998). These comprised less than 1% of the assemblage by both count and weight, mainly fragments of Dr 20 amphora sherds, dating from the 1st to the 3rd century.

South Gaulish Samian Ware (SGSW) was present in just two forms; three fragments of a Dragendorff 18 (contexts 18, 136 and 186) dish or bowl dating to the mid to late 1st century,

and decorated fragments of a Dragendorff 29 bowl (contexts 79, 129 and 169), one example of which had been riveted (169); all dated to 50 to 85 AD. Almost all of these fragments are residual in later contexts.

Central Gaulish Samian Ware (CGSW) was recovered in five distinct forms, several sherds of a Dragendorff 30 cup or 37 decorated bowl (contexts 73 and 169) and Dragendorff 37 bowl (contexts 43 and 79), dating from 110 to 200 AD. In addition a conical cup or Dragendorff 33 (contexts 95), which dated to the mid to late 2nd century, and fragments of a Dragendorff 36 dish (contexts 44 and 79), of 2nd century date, were recovered. Finally the rim sherd of a bowl, Dragendorff 31R was also recovered (context 127). This dated from 160 to 200 AD.

East Gaulish Samian Ware (EGSW) was identified in just three forms; a fragment of a Dragendorff 30 cup or 37 decorated bowl (contexts 169), a Dragendorff 31/31R dish (contexts 83 and 169), and Dragendorff 33 conical cup (contexts 73 and 79). All dated from the mid 2nd to mid 3rd century.

Discussion

The assemblage consists of a very characteristic collection of fabrics peculiar to low status rural sites. Less than 2% of the assemblage comprises colour coats or Samian ware, low even for a rural site. This very much supports the idea of a functional or seasonal use of this site. The assemblage is dominated by jars with relatively few bowls and dishes and lacks other high status artefacts. There is one potential Late Iron Age feature (ditch 132), but again, as is usual on these sites (Lane and Morris 2001), the early activity is obscured by the later more intensive Roman activity.

The assemblage is much abraded and burnt, whilst displaying clear phasing and activity throughout the Roman period of site use. Early intensive use of the site during the 1st to mid 2nd century is represented by a distinct assemblage of grog tempered wares in association with Black Surfaced, Early Shell tempered and Romano British mica dusted wares. Small amounts of imported mica wares were also present along with some Colchester and Verulamium products.

The mid 2nd century groups are very distinct with a range of forms dating between 125/30 to 150/70 AD. There is a distinct lack of definable late 2nd century forms, in particular the lack of BB1 imitation type 24 flanged bowls with an incised line around the rim (Seager Smith 1993, 235). The following mid 2nd to mid 3rd century sees small amounts of Hadham wares, BB1 and BB2 fabrics and Nene Valley Wares (Perrin 1999). By the late 3rd century

Rettendon Ware (Tildesley 1971) has become a definable element of the coarse wares, with small amounts of Oxford and later Nene, shell tempered and New Forest fabrics. Activity continues into the late 4th century with a few definably late forms, although at a much reduced level; this is very characteristic of low status sites in the later 4th century.

Overall the assemblage is clearly dominated by local coarse ware fabrics; many of these are not provenanced being part of the grey ware or black surfaced ware assemblages. North Kentish and Hadham fabrics are difficult to define and as such probably under represented at sources of pottery supply (Stansbie and Biddulph 2001). Fine wares are initially imported from North Gaul or the Colchester and Verulamium industries before these are overtaken by Nene Valley and Oxford products in the 3rd century (Bidwell 1999). These comprise an unusually limited range of forms.

6.2 Brick and Tile

Relatively small amounts of brick and tile were recovered, comprising only sixty fragments weighing 2528 grams.

Brick fragments were present in only three contexts, with a single fragment of Roman brick being recovered (context 201); this was from a thick slab fragment, although the exact form type was not definable. The rest of the brick fragments were much abraded, of post medieval or modern date (contexts 75 and 104), and too small to be further defined.

Tile was present in a total of seventeen contexts, five of which contained small fragments of roof tile dating from the 13th to 18th centuries (contexts 8, 9, 48, 79 and 133). The bulk of the tile fragments were of Roman date, with small definable fragments of imbrex (contexts 8, 75, 79, 80, 105 and 169) or tegula (context 107); the remaining material consisting of small fragments of unidentifiable spall (contexts 44, 73, 79, 82, 95,104, 105, 110, 122 and 133).

6.3 Salt Briquetage

A medium-sized assemblage of briquetage was recovered relating to salt production and processing in this area. In total, 882 fragments of briquetage were recovered, weighing 11kg. However, the limited area of trenching and later activity on the site has restricted our understanding of deposition. Two distinct phases (A and C) of salt production were definable. Briquetage was also redeposited into later phases through levelling and agricultural activity.

The material was sorted into form types for assessment, due to the size of the group and limitations in the value of fabric identification (Tyrrell in prep.). The typology is based on the work of the Colchester Archaeological Group’s typology of Essex briquetage (Fawn *et al*

1990, 69). This assemblage demonstrates a distinct local character and technology with elements that are not present in salt production in Lincolnshire and Kent (Lane and Morris 2001).

Vessels

The bulk of the briquetage fragments consisted of body or base sherds of large vessels. These fragments were much abraded with many examples burnt and redeposited in later contexts. The average size of the sherds was just 13g. This would indicate that no deposits were found in situ. A total of only 84 fragments (9%) weighing 1.5kg (15%) could be defined to form. These consisted of fragments of piecrust (context 25) or roughly flat knife-trimmed (contexts 57, 122 and 151) rims from large tank-like vessels. Several clearly definable thick base fragments with heavy surface salt staining could be defined (contexts 57, 65 and 89), as well as examples of curved sides (context 158) and corners (context 202) deriving from these distinctive evaporation tanks.

Hearth Furniture

Hearth furniture included just twenty-three identifiable fragments (3%) weighing 1.9kg (17%). Definable forms consisted of end fragments of triangular fire bars (contexts 104, 106, 122 and 154). Complete examples are noted to be rare in Essex (Tyrrell in prep), although this may be due to the lack of extensive modern excavation of red hill sites.

The bases of two pedestals (contexts 169 and 197 - Plate 9, items 1 and 2) were recovered. These were highly fired and salt stained. Several fragments of examples of a small scoop or bowl were also present (contexts 135 and 169 (Plate 9, item 3). These were very coarsely made, heavily burnt and blackened and of irregular diameter. Also present was the head of a pillar with a distinct supporting crest, which was also highly burnt (context 169 - Plate 9, item 4). Two fragments of wedges were recovered (contexts 69 and 168 - Plate 1, item 5), although these represented only one end of the forms. An incomplete fragment of a rod (context 25) and a single example of a pinch prop (context 25) were also present.

6.3 Slag

A total of fifty-three fragments of slag were recovered, weighing 1.7kg. This light material had been very highly fired and some examples were virtually vitrified, a waste product of the furnaces used during salt production (Fawn *et al*, 31). This can leave a very distinct green surface glaze where the salt acts as a flux causing iron particles in the clay to react. This vitrified material came from a total of thirteen contexts (9, 11, 14, 73, 75, 76, 79, 82, 93, 95, 104, 122 and 133), most of which were later levelling layers.

6.4 Baked Clay

A total of 245 fragments of baked-clay, weighing 4kg, was recovered. These consisted almost entirely of fragmented pieces of irregularly fired clay, some of which was disintegrating and in poor condition. Most of the fragments were incidentally fired and as such were possibly from baked surfaces of man-made hollows which had been used as hearths (Atkinson, M. pers. comm.). However, less superficially-made hearths were probably also being used as several examples of rims, 54 to 60mm thick, of clay lined pits also survive. The only variation in this material were fragments of vitrified baked clay (contexts 79, 101 and 104); this highly fired material had a texture similar to the tile, and may represent surviving fragments of hearth lining.

Only a single object of baked clay was recovered; this was the rounded corner of a triangular loom weight (context 158, plate 1 no 6) with a single surviving perforation. The fragment was 110mm in height by 95 mm wide by 42mm in depth; the softly fired fabric was light brown in colour and tempered with chalk. There are no indications of burning on the surfaces, which survive in unabraded condition. The perforation is 10mm in diameter and has been created by pushing a stick through the fabric of the loom weight before it has dried (Poole 1984, 403). This is a long lived type which is difficult to date, but was recovered from a 1st to mid 2nd century context.

6.5 Stone

A variety of stone fragments and objects were recovered, consisting of twenty-four fragments weighing 4.8kg. Small amounts of highly burnt sandstone, lava (contexts 85 and 96), naturally occurring ferruginous sandstone (context 186) and a large squared block of septaria (context 169) in several fragments, were recovered.

Stone objects were present primarily in the form of whetstones (contexts 129, 169 and 205); two examples were of fine sandstone and one of a siltstone. They all showed evidence of considerable use, and except for the mid 2nd century example (context 169), were redeposited in make-up or later agricultural layers. A single example of the rubber for a saddle quern (context 129) was recovered; this was shaped from quartzitic sandstone and the lower surface had seen considerable use.

This small group would support indications of the industrial nature of this site and the limited number of domestic items, the whetstones possibly being used for sharpening tools relating to briquetage or salt production.

6.6 Glass

Only three fragments of glass weighing 27g were recovered. Two of these were modern, a single fragment of late 18th to 19th-century beer bottle (context 14), the other a small fine fragment probably of a 19th century perfume bottle (context 42). The third fragment of possible Roman date (context 85) could equally be of modern date. This is a fragment of handle that does not match standard Roman forms.

6.7 Pipe Clay

A single fragment of a pipe clay figurine was present; this weighed 8g and was 35mm by 27mm in size. The fragment consisted of the rear of a Venus figurine from waist to knees. These Roman figurines are found throughout the Empire (Crummy 1983, 141), and are thought to have been produced in Gaul and possibly the Thames Valley between the 1st and the 3rd century. Within Britain these artefacts are usually found as individual finds rather than in groups as on the continent. These objects have been seen in the past to represent pagan ritual belief.

6.8 Iron

A total of ten fragments of iron weighing 134g were recovered. These consisted primarily of iron staining (contexts 68, 85, 119, 131 and 186), most likely the corroded remains of nails disintegrating in the salt environment. The only clear object was a bent Roman nail cleaner (context 133), which was 5mm in diameter and 55mm long, with one prong tip missing; the decoration unclear. This object is not more closely dateable.

6.9 Copper Alloy

A single copper alloy coin weighing 2g (context 82) was recovered from excavation. The coin is clearly of the 4th century, 20mm in diameter and very heavily corroded. The obverse contains only the vague shape of the head of Gratian? This is defined by the position of the bust, shape of hairstyle, chin, scarf and angle of the ear and nose. None of the legend has survived. The reverse contains a very indistinct figure, possibly of Concordia. Part of the head is visible and a vague form of the body with only a D to the right of the head and V - - G of the lower right hand legend (Reece and James 1986, 145). This, along with the condition and size of the coin, would indicate a date of 378 to 387 AD.

6.10 Faunal Remains

A total of 336 fragments of animal bone weighing 5.4kg was recovered from a total of forty-seven contexts. A single context (169) contained the bulk of the cattle bone, fifty-five pieces weighing 3.5kg. This was the only unabraded material of relatively complete elements, including a cattle atlas and several vertebrae, but also many fragments of heavily butchered

long bone ends. Whilst the overall average fragment size is 16g, without the cattle bone from context 169 this falls to around 6g.

Clearly identified material therefore by percentages consists of cattle 50%, sheep / goat 42% and pig 8%. This compares well with the other Essex red hill sites where a very narrow range of animal bone is present. The very fragmentary nature of the bone recovered which has been heavily butchered limits interpretation of this assemblage. No other animal species were identified from excavation although small mammal and fish bone were present in the environmental samples. The assemblage was dominated by small fragments of butchered long bone, teeth and occasionally vertebrae, indicating a bias in deposition where skull and pelvic bones are under represented. A single pig's tooth ornament was recovered (context 196); this weighed 2g and was 40mm long by 12mm wide by 6mm thick, with a hole drilled in the centre of the tooth.

Bird bone was recovered from only a single context (136) and consisted of two fragments of the end piece of a goose tibia weighing 16g. This was the only bird bone recovered from site and as such is of limited usefulness beyond identifying the presence of this species, and indicating similarities with other red hill sites (Albarella and Mulville 2001).

6.11 Mollusc Shell

A total of twenty-four fragments of mollusc shell weighing 398g was recovered from just five contexts (119, 125, 138, 150 and 154), and consisted primarily of oyster shell fragments. The small amount of material recovered would indicate that shell fish was not a major part of the diet on this site. This is an aspect of Roman rural sites in Essex, where aquatic fauna are not being exploited (Albarella and Mulville 2001).

6.12 Discussion

The pottery assemblage at Bowers Marsh is of a size to merit statistical analysis, which can add significantly to our knowledge of salt production in south Essex during the Roman period. The pottery assemblage displays distinctive patterns of fabric and form that can be used in comparison with other local sites as well as for a functional analysis in relation to salt production. The overall assemblage is dominated by courseware jars, with smaller amounts of dishes and bowls characteristic of rural sites. These are predominantly in local fabrics relating to the low status and peripheral nature of this site. These forms include examples of large storage jars which could conceivable have a function relating to salt distribution or production.

Only very small amounts of Samian Ware, colour coat and fine wares are present in this assemblage, indicating that the site has a functional, possibly seasonal occupation where only material necessary for the immediate needs of the work force is provided. There are only a few unusual sherds of pottery present, but these include indications of riveting of a Samian vessel, a possible fragment of a face pot and a body sherd of an unguentaria. These represent forms that are either valued or have a religious significance. With the fragment of Venus figurine this could relate to a small shrine or personal religious belief. The wide range of fabrics imported does, however, reflect the access to markets available in Essex during the Roman period, again reinforcing the lack of higher status items recovered on this site.

The lack of modern professional excavation on red hill sites in Essex has limited our understanding of regional variation in the technology and economics of salt production in comparison to other sites across Roman Britain. The modest briquetage assemblage at Bowers Marsh is considerably abraded with a sherd size of only 13g compared to 33g at Elms Farm (Tyrrell in prep). This reflects the differences in production and later reprocessing of salt in this region. The site also has a distinctive fabric and possibly differing tank forms when compared with sites to the north along the Essex coast (Atkinson, M. pers. comm.). Other elements of the assemblage include coarse briquetage scoops or bowls, distinctive smaller vessels not seemingly present further north.

The excavation uncovered features representing levelling and later agricultural activity between or following periods of salt production. This compares well with industrial sites elsewhere in Britain. These often have a seasonal or specialist nature and are characterised by large amounts of pottery but lacking in more permanent structures with distinct phasing or movements of activity over time. The lack of any structures and only minuscule amounts of abraded brick and tile emphasize the ephemeral nature of these sites and their continuity from a local Late Iron Age briquetage technology.

Stone has not been used as a building material here, where it has been recovered it seems to have had only an accidental presence, possibly being incorporated into small structures, such as hearths or ovens. The much worn whetstones may however be significant, either for sharpening tools needed to form and shape the briquetage vessels or for domestic butchery of the animal bone recovered from site. The very broken and butchered animal bone assemblage would indicate secondary food production on site with a limited range of individual bone types supporting the jointing of meat elsewhere. These are dominated by broken up long bones, split for marrow extraction, limited amounts of jaw bone and lots of teeth. Relatively few vertebrae or ribs were recovered, nearly all of which were recovered from a single context. The narrow range of the diet at Bowers Marsh, with an assemblage

dominated by sheep and cattle bones with lesser amounts of pig again supports the specialist function of this site where secondary hunting or food gathering is not being undertaken. The abraded nature of the animal bone limits further interpretation.

The lack of domestic items is very noticeable, only a loom weight, a coin, several possible nails and the rubber from a quern were recovered, that would fall into this category. Although of significance the low numbers of these items are indicative of a non (permanent) occupational use of the site. Personal items in the form of the nail cleaner and bone ornament may represent casual losses rather than deliberate disposal. This artefact group therefore represents a rare opportunity to further define the nature of these ephemeral salt production sites, and to define their relationship to the rural society and economy of Essex during the Roman period.

7.0 CHARRED PLANT MACROFOSSILS AND OTHER REMAINS, by Val Fryer

Excavations at Bowers Marsh, undertaken by the Essex County Council Field Archaeology Unit, recorded layers and features associated with a Late Iron Age to Roman ‘red hill’ or salt extraction site. Samples for the retrieval of the plant macrofossil assemblages were taken from features recorded within two of the excavation trenches (2 and 4) and from three drains (1, 2 and 3), which were dug in advance of development, and a total of twenty-seven were submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. Although de-watered macrofossils were noted within two assemblages (samples 3 (context 62, trench 4) and 24 (ditch 132, drain 2), all were robust and both flots were air-dried to facilitate sorting and subsequent storage. All dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Appendix 3. Nomenclature within the tables follows Stace (1997). With the exception of the above-mentioned de-watered remains, which are denoted within the table by a lower case ‘w’ suffix, all plant macrofossils were charred.

The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. Any artefacts/ecofacts were retained for further specialist analysis.

7.1 Results

Cereal grains/chaff and seeds of common weeds, wetland plants and halophyte species were present at varying densities within all twenty-seven assemblages. Preservation was generally quite good, although some grains were puffed and distorted, probably as a result of combustion at very high temperatures.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded, mostly as single specimens within an assemblage. Wheat occurred most frequently, with the majority of the grains being of an elongated 'drop' form typical of spelt (*T. spelta*). Spelt chaff (most particularly glume bases) was present within all but one sample, and was common or abundant within seven assemblages. Bread wheat (*T. aestivum/compactum*) type rachis nodes were only noted within the assemblages from samples 9 and 10 from cut-feature 167 (drain 1). Barley grains/chaff occurred relatively infrequently, although rachis nodes were moderately common within fill 91 of cut-feature 167. Possible asymmetrical lateral grains of six-row barley (*H. vulgare*) were noted within the assemblages from samples 10, 25 (feature 171, drain 3) and 29 (layer 162, drain 3). Only one oat floret base was recorded (from sample 10), and as this did not retain an intact basal abscission scar, it was not possible to determine whether a wild or cultivated variety was present. The assemblages from samples 1 (layer 58, trench 4) and 29 contained high densities of 'silica skeletons' of indeterminate cereal awn.

Weed seeds were present throughout, although mostly at a very low density. Most were of common grassland herbs, although occasional segetal weeds were also recorded. Taxa noted included orache (*Atriplex* sp.), brome (*Bromus* sp.), black bindweed (*Fallopia convolvulus*), grasses (Poaceae), knotgrass (*Polygonum aviculare*), buttercup (*Ranunculus* sp.), dock (*Rumex* sp.) and vetch/vetchling (*Vicia/Lathyrus* sp.). Wetland plants occurred infrequently, although sedge (*Carex* sp.) and bur-reed (*Sparganium* sp.) nutlets were noted along with a number of entire rush (*Juncus* sp.) capsules/seed heads. Halophyte species, which were more common within the assemblages from drains 2 and 3, included sea plantain (*Plantago maritima*), sea beet (*Suaeda maritima*) and sea arrow-grass (*Triglochin maritima*). Tree/shrub macrofossils were scarce, but did include charred and de-watered fragments of hazel (*Corylus avellana*) nutshell, de-watered seeds of apple/pear (*Malus/Pyrus* sp.) type and bramble (*Rubus* sect. *Glandulosus*) 'pips'. Charcoal/charred wood fragments and pieces of charred root or stem were present throughout, and other plant macrofossils included indeterminate buds, culm nodes, inflorescence fragments and moss fronds.

The fragments of black porous and tarry material and the siliceous/vitreous globules, which were noted within a number of the assemblages studied, were probable residues of the

combustion of organic remains (including cereal grains and straw/grass) at very high temperatures. Other remains occurred less frequently, but did include fragments of bone, pellets of burnt or fired clay and white/buff mineral concretions. A burnt shell of the brackish water snail *Hydrobia ulvae* was noted within the assemblage from sample 2 (context 60, trench 4).

7.2 Discussion

For the purposes of this discussion, the assemblages have been divided by the trench or drain from which the samples were taken.

Trench 4 (Table 1)

Four samples were taken from layers noted within trench 4. Although small (<0.1 litres in volume), the assemblages from samples 1 (context 58) and 2 (context 60) both contain moderate to high densities of charred cereal processing waste including grains, chaff and weed seeds. Although processing waste was commonly used as a temper for the briquettage furniture used in the salt making processes (*cf*. examples from the Hullbridge Survey, Murphy and Wilkinson 1995), the fact that the current material is charred would suggest that it had most likely been used as kindling or fuel within the evaporating hearths. The presence of silica 'skeletons' within both assemblages suggests that this material had been burnt within high temperature fires with a good supply of air, conditions which result in the total loss of carbon from the macrofossils, leaving only skeletons of silica. Charcoal/charred wood is also relatively abundant, although both assemblages also contain very high densities of indeterminate root/stem fragments as well as buds, culm nodes and florets, possibly indicating that hedge brush and straw were also used as fuel or kindling along with wood/charcoal. The presence of a burnt shell of a brackish water mollusc along with seeds of halophyte plants may indicate that some materials from the nearby salt marsh were also being imported as fuel, although it should be stressed that these remains are very scarce, and may be coincidental within the assemblages.

