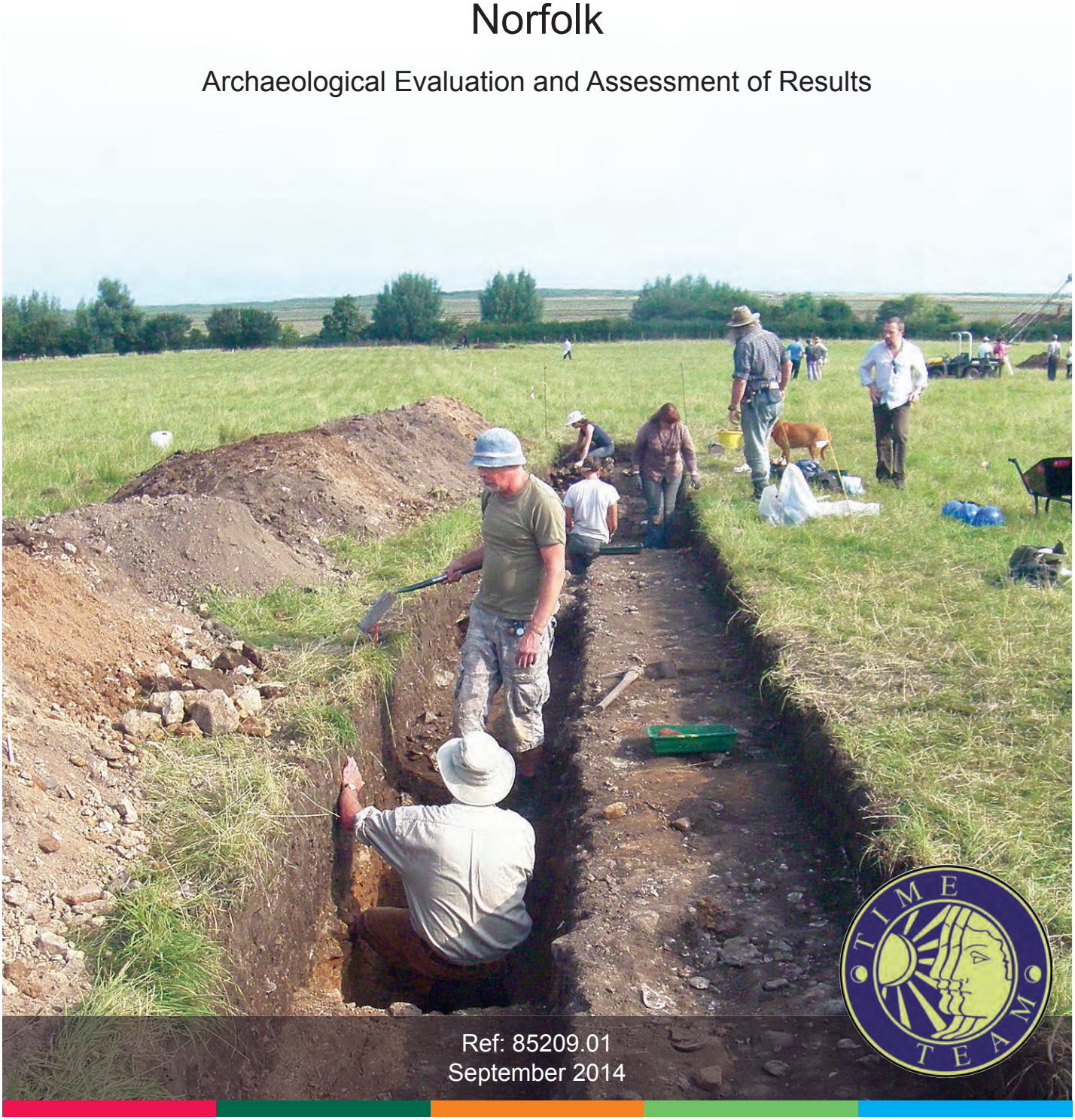
making sense of heritage

Brancaster Roman Fort, (Branodunum), Norfolk

Archaeological Evaluation and Assessment of Results



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wessex archaeology

BRANCASTER ROMAN FORT (BRANODUNUM), NORFOLK

Archaeological Evaluation and Assessment of Results

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DISCLAIMER

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Summary

Wessex Archaeology was commissioned by Videotext Communications Ltd to undertake a programme of archaeological recording and post-excavation work on an archaeological evaluation undertaken by Channel 4's 'Time Team' at Brancaster Roman Fort (*Branudonum*), Brancaster, Norfolk (NGR 578209, 344020). An evaluation consisting of five trenches, magnetometer survey and Ground Penetrating Radar (GPR) survey sought to characterise both the chronology and character of the main fort and also the eastern *vicus*. A trench was also positioned on a possible earlier fort identified from cropmark evidence to the north of the main fort. The fieldwork was carried out between 7–10 August 2012.

Trenches 1, 2 and 4 lay within the fort. These indicated activity in the fort from the 2nd into the 4th century AD, with some evidence for robbing, abandonment and possible later activity in the 4th century. The geophysical survey, particularly the GPR survey, enabled the layout of the fort and a number of structures within in it to be identified, and indicated the generally good preservation of the below ground remains.

Trench 3 was situated within the eastern *vicus*. This revealed considerable truncation by modern ploughing. A number of features were identified, dating to the 2nd and 3rd century AD, overlain by a metalled road surface of 3rd or 4th century AD date.

Trench 5 was positioned to the north of the fort, targeting double ditched features identified by aerial photography. An earlier date for this structure could not be determined as the Romano-British pottery recovered from these ditches could not be tightly dated, though there was some evidence that the features may have been deliberately backfilled.

Despite limited size, these investigations have considerably augmented existing knowledge of this nationally significant monument and have the potential to contribute to our understanding of the Saxon Shore network. Only limited further analysis is proposed, but a short summary article of the results of the evaluation, incorporating the analytical results, will be prepared for submission to the *Norfolk Archaeological Journal*.

BRANCASTER ROMAN FORT (BRANODUNUM), NORFOLK

Archaeological Evaluation and Assessment of Results

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The geophysical survey was undertaken by John Gater, Jimmy Adcock, Emma Wood, Graeme Attwood and Rachel Brown. The excavation strategy was devised by Francis Pryor. The on-site recording was co-ordinated by Naomi Brennan, and on-site finds processing was carried out by Matt Kendall, both of Wessex Archaeology.

The excavations were undertaken by Time Team's retained archaeologists, Tracey Smith, Phil Harding, Rob Hedge, Ian Powlesland, Matt Williams, Raksha Dave and Cassie Newland assisted by Rob Brown, Sarah Leppard, Simon Greenslade, Charlotte Mecklenburgh, Tom Jamieson and John Ames. The metal detector survey was carried out by Kevin Elfeet and Mark Nicolson.

The archive was collated and all post-excavation assessment and analysis undertaken by Wessex Archaeology. This report was written and compiled by Naomi Brennan with specialist reports prepared by Rob Perrin (pottery), Kayt Marter Brown (CBM), Nicholas Cooke (coins), Jacqueline McKinley (human bone), Lorrain Higbee (animal bone), Lorraine Mepham (all other finds), Kevin Hayward (geological identifications), Chris J. Stevens (environmental – charred and mineralised material) and Sarah Wyles (Marine shell; environmental – molluscs). The illustrations were prepared by Rob Goller. The post-excavation project was managed on behalf of Wessex Archaeology by Lorraine Mepham.

Wessex Archaeology would like to thank Will Fletcher (English Heritage), Angus Wainright (National Trust) and David Gurney (Norfolk County Council) for their advice and input during the evaluation process. We would also like to thank Philippa Walton, Mark Corney, Alice Lyons and Naomi Sewpaul for their specialist input during the course of the investigation. Finally thanks are extended to the owners, Jeremy Thompson and the National Trust, for allowing access to the Site for geophysical survey and archaeological evaluation.

BRANCASTER ROMAN FORT (BRANODUNUM), NORFOLK

Archaeological Evaluation and Assessment of Results

1 INTRODUCTION

1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Videotext Communications Ltd to undertake a programme of archaeological recording and post-excavation work on an archaeological evaluation undertaken by Channel 4's 'Time Team' at the site of Brancaster Roman Fort (*Branodunum*), Brancaster, Norfolk, National Grid Reference (NGR) 578209, 344020 (hereafter the 'Site') (**Figure 1**).

1.1.2 This report documents the results of archaeological survey and evaluation undertaken by 'Time Team', and presents an assessment of the results of these works.

1.2 The Site, location and geology

1.2.1 The Site lies within the parish of Brancaster, some 11km to the north-east of Hunstanton and 5km to the north-west of Burnham Market, and is situated less than 2.5km from the present edge of the Norfolk coast. The saltmarsh, sand dunes and associated littoral zone just to the north of the Site forms part of the North Norfolk Coast Site of Special Scientific Interest (SSSI) (citation number 1001342).

1.2.2 Brancaster Roman Fort is a Scheduled Ancient Monument (old county number NF 208, The National Heritage List for England entry 1003983). The Scheduled Area is around 27ha in extent and covers not only the field where the fort is known to situated but the fields to the north and east of this, as well as the northern portion of the fields to the south of A149. This was in order to encompass the spread of the *vicus* and other associated features. The housing estate to the west, though forming part of the *vicus*, is not included as this was subject to excavation in the 1970s before development.

1.2.3 The area considered as part of this evaluation consisted of the main field where the fort lies (under the ownership of the National Trust), the field directly to the north of this and the field immediately to the east (under private ownership).

1.2.4 The fort area is still visible as a distinct raised plateau at a height of approximately 15m aOD. On each side the ground slopes steeply down and into the hollows, indicating the surrounding defensive ditch. The northern field is slightly lower at a height of 7-9m aOD and slopes gently towards the coast. The eastern field is generally flat and lies at around 13m aOD. All the areas are currently under grass, though the eastern field has been ploughed within the last few years. Though the fort area has been ploughed during the 19th and 20th centuries, in 1984 the National Trust acquired the site and were therefore able to remove it from cultivation and further damage (Flack and Gregory 1988, 164).

1.2.5 The bedrock is listed as White Chalk Subgroup while the superficial geology is the Ringstead Sand and Gravel Member; a spur of Head (clay, silt, sand and gravel) crosses the eastern field to a point just by the bend in Green Common Lane to the south (BGS 1:50,000 mapping).

1.3 Archaeological Background and Previous Archaeological Work

1.3.1 Brancaster forms one of a line of Roman forts that was constructed on the south and east coasts of England, generally known as the 'Saxon Shore'. The *Notitia Dignitatum*, thought to reflect the situation in the western empire in the late 4th century AD, lists nine forts under the command of the *comes litoris Saxonici* (Count of the Saxon Shore), although the physical remains of ten or possibly twelve remain (Cunliffe 1977, 1). Brancaster has long been identified from the list of these installations given in the *Notitia Dignitatum* with *Branodunum*, where a regiment of *Equites Dalmatæ*, or Dalmatian Horse was garrisoned. Its form, with rounded corners, internal banks and no bastions, suggests a 2nd or early 3rd century date, making it one of the earlier forts to be constructed and probably of a similar date to Relculver (*Regulbium*) in Kent (*ibid.*, 3). Though the Dalmatian cavalry are unlikely to have been stationed here before the late 3rd century, there is some evidence to suggest that *Cohors I Aquitanorum*, a Gaulish infantry regiment, was originally stationed at the fort (Hassall 1977, 9). The position of a fort at Brancaster and its likely date suggest that it was constructed to guard the approach of the Wash from pirate attacks (Cunliffe 1968, 261), though more recent interpretation has seen the Saxon Shore forts supporting inland garrisons and facilitating the movement of people and resources through the territory and the wider empire (Bidwell 1997, 42-43).

1.3.2 In 1846 the Reverend Lee Warner examined Brancaster with the hope of elucidating the plan of the fort. His investigations were successful in locating remnants of the masonry wall at the north-east corner as well as locating the base of corner tower, apparently contemporaneous with the main wall. He also notes the removal of stonework from the foundation walls some 50 years previously in order to prepare ground for ploughing and to provide stone for the construction of a nearby barn (Lee Warner 1851, 12).

1.3.3 The first systematic excavations of the fort were in 1935, when a number of trenches were excavated within the western part of the fort on the north, south and western defensives (St. Joseph 1936). This was able to establish confidently the size and shape of the fort as well as to locate sections of the wall, ditch and rampart. The rampart was found to be internal and contemporaneous with the wall which it directly abutted. In several places the wall was found to have been complete removed and in places where it was present, much of the facing stone had been removed. Other trenches explored the north-west corner and the west entrance, confirming the presence of a corner tower as well as the west gateway and road, though here the remains had been heavily disturbed by ploughing. One trench was extended to explore the interior of the fort and here found two phases of structures and associated occupation separated by a layer of refuse and debris. The later structure was of fairly crude construction; finds from this layer suggest it is late 4th century AD.

1.3.4 Some brief unpublished notes suggest the presence of Roman structures in a field to the west of Straithe House (Rotham 1960), potentially in the eastern *vicus* settlement.

1.3.5 In 1974 and 1977 excavations took place to the west of the fort to record the western *vicus* settlement prior to the construction of a new housing estate (Hinchliffe and Sparey Green 1985). This encountered a certain amount of truncation due to ploughing which was thought to have removed some of the structural remains, but a series of ditches and pits was located. The activity would seem to indicate settlement in the late 2nd and through the 3rd century AD, with some 4th century activity. The alignment of the settlement differs from the fort and it has been suggested that the *vicus* pre-dates the fort; the establishment of such a settlement, therefore, within the rural hinterland may indicate an earlier military presence.

1.3.6 In 1985 three trenches were excavated in the western part of the fort, two across the defensive ditch and one at right angles along its edge (Flack and Gregory 1988). Though the trenches were not able to excavate a full profile across the ditch, in both cases they located a gully at the base of the western (outer) edge. It was hoped that the trench at right angles to the ditch might locate remains of the road, but nothing was found to have survived. Intriguingly the ditch does not appear to be directly parallel to the fort and runs directly in front of the west gate, posing questions about the connection between the fort and the western *vicus*.

1.3.7 As well as the evidence for Romano-British activity, Neolithic and Mesoltihc flints were discovered during the 1985 excavations (Flack and Gregory 1988, 169).

2 AIMS AND OBJECTIVES

2.1.1 A project design for the work was compiled (Videotext Communications 2012), providing full details of the research aims and methods. A brief summary is provided here.

2.1.2 The aim of the project was to characterise the nature and date of the Site and place it within its historical, geographical and archaeological context. Three research aims were outlined in the project design:

- Research Aim 1: What is the character of the archaeology represented by cropmarks at both the main fort site and the eastern *vicus*? Do the differing alignments suggest the presence of an earlier fort?
- Research Aim 2: What is the chronological sequence of fort construction at Brancaster? Is there a 2nd century AD fort at the site?
- Research Aim 3: Does any evidence survive for shore-side development at Brancaster?

3 METHODOLOGY

3.1 Geophysical Survey

3.1.1 Prior to the excavation of evaluation trenches, a geophysical survey was carried out across the Site using a combination of resistance and magnetic

survey. The survey grid was tied in to the Ordnance Survey grid using a Trimble real time differential GPS system.

3.2 Evaluation Trenches

3.2.1 Five trenches of varying sizes were excavated, their locations determined in order to investigate and to clarify geophysical anomalies and address specific research objectives (**Figure 1**).

3.2.2 The trenches were excavated using a combination of machine and hand digging. All machine trenches were excavated under constant archaeological supervision and the machine was only used to remove modern topsoil or ploughsoil. When machine excavation had ceased all trenches were cleaned by hand and archaeological deposits investigated.

3.2.3 At various stages during excavation the deposits were scanned by a metal detector and signals marked in order to facilitate investigation. The excavated up-cast was scanned by metal detector.

3.2.4 All archaeological deposits were recorded using Wessex Archaeology's *pro forma* record sheets with a unique numbering system for individual contexts. Trenches were located using a Trimble Real Time Differential GPS survey system. All archaeological features and deposits were planned at a scale of 1:20 with sections drawn at 1:10. All principal strata and features were related to the Ordnance Survey datum.

3.2.5 A full photographic record of the investigations and individual features was maintained, using digital images. The photographic record illustrated both the detail and general context of the archaeology revealed and the Site as a whole. Digital images have been subjected to a managed quality control and curation process which has embedded appropriate metadata within the image and ensures the long term accessibility of the image set.

3.2.6 At the completion of the work, all trenches were reinstated using the excavated soil.

3.2.7 A unique Site code **85209** was agreed prior to the commencement of works. The work was carried out between 7–10 August 2012. The archive and all artefacts were subsequently transported to the offices of Wessex Archaeology in Salisbury where they were processed and assessed for this report.

3.3 Copyright

4 RESULTS

4.1 Introduction

4.1.1 Details of individual excavated contexts and features, the full geophysical report (GSB 2014), the summary of the landscape and earthwork survey and details of artefactual and environmental assessments, are retained in the archive. Summaries of the excavated sequences can be found in **Appendix 1**.

4.2 Geophysical Results

4.2.1 Geophysical survey was carried out over a total area of 84.5 hectares using magnetometer survey with a 0.8 hectare area within the fort interior subjected to detailed Ground Penetrating Radar (GPR) survey. Conditions for the survey were good. It should be noted that depths referred to in the GPR data are only an approximation. The following discussion and accompanying data is taken from the report compiled by GSB (2014).

Magnetometer survey (Figure 2)

4.2.2 Earlier unpublished work at Brancaster by English Heritage in 1973 and 1975 (Bartlett 1973; Bartlett 1975) provided a glimpse of the potential that could be achieved by carrying out magnetic survey at the site. Ditches, pits and field systems, following a rectilinear pattern, were detected immediately to the west of the fort, on the site of the present housing estate. It is perhaps surprising. therefore, that prior to this investigation, no further geophysical survey had been carried out, apart from an evaluation project to the east of the *vicus* (GSB 2006).

<u>The fort</u>

4.2.3 The main elements of the fort are clearly visible in the magnetic data. The defences, comprising banks and ditches, stand out in the east and west but unfortunately are obscured by modern field boundaries in the north and south. Gateways [**1**, **2, 3 & 4**] are visible at the cardinal points, some more clearly than others, and the courses of the internal roads are discernible but only the east-west route is conspicuous. Barrack blocks are apparent in the south-west quadrant but much more clearly in the south-east [**5**] where the lines of buildings are visible, with negative magnetic responses corresponding to the wall foundations. Similarly many of the rooms and the courtyard which make up the *principia* [**6**] show as negative anomalies (due to the lack of magnetic material compared to the immediate surroundings). It is interesting to note the strong positive anomalies which presumably relate to magnetic deposits which have built up inside the individual rooms; in some cases these are likely to represent the sources of heat for the hypocaust system. The results correlate extremely well with the radar findings [**Figure 3, B** and **D**]. In the northern half of the fort the complexity of the magnetic responses is even greater, but buildings visible in the radar are not as clear magnetically. For example, the granary building's walls are at best poorly defined but more often absent in the data; this is likely to be a consequence of the lack of magnetically enhanced deposits which are present in and around the barracks and *principia*. This interpretation could explain why many of the small buildings, including probable workshops, elsewhere in the fort are visible. The magnetic data from the three rooms at [**7**] match extremely well with the radar [**Figure 3, J** & **I**]; the clarity is such that the magnetic data even indicate the line of the flue into the hypocaust

room [**I**]. Other anomalies which have been highlighted are those at [**8** & **9**] which could be large pits or areas of intensive burning and the responses [**10**] which correspond with the enigmatic radar results [**Figure 3, G**]. A line of four ferrous-like anomalies [**11**] is perplexing; it is uncertain whether they relate to the fort or to much more recent features.

The *vicus*

4.2.4 An area in the field to the east of the fort shows a complex of responses very similar to the earlier English Heritage surveys. The line of the east-west road which runs through the fort is apparent, although it veers slightly southwards and there appear to be later features cutting through. The rectilinear pattern of ditches and presumed tracks indicates a formal layout to the majority of the *vicus* mapped by the survey. Overlapping and intercutting anomalies [e.g. **12**] suggest multi-phased activity. The data suggest a lack of pits throughout which is perhaps surprising given the nature of the settlement. The general results concur well with aerial photographs; clearly the *vicus* extends well beyond the area which was surveyed.

Area to the north

4.2.5 The density and complexity of the anomalies in this area is much less than compared with the *vicus* field. In the south-western extension of Area 1 there is a similar pattern of anomalies [**13**] as in Area 3 and in the English Heritage survey in the housing estate to the south. The diminished magnetic response may be due to a phenomena referred to as a 'habitation effect' (Gaffney and Gater 2003) whereby the strength of magnetic responses decreases away from the core of activity. However, in this instance it is possible that a post-Roman deposition of alluvium is resulting in a weaker anomaly strength. In the northern half of the area there appears to be a separate double-ditched enclosure [**14**] with internal divisions which seems to have no direct association with the fort, apart from the fact it follows a very similar alignment. At [**15**] there is an unusual curving response which is difficult to interpret. In this context it could be of archaeological interest but the nature of the anomaly suggests a natural (alluvial) origin is perhaps more likely; hence the uncertain interpretation category.

GPR survey (Figure 3)

4.2.6 After the success of the magnetic survey, there were high hopes for the results of the GPR survey. Despite only covering a relatively small percentage of the whole site, they exceeded expectations revealing a wealth of detail indicating numerous structures, construction details and multi-phased elements of the fort. As the MIRA system and processing software were on loan for the 'Time Team' project, there was only a limited amount of processing and interpretation that could be carried out to produce this report. It therefore gives just a basic overview of what was found, highlighting some key features of note; it should provide an excellent basis for any further investigations in the future.

4.2.7 The survey area was chosen based on crop-marks which appeared to show the *principia*. This building dominates the southern third of the data, with the walls and large rooms clearly visible and spanning a total of approximately 51m by 38m. Other features include: a possible monumental feature [**A**] within the central 20m-sided courtyard, plus two more similar features immediately to the north-east and north-west [**D**]; a grid of very small reflectors [**B**], presumably the *pilae* within an extensive hypocaust system;

potential structures [**C**] immediately outside the building complex; and one room (approximately 8m by 5m) with significantly greater depth extent (0.45m – 2.2+m) than the others (which, at the northern end of the *principia,* peter out at around 1.5m below ground level).

4.2.8 North of the *principia* is a large range of buildings one of which [**E**] has the hallmarks of a large granary, 7m by at least 21m, with a central division or drain, floor pillars for air circulation and buttressed walls. On the north side of this, a large rectangular space [**F**] is around 18m north-south and could be as much as 40m east-west based on the magnetic data. What is unusual about this structure is the oval response that contracts towards the centre of the space with increasing depth, to reveal a smaller inner rectangle [**G**] approximately 10m by at least 18m and which extends down beyond 2.2m below ground level. The oval shape could be the effect of tip-lines within demolition material filling this feature rather than a response to a physical structure. There is also a strong magnetic response [**Figure 2, 10**] coincident with the inner rectangle.

4.2.9 Further north again, beyond a range of buildings adjoining [**F**], is another large structure [**H**] with no obvious internal divisions – although this does not preclude their existence. It has a small porch-like extension on the north side but it is difficult to tell whether the structure is cruciform as the south side is masked somewhat by an area of increased response, perhaps demolition material.

4.2.10 On the eastern side of the survey area is a three-cell building although whether they are all contemporaneous is arguable. The southern-most room has a cross-flue hypocaust system [**I**] which, with depth, fades to reveal a semi-circular feature beneath it (from around 1.5m below ground level) that seems to extend off the southern side of the central room [**J**] and has a star-shaped response at its centre.

4.2.11 South of the three-celled structure is a large building [**K**] containing a number of rooms, three of which [**L, M, N**] appear to have intact floor surfaces at around 0.3m, 0.4m and 0.7m below ground level, respectively. This building is interesting as it lies on a slightly altered alignment from the majority of the other structures; most are aligned with the *principia* and thus the Saxon Shore Fort phase of defences, whereas [**K**] is in the same orientation as the *vicus* to the east. One explanation could be that this is a relatively early *mansio* that was built on the line of a pre-existing Roman road running through the original 2nd century fort, which was then subsumed within the larger fort construction, whose focus in the landscape, and thus orientation, was somewhat different.

4.2.12 Down the centre of the survey block runs one of the principal thoroughfares, leading to the *principia* and along this can be seen a series of narrow linear anomalies [e.g. **O**], presumably drains. Some of these can be seen to branch off [**P**] towards the buildings down each side.

4.2.13 There are numerous other linear anomalies and zones of response that are undoubtedly further structural elements but which are less clear in the data, due to variation in either preservation, overburden or construction, for which interpretation is accordingly more ambiguous. Examples include the rectilinear features up against the northern boundary [**Q**]; zones of increased

response [**R**], possibly indicating metalling; the linear responses [**S**] and [**T**] which have markedly different orientations to the other features identified but which could be more drains or some such.

4.3 Conclusions

4.3.1 The magnetometer survey was able to provide a detailed plan of the *vicus* to the east of the fort and other archaeological features to the north as well as complementing the radar results within the interior of the fort. Use of the GPR was focused within the fort interior and was able to achieve incredibly detailed results, identifying the *principia*, a possible *mansio*, and a granary as well as hypocaust systems, drainage routes, intact floor surfaces, pillar bases and buttresses.