The de-watered macrofossils within sample 3 (context 62) are almost certainly largely derived from plants growing within the near vicinity. The composition of the assemblage suggests that the local habitat comprised rough grassland, although a small number of annual weeds may have been growing on areas of disturbed soil.

The assemblage from sample 4 (context 57) is very sparse, although the presence of both siliceous and vitreous globules may indicate that the few remains recorded are again derived from the waste products of a very intense fire.

Trench 2 (Table 2)

The three assemblages from layers within trench 2 are broadly similar to those from trench 4, although a more restricted range of material is present. Cereal processing waste is present throughout, along with a moderate density of charcoal/charred wood and root/stem fragments, and high temperature combustion is again indicated. Small pellets of burnt or fired clay are common throughout, and it is assumed that all are derived from materials used within the salt making processes.

Drain 1 (Table 3)

Seven samples were taken, three from discrete layers (samples 8, 19 and 28) and four from fills within cut-feature 167 (samples 9 – 12). Samples 8 (context 79) and 19 (context 113) again appear to contain a very low density of charred cereal processing waste, and the assemblage from sample 19 also includes a high density of burnt or fired clay fragments.

The de-watered assemblage from sample 28 (context 182) is very sparse but, like the assemblage from sample 3 (see above), does contain occasional seeds of grassland herbs and both segetal and ruderal weeds. Whilst the apple/pear seed and the bramble pips may be indicative of nearby trees/scrub, it is, perhaps most likely that both are derived from 'snacks' eaten by those involved in the salt making.

Two of the cut-feature 167 assemblages (samples 9 and 10) are relatively large (at 0.5 and 0.2 litres in volume), possibly suggesting that they are derived from materials, which were deliberately dumped within the feature. Both contain very high densities of cereal processing waste, with sample 10 being of especial note because of the high density of barley chaff. Barley is very well suited to production on maritime influenced soils in coastal areas and it is, therefore, most likely that these are the remains of a locally grown crop. However, the wheat chaff, which is also abundant within these assemblages and that from sample 11, is more likely to have come from crops grown elsewhere (wheat being less tolerant of soil salinity), with only the chaff being imported to the site for use as fuel. The assemblage from sample 12, from the secondary fill of the cut-feature, is very sparse, although it does still contain some processing waste, weed seeds and charcoal/charred wood.

Drain 2 (Table 4)

The seven samples are all from discrete layers or fills within ditch 132. The assemblages from the layers (samples 13, 14, 18 and 21) all appear to contain low to moderate densities of cereal processing waste and other debris from the salt making processes. Similar material may also be present within the ditch fills (samples 20, 23 and 24), although these

assemblages are mostly small and sparse. However, sample 23 (context 125) contains a very high density of charcoal fragments and pieces of burnt or fired clay, possibly indicating material derived from a hearth or similar context, which was subsequently deposited within the fill of the ditch.

Drain 3 (Table 4)

The four layers from drain 3 (samples 15, 16, 17 and 29) all appear to contain some cereal processing waste, with material being particularly abundant within the assemblage from layer 162. Other contexts sampled within drain 3 include feature 171 (sample 25) and ditch 170 (sample 26), both of which also contain a low to moderate density of chaff, weed seeds and charcoal/charred wood.

7.3 Conclusions

In summary, although the assemblages are generally very small (the majority being 0.1 litres in volume or less), most contain some cereal processing waste, with spelt chaff being particularly abundant. Similar assemblages have been noted at other 'red hills' studied during the Hullbridge Survey (Wilkinson and Murphy 1995) and at saltern sites excavated as part of the Fenland Survey (Lane and Morris 2001), and it is generally assumed that much of this material was imported to the sites for use as temper or, as at Bowers Marsh, as fuel. At the current site, it would appear that very little of this material was systematically buried after combustion; rather, it seems most likely that it was randomly dumped across the entire area, where it was further dispersed by subsequent activity or by the wind, thereby becoming accidentally incorporated within most of the excavated features.

8.0 CONCLUSIONS

The evaluation and excavation works have shown that the remains of the western part of a Roman salt-producing site or saltern underlie the new car park site. The saltern probably sat on a naturally occurring area of high ground, *c*. 1.5m to 2m above modern day mean sea level, and is likely to have been surrounded by a network of depressions and creeks. The dating and stratigraphic evidence suggest that it was in use from the 1st to the mid to late 3rd centuries AD (Phases A to C), but was subject to a short period of disuse or reorganisation during the mid 2nd-century (Phase B). The sherds of Late Iron Age pottery from the basal fills of ditch 132 in drain 2 and the Iron Age loomweight from phase C deposit 158 in drain 1 possibly indicate that it developed from a Late Iron Age predecessor, although no other evidence has been found to support this and it may be that this material is derived from a nearby settlement site of that date. Later events in the history of the site were its site for

agriculture/ cultivation during the late 3rd/4th century (Phase D) and a subsequent build up of tidal deposits around some of its edges (Phase E), presumably either once the site had been abandoned or as a contributory factor leading to its abandonment.

The evidence for salt extraction during phases A to C comprises a layer of red earth, effectively the burnt/ heat affected soil derived from around the hearths used to evaporate the brine, numerous briquetage artefacts related to the actual process of salt extraction itself and a series of cut features representing channels or creeks, storage pits and possible structural/ building remains. Within this, ditches 132 and 167/170 were probably channels for the collecting and storing of seawater during and after high tides, while pits 116, 144, 171 and 190 were containers and/ or settling tanks for the storing of brine prior to it being transferred to the evaporating pans. Stake-hole 142 and post-holes 118, 147, 174 and 190 are likely to be fragments of small timber structures, perhaps workshops, storage sheds or fence lines and wind breaks, the latter of which would have be used to shelter the hearths from the prevailing wind. Gully 130 is either a small drain or a foundation trench for the wall of a building.

No actual hearths for the heating of the brine were encountered during the archaeological work, although this is almost certainly due to the narrowness of the drain runs that were excavated as the pieces of baked clay and briquetage, lumps of vitrified slag, and the abundant charred cereal waste seemingly used for kindling and fuel point to their presence. Roman saltern hearths within Essex typically consisted of a fire on a flat surface or within a large shallow scoop, although hearths consisting of fires enclosed within oven-like structures were also used (Fawn et al 1990, 21-25). The pedestals and fire bars in the briquetage assemblage suggest use of the former rather than the latter, as they would have been used to support vessels containing brine above open fires. Pieces of baked soil are present within the baked clay assemblage and are probably the product of open fires, while the red soil layers noted above almost certainly derives from the less-heavily burnt areas immediately surrounding the hearths.

The phase A and C dumps of soil in the low-lying areas are probably spoil arising from the digging of features such as the pits and ditches and psotsholes, which was then dumped into convenient low-lying areas both as a means of raising ground levels and as a convenient place of disposal. The waste material from the salt extraction process, perhaps a combination of ash and charcoal from the hearths, and mud scraped from the bottoms of seawater/brine storage features and vessels was also clearly disposed of in a similar way.

The make up of the finds assemblage suggests that the investigated area was primarily a low-status, functional site for seasonal use, with occasional small-scale domestic activities occurring. The evidence for this functional use comprises a low occurrence of domestic items against a high occurrence of briquetage vessels/furniture and numerous fragments of baked clay from hearth floors, while most of the pottery consisted of local coarse ware storage jars. It is conjectured that the jars were used to transfer brine from ditches to pits or settling tanks and from pits to briquetage vessels, principally evaporating pans. The evidence for the site's low status is further reinforced by a paucity of samian and colour coat wares, and a dearth of coins and items of jewellery or other personal effects. The fragment of Venus figurine is possibly from a child's toy or from a work place/domestic shrine. Animal bone, a saddle quern rubber (for the grinding of corn) and other food remains including hazel nutshells, apple/pear seeds and bramble pips, coupled with a small number of bowls and dishes in the pottery assemblage imply the consumption and preparation of food locally, and it is possible that much of the food was eaten as snacks during breaks from work or was alternatively domestic rubbish that was dumped into the marshland network of creeks from a nearby settlement.

The plant macrofossil assemblage suggests that although the saltern was sited near wetland and halophyte species, much of the adjacent environment consisted of weedy grassland with few trees and shrubs, most likely reflecting use of mature marsh for grazing. The plant macrofossils mainly comprise cereal waste, perhaps indicating that the high ground above the dryland/wetland edge was also being used for the growing of crops. The cereal waste includes barley and this is apposite as it is well-suited to production on maritime-influenced soils.

The layer of silt clay comprising phase D is both uniform and extensive and is conjectured to represent use of the site for cultivation during or after the late 3rd/4th century. If this is correct then ploughing or hand digging has possibly destroyed and/or truncated the saltern's latest deposits and features. The finds assemblage contains few exclusively late 4th-century finds and it is possible that the area had gone completely out of use by that period. The tidal deposits surrounding the saltern, including those of phase E, imply continuing silting up of the surrounding creeks and depressions during and after the use of the saltern, perhaps due to rising sea levels or to changes in the form of the local topography.

The earthworks in the field labelled 'Old Saltings' and the finds and red earth deposits that were found during the construction of Canvey Way bridge potentially represent further salterns similar to that at the new car park site. Lidar survey suggests that all three sites were sited close to the dryland / wetland edge, thereby enabling them to access seawater and stay

relatively dry at the same time (Fig. 11). It also suggests that the car park saltern was sited at the tail end of a creek, part of which still exists in the form of a large drain.

The siting of salterns alongside creeks close to the dryland/wetland edge and use of the waste, baked red earth as levelling layers were standard practice and are further evidenced at Stanford-le-Hope and other saltern sites, including examples at Hullbridge (Foreman 2009; Wilkinson and Murphy 1995, 166-195). Other factors the car park site and Stanford-le-Hope have in common are large ditches to channel seawater, the use of pits to store brine and the presence of timber structures. However, by contrast to Stanford-le-Hope the investigation of the car park site has revealed no in situ hearths, although this is probably due to the small size of the excavation area, as there is plenty of indirect evidence for their former existence. It is suggested that the form and appearance of the car park saltern was closer to the early Roman salterns of Stanford-le-Hope than it was to the late Roman example as it has produced no in situ masonry structures and very few pieces of Roman brick and tile. However, the early Roman salterns at Stanford-le-Hope have produced comparatively small amounts of Roman pottery in comparison to the Bowers Marsh example, the reasons for which remain unknown.

9.0 ASSESSMENT OF RESULTS

The new visitor car park contains part of a Roman saltern which was in use during the 1st to late 3rd/4th centuries AD. The remains of the saltern continue to the east and further remains are likely to be present beyond the eastern boundary of the car park and underneath Great Mussels Farm, which may have been deliberately sited on an area of higher ground provided by a group of saltern mounds. Elsewhere within Bowers Marsh further salterns are seemingly represented by the Roman remains discovered at Canvey Way bridge and the standing earthworks in the field known as ‘The Old Saltings’. The results of a lidar survey suggest that at Bowers Marsh the favoured location for salterns was on the dryland/wetland edge at the *c*. 2m contour line and other as yet unknown salterns are potentially present within that transitional area.

The site was finds-rich, but produced few waterlogged contexts, with the exception of the deepest features, probably indicating that it has dried out in the past. The build up of archaeological deposits over the original ‘island’ of raised ground stands at *c*. 0.5m high and the latest deposits, daring from the late 3rd/4th century onwards, with only c. 0.3m overlying them, have probably been turned over by cultivation and ploughing.

The Roman pottery assemblage is of sufficient quality to compare with those of other Roman rural, urban, domestic and industrial sites and thereby obtain an enhanced understanding of patterns of supply and consumption in a regional context, while the briquetage assemblage is likewise of sufficient quality for technological comparison with other saltern sites.

The excavation has produced an important plant macrofossil assemblage, with a number of deposits producing material of sufficient quality and quantity for quantification. Comparatively little work has been carried out on the plant macrofossils of 'red hills' and further work on those of Bowers Marsh may enable a greater understanding of the saltern's local environment and Roman resource management.

Further analyses of the results of the excavation are likely to contribute towards the regional research framework objectives. In particular, the development of industrial production, including Iron Age and Roman salt extraction and the subsequent use of saltern sites, has been identified as an important area for further investigation and research by *Research and Archaeology: a Framework for the Eastern Counties* (Brown and Glazebrook 2000, 17 and 22). Publication of the results will make the information obtained more-easily accessible and open to a wider audience.

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APPENDIX 1: CONTEXT DATA

No	Area	Type	Description	Date
1	Tr. 1	Topsoil	Greyish brown firm silt clay with very infrequent gravel. Above 2	Modern
2	Tr. 1	Layer	Brownish yellow plastic silt clay with very infrequent pieces of baked clay. Below 1	Roman+
3	Tr. 3	Topsoil	Greyish brown firm silt clay with very infrequent gravel. Above 6	Modern
4	Tr. 3	Layer	Brownish yellow firm/plastic silt clay. Below 5	Undated
5	Tr. 3	Layer	Same as 6	Undated
6	Tr. 3	Layer	Brownish grey form silt clay with very infrequent gravel	Undated
7	Tr. 3	Artefacts	Unstratified surface finds from trench 3	
8	Tr. 4	Artefacts	Unstratified surface finds from southern half of trench 4	
9	Tr. 4	Artefacts	Unstratified surface finds from northern half of trench 4	
10	Tr. 4	Artefacts	Unstratified surface finds from northern tip of trench 4	
11	Tr. 4	Artefacts	Unstratified surface finds from trench 4	
12	Tr. 4	Layer	Dark brownish grey friable silt clay with very infrequent gravel, occasional flecks and pieces of baked clay, and infrequent flecks of charcoal	M2C-M3C
13	Tr. 4	Layer	Brownish yellow plastic/firm silt clay with infrequent small pieces of baked clay. Above 63. Below 24, 27, 33, 56 and 60	M2-M3C
14	Tr. 4	Layer	Dark brownish grey firm silt clay with very infrequent gravel and occasional flecks and small pieces of baked clay. Above 15 and 16. Below 18 and 21	M2C
15	Tr. 4	Layer	Dark brownish grey silt clay with pale brown silt clay mottles, very infrequent gravel and occasional flecks and pieces of baked clay. Same as 14	M2C
16	Tr. 4	Layer	Dark brownish grey loose silt clay. Same as 14	M2C
17	Tr. 4	Layer	Dark brownish grey friable silt clay with abundant small pieces of baked clay	M2-M3C
18	Tr. 4	Layer	Dark brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Above 14 and 20	M2C-M3C
19	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and frequent flecks and pieces of baked clay. Below 208. Above 21	M2C-M3C
20	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Below 18 and 21	M2C-M3C
21	Tr. 4	Layer	Dark brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Above 14 and 20. Below 19 and 22. Above 20	M2C-M3C

No	Area	Type	Description	Date
22	Tr. 4	Layer	Brownish grey friable silt clay with frequent flecks and pieces of baked clay. Above 21 and 23. Below 208	M2C-M3C
23	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Above 24. Below 22. Above 24	M2C-M3C
24	Tr. 4	Layer	Very dark brownish grey friable silt clay with infrequent flecks and pieces of baked clay. Above 13. Below 23	M2C-M3C
25	Tr. 4	Layer	Dark brownish grey friable silt clay with very infrequent gravel. Above 33, 56 and 61. Below 34 and 55	M2C-M3C
26	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and frequent flecks and pieces of baked clay. Above 27. Below 28	M2C-M3C
27	Tr. 4	Layer	Dark brownish grey friable silt clay with infrequent small flecks and pieces of baked clay. Above 13. Below 26	M2C-M3C
28	Tr. 4	Layer	Brownish grey friable silt clay with infrequent gravel and infrequent flecks and pieces of baked clay. Above 26. Below 29	M2C-M3C
29	Tr. 4	Layer	Dark brownish grey friable silt clay with infrequent flecks and pieces of baked clay and infrequent flecks of charcoal. Above 28. Below 30	M2C-M3C
30	Tr. 4	Layer	Brownish grey friable silt clay with frequent flecks and pieces of baked clay. Above 29. Below 31	M2C-M3C
31	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Above 30. Below 32	M2C-M3C
32	Tr. 4	Layer	Brownish grey friable silt clay with infrequent brownish white flecks and infrequent flecks and pieces of baked clay. Above 31	M2C-M3C
33	Tr. 4	Layer	Brownish grey friable silt sand with very infrequent gravel and frequent flecks and pieces of baked clay. Above 13. Below 25	M2C-M3C
34	Tr. 4	Layer	Dark greyish brown friable silt clay with infrequent flecks and pieces of baked clay. Above 25 Below 35	M2C-M3C
35	Tr. 4	Layer	Brownish grey friable silt clay with infrequent gravel and infrequent flecks and pieces of baked clay. Above 34. Below 36 and 38	M2C-M3C
36	Tr. 4	Layer	Mixed deposit of dark brownish grey and grey silt clay with infrequent flecks and pieces of baked clay. Above 35. Below 37 and 41	M2C-M3C
37	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay. Above 36 and 40, Below 208	M2C-M3C
38	Tr. 4	Layer	Dark brownish grey friable silt clay with infrequent flecks and pieces of baked clay. Above 35. Below 39 and 40	M2C-M3C
39	Tr. 4	Layer	Brownish grey friable silt clay with occasional flecks of baked clay. Above 38. Below 41	M2C-M3C

No	Area	Type	Description	Date
40	Tr. 4	Layer	Brownish yellow firm/plastic silt clay with infrequent flecks of charcoal. Above 38. Below 37 and 41	M2C-M3C
41	Tr. 4	Layer	Dark brownish grey friable silt clay with infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Above 36, 39 and 40	M2C-M3C
42	Tr. 2	Artefacts	Unstratified finds from stripped surface of trench 2	
43	Tr. 2	Layer	Orange brown firm silt clay with infrequent gravel. Above 44	L4C+
44	Tr. 2	Layer	Bluish grey firm silt clay with infrequent gravel with occasional flecks and pieces of baked clay. Above 45, 49 and 50. Below 43	L4C+
45	Tr. 2	Layer	Dark grey firm silt clay with frequent flecks of charcoal. Above 46. Below 44	M2C-M3C
46	Tr. 2	Layer	Black silt clay with frequent flecks and pieces of charcoal. Above 47. Below 45	M2C-M3C
47	Tr. 2	Layer	Dark brown grey firm silt clay with frequent flecks of charcoal. Above 53. Below 46	1C-M2C
48	Tr. 2	Layer	Grey firm silt clay. Uncertain stratigraphic relationship with layer 44	L3/4C+
49	Tr. 2	Layer	Dark brownish grey firm/plastic silt clay with very infrequent gravel, occasional flecks of charcoal and infrequent pieces of baked clay. Above 70. Below 44	M2C-M3C
50	Tr. 2	Layer	Brownish grey friable silt clay with occasional flecks and pieces of baked clay. Below 44	1C-M2C
51	Tr. 2	Layer	Dark brownish grey friable silt clay with pale brown mottles and occasional flecks and pieces of charcoal and baked clay	1C-M2C
52	Tr. 2	Layer	Brownish yellow firm/plastic silt clay	1C-M2C
53	Tr. 2	Layer	Light orange brown firm silt clay with flecks of charcoal. Below 47	1C-M2C
54	Tr. 4	Layer	Brownish grey friable silt clay with very infrequent gravel, occasional flecks and pieces of baked clay and infrequent flecks of charcoal. Above 55	M2C-M3C
55	Tr. 4	Layer	Brownish yellow plastic silt clay with infrequent flecks of charcoal. Above 25. Below 54	M2C-M3C
56	Tr. 4	Layer	Dark brownish yellow hard silt clay with occasional pieces of baked clay and infrequent small pieces of charcoal. Above 13. Below 25	M2C-M3C
57	Tr. 4	Layer	Very dark grey friable silt clay with occasional gravel, infrequent flecks of charcoal and frequent flecks and pieces of baked clay, Same as 14	M2C
58	Tr. 4	Layer	Dark brownish grey friable/loose silt clay with very infrequent gravel, infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Above 59. Below 63	1C-M2C

No	Area	Type	Description	Date
59	Tr. 4	Layer	Brownish grey plastic silt clay with occasional flecks of charcoal. Above 62. Below 58	1C-M2C
60	Tr. 4	Layer	Dark greyish brown friable/soft silt clay with very infrequent gravel, infrequent flecks and pieces of baked clay and infrequent flecks and pieces of charcoal. Above 13. Below 61	M2-M3C
61	Tr. 4	Layer	Brownish yellow plastic silt clay with occasional flecks of charcoal. Above 60. Below 25	M2C-M3C
62	Tr. 4	Layer	Brownish yellow plastic silt clay with grey streaks and infrequent flecks of charcoal. Above 64. Below 59	1C-M2C
63	Tr. 4	Layer	Pale brownish grey plastic silt clay with infrequent flecks of baked clay and occasional flecks of charcoal. Above 58. Below 13	M2C-M3C
64	Tr. 4	Layer	Brownish yellow plastic/sticky silt clay with one very large flint nodule and infrequent flecks of charcoal. Below 62	1C-M2C
65	Tr. 2	Layer	Dark greyish brown friable silt clay with occasional gravel, infrequent flecks of charcoal and occasional flecks and pieces of baked clay. Above 66	1C-M2C
66	Tr. 2	Layer	Light orange brown plastic clay with very infrequent flecks of charcoal. Above 67. Below 65	1C-M2C
67	Tr. 2	Layer	Very dark greyish brown friable silt clay with infrequent gravel and infrequent flecks and pieces of charcoal and baked clay. Above 68. Below 66	1C-M2C
68	Tr. 2	Layer	Dark orange brown firm silt clay with occasional flecks of charcoal and flecks and pieces of baked clay. Above 69. Below 67	1C-M2C
69	Tr. 2	Layer	Light greyish brown plastic/sticky silt clay with frequent flecks of charcoal and baked clay. Below 68	1C-M2C
70	Tr. 2	Layer	Greenish grey firm/plastic silt clay with infrequent flecks and pieces of charcoal and baked clay. Above 71. Below 49	M2C-M3C
71	Tr. 2	Layer	Brownish grey firm/plastic silt clay with very infrequent gravel and infrequent flecks of charcoal and baked clay. Above 72. Below 70	M2C-M3C
72	Tr. 2	Layer	Brownish yellow firm/plastic silt clay with infrequent flecks and pieces of charcoal and baked clay. Below 71	1C-M2C
73	TP 2	Layer	Dark brownish grey firm silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay	Undated
74	TP 3	Layer	Brownish grey firm silt clay with very infrequent stones	Undated
75	TP 5	Layer	Dark brown/grey/black friable silt clay with very infrequent gravel and infrequent flecks and pieces of baked clay	Undated
76	TP 1	Layer	Dark brown/grey/black friable silt clay with very infrequent gravel and infrequent pieces of baked clay	Undated
79	Dr. 1	Layer	Dark grey firm silt clay with occasional gravel, infrequent flecks of charcoal and frequent flecks of baked clay. Probably same as 105 and 183. Above 85	L3C-4C

No	Area	Type	Description	Date
80	Dr. 1	Layer	Same as 79	L3C-4C
82	Dr. 2	Layer	Dark brownish grey firm silt clay with very infrequent gravel and occasional flecks and pieces of baked clay. Probably same as 95 and 104. Above 143. Below 103	L3C-4C
83	Dr. 1	Fill	Dark brown friable silt clay with light grey lenses and an 'ash-like' appearance. Contains occasional flecks of charcoal. Third fill of cut-feature 167. Above 86. Below 91	M2C-M3C
84	Dr. 1	Layer	Mottled pink/dark grey friable silt clay with frequent flecks and pieces of baked clay. Probably same as 110, 108 and 106. Above 87. Below 167	M2C
85	Dr. 1	Fill	Mixed deposit of light grey, orange brown and greyish brown silt clay with an 'ash-like' appearance. Contains frequent flecks of charcoal and frequent flecks and pieces of baked clay. Latest fill of cut-feature 167. Above 91. Below 79	M2C-M3C
86	Dr. 1	Fill	Brownish yellow friable silt clay with occasional flecks of charcoal. Secondary fill of cut-feature 167. Above 157. Below 83	M2C-M3C
87	Dr. 1	Layer	Greenish/brown firm clay. Below 84	Undated
88	Dr. 1	Layer	Repeat number for 87	Undated
89	Dr. 2	Layer	Mixed deposit of dark greyish brown and brownish yellow friable silt clay with very infrequent gravel, infrequent flecks and pieces of charcoal and occasional flecks and pieces of baked clay. Probably same as 96 and 122. Above 90 and 123. Below 142	M2C
90	Dr. 2	Layer	Brownish orange firm silt clay with abundant pieces of baked clay/baked clay. Below 89	1C-M2C
91	Dr. 1	Fill	Dark grey friable silt clay with frequent flecks of charcoal. Fourth fill of cut-feature 167. Above 83 and 168. Below 85	M2C-M3C
92	Dr. 2	Layer	Brownish yellow firm silt clay with infrequent flecks of charcoal. Below 132	Undated
93	Dr. 3	Layer	Dark greyish brown firm silt clay with very infrequent gravel, infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Probably same as 192. 127. 133 and 202. Above 97	L3C-4C
94	Dr. 3	Layer	Brownish grey friable silt clay with very infrequent gravel, infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Above 98. Below 97	M2C-M3C
95	Dr. 2	Layer	Dark grey firm silt clay with occasional flecks and pieces of charcoal and baked clay. Probably same as 82 and 104. Above 143. Below 103	L3C-4C
96	Dr. 2	Layer	Pinkish grey friable silt clay with 'ash-like' appearance. Contains occasional flecks and pieces of charcoal. Probably same as 89 and 122. Above 123. Below 142	M2C
97	Dr. 3	Layer	Dump of baked clay fragments. Above 94. Below 93	M2C-M3C
98	Dr. 3	Layer	Light brownish grey friable silt clay with very infrequent gravel, infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Above 99. Below 94	M2C-M3C

No	Area	Type	Description	Date
99	Dr. 3	Layer	Dump of baked clay fragments. Above 100. Below 98	M2C-M3C
100	Dr. 3	Layer	Greyish brown friable silt clay with very infrequent gravel, infrequent flecks of charcoal and infrequent flecks and pieces of baked clay. Above 101. Below 99. Contains 102	M2C-M3C
101	Dr. 3	Layer	Light brownish grey friable silt clay with very infrequent gravel, frequent flecks and pieces of charcoal and infrequent flecks and pieces of baked clay. Possibly same as 196. Below 100	M2C-M3C
102	Dr. 3	Layer	Dump of baked clay fragments. Within 100	M2C-M3C
103	Dr. 2	Layer	Brownish grey firm silt clay with occasional flecks of baked clay. Above 82/95/104	L4C+
104	Dr. 2	Layer	Dark brownish grey firm silt clay with very infrequent gravel, infrequent flecks of charcoal and occasional flecks and pieces of baked clay. Probably same as 82 and 95. Above 143. Below 103	L3C-4C
105	Dr. 1	Layer	Dark brownish grey firm silt clay with frequent flecks of baked clay and occasional flecks of charcoal. Probably same as 183 and 79. Above 106	L3C-4C
106	Dr. 1	Layer	Mottled pink/grey/orange friable clay silt with an 'ash like' appearance. Contains abundant flecks and small fragments of baked clay. Probably same as 108 and 84. Above 146, 115 and 117. Below 105	M2C
107	Dr. 1	Layer	Dark greyish brown firm silt clay with occasional flecks of charcoal and baked clay. Above 110. Below 160 and 183	M2C-M3C
108	Dr. 1	Layer	Dark greyish brown soft silt clay with frequent flecks and pieces of charcoal and baked clay. Probably same as 110, 106 and 84	M2C
109	Dr. 1	Layer	Yellowish brown firm silt clay. Below 113. Above 114	1C-M2C
110	Dr. 1	Layer	Greyish brown soft/loose silt clay with frequent flecks of charcoal and baked clay. Probably same as 108, 106 and 84. Above 180. Below 107	M2C
111	Dr. 1	Layer	Brown soft silt clay with occasional flecks and pieces of charcoal and baked clay. Above 112. Below 181	1C-M2C
112	Dr. 1	Layer	Pink soft/loose silt with 'ash-like' appearance. Contains flecks of charcoal. Above 113. Below 111	1C-M2C
113	Dr. 1	Layer	Bluish green soft/sticky silt clay with flecks of charcoal. Above 109. Below 112	1C-M2C
114	Dr. 1	Layer	Brown soft silt clay with occasional flecks and pieces of charcoal and baked clay. Above 182. Below 109	1C-M2C
115	Dr. 1	Fill	Greyish brown friable clay silt with abundant flecks of baked clay and occasional flecks of charcoal. Latest fill of pit 116. Above 149. Below 106	1C-M2C
116	Dr. 1	Pit	Rounded pit with steeply sides and a slightly concave/uneven base. 0.25m+ long, 0.75m wide, 0.2m deep. Filled by 115 and 149. Below 149	1C-M2C

No	Area	Type	Description	Date
117	Dr. 1	Fill	Greyish brown friable clay silt with pink and orange mottles and an 'ash-like' appearance. Contains frequent flecks of baked clay. Single fill of post-hole 118. Below 106	1C-M2C
118	Dr. 1	Post-hole	Circular post-hole with steep sides and a slightly concave base. 0.16m long, 0.15m wide, 0.11m deep. Filled by 117	1C-M2C
119	Dr. 1	Layer	Yellowish brown soft silt clay with blue mottles. Contains occasional flecks and lumps of charcoal and baked clay. Above 181. Below 180. Contains 120	1C-M2C
120	Dr. 1	Layer	Greyish brown loose/friable silt clay with abundant flecks of baked clay and charcoal. Within 119	1C-M2C
121	Dr. 1	Layer	Brown clay - location not recorded	Undated
122	Dr. 2	Layer	Mixed deposit of brownish grey and brownish yellow friable silt clay with very infrequent gravel, infrequent flecks and small pieces of charcoal and occasional flecks and pieces of baked clay. Probably same as 89 and 96. Above 123. Below 142	M2C
123	Dr. 2	Fill	Grey friable silt clay with 'ash-like' appearance. Contains very infrequent gravel and infrequent flecks and pieces of charcoal and baked clay. Latest fill in 132. Above 126. Below 89/96/122	1C-M2C
124	Dr. 2	Fill	Brownish yellow firm silt clay with very infrequent flecks of charcoal and baked clay. Fourth fill of 132. Above 140, 141 and 125. Below 126	1C-M2C
125	Dr. 2	Fill	Brownish grey soft/sticky silt clay with very infrequent gravel and occasional flecks and pieces of charcoal and baked clay. Third fill of 132. Above 137. Below 124	1C-M2C
126	Dr. 2	Fill	Spread of baked clay and baked clay fragments, most too friable to retain, extending into ditch 132. Fifth fill of 132. Above 124. Below 123	1C-M2C
127	Dr. 3	Layer	Dark grey firm silt clay with occasional gravel and frequent flecks of baked clay. Probably same as 192, 133, 202 and 93. Above 128	L3C-4C
128	Dr. 3	Layer	Light grey friable silt clay with an ash-like appearance. Contains frequent pieces of baked clay. Probably same as 155. Above 129. Below 127	M2C-M3C
129	Dr. 3	Layer	Dark greyish brown friable silt clay with occasional gravel. Probably same as 136 and 203. Above 131. Below 128	M2C
130	Dr. 3	Gully	Linear feature with steeply-sloping sides and a concave base. 0.55m+ long, 0.45m wide, 0.15m deep. Filled by 131	1C-M2C
131	Dr. 3	Fill	Dark greyish brown friable silt clay with occasional gravel and infrequent flecks of charcoal. Single fill of gully 130. Below 129	1C-M2C
132	Dr. 2	Ditch	Gradual to moderately-sloping sides, concave base. 0.5m+ long, 3.5m wide, 0.8m deep. Filled by 138, 139, 137, 140, 141, 125, 124, 126 and 123. Below 138	1C-M2C

No	Area	Type	Description	Date
133	Dr. 3	Layer	Dark grey firm silt clay with occasional gravel and infrequent flecks and pieces of baked clay. Probably same as 192, 127, 202 and 93. Above 134 and 155	L3C-4C
134	Dr. 3	Layer	Light grey friable silt clay with frequent flecks and pieces of baked clay. Above 135. Below 133	M2C-M3C
135	Dr. 3	Layer	Light reddish pink friable silt clay with frequent flecks and pieces of baked clay. Above 156. Below 134	M2C-M3C
136	Dr. 3	Layer	Dark black/grey friable silt clay with flecks and pieces of baked clay. Probably same as 129 and 203. Above 152 and 153. Below 155 and 156	M2C
137	Dr. 2	Fill	Brownish yellow soft/sticky silt clay with infrequent flecks of charcoal. Secondary fill of 132. Above 138. Below 125 and 141	1C-M2C
138	Dr. 2	Fill	Brownish grey soft/sticky silt clay with occasional flecks of charcoal. Primary fill of 132. Contains 139. Below 137	1C-M2C
139	Dr. 2	Artefacts	Large piece of pottery within 138	1C-M2C
140	Dr. 2	Fill	Dark brownish grey friable silt clay with infrequent flecks of charcoal. Primary fill of 132. Below 124	1C-M2C
141	Dr. 2	Fill	Small pockets of compressed, slightly desiccated vegetation, probably reed stems or grass. Third fill of 132. Above 137. Below 124	1C-M2C
142	Dr. 2	Stake-hole	Vertical sides, pointed base. 0.06m wide, 0.5m deep. Filled by 143. Above 89/96/122. Below 143	M2C-M3C
143	Dr. 2	Fill	Dark brownish grey friable silt clay with infrequent flecks of charcoal and baked clay. Single fill of 142. Below 82/95/104	M2C-M3C
144	Dr. 1	Pit	Rounded pit with steeply-sloping sides and a concave base. 0.58m+ long, 0.34m wide, 0.31m deep. Filled by 145 and 146. Below 145	1C-M2C
145	Dr. 1	Fill	Orange brown plastic clay. Primary fill of 144. Below 146	1C-M2C
146	Dr. 1	Fill	Dark orange brown friable silt clay with occasional gravel and occasional flecks of charcoal and baked clay. Latest fill of pit 144. Above 145. Below 106	1C-M2C
147	Dr. 1	Post-hole	Circular post-hole with vertical sides and a concave base. 0.09m diameter, 0.11m deep. Filled by 148	1C-M2C
148	Dr. 1	Fill	Dark grey friable silt clay. Single fill of post-hole 147. Below 106	1C-M2C
149	Dr. 1	Fill	Orange brown plastic/friable silt clay with infrequent flecks of charcoal and baked clay. Primary fill of pit 116. Above 116. Below 115	1C-M2C
150	Dr. 1	Artefacts	Finds from layers 113 and 182	1C-M2C
151	Dr. 1	Artefacts	Finds from layer 182	1C-M2C
152	Dr. 3	Layer	Dark brown firm clay with flecks and pieces of baked clay. Below 136	1C-M2C

No	Area	Type	Description	Date
153	Dr. 3	Layer	Dark brown firm clay with flecks and pieces of oyster shell and baked clay. Above 154. Below 136	1C-M2C
154	Dr. 3	Layer	Dark greyish brown firm clay with flecks and pieces of oyster shell and baked clay. Below 153	1C-M2C
155	Dr. 3	Layer	Light grey friable silt clay with frequent flecks and pieces of baked clay. Probably same as 128. Above 136. Below 133	M2C-M3C
156	Dr. 3	Layer	Dump of baked clay fragments. Above 136. Below 135	M2C-M3C
157	Dr. 1	Fill	Greenish/greyish brown soft/sticky silt clay with very infrequent gravel and infrequent flecks of charcoal. Primary fill of cut-feature 167. Below 86 and 168	M2C-M3C
158	Dr. 1	Layer	Not recorded. Possibly same as 178. Above 159. Below 160	M2C-M3C
159	Dr. 1	Layer	Not recorded. Above 180. Below 158	M2C-M3C
160	Dr. 1	Layer	Not recorded. Above 178, 158 and 107. Below 177	M2C-M3C
161	Dr. 3	Artefacts	Surface finds: ditch 170 and pit 188	
162	Dr. 3	Fill	Grey friable silt clay with an ash-like appearance and infrequent flecks of charcoal. Latest fill of ditch 170. Above 169. Below 192	M2C-M3C
167	Dr. 1	Cut-feature	Pond or shallow ditch with gradually sloping uneven sides and an uneven concave base. 0.55m+ long, 4.2m wide and 0.5m deep. Filled by 83, 85, 86, 91, 157 and 168. Above 84. Below 157	M2C-M3C
168	Dr. 1	Fill	Mixed deposit of brownish grey and brownish yellow firm/friable silt clay. Contains infrequent gravel and occasional flecks of charcoal and baked clay. Secondary fill of cut-feature 167. Above 157. Below 91	M2C-M3C
169	Dr. 3	Fill	Brownish grey firm silt clay with very infrequent gravel and infrequent flecks of charcoal. Latest fill of ditch 170. Above 176. Below 162	M2C-M3C
170	Dr. 3	Ditch	Moderate to steep sided ditch with a flat to concave base. 0.45m deep. Filled by 162, 169 and 176. Above 203. Below 176	M2C-M3C
171	Dr. 3	Pit	Elongated feature with gradually-sloping sides and a slightly concave base. 0.6m+ long, 1m wide, 0.15m deep. Filled by 172 and 173. Below 172	1C-M2C
172	Dr. 3	Fill	Pale brownish grey firm/sticky silt clay with infrequent gravel and infrequent flecks of charcoal and baked clay. Primary fill of pit 171. Below 173	1C-M2C
173	Dr. 3	Fill	Brownish grey firm/sticky silt clay with infrequent gravel and occasional flecks of charcoal and baked clay. Latest fill of pit 171. Above 172. Below 204	1C-M2C
174	Dr. 3	Post-hole	Sub-square post-hole with steeply-sloping sides and an uncertain base. 0.14m long, 0.14m wide, 0.09m deep. Filled by 175	1C-M2C

No	Area	Type	Description	Date
175	Dr. 3	Fill	Brownish grey firm/sticky silt clay with infrequent flecks of charcoal and baked clay. Single fill of post-hole 174. Below 192	1C-M2C
176	Dr. 3	Fill	Brownish grey friable silt clay with very infrequent gravel and occasional flecks and small pieces of baked clay. Primary fill of ditch 170. Below 169	M2C-M3C
177	Dr. 1	Layer	Brownish yellow firm/sticky silt clay with very infrequent gravel. Above 160	M2C-M3C
178	Dr. 1	Layer	Brownish grey soft/sticky silt clay. Possibly same as 158. Above 179. Below 160	M2C-M3C
179	Dr. 1	Layer	Brownish yellow soft/sticky silt clay. Below 178	M2C-M3C
180	Dr. 1	Layer	Brownish grey silt soft/sticky silt clay with very infrequent gravel and infrequent flecks of charcoal. Above 119. Below 110 and 159	1C-M2C
181	Dr. 1	Layer	Dark brown soft/sticky silt clay with very infrequent flecks of charcoal. Above 111. Below 119	1C-M2C
182	Dr. 1	Layer	Brownish grey soft/sticky silt clay with very infrequent stones and infrequent flecks of charcoal. Below 114	1C-M2C
183	Dr. 1	Layer	Brownish grey firm silt clay with very infrequent gravel. Probably same as 79, 80 and 105. Above 107	L3C-4C
186	Dr. 3	Fill	Yellowish to greyish brown firm/stick silt clay with very infrequent gravel and infrequent flecks of charcoal and baked clay. Latest fill of pit 188. Above 187. Below 207	1C-M2C
187	Dr. 3	Fill	Brownish grey firm silt clay with very infrequent gravel and infrequent flecks of charcoal. Primary fill of pit 188. Below 186	1C-M2C
188	Dr. 3	Pit	Linear feature with gradually to moderately sloping sides and a concave, but slightly irregular, base. 048m deep. Probably same as 167. Filled by 186 and 187. Above 189. Below 187	1C-M2C
189	Dr. 3	Fill	Greyish brown firm silt clay with occasional flecks of charcoal. Single fill of post-hole 190. Below 188	1C-M2C
190	Dr. 3	Post-hole	Oval post-hole with moderately and steeply sloping sides and a concave base. 0.23m+ long, 0.15m wide, 0.05m deep. Filled by 189	1C-M2C
191	Dr. 3	Layer	Brownish grey firm silt clay with very infrequent gravel. Above 192	L4C+
192	Dr. 3	Layer	Yellowish brown firm silt clay with very infrequent gravel. Probably same as 127, 133, 202 and 93. Above 204, 175 and 162. Below 191	L3C-4C
193	Dr. 3	Layer	Duplicate record - possibly same as 192	
196	Dr. 3	Layer	Grey/white friable silt with an ash-like appearance and green-blue mottles. Contains frequent flecks of charcoal and flecks and pieces of baked clay. Possibly same as 101. Above 197. Below 198	1C-M2C