4.4 Evaluation Trenches

4.4.1 Five trenches were excavated as part of this investigation. Trenches 1 and 2 both lay within the interior of the fort, targeted on buildings of varied alignment. Trench 3 was positioned in the eastern field over the eastern *vicus* settlement. Trench 4 was situated over the northern fortifications of the fort and Trench 5 lay in the northern field over a possible earlier defensive structure. The size and shape of the trenches varied to account for the potential targets that they were sited on and the archaeology subsequently uncovered. Any substantial remains were left *in situ*. Those trenches in the main and eastern field lay at heights of between 10-15.5m aoD while Trench 5 lay at around 8m aOD.

4.4.2 The trenches within the fort interior saw the removal of between 0.25-0.50m of overlying topsoil while Trench 3 saw 0.58m of overlying topsoil. Only in Trench 5, which lay to the north of the fort was a thin (0.15m) subsoil seen beneath 0.40m of topsoil. Where encountered the natural geology was sand with gravel inclusions.

Trench 1 (Figures 4 and 5)

4.4.3 Trench 1 was positioned over what had been identified as the *principia* or headquarters of the fort. The trench was situated over the central part of the southern range of rooms. In general, though largely relating to abandonment and later activities, the pottery suggests activity from the 2nd into the 4th century.

4.4.4 The earliest stratigraphic features identified were two sections of east-west aligned wall, **128** thought to be the external south wall and **130** an internal wall. Both walls lay over 1m below the present ground surface and continued below the limit of excavation.

4.4.5 Wall **128**, which lay in the southern part of the trench, was at least 0.90m wide and constructed from stone bonded with a dark yellow mortar. Sand deposits **142** and **143** lay to the south of the wall, separated by clay deposit **141**. As no construction cut was visible and the wall depth continued into **143** these layers must be re-deposited and either levelling or possible construction cut deposits. The origin of **141** is curious but could potentially provide a firmer footing during the construction of the wall.

4.4.6 Above re-deposited sand layer **142** was a thin layer of stone chippings (**136**) which may relate to the construction or potentially the demolition of wall **128**

(**Figure 4, Section 2; Figure 5, Plate 1**). Overlying this was **122**, which may represent general build up during the life of the fort and contained 2nd century AD pottery. Above this was a distinctive tile-rich deposit (**121**) that could indicate collapse of the roof or, given the fragmentation of the tiles, material discarded during dismantling of the roof. This layer was equivalent to **115**, identified slightly further to the south. Covering tile deposit **121** was **120**, a spread of demolition material; this is equivalent to **114** which overlay **115** to the south.

4.4.7 Cutting through demolition debris **120** was robber cut **127**, which had removed the greater proportion of wall **128** (**Figure 4, Section 2; Figure 5, Plate 1**). The homogeneous nature of the single fill **126** suggests it was deliberately backfilled and 4th century AD pottery was recovered from this deposit. Backfill deposit **126** lay beneath **107**, which is equivalent to **105** and **106** seen elsewhere in the trench.

4.4.8 The interior wall **130**, located in the central area of the trench, was similarly east – west aligned and its stone block construction is largely obscured by a pale yellow mortar (**Figure 5, Plates 2 and 3**). With a width of only 0.48m it is narrower than **128** but this is to be expected for an internal division. Though its position suggests it divides two rooms, the deposits to the north and south of the wall differ considerably.

4.4.9 Against the southern face of wall **130** at the limit of excavation a portion of *lorica squamata* (Object Number [ON] 83) was recovered (**Figure 5, Plate 4**). This artefact (assigned context **129**) was situated on a possible pink-brown mortar surface **132**, though only a small area was seen along the wall face. When ON83 was lifted, a sand layer (**139**) could be seen beneath **132**, though as the wall could be seen still to continue, this layer is thought to be re-deposited. Above **132** but not extending fully to the wall face was another mortar deposit of pale-yellow white mortar (**131**), a possible later surface.

4.4.10 Above mortar **131** and extending fully to abut wall **130** was occupation deposit **125**. Within this layer were a number of pieces of articulated animal bone representing cuts of meat (Animal Bone Group [ABG] 82) as well as a probable scattered coin hoard deposited in the mid 4th century AD. An environmental sample (ES 1) taken from this context found low numbers of cereal seeds, but a number of plant seeds mainly found in wasteland and arable margins were present, supporting the idea that this context relates to the final or post-abandonment phase of the fort. This deposit was overlain by **124**, a layer of alternating lenses of mortar and dark silts which must surely post-date the decommissioning of the fort. Over this, and capping the remnants of wall **130**, was a spread of mortar (**123**) (**Figure 5, Plates 2 and 3**).

4.4.11 Mortar **123** also covered the layer of built up material to the north of wall **130 (138**). Unlike **124** to the south, **138** was a fairly clean sandy deposit with occasional fragments of stone. It was stratigraphically above a sand deposit (**140**) which, for the same reasons as **139** to the south, must have been re-deposited. These two layers are at a similar height in relation to wall **130** and may therefore be equivalent deposits.

4.4.12 Overlying **123** and directly above wall **130**, though at a slightly divergent alignment was a defined area of pink-red mortar or crushed tile (**137**)

(**Figure 5, Plate 2**). It was seen mostly clearly in the western part of trench though it may continue on the eastern edge of the sondage. Set virtually upright at the south-east corner of this possible structure were two or three mortared tiles. What is unclear is whether this is a deliberate structural element *in situ* or whether it is a structural element, possibly an arch, which has maintained a degree of structural integrity despite falling out of position. Covering this and **123** was **106**, an artefact-rich deposit which appears to post-date the main demolition of the building, equivalent to deposits **105** and **107** elsewhere. Pottery from this context spans the period from the 2nd to the 4th century AD, while the environmental sample (ES 3) contained evidence for grass and heather and utilisation of hazelnut and sloe in addition to some wheat, barley and spelt charred remains.

4.4.13 At the far northern end of the trench and constructed on layer **106** was a very rough series of large blocks **112**. Although only one course high it does appear to be represent a possible plinth, of likely post-Romano-British date (**Figure 5, Plate 5**).

4.4.14 A sondage dug immediately to the south of **112** located a potential rough surface **134** at the limit of excavation (**Figure 4, Section 1; Figure 5, Plate 5**). It lacked coherent structure but did contain a number of flat stones and appeared to be overlain by a layer of trampled, charcoal-rich material (**133**). Over this was a tile- and mortar-rich deposit **119** similar to **115**/**121** and which is also likely to derive from dismantling or demolition of the roof.

4.4.15 Indications of possible post- Romano-British activity can be seen in levelling deposit **118** which was above **119**, onto which layer **117** and then possible mortar surface **116** appear to have been laid. This layer of mortar is sealed beneath **106**.

4.4.16 Another later phase of use may be indicated by **111**. Although it may have been merely a spread of rubble, the sharply defined limits of its extent could indicate a rough surface. Other discrete demolition deposits were seen in the central part of the trench where rubble-rich **109** was partially overlain by similar deposit **113**.

4.4.17 Rubble layers **111**, **113** and possible plinth **112** all lie beneath **102**, a deposit rich in domestic debris and datable late Romano-British artefacts, but which must surely post-date the abandonment of the fort. It is equivalent to **104** and **108** and was seen through the full area of the trench. Such a wide extent suggests that this material has been deliberately spread, probably by agricultural activity. Deposits **104** and **108** directly overay layers **105** and **107** which are equivalent to **106**.

4.4.18 A single feature was observed cutting **102**. Feature **135**, which lay beneath the modern topsoil **101** was not fully excavated and was difficult to distinguish in plan but may be a small pit. It contained a single fill **110**. No dating evidence was recovered from this feature.

Trench 2 (Figure 6)

4.4.19 Cropmarks clearly indicated another building within the fort interior just to the north-east of the *principia.* It had been suggested that as this appeared to be on a different alignment to the fort it may have belonged to a different phase of activity. Trench 2 was situated on the southern edge of this structure and

also on the northern edge of another building identified from cropmark evidence, fronting the *via principalis*.

4.4.20 It is believed that undisturbed natural geology **211** was only encountered at a depth of 0.8m+ below the current ground surface and that the sand deposits into which the majority of the archaeological features were cut, or on which they were situated (**209** and **210**), are in fact made ground deposits, probably to level the ground prior to construction. Artefactual material was recovered from both **209** and **210** (which were identical deposits, originally numbered separately as they were encountered during excavation). The presence of a clearly diagnostic sherd of Middle Saxon pottery (Ipswich ware) in deposit **209** is problematic, but the sandy and friable nature of the layer and overlying deposits meant that considerable bioturbation was evident, as shown by the dark root lines. The rest of the pottery recovered from the layer suggests a 2nd to 3rd century AD date, in keeping with the postulated date of establishment of the fort. Interestingly the presence of human neonatal bones in deposit **210** suggests that this initial occupation included a female presence. At the interface of **210** and **211**, a thin layer of darker material (**221**) was seen which may represent an area of trample. A single sherd of pottery recovered from this layer is probably of Iron Age date.

4.4.21 The base of a small chalk rubble wall (**205**) ran on an east–west alignment (**Figure 6, Section 3, Plates 6 and 7**). This was relatively narrow with no real foundation, suggesting it is more probably an internal division than an external or load-bearing wall. Comparison with the interpretation of the cropmarks (Hincliffe and Sparey Green 1985, fig. 2) suggest that in fact this wall is the northern wall of a long building situated along the east–west road, rather than part of the differently aligned building. To the north of this were remnants of surfacing (**Figure 6, Plate 6**). Surface **204**, which directly abutted wall **205**, contained several layers of make-up, the lower portion composed of mortar with chalk and gravel inclusions overlain by a sandier layer with frequent gravel. In places, patches of a final mortar surfacing were observed. Further north, the surface was damaged and truncated by additional areas of surfacing which were seen at the northern end of the trench, here numbered **203**. In this northern part of the trench, a disturbed interface layer **202** was recorded beneath the topsoil and above surface **203**.

4.4.22 Despite the cropmark evidence, no indication of another wall was found in the northern part of the trench though the metalled surface **203** suggests a yard in this area. It is possible that further masonry remains lie beneath the limits of excavation or that the area of disturbance seen within **203** represents the removal of a wall. The GPR results suggest that the main structure of the building lay slightly further to the north-west (**Figure 3**).

4.4.23 Cutting through **204** was a small east – west aligned gully **208** filled with a single fill of topsoil-derived material (**207**). This feature, cutting through the Romano-British deposits, is likely to be much later in date, and the finds within it residual, although they are still of largely 2nd and 3rd century date.

4.4.24 To the south of the wall **205** was a rubble spread (**206**)**,** thought to represent demolition debris; it was composed of chalk and flint and may represent

remnants of wall **205**. Removal of **206** in the western part of the trench showed that it overlay a number of features (**Figure 6, Plate 8**).

4.4.25 Three discrete areas of mortar (**212**, **213** and **214**) appear to have been post-pads for a north-west–south-east aligned structure. Further post-pads may line beyond the limit of excavation to the west and beneath **206** to the south-east. A fourth feature which may also relate to this group was a possible posthole **223**. Directly alongside the wall **205**, its relationship to this feature was unclear, nor was it clear whether large fragments of stone and chalk rubble within its fill (**224**) were remnants of post-packing or collapsed material from the wall.

4.4.26 Two small pits were found at the southern end of the trench (**215** and **219**). Pit **219** was sub-oval in shape with a single fill (**220**) and a concentration of charcoal flecks near the base. Pit **215** was slightly more irregular in shape with what appeared to be a posthole incorporated into its southern end. There were some indications of *in situ* heating along the cut margins with a red discolouration **218**. At the base of the main part of the pit but not within the posthole was a more clayey deposit (**217**) which may be a deliberate lining. The final fill **216** was a more general mixed deposit which also filled the posthole void. Indications are that pits **215** and **219**, as well as the group of post-pad **212**, **213** and **214** represent an area of occupation but not one necessarily associated with the military use of the fort. However the pottery recovered still falls within the 2nd to 3rd century AD period seen elsewhere in the trench.

Trench 3 (Figure 7)

4.4.27 Trench 3 was situated outside the fort, within the eastern *vicus* settlement. It was located on the south-western edge of a probable crossroads identified from the cropmark evidence. Overlying the archaeology was a deep former ploughsoil, indicating that the archaeology had potentially been truncated since the cropmarks were identified. Indications from local residents are that the field has been deep ploughed within recent memory. The only 2nd century AD coin recovered from the Site was found unstratified in this Trench (ON 29).

4.4.28 The earliest feature encountered was a north-east–south-west aligned ditch, numbered **312** and **313** in the slots that explored the northern and southern edges of this feature respectively (**Figure 7, Plates 9 and 10**). The feature was not fully excavated but was 2.3m wide and over 1.2m deep. Its size suggests a large enclosure ditch. The lowest fill excavated was **307/314**, a distinctive banded sandy deposit (**Figure 7, Section 4 and Plate 10**), thought to be the result of a sequence of depositional events, probably the result of water action. Above this was a deep but fairly homogeneous fill (**303/304/315**). The uniform nature of this deposit and the presence of a number of large, unabraded sherds of pottery suggest that this was deliberately backfilled. The pottery from both the initial deposits (**307/314**) and the later backfilling (**303/304/315**) all fall broadly within the 2nd and 3rd century AD, but the presence of a sherd of Late Saxon Thetford ware from the lower fill **307** should be noted; this may be intrusive.

4.4.29 In the eastern part of the trench, feature **310** was partially exposed in one of the excavation slots. As it was not fully exposed in plan its exact nature is unclear, but it would appear to have been either an eastern ditch terminus or

an elongated pit. It contained a single secondary fill **311**. No relationship between **310** and enclosure ditch **312/313** could be determined.

4.4.30 Feature **310** lay beneath and was truncated by curvilinear feature **308**. This shallow but relatively wide feature also cut through enclosure ditch **312/313**. It contained a single secondary fill (**309**) incorporating occasional fragments of animal bone and 2nd to 3rd century pottery.

4.4.31 Few traces of the road surface itself remained though some patches of metalling were identified (**302** and **316**), particularly where they had settled into the top of earlier features. Pottery recovered from the road metalling **302** and **316** suggests 3rd and 4th century activity. The southern roadside ditch **305** was also identified, which was found to have a steeper nearside edge (**Figure 7, Section 4**). Some of the gravel metalling from the road had been eroded and was incorporated into the upper part of ditch fill **306**. Ditch **305** cut ditch **308**.

Trench 4 (Figure 8)

4.4.32 Trench 4 was located over the northern (seaward) fort defences on the western edge of the entranceway.

4.4.33 At the northern end of the trench was a defensive wall (**403**), constructed from micaceous stone and flint nodules. It was a substantial structure, 2.5m in width (**Figure 8, Plate 11**). As observed on previous excavations, the rampart (**413**, **414**), constructed from re-deposited natural sand, was internal and directly abutted the wall. Even allowing for a certain amount of spread along the southern edge, the width appears to be over 5m. Dividing the very similar upper (**413**) and lower (**414**) deposits was a thin discontinuous lens of charcoal, **415**. Environmental evidence obtained from a sample (ES 2) suggests that this charcoal lens represents an occupation layer, which could therefore indicate a second phase of construction, perhaps to increase the height of the rampart (**Figure 8, Section 5**).

4.4.34 Defensive ditch **406** lay to the north of wall **403** (**Figure 8, Section 5**). No direct relationship between the two features could be established but they are likely to have been contemporaneous. Indeed, the lowest ditch fill encountered (**420**) appeared to be mortar debris deriving from the construction of the wall. Neither the full depth nor profile of the ditch **406** was exposed. Both the upper deposit (**404**) and deposit **409** below are likely either to post-date the defensive life of the feature or to have occurred very late within the sequence, although pottery recovered falls within a date range of 2nd to 3rd century AD.

4.4.35 Robber cut **408** ran along the upper part of the wall **403** and down its northern face (**Figure 8, Section 5**). The cut was filled with several deposits (**402, 405, 407** and **418**); both **405** and **407** are likely to have been deliberate backfill events while **418**, which contained a large number of stone chippings, may represent reclamation debris.

4.4.36 Overlapping the southern edge of the upper portion of rampart bank **413** was a mixed deposit (**419**) likely to reflect demolition or abandonment (**Figure 8, Plate 12**). This was cut on its southern edge by robbing event **411**. This comprised several robbing episodes, and had cut through what was presumably originally one area of surfacing (**412**). Its position, just

within the rampart and adjacent to the road, suggests it could have been flooring or foundation within a guardhouse - indications of a building are shown here on both the magnetometer and GPR survey (**Figures 2 and 3**). The date and exact purpose of robbing event **411** is unclear.

4.4.37 Exposed at the base of cut **411** was a possible makeup deposit (**416**) containing a large fragment of a 2nd or 3rd century Rhenish mortarium, and beneath this in turn was another mortar layer (**417**). This could indicate an earlier structural phase beneath the structure represented by **412**.

4.4.38 The presence of redeposited neonatal bones in the topsoil and an adult tibia in the upper robber cut backfill **402** could indicate nearby burials.

Trench 5 (Figure 9)

4.4.39 Trench 5 was situated in the northern field across a double ditched feature identified from cropmark evidence, thought potentially to be the remnants of an earlier fort.

4.4.40 Only in this area was a thin, underdeveloped subsoil identified (**502**), beneath the modern topsoil. As in the other excavation areas, the natural (**510**) consisted of sand with some coarse flint gravel.

4.4.41 The two ditches (**503** and **506**) were found to have very similar profiles (**Figure 9, Section 6**), though the outer ditch (**503**) was slightly more substantial. The main fills of both ditches were very similar and homogeneous, necessitating a slightly arbitrary division between the upper and lower deposits in each case as the interface between them was extremely diffuse. The exception was **509**, the lowest fill of **506** which was derived from the collapse of the southern edge. The pottery recovered indicates largely 2nd and perhaps some 3rd century activity. A single neonatal bone was also recovered from fill **505** (ditch **503**).

4.4.42 Such dark homogeneous deposits could be reflective of a long period of gradual infilling and sediment accumulation or equally they could indicate a single period of deliberate backfilling. Whichever is the case is likely to indicate whether there was a hiatus between this defensive earthwork and the fort to the south. Once the main fort was established it seems unlikely that another defensive structure in close proximity would be tolerated; either enough time must have passed for the earlier fortifications to have naturally infilled, which is perhaps unlikely given the timescale, or if there is continuity of occupation the ditches must have been deliberately backfilled.

5 FINDS

5.1 Introduction

5.1.1 Finds were recovered from all five of the trenches excavated, although quantities from Trench 5 were relatively low. The assemblage is predominantly of Romano-British date, and relates to the construction and use of the fort complex; there are also a few prehistoric items (worked flint, pottery sherd), and a small quantity of post-Roman (or probable post-Roman) material (pottery, ceramic building material, gaming die, metal objects).

5.1.2 The whole assemblage has been quantified by material type within each context; finds totals by material type, subdivided by trench, are presented in **Table 1** (**Appendix 2**). As part of this assessment stage, all finds have been at least visually scanned, and preliminary identifications and spot dates recorded. On this information is based an assessment of the potential of the finds assemblage for further research.

5.1.3 The assemblage is described and discussed by material type below.

5.2 Pottery

5.2.1 The pottery was divided into fabric groups and quantified by number of sherds, weight and rim estimated vessel equivalent (EVE) per fabric. As an additional measure, vessels identifiable to form (mostly rim and base sherds) were recorded for each context by fabric. The pottery data was entered onto an Excel spreadsheet. The total assemblage comprises some 653 sherds, weighing almost 15 kilos and with a rim EVE of 17.7 (**Appendix 2**, **Table 2**). This is almost exclusively of Romano-British date, with one late prehistoric and three post-Roman sherds.

5.2.2 The pottery is compared to the substantial pottery assemblage (260kg) recovered from excavations at Brancaster in 1974 and 1977 and subsequently published (Andrews 1985).

Prehistoric pottery

5.2.3 One small, undiagnostic body sherd in a coarse shelly fabric from layer **221** is not particularly chronologically distinctive, but is tentatively dated as Iron Age.

Romano-British Fabrics

5.2.4 Just over 50% of the Romano-British pottery comprises various reduced grey wares, with regionally-traded wares from Dorset, the Thames estuary, the Lower Nene Valley, Oxfordshire and Hertfordshire, and continental imports from France, Spain and the Aegean accounting for around another third. **Table 3** (**Appendix 2**) shows the fabric proportions.

5.2.5 The various reduced grey wares are all quartz sand-gritted. Mica is prominent in some of the wares with one sherd being highly micaceous. Some of the vessels have burnished surfaces and the most noticeable of these has a black, highly burnished, almost polished surface; it is possible that the black colour may be in fact due to a slip. The regionally-traded wares are BB1 and BB2, Lower Nene Valley colour-coated and cream wares (LNVCC, LNVCW) and Oxfordshire colour-coated, parchment and white-slipped wares (OXCC, OXPA, OXWS). While there are definite examples of BB1 and BB2 in the assemblage, there are some similar fabrics which may be of more local origin. The continental imports comprise samian ware (CGS), Rhenish ware and amphora from France, Spain and the Aegean. The only other ware which occurs in appreciable amounts is shell-gritted ware and there are a few sherds in flint-gritted, mica-dusted, buff and other oxidised wares.

5.2.6 All of the fabrics are present in the 1974 and 1977 assemblage. **Table 4** (**Appendix 2**) provides a fabric concordance for the reduced grey wares.

5.2.7 The 1974 and 1977 assemblage contains some fabrics not present in the 2012 pottery, comprising Lower Nene valley grey ware, Colchester colour-coated ware and Dales shell-gritted ware. Andrews notes that fabric RW10 represents a number of fabrics (Andrews 1985, 92-3) and that fabrics RW11-20 "comprise grey wares with no outstanding characteristics which were, however, consistently distinguished and sorted" (*ibid*., 93-4). RW11 was difficult to distinguish from BB2 and some of RW10 from BB1.

Romano-British Vessel Forms

5.2.8 The minimum number of identifiable vessels, as represented by mainly rims and bases, totalled 171, of which five are amphora. Some of the 166 others may be the same vessels, and there are a large number of body sherds which could be from these or different vessels. **Table 5** (**Appendix 2**) shows the occurrence of forms by fabric.

5.2.9 The assemblage has a wide range of vessel forms. Jars occur in the most fabrics but many fabrics also include bowls and/or dishes in their vessel range. Some wares are more specialised, as with the LNVCW, OXWS and Lower Rhineland mortaria, the Rhenish beaker and the shell-gritted jars. The LNVCW mortaria comprise bead and grooved and reeded flange types while the OXWS mortaria are mainly Young (1977) type M22. The Lower Rhineland mortarium is an extra large vessel, which can probably be attributed to the workshop of Verecundus at Soller; an edge of a stamp is just visible on this vessel. The OXCC and CGS vessel range is mainly confined to bowls and dishes, while the latter ware also has a cup and a mortarium. Many of the OXCC bowls are Young forms C75 or C77, together with a C50 and a C52. The CGS occurs as forms 18/31 or 31, 18/31R or 31R, 33, 37, 38 and 45.

5.2.10 The BB1 and BB2 vessels are mainly the more widely-traded bowl and/or dish types, the former ware occurring as flanged bowls with intersecting arc decoration and the latter ware comprising rounded rim types. The LNVCC vessel range is one of the widest with flanged bowls, plain-rim dishes, beakers and wide-mouthed jars or bowls all well represented, together with a flagon and two lids, one flanged and the other the upper part of a 'Castor' box.

5.2.11 The vessels in the distinctive highly burnished (or slipped?) black-surfaced ware have some interesting characteristics. Many of the bowls and dishes are curved-sided and have one or more external grooves below the rim. A few dishes have internal grooves and one dish has a thickened rim 'boss' with two grooves cut on its upper surface. Other bowls have either a low flange or a small, high flange and some have facetted burnishing akin to that found on BB1 vessels. Many body sherds, probably from jars, have unburnished bands down the vessel wall which are decorated with lattice, wavy lines and, occasionally, stabbing. One or two of the jars have frilled rims. A number of body sherds in other grey wares have horizontal bands of closely-set combed wavy lines and the grey, Rustic ware sherds all have the linear form of rustication.

5.2.12 These forms all occur in the 1974 and 1977 assemblage (Andrews 1985, figs 53-66). As examples, fig. 63, types 150-1 are black-surfaced ware bowls and dishes, linear rustication occurs on fig. 56, type 100 jars, fig. 53, types 50.1 and 50.3, and fig. 55, type 94 are examples of the LNVCC funnel-

necked folded beakers, fig. 54, type 61 are similar 'Castor box' lids and fig. 63, types 145 and 147.1-4 are BB1 or BB1 type vessels. The 1974/1977 assemblage even has another Aegean hollow foot amphora (*ibid.*, 84, no. 75, 104, not illustrated) but contains many forms not present in that from the 2012 excavations; this is not surprising, given its size. It does not include, however, any of the dark grey burnished vessels, probably jars, which have unburnished bands down the vessel wall decorated with lattice, wavy lines and, occasionally, stabbing, though these all occur individually on some of the 1974/1977 vessels.

Sources

5.2.13 It is likely that most of the reduced grey wares will have been locally produced. There are no kilns known around Brancaster itself, but there were large production centres at Brampton, Pentney and Shouldham and others at Sheringham, Snettisham, Lyng and Witton (Swan 1984, map 15). These are all between 30 and 50 kilometres from Brancaster but military sites such as Brancaster had more elaborate and far-reaching supply routes. Some of the grey ware may have originated from the kilns at Horningsea near Cambridge and kilns in the East Midlands which were part of the East Midlands burnished ware production. The sherds in reddish-yellow ware vary with some being highly burnished and others having red- or brown-painted horizontal bands or a white slip. Some are probably from the Lower Nene valley kilns, but other sherds may be from Much Hadham in Hertfordshire. It is likely that most of the buff sherds are also from the Lower Nene valley, but some could be from the Oxfordshire kilns.

5.2.14 The vessels in BB2 will have originated from kilns in along the Thames estuary and those in BB1 from south Dorset BB1 but, in both cases, some may, in fact, be good locally-produced imitations, as the fabrics are not always readily distinguishable from some of the other reduced grey wares. There is far more certainty with the colour-coated wares and cream wares from the Lower Nene Valley and the Oxfordshire kilns; the buff colour-coated sherd is probably from the former. The samian ware is from Central Gaul, the Rhenish ware from the Trier region and the amphora from southern Spain, southern France, together with the handle of an unusual 'hollow-foot' amphora, probably of Aegean origin (Peacock and Williams 1986, 193-5, class 47). The shell-gritted ware may have been produced in the Harrold areas of Bedfordshire.

5.2.15 A programme of heavy mineral analysis was carried out on some of the 1974 and 1977 pottery (Andrews 1985, 82, 88, 90, 92). This indicated that fabric RW1 has links with the Shouldham kilns, though it is noted that the glacial drift deposits forming the clays used there are widespread in Norfolk, Indeed, Lyons (2004) states that large quantities of pottery from kilns at Snettisham occur at Brancaster. Shouldham, Pentney and Blackborough End, Middleton (Gurney 1990) are all part of the same Nar Valley/West Norfolk pottery industry, so the any one or a combination of these could have been the source for the Brancaster material. The analysis also suggests that fabrics RW2 and RW are products of the Brampton kilns while kilns in the Homersfield/Wattisfield area are thought to be the source for the micaceous wares.

Date

5.2.16 The assemblage contains a lot of 4th century AD pottery, especially the BB1 flanged bowls, the LNVCC flanged bowls, plain-rim dishes, beakers and wide-mouthed jars or bowls, the OXCC bowls and dishes and some of the shell-gritted ware jars. Some of the LNVCC beakers and the mortaria in LNVCW and OXWS are types which originated in the later 3rd century but continued into the 4th century. More definite 3rd century vessels are the BB2 bowls and dishes and a LNVCC 'Castor' box lid. The CGS, Rhenish ware, mica-dusted ware and grey Rustic ware attest 2nd century activity. The earliest pottery, possibly of pre-Roman date, comprises the sherds in flint-gritted ware. The kilns at Shouldham, Pentney and Brampton were in operation from the 2nd to 4th centuries.

5.2.17 The trenches were positioned to hopefully provide additional dating evidence for specific areas of the Brancaster site. The pottery from Trench 1, located over the central part of the southern range of rooms of the *principia* or headquarters building, is predominantly 4th century in date. That from Trench 2, in the main fort area, appears earlier in date than Trench 1, with an overall range of mid 2nd to 3rd centuries. The date range of the Trench 3 pottery, from within the east *vicus* area, appears to be 2nd to 4th centuries, while that from the fort defensive ditch and rampart (Trench 4) and the double ditch feature thought to potentially be the remnants of an earlier fort Trench 5) both have a mid 2nd to 4th century date range, though the latter may start in the later 2nd century.

5.2.18 The chronology postulated by Hinchliffe in the report on the 1974 and 1977 excavations (Hinchliffe 1985, 180-1) was that a fort was established in the late 2nd century and an adjacent settlement was soon established. This fort was replaced by a larger one in the second quarter of the 3rd century with occupation continuing, based on coin evidence, into the 5th century. The settlement itself appeared to have been abandoned by the 4th century. The dating evidence provided by the 2012 excavation pottery broadly supports this chronology.

Assemblage characteristics

5.2.19 The pottery is generally in good, unabraded, condition with a number of large sherds, complete bases and vessel profiles. One jar rim has a pierced hole in the neck just below the rim and some other jar sherds have internal limescale accretion. The approximate 50:50 ratio of reduced grey wares and other wares which were probably locally produced to regionally-traded and imported continental wares would be unusual on most rural Norfolk sites, but reflects the military nature of the main occupation, with its attendant civilian *vicus*. This character is borne out in the wide range of vessel types within the various fabrics, which includes unusual vessels like the Aegean 'hollow-foot' amphora.

Post-Roman pottery

5.2.20 The three post-Roman sherds comprise the rim and spout from a middle Saxon Ipswich ware spouted pitcher (*c.* AD 720–850) from **209**; the rim from a late Saxon Thetford ware jar (10th to mid 12th century) from **307**; and a small body sherd in modern (19th/20th century) refined whiteware from Trench 3 topsoil.

The Trenches

Trench 1

5.2.21 Trench 1 was located over the central part of the southern range of rooms of the *principia* or headquarters building. The contexts containing pottery excavated comprise post abandonment layers, a post stone-robbing deposit, occupation debris/refuse and a finds retrieval cleaning interface. The Trench 1 contexts produced a large percentage of the total site assemblage, ranging from 40-55% (**Appendix 2, Table 2**). **Table 6** (**Appendix 2**) shows the fabric proportions. Most of the fabrics represented in the overall site assemblage occur in the Trench 1 contexts and in similar overall proportions. There is, however, a higher percentage of Oxfordshire wares and the most noticeable absentees are BB2, Lower Rhineland and Rhenish.

5.2.22 **Table 7** (**Appendix 2**) shows the vessel forms per fabric from Trench 1. The contexts again have most of the forms occurring in the overall site assemblage and, in some cases, contain all the forms in certain fabrics; the form ratio is also similar. The LNVCC vessels include flanged bowls, plain-rimmed dishes a narrow-mouthed jar and a jar sherd with bosses (cf Corder 1961, fig. 24, 5). The LNVCW mortarium has a bead and grooved flange (cf Howe *et al.* 1980, fig. 8, 102), while two of the OXWS mortaria are Young (1977) type M22. The OXCC comprises Young (1977) forms C50, C52, C75 and C77.

Trench 2

5.2.23 Trench 2 investigated the main fort area. The contexts contain around a fifth of the total site assemblage (**Appendix 2, Table 2**) and **Table 8** (**Appendix 2**) shows the fabric proportions. The range of reduced grey wares is smaller than Trench 1 and there are no Oxfordshire wares present. The only Rhenish ware from the Site occurs in a Trench 2 context.

5.2.24 There are far less forms from Trench 2 and the range occurring is also more limited (**Table 9, Appendix 2**). The possible BB2 dishes have plain and flat-topped rims while the jar has lattice decoration. The LNVCC dish has a plain rim and the lid is flanged (cf Perrin 1999, fig. 62, 214). The CGS cup is form 33.

5.2.25 The presence of a sherd of Middle Saxon Ipswich ware from sand deposit **209** can be noted.

Trench 3

5.2.26 Trench 3 is located within the east *vicus* area. The features comprise various ditches, including a road ditch and contain between 11% and 16% of the pottery from the excavations. The reduced grey wares are the most numerous fabric types and there are more BB2 and CGS than in Trenches 1 and 2, with Lower Nene Valley and Oxfordshire wares being correspondingly lower (**Appendix 2, Table 10**).

5.2.27 The form range is greater than that in Trench 2 (**Appendix 2, Table 11**). The amphorae are from southern Spain and southern France and the LNVCW mortarium is a hammer-head type (cf Hartley and Perrin, 1999, fig. 77, M20). The LNVCC includes an imitation samian ware form 38 and the OXCC a beaded-rim bowl. The possible BB1 bowl has a flanged rim, facetted burnishing and intersecting arc decoration.

5.2.28 A single sherd of Late Saxon Thetford ware was recovered from the lowest excavated fill in the large enclosure ditch **312**/**313**.

Trench 4

5.2.29 Trench 4 was located to investigate the fort defensive ditch and rampart. The assemblage size is similar to that in Trench 2, also comprising around a fifth of the overall excavation total (**Appendix 2, Table 2**). All bar eight sherds come from the topsoil. The proportion of reduced grey wares is lower than the previous three trenches with the amount of other fabrics, especially BB2 and LNVCC, correspondingly higher. Weighty sherds also boost the amphora percentage (**Appendix 2, Table 12**).

5.2.30 The number of vessels is a little higher than Trench 2 (**Appendix 2, Table 13**). The contexts contain five of the six LNVCC beakers from the excavations. Two of these are tall funnel neck types (cf Howe *et al.* 1980, fig. 4, 43) and another is a folded beaker with rouletted bands (*ibid*., fig. 4, 42). The LNVCW mortarium is a bead and grooved flange type (*ibid*., fig. 8, 102) and the CGS form 45 mortarium is the only samian ware mortarium from the excavations. The BB2 vessels both have rounded rims. One of the amphorae is of significant interest, comprising the handle of a 'hollow-foot' amphora, thought to have been manufactured in the Aegean and occurring in Britain in late 3rd to early 4th century contexts (Peacock and Williams 1986, 193-5, Class 47).The other amphorae are from southern France.

Trench 5

5.2.31 Trench 5 was situated across a double ditch feature which is thought to potentially be the remnants of an earlier fort. The assemblage from the contexts is quite small, accounting for a maximum of 5% of the pottery from the excavations (**Appendix 2, Table 2**) and the various reduced wares comprise over three-quarters of the total (**Appendix 2, Table 14**). The contexts contain the only possible pre-Roman pottery, flint-gritted pottery.

5.2.32 Only four vessels occur in the Trench 5 assemblage, but these include a micaceous grey ware dish with a plain rim and the lid of a LNVCC 'Castor' box (cf Perrin 1999, fig. 62, 210).

5.3 Ceramic Building Material

5.3.1 The complete CBM assemblage recovered from the Site amounted to 627 fragments. An on-site selection strategy was adopted, in which undiagnostic flat fragments were quantified (count and weight) and then discarded. An assemblage totalling 433 fragments was retained for further processing and assessment. This assemblage is almost entirely of Romano-British date; only three post-Roman fragments were recorded (medieval roof tile fragments from ditches **312** and **308**, and an early post-medieval brick from ditch **312**).

5.3.2 The retained assemblage has been quantified by type (*imbrex*, *tegula*, etc) within each context, with thicknesses and other selected dimensions (e.g. *tegula* flange height) recorded, as well as the presence of features such as combing on box flue tiles, paw prints and finger-smeared 'signatures'. For *tegulae*, upper cutaway type, where present, was classified using Warry's typology (2006). The fabric types were noted but not recorded in detail as the majority of the assemblage comprised fragments in non-distinctive hard-

fired, slightly sandy fabrics firing orange-red. A very few fragments differed significantly from this norm.

5.3.3 **Table 15** (**Appendix 2**) gives the breakdown of CBM types by context. Roof tiles (*tegulae* and *imbrex*) formed the major component of the assemblage (21% and 24% respectively by count). A very small quantity of box flue tiles (*tubuli*) from hypocaust heating systems was recovered. A significant proportion of the retained assemblage, however, comprised flat fragments lacking diagnostic features on which to assign them to specific tile or brick types; these were divided into those less than 30mm in thickness, and those of a greater thickness; the former are likely to represent further examples of *tegulae*, *imbrices* and box flue tiles, while the latter probably derive from bricks of various forms. Pieces lacking any dimensions or distinguishing features were classified as unidentifiable fragments.

5.3.4 No complete dimensions were noted amongst the assemblage. Within the *tegulae* fragments it was apparent that thickness, as well as flange width and height, varied. Flange height is generally considered to be roughly twice the tile thickness – in this instance it ranged from 30 to 50mm; flange profile was generally squared, occasionally with a single finger smeared groove along the flange top. Fifteen cutaways were observed, both upper and lower examples; those complete enough to be identified to type comprise three of Warry type C5 and single fragments of a C4 and D16 (Warry 2006). Within Warry's classification of cutaways type C is assigned a date range of 140–260 AD and type D is considered to date 240 AD onwards.

5.3.5 There were two *imbrex* fragments with finger smear marks along the length of the upper surface, which appear to be deliberate markings. Signature marks were relatively uncommon; four were recorded on flat tile fragments and two marks on *tegulae*. All comprised two or more finger smears in a curved design. One paw print was recorded, on a flat tile from trench 5. Occurring alongside this print were two joining fragments of a tile which had been tapered along one edge. A second tile (from Trench 1) had possibly been re-worked into an 'S' shape. Most box flue fragments carry some form of keying for mortar in the form of linear (often cross-hatched) combing.

5.3.6 CBM was recovered from a total of 37 contexts across all five excavated trenches. Most contexts are described as occupation debris/abandonment layers. By far the majority of the assemblage was recovered from Trench 1, not unexpected, given the location of the trench over the *principia*. The small number of *tegula* cutaways that can be identified to the mid 2nd–early 3rd century AD may lend further weight, albeit somewhat tenuous given the small numbers involved, to the possibility of a 2nd century structure on the Site.

5.4 Mortar, *opus signinum* and wall plaster

5.4.1 Building material is also represented by small quantities of mortar, *opus signinum* and wall plaster, recovered mainly from Trenches 1 and 2 in the fort interior, and largely from demolition or post-abandonment contexts; none was found *in situ*. The wall plaster is all monochrome white in colour.

5.5 Stone and Worked Flint

5.5.1 Of the four pieces of stone recovered, two represent building material, one is a portable object, and the fourth is of uncertain origin.

5.5.2 The building material comprises one fragment of hard chalk incorporated in road metalling **302**, and one small fragment from a roof or floor tile in a micaceous fine sandstone from ditch **313**. The chalk could have come from Upper Cretaceous chalk quarries to the south of the Site, or from the shores of the Wash to the west (Allen and Fulford 1999), while the micaceous sandstone derives from Triassic or carboniferous sandstone, from Nottinghamshire or the Pennines.

5.5.3 The potable object is a crudely made rectangular die, measuring 25 x 20 x 15mm, made of Upper Cretaceous chalk, possibly a re-used tessera, and found in layer **102**. The die does not follow the conventional marking, with opposing faces totalling 7, but is marked with rough point indentations, apparently far more randomly: 3/3, 5/?6 (damaged face), and 9/incised cross. No parallels for this marking have been found. Although dice made from reused tesserae are recorded in Romano-British contexts elsewhere, for example Dorchester, Dorset (Woodward 1993, fig. 104, 26), this object is very crude for a Romano-British die, and is more likely to be medieval in date (I. Finkel pers. comm.; I. Riddler pers. comm.).

5.5.4 The fourth object is a small fragment from Trench 2 topsoil with one flat, smooth surface, but with no incontrovertible signs of working.

5.5.5 There is also a single prehistoric flint waste flake, recovered as a residual find from ditch **503**.

5.6 Glass

5.6.1 Of the five pieces of glass recovered, two are of Romano-British date. The more diagnostic of these is a small bowl rim in pale greenish glass from layer **102**. An undiagnostic small body fragment in pale blue glass came from the topsoil in Trench 4.

5.6.2 Two fragments are certainly post-Roman. These comprise a very heavily degraded and oxidised vessel fragment, possibly of late medieval or early post-medieval date; and a post-medieval window glass fragment, both from Trench 4 topsoil.

5.6.3 The fifth fragment, in clear glass, from Trench 4 topsoil, is completely undiagnostic, and could well be of post-medieval date.

5.7 Metalworking debris

5.7.1 A very small quantity of slag was recovered, from Trenches 1 and 3, deriving from iron smithing. This includes a possible hearth bottom from ditch **312**. Quantities are insufficient to postulate on-site metalworking, although this would not be unexpected.

5.8 Coins

5.8.1 Seventy-nine Roman coins were recovered from the excavations at Brancaster. All of these are Roman in date, the vast majority comprising

antoniniani and *nummi* of the late 3rd and 4th centuries AD (see **Appendix 2, Table 16**). All of the coins are small denomination copper alloy issues. In general these are in fair condition, although a few show evidence for post-depositional of corrosion, whilst many also show signs of pre-depositional wear. Despite this, the majority could be identified to period. Only 14 of the 79 coins could not be closely dated, although the size and shape of the flans suggest that these date to the 3rd or 4th centuries AD.

5.8.2 Sixty-five of the coins from the Site could be dated to period, using the 21 periods described by Reece (1991) for the analysis of coin assemblages. The breakdown of these coins by period can be seen in **Appendix 2, Graph 1.**

5.8.3 The earliest coin from the site is a worn *dupondius* of the Emperor Caracalla (AD 180–192). A further eight coins are radiate copies of late 3rd century *antoniniani*, the majority probably minted between AD 270 and 296. These radiate copies were copies of 'official' coinage, possibly struck to compensate for gaps in supply of coinage to Britain and to supply sufficient small change for the provinces needs. It is unclear whether these copies were officially sanctioned, if at all, but they are not uncommon as site finds, and seem to have circulated in the same fashion as officially struck coins.

5.8.4 The majority of the coins from the site date to the first half of the 4th century AD, with a sizeable peak of coin loss in period 17. Once again, more than half of these coins (23 of the 43) were copies or probable copies. Much smaller numbers of period 18 and 19 coins were present, although the six coins of period 21 indicate that coin use continued on the site into the late 4th century, and perhaps into the 5th.

Coins from layer 125

5.8.5 Some 42 of the coins from the site were recovered from a single deposit – layer **125**. This was a final use/disuse deposit recorded in one of the small rooms within the *principia* building. Only a small portion of this deposit, so the recovery of so many coins is worthy of comment. Looking at these coins by period (see **Appendix 2, Graph 2**), it is clear that the vast majority of those that could be dated (some 30 coins in all) date to the AD 330s and 340s (period 17). This clearly suggests that the deposit represents a scattered hoard. The latest coin from this deposit is an 'official' *Fel Temp Reparatio* 'Fallen Horseman' issue of period 18, probably minted between AD 350 and 355. This suggests that the hoard was probably deposited in the AD 350s. Some caution should be exercised here, as only a portion of the hoard was recovered – much of the deposit from which they were recovered was left *in situ*.

Other coins from the site

5.8.6 Inevitably, the presence of a hoard within a site assemblage skews the pattern of 'normal' coin loss. This can clearly be seen by looking at the remaining coins from the site by period (**Appendix 2, Graph 3**). With the hoard removed, it is clear that the assemblage is no longer so dominated by period 17 coins. The peaks of coin loss in the late 3rd century (period 14) and period 17 are common in late Roman assemblages, and reflect the vagaries of the supply of coinage to Britain from the Imperial mints, most of which were based on the continent.

5.8.7 The single late 2nd century coin from the site may well have been in circulation for some considerable period of time before its loss. Earlier excavations and fieldwork on the site (Hinchliffe and Sparey Green 1985) recovered a number of coins spanning the four centuries of Roman rule. Work on the combined assemblage from the earlier work suggested that coin loss on the site began in the middle of the 2nd century AD (Sparey Green and Gregory 1985, 191), and continued until the end of the 4th century AD, although with a marked decline in coin use after period 17 (from AD 348 onwards). There were also apparent differences between the patterns of coin loss from within the fort to that recorded outside the fort, although the sample sizes were not equal, with significantly fewer coins recorded from within the fort. To a certain extent, the overall pattern of coin loss from the current evaluation matches that from the earlier excavations, with the only significant change being the number of Theodosian (period 21) coins recovered from the evaluation. Only one of these was recorded from the previous excavations, from the settlement outside the camp itself. All six of those recorded from the recent work were recovered from unstratified spoil from Trenches 1 and 2, within the fort. They clearly indicate that there was activity in the fort at the end of the 4th century, and probably into the 5th. Beyond this, the small size of the assemblage (13 coins) recovered from Trench 3, the only trench outside the defences, makes any meaningful discussion of the distribution of the coins recovered impossible.

5.9 Metalwork

5.9.1 Apart from coins, the metalwork includes objects of copper alloy, lead and lead alloy, and iron.

5.9.2 All metal items apart from the coins have been X-radiographed as a basic record, and also to aid identification. The iron objects in particular are badly corroded.

Copper alloy

5.9.3 The copper alloy objects fall into four functional groups: personal items, writing implements, military items, and miscellaneous objects. There are also 14 very small fragments of copper alloy sheet, from various contexts, some with rivets *in situ*, but of unknown function.

5.9.4 Amongst the personal items are a brooch pin from layer **122**; part of an armlet made from two twisted strands (layer **106**); a finger ring formed from a narrow plain strip bent into a circle (layer **102**); and a pair of toilet implements held on a suspension ring (layer **108**), comprising a double-looped object and a shank, probably from an ear scoop, but with the end missing. A shank from Trench 1 topsoil may belong to another toilet implement; it seems too thick for a hairpin. All these objects are of well documented Romano-British types.

5.9.5 An almost complete pin (tip missing) from layer **102**, however, is of more ambiguous date. The pin has a faceted cuboid head: the type is known from Romano-British contexts, for example in Colchester (Crummy 1983, fig. 29), but also from the mid Saxon period, for example in *Hamwic* (Southampton) (Hinton 1996, fig. 9).

5.9.6 Two personal items are certainly of post-Roman date. These comprise a small, D-shaped buckle, lacking the pin, and a modern button (both from Trench 3 topsoil).

5.9.7 One stylus was recovered, from cleaning layer **103** in Trench 1. The shank is bent, and the pointed end is missing; the opposite end is expanded and subrectangular.

5.9.8 Perhaps of most interest from the Site, however, is a section of *lorica squamata* (scale armour), found on mortar surface **132**, next to wall **130** (**Figure 5, Plate 4**). This was made from small subrectangular scales attached to a fabric backing. It is typically seen on depictions of standard bearers, centurions, cavalry troops and even auxiliary infantry, as well as regular legionaries. The X-radiograph clearly shows groups of overlapping scales (measuring 16mm x 12mm) fastened together with wire; each scale has three paired perforations for attachment, one at each side (for attachment to each other) and one at the top (for attachment to the backing). The lower corners of each scale are rounded.

5.9.9 A small stud with a solid domed head (diameter 10mm, length 15mm) from Trench 1 topsoil is presumed to be of Romano-British date, but is not particularly chronologically distinctive.

Lead and Lead Alloy

5.9.10 Much of the lead comprises waste pieces, or small undiagnostic fragments (16 objects). Identifiable objects include two weights. One of these, from cleaning layer **103**, is ovoid, with a transverse perforation through one end; it weighs 36.6g. The second, from Trench 2 topsoil, is bun-shaped, and weighs 162g (although including some iron corrosion, possibly from a suspension loop). Three possible pot mends were recovered, all from topsoil contexts.

5.9.11 The most diagnostic object is a pewter platter from layer **102**. This has been damaged, and is in four pieces, with some distortion to the rim. The platter is almost certainly of late Romano-British date – datable pewter finds in Britain are nearly all from later 3rd of 4th century contexts, and reflect the revival of Roman interest in the Cornish tin mines around the middle of the 3rd century, leading to extensive pewter production in Britain (Barker and Hatcher 1974, 9). Production seems to have been widespread: moulds have been found in several locations, including East Anglia, although there is very little regional variation in forms.

5.9.12 A possible post-medieval impacted musket shot came from Trench 5 topsoil.

Iron

5.9.13 The majority of the ironwork consists of nails of various sizes (99 examples). Other structural items comprise three strip fittings. Neither the nails nor the structural items are chronologically distinctive; most if not all are assumed to be Romano-British, although a high proportion (approximately two-thirds) came from topsoil contexts.

5.9.14 Other identifiable objects fall into four functional categories: personal items; knives and other tools; household equipment; writing implements. Personal

items are limited to three hobnails from Trench 3 topsoil, probably from footwear.

5.9.15 There are three knives. The most complete came from layer **102**, and falls into Manning's type 24, the back of the blade and tang having an S-shaped profile. This knife type was originally an Iron Age form, and continued to be used into the early Romano-British period (Manning 1985, fig. 29, 118-9). A second knife came from the topsoil in Trench 1, and appears to belong to Manning's type 16, the tang lying on the midline of the blade; it seems to have been a long-lived form (*ibid*., fig. 28, 116). The third knife, from 315, survives as a triangular blade only, lacking the tang: Manning's type 12, another long-lived type, would accommodate this example (*ibid*., fig. 28, 114).

5.9.16 A tapering bar from Trench 1 topsoil seems likely to be a tool of some kind, perhaps a chisel or punch. This is not a chronologically distinctive tool type, and cannot be definitively dated as Romano-British.

5.9.17 A small key was found in Trench 4 topsoil. This is a lever-lock key, the most advanced key type used during the Romano-British period, operating on the same principles as the modern lever-lock. This example has a rectangular handle with circular bow, and a simple bit.

5.9.18 Two styli were identified (demolition debris **206**, Trench 4 topsoil), as well as the possible shanks of two others (both from layer **102**). The example from Trench 4 is of Manning's type 1, tapering to a point at one end and flattened into a small eraser at the other; this is a common type (Manning 1985, 85, fig. 24). The stylus from 206 belongs to Manning's type 3, with eraser and point clearly separated from the stem, the eraser having concave sides (*ibid*., 85, fig. 24). The two shanks cannot be attributed to specific forms, and are not definitively identified due to lack of distinctive features.

5.10 Worked Bone

5.10.1 A single object of worked bone was recovered, from layer **102**. This comprises a strip with concave sides and ends (150 x 23mm). The object is neatly made, with the upper surface and edges polished; it is of uncertain function, although it could have been used as an inlay.

5.11 Human Bone

5.11.1 Redeposited human bone was recovered from five contexts in three trenches, two within the confines of the fort (Trenches 2 and 4) and one from the potential early fort to the north (Trench 5). The bone was subject to a rapid scan to establish the minimum number of individuals (MNI) and other demographic data.