No	Area	Type	Description	Date
197	Dr. 3	Layer	Greyish blue soft clay with occasional flecks of charcoal and pieces of oyster shell and baked clay. Below 196	1C-M2C
198	Dr. 3	Layer	Yellowish brown soft clay with occasional flecks and pieces of charcoal and baked clay. Above 196. Below 199	1C-M2C
199	Dr. 3	Layer	Reddish brown soft/loose clay silt with occasional flecks and pieces of charcoal and baked clay. Above 198. Below 200	M2C-M3C
200	Dr. 3	Layer	Dump of baked clay fragments. Above 199. Below 201	M2C-M3C
201	Dr. 3	Layer	Reddish brown loose/friable silt with frequent flecks and pieces of baked clay and infrequent flecks of charcoal. Above 200. Below 202	M2C-M3C
202	Dr. 3	Layer	Dark greyish brown firm silt clay with frequent flecks and pieces of baked clay and charcoal. Probably same as 93, 133, 127 and 192. Above 201	L3C-4C
203	Dr. 3	Layer	Brownish yellow and dark greyish brown firm/friable silt clay with very infrequent gravel, infrequent flecks of charcoal and occasional flecks and pieces of baked clay. Probably same as 129 and 136. Above 207. Below 170	M2C
204	Dr. 3	Layer	Yellowish/greenish brown firm silt clay. Below 192. Above 173	M2C-M3C
205	Dr. 3	Artefacts	Unstratified finds from spoil heap of drain 3	
206	TP 4	Layer	Brownish grey firm silt clay	Undated
207	Dr. 3	Layer	Yellowish brown firm silt clay. Above 186. Below 203	1C-M2C
208	Tr. 4	Layer	Dark greyish brown firm silt clay. Above 19, 22, 37 and 41	Undated
209	Tr. 2	Layer	Tidal deposit. Not recorded	Undated
210	Dr. 3	Layer	Tidal deposit. Not recorded	Undated
211	Dr. 3	Layer	Tidal deposit. Not recorded	Undated
212	Dr. 2	Layer	Tidal deposit. Not recorded	Undated

APPENDIX 2: FINDS DATA

Finds data

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
2	Ditch fill	**1**	**6**	Fragment of briquetage	Mid 1st to 4th century
		1	**48**	Pottery, Roman single storage jar sherd (STOR).	
7	Finds u/s (surface of trench 3)	**2**	**26**	Pottery, Roman selective sample of more visible fabric/forms, Black Surface ware and Rettendon ware G24 forms (BSW and RET) too small a sample for secure dating.	Late 3rd to 4th century
8	Finds u/s (surface of trench 4)	**3**	**28**	Animal bone, sheep/goat and pig fragments of abraded long bone	
		8	**86**	Briquetage fragments	
		1	**84**	Fragment of the flange of a Roman Imbrex, much abraded	Roman
		1	**36**	Fragment of medieval/post medieval roof tile	13th to 18th century
		13	**138**	Pottery, Roman selective sample of more visible fabric/forms, including Black Burnished ware and Hadham Oxidised ware late forms (BB2 and HAX) too small a sample for secure dating.	Late 3rd to 4th century
9	Finds u/s (northern half of trench 4)	**2**	**4**	Animal bone, sheep/goat fragments of abraded bone	
		1	**64**	Fragment of medieval/post medieval roof tile	13th to 18th century
		1	**10**	Slag; iron poor	
		70	**631**	Pottery, Roman selective sample of a wide range of fabric/forms, including early wares (ESH, GROG, MIC, MICW) as well as late fabrics and forms (NFG, NVC and VRWM) very mixed sample for a broad site date range.	Late 3rd to 4th century
10	Finds u/s (northern tip of trench 4)	**1**	**24**	Fragment of briquetage	Roman
		1	**10**	Fragment of baked clay	Roman
		5	**60**	Pottery, Roman selective sample of an early to late fabrics in small group for a broad site date range.	1st to 4th century
11	Finds u/s (surface of trench 4)	**1**	**8**	Slag; iron poor	
12	Trench 4 Layer	**8**	**22**	Animal bone, cattle fragments of abraded bone	
		6	**56**	Fragments of briquetage	Roman
		5	**70**	Pottery, Roman selective sample of an early to late fabrics in small group for a broad site date range.	1st to 4th century
13	Trench 4 Layer	**2**	**82**	Fragments of briquetage	Roman
14	Trench 4 Layer	**6**	**50**	Animal bone, cattle and medium mammal fragments of abraded bone	
		25	**248**	Fragments of briquetage	Roman
		5	**162**	Slag; iron poor	
		1	**14**	Glass, modern bottle fragment (intrusive)	19th to 20th century
		87	**626**	Pottery, Roman a wide range of fabric/forms, including early wares (GROGRF, MIC, NGWF) as well as late fabrics and forms (HAR, HAX, OXWM, NVM and BB2) very mixed sample for a late date range with much residual material.	
25	Trench 4 Layer	**1**	**2**	Animal bone, sheep/goat fragment of abraded bone	
		50	**416**	Fragments of briquetage including a pinch plug and the rim of a salt production tank.	Roman
42	Finds u/s (surface of	**8**	**20**	Animal bone, sheep/goat fragments of abraded bone	

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
	trench 2)	**2**	**12**	Fragments of briquetage	Roman
		1	**18**	Fragments of baked clay tank lining	Roman
		1	**3**	Glass, modern bottle fragment (intrusive)	19th to 20th century
		39	**520**	Pottery, Roman a wide range of fabric/forms, including early wares (GROG, GROGRS, MIC, NGWF) as well as late fabrics and forms (HAR, HAX, OXWM, NVM and BB2) very mixed sample for a mid Roman date range with G24, G26 and B4/5/6 forms, much residual material.	Mid 2nd to mid 3rd century
44	Trench 4 Layer	**1**	**6**	Fragment of tile spall	Roman
		3	**62**	Pottery, Roman selective sample of a small group with a late Nene Valley mortaria form (NVM D14) and residual Central Gaulish Samian (CGSW) sherds, to small a group for further definition.	260 to 360 AD
47	Trench 2 Layer	**2**	**8**	Animal bone, sheep/goat fragments of abraded bone	
		4	**40**	Fragments of briquetage	Roman
		1	**36**	Worked Flint, scraper	Prehistoric
		36	**594**	Pottery, Roman distinct forms (G5 and G19) and fabrics dating to the 1st to early 2nd century (BSW, GRF and GROGC). Fragments of a grog tempered crucible? were present.	1st to early 2nd century
48	Trench 2 Layer	**1**	**6**	Fragment of briquetage	Roman
		1	**10**	Fragments of baked clay tank lining	Roman
		1	**88**	Fragment of medieval/post medieval roof tile	13th to 18th century
		1	**40**	Pottery, Roman single sherd of storage jar fabric (STOR), not more closely dated.	Roman
49	Trench 2 Layer	**1**	**8**	Fragment of briquetage	Roman
		2	**18**	Pottery, Roman two sherds of Verulamium Buff Ware and Sandy Grey Ware (VRB AND GRS), not more closely dateable.	Mid 2nd to mid 3rd century
53	Trench 2 Layer	**14**	**26**	Pottery, Roman sherds of Imported Mica Coated ware (IMIC), in the form of a carinated beaker (H10).	1st to early 2nd century
54	Trench 4 Layer	**3**	**32**	Fragments of briquetage	Roman
56	Trench 4 Layer	**8**	**66**	Fragments of briquetage	Roman
		2	**14**	Animal bone, medium mammal fragments of abraded bone	
57	Trench 4 Layer	**44**	**658**	Fragments of briquetage including a base fragment and the rim of a salt production tank.	Roman
		1	**2**	Animal bone, sheep/goat abraded fragment	
		7	**64**	Pottery, Roman small group of fabrics with earlier residual material (HAB, MIC, NGWF, NVC and VRWM), No specific forms.	Mid 2nd century
58	Trench 4 Layer	**2**	**44**	Fragments of briquetage	Roman
		12	**320**	Pottery, Roman distinct forms (G5 and C2) and fabrics dating to the 1st century (ESH, GRF and GROGC).	1st to Early 2nd century
59	Trench 4 Layer	**2**	**42**	Fragments of briquetage	Roman
		7	**231**	Pottery, Roman distinct forms of jars and bowls (G17 and C2) and fabrics dating to the 1st century (GRF and RED) to early 2nd century.	1st to Early 2nd century
65	Trench 2 Layer	**1**	**2**	Animal bone, sheep/pig fragment of abraded bone	
		9	**100**	Fragments of briquetage	Roman
		6	**124**	Fragments of baked clay tank lining	Roman
		2	**32**	Pottery, Roman sherds of Grog tempered ware and Mica Coated ware (GROGRS and MIC), no identifiable forms.	1st to Early 2nd century

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
66	Trench 2 Layer	**1**	**8**	Fragment of briquetage	Roman
67	Trench 2 Layer	**2**	**22**	Fragments of briquetage	Roman
68	Trench 2 Layer	**1**	**1**	Animal bone, sheep/goat fragment of abraded bone	
		3	**30**	Iron Staining; nails or unidentified objects	
		1	**28**	Pottery, Roman sherd of Mica Coated ware (MIC), no identifiable forms.	1st century
69	Trench 2 Layer	**6**	**62**	Fragments of briquetage including a fragment of a wedge.	
		4	**84**	Pottery, Roman sherds of Grog tempered ware and Mica Coated ware (GROG, GROGRS and MIC), no identifiable forms.	1st to early 2nd century
71	Trench 2 Layer	**4**	**32**	Animal bone, sheep/pig fragments of abraded bone	
		11	**118**	Fragments of briquetage	Roman
		2	**26**	Fragments of baked clay tank lining	Roman
		55	**824**	Pottery, Roman distinct forms (G5 and D1) and fabrics dating to the 1st to early 2nd century (ESH, BSW, GRF, VRWM and GROGC) residual in later context.	Mid 2nd to mid 3rd century
73	Test pit 2 Layer	**1**	**12**	Fragment of tile spall	Roman
		1	**10**	Slag; fragment iron poor highly fired	
		23	**182**	Pottery, Roman sherds of Central Gaulish Samian ware and Hadham Oxidised ware (CGSW and HAX), Dragendorff 30/37 and 36 forms as well as a C12 bowl based on A Dragendorff 37 form.	Early to Late 2nd century
74	Layer	**1**	**40**	Animal bone, pig fragment of abraded bone	
75	Test pit 5 Layer	**1**	**10**	Animal bone, pig fragment of abraded bone	
		1	**60**	Brick, spall	Roman (check)
		1	**60**	Fragment of a Roman Imbrex, much abraded	Roman
		2	**20**	Slag; fragment iron poor highly fired	
		6	**62**	Pottery, Roman distinct forms (G24) and fabrics dating to the 2nd to 3rd century (BSW, GRS, VRB and ABAET) including a sherd of South Spanish Amphora.	2nd to 3rd century
76	Test pit 1 Layer	**1**	**10**	Animal bone, pig fragment of abraded bone	
		5	**50**	Fragments of briquetage	
		6	**196**	Slag; fragment iron poor highly fired	
		22	**236**	Pottery, Roman a wide range of fabric including early wares (GROG, MIC, ESH and VRW) as well as late fabrics and forms (HAX and RET) very mixed sample for a late Roman date range with only an early Bowl (B1) forms, much residual material.	Late 3rd to 4th century
79	Drain 1 Layer	**41**	**286**	Animal bone, pig, cattle and sheep/goat fragments of abraded bone.	
		16	**440**	Fragments of baked clay tank lining as well as some extremely highly fired almost vitrified fragments.	Roman
		6	**252**	Fragments of a Roman Imbrex, and tile spall much abraded	Roman
		1	**124**	Fragment of medieval/post medieval roof tile, intrusive.	13th to 18th century
		9	**230**	Slag; fragments iron poor and highly fired.	
		304	**3706**	Pottery, Roman a wide range of fabric/forms, including very small amounts of early wares (GROGC, MIC, NGWF), late fabrics and forms predominate (BSW, GRS, GRF, HAX, RET and BB2) with a great many mid to late Roman jar	Late 3rd to 4th century

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
				forms (G19, G23, G24, G27 and G28) and bowls (B1,B2 and B6). A substantial assemblage of Rettendon Ware (RET), supporting a late date range for this group. Late Colour Coats are noticeable by their absence.	
80	Test pit 1 Layer	**1**	**4**	Animal bone, medium sized mammal fragment of abraded bone	
		1	**30**	Fragment of a Roman Imbrex.	Roman
		6	**64**	Pottery, Roman distinct fabric group with a single form (G5) and fabrics dating to the 1st to early 2nd century (GROG, GRS, MIC and VRB) residual in later context?	Late 3rd to 4th century
82	Drain 2 Layer	**11**	**90**	Animal bone, sheep/goat fragment of abraded bone	
		26	**226**	Fragments of briquetage	Roman
		4	**108**	Fragments of a Roman tile spall much abraded	Roman
		7	**198**	Slag; fragments iron poor and highly fired	
		100	**1273**	Pottery, Roman a wide range of fabric/forms, including very small amounts of early wares (GROGC, MIC, NGWF), late fabrics and forms predominate (BSW, GRS, GRF, BB2, HAX, RET and BB2) with a great many mid to late Roman jar forms (G19, G23, G24, G25) and bowls (B1, B2 and B4). A small amount of Rettendon Ware and Oxford Colour Coat (RET and OXRCM), supports a late date range for this group.	Late 3rd to 4th century
83	Drain 1 Fill	**17**	**86**	Animal bone, sheep/goat fragments of abraded bone	
		3	**24**	Fragments of briquetage	Roman
		64	**572**	Pottery, Roman distinct fabric group with a single form (G5) and fabrics dating to the 1st to early 2nd century (GROGC, BSW, MIC and VRB). These are residual with later fabrics and forms (EGSW, HAR and BB2), only two later forms were identifiable a jar (G24) and a bowl (B10) both of 2nd to 4th century date. The context is stratigraphically late 3rd to 4th century indicating the presence of a considerable amount of residual material.	Late 3rd to 4th century
84	Drain 1 Layer	**3**	**10**	Animal bone, sheep/goat and cattle fragments of abraded bone	
		9	**110**	Fragments of briquetage	Roman
		17	**203**	Pottery, Roman a small distinct fabric group of mid to late 2nd century material (BSW, GRF, GRS, RED and VRW) in the form of a jar (G8) and bowl (B6) along with a more unusual example of a lid (K2).	Mid to late 2nd century
85	Drain 1 Fill	**5**	**56**	Animal bone, medium sized mammal and cattle fragments of abraded long bone	
		5	**56**	Fragments of briquetage	Roman
		5	**84**	Fragments of baked clay tank lining.	Roman
		1	**10**	Glass; handle fragment of jug	Modern?
		1	**14**	Iron; staining, probably corroded nail	
		4	**62**	Sandstone; Burnt fragments	
		17	**202**	Pottery, Roman distinct group with small amounts of fabrics dating to the 1st to early 2nd century (GROG, GROGC, ESH, MWSRF and SGSW), with one early jar form (G5). These are residual with later fabrics (BB1, BB2, BSW, GRF, GRS and NVC), with several jar (G23 and G24) and bowl (B1 and B4) forms dating the context. The presence of an East Gaulish Samian ware base ring of a Dragendorff 33 indicates a late 2nd century for this context	160 to 200 AD

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
86	Drain 1 Fill	**1**	**30**	Fragment of briquetage	Roman
		18	**316**	Pottery, Roman distinct group with small amounts of fabrics dating to the 1st century (GROGRS and ESH). These are residual with later fabrics (BSW and GRF), and only a single jar form (G37).	Late 2nd to mid 3rd century
89	Drain 2 Layer	**4**	**8**	Animal bone, sheep/goat fragments of abraded long bone	
		56	**918**	Fragments of briquetage, including base fragments.	Roman
		55	**910**	Fragments of baked clay tank lining.	Roman
		22	**444**	Pottery, Roman distinct group with small amounts of fabrics dating to the 1st century (GROGC, MIC, GROGRS and SGSW). These are residual with later fabrics (BSW and GRS), and only a single jar form (G45), supporting a mid 2nd century date.	Mid 2nd century
90	Drain 2 Layer	**4**	**40**	Fragments of briquetage.	Roman
		101	**1240**	Fragments of baked clay tank lining.	Roman
91	Drain 1 Fill	**1**	**6**	Animal bone, medium sized mammal.	
		3	**34**	Pottery, Roman small group of fabrics (GROGC, MIC and BSW) these are mostly residual. The only form was that of a beaker (H3), the context is dated stratigraphically.	Mid to late 2nd century
93	Drain 3 Layer	**4**	**36**	Fragments of briquetage.	Roman
		1	**20**	Fragments of baked clay tank lining.	Roman
		2	**68**	Slag; fragments iron poor and highly fired	
		8	**66**	Pottery, Roman a small group of broadly dateable sherds (BSW, GRF and GRS) stratigraphically late.	Late 3rd to 4th century
94	Drain 3 Layer	**2**	**46**	Fragments of briquetage.	Roman
95	Drain 2 Layer	**16**	**174**	Animal bone, sheep/goat and cattle fragments of bone	
		24	**430**	Fragments of briquetage, including base fragments.	Roman
		6	**106**	Fragments tile spall.	Roman
		1	**42**	Flint; burnt fragment.	
		3	**292**	Slag; fragments iron poor and highly fired	
		126	**1600**	Pottery, Roman distinct fabric group with a single form (G5) and fabrics dating to the 1st to early 2nd century (GROGC, GROGRF, BSW, MIC and VRB). These are residual with later fabrics and forms (CGSW, RET and BB2), only two later forms were identifiable a jar (G24, G27) and a bowl (B2, B5 and B6) all of 2nd to 4th century date. The context is dated primarily by the Rettendon ware form late 3rd to 4th century indicating the presence of a considerable amount of residual material.	Late 3rd to 4th century
96	Drain 2 Layer	**1**	**16**	Animal bone, pig fragment of bone.	
		2	**32**	Stone; Lava fragment.	
		15	**114**	Pottery, Roman small group of fabrics (BB2, GROGC, MIC and BSW). The only form was that of a cooking pot (G9) that fits with a mid to late 2nd century date.	Mid 2nd century
100	Drain 3 Layer	**1**	**18**	Fragment of briquetage.	Roman
		3	**70**	Pottery, Roman distinct fabric group dating to the 1st to early 2nd century (BSW and ESH).	1st to early 2nd century
101	Drain 3 Layer	**3**	**16**	Animal bone, medium sized mammal.	
		7	**222**	Fragments of briquetage.	Roman
		1	**40**	Fragments of baked clay vitrified.	Roman

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
		13	**302**	Pottery, Roman distinct fabric group dating to the 1st to early 2nd century (GRF, INIC, MSR, VRW, BSW and ESH).	1st to early 2nd century
104	Drain 2 Layer	**22**	**120**	Animal bone, medium sized mammal.	
		60	**1000**	Fragments of briquetage including part of a fire bar.	Roman
		8	**176**	Fragments of baked clay, vitrified.	Roman
		4	**74**	Brick; Spall	Modern
		1	**8**	Pipe clay; figurine, rear of Venus figurine from waist to knees.	1st to 3rd century
		4	**114**	Fragments of tile spall.	Roman
		1	**42**	Flint; rough flake.	Prehistoric
		13	**454**	Slag; fragments iron poor and highly fired	
		378	**3511**	Pottery, Roman distinct fabric group with small amounts of fabrics dating to the 1st to early 2nd century (SGSW, GROGRF and VRB). These are residual with later fabrics and forms (GRF, GRS, RET, BSW and BB2), later forms were identifiable a jars (G9, G22, G24, G30, G35 and G45) and a bowl (B1, B2 and B6) all of 2nd to 4th century date. The context is dated primarily by the Rettendon ware from late 3rd to 4th century.	Early 4th century
105	Drain 1 Layer	**13**	**62**	Animal bone, sheep/goat and medium sized mammal long bone and teeth fragments.	
		13	**232**	Fragments of briquetage.	Roman
		2	**10**	Fragments of baked clay tank lining.	Roman
		6	**372**	Fragments of Imbrex and tile spall.	Roman
		67	**744**	Pottery, Roman distinct fabric group with a single form (G5) and fabrics dating to the 1st to early 2nd century (GROG, GROGRF, BSW, MIC and VRW). These are residual with later fabrics and forms (GRF, GRS, NKG and BSW), only three later forms were identified as a jar (G24), a bowl (B2) and a beaker (H5) all of 2nd to 4th century date.	Late 3rd to 4th century
106	Drain 1 Layer	**2**	**4**	Animal bone, sheep/goat bone fragments.	
		11	**260**	Fragments of briquetage including part of a fire bar.	Roman
		7	**48**	Pottery, Roman a narrow range of fabric/forms, dominated by early wares (GROG, GROGRS and IMIC), which date to the 1st century. Later fabrics (GRS, NKO AND RED), would indicate a later date, the context is dated stratigraphically.	Mid 2nd century
107	Drain 1 Layer	**1**	**142**	Fragment of Tegula.	Roman
		30	**424**	Pottery, Roman a narrow range of fabric/forms, dominated by early wares (GROG, GROGC, GROGRS and IMIC), forms included globular jars (G3 and G5) bowls (A4) and an unusual fragment of an ear or handled rim (H17) with a bifid rim.	Early to mid 2nd century
109	Drain 1 Layer	**1**	**12**	Fragments of briquetage.	Roman
		5	**62**	Pottery, Roman small amount of fabrics (GROGC, GROGRS and COLB), the single form of a small globular jar (G5) would fit with an early date.	1st to early 2nd century
110	Drain 1 Layer	**7**	**88**	Animal bone, sheep/goat and medium sized mammal long bone fragments.	
		36	**186**	Fragments of briquetage.	Roman
		5	**22**	Fragments of baked clay tank lining.	Roman
		5	**70**	Fragments of a Roman tile spall much abraded	Roman