5.11.2 The bone is generally in good condition. Complete or near complete skeletal elements are represented with limited fragmentation.

5.11.3 Parts of a minimum of two neonates (0-2 weeks) were recovered (Trenches 2 and 4), and an adult (> 18 yr) of indeterminate sex (Trench 5).

5.11.4 The neonatal remains were recovered from the topsoil (**201** and **401**), made-ground (**210**) laid to facilitate construction of the fort, and the fill of ditch **506**

believed to be part of the defences associated with the earlier fort.The adult tibia was recovered from the fill (**402**) of a robber trench cut through the backfill of the defensive ditch **406**.

5.11.5 The exclusion of neonates from cemeteries and the recovery of their remains in association with domestic buildings and properties is a common feature in the Roman period (Philpott 1991, 97-102; Mays 1993; Scott 1999, 115; Struck 1993). The factors affecting both the death and place of burial of such young individuals may be numerous and have been subject to both general and site-specific discussion elsewhere (Mays 1993; McKinley 2011; Philpott 1991, 101; Riddle 1997, 85-6; Scott 1999, 30-32, 70 and 115- 118). As the original place of burial of the neonates at Brancaster is unknown limited comment can be made regarding their deposition. However, the condition of the bone and presence of numerous skeletal elements from different areas (upper and lower limb and axial skeleton) suggests the remains have not moved far from their original place of deposition. The presence of the adult tibia is less easily accounted for in the absence of precise dating. It may have derived from a grave within the vicinity of the fort displaced by its construction or, following a break-down in organisation/abandonment of the fort, parts of the area may have served a temporary mortuary function (potentially sub-Roman in date), burials made there being disturbed and redeposited before the ditch silted up.

5.12 Animal Bone

5.12.1 A total of 1,322 fragments (or 22.714kg) of animal bone was recovered from the site during the normal course of excavation. Once conjoins are taken into account this figure falls to 1,149 fragments. The majority of the bone comes from Roman layers in Trenches 1 to 5, very little was recovered from cut features.

Methods of assessment

5.12.2 The following information was recorded where applicable: species, skeletal element, preservation condition, fusion and tooth ageing data, butchery marks, metrical data, gnawing, burning, surface condition, pathology and non-metric traits. This information was directly recorded into a relational database (in MS Access) and cross-referenced with relevant contextual information.

Preservation condition

5.12.3 Bone preservation is on the whole quite good and only a small number of fragments show signs of weathering and abrasion. This suggests that soil conditions are favourable for the preservation of bone and that contexts containing bone have not been significantly disturbed and redeposited. The number of fragments displaying signs of gnawing is also relatively low (*c.* 4%), which suggests that the majority of bones were rapidly buried out of the reach of scavenging carnivores. Indeed some of the bones were still in articulation when uncovered, for example the pork joint from occupation deposit **125** (animal bone group 82).

The assemblage

5.12.4 Bone was recovered from 41 separate contexts, mostly layers resulting from demolition and levelling. The following species have been identified and are listed in order of their relative abundance: cattle (40%), sheep/goat (33%),

pig (12%), bird (includes domestic fowl, duck and corvid), horse, dog, deer, cat and edible crab. A few intrusive rodent bones were also recovered.

5.12.5 Species frequencies are similar to those reported from earlier excavations at the fort (Jones *et al.* 1985, 135 and 137), and this reflects the importance of cattle to the Romano-British economy and the dietary preferences of the solders stationed at the fort (see King 1984, 198; 1991, 17; Dobney 2001, 36-7; Davies 1971).

5.12.6 All parts of the beef, mutton and pork carcass are represented in the assemblage and this suggests that the fort was supplied with livestock on the hoof probably from the immediate rural hinterland (see for example (Davies 1971, 127; Thomas and Stallibrass 2008, 9; Thomas 2008, 38 and 44-5). Cattle bones are more extensively butchered than the bones of other species, more so than might be considered necessary to reduce a large carcass into manageable portions. This could indicate that cattle bones were reused in stews or to flavour soups, the type of dishes that are relatively quick and easy to prepare for large groups, and which stretch available food resources.

5.12.7 A distinct pattern of butchery marks was observed on a number of cattle scapulae. This takes the form of trimming around the glenoid cavity, removal of spine and nick marks on the margo thoracic border. A few of the scapulae also have hook damage to the blade. This type of butchery is typically Roman and has been recorded on cattle scapulae from a large number of sites in Britain. The marks result from the preparation of shoulders of beef for curing, most probably by using the technique of cold-smoking (i.e. immersion in brine; see Dobney *et al.* 1996, 24-7), a process that preserves meat for long-term storage and is thought to have evolved in response to military food requirements (Grant 1987; Maltby 1989). Cattle scapulae recovered from previous excavations at the fort also show this distinct pattern of marks (see Jones 1985, 130; Jones *et al.* 1985, 144).

5.12.8 Additional sources of meat include domestic fowl and duck, and based upon the butchery evidence, it would seem that horse was also eaten. There is limited evidence for the exploitation of marine resources in the form of both fish and crab.

5.12.9 Two red deer bones were recovered; these include a lower molar and a piece of antler. The latter is a single tine, which shows signs of use wear on the very tip. It is unclear what type of implement this piece might have broken-off from, antler tools such as picks and rakes are known from the prehistoric period in Britain, however these tools are rather rudimentary in comparison to the wooden and metal digging tools available during the Romano-British period.

5.12.10 The assemblage also includes a small number of dog and cat bones, and based on the demographics it would seem that a breeding population was present. These animals are like to have had a semi-feral existence.

5.12.11 Also present are a number of crow and raven bones, these species might have been attracted to the site by the opportunity to scavenge on midden material.

Conclusions

5.12.12 Assessment of the animal bone assemblage from Brancaster Fort indicates that the military diet was primarily based on the consumption of beef, and too a lesser degree mutton and pork. These animals appear to have been supplied on the hoof, although there is also some indication that cured shoulders of beef were available. Domestic poultry, fish and crab provided some dietary variety, and horsemeat also eaten but perhaps only in times of severe hardship.

5.13 Marine Shell

5.13.1 The marine shell assemblage consisted of 519 shells, representing 329 minimum number of individuals. These were retrieved from 31 deposits of Romano-British date in five trenches. Where deposits were encountered which contained a large proportion of marine shell, a representative sample was collected of sufficient size for analysis.

5.13.2 All the shell has been recorded by species and by context, with the oyster shell being sub-divided into left and right measurable and unmeasurable valves. The results can be seen in **Table 17** (**Appendix 2**).

5.13.3 The predominant species of the assemblage was oyster (*Ostrea edulis*), forming 90% of the minimum number of individuals. Mussels (*Mytilus edulis*) represented 5% and whelks (*Buccinum undatum*) 3.6% of the minimum number of individuals. The remaining 1.4% of the assemblage was comprised of cockles (*Cerastoderma edule*) and periwinkles (*Littorina littorea*).

5.13.4 Although the marine shell was retrieved from five trenches on the site, 36% of the assemblage was recovered from Trench 1, 29% from Trench 4, 19% from Trench 2, 15% from Trench 3 and only 0.6% from Trench 5. No indication of areas of preparation or consumption could be discerned, as there were no significant differences between the spread of the 203 right oyster valves and the 273 left oyster valves in the five trenches.

5.13.5 The oyster shell was analysed in more depth from five deposits of Romano-British date, two from Trench 1 (**103**) and (**108**), one from Trench 2 (**202**), one from Trench 3 (**304**) and one from Trench 4 (**401**). The oysters were subdivided into measurable and unmeasurable left and right valves. 70% of the shells from the selected deposits were measurable. The measurable valves were then measured and examined, both for traces of infestation and physical characteristics. A summary of these results can be seen in **Table 18** (**Appendix 2**).

5.13.6 The analysed oyster shells were generally large, with the majority of the shells having a maximum width and length of between 60 and 100 mm, as can be seen in **Table 19** of comparative shell sizes and the graphs of shell size distributions (**Appendix 2**). The shells were generally slightly elongated, indicative of softer substrates. Although the shells were generally large, over a quarter of the shells (26.7%) were misshapen and 10% of the shells had oysters attached. This may be an indication of competition for space in a less well managed oyster bed as high levels of both irregularity of shape and clumping of shells are indicative of natural oyster beds where there is competition for space. The general lack of other small marine shells together

with paucity of small oysters may be indicative of a managed natural oyster bed being fished with a dredge net of a fixed size, rather than a specially laid oyster bed. It may also be an indication of some form of selection before they were brought to site.

5.13.7 Traces of infestation, mainly only in small amounts, was seen on 59% of the analysed shells. This was mainly traces caused by the polychaetic worm *Polydora ciliata*, observed on 50.7%, with some evidence of the boring sponge *Cliona celata* on 11.5% of the shells. A small number of shells (4%) showing traces left by barnacles were recorded from Trenches 2, 3 and 4 and there were calcareous tubes, made by marine worms of the Serpulidae family such as *Pomatoceros triqueter* and *Hydroides norvegica*, on two shells from Trench 4. *Polydora ciliata* is widespread and is most prevalent on hard, sandy or clay grounds particularly in warm shallow water, while the boring form of *Cliona celata* is also widespread on a variety of coasts.

5.13.8 The shells were generally in fairly good condition with 26% being worn and 7.8% flaky. Taken in conjunction with the fact 70% of the shells were measurable, this may be indicative of a relatively fast rate of deposition of the shells.

5.13.9 There were notches and traces of opening on 34% of the shells. There was a square hole in the centre of a large right valve from Trench 2 (**202**), and a smaller right valve from Trench 4 (topsoil **401**), which were not the result of predators. Such complete holes in the centre of the shells have been observed elsewhere from Roman contexts, such as Westhampnett, West Sussex (Wyles 2008) and Tolpuddle, Dorset (Winder 1999), and are thought to be possibly a result of fork tines or even the deliberate perforation of large shells for use as temporary roof tiles. It is possible that some shells were used as temporary labels on barrels or even as decoration/advertising on oyster stalls. Georgius Agricola refers to sheds “usually named from some animal or other thing which is pictured on a tablet nailed to it” (Agricola 1556, modern translation 1950). It may be that oyster shells themselves were used in a similar way to distinguish between different barrels or buildings, using a pictorial or representational form of labelling rather than writing for what would have been largely a non-literate society.

Conclusion

5.13.10 The marine shell assemblage only represents an augmentation and variety of the basic diet rather than forming a significant part of the diet.

5.13.11 It is likely that the shells came from a managed natural oyster bed on a soft substrate on the East coast.

6 PALAEO-ENVIRONMENTAL SUMMARY

6.1 Introduction

6.1.1 Three bulk samples were taken: from a possible occupation layer (**125**) associated with Romano-British coins and possibly located within the strong-room in the headquarters building; from the late Romano-British or post-Roman demolition layer (**106**) sealing many of the structures in Trench 1; and from a charcoal lens (**415**) within the defensive rampart excavated in

Trench 4. The samples were processed for the recovery and assessment of charred plant remains and charcoal.

6.1.2 The bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 5.6 mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. Flots were scanned under a x10 – x40 stereo-binocular microscope and the preservation and nature of the charred plant and wood charcoal remains recorded in **Table 20, Appendix 3**. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, tables 3 and 5), for cereals.

6.1.3 The flots varied in size with low numbers of roots and modern seeds that may indicative of stratigraphic movement and the possibility of contamination by later intrusive elements. Charred material comprised varying degrees of preservation.

6.2 Charred and mineralised plant remains

6.2.1 Charred remains of cereals were quite low in the sample from the occupation layer **125**, but occasional grains and glumes of hulled wheat (*Triticum dicoccum/spelta*) were present along with charred seeds of hedge parsley (*Torilis* sp.), annual meadow grass (*Poa* sp.), vetch/wild pea (*Vicia Lathyrus* sp.), buttercup (*Ranunculus* sp.) and ribwort plantain (*Plantago lanceolata*). There were also some charred stems, and thorns of sloe/hawthorn (*Prunus spinosa/Crataegus monogyna*).

6.2.2 This same sample also produced a large number of mineralised seeds, mainly of more wasteland and arable species, rather than cultigens or domesticated species. The seeds present included corncockle (*Agrostemma githago*), dock (*Rumex* sp.), hedge-parsley, knotgrass (*Polygonum aviculare*), wild mignonette (*Reseda lutea*), knapweed (*Centaurea* sp.), perennial rye grass (*Lolium* sp.) and brome grass (*Bromus* sp.). More unusual was a probable seed of *Spergularia* cf. *marina*, a species of sandy and muddy coastal areas. Seeds of orache (*Atriplex* sp.) were also quite common and can be found in similar coastal situations, or within wasteland and arable areas. Also present were a few seeds of forget-me-not (*Myosotis* sp.), given the general ecologies of the other species in the assemblage and the modern distribution of species of *Myosotis*, early forget-me-not (*Myosotis ramosissima*) a plant of dune slacks, sandy wastelands, arable fields and calcareous soils, would seem the most probable candidate.

6.2.3 The later sample that seals this earlier deposit from demolition layer **106** had stems of heather (Ericaceae), along with a few grains of hulled wheat and several more of barley (*Hordeum vulgare*). A few glume bases including some of spelt (*Triticum spelta*) were also seen in the sample. A small range of charred seeds, predominately of larger seeded species including black bindweed (*Fallopia convolvulus*), fumitory (*Fumaria* sp.), cleavers (*Galium aparine*), oats (*Avena* sp.) and brome grass (*Bromus* sp.) were also present. Smaller seeds included a few of sedges (*Carex* sp.) and heath grass (*Danthonia* sp.). Also present were several fragments of hazelnut (*Corylus avellana*) shell and a fragment of a stone of sloe (*Prunus spinosa*).

6.2.4 The sample from layer **415** contained several grains of barley and many charred capsules of runch (*Raphanus raphanistrum*). The sample also contained a few other weed seeds although these were few in number and included those already recorded from the other samples, including cleavers, black bindweed, dock, goosefoot and orache.

6.2.5 The samples indicate the presence and potentially the processing of cereals, although glume bases, which were rarer than grain, might be expected in some quantity if larger amounts of processing waste were present. It is possible that such processing was carried out outside the fort, or, as noted at South Shields and potentially also at *Bremetenacum*, Ribchester (van der Veen 1992; Huntley 2000; Fuller and Stevens 2009), that grain arrived and was stored in such forts after dehusking. The dominance of seeds or capsules of larger seeded species would certainly suggest that crops arrived at the fort in a relatively processed state.

6.2.6 The range of species present are not generally indicative of the cultivation of any particular types of soil and, as such, could all come from locally grown crops. In particular runch can become very dominant on sandier, usually non-calcareous soils, which formed on the Pleistocene deposits just to the south of Brancaster.

6.2.7 The charred remains of hazelnut and sloe are in general keeping with the probable collection and use of local wild food resources. The remains of heather, and stems, including seeds of heath (*Danthonia decumbens*) and probably sedge, are all likely to come from heathland vegetation that lies to the south of Brancaster, again growing upon the Pleistocene deposits that can still today be associated with heathland to the south of the site. Such remains are common on sites in the north where they have been associated with the use of heathland turves for fuel (see Hall and Huntley 2007).

6.2.8 The mineralised seeds from the occupation layer **125** might result from cess although no cess type material was seen. The high presence of fish bones and fish bones in general, can introduce phosphates and together with the calcareous nature of these deposits, can explain the resulting calcium phosphate and mineralisation. None of the identified seeds present relate to edible species and all are more typical of disturbed, wasteland settlement soils with some coastal elements.

6.3 Wood Charcoal

6.3.1 Wood charcoal was noted from the flots of the bulk samples and is recorded in **Table 20** (**Appendix 3**). Generally very little wood charcoal was recovered within the samples, although small round wood was identified from layer **125**. The absence of wood charcoal may be a result of preservation, although equally it might reflect the regular use of other material for fuel; e.g. possibility turves and heather.

6.4 Land and aquatic molluscs and marine shells

6.4.1 The flots of the bulk samples were rapidly assessed by scanning under a x10 – x40 stereo-binocular microscope to provide some information about shell preservation and species representation. The numbers of shells and the presence of taxonomic groups were quantified (**Table 21, Appendix 3**). Nomenclature is according to Anderson (2005) and habitat preferences

according to Kerney (1999). The presence of these shells may aid in broadly characterising the nature of the wider landscape.

6.4.2 The mollusc assemblages observed within layers **125** and **106** in Trench 1 were indicative of the presence of a number of different habitats in the vicinity of the site. The local environment may have been one of an area of open grassland as shown by the general range of open country species, intermediate species and shade-loving species in the assemblages. A variety of other habitats in the vicinity is indicated by the mollusc assemblage from layer **125**. These include more marshy areas and fresh-water flooding, as shown by the presence of *Succinea/Oxyloma* sp. and *Anisus leucostoma*, and brackish environments, such as estuaries or salt marshes, as indicated by the occurrence of *Myosotella myosotis* and *Hydrobia* spp.. The possible identification of *Cochlicella acuta* is noteworthy. This species 'in Britain is almost exclusively maritime, inhabiting cliffs, sand hills and waste ground and rarely straying more than a mile or two inland' (Kerney 1999, 186 citing Aubertin *et al.* 1931). Although this species on the South and West coasts of Britain, it has been recorded in Norfolk at Wells-next-the-sea.

6.4.3 The small assemblage from charcoal layer **415** is indicative of an open environment.

6.4.4 A few marine shell fragments were also observed in the samples from Trench 1. These included fragments of periwinkles, oysters, mussels and limpets.

6.5 Small animal and fish bones

6.5.1 During the processing of bulk soil samples for the recovery of charred plant remains and charcoals, small animal bones were noted, and their presence recorded in the flots (**Table 20, Appendix 3**). These included those of birds/small mammals, anurans (frogs, toads)/fish. The sample from the strong-room (**125**) contained a number of small and small-medium mammal bones including a rodent jaw bone. Fish bone was also present which included a vertebra of eel (*Anguilla anguilla*), and a number of smaller fish vertebra, and other bones, including otoliths.

6.5.2 The other two samples had less of such material with only a few mammal bones available from demolition layer **106**.

6.6 Foraminifera

6.6.1 Tests of foraminifera, including *Quinqueloculina* and *Elphidium* sp. were recorded within the sample from occupation layer **125**. These remains were not seen within the remaining samples.

7 DISCUSSION

7.1 Introduction

7.1.1 Though small scale this evaluation has effectively highlighted the well preserved remains and structures within Brancaster fort through both geophysical survey and intrusive investigations. The eastern *vicus* was also investigated and though many of the cropmark features were identifiable from the magnetometer survey, excavation showed some truncation of the

remains. Such truncation was also noted during the 1974 and 1977 excavations of the western *vicus* (Hinchliffe 1985, 176).

7.2 Evidence for an earlier fort (Trench 5 and Trench 3)

7.2.1 Trench 5 was positioned to target the double-ditched enclosure thought to represent an earlier fort. The location of the enclosure would be consistent with establishing an early position to guard the river navigation, and the shifting course of the river and mudflats may have necessitated its relocation. Generally little occupational debris was recovered from Trench 5 and, even given its position on the defensive margins, when contrasted with Trench 4 it suggests less intensive occupation - it may have been more a camp than a 'fort'. No evidence was found for any upstanding earthwork defences.

7.2.2 No clear difference in dating could be determined through the pottery, though it seems doubtful that this structure was established very long before work began at the main fort. Most probably this 'fort' would have been abandoned once the main fort was established, though it may have served an auxiliary function. Evidence from Trench 5 suggests that the ditches may have been deliberately backfilled once they went out of use.

7.2.3 A large enclosure ditch (**312/313**) was excavated in Trench 3. The position of this ditch in conjunction with the magnetometer survey and cropmark evidence suggests the position of a large rectangular enclosure on a similar alignment to the 'early fort'. The magnetometer survey indicates that this may have been another double-ditched feature - could this also be another earlier 'fort'? The presence of such a feature, pre-dating the *vicus*, could explain the general alignment of the *vicus*, which is at odds to the main fort.

7.3 The eastern *vicus* (Trench 3)

7.3.1 The 1977 excavations indicated that the western *vicus* was established in the 2nd century AD, with continued occupation throughout the 3rd century (Hinchliffe 1985, 178). While the 1974 excavation areas slightly to the west suggested the presence of stock enclosures dating to the late 3rd and 4th centuries AD (Sparey Green 1985, 13).

7.3.2 The evidence from Trench 3 seems to indicate that both settlements were contemporaneous, with largely 2nd and 3rd century material recovered from the trench. The exception was the road surface itself, stratigraphically later, and from which pottery suggests a 3rd to 4th century date. It also overlay some of the earlier features. As this represents the earliest surviving metalling phase of the road, this seems to suggest that the road network within the *vicus* may not have been laid out or formalised until this later period. This would imply continued and perhaps more significant settlement into the 4th century AD. On current evidence, this would have coincided with the abandonment of the western *vicus* and the decline and possible abandonment of the fort, suggesting the emergence of the eastern *vicus* as an entirely civilian settlement.

7.3.3 While the vast majority of the features seen in the magnetometer survey and identified through cropmark evidence follow a broad west-north-west – east-south-east alignment, some possible features can be seen on a divergent orientation, most obviously, a north-west – south-east aligned linear feature

to the east of Trench 3. However, without excavation it is impossible to tell whether this represents earlier or later activity, though a break in continuity is suggested.

7.4 The main fort

7.4.1 Roman forts generally conform to a 'playing card' shape with gates in the centre of the four sides (*portae principales*) (Bidwell 1997, 28). A main road (*via principalis*) forms the main axis of the fort with the headquarters (*principia*) fronts this with another extending to the front gate from this (*via praetorian*) and another behind (*via decumana*). Other standard buildings within the interior are barrack blocks, the commander's house (*praetorium*) and granaries, the latter two usually situated either side of the *principia*.

7.4.2 Some variation from this typical layout design can be seen at Brancaster. This may reflect the date of construction - some changes in layout are seen from the early 3rd century (Bidwell 1997) - or differences in function. At Reculver, thought to have been contemporaneous with Brancaster, the barracks also appear to lie to the east of the *principia*, while to the west lay granaries (Philp 2005); unfortunately the northern half of Reculver has been reclaimed by coastal erosion, so the parallels cannot be further pursued, but in the north-eastern part of the fort lay a bath house and officer's quarters (*ibid.*).

7.4.3 Perhaps most anomalous feature of Brancaster is the west-north-west – east-south-east aligned building in the north-eastern are of the fort. This shares a common orientation with the postulated earlier forts to the north and west and its walls appear to extend substantially deeper than the buildings fronting the *via principalis* to the south. As there is evidence in Trench 2 that the ground may have been built up before the construction of the more conventionally west – east orientated building, this difference in construction depth may represent a change in the ground surface rather than different foundation depths. There is a suggestion that this complex of rooms may be a *mansio*, or official accommodation. The presence of a hypocaust system in the complex to the north suggests a detached bath house though this may not be contemporary.

7.4.4 A large barrack block was identified from the geophysical survey to the east of the *principia*, and a granary in the north-western part of the fort. Further buildings are suggested to the east of the *principia*, though these are less distinct and within the northern part of the fort.

7.4.5 An unusual oval footprint underlain by a rectangular structure and within a wider rectangular structure was identified during the GPR survey. The report (GSB 2014) speculates that the oval response, which contracts with depth, could be demolition period. The possibility of a raked structure such as seating should perhaps also be considered, although the location and size would be unusual for an amphitheatre. A building showing an oval within a rectangular footprint is known from Chester legionary fortress (*Deva Victrix*) where is has been interpreted as a temple.

7.4.6 A number of possible structures are visible in the northern and western parts of the fort along the interior of the ramparts, a situation which typically reflects later development and, where investigated by St. Joseph, proved to be late 4th century in date (Edwards and Green 1977, 25). The evidence

from the magnetometer survey (**Figure 2**) suggests more industrial activity may have been concentrated within these areas.

7.4.7 What is not clear from the available evidence is the location of *praetorium.* While the nature of the structures to the west of the *principia* is uncertain there are no responses in the geophysical survey that suggest the kind of stone built structure you would expect. The postulated *mansio* could also equally be the *praetorium*, though the different orientation does suggest either an earlier or later date than the main fort layout. It is even possible that the building changed function as the fort developed with the earlier *mansio* being commandeered for military use.

7.4.8 Earlier excavations confirmed the position of the corner towers and the present investigations have confirmed the earlier findings of a wide stone-built wall with an internal rampart behind and at least one external ditch (Trench 4). Analysis of the stone recovered from the excavations confirms the evidence from earlier studies (Allen and Fulford 1999; Allen *et al*. 2001) that the construction materials from the fort were sourced relatively locally and probably utilising the coastal access.

7.4.9 The charcoal layer with the rampart (**415**) may correspond to that noted during the 1935 excavations, where the removal of the facing stones of the defensive wall was also noted (St Joseph 1936, 447). Significant amounts of charcoal were also noted by the Reverend Lee Warner during his excavations of the north-east corner tower (Lee Warner 1851, 14-16) and this could perhaps have resulted from a widespread fire amongst the defences.

7.4.10 The earliest stratigraphic deposits within Trench 1 were not reached during excavation, but the pottery suggests activity from the 2nd into the 4th century AD. Evidence of robbing and infilling of the rooms of the *principia* appears to date to the 4th century.