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
		98	**814**	Pottery, Roman distinct group with fabrics dating to the 1st century (GROG, GROGC, GROGRS, BSW and NGWF), forms include jars (G5) AND Bowls (A4). These are residual with later fabrics and forms (GRF, GRS and BSW), no later forms are identifiable, the context is dated stratigraphically	Early to mid 2nd century
111	Drain 1 Layer	**2**	**230**	Pottery, Roman small group of single fabric (ESH). The only form was that of a storage jar (G35) that is residual in later context.	Mid 2nd century
112	Drain 1 Layer	**6**	**126**	Pottery, Roman small group of fabrics (BB2, GROGC and GRF). The only form was that of a cooking pot (G9) that fits with an early to mid 2nd century date.	125/130 to 150 AD
113	Drain 1 Layer	**15**	**896**	Pottery, Roman distinct group with fabrics dating to the 1st to early 2nd century (GROG, ESH, GRS and NGWF). These are residual with the context being dated stratigraphically.	125/130 to 150 AD
115	Drain 1 Fill	**19**	**366**	Fragments of baked clay tank lining.	Roman
119	Drain 1 Layer	**3**	**16**	Animal bone, sheep/goat long bone fragments.	
		32	**180**	Fragments of briquetage.	Roman
		2	**32**	Iron staining, possibly a nail much corroded.	Roman
		1	**14**	Mollusc shell, fragments of oyster	
		38	**378**	Pottery, Roman distinct group with fabrics dating to the 1st to early 2nd century (GROGRF, GROGRS, ESH, MWSRF and BSW). These are residual with later fabrics and forms (BSW, GRF, GRS and NVC), only a single form was identifiable a jar (G9) dating the context.	125/130 to 160/70 AD
122	Drain 1 Layer	**21**	**70**	Animal bone, sheep/goat and pig long bone fragments.	
		97	**928**	Fragments of briquetage, including part of a fire bar and the rim of a salt processing tank.	Roman
		8	**58**	Fragments of baked clay tank lining.	Roman
		4	**80**	Fragment of tile spall	Roman
		1	**56**	Slag; fragments iron poor and highly fired	
		147	**1217**	Pottery, Roman very distinct group with small amounts of earlier residual material (GROGC and MWSRF). Forms are dominated by (G9 and G10) bb1 imitation type 2 cooking pots (fabrics GRF and GRS) these nominally could date to the later 2nd century but the only bowl present (B2 and B4) is a type 22/23 BB1 imitations (BB2), no sherds of type 24 bowls with incised lines around the top of the flanged rim are present (B5), these date to the late 2nd century. This gives a close context date. a number of large storage jars (STOR) were present in this context in a single form (G44).	150 to 170 AD
123	Drain 2 Fill	**7**	**78**	Fragments of briquetage.	Roman
		5	**20**	Pottery, Roman small amount of fabrics (GRS, BSW and GRF) that fit with an early date.	1st to early 2nd century
125	Drain 2 Fill	**7**	**50**	Animal bone, sheep/goat long bone fragments.	
		1	**26**	Fragments of briquetage.	Roman
		9	**236**	Mollusc shell, fragments of oyster	
		11	**194**	Pottery, Roman small amount of fabrics (MIC, BSW and ESH) that fit with an early date.	1st to early 2nd century
126	Drain 2 Fill	**1**	**1**	Animal bone, medium sized mammal long bone fragment.	
		4	**26**	Pottery, Roman small amount of a single fabric (MIC) in the form of a beaker that fits with an early date.	1st century

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
127	Drain 3 Layer	**30**	**745**	Pottery, Roman distinct fabric group with a single form (G5) and fabrics dating to the 1st to early 2nd century (GROGC, ESH, MIC and COLB). These are residual with later fabrics and forms (CGSW, HAX and NVC), only two later forms were identifiable a jar (G24, G35 and G44) and a bowl (B1, B2 and B5) all of 2nd to 4th century date.	Late 3rd to 4th century
128	Drain 3 Layer	**13**	**280**	Fragments of briquetage.	Roman
129	Drain 3 Layer	**1**	**800**	Stone, saddle quern rubbing stone, quartzitic sandstone.	
		2	**102**	Whetstone, sandstone.	
		2	**20**	Pottery, Roman small amount of fabrics (MIC and SGSW) that fit with an early date.	1st century
131	Drain 3 Fill	**1**	**18**	Animal bone, sheep/goat long bone fragments.	
		2	**4**	Iron, staining possibly fragment of nail.	
		13	**432**	Pottery, Roman small amount of fabrics (MIC, GROGC and GRS) that fit with an early date.	1st century
133	Drain 3 Layer	**13**	**86**	Animal bone, medium mammal long bone fragments.	
		59	**386**	Fragments of briquetage.	Roman
		3	**52**	Roof Tile, abraded fragment.	13th to 18th century
		5	**170**	Fragments of tile spall	Roman
		1	**8**	Iron, nail cleaner	Roman
		2	**32**	Slag; fragments iron poor and highly fired	
		51	**530**	Pottery, Roman a wide range of fabric/forms, late fabrics and forms predominate (BSW, GRS, GRF, HAX, RET) with a great many mid to late Roman jar forms (G24) and bowl (C11). The presence of Rettendon ware indicates a late date for this context.	Late 3rd to 4th century
134	Drain 3 Layer	**6**	**40**	Animal bone, medium mammal long bone fragments.	
		13	**106**	Fragments of briquetage.	Roman
		12	**86**	Pottery, Roman a narrow range of fabric/forms, dominated by coarse wares (BB2, HAX, GRF and MSR), only the form of a bowl (B6) of mid 3rd century date, defines the context.	2nd to mid 3rd century
135	Drain 3 Layer	**6**	**30**	Animal bone, cattle sheep/goat bone fragments.	
		26	**250**	Fragments of briquetage mainly, body sherds but including fragments of a scoop or small bowl and rods.	Roman
		18	**128**	Pottery, Roman fabrics dating to the 1st to 2nd century (BSW, GRF, GROGRC, MIC and SGSW). No complete forms but a body sherd of South Gaulish Samian ware date this context to the 1st to very early 2nd century indicating this material is residual in later context.	Mid 2nd to mid 3rd
136	Drain 3 Layer	**10**	**40**	Animal bone, sheep/goat and medium mammal teeth and long bone fragments.	
		2	**16**	Bird Bone, goose tibia.	
		34	**282**	Fragments of briquetage.	
		33	**428**	Pottery, Roman fabrics dating to the 1st to early 2nd century (BSW, GRF, GROGRS, MSR, SGSW and GROGC). Two definable forms a jar (G18) and a body sherd of a South Gaulish Samian ware Dragendorff 18 date this context to the 1st to early 2nd century.	1st to early 2nd century
138	Drain 2 Fill	**2**	**48**	Mollusc shell, fragments of oyster	
		2	**142**	Pottery, Roman small amount of single fabric (ESH), of 1st century date.	1st century
139	Find Drain 2	**3**	**112**	Pottery, Roman small amount of single fabric	1st century

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
	(large piece of pottery within 138)			(ESH) in the form of a globular jar (G5.1), of 1st century date.	
146	Drain 1 Fill	**55**	**242**	Fragments of briquetage.	
		5	**182**	Pottery, Roman small amount of single fabric (GROGRS), of 1st century date.	1st century
148	Drain 1 Fill	**2**	**4**	Animal bone, medium mammal long bone fragments.	
		1	**2**	Pottery, Roman small amount of single fabric (GROGRF), of 1st century date, residual in later context.	Late 3rd to 4th century
149	Drain 1 Fill	**4**	**30**	Fragments of briquetage.	
150	Drain 1 (finds from layers 113 and 182	**1**	**26**	Animal bone, pig bone fragment.	
		7	**36**	Fragments of briquetage.	Roman
		9	**92**	Mollusc shell, fragments of oyster	
		11	**336**	Pottery, Roman small group of fabrics (BB2, BSW, GROGC and MIC). The only form was that of a cooking pot (G9) that fits with an early to mid 2nd century date.	125/130 to 150 AD
151	Drain 1 (finds from layer 182	**2**	**24**	Pottery, Roman small amount of single fabric (GRF), in the form of a fragment of a bowl that fits with a mid 2nd century date.	125/130 to 150 AD
152	Drain 3 Layer	**6**	**62**	Fragments of briquetage.	Roman
		2	**8**	Pottery, Roman small amount of fabrics (MIC and VRB) that fit with an early date.	1st to early 2nd century
154	Drain 3 Layer	**1**	**38**	Fragments of briquetage, fire bar end.	Roman
		3	**8**	Mollusc shell, fragments of oyster	
		2	**18**	Pottery, Roman small amount of fabrics (GRF and VRW) that fit with an early date.	1st to early 2nd century
157	Drain 1 Fill	**2**	**48**	Animal bone, sheep/goat/pig bone fragments.	
		39	**745**	Pottery, Roman very distinct group with small amounts of earlier residual material (GROGC and MIC). Forms are dominated by (G9) bb1 imitation type 2 cooking pots (fabrics GRF and GRS) these nominally could date to the later 2nd century but the only bowl present (B4) is a type 22/23 BB1 imitations (BB2), no sherds of type 24 bowls with incised lines around the top of the flanged rim are present, these date to the late 2nd century. This gives a close context date.	150 to 170
158	Drain 1 Layer	**3**	**68**	Animal bone, cattle long bone fragments.	
		27	**258**	Fragments of briquetage, including part of a curved corner of a salt processing tank.	Roman
		6	**408**	Fragments of baked clay triangular loom weight, with horizontal penetration, and 110mm in height by 95 mm wide by 42mm in depth, the softly fired fabric was light brown in colour and tempered with chalk.	Roman
		26	**512**	Pottery, Roman a narrow range of fabric/forms, dominated by early wares (ESH and GROGRS form G2 and G6), which would date to the 1st century. This material is redeposited into later context.	Mid 2nd to mid 3rd century
160	Drain 1 Layer	**3**	**10**	Fragments of briquetage.	Roman
		10	**160**	Pottery, Roman small amount of mixed material including early fabrics (BSW and MIC) but included a few sherds of Rettendon ware (RET and G24) that may be intrusive.	Mid 2nd to mid 3rd century
161	Drain 3 Layer	**1**	**26**	Fragment of briquetage processing tank rim.	Roman
		22	**346**	Pottery, Roman a wide range of fabric/forms, including very small amounts of early wares (BSW form G3), late fabrics and forms predominate (GRS, GRF, HAX and OXRCM)	Late 3rd to 4th century

Context	Feature	Count	Wt (g)	Description	Date
				with mid to late Roman jar forms (G24) and bowl (B6). This supports a later date range for this group.	
162	Drain 3 Layer	**9**	**68**	Animal bone, sheep/goat/pig and cattle bone fragments.	
		1	**550**	Flint; hammer stone possibly natural some indication of impact surface.	Prehistoric?
		92	**1568**	Pottery, Roman very distinct group with small amounts of earlier residual material (GROGRF and MICW). Forms are dominated by (G9 and G10) bb1 imitation type 2 cooking pots (fabrics BSW and BB2) these nominally could date to the later 2nd century but the only bowl forms present (B1, B3 and B4 variations) are general bowls type 22/23 BB1 imitations (BSW), no sherds of type 24 bowls with incised lines around the top of the flanged rim are present, these date to the late 2nd century. This gives a close context date.	150 to 170 AD
169	Drain 3 Fill	**62**	**3622**	Animal bone substantial fragments of a cattle skeleton including complete unabraded atlas, jaw bone and vertebrae, several fragmented and butchered long bones as well as small amounts of sheep/goat and pig bone long bone fragments.	
		8	**1058**	Fragments of briquetage, including fragments of pedestals, wedge and a scoop.	Roman
		1	**124**	Fragment of the flange of a Roman Imbrex, much abraded.	Roman
		12	**3403**	Stone, block of Septaria naturally occurring, possibly used in salt production process.	
		1	**86**	Stone, sandstone whetstone, very worn.	
		260	**3842**	Pottery, Roman very distinct group with virtually no earlier residual material. Forms are dominated by (G9 and G10) BB1 imitation type 2 cooking pots (fabrics BSW, BB1 and GRF) these nominally could date to the later 2nd century but the only bowl forms present (B2 and B4 variations) are type 22/23 bb1 imitations (BSW and RED), no sherds of type 24 bowls with incised lines around the top of the flanged rim are present, these date to the late 2nd century. Several sherds of East Gaulish ware Samian (EGSW) are present dating from around 150 AD. This gives a close context date.	150 to 170 AD
173	Drain 3 Fill	**1**	**18**	Animal bone, cattle bone fragments.	
		6	**42**	Fragments of baked clay tank lining.	Roman
		16	**240**	Pottery, Roman several sherds of early Grog tempered wares with more general fabrics no forms.	1st to early 2nd century
175	Drain 3 Fill	**2**	**22**	Fragments of briquetage.	Roman
176	Drain 3 Fill	**1**	**6**	Fragments of baked clay tank lining.	Roman
		1	**16**	Fragments of briquetage.	Roman
		1	**22**	Pottery, Roman shoulder sherd of BB1 cooking pot.	Mid 2nd to mid 3rd century
184		**6**	**56**	Pottery, Roman single sherd of early Grog tempered ware with more general fabrics no forms.	1st to early 2nd century
186	Drain 3 Fill	**6**	**54**	Fragments of briquetage.	Roman
		1	**248**	Stone, ferruginous sandstone fragment (discarded).	
		1	**46**	Iron Staining; nails or unidentified objects	
		42	**434**	Pottery, Roman mixed fabrics dominated by grey wares (GRF, GRS and BSW) as well as Early grog and micaceous wares (GROG & MIC) single fragment of South Gaulish Samian (SGSW).	1st century

Context	*Feature*	*Count*	*Wt (g)*	*Description*	*Date*
187	Drain 3 Fill	**5**	**24**	Fragments of briquetage.	Roman
		1	**84**	Pottery, Roman single sherd of early Grog tempered ware.	1st century
189	Drain 3 Fill	**1**	**4**	Fragments of briquetage.	Roman
		1	**6**	Pottery, Roman single sherd of early micaceous ware form.	1st to early 2nd century
196	Drain 3 Layer	**1**	**2**	Worked Bone, pigs tooth ornament with incised hole in centre of tooth.	
		5	**220**	Pottery, Roman residual material small amounts of early wares including Early Shell tempered, and Black Surface ware.	1st to early 2nd century
197	Drain 3 Layer	**3**	**346**	Fragments of briquetage, pedestals.	Roman
		6	**352**	Pottery, Roman residual material small amounts of early wares including Early Shell tempered, and Black Surface ware.	1st to early 2nd century
201	Drain 3 Layer	**1**	**298**	Brick, fragment burnt.	Modern
		3	**17**	Pottery, Roman residual material small amounts of Grog and msr.	1st to early 2nd century
202	Drain 3 Layer	**1**	**54**	Animal bone, cattle bone fragment.	
		11	**146**	Fragments of briquetage including the corner of a salt processing tank.	Roman
		14	**182**	Pottery, Roman mixed fabrics dominated by grey wares (GRF, GRS and BSW) considerable residual material only three bowl forms only one a later BB1. Early grog and micaceous wares present (GROG & MIC).	Late 3rd to 4th century
205	Finds u/s (from spoil heap of drain 3)	**1**	**76**	Stone, siltstone whetstone, heavily used.	

Finds quantification

Description	*Count*	*Wt (g)*
Roman Pottery	2765	35996
Briquetage	882	10910
Baked Clay	245	4004
Slag	53	1736
Roman Tile	47	1730
Medieval/Modern tile	7	364
Roman Brick	1	198
Modern Brick	5	234
Stone	24	4809
Glass	3	27
Pipe clay	1	8
Iron	10	134
Copper Alloy (coin)	1	2
Animal Bone	336	5436
Bird Bone	2	16
Mollusc Shell	24	398
Total	*4406*	*66002*

Pottery quantification

Fabric code	*No*	*Name*	*Count*	*Count (%)*	*Wt (g)*	*Wt (%)*
NKG	32	North Kent grey ware	4	<1%	12	<1%
BSW	34/45	Black Surfaced Ware	600	22%	7343	20%
HAB	35	Hadham black surfaced ware	7	<1%	38	<1%
HAR	36	Hadham grey ware	71	2%	508	2%
GRF	39	Fine grey wares	393	14%	3439	10%
BB1	40	Black Burnished Ware 1	5	<1%	94	<1%

BB2	41	Black Burnished Ware 2	82	3%	1198	4%
STOR	44	Storage jar fabric	126	4%	3054	9%
GRS	47	Sandy grey wares	449	16%	5067	14%
RET	48	Rettendon type ware	116	4%	1466	4%
GRM	49	Grey-green mortaria	3	<1%	64	<1%
ESH	50	Early shell-tempered ware	52	2%	1464	4%
LSH	51	Late shell-tempered ware	2	<1%	236	<1%
GROG	53	Fine reduced grog-tempered ware	176	10%	3992	15%
GROGC	53	Coarse reduced grog-tempered ware	23		458	
GROGRF	53	Fine red surfaced grog-tempered ware	29		252	
GROGRS	53	Red surfaced grog-tempered ware	58		842	
NKO		North Kent oxidised ware	3	<1%	30	<1%
MICW		Miscellaneous late Iron Age wares	4	<1%	46	<1%
HAX	4	Hadham 0xidised ware	62	2	634	2
HAWO	14	Hadham white slipped oxidised ware	3	<1%	40	<1%
COLB	27	Colchester buff Ware	20	<1%	150	<1%
COLBM	27	Colchester buff Ware mortaria	3	<1%	218	<1%
BUF	31	Unsourced buff wares	6	<1%	40	<1%
BUFM	31	Unsourced buff ware mortaria	9	<1%	590	2%
MWSGS		Miscellaneous white-slipped sandy ware	1	<1%	4	<1%
MWSRS	15	Miscellaneous fine white or cream slipped sandy red wares	2	<1%	12	<1%
MWSRF	16	Miscellaneous fine white or cream slipped red-buff wares	1	<1%	8	<1%
MSR	17	Miscellaneous slipped red ware	10	<1%	93	<1%
RED	21	Miscellaneous red wares	89	<1%	728	2%
REDM	21	Miscellaneous red ware mortaria	3	<1%	64	<1%
VRW	26	Verulamium region white ware	14	<1%	108	<1%
VRWM	26	Verulamium region white ware mortaria	10	<1%	122	<1%
VRB	29	Verulamium region buff ware	19	<1%	214	<1%
VRR		Verulamium region red ware	15	<1%	144	<1%
UCC		Unsourced colour coated wares	10	<1%	61	<1%
UWW		Unsourced white wares	2	<1%	50	<1%
SILT		Silty Ware	1	<1%	4	<1%
COLC	1	Colchester Colour Coated Ware	15	<1%	58	<1%
NFG	46	New Forest grey wares	2	<1%	8	<1%
NVC	2	Nene Valley colour coated ware	15	<1%	238	<1%
NVM	24	Nene Valley white ware mortaria	3	<1%	64	<1%
NVP		Nene Valley painted ware	5	<1%	48	<1%
OXRC	3	Oxford Red colour coated ware	1	<1%	1	<1%
OXRCM	3	Oxford Red colour coated ware Mortaria	11	<1%	217	<1%
OXSWM	13	Oxford white slipped red ware	4	<1%	68	<1%
OXW	25	Oxford white ware	1	<1%	14	<1%
OXWM	25	Oxford white ware mortaria	8	<1%	168	<1%
PORD		Porchester D ware	1	<1%	6	<1%
IMIC	11	Imported mica-dusted ware	17	<1%	50	<1%
MIC	12	Romano-British mica-dusted ware	132	5%	1331	4%
CEP	22	Ceramique a leponge	4	<1%	22	<1%
NGWF		North Gaulish fine white ware	28	<1%	128	<1%
ABAET	55	South Spanish amphoras	4	<1%	346	1%
CGSW	60	Central Gaulish Samian Ware	11	<1%	184	<1%
EGSW	60	East Gaulish Samian Ware	10	<1%	106	<1%
SGSW	60	South Gaulish Samian Ware	9	<1%	52	<1%
Total			2765		35996	