7.4.11 The central room of the office block of the *principia* can be seen on the GPR survey to extend to a considerable depth below the surrounding rooms, with responses still be received at 2.2m below ground level. This basement room was in all likelihood the location of the fort strong-room. A similar feature was uncovered during the excavations at Reculver, where it was thought to have been overlain by the garrison shrine (*sacellum*) (Philp 2005, 43-46).

7.4.12 The position of wall **205** indicates that it was mostly probably the north wall of a long building fronting the *via principalis*. However, excavation showed that this was not a substantial structure. Such a shallow foundation may have formed the support for a timber superstructure rather than a stone building. There were no clear indications of the nature or purpose of this building, though a storeroom or stable is perhaps most likely. Dating evidence from Trench 2 indicates activity within the overall range of mid 2nd to 3rd centuries AD.

7.4.13 In both Trenches 1 and 2 there was evidence of later, seemingly more rudimentary structures, but it was not clear whether this presented military or civilian occupation. This activity could not be clearly dated but seems to have post-dated some demolition of structures within the fort.

7.4.14 The pottery is largely derived from the local region though there are some continental imports (Rhineland and central Gaul). Rather than being a point of entry for foreign imports, however, the fort is more likely to have been supplied from internal trade routes. The prevalence of locally derived Nene Valley and Oxford wares is similar to the pattern seen within the western *vicus* excavations, though here Colchester-derived wares were also seen (see Andrews 1985). Interestingly the finds assemblage suggests the presence of women on the site with neonatal bones recovered from three contexts (Trenches 2, 4 and 5). The excavations at Reculver found at least ten infant burials within the fort (Philp 2005, 225).

7.4.15 Very little higher status indications were recovered from the investigation with the finds of *opus signinum* and wall plaster largely coming from Trench 1. Three of the five styli recovered also came from Trench 1 and this, along with the evidence for more luxurious decorations, is perhaps a reflection of its function. However it must be noted that all these items were retrieved from the later demolition and abandonment deposits.

7.4.16 Evidence for diet is limited, but does demonstrate that meat and cereals were, perhaps unsurprisingly, being supplemented by fish and seafood.

8 POTENTIAL AND FURTHER RECOMMENDATIONS

8.1 Potential

8.1.1 This investigation represents a small-scale evaluation of a large and complex site, although the use of geophysical survey has enabled some wider conclusions to be drawn. As a Scheduled Monument the fort is of national significance and the results here, albeit limited, will inform research about the wider network of Saxon Shore forts.

Finds

8.1.2 The finds assemblage from Brancaster is of moderate size, dominated by pottery, ceramic building material and animal bone, with a smaller quantity of metalwork, including coins. Other material types are represented in negligible quantities. The assemblage is similarly limited in its range of object types. Domestic and structural refuse is overwhelmingly predominant, but there is otherwise little functional evidence (several styli, but no grain processing or textile-working equipment, for example), and personal items are noticeably scarce. Given the clear evidence for substantial buildings on the Site, the scarcity of 'higher status' building materials, such as painted wall plaster, and anything more than a scattering of *opus signinum*, is perhaps surprising. There was no evidence for tessellated pavements. The small amount of stone building material recovered indicates both local and regional sources of supply, and this is also likely to be the case for the ceramic building material. Longer-distance contacts are demonstrated by the pottery assemblage, but continental and Mediterranean imports are more likely to have arrived at the fort via internal trade networks rather than directly from overseas trade.

8.1.3 Despite the relatively large number of identifiable animal bone fragments in the assemblage, the amount of specific information (e.g. age, biometry and butchery) available for further study is quite limited and unlikely to provide the level of detail needed to significantly enhance our understanding of

military food supply networks, butchery practices or the dietary preferences of solders stationed at Brancaster Fort.

8.1.4 Certain items and groups of items amongst the finds are, however, of intrinsic interest, such as the fragment of *lorica squamata*, and a probable dispersed coin hoard in Trench 1. The coin assemblage as a whole provides important new information on coin use and coin loss within Brancaster and its environs. It also has the potential to inform discussion on the longevity of activity within the fort and, through discussion of the likely hoard and its context, on the chronology of the *principia* in particular. This information is sufficiently important to merit publication as part of a wider report on the excavations themselves. The hoard itself, whilst only partially complete, is also worthy of publication in its own right.

8.1.5 The small group of post-Roman material, including Ipswich ware pottery and (probably) the chalk die, is of interest, but its potential is limited by the small quantities involved, and the probable residual provenance.

Environmental samples

Charred and mineralised plant remains

8.1.6 The charred plant remains have the potential to demonstrate the range of crops brought into the fort, as well as information on their processing and from the weed seeds potentially crop-husbandry practices. Additionally the charred material has also the potential to examine the use of local heathland resources for fuel. The small number of remains and small range present however make such potential very limited.

8.1.7 The mineralised remains have the potential to provide information on the local vegetation growing on the site during the deposition of the occupation material within layer **125**. As most of the seeds have been identified to species, and the range of species only appears to include plants associated with disturbed and nitrogen rich soils in coastal areas, further potential from full analysis is likely to be limited.

Wood charcoal

8.1.8 Wood charcoal can inform on the range of species collected as fuel, as well as providing evidence for aspects of woodland management and composition. However, given the low amount of wood charcoal there is little further potential.

Land and aquatic molluscs

8.1.9 Further analysis of the mollusc assemblages from the Trench 1 deposits would not assist in determining to nature of the local landscape to a greater extent due to the mixed nature of the deposits. The assemblage from Trench 4 is too small for any analysis.

Small animal and fish bones

8.1.10 The small animal and fish bones from context **125** can provide information on the broader diet beyond the usual range of larger domestic and wild animals, whose bones are recovered through hand excavation.

8.2 Proposals

Finds

8.2.1 All the finds have already been recorded to an appropriate archive level, and no further analysis or reporting is proposed on any of the material types. Data gathered as part of the assessment stage, and assessment reports as presented here, will be incorporated as appropriate in the proposed publication report.

Environmental samples

Charred and mineralised plant remains

8.2.2 It is proposed to analyse the plant remains from all three samples.

8.2.3 All identifiable charred and mineralised plant macrofossils will be extracted from the 2 and 1mm residues together with the flot. Identification will be undertaken using stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals. and with reference to modern reference collections where appropriate, quantified and the results tabulated.

8.2.4 The samples proposed for analysis are indicated with a 'P' in the analysis column in **Table 20, Appendix 3**.

Wood charcoal

8.2.5 No further work is proposed.

Land and aquatics molluscs

8.2.6 No further work is proposed.

Small animal and fish bones

8.2.7 No further work is proposed.

Publication

8.2.8 It is recommended that short article summarising the results of these investigations and the further environmental analysis undertaken be submitted to the *Norfolk Archaeological Journal*. An report of approximately 3000 words is proposed, with 3-4 accompanying figures, and finds and environmental data tabulated as appropriate.

9 ARCHIVE

9.1.1 It is recommended that the project archive resulting from the excavation be deposited with Norfolk Museums and Archaeology Service. The Museum has issued an Event Number (**ENF129426**) and an accession number for the project (**NWHCM : 2012.240**), but is not currently accepting archives due to lack of storage space. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner.

9.1.2 The complete site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated

archaeological material by Norfolk Museums and Archaeology Service, and in general following nationally recommended guidelines (SMA 1995; IfA 2009; Brown 2011; ADS 2013).

9.1.3 All archive elements will be marked with the Event Number and accession code, and a full index will be prepared. An OASIS online record http://ads.ahds.ac.uk/projects/oasis/ will be initiated and key fields completed on Details, Location and Creators Forms. All appropriate parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .pdf version of the entire report.

Copyright

9.1.4 The full copyright of the written/illustrative archive relating to the Site will be retained by Wessex Archaeology Ltd under the *Copyright, Designs and Patents Act* 1988 with all rights reserved. The recipient museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use shall be non-profitmaking, and conforms with the *Copyright and Related Rights Regulations* 2003.

9.1.5 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright etc.), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the *Copyright, Designs and Patents Act* 1988 with regard to multiple copying and electronic dissemination of the report

Security copy

9.1.6 In line with current best practice (Brown 2011), on completion of the project a security copy of the paper records will be prepared, in the form of a PDF/A file; PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

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10.2 Online resources

Geological Survey of Great Britain 1:50,000 mapping available at: http://www.bgs.ac.uk/data/services/digmap50wms.html

Scheduled monument information available at: http://list.english-heritage.org.uk/

APPENDIX 1: TRENCH SUMMARIES

bgl = below ground level

TRENCH 1			**Type:** Machine excavated
Dimensions: 20.20x1.80m	**Max. depth:** 1.16m		**Ground level:** 14.65-15.56m aOD
Context	**Description**		**Depth (m)**
101	*Topsoil*	Modern topsoil. Dark brown sandy loam. <1% flint, sub-angular – sub-rounded, <1-3cm. Loose and friable. Bioturbated. Homogeneous. Under grass. Overlies 110.	0.00-0.25 bgl
102	*Layer*	Equivalent to 104 and 108, northern area of trench. Occupation debris likely post-abandonment. Very dark grey-brown sandy silt loam. 5% stone, gravel and chalk, sub-angular – sub-rounded, <1-6cm. Frequent oyster shells, animal bone and CBM. Slightly mixed. Fairly compact. Overlies 111, 112 and 113.	0.34 deep
103	-	Number assigned for finds retrieval, cleaning over 104, base of 101	-
104	*Layer*	Equivalent to 102 and 108, south end of trench. Occupation debris likely post-abandonment. Very dark grey-brown sandy silt loam. 5% stone, gravel and chalk, sub-angular – sub-rounded, <1-6cm. Frequent oyster shells, animal bone and CBM. Slightly mixed. Fairly compact. Overlies 105.	0.34 deep
105	*Layer*	Equivalent to 106 and 107, northern end of trench. Very dark brown sandy loam. 1% stone/gravel, sub-angular – sub-rounded, <1-4cm. Frequent oyster shell, occasional animal bone and CBM. Rare charcoal and chalk flecks. Fairly friable but moderately compact. Overlies 114.	0.30 deep
106	*Layer*	Equivalent to 105 and 107, southern end of trench. Very dark brown sandy loam. 1% stone/gravel, sub-angular – sub-rounded, <1-4cm. Frequent oyster shell, occasional animal bone and CBM. Rare charcoal and chalk flecks. Fairly friable but moderately compact. Environmental sample 3. Overlies 116 and 137.	0.33 deep
107	*Layer*	Equivalent to 105 and 106, central area of trench. Very dark brown sandy loam. 1% stone/gravel, sub-angular – sub-rounded, <1-4cm. Frequent oyster shell, occasional animal bone and CBM. Rare charcoal and chalk flecks. Fairly friable but moderately compact. Overlies 126.	0.29 deep
108	*Layer*	Equivalent to 102 and 104, central area of trench. Occupation debris likely post-abandonment. Very dark grey-brown sandy silt loam. 5% stone, gravel and chalk, sub-angular – sub-rounded, <1-6cm. Frequent oyster shells, animal bone and CBM. Slightly mixed. Fairly compact. Overlies 107.	0.43 deep
109	*Layer*	Discrete dump of demolition material. Very dark grey-brown sandy silt loam. 5% stone, sub-angular, 2-8cm. Rare oyster shell. Slightly mixed. Moderately compact. Overlies 106.	0.31 deep
110	*Deposit*	Deliberate backfill of possible pit **135**. Dark grey-brown sandy silt loam. 2% chalk fragments and oyster shell, rare CBM. Largely unexcavated. Overlies **135**.	0.26+ deep
111	*?Surface*	Possible rough surface. Dark grey-brown sandy loam. 60% stone and chalk, occasional mortar and CBM. Compact. Unexcavated. Overlies 106.	-
112	*Structure*	Possible wall remnant or structural feature composed of large chalk blocks. No bedding material or core. 0.85x0.40m. Only single course remaining. Overlies 106.	0.12 high
113	*Layer*	Demolition rubble spread in central part of trench, potentially associated with later robbing. Mid grey-brown sandy loam. 60% stone, sub-angular, 2-10cm. Occasional CBM fragments. Overlies 109.	0.25 deep

114	*Layer*	Equivalent to 120. Demolition debris. Mid orange brown sandy loam. 15% stone, sub-angular, <1-3cm. Occasional tile fragments and mortar fragments. Fairly compact. Overlies 115.	0.08 deep
115	*Layer*	Equivalent to 121. Tile debris, possible roof collapse or reclamation. Mid orange-brown silty sand. Abundant tile fragments. Fairly homogenous. Moderately compact. Overlies 122.	0.21 deep
116	*?Surface*	Possible surface. Mid yellow-pink mortar with small gravel inclusions. Compact. Overlies 117.	0.05 deep
117	*Layer*	Very dark grey-brown sandy loam. Rare charcoal flecks. Loose and friable. Overlies 118.	0.06 deep
118	*Layer*	Possible levelling layer. Mid yellow-brown sandy silt loam. <1% stone/gravel, rounded, <1-2cm. Fairly homogeneous. Overlies 119.	0.09 deep
119	*Layer*	Tile debris, possible roof collapse or reclamation. Mid yellow-brown sandy mortar. Abundant tile fragments. Fairly homogenous. Moderately compact. Overlies 133.	0.14 deep
120	*Layer*	Equivalent to 114. Demolition debris. Mid orange brown sandy loam. 15% stone, sub-angular, <1-3cm. Occasional tile fragments and mortar fragments. Fairly compact. Overlies 121.	0.10 deep
121	*Layer*	Equivalent to 115. Tile debris, possible roof collapse or reclamation. Mid orange-brown silty sand. Abundant tile fragments. Fairly homogenous. Moderately compact. Overlies 122.	0.22 deep
122	*Layer*	Mid orange-brown sandy loam. 2% stone/gravel, sub-angular – sub-rounded, <1-3cm. Occasional small CBM fragments. Moderately homogeneous. Fairly compact. Overlies 136.	0.20 deep
123	*Layer*	Mortar spread. Mid yellow. Moderately homogeneous and compact. Overlies 124.	0.10 deep
124	*Layer*	Possible deliberate backfill relating to building demolition. Mixed lenses of pale yellow-white mortar and very dark-brown sandy silt loam. Occasional CBM fragments within mortar. Fairly compact. Overlies 125.	0.38 deep
125	*Layer*	Occupation deposit. Dark yellow-brown sandy silt loam. <1% stone/gravel, sub-angular – sub-rounded, <1-3cm. Rare mortar flecks. Contains ABG 82. Environmental sample 1. Overlies 131.	0.10 deep
126	*Deposit*	Deliberate backfill of robber cut **127**. Dark yellow-brown sandy silt loam. 5% stone, sub-angular, <1-6cm. Rare CBM fragments. Fairly homogenous. Moderately compact. Overlies **127**.	0.65 deep
127	***Cut***	**Robber cut which has removed upper portion of 128, filled with 126. East – west aligned. Steep, straight side, flat base. Full width not exposed 0.90m+ wide. Cuts 120.**	**0.65 deep**
128	*Structure*	East – west aligned wall, southern exterior wall. Face material squared stone blocks mostly obscured by dark yellow sandy mortar. Full surviving height not exposed. At least 0.90m wide.	0.28+ high
129	*Layer*	Material around *lorica squamata* (ON83) collected for find retrieval. Overlies 132.	-
130	*Structure*	East – west aligned wall, interior wall. Face material squared stone blocks mostly obscured by pale yellow sandy mortar. Full surviving height not exposed. 0.48m wide.	0.54+ high
131	*Surface*	Mortar surface. Pale yellow-white mortar. Does not fully extend to wall face 130. Only partially excavated. Overlies 129.	0.02 deep
132	*Layer*	Exposed along edge of wall, only removed where ON83 lifted. Pale pink-brown mortar, possible surface. Overlies 139.	0.02 deep
133	*Layer*	Trample deposit. Very dark grey-brown silt. Frequent charcoal flecks. Laminations visible. Compact. Unexcavated except to establish textural class and depth. Overlies 134.	0.01 deep
134	*?Surface*	Possible rough surface. Mid yellow-brown sandy silt loam. Includes several large (8-15cm) flat stones. Unexcavated.	-
135	***Cut***	**Seen mostly in section, largely unexcavated. Difficult to see in plan. Possible pit filled with 110. Cuts 102.**	**0.26+ deep**

136	*Layer*	Pale orange sandy silt loam. Abundant small angular stone chips. Possible construction or reclamation debris. Abuts wall 128. Overlies 142.	0.06 deep
137	*Structure*	Possible structural element but post-dates robbing. Area of pink-red crushed CBM or mortar includes some near vertical tiles mortared together. Unexcavated. Overlies 123.	0.10 high
138	*Layer*	Build up to north of wall 130. Mid orange-brown sand. 10% stone/chalk, sub-angular – sub-rounded, <1-10cm. Slightly mixed deposit. Fairly compact. Overlies 140.	0.20 deep
139	*Layer*	Apparently re-deposited natural as wall depth continues. Mid orange sand. Only very small area seen beneath 132 where ON83 removed. Unexcavated. May be similar to 140. Abuts 130.	-
140	*Layer*	Apparently re-deposited natural as wall depth continues. Mid red-orange sand. 2% flint/gravel, sub-angular – sub-rounded, <1-6cm. Fairly homogeneous and compact. Unexcavated. May be similar to 139. Abuts 130.	-
141	*Layer*	Defined area or lens of mid red clay apparently abutting wall 128. Overlies 143.	0.07 deep
142	*Layer*	Apparently re-deposited natural as wall depth continues. Mid red-orange sand. <1% flint/gravel, sub-angular – sub-rounded, <1-3cm. Fairly homogeneous and compact. Very similar to 143. Overlies 141.	0.33 deep
143	*Layer*	Apparently re-deposited natural as wall depth continues. Mid red-orange sand. <1% flint/gravel, sub-angular – sub-rounded, <1-3cm. Fairly homogeneous and compact. Very similar to 142. Abuts 128.	0.28+ deep

TRENCH 2			**Type:** Machine excavated
Dimensions: 9.80x2.60m	**Max. depth**: 0.98m		**Ground level:** 12.43-12.74m aOD
Context	**Description**		**Depth (m)**
201	*Topsoil*	Modern topsoil. Dark brown sandy loam. 1% flint/stone, sub-angular – sub-rounded, <1-4cm. Loose and friable. Homogenous. Bioturbated Under grass. Overlies 202, 206 and 207	0.00-0.35 bgl
202	*Layer*	Disturbed interface/ layer between topsoil 201 and surface 203. Mid grey-brown sandy loam. 2% stone, sub-rounded, <1-3cm. Occasional sand lenses. Overlies 203.	0.12 deep
203	*Surface*	Same as 204. 40% flint gravel and chalk flecks, sub-angular, <1-2cm within pink-grey mortar form base. Finer mid orange sandy ?mortar with 50% flint gravel , sub-angular, <1-2cm form upper layer. Compact. Left *in situ*. Overlies 209.	-
204	*Surface*	Same as 203. 40% flint gravel and chalk flecks, sub-angular, <1-2cm within pink-grey mortar form base. Finer mid orange sandy ?mortar with 50% flint gravel , sub-angular, <1-2cm form upper layer. Some traces of mortar, possibly opus signinum on upper surface. Compact. Abuts 205.	0.12 deep
205	*Structure*	East – west aligned chalk wall. Chalk sub-angular facing blocks, 8-12cm, chalk rubble core. Only 1 course remaining, no discernable foundation. Pale pink grey mortar. 0.50m wide.	0.12 high
206	*Layer*	Demolition debris. Mid brown sandy silt loam. 40% stone and flint rubble, angular – sub-rounded, <1-3cm, 8-34cm. Slightly mixed. Fairly compact. Some bioturbation. Overlies 205, 212, 213, 214, 216, 220 and 224.	0.15 deep
207	*Deposit*	Secondary fill of gully **208**. Dark brown silty sand. 1% flint, sub-rounded, <1-2cm. Occasional chalk and mortar fragments. Fairly homogeneous. Moderately compact. Some bioturbation. Overlies **208**.	0.40 deep
208	***Cut***	**East – west aligned gully, filled with 207. Straight, near vertical sides, concave base. 0.36m wide. Cuts 204.**	**0.40 deep**
209	*Layer*	Same as 210. Made ground, re-deposited natural. Pale to mid brown	0.53+ deep

		sandy silt loam. <1% stone, rounded – sub-rounded, <1cm. Homogeneous. Compact. Some bioturbation. Overlies 211.	
210	*Layer*	Same as 209. Made ground, re-deposited natural. Pale to mid brown sandy silt loam. <1% stone, rounded – sub-rounded, <1cm. Homogeneous. Compact. Some bioturbation. Overlies 211.	0.34 deep
211	*Natural*	Natural geology. Mid yellow-brown sand. No inclusions. Compact.	0.80+ bgl
212	*Structure*	Possible post-pad, sub-rectangular. 0.35x0.24m. Composed of pale white-grey mortar. Possible group with 213, 214 and possibly **223**.	-
213	*Structure*	Possible post-pad, sub-rectangular. 0.36x0.25m. Composed of pale white-grey mortar and tile fragment. Possible group with 212, 214 and possibly **223**.	-
214	*Structure*	Possible post-pad, sub-rectangular. 0.15+x0.20m. Composed of pale white-grey mortar. Possible group with 212, 213 and possibly **223**.	-
215	***Cut***	**Small sub-oval pit fill with 216, 217 and 218. Includes possible posthole in southern end. Steep straight sides, generally very slightly concave base except for concave area at southern end. 1.08m long, 0.50m wide. Cuts 210.**	**0.42 deep**
216	*Deposit*	Secondary fill or possible deliberate backfill. Dark brown sandy loam. 2% flint, sub-rounded – sub-angular, <1-4cm, 5-18cm.Occasinal charcoal flecks. Very mixed deposit, mid orange-brown and mid red mottling. Some bioturbation. Infills area of possible posthole. Overlies 217.	0.42 deep
217	*Deposit*	Possible deliberate deposit, possible clay lining. Mid red-brown clay. No inclusions. Very occasional mid brown mottles due to bioturbation but otherwise homogeneous. Compact. Overlies 218.	0.14 deep
218	*Deposit*	Possible in-situ heating. Mid to pale red sand. Homogenous. Some bioturbation. Compact. Overlies **215**.	0.02 deep
219	***Cut***	**Small sub-oval pit filled with 220. Moderate, concave sides, concave base. 0.65m long, 0.45m wide. Cuts 210.**	**0.15 deep**
220	*Deposit*	Secondary fill of pit **219**. Dark brown-grey sandy silt loam. <1% stone, sub-rounded, <1cm. Occasional charcoal flecks concentrated at base of deposit. Very slightly mixed. Some bioturbation. Overlies **219**.	0.15 deep
221	*Layer*	Possible trample layer beneath 210. Mid grey sand. No inclusions. Overlies 211.	0.02 deep
222	*Layer*	Thin layer seen in south-west part of trench. Mid orange-brown sand. <1% stone, sub-angular – sub-rounded, <1-2cm. Slightly mixed. Fairly compact. Overlies 210.	0.12 deep
223	***Cut***	**Possible group with 212, 213 and 214. Possible posthole filled with 223. Not seen in plan. 0.40m wide. Cuts 222. Adjacent to wall 205 but relationship unclear.**	**0.40 deep**
224	*Deposit*	Secondary fill of possible posthole **223**. Dark grey brown sandy loam. 10% stone and chalk rubble, 6-20cm – either post-packing or collapse from wall 205. Fairly homogeneous. Overlies **223**.	0.40 deep

TRENCH 3			**Type:** Machine excavated
Dimensions: 10.20x9.15m	**Max. depth:** 0.58m		**Ground level:** 13.38-13.70m aOD
Context	**Description**		**Depth (m)**
301	*Topsoil*	Modern topsoil/ former ploughsoil. Dark black-brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-5cm. Fairly loose and friable. Homogeneous. Bioturbated. Under grass. Overlies 302, 306 and 316.	0.00-0.58 bgl
302	*Layer*	Remnants of road metalling, very patchy. Has survived within the top of some of the earlier features. Same as 316. Dark grey-brown silty sand. 40% flint/ gravel, sub-angular – sub-rounded, <1-4cm. Compact. Fairly homogeneous. Overlies 309.	0.10 deep
303	*Deposit*	Possible deliberate backfill of ditch **312**. Same as 304. Dark brown silty sand. 2% flint/gravel, sub-angular – sub-rounded, <1-4cm. Fairly homogeneous. Moderately compact. Some bioturbation. Overlies	0.66 deep

		307. Same as 315 within **313**.	
304	*Deposit*	Possible deliberate backfill of ditch **312**. Same as 303. Dark brown silty sand. 2% flint/gravel, sub-angular – sub-rounded, <1-4cm. Fairly homogeneous. Moderately compact. Some bioturbation. Overlies 307. Same as 315 within **313**.	0.66 deep
305	***Cut***	**Roadside ditch, east – west aligned filled with 306. Straight, sides, steep north edge, moderate south edge. Flat base. 1.08m wide. Cuts 309.**	**0.44 deep**
306	*Deposit*	Secondary fill of ditch 305. Dark brown sand. 20% flint/gravel, sub-angular – angular, <1-8cm. Sand lens at base of deposit along interface with cut. Some eroded metalling from road 302/316 within top 0.12 of deposit. Compact. Overlies **305**.	0.44 deep
307	*Deposit*	Secondary fill of ditch **312**. Mixed/ layered deposit of mid to dark brown lenses and pale yellow-white lenses of sand. No inclusions. Compact. Banding suggests probably water action. Not fully excavated. Lowest fill encountered within **312**. Same as 314 within **313**.	0.50+ deep
308	***Cut***	**North – south aligned curvilinear ditch. Filled with 309. Moderate, concave sides, concave base. 1.2-2.0m wide. Cuts 303 and 311.**	**0.30 deep**
309	*Deposit*	Secondary fill of ditch **308**. Pale brown sand. 2% flint/gravel sub-angular – sub-rounded, <1-4cm. Fairly homogeneous. Moderately compact. Overlies **308**.	0.30 deep
310	***Cut***	**Possible pit or ditch terminus, filled with 311. East – west aligned. Concave, moderate sides, concave base. Full extent not seen in plan. Cuts 317.**	**0.30 deep**
311	*Deposit*	Secondary fill of ditch **310**. Pale brown sand. 2% flint/gravel sub-angular – sub-rounded, <1-3cm. Fairly homogeneous. Moderately compact. Overlies **310**.	0.30 deep
312	***Cut***	**Large north-east – south-west aligned ditch filled with 303, 304 and 307. Northern edge. Same as 313. Steep, straight sides. Not fully excavated. 2.3m wide. Cuts 317.**	**1.20+ deep**
313	***Cut***	**Large north-east – south-west aligned ditch filled with 314 and 315. Southern edge. Same as 312. Steep, straight sides. Not fully excavated. 2.3m wide. Cuts 317.**	**0.95+ deep**
314	*Deposit*	Secondary fill of ditch **313**. Mixed/ layered deposit of mid to dark brown lenses and pale yellow-white lenses of sand. No inclusions. Compact. Banding suggests probably water action. Not fully excavated. Lowest fill encountered within **313**. Same as 307 within **312**.	0.14+ deep
315	*Deposit*	Possible deliberate backfill of ditch **313**. Dark brown silty sand. 2% flint/gravel, sub-angular – sub-rounded, <1-3cm. Fairly homogeneous. Moderately compact. Some bioturbation. Overlies 314. Same as 303/304 within **312**.	0.66 deep
316	*Surface*	Remnants of road metalling, very patchy. Has survived within the top of some of the earlier features. Same as 302. Dark grey-brown silty sand. 40% flint/ gravel, sub-angular – sub-rounded, <1-4cm. Compact. Fairly homogeneous. Overlies 315.	0.10 deep
317	*Natural*	Natural geology. Mid orange sand and gravel. 10% gravel, sub-angular – sub-rounded, <1-3cm. Slightly mixed, some pale yellow orange patches. Compact.	0.44+ bgl

TRENCH 4			**Type:**	Machine excavated
Dimensions: 21.10x1.90m		**Max. depth:** 1.40m	**Ground level:** 10.34-11.22m aOD	
Context	**Description**			**Depth (m)**
401	*Topsoil.*	Modern topsoil. Dark brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-4cm. Loose and friable. Homogeneous. Bioturbated.		0.00-0.50 bgl

		Under grass. Overlies 402 and 410.	
402	*Deposit*	Demolition debris, upper fill of robber cut **408**. Mid orange silty sand. 15% flint and stone, sub-angular – sub-rounded, <1-8cm. Slightly mixed. Fairly compact. Overlies 407.	0.35 deep
403	*Structure*	Northern exterior defensive wall of fort. East – west aligned. 2.5m wide. Face material pale white micaceous stone and flint nodules within pale yellow lime mortar. Lower portion slightly stepped out. Mortar widely slobbered so coursing pattern not apparent. Left *in situ*.	0.75+ high
404	*Deposit*	Secondary fill of ditch **406**. Dark grey-brown silty sand. 25% stone, sub-angular, <1-10cm. Occasional charcoal flecks. Slightly mixed. Fairly compact. Overlies 409.	0.50 deep
405	*Deposit*	Secondary fill or possible deliberate backfill of robber cut **408**. Mid orange-brown sandy silt loam. 2% flint, sub-rounded, <1-2cm. Slightly mixed, some bioturbation. Fairly compact. Overlies **408**.	0.31 deep
406	***Cut***	**Northern defensive ditch, east – west aligned, filled with 404, 409 and 420. Not fully excavated so profile not seen.**	**0.88+ deep**
407	*Deposit*	Secondary fill or possible deliberate backfill of robber cut **408**. Dark grey-brown silty sand. 5% stone an flint, sub-angular – sub-rounded, <1-4cm. Slightly mixed. Fairly compact. Overlies 418.	0.30 deep
408	***Cut***	**Robber cut associated with wall 403, situated over top of wall and down northern face. East – west aligned, filled with 402, 405, 407 and 418. Straight steep sides, stepped base. 3.8m wide. Cuts 404 and 413.**	**0.62 deep**
409	*Deposit*	Secondary fill of ditch **406**. Dark brown silty sand. 5% flint and stone, sub-angular – rounded, <1-3cm. Occasional mortar and oyster shell. Very slightly mixed. Fairly compact. Not fully excavated. Overlies 420.	0.28+ deep
410	*Deposit*	Secondary fill of robber trench **411**. Dark brown sandy silt loam. 2% chalk and gravel, sub-angular – sub-rounded, <1cm. Topsoil/ ploughsoil derived material. Fairly homogeneous. Moderately compact. Overlies **411**.	0.48+ deep
411	***Cut***	**Series of robber trenches in southern end of trench. Thought to be from either early modern robbing or investigations. Filled with 410. Cuts 412 and 419.**	**0.48+ deep**
412	*Surface*	Mortar surface or wall foundation. Shape in plan highly truncated. Mid yellow-grey sandy mortar. 10% chalk and lint, sub-rounded – sub-angular, 1-5cm. Compact. Overlies 416.	0.10 deep
413	*Layer*	Rampart bank. East-west aligned. Mid orange sand. 2% flint/ gravel, sub-angular, <1-4cm. Fairly homogenous. Compact. Some bioturbation. Overlies 415.	0.52 deep
414	*Layer*	Rampart bank. East-west aligned. Mid orange sand. 2% flint/ gravel, sub-angular, <1-8cm. Fairly homogenous. Compact. Some bioturbation. Abuts 403.	0.17+ deep
415	*Layer*	Thin discontinuous charcoal rich lens. Dark grey-black sandy loam. Frequent charcoal. Environmental sample 2. Overlies 414.	0.03 deep
416	*Layer*	Possible makeup. Mid yellow-brown sandy silt. 5% stone and chalk, sub-angular – sub-rounded, <1-4cm. Frequent mortar. Overlies 417.	0.13 deep
417	*Layer*	Possible surface or bedding layer. Mid brown sandy silt with pale pink-orange mortar. 2% flint and chalk, sub-rounded, <1-4cm. Heavily truncated. Compact. Slightly mixed. Left *in situ*.	-
418	*Deposit*	Deliberate backfill of robber cut **408**. Likely reclamation debris, east facing section only. Mid grey sandy silt loam. 60% sub-angular stone chippings, <1-4cm. Fairly compact. Slightly mixed. Overlies 405.	0.11 deep
419	*Layer*	Possible abandonment, demolition debris. Mid grey-brown sandy loam. 1% flint, sub-angular, <1-8cm, Frequent oyster shell, rare stone and mortar flecks. Mixed with frequent mid orange-brown mottles. Fairly compact. Overlies 413. Largely unexcavated.	-
420	*Deposit*	Possible lower fill of ditch **406**, lowest deposit encountered but could	-

		be on the edge of the ditch edge rather than within ditch itself. Mid orange brown sand and mortar. Debris from wall construction. Unexcavated.	

TRENCH 5			**Type:** Machine excavated	
Dimensions: 9.50x1.62m		**Max. depth:** 1.36m	**Ground level:** 7.93-8.26m aOD	
Context	**Description**			**Depth (m)**
501	*Topsoil*	Modern topsoil. Dark grey-brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-5cm. Loose and friable. Bioturbated. Homogeneous. Under grass. Overlies 502.		0.00-0.40 bgl
502	*Subsoil*	Thin, underdeveloped subsoil. Mid orange-brown sand. 5% flint, Sub-angular – sub-rounded, <1-6cm. Fairly loose and friable. Slightly mixed. Bioturbated. Overlies 510.		0.38-0.52 bgl
503	***Cut***	**East – west aligned probable double defensive ditch, filled with 504 and 505. Straight, moderate sides, concave base. 2.56m wide. Slightly diffuse in plan and section. To south of parallel ditch 506. Cuts 510.**		**0.96 deep**
504	*Deposit*	Secondary fill or possible deliberate backfill of ditch **503**. Dark brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-4cm. Slightly arbitrary division with 505, slightly more orange but very diffuse, gradual change. Overlies **503**.		0.56 deep
505	*Deposit*	Secondary fill or possible deliberate backfill of ditch **503**. Dark brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-4cm. Slightly arbitrary division with 504, slightly darker but very diffuse, gradual change. Overlies 504		0.40 deep
506	***Cut***	**East – west aligned probable double defensive ditch, filled with 507, 508 and 509. Straight, moderate sides, concave base. 2.46m wide. Slightly diffuse in plan and section. To north of parallel ditch 503. Cuts 510.**		**0.75 deep**
507	*Deposit*	Secondary fill or possible deliberate backfill. Mid brown sandy loam. 2% flint, sub-angular – sub-rounded, <1-6cm. Occasional diffuse dark brown mottles. Slightly arbitrary division with 508 as very diffuse, gradual change. Overlies 509.		0.40 deep
508	*Deposit*	Secondary fill or possible deliberate backfill. Dark brown sandy loam/ sand. 2% flint, sub-angular – sub-rounded, <1-6cm. Rare diffuse mid brown mottles. Bioturbated. Slightly arbitrary division with 507as very diffuse, gradual change. Overlies 507.		0.35 deep
509	*Deposit*	Derived from collapse of south edge. Mid orange-brown sand. 5% flint, sub-angular – sub-rounded, <1-8cm. Very mixed – bioturbated. Overlies **506**.		0.25 deep
510	*Natural*	Natural sand. Mid orange. 5% sub-angular gravel, <1-6cm. Paler yellow patches and mottles. Compact.		0.30+ bgl

APPENDIX 2: SUPPLEMENTARY FINDS INFORMATION

Table 1: Finds totals by material type and by trench (number / weight in grammes)

Material	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5	Total
Pottery	263/6577	131/2685	93/2420	134/2968	33/362	654/15,012
Prehistoric	-	*1/3*	-	-	-	*1/3*
Romano-British	*263/6577*	*129/2629*	*91/2386*	*134/2968*	*33/362*	*650/14,922*
Post-Roman	-	*1/53*	*2/34*	-	-	*3/87*
Ceramic Building Material	342/63,957	113/20,032	54/5749	104/18,175	14/3611	627/111,444
Fired Clay	-	8/738	-	1/15	-	9/753
Opus Signinum	4/360	1/151	-	-	-	5/511
Wall Plaster	3/109	1/13	-	-	-	4/122
Mortar	7/2237	-	-	1/323	-	8/2560
Stone	1/8	1/121	2/527	-	-	4/656
Worked Flint	-	-	-	-	1/4	1/4
Glass	1/3	-	-	4/7	-	5/10
Slag	3/173	1/20	2/1110	-	-	6/1303
Metalwork (no. objects)	125	28	41	47	3	244
Coins	*57*	*7*	*13*	*2*	-	*79*
Copper Alloy	*22*	-	*5*	-	-	*27*
Lead	*6*	*8*	-	*6*	*1*	*21*
Lead Alloy	*2*	-	-	-	-	*2*
Iron	*38*	*13*	*23*	*39*	*2*	*115*
Worked Bone	1/12	-	-	-	-	1/12
Human Bone	-	7/16	-	9/162	1/2	17/180
Animal Bone	735/11484	149/2106	313/7532	117/1433	10/171	1324/22,726
Marine Shell	182/7477	103/4038	81/3343	165/5285	2/42	533/20,185

Table 2: Pottery assemblage by trench

Trench	No. Sherds	%	Wt (g)	%	EVE	%
Trench 1	263	40.2	6577	43.8	984	55.6
Trench 2	131	20.0	2685	17.9	301	17
Trench 3	93	14.2	2420	16.1	193	10.9
Trench 4	134	20.5	2968	19.8	262	14.8
Trench 5	33	5.1	362	2.4	30	1.7
Total	**651**		**15,012**		**1770**	

Table 3: Pottery quantification by fabric type

Fabric	No. sherds	%	Wt (g)	%	EVE	%
Grey	78	10.4	1251	8.4	150	8.5
Grey, oxidised core/edges	9		137		33	
Grey, burnished	39	6	480	3.4	108	6.1
Grey, burnished oxidised surface	2		10			
Grey, micaceous	5		88		35	2
Grey, micaceous, burnished	20	3.1	830	5.8	38	2.1
Grey, micaceous, oxidised core edges	6		200	1.4	19	1.1
Grey, micaceous, burnished dark grey/black	87	13.4	2045	14.3	300	17
Grey, micaceous, burnished dark grey, oxidised core edges	3		129		21	1.2
Grey, highly micaceous, burnished dark grey	1		40			
Misc grey	3		114		22	1.2
Dark grey	54	8.1	940	6.3	163	9.2
Dark grey, oxidised core	3		18			
Dark grey, oxidised core edges	7	1.1	259	1.8	11	
Dark grey, micaceous, oxidised core edges	3		48		7	
Dark grey, micaceous, oxidised surfaces	5		244	1.7		
Grey, Rustic	18	2.8	226	1.6		
BB1	11	1.7	442	3	47	2.7
BB2	37	5.7	626	4.2	80	4.5
LNVCC	90	13.8	1278	8.6	288	16
LNVCW	15	2.3	735	4.9	16	
OXCC	24	3.7	820	5.5	127	7.2
OXPA?	1		8		4	
OXWH?	1		4			
OXWS	3		146	1	29	1.6
Lower Rhineland	3		363	2.4		
Rhenish	1		2			
CGS	22	3.4	393	2.6	79	4.5
Amphora	18	2.8	829	5.6		
Buff	7		278	1.9		
Mica dusted?	3		22			
Buff CC	1		3			
Reddish brown	3		244	1.7	10	
Reddish-yellow	17	2.6	464	3.1	57	3.2
Shell	49	7.5	1204	8.1	126	7.1
Flint gritted	2		5			
Middle Saxon Ipswich ware	1		53			
Late Saxon Thetford ware	1		32			
Modern refined whiteware	1		2			
Total	**654**		**15,012**		**1770**	

Table 4: Pottery fabric concordance for greywares

2012 Fabrics	1974/1977 fabric
Grey	RW2
Grey, oxidised core	RW13
Grey, burnished	RW2
Grey, burnished oxidised surface	RW2

Grey, micaceous	RW4
Grey, micaceous, burnished	RW4
Grey, micaceous, oxidised core edges	RW4
Grey, micaceous, burnished dark grey/black	RW1
Grey, micaceous, burnished dark grey, oxidised core edges	RW5
Grey, highly micaceous, burnished dark grey	RW5
Misc grey	RW10
Dark grey	RW10
Dark grey, oxidised core	RW8
Dark grey, oxidised core edges	RW14
Dark grey, micaceous, oxidised core edges	RW1
Dark grey, micaceous, oxidised surfaces	RW1

Table 5: Pottery vessel forms by fabric

Fabric	J	J/B	B	D	B/D	C	BKR	BKR/J	J/F	F	M	L	L/D	L/J	Total
Grey	8			1	2			1		1					**13**
Grey, oxidised core/edges	4														**4**
Grey, burnished	4			1	2			1						1	**9**
Grey, micaceous	2		1												**3**
Grey, micaceous, burnished	4		1												**5**
Grey, micaceous, burnished dark grey/black	7		7	8	4				1				1		**28**
Grey, micaceous, burnished dark grey, oxidised core edges	2														**2**
Grey, micaceous, oxidised core edges	3														**3**
Grey, highly micaceous, burnished dark grey					1										**1**
Misc grey	1														**1**
Dark grey	8				1										**9**
Dark grey, oxidised core edges	2														**2**
Dark grey, micaceous, oxidised core edges	1														**1**
Dark grey, micaceous, oxidised surfaces	1														**1**
Grey, Rustic	1														**1**
BB1	1		3												**4**
BB2	2			2	3										**7**
LNVCC	3	4	5	4			6			1		2			**25**
LNVCW											3				**3**
OXCC	1		9	1	1			1							**13**
OXPCH?				1											**1**
OXWS											3				**3**
Lower Rhineland											1				**1**
Rhenish							1								**1**
CGS			3	4	1	1					1				**10**
Amphora															**5**
Reddish brown	2														**2**
Reddish-yellow	3		2							1					**6**
Shell	7														**7**
Total	**67**	**4**	**31**	**22**	**15**	**1**	**7**	**3**	**1**	**3**	**8**	**2**	**1**	**1**	**171**

Table 6: Trench 1 Romano-British pottery fabrics

Fabric	No. Sherds	%	Wt (g)	%	EVE	%
Grey	47	17.9	738	11.2	110	11.2
Grey, oxidised core/edges	8	3	125	1.9	33	3.3
Grey, burnished	10	3.8	172	2.6	64	6.5
Grey, burnished oxidised surface	2		10			
Grey, micaceous	4	1.5	54		25	2.5
Grey, micaceous, burnished	14	5.3	732	11.1	38	3.9
Grey, micaceous, oxidised core edges	6	2.3	200	3	19	1.9
Grey, micaceous, burnished dark grey	53	20.2	1046	15.9	195	19.8
Grey, micaceous, burnished dark grey, oxidised core edges	2		74	1.1	11	1.1
Grey, highly micaceous, burnished dark grey	1		40			
Dark grey	2		40		22	2.2
Dark grey, micaceous, oxidised core edges	3	1.1	48		7	
Dark grey, micaceous, oxidised surfaces	5	1.9	244	3.7		
Grey, Rustic	1		20			
BB1	1		20			
LNVCC	30	11.4	581	8.8	153	15.6
LNVCW	2		150	2.3	9	
OXCC	23	8.7	815	12.4	122	12.4
OXPCH?	1		8		4	
OXWH?	1		4			
OXWS	3	1.1	146	2.2	29	2.9
CGS	4	1.5	63	1	5	
Reddish brown	1		20			
Reddish-yellow	12	4.6	364	5.5	36	3.7
Shell	27	10.3	863	13.1	102	10.4
Total	**263**		**6577**		**984**	

Table 7: Trench 1 Romano-British pottery forms by fabric

Trench 1	J	J/B	B	D	B/D	BKR	BKR/J	J/F	F	M	L/D	Total
Grey	5			1	1		1					**8**
Grey, oxidised core/edges	4											**4**
Grey, burnished	1						1					**2**
Grey, micaceous, oxidised core edges	3											**3**
Grey, micaceous, burnished	5		1									**6**
Grey, micaceous, burnished dark grey	7		5	4	1			1			1	**19**
Grey, micaceous, burnished dark grey, oxidised core edges	1											**1**
Grey, highly micaceous, burnished dark grey					1							**1**
Dark grey	1											**1**
Dark grey, micaceous, oxidised core edges	1											**1**
Dark grey, micaceous, oxidised surfaces	1											**1**
Grey, Rustic	1											**1**
BB1?			1									**1**
LNVCC	3	1	4	3		1			1			**13**
LNVCW										1		**1**
OXCC	1		8	1	1		1					**12**
OXPCH?				1								**1**
OXWS										3		**3**
CGS			1	2	1							**4**
Reddish-yellow	3		2									**5**
Shell	5											**5**
Total	**42**	**1**	**22**	**12**	**5**	**1**	**3**	**1**	**1**	**4**	**1**	**93**

Table 8: Trench 2 Romano-British pottery fabrics

Fabric	No. Sherds	%	Wt (g)	%	EVE	%
Grey	10	7.7	161	6.1		
Grey, burnished	4	3.1	52	2	12	4
Grey, micaceous, burnished dark grey	11	8.5	501	19	67	22.3
Grey, micaceous, burnished dark grey, oxidised core edges	1		55	2.1	10	3.3
Misc grey	1		14			
Dark grey	28	21.6	492	18.7	106	35.2
Grey, Rustic	10	7.7	124	4.7		
BB1	3	2.3	46	1.7		
BB2	11	8.5	223	8.5	47	15.6
LNVCC	33	25.4	412	15.7	45	15
LNVCW	7	5.4	101	3.8		
Lower Rhineland	2	1.5	67	2.5		
Rhenish	1		2			
CGS	2	1.5	28		14	4.7
Buff	2	1.5	130	4.9		
Buff CC	1		3			
Reddish brown	1		200	7.6		
Shell	2	1.5	21			
Total	**130**		**2632**		**301**	

Table 9: Trench 2 Romano-British pottery forms by fabric

Trench 2	J	B	D	C	BKR	L	Total
Grey, burnished	2						**2**
Grey, highly micaceous, burnished dark grey	1	2	1				**4**
Dark grey	5						**5**
Grey, Rustic	1						**1**
BB2?	1		2				**3**
LNVCC			1			1	**2**
CGS				1			**1**
Rhenish					1		**1**
Reddish-brown	1						**1**
Total	**11**	**2**	**4**	**1**	**1**	1	**20**

Table 10: Trench 3 Romano-British pottery fabrics

Fabric	No. Sherds	%	Wt (g)	%	EVE	%
Grey	2	2.2	26	1.1		
Grey, burnished	5	5.5	58	2.2	12	6.2
Grey, micaceous	1	1.1	34	1.4	10	5.2
Grey, micaceous, burnished	6	6.6	98	4.1		
Grey, micaceous, burnished dark grey	6	6.6	105	4.4	19	9.8
Dark grey	20	22	336	14.1	35	18.1
Dark grey, micaceous, oxidised surfaces	5	5.5	233	9.8		
Grey, Rustic	2	2.2	21			
BB1	4	4.4	288	12.1	27	14
BB2	11	12.1	279	11.7	12	6.2
LNVCC	5	5.5	95	4	13	6.7
LNVCW	1	1.1	356	14.9		
OXCC	1	1.1	5		5	2.6
CGS	15	16.5	223	9.3	60	31.1
Amphora	5	5.5	149	6.2		
Buff	1	1.1	73	3.1		
Shell	1	1.1	7			
Total	**91**		**2386**		**193**	

Table 11: Trench 3 Romano-British pottery forms by fabric

Trench 3	J	J/B	B	D	B/D	F	M	L/J	Total
Grey						1			**1**
Grey, burnished	1							1	**2**
Grey, micaceous, burnished	**1**		**1**						**2**
Grey, micaceous, burnished dark grey				1	1				**2**
Dark grey	2				1				**3**
Dark grey, micaceous, oxidised surfaces	1								**1**
Grey, Rustic	1								**1**
BB1?			1						**1**
BB2	1				1				**2**
LNVCC		1	1						**2**
LNVCW							1		**1**
OXCC			1						**1**
CGS			2	2					**4**
Amphora									**2**
Total	**7**	**1**	**6**	**3**	**3**	**1**	**1**	**1**	**25**

Table 12: Trench 4 Romano-British pottery fabrics

Fabric	No Sherds	%	Wt (g)	%	EVE	%
Grey	19	14.2	326	11	40	15.3
Grey, burnished	7	5.2	88	3	20	7.6
Grey, micaceous, burnished dark grey	14	10.4	334	11.3	14	5.3
Dark grey	2	1.5	64	2.2		
Dark grey, oxidised core edges	1		23		11	4.2
Grey, Rustic	4	3	51	1.7		
BB1	3	2.2	88	3	20	7.6
BB2	15	11.2	124	4.2	21	8
LNVCC	23	17.2	200	6.7	74	28.2
LNVCW	1		102	3.4	7	2.7
Lower Rhineland	1		296	10		
CGS	1		79	2.7		
Amphora	13	9.7	680	22.9		
Buff	4	3	75	2.5		
Mica dusted?	2	1.5	9			
Reddish brown	1		24		10	3.8
Reddish-yellow	5	3.7	100	3.4	21	8
Shell	18	13.4	305	10.3	24	9.2
Total	**134**		**2968**		**262**	

Table 12: Trench 4 Romano-British pottery forms by fabric

Trench 4	J	J/B	B	D	B/D	BKR	F	M	Total
Grey	3				1				**4**
Grey, burnished				1	2				**3**
Grey, micaceous, burnished dark grey					2				**2**
Dark grey, micaceous, oxidised surfaces	1								**1**
Grey, Rustic	1								**1**
BB1?	1		1						**2**
BB2					2				**2**
LNVCC		1				5			**6**
LNVCW								1	**1**
Amphora									**3**
CGS								1	**1**
Reddish brown	1								**1**
Reddish yellow							1		**1**
Shell	2								**2**
Total	**9**	**1**	**1**	**1**	**7**	**5**	**1**	**2**	**30**

Table 14: Trench 5 Romano-British pottery fabrics

Fabric	No. Sherds	%	Wt (g)	%	EVE	%
Grey, oxidised core/edges	1	3	12	3.3		
Grey, burnished	13	39.4	110	30.4		
Grey, micaceous, burnished dark grey	3	9.1	59	16.3	5	16.7
Dark grey	1	3	3			
Dark grey, oxidised core	4	12.1	23	6.4		
Dark grey, oxidised core edges	1	3	3			
Misc grey	2	6.1	100	27.6	22	73.3
Grey, Rustic	1	3	10	2.8		
LNVCC	3	9.1	16	4.4	3	10
Mica dusted?	1	3	13	3.6		
Shell	1	3	8	2.2		
Flint gritted	2	6.1	5	1.4		
Total	**33**		**362**		**30**	

Table 15: Quantification of retained CBM by type and by context (fragment count)