APPENDIX 3: PLANT MACROFOSSILS AND OTHER REMAINS

Trench 2

Sample No.	**5**	**6**	**7**
Context No.	**65**	**69**	**71**
Cereals			
Avena sp. (awn frags.)	x		
Hordeum sp. (rachis nodes)	x		
Triticum sp. (grains)	x		x
(glume bases)			x
(spikelet bases)	x		x
(rachis internodes)		x	x
T. spelta L. (glume bases)	xx	xxx	x
Cereal indet. (grains)	x	x	x
(detached sprout frags.)		x	
Herbs			
Bromus sp.	x	x	
Small Poaceae indet.		x	
Vicia/Lathyrus sp.	x	x	x
Other plant macrofossils			
Charcoal <2mm	xx	xxx	xx
Charcoal >2mm	xxx	xx	x
Charcoal >5mm	xx	x	x
Charcoal >10mm	x		
Charred root/stem	x	xx	x
Indet.culm nodes		x	
Indet.seeds	x	x	
Other remains			
Black porous 'cokey' material	xx	xx	x
Bone			xb
Burnt/fired clay	xx	x	xxx
Siliceous globules	xx	x	
Vitreous material	xx		x
White/buff mineral concretions		x	x
Sample volume (litres)	**10**	**10**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**

Trench 4

Sample No.	**1**	**2**	**3**	**4**
Context No.	**58**	**60**	**62**	**57**
Cereals				
Avena sp. (grains)	x	x		
(awn frags.)	x			
Hordeum sp. (rachis nodes)	x	x		
Triticum sp. (grains)	x	x	xcf	x
(germinated grains)	x			
(spikelet bases)	x	x		
(rachis internodes)	xx	xx		
T. spelta L. (glume bases)	xxxx	xxx	x	x
Cereal indet. (grains)	x	x		
(basal rachis nodes)	x	x		

(detached sprout frags.)		x		
(silica skeletons - awn)	xxxx	x		
Herbs				
Atriplex sp.	x		xw	
Brassicaceae indet.		x		
Bromus sp.	x	xcf	x	
Small Poaceae indet.	x	x		
Large Poaceae indet.	x	xx	x xxw	
Polygonum aviculare L.	x	xcf		
Ranunculus sp.			xw	x
R. parviflorus L.		x	xw	
R. sardous L.			xcfw	
Rumex sp.		x		
Rumex/Carex sp.			x xw	
Tripleurospermum inodorum (L.)Schultz-Bip			x	
Vicia/Lathyrus sp.		x	xx	
Wetland plants				
Carex sp.		xcf	xcf	
Juncus sp.(entire capsules)		xcf		
Sparganium sp.		xcf		
Tree/shrub macrofossils				
Rubus sect. *Glandulosus* Wimmer & Grab			xw	
Halophyte species				
Plantago maritima L.		xcf	xcf	
Other plant macrofossils				
Charcoal <2mm	xxx	x	x	xx
Charcoal >2mm	xxx	xx	xx	xx
Charcoal >5mm	xx	xx	x	
Charcoal >10mm	x			
Charred root/stem	xxxx	xxxx	xxx	x
Waterlogged root/stem			xxx	
Indet.buds	xx	x	x xw	
Indet.culm nodes	x	x		
Indet.florets		xxx		
Indet.moss			xw	
Indet.seeds		xxx	xx	
Waterlogged wood frags.			x	
Mollusc shells				
Hydrobia ulvae		xb		
Other remains				
Black porous 'cokey' material	x			x
Black tarry material	x		x	
Bone	x			
Burnt/fired clay	x		x	x
Burnt organic concretions	x			
Siliceous globules	x	xxx		xx
Vitreous material	x	x		xx
Waterlogged arthropods			x	
White/buff mineral concretions	x	x		
Sample volume (litres)	**10**	**10**	**10**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**

Drain 1

Sample No.	**8**	**19**	**28**	**9**	**10**	**11**	**12**
Context No.	**79**	**113**	**182**	**85**	**91**	**83**	**86**
Feature No.				**167**	**167**	**167**	**167**
Feature type	**Layer**	**Layer**	**Layer**	**Cut-feat.**	**Cut-feat.**	**Cut-feat.**	**Cut-feat.**
Cereals							
Avena sp. (grains)				xcf	x	x	
(awn frags.)		x			x		
(floret bases)					x		
Hordeum sp. (grains)					x		
(rachis nodes)				x	xxx	x	
H. vulgare L. (asymmetrical lateral grains)					xcf		
Triticum sp. (grains)	x	x		x	x		x
(germinated grains)						x	
(glume bases)	x	x					
(spikelet bases)		x			x	x	
(rachis internodes)				x	x		
T. spelta L. (glume bases)	x	x	x	xxxx	xxxx	xxx	x
(spikelet forks)					x		
T. aestivum/compactum type (rachis nodes)				x	x		
Cereal indet. (grains)	x	x				x	x
(basal rachis nodes)				xx	x		
(detached sprout frags.)		x	x		x		x
(silica skeletons - awn)				x	x		
Herbs							
Apiaceae indet.			xw				
Asteraceae indet.				x			
Atriplex sp.			xw	x	x	x	
Bromus sp.		x	x	x	xx	x	x
Chenopodiaceae indet.				x	x		
Daucus carota L.			xw				
Fabaceae indet.					x	x	
Fallopia convolvulus (L.)A.Love	x			x	x		

Galium aparine L.				x	x		
Leucanthemum vulgare L.				xcf			
Small Poaceae indet.				xx	x		x
Large Poaceae indet.					x		x
Polygonum aviculare L.					x		
Prunella vulgaris L.			xw				
Ranunculus sp.				x			
R. acris/repens/bulbosus					xcf		
R. sardous L.			xcfw				
Rumex sp.				x			
Thlaspi arvense L.					x		
Vicia/Lathyrus sp.		x		xx	x	x	
Wetland plants							
Juncus sp. (entire capsule)			xcf				
Tree/shrub macrofossils							
Corylus avellana L.		x					
Malus/Pyrus sp.			xw				
Rubus sect. *Glandulosus* Wimmer & Grab			xw				
Halophyte species							
Suaeda maritima L.			xcfw				
Other plant macrofossils							
Charcoal <2mm	xx	xxx	x	xxxx	xxx	xx	xx
Charcoal >2mm	xx	xxx		xx	xx	xx	x
Charcoal >5mm		xx			x	x	x
Charred root/stem	x	x		xxx	xxx	xx	
Waterlogged root/stem			xxx				
Indet.buds			xw		x	x	
Indet.culm nodes				x			
Indet,inflorescence frags.				xxx	x		
Indet.seeds			x	x			
Other remains							
Black porous 'cokey' material					xx	x	x
Black tarry material						x	x

Bone	x	xb			x xb		
Burnt/fired clay	x	xxx		x	x	x	xxx
Burnt organic concretions				x	x		
Charred arthropods			x				
Fish bone						x	
Pottery	x				xcf		
Siliceous globules				x	x	x	x
Vitreous material	x			x	x	x	x
White/buff mineral concretions				x	x		
Sample volume (litres)	**10**	**10**	**10**	**10**	**10**	**10**	**5**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**0.5**	**0.2**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**12.50%**	**50%**	**100%**	**100%**

Drain 2

Sample No.	**13**	**14**	**18**	**21**	**20**	**23**	**24**
Context No.	**82**	**89**	**96**	**122**	**123**	**125**	**138**
Feature No.					**132**	**132**	**132**
Feature type	**Layer**	**Layer**	**Layer**	**Layer**	**Ditch**	**Ditch**	**Ditch**
Cereals							
Avena sp. (grains)						x	
(awn frags.)							
(floret bases)							
Hordeum sp. (grains)				xcf			
(rachis nodes)				x			
H. vulgare L. (asymmetrical lateral grains)							
Triticum sp. (grains)			x	x		x	
(spikelet bases)			x	x			
(rachis internodes)							
T. spelta L. (glume bases)	x	x	xx	xx	x	x	
(spikelet forks)							
Cereal indet. (grains)		x	x	x			
(detached sprout frags.)							

(silica skeletons - awn)							
Herbs							
Atriplex sp.							xw
Brassicaceae indet.				xcf			
Bromus sp.		x	x	x	x	x	
Chenopodiaceae indet.							
Plantago lanceolata L.							
Small Poaceae indet.		x	xcf	xcf	x		
Polygonum aviculare L.							
Ranunculus sp.							xw
R. acris/repens/bulbosus							
R. parviflorus L.							xw
Rumex sp.	xcf						
Tripleurospermum inodorum (L.)Schultz-Bip						x	
Vicia/Lathyrus sp.			x	x	xcf	x	
Wetland plants							
Carex sp.							xw
Juncus sp.(entire capsules)					xx		
Tree/shrub macrofossils							
Corylus avellana L.							xw
Halophyte species							
Plantago maritima L.		xcf	xcf		xcf	xcf	
Suaeda maritima L.							xcfw
Triglochin maritima L.							xcfw
Other plant macrofossils							
Charcoal <2mm	xxx	x	xxx	xxx		xxxx	x
Charcoal >2mm	xx	x	xx	xxx		xxxx	x
Charcoal >5mm	x		x	x		x	
Charcoal >10mm		x				x	
Charred root/stem	x	x	x	x	xxxx	x	x
Waterlogged root/stem							xxx
Indet.buds						x	xw
Indet.culm nodes							

Indet,inflorescence frags.							
Indet.moss							xw
Indet.seeds		x	x	x	x	x	
Indet.twigs						x	
Other remains							
Amber frags.			xcf				
Black porous 'cokey' material			x	x		x	x
Black tarry material					x		
Bone			x	x		x xb	xb
Burnt/fired clay	x	x	x	x	x	xxx	
Burnt organic concretions							
Eggshell						xb	
Fish bone							
Marine mollusc shell frags.						x	x
Siliceous globules	x	xx	xx	xxx	xxx		x
Small coal frags.							
Small mammal bones						x	
Vitreous material	xx	xx	xx	xx	xx	x	
Waterlogged arthropods							xx
White/buff mineral concretions		x			xx		
Sample volume (litres)	**10**	**10**	**10**	**10**	**10**	**10**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**0.1**	**<0.1**	**0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Drain 3

Sample No.	15	16	17	29	25	26
Context No.	**94**	**100**	**101**	**162**	**173**	**176**
Feature No.					**171**	**170**
Feature type	**Layer**	**Layer**	**Layer**	**Layer**	**Feature**	**Ditch**
Cereals						
Avena sp. (grains)				x		x
(awn frags.)				x		
(floret bases)						x
Hordeum sp. (grains)				x	x	x
(rachis nodes)				xx	x	x
H. vulgare L. (asymmetrical lateral grains)				x	xcf	
Triticum sp. (grains)			x	x		
(spikelet bases)		x		x	x	
(rachis internodes)		x		x		
T. spelta L. (glume bases)	x	xx	xx	xxxx	xx	x
(spikelet forks)				x		
Cereal indet. (grains)	x			x		x
(detached sprout frags.)			x			
(silica skeletons - awn)				xxx		
Herbs						
Atriplex sp.						x
Brassicaceae indet.						x
Bromus sp.				xx	x	xcf
Chenopodiaceae indet.				x		
Plantago lanceolata L.				x		
Small Poaceae indet.	x			x		x
Polygonum aviculare L.					x	
Ranunculus sp.						
R. acris/repens/bulbosus			x			
R. parviflorus L.						
Rumex sp.		x		x		
Tripleurospermum inodorum (L.)Schultz-Bip						

Vicia/Lathyrus sp.				x	x	x
Wetland plants						
Carex sp.						
Juncus sp.(entire capsules)		x		x		
Tree/shrub macrofossils						
Corylus avellana L.						
Halophyte species						
Plantago maritima L.		xcf				
Suaeda maritima L.				xcf		
Triglochin maritima L.						
Other plant macrofossils						
Charcoal <2mm	xx	xx	xxxx	xxxx	xx	xxx
Charcoal >2mm	x	x	xxx	xxx	xx	xxx
Charcoal >5mm	x		xx	x		xxx
Charcoal >10mm						
Charred root/stem	xx	xx	xxx	xxx	x	x
Waterlogged root/stem						
Indet.buds			x			
Indet.culm nodes					x	
Indet,inflorescence frags.				xx		
Indet.moss						
Indet.seeds		x	x			
Indet.twigs						
Other remains						
Amber frags.						
Black porous 'cokey' material		x	x	x		
Black tarry material	xx	xx	x			
Bone			x xb			x
Burnt/fired clay	x	x	x	xx	x	x
Burnt organic concretions			x	x		
Eggshell						
Fish bone				x		xb
Marine mollusc shell frags.						x xb

Siliceous globules		x		x		
Small coal frags.	x					
Small mammal bones				xb		
Vitreous material	xx	xxx	x			x
Waterlogged arthropods						
White/buff mineral concretions						
Sample volume (litres)	**10**	**10**	**10**	**10**	**10**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**0.3**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**50%**	**100%**	**100%**

APPENDIX 4: CONTENTS OF SITE ARCHIVE

1. Client report
1. Archaeological brief
1. Written scheme of investigation
1. Finds report and tables
1. Plant macrofossil report and tables
6. Context registers sheets
210. Context sheets
1. Photo register sheet
1. Plan register sheet
11. Section register sheets
11. Levels register sheets
1. Soil sample register sheet
29. Soil sample bulk sample record sheets
1. Small find register sheet
8. Trench recording sheets
109. Photographs
1. Computer disk containing copies of photos, reports and tables
5. Large sheets of site plans
12. Large sheets of section drawings
10. Boxes of finds

APPENDIX 5: HISTORIC ENVIRONMENT RECORD

Site name/Address: RSPB Bowers Marsh Wetland Nature Reserve, Basildon	
Parish: Bowers Gifford	***District:*** Basildon
NGR: TQ 575539 186708	***Site Code:*** BABM 09
Type of Work: Archaeological trial-trenching and excavation	***Site Director/Group:*** Mark Germany, Essex County Council Field Archaeology Unit
Date of Work: 18/5/10 to 25/5/10 to 27/7/10 to 13/8/10	***Size of Area Investigated:*** Four trenches, totalling 160m^2 Excavation area: 96m^2
Location of Finds/Curating Museum: Southend Museum	***Client:*** Haskoning UK Ltd, acting for the RSPB
Further Seasons Anticipated?: No	***Related HER Nos.:***
Final Report: Essex Archaeology and History	
Periods represented: Roman	

SUMMARY OF FIELDWORK RESULTS:

Part of a Roman saltern was investigated in advance of the construction of a new visitor car park for the RSPB Bowers Marsh nature reserve at Bowers Marsh, Basildon. The archaeological work was recommended by the Historic Environment Management team and carried out by the Essex County Council Field Archaeology Unit on behalf of Haskoning UK Ltd, acting for the RSPB.

The remains of the saltern represent five phases of Roman activity; principally, 1st to mid 2nd century (A), mid 2nd century (B), mid 2nd to mid 3rd century (C), late 3rd /4th century (D), and late 4th century and later (E). The site was used for salt extraction during phases A and C, having been deliberately increased in height during the intervening phase B, and appears to have been use for cultivation during phase D, salt production having presumably ceased. Tidal deposits built up around the northern edge of the saltern during phase E. Features relating to the use of the site for salt extraction comprised ditches, pits and post-holes. Numerous pieces of briquetage and baked clay, representing pedestals, fire bars, pillars, wedges, a pinch prop and vessels, implied use of hearths, while carbonised cereal waste indicated use of chaff and straw as kindling or fuel.

The Roman pottery from the site consisted primarily of jars and is characteristic of a low-status rural site with seasonal and/or functional use. Other notable finds included whetstones, a rubber from a saddle quern, and part of a pipe clay Venus figurine. It seems likely that there were no masonry structures or near the saltern as the investigation found very little Roman brick and tile.

The report concludes that the saltern lay at the tail end of a former creek and was one of three or more salterns on the dryland/wetland edge at the c. 2m contour line. The saltern is moderately-to-well preserved and probably continues eastwards, beyond the eastern edge of the investigation. It is very likely that further features, including hearths and post-holes for timber structures, survive within the un-investigated areas.

Previous Summaries/Reports:- Germany, M. 2011 *RSPB Bowers Marsh Wetland Nature Reserve, Basildon, Essex. Archaeological evaluation and excavation at the new visitor car park*. ECC FAU report 2284	
Author of Summary: Mark Germany	***Date of Summary:*** August 2011

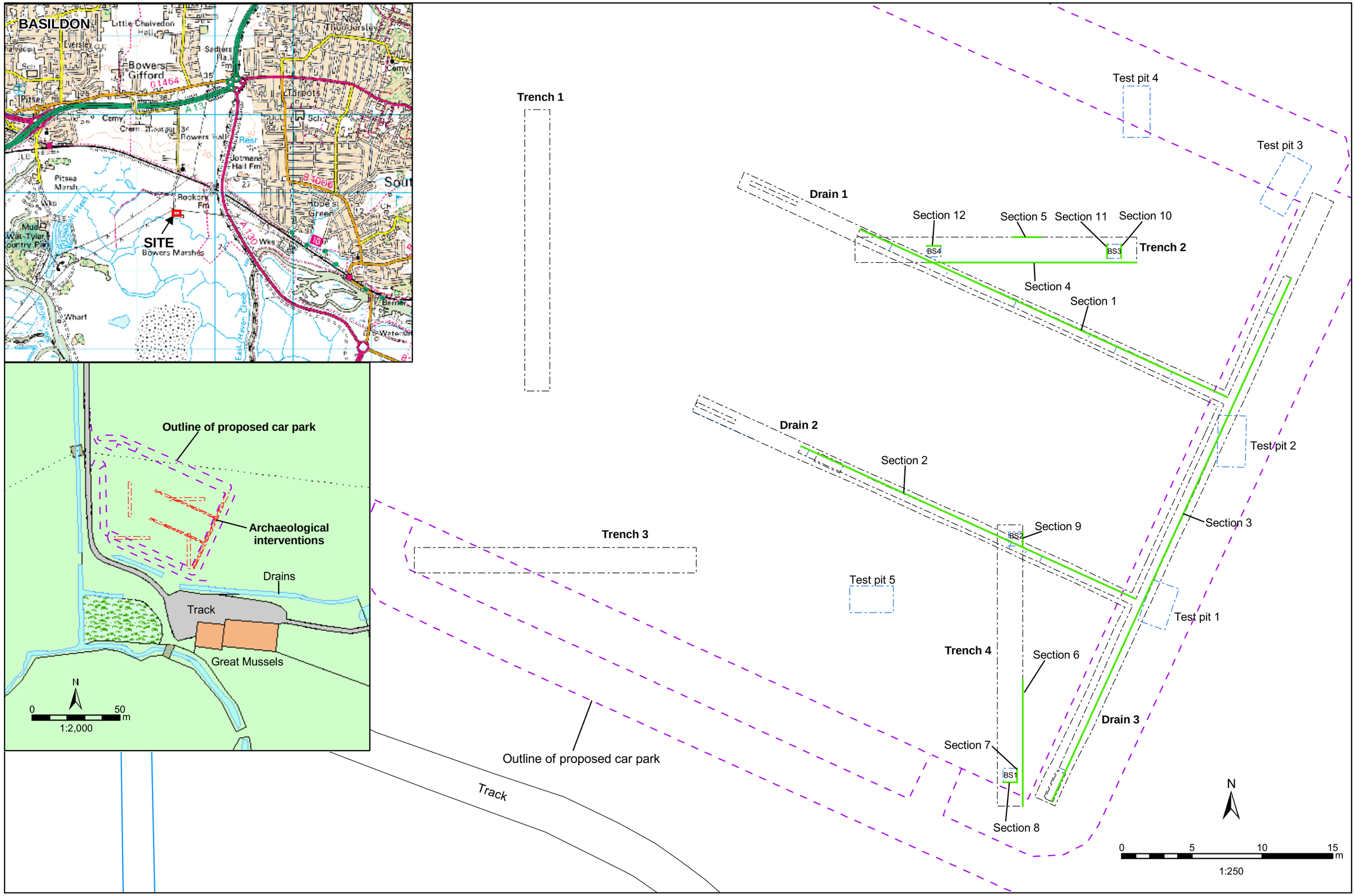
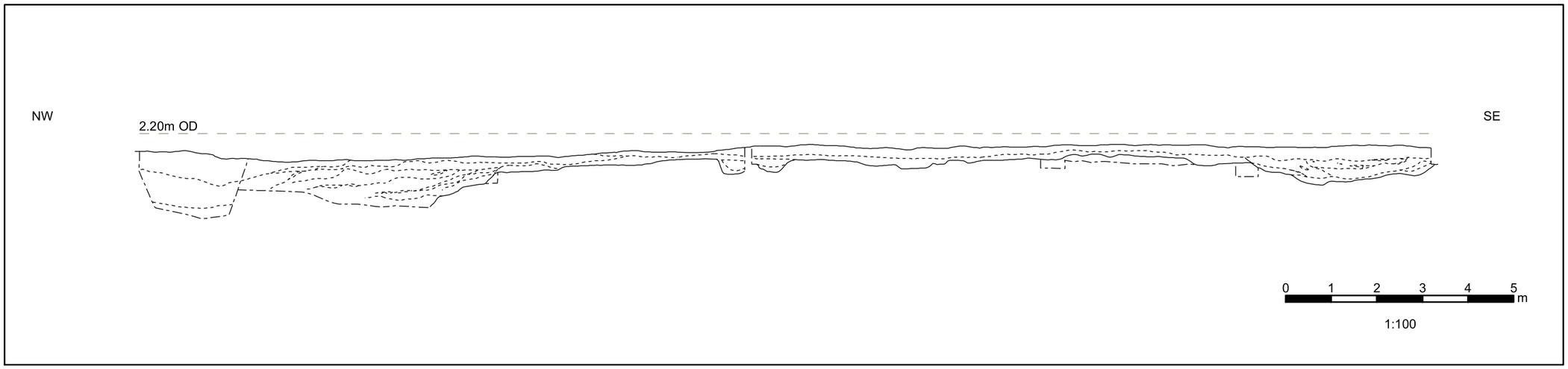


Fig.1. Site location and areas of archaeological excavation



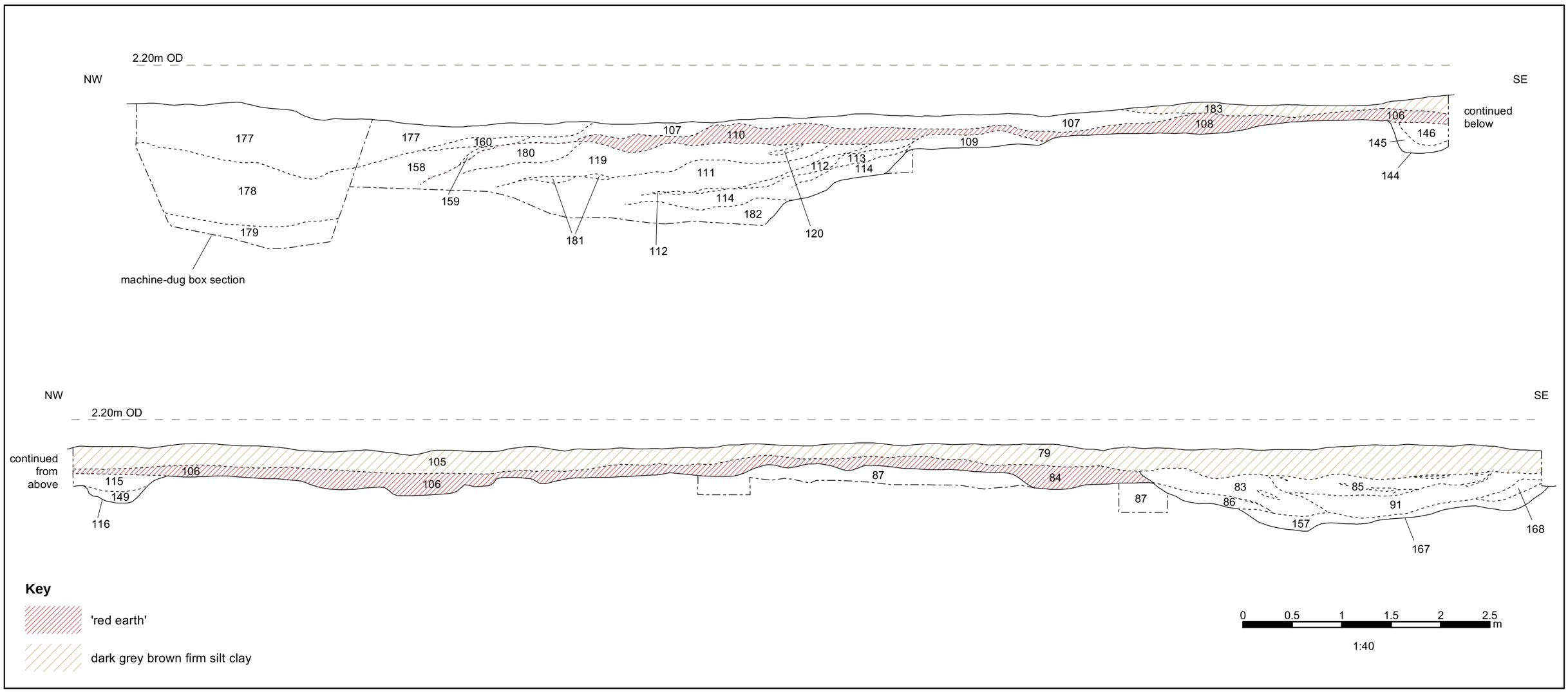
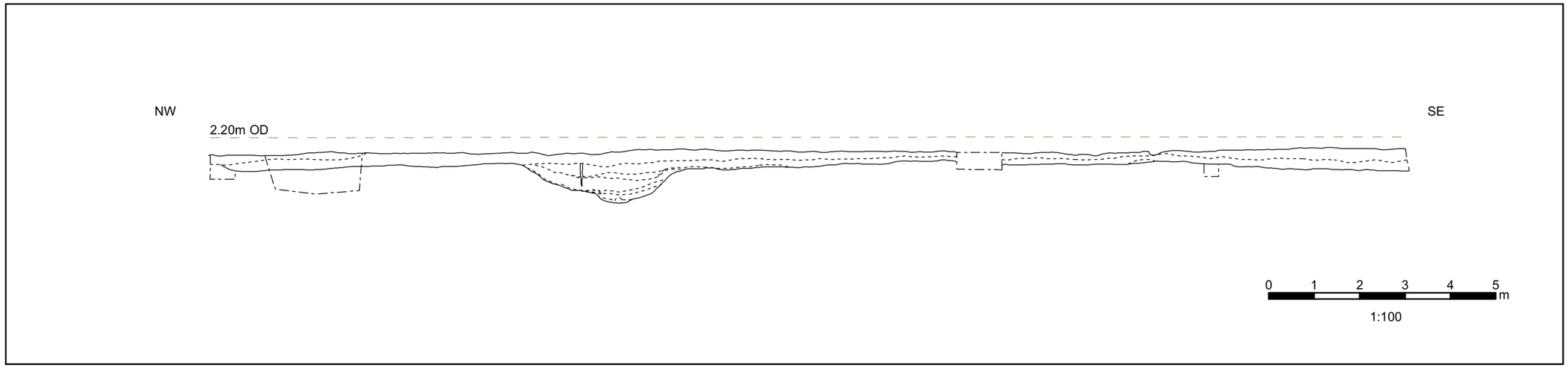


Fig.2. Drain 1, section 1



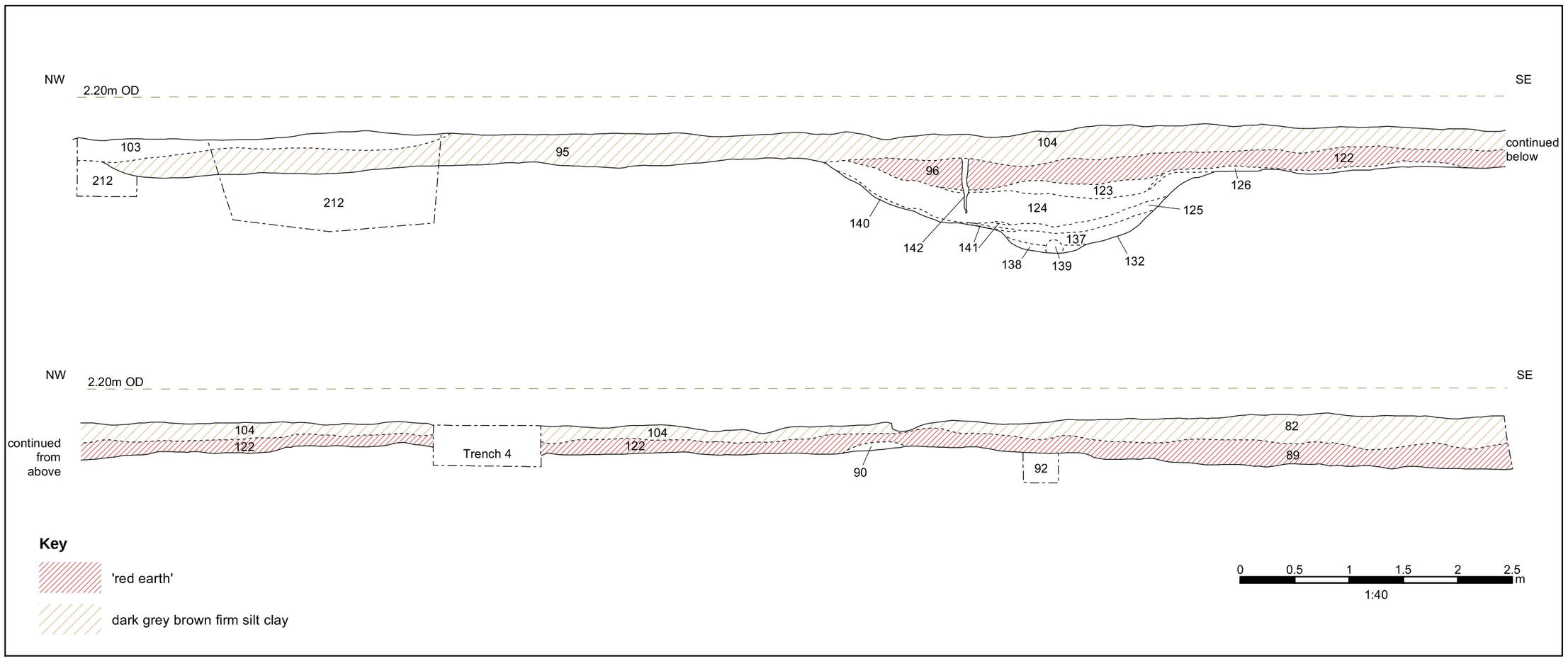
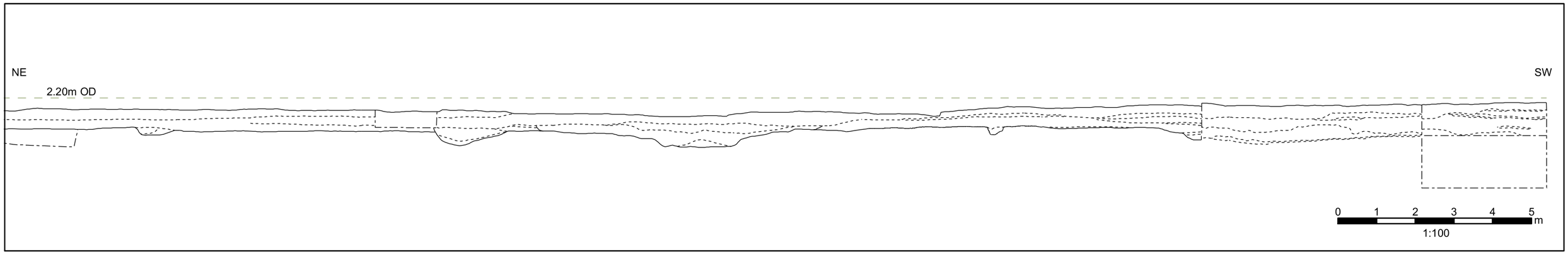


Fig.3. Drain 2, section 2



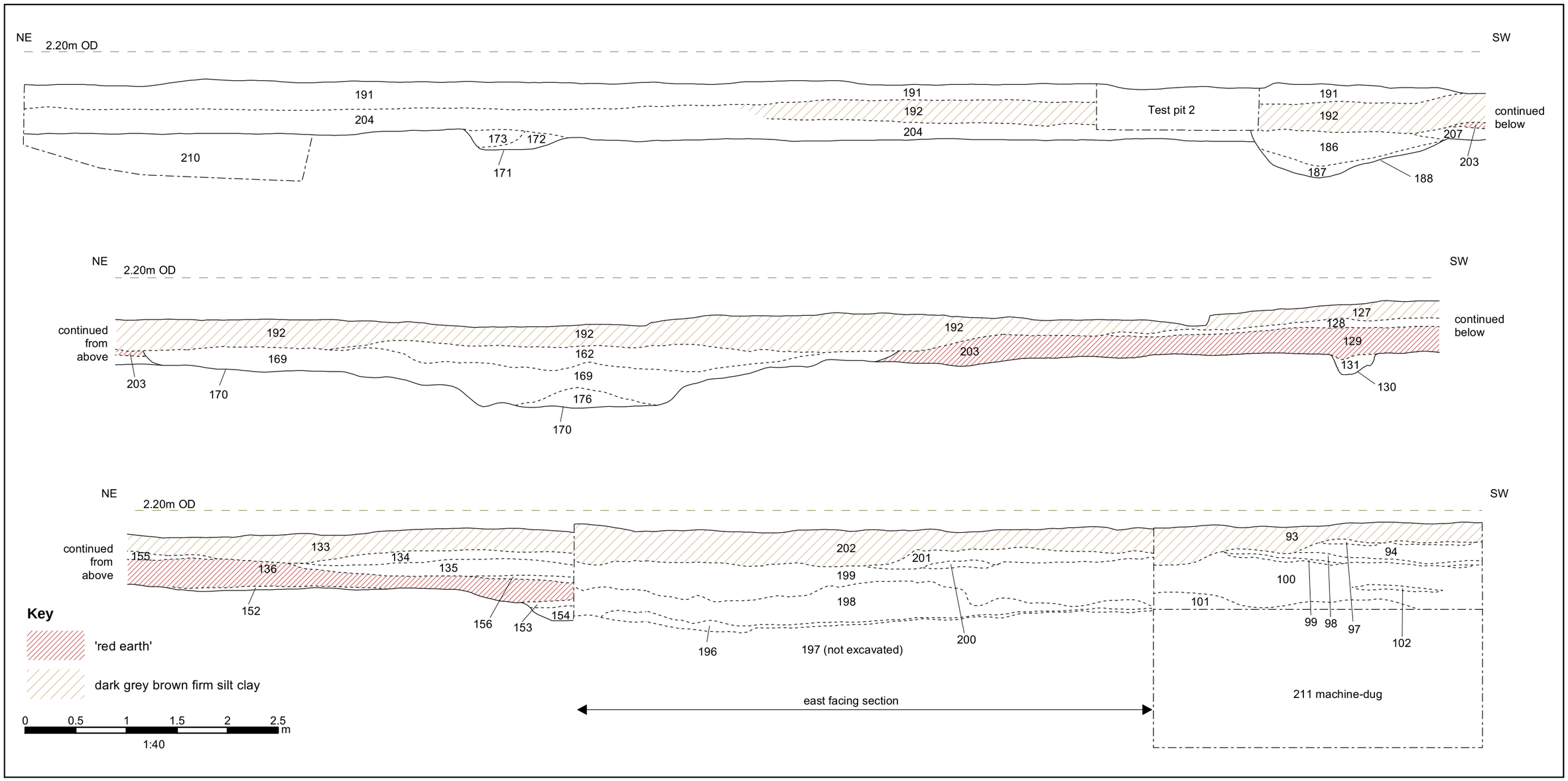
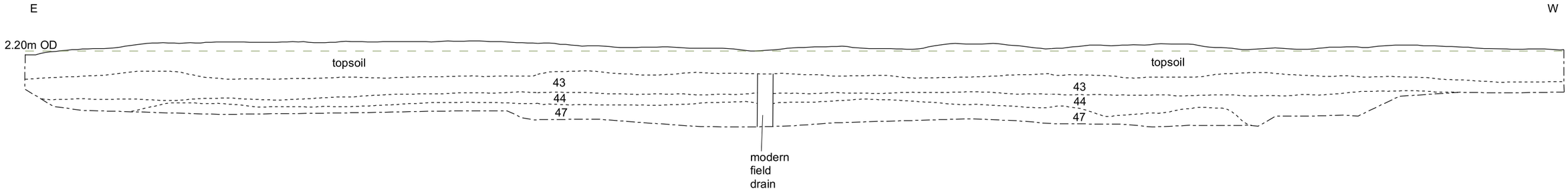
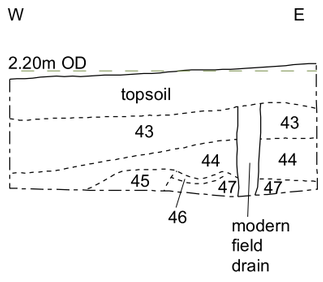


Fig.4. Drain 3, section 3 - west facing

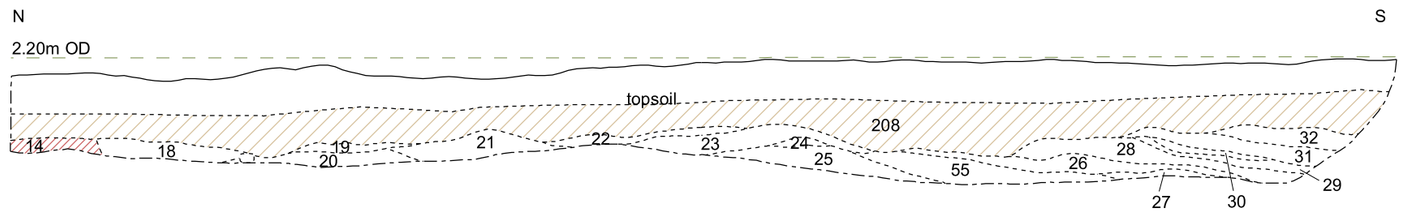
Trench 2, Section 4



Trench 2, Section 5



Trench 4, Section 6



Key

'red earth'