Context	*Tegula*	*Imbrex*	Box Flue	Flat Tile (<30mm)	Brick (>30mm)	Fragment	Post-RB	Total
101		1						1
102	15	3		6		12		36
103	2	23	3	4		21		53
104	5	5		3				13
105		1		2				3
106	4	1		3	1	4		13
108	1	4	1	11		7		24
113	4			3		6		13
115	3	6		2				11
119	5	8		4				17
121	5	9		2				16
122						2		2
124	2	9		4	1			16
126	4	2				1		7
201	2			2	3			7
202	3	3		9		6		21
207		1						1
210						4		4
213	1				14			15
216	1			2				3
220	1		1					2
222	1			2		1		4
301	1	1						2
303	2							2
304	2	1		1			2	6
306	1			1		4		6
307	1			2		4		7
309	2	1		1			1	5
315		2		2		3		7
401	6	4		7		15		32
404	2	1						3
405	2	11		9		13		35
409		1		2		2		5
410	5	7		3		3		18
501	1							1
502						1		1
505			2	5		5		12
TR2 u/s	1							1
TR4 u/s	2			2		1		5
TOTAL	**90**	**105**	**7**	**94**	**19**	**115**	**3**	**433**

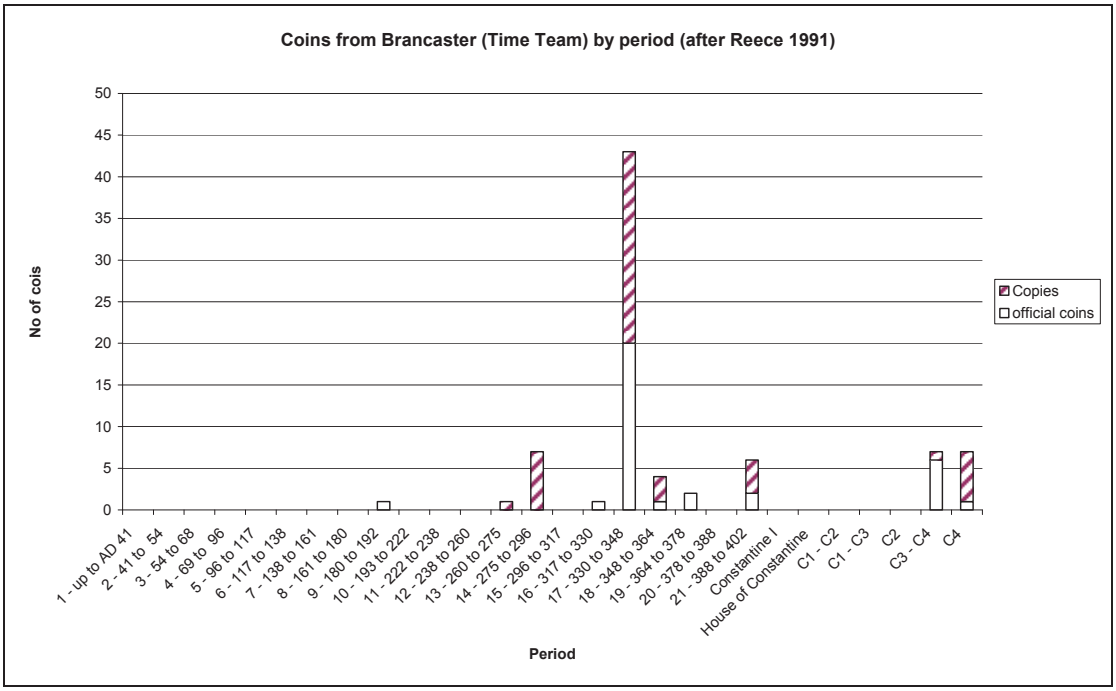
Table 16: Coin list

Object	Context	Type	Issuer / type	Issue Date	Reference
1	101	Cu Alloy Nummus	Constantine I/Quadriga. Commemorative issue, Trier	AD 337	LRBC I, 114
3	101	Cu Alloy Nummus	House of Theodosius/Victory l dragging captive. Salus Reipublicae type	AD 388 - 402	As LRBC II, 796
5	102	Cu Alloy Nummus	House of Constantine/Fel Temp Reparatio (Fallen Horseman) Copy	AD 353 - 360	Copy as LRBC II, 25
10	201	Cu Alloy Nummus	Eugenius/Winged victory l with wreath. Victoria Auggg. ?Copy	AD 392 - 394	?copy as LRBC II, 171
11	201	Cu Alloy Nummus	House of Constantine/Fel Temp Reparatio (Fallen Horseman) ?Copy	AD 353 - 360	?copy as LRBC II, 196
15	101	Cu Alloy Nummus	House of Theodosius/Salus Reipublicae type	AD 388 - 402	?copy as LRBC II, 796
16	105	Cu Alloy Antoninianus	Radiate copy/Pax Aug reverse. Copy	AD 270 - 296	/
22	201	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. ?Copy	AD 330 - 345	?copy as LRBC I, 51
23	201	Cu Alloy Antoninianus/nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/
24	201	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
26	301	Cu Alloy Nummus	Constantius II/ Fel Temp Reparatio (Fallen Horseman) Copy	AD 350 - 360	Copy as LRBC II, 25
29	301	Cu Alloy Dupondius	Commodus/uncertain reverse	AD 180 – 192	/
31	301	Cu Alloy Nummus	Constantine II/2 soldiers, 2 standards. Gloria Exercitus type. Trier mint	AD 332	LRBC I, 63
32	301	Cu Alloy Nummus	Constantinopolis/Victory on prow. Trier mint	AD 330	LRBC I, 52
36	301	Cu Alloy Nummus	Constantinopolis/Victory on prow. ?Copy	AD 330 - 345	? Copy as LRBC I, 52
41	401	Cu Alloy Antoninianus	Radiate copy/Illegible reverse. Copy	AD 270 - 296	/
42	301	Cu Alloy Nummus	Constans/2 facing victories with wreaths. Victoriaeddauggqnn type. Trier mint	AD 347 – 348	LRBC I, 149
44	101	Cu Alloy Antoninianus	Radiate copy/Illegible reverse. Copy	AD 270 - 296	/
45	301	Cu Alloy Nummus	Constantine I/Camp Gate Providentiaeaugg type. Trier mint	AD 327-328	LRBC I, 38
49	301	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. Trier mint	AD 335	LRBC I, 85
50	301	Cu Alloy Nummus	Constans/2 facing victories with wreaths. Victoriaeddauggqnn type. Trier mint	AD 348	LRBC I, 163
51	101	Cu Alloy Nummus	House of Valentinian/Winged victory l with wreath. Securitas Reipublicae type	AD 364 – 378	As LRBC II, 82
57	301	Cu Alloy Nummus	Constantine II/2 soldiers, 2 standards. Gloria Exercitus type. Trier mint	AD 330/331	LRBC I, 56
58	301	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. Copy	AD 330 - 345	Copy as LRBC I, 51
59	201	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
70	101	Cu Alloy Antoninianus/nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/
71	101	Cu Alloy Antoninianus	Radiate copy/Uncertain reverse. Copy	AD 270 - 296	/
72	101	Cu Alloy Nummus	House of Theodosius/Victory l dragging captive. Salus Reipublicae type. ?Copy	AD 388 - 402	?Copy as LRBC II, 796
73	101	Cu Alloy Nummus	Valens/ Winged victory l with wreath. Securitas Reipublicae type	AD 364 - 378	As LRBC I, 340
75	401	Cu Alloy Antoninianus/nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/
84	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type. Copy	AD 335 - 345	Copy as LRBC I, 87

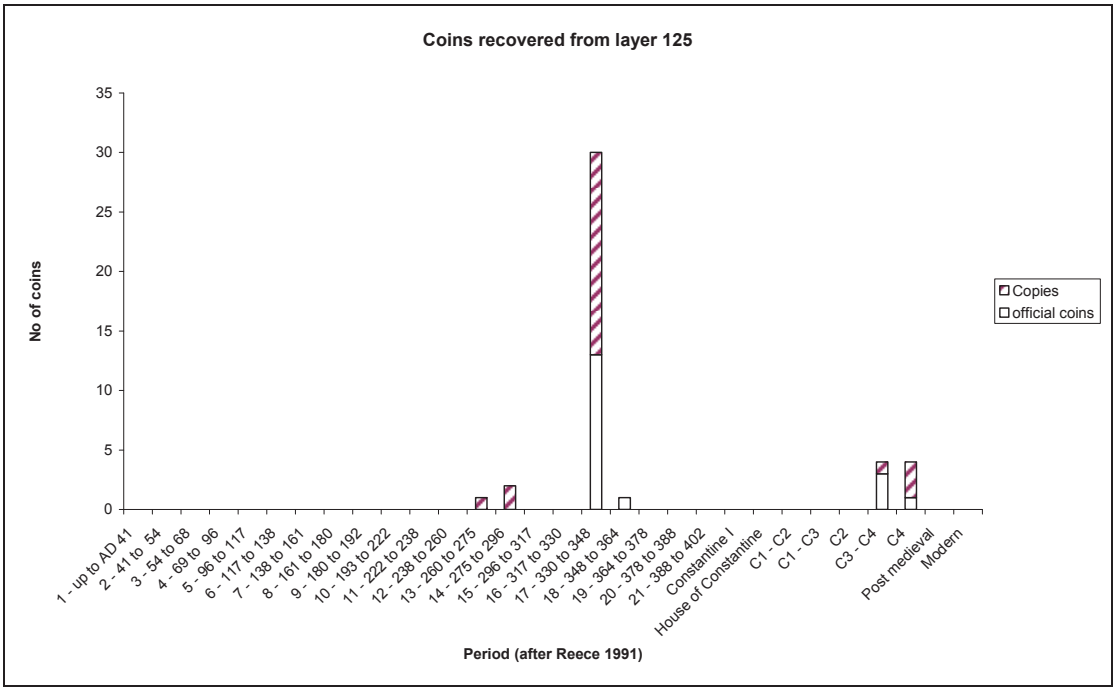
85	125	Cu Alloy Nummus	Constantine I/2 soldiers, 2 standards. Gloria Exercitus type.	AD 330 - 335	As LRBC I, 48
86	125	Cu Alloy Nummus	House of Constantine/Winged victory on prow. Constantinopolis reverse. Mule. Almost certainly a copy	AD 330 - 345	/
87	125	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
88	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. Copy	AD 330 - 345	Copy as LRBC I, 51
89	125	Cu Alloy Antoninianus	Radiate copy/Uncertain reverse. Copy	AD 270 - 296	/
90	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 2 standards. Gloria Exercitus type. Copy	AD 330 - 345	Copy as LRBC I, 48
91	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type. Lyons mint	AD 330	As LRBC I, 180
92	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. Lyons mint	AD 330	LRBC I, 184
93	125	Cu Alloy Nummus	Constans/2 soldiers, 1 standard. Gloria Exercitus type. Lyons mint	AD 339	LRBC I, 131
94	125	Cu Alloy Antoninianus	Radiate copy/Uncertain reverse. Copy	AD 270 – 296	/
95	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type.	AD 335- 345	As LRBC I, 87
96	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 – 345	Copy as LRBC I, 52
97	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type.	AD 335 – 345	As LRBC I, 87
98	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 2 standards. Gloria Exercitus type. ?Copy	AD 330 - 345	?Copy as LRBC I, 48
99	125	Cu Alloy Nummus	Constantius II/2 soldiers, 1 standard. Gloria Exercitus type.	AD 335 - 341	As LRBC I, 89
100	125	Cu Alloy Antoninianus	Radiate copy/Uncertain reverse. Copy	AD 270 - 296	/
101	125	Cu Alloy Nummus	Constantinopolis type/2 soldiers, 1 standard. Gloria Exercitus type. Mule. Almost certainly a copy	AD 335 - 345	/
108	301	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
110	101	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
111	101	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
116	101	Cu Alloy Nummus	House of Theodosius/Victory l dragging captive. Salus Reipublicae type	AD 388 - 402	As LRBC II, 796
117	101	Cu Alloy Nummus	Arcadius/ Winged victory l with wreath. Victoria Auggg. ?Copy	AD 388 - 402	?Copy as LRBC II, 164
119	301	Cu Alloy Nummus	Constantinopolis/Victory on prow. ?Copy	AD 330 - 345	Copy as LRBC I, 52
144	201	Cu Alloy Antoninianus	Radiate Copy/uncertain reverse	AD 270 - 296	/
154	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
155	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Mint Mark: PTR Trier mint, Copy	AD 330 - 345	Copy of LRBC I, 52
156	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Mint Mark: SLG Lyons mint	AD 331	LRBC I, 191
157	125	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
158	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
159	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins.	AD 330 - 335	As LRBC I, 51
160	125	Cu Alloy Nummus	Constantine II/2 soldiers, 1 standard. Gloria Exercitus type.	AD 330 - 335	As LRBC I, 226
161	125	Cu Alloy Nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/
162	125	Cu Alloy Nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/

163	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type.	AD 335 - 345	As LRBC I, 87
164	125	Cu Alloy Nummus	House of Constantine/ Soldier spearing a fallen horseman. Fel Temp Reparatio type	AD 348 - 360	As LRBC II, 25
165	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. ? Copy	AD 330 - 345	?Copy as LRBC I, 51
166	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. ? Copy	AD 330 - 345	?Copy as LRBC I, 52
167	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
168	125	Cu Alloy Nummus	Constantinopolis/Victory on prow. Copy	AD 330 - 345	Copy as LRBC I, 52
169	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins.	AD 330 - 335	As LRBC I, 51
170	125	Cu Alloy Nummus	Urbs Roma/Wolf and Twins. Mint Mark –LG. Lyons mint	AD 330 - 335	As LRBC I, 184
171	125	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
172	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type. ? Copy	AD 335 - 345	?Copy as LRBC I, 87
173	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type. Copy	AD 335 - 345	Copy as LRBC I, 87
174	125	Cu Alloy Nummus	Corroded C4 coin. Dated by size alone	C4	/
175	125	Cu Alloy Nummus	House of Constantine/2 soldiers, 1 standard. Gloria Exercitus type. Copy	AD 335 - 345	Copy as LRBC I, 87
176	125	Cu Alloy Antoninianus/nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/
177	125	Cu Alloy Nummus	Corroded C3-C4 coin. Dated by size alone	C3 - C4	/

Graph 1: All coins from the site



Graph 2: Probable hoard from layer 125



Graph 3: Coins from Brancaster (without the coins from layer 125)

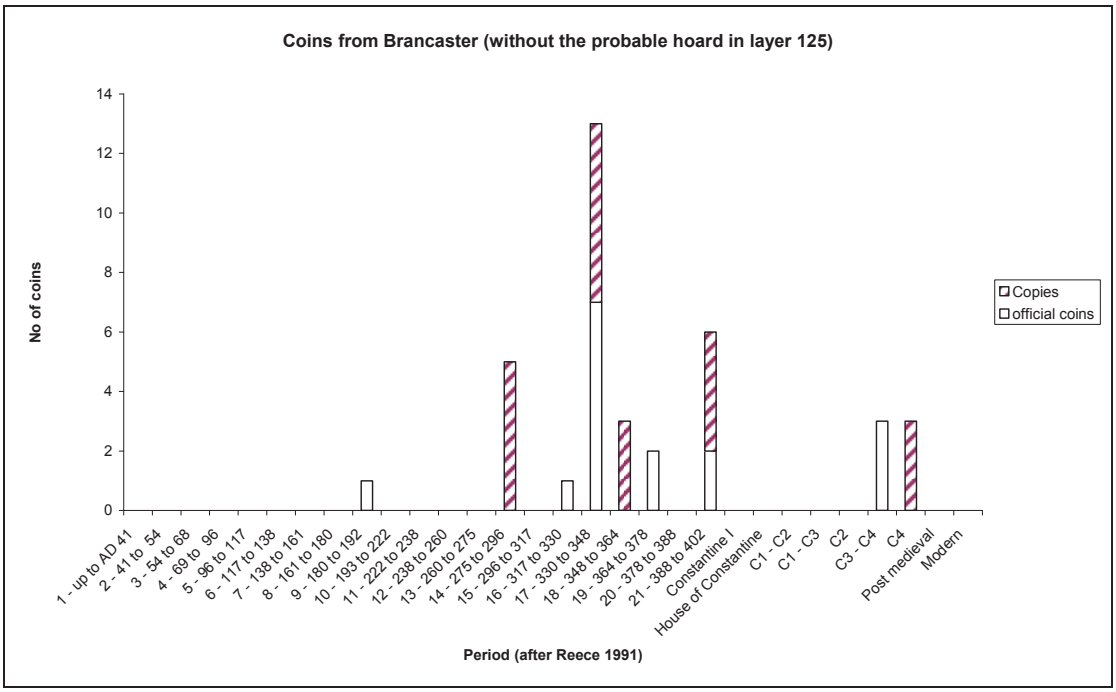


Table 17: Marine shell by context

Trench	Context	OY LV	OY UMLV	OY RV	OY UMRV	OY MNI	Whelk	Periwinkle	Mussel MNI	Cockle MNI	Total
1	103	18	8	15	2	26			2		**28**
1	104	1	0	0	0	1					**1**
1	105	0	1	0	0	1			1		**2**
1	106	13	0	1	0	13	4		1		**18**
1	106 <3>	2	5	4	1	7					**7**
1	108	19	3	19	7	26		1			**27**
1	109						2	1			**3**
1	113	13	4	8	3	17	1		1		**19**
1	121								1		**1**
1	122	1	1	0	0	2					**2**
1	125	1	0	0	0	1					**1**
1	125 <1>	4	0	8	0	8					**8**
1	126	1	0	0	0	1					**1**
2	201	13	2	8	1	15					**15**
2	202	22	9	14	8	31					**31**
2	206	9	0	3	0	9	1				**10**
2	210	0	0	2	0	2			1		**3**
2	216	1	1	3	0	3					**3**
3	301	0	0	2	0	2					**2**
3	302	2	5	0	2	7					**7**
3	303	0	0	2	0	2			1	1	**4**
3	304	13	4	10	7	17					**17**
3	306	4	0	5	0	5					**5**
3	307	5	1	8	0	8				1	**9**
3	314	0	0	1	0	1					**1**
3	315	2	0	0	1	2	1				**3**
3	316	0	1	2	0	2					**2**
4	401	52	24	36	14	76	3		9		**88**
4	402	0	1	0	0	1					**1**
4	405	3	0	1	0	3					**3**
4	409	1	0	1	0	1					**1**
4	410	1	0	4	0	4					**4**
5	504	2	0	0	0	2					**2**
Total		**203**	**70**	**157**	**46**	**296**	**12**	**2**	**17**	**2**	**329**

KEY: OY = oyster, LV = left valve, RV = right valve, UM = unmeasurable, MNI = minimum number of individuals

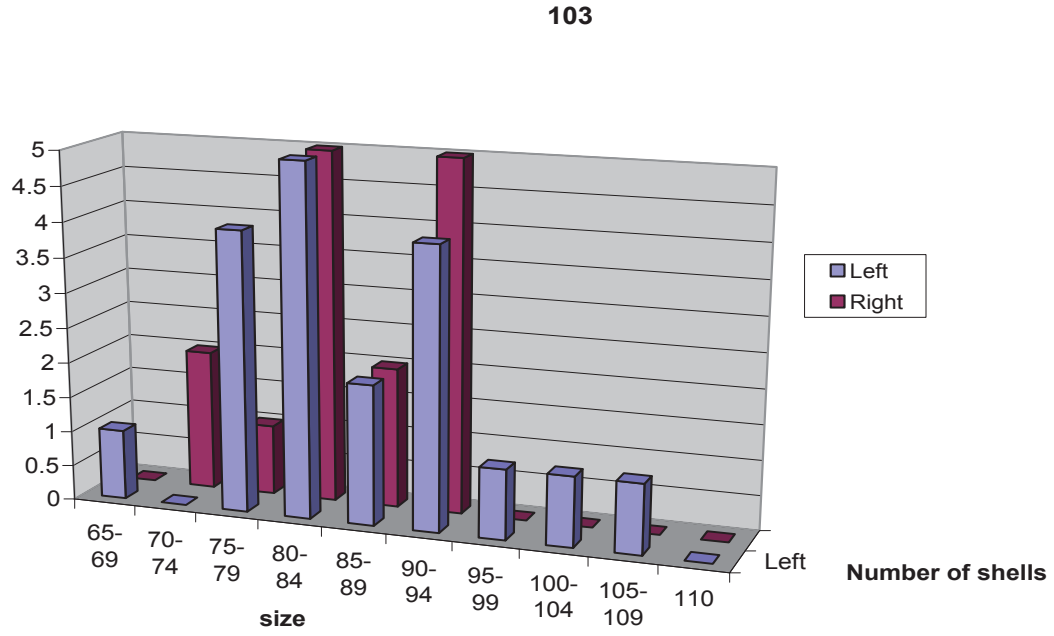
Table 18: Oyster shell analysed in more detail

Context	R V	L V	Polydora Ciliata	Cliona celata	Calcareous tubes	Barnacles	Thin	Thick	Chambered	Chalky dep.	Worn	Flaky	Oysters attached	Irreg shape	Notches	Shell infested
103	15	18	18	5					1		5		4	8	15	21
108	19	19	26	5			3	5	3	4	10	6	6	8	15	29
202	14	22	17	4		3	2	1	2	3	12	1	2	10	12	22
304	10	13	15	4		3	1	3	3	5	7	3	3	10	5	15
401	35	52	34	7	2	3	6	5	2	11	23	7	7	22	27	41
Total	**93**	**124**	**110**	**25**	**2**	**9**	**12**	**14**	**11**	**23**	**57**	**17**	**22**	**58**	**74**	**128**
%	**42.9**	**57.1**	**50.7**	**11.5**	**0.9**	**4.1**	**5.5**	**6.5**	**5.1**	**10.6**	**26.3**	**7.8**	**10.1**	**26.7**	**34.1**	**59.0**

Table 19: Comparative size of analysed oyster shell

Context	Valve	Number	Mean	Min	Max
103	LV width	18	81.05	64	105
103	LV length	18	79.7	50	90
103	RV width	15	81.5	70	92
103	RV length	15	76.7	62	90
108	LV width	19	81.9	55	110
108	LV length	19	78.7	56	113
108	RV width	19	79.8	62	100
108	RV length	19	72.5	58	88
202	LV width	22	80.1	60	105
202	LV length	22	75.5	57	118
202	RV width	14	72.1	50	90
202	RV length	14	67.3	45	90
304	LV width	13	88.8	75	120
304	LV length	13	90.3	70	135
304	RV width	10	80.8	60	110
304	RV length	10	78.9	58	115
401	LV width	52	81.5	55	102
401	LV length	52	78.9	55	108
401	RV width	35	76.6	58	120
401	RV length	35	71.4	50	100