dark grey brown firm silt clay

0 0.5 1 1.5 2 2.5 m

1:40

Fig.5. Trenches 2 and 4, sections 4 to 6

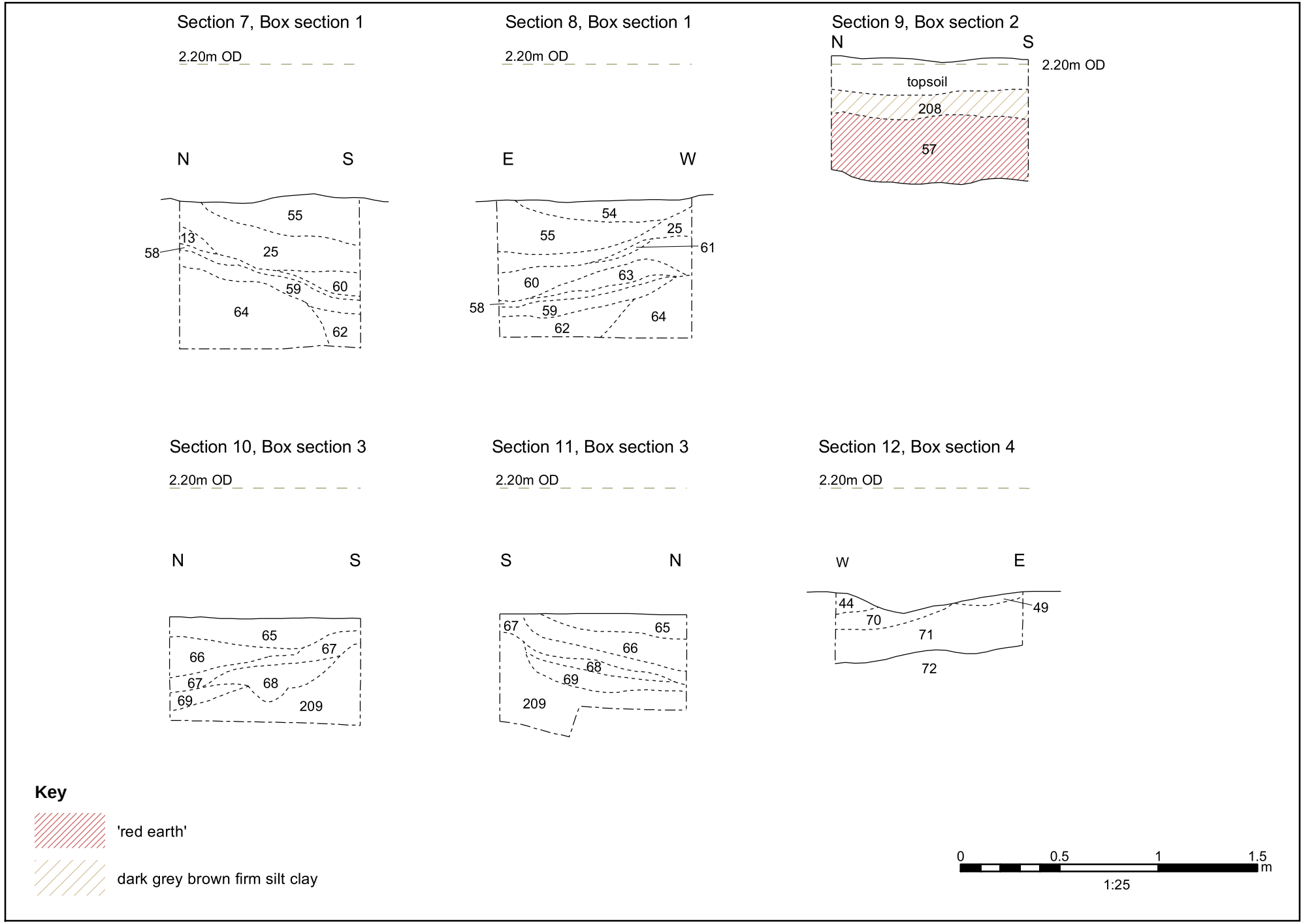


Fig.6. Box sections 1 to 4, sections 7 to 12

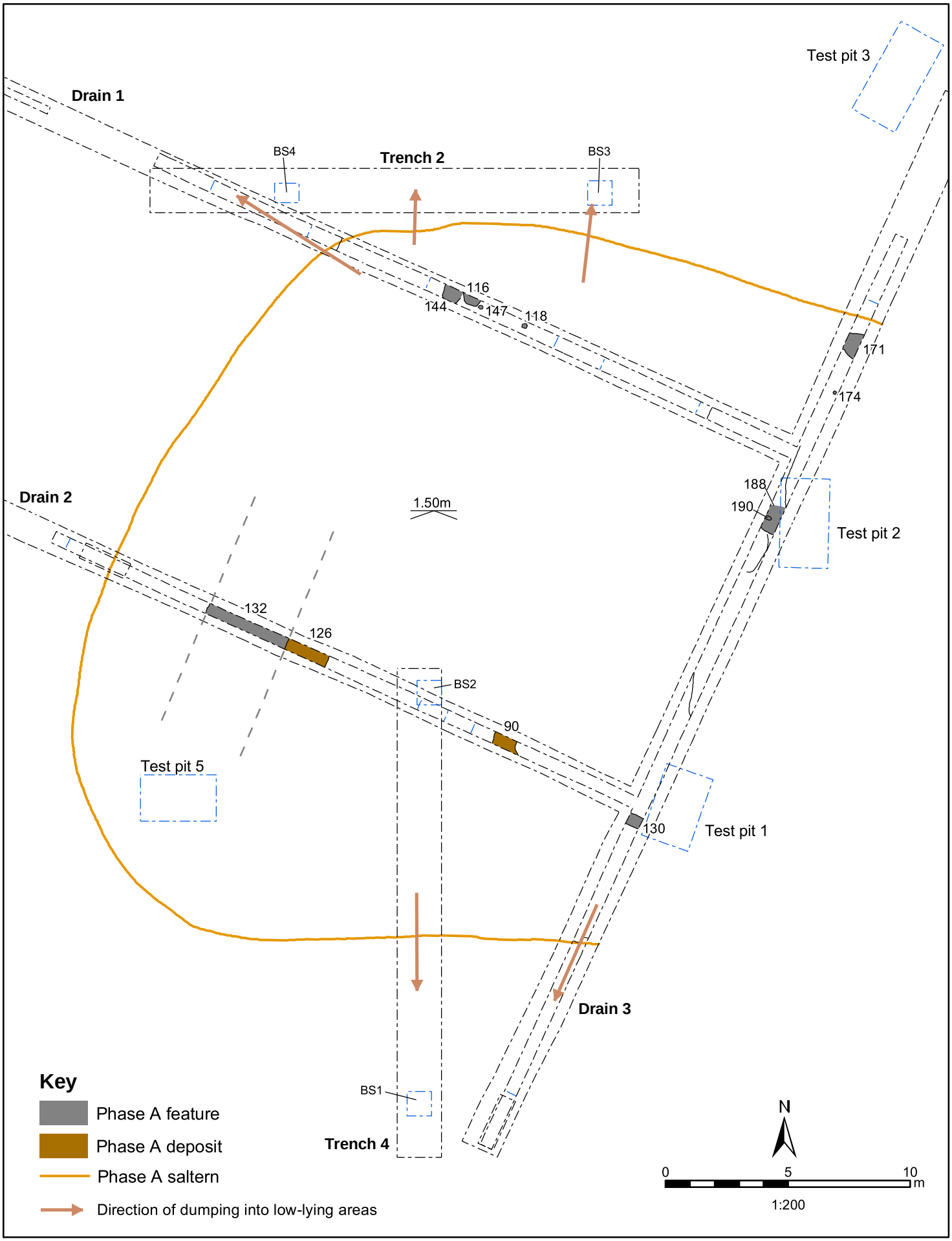


Fig.7. Phase A: 1st to mid 2nd century

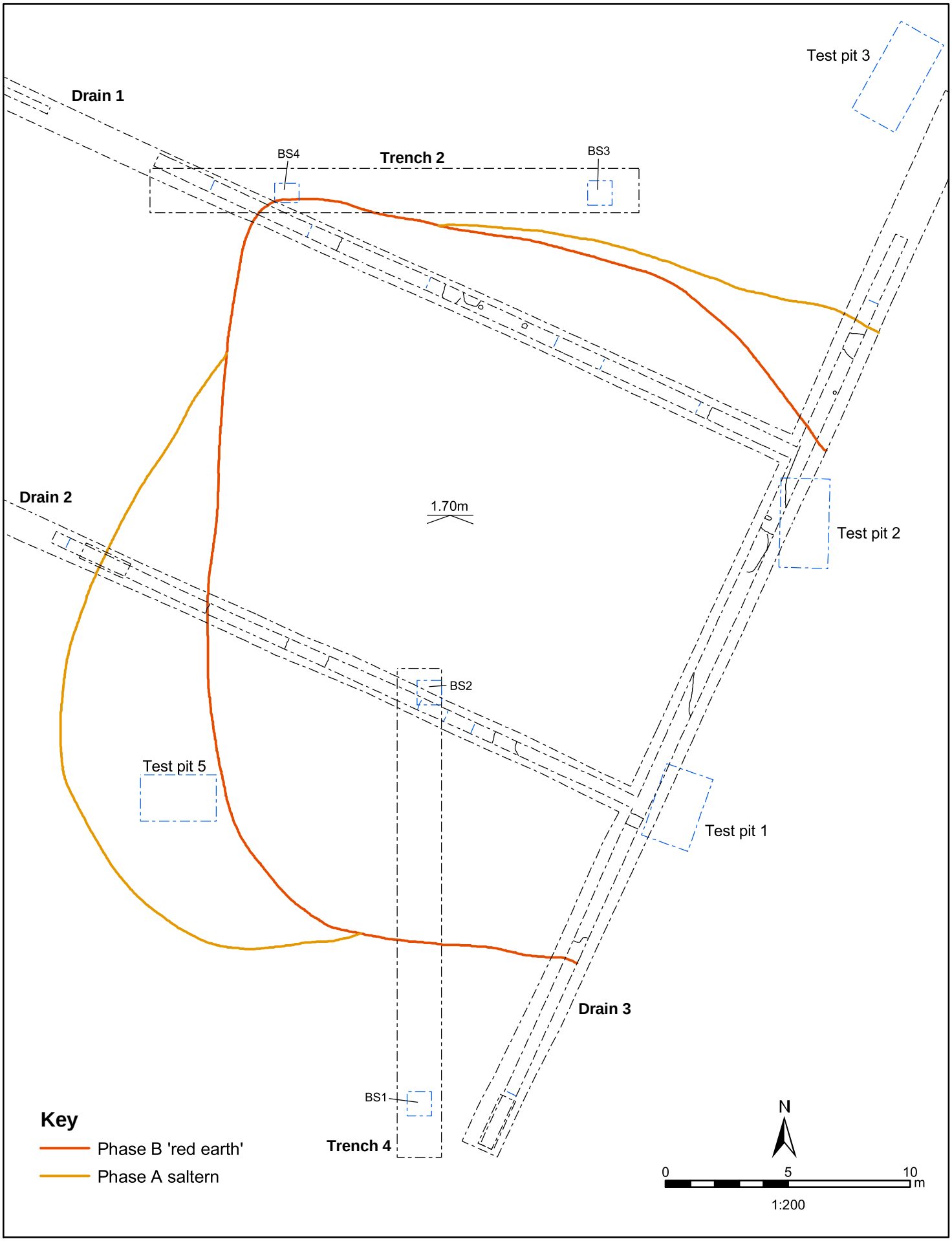


Fig.8. Phase B: mid 2nd century

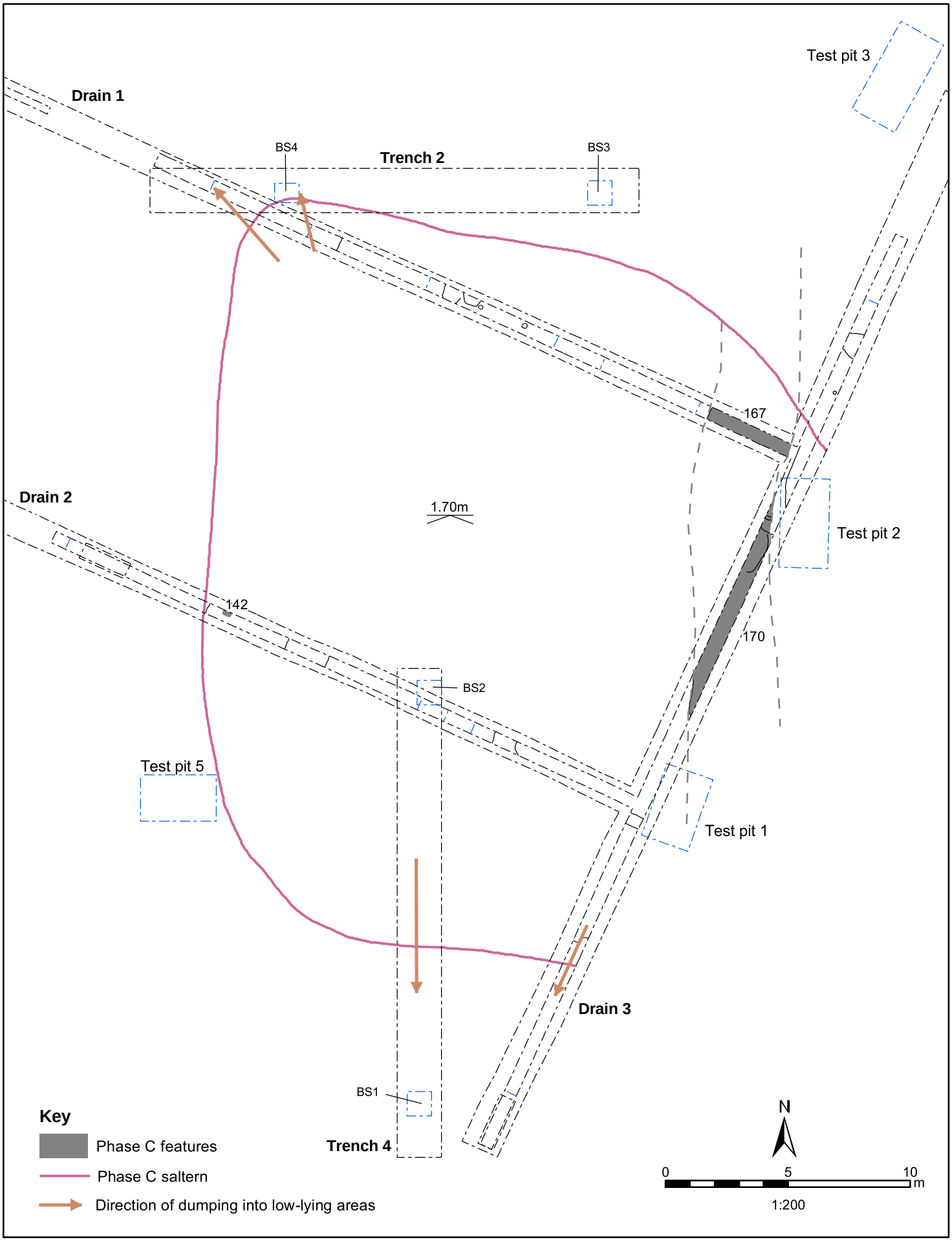


Fig.9. Phase C: mid 2nd to mid 3rd century

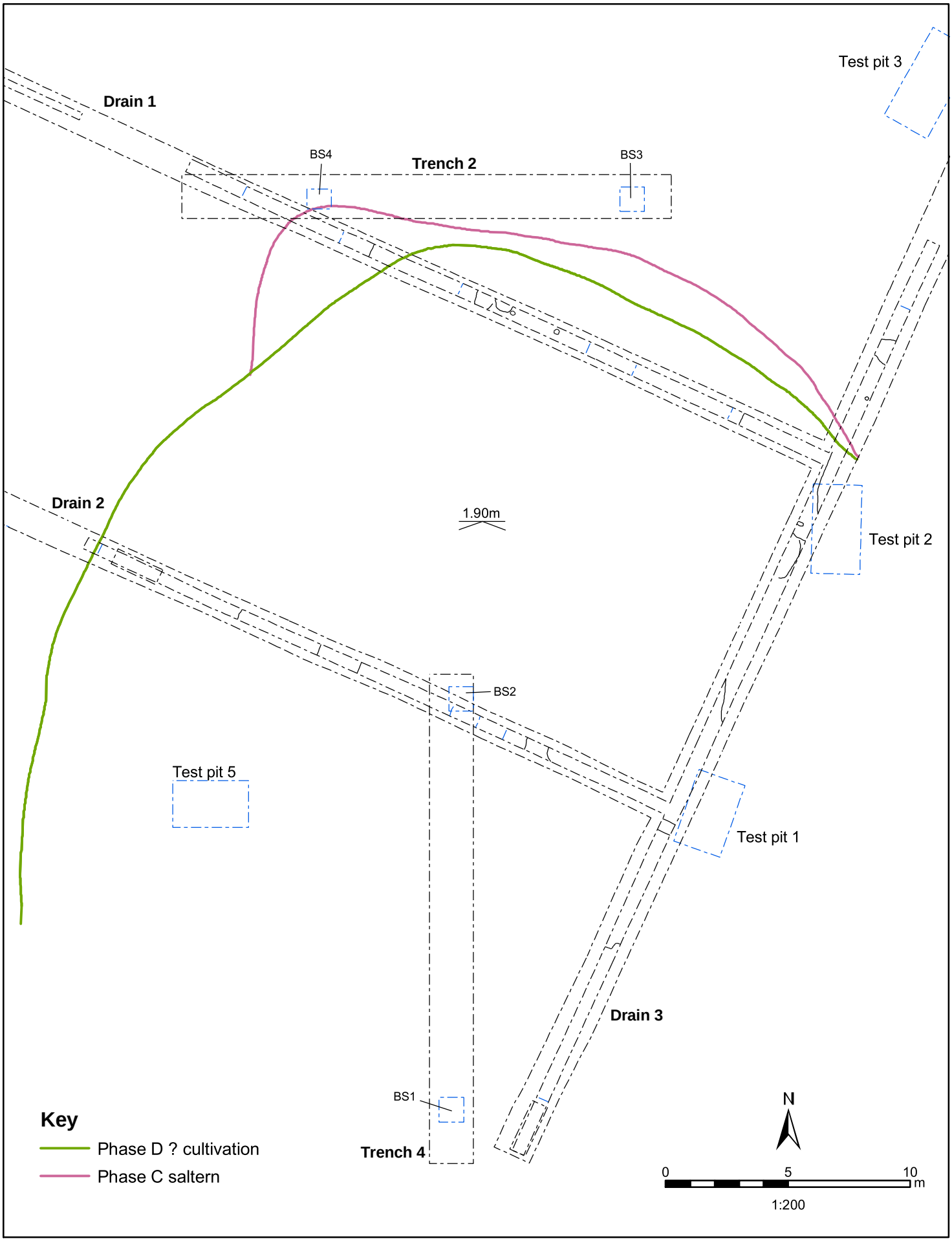


Fig.10. Phase D: late 3rd / 4th century

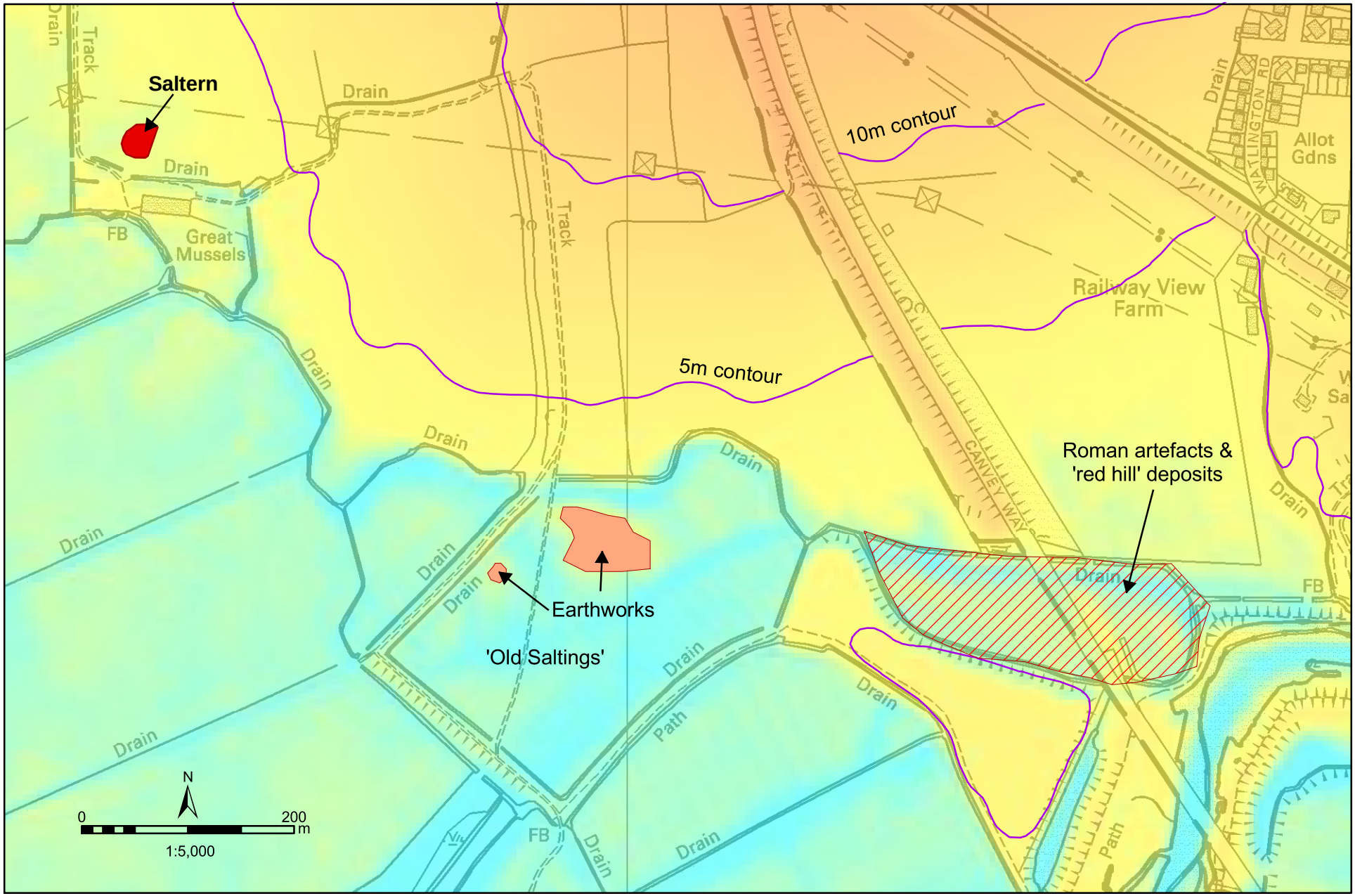


Fig.11. The Saltern with Lidar data (showing low-lying areas in blue)

Plate 1. Trench 4, looking north

Plate 2. Ditch 132, drain 2, looking north-west

Plate 3. Drain 3, looking north

Plate 4. Ditch 170 drain 2, looking north

Plate 5. Cut-feature 167, drain 1, looking north-east

Plate 6. Pits 116 and 144 and post-hole 147, drain 1, looking north-east

Plate 7. Gully 130, drain 3, looking south-east

Plate 8. Pit 188, drain 3, looking north-west

Plate 9. Baked clay and briquetage