Graphs 4-8 showing size of analysed oyster shells by context



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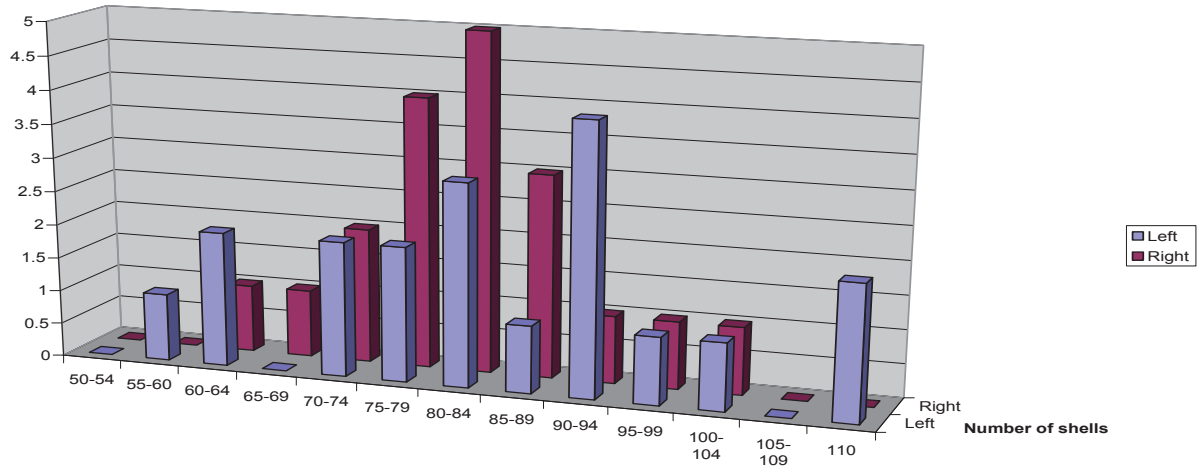
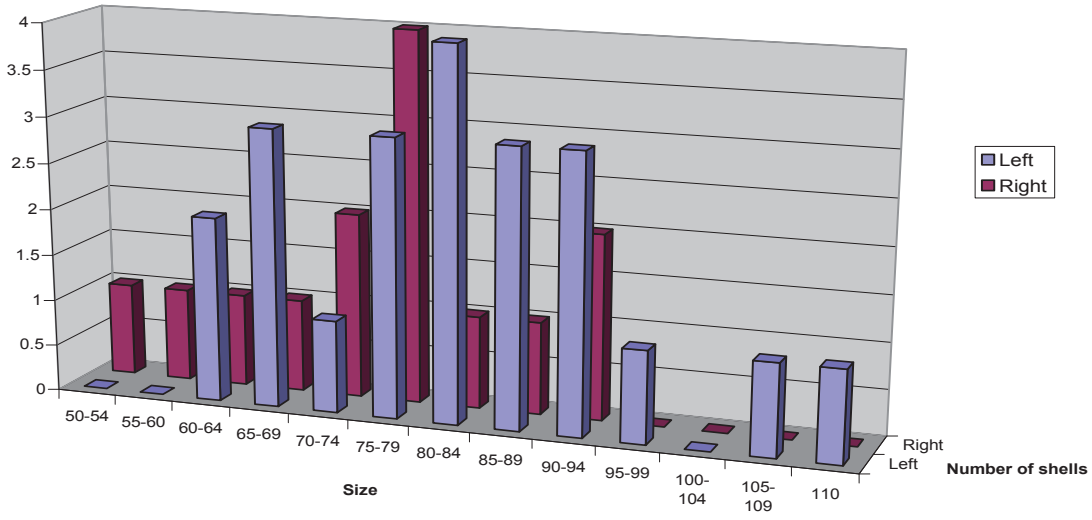
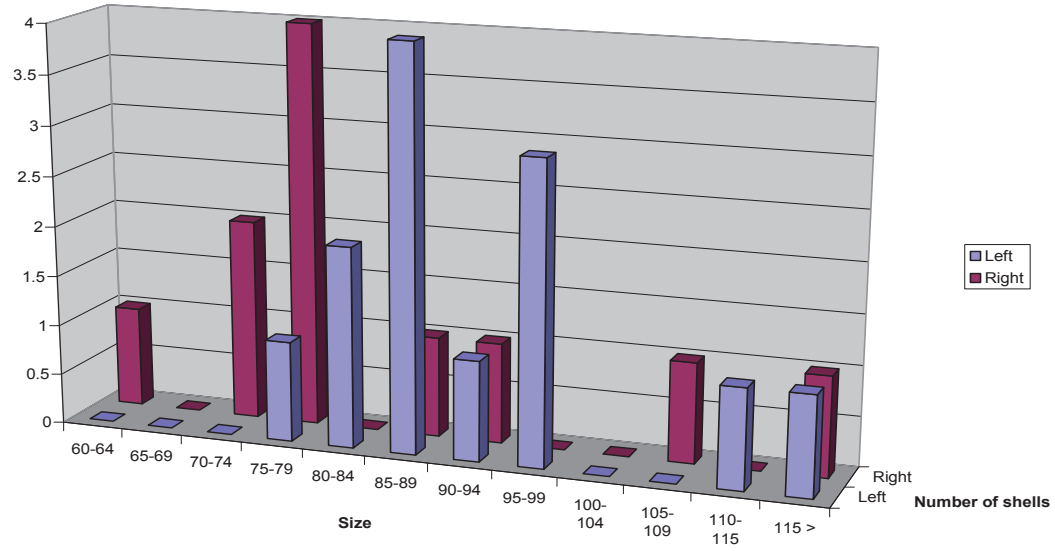

5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
50-54
55-60
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99
100-104
105-109
110
Right
Left
Number of shells
Left
Right

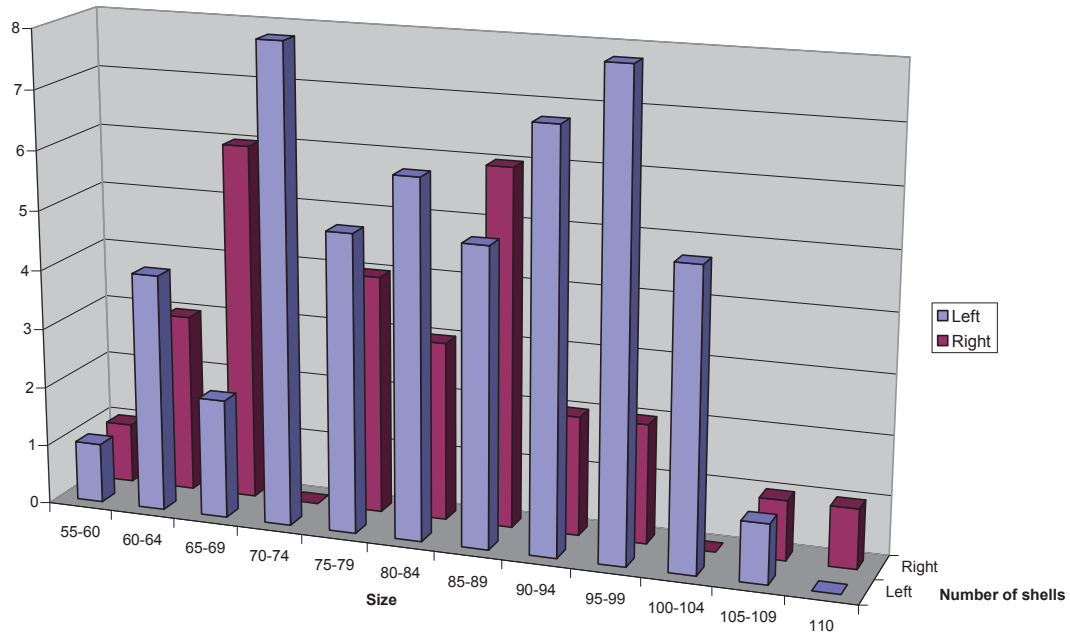
202


4
3.5
3
2.5
2
1.5
1
0.5
0
50-54
55-60
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99
100-104
105-109
110
Size
Right
Left
Number of shells
Left
Right

304


4
3.5
3
2.5
2
1.5
1
0.5
0
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99
100-104
105-109
110-115
115 >
Size
Left
Right
Right
Left
Number of shells

401


8
7
6
5
4
3
2
1
0
55-60
60-64
65-69
70-74
75-79
80-84
85-89
90-94
95-99
100-104
105-109
110
Size
Left
Right
Right
Left
Number of shells

APPENDIX 3: PALAEOENVIRONMENTAL RESULTS

Table 20: Assessment of the charred plant remains and charcoal

Samples				Flot								
Feature	Context	Sample	Vol. Ltrs	Flot (ml)	% roots	Charred Plant Remains				Charcoal >4/2mm	Other	Analysis
						Grain	Chaff	Other	Comments			
Trench 1 – Romano-British												
Occupation Layer Strong-room	**125**	1	10	60	0	C	C	C	Charcoal includes small round wood. Hulled wheat, glume bases, *Torilis, Poa Vicia, Ranunculus Plantago lanceolata*, Charred stems. thorns of *Prunus spinosa/Crataegus monogyna.* Mineralised seeds of *Spergularia marina*, *Myosotis* sp., *Lolium* sp., *Agrostemma, Rumex, Daucus, Torilis* type, *Bromus. Reseda, Orache, Aethusa, Polygonum, Centaurea, Urtica/Aphanes* fly larvae,	6/8ml	Smb (A) Eel (C) Min (A Moll–t (A) Mol–f (A)	P
Trench 1 – Late Romano-British-Post-Roman												
Demolition layer	**106**	3	10	125	3	A	B	A*	Heather stems x4-5, some hulled wheat, grains and glumes, several grains of hulled barley x5, *Fallopia convolvulus, Avena* sp., *Fumaria* sp. *Carex* sp., *Bromus* sp., *Galium aparine*, *Prunus* sp. *Corylus avellana. Danthonia* sp.	2/3ml	Moll-t (A) Moll-f (B) Smb (C)	P
Trench 4 – Romano-British												
Layer	**415**	2	2	15	1	A	-	A	12x barley, *Raphanus raphanistrum* ++, *Galium aparine, Fallopia convolvulus, Rumex* sp. *Chenopodium* sp. *Atriplex*,	1/1ml	Moll-t (C)	P

Key: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5; Smb = small animal bones, Moll-t = terrestrial molluscs, Moll-f = aquatic molluscs; Analysis: P = plant

Table 21: Land and aquatic molluscs and marine shell assessment

Site Phase	**RB**	**LRB-Post RB**	**RB**
Trench	**1**	**1**	**4**
Feature type	**layer**	**layer**	**layer**
Context no.	**125**	**106**	**415**
Sample no.	**1**	**3**	**2**
Volume (L)	**10**	**10**	**2**
Open country species			
Pupilla muscorum	-	C	-
Vertigo spp.	-	C	C
Helicella itala	B	C	-
Vallonia costata	C	A	-
Vallonia excentrica		A	C
cf. *Cochlicella acuta*	A	B	-
Intro. Helicellids	-	C	-
Intermediate species			
Trochulus hispidus	A	A	-
Cochlicopa spp.	-	C	-
Cepaea spp	-	C	+
Shade-loving species			
Oxychilus cellarius	-	C	-
Aegopinella nitidula	C	C	-
Clausilia bidentata	B	C	-
Marsh-loving species			
Succinea/Oxyloma sp.	C	-	-
Aquatic species			
Myosotella myosotis	B	-	-
Anisus leucostoma	C	-	-
Hydrobia spp.	A	B	-
Burrowing species			
Cecilioides acicula	-	A	B
Approx totals	**100+**	**100+**	**2**
Marine shells			
Periwinkles	C	C	-
Oyster	Frags	Frags	-
Mussel	-	Frags	-
Limpet	-	Frags	-

Key: A = >10, B = 9-5, C = <5; + = fragment present

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Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_master.dwg		

Location of Site, trenches and geophysical survey areas including features identified from aerial photography

Figure 1

Geophysics data reproduced by permission of GSB Prospection LTD

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Magnetometer survey results

Figure 2

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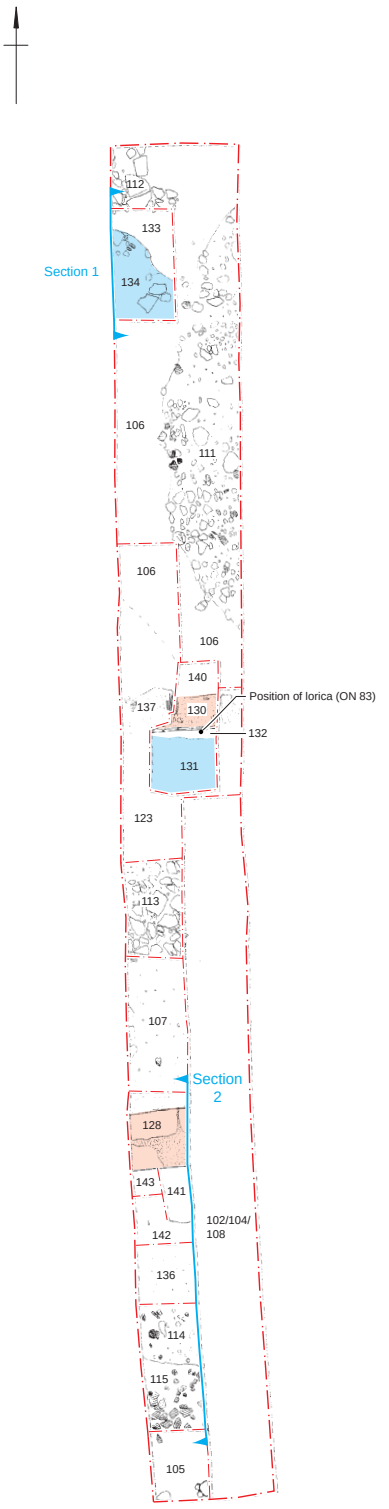
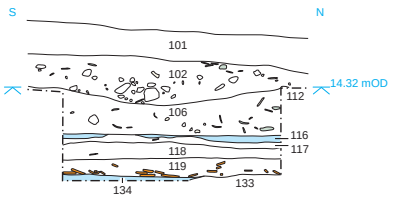
GPR survey results

Figure 3



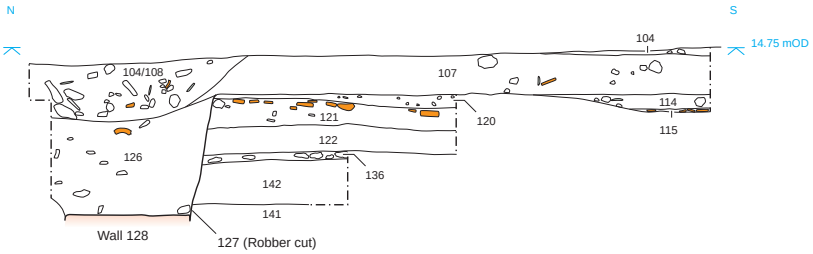
Section 1



West-facing section of wall 128, robber cut 127 and adjacent deposits

Wall
Surface
Ceramic building material (section only)

Section 2



East-facing section of sondage at north end of trench and possible surface 134

0 5 m
Scale for plan

0 1 m
Scale for sections

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Trench 1 Survey and sections

Figure 4

Plate 1: Southern end of Trench 1, view from the south-east

Plate 2: Central area of Trench 1 , view from the south

Plate 3: West-facing section adjacent to wall 130, obli ue view from the south-west

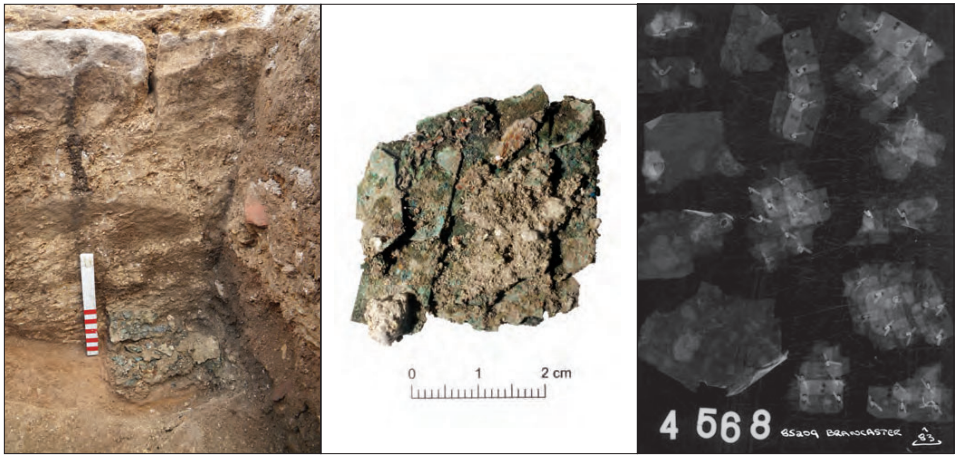

Plate 4: *Lorica squamata in situ* adjacent to wall, fragment after cleaning, x-ray plate of fragments

Plate 5: Northern end of Trench 1, view from the north

Date:	19/08/2014	Revision Number:	0
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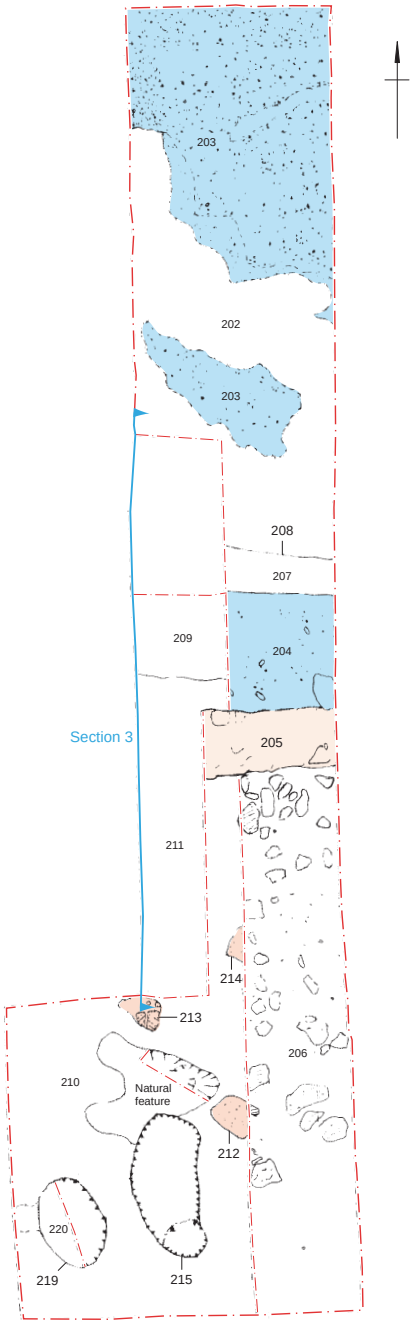
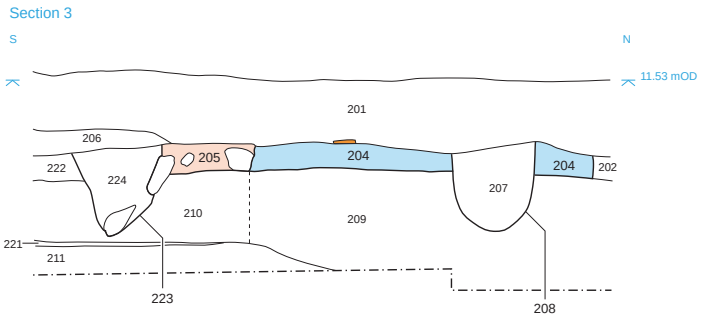
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_trench01plates.ai		



Wall/structure
Surface
Ceramic building material (section only)



East-facing section features 208, 223 and wall 205

0 2.5 m

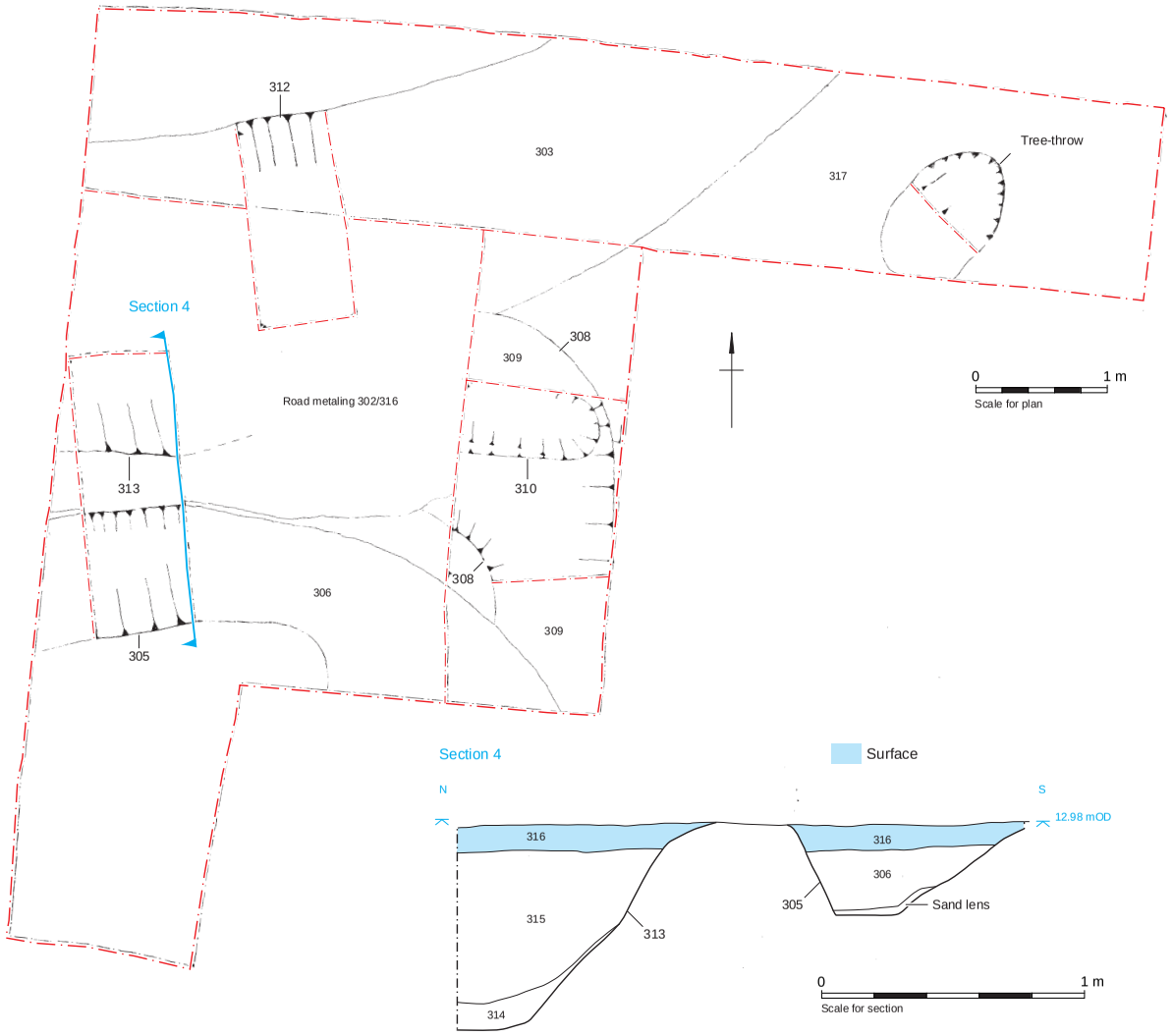
Scale for plan and section

Plate 6: Northern end of Trench 2, view from the north

Plate 7: East-facing section features 208, 223 and wall 205, obli ue view from the north-east

Plate 8: Southern end of Trench 2, view from the south

Date:	19/08/2014	Revision Number:	0
Scale:	Plan section @ 1:40	Illustrator:	RG
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_trench02.ai		



West-facing section through ditches 313 and 305

Plate 9: Trench 3, view from the east

Plate 10: East-facing section of 312

Date:	21/08/14	Revision Number:	0
Scale:	Plan @ 1:40, section @ 1:20	Illustrator:	RG
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_trench03.ai		

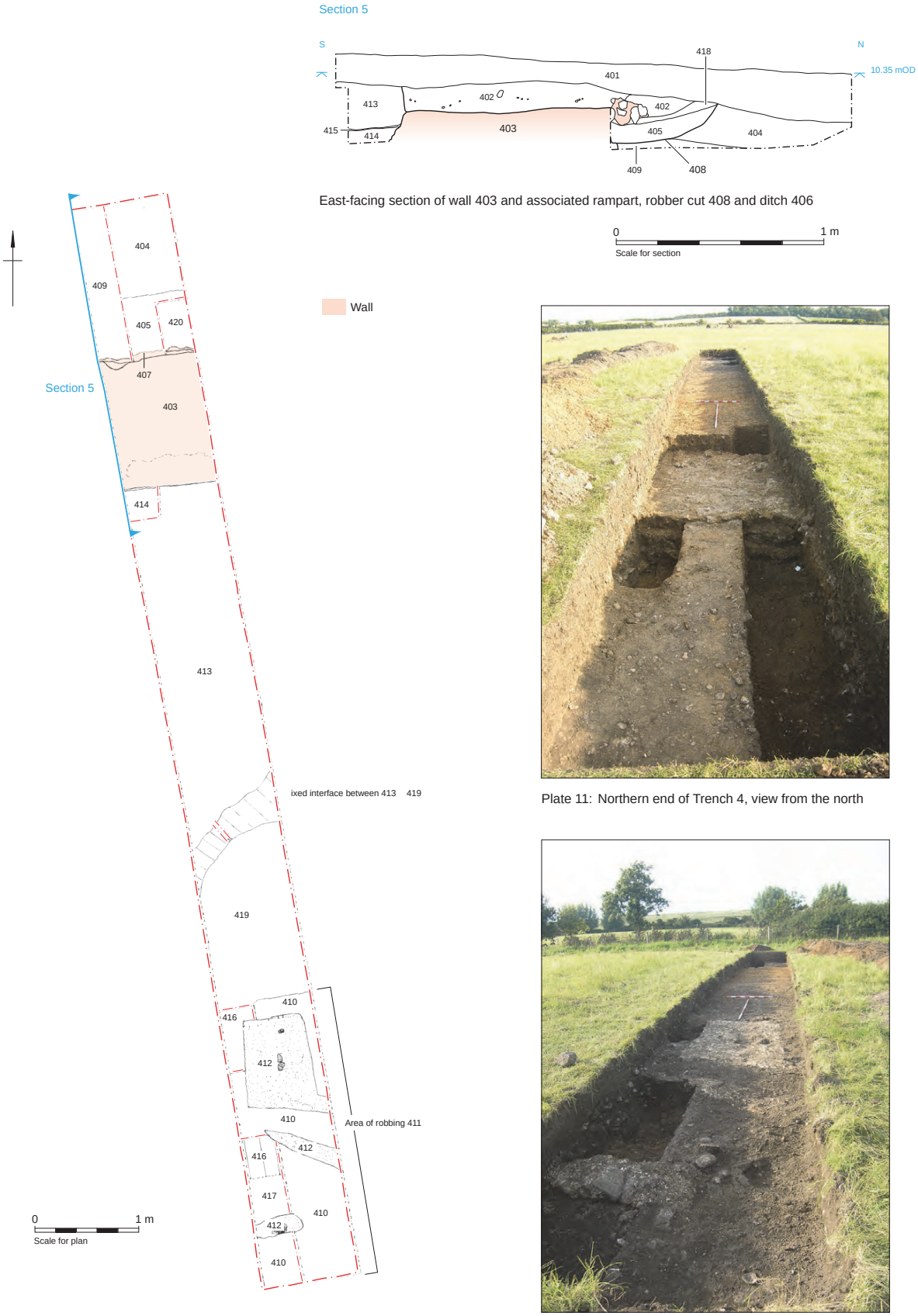


Plate 11: Northern end of Trench 4, view from the north

Plate 12: Southern end of Trench 4, view from the south-west

Date:	21/08/2014	Revision Number:	0
Scale:	Plan @ 1:80, section @ 1:40	Illustrator:	RG
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_trench04.ai		

Trench 4, survey, section and plates

Figure 8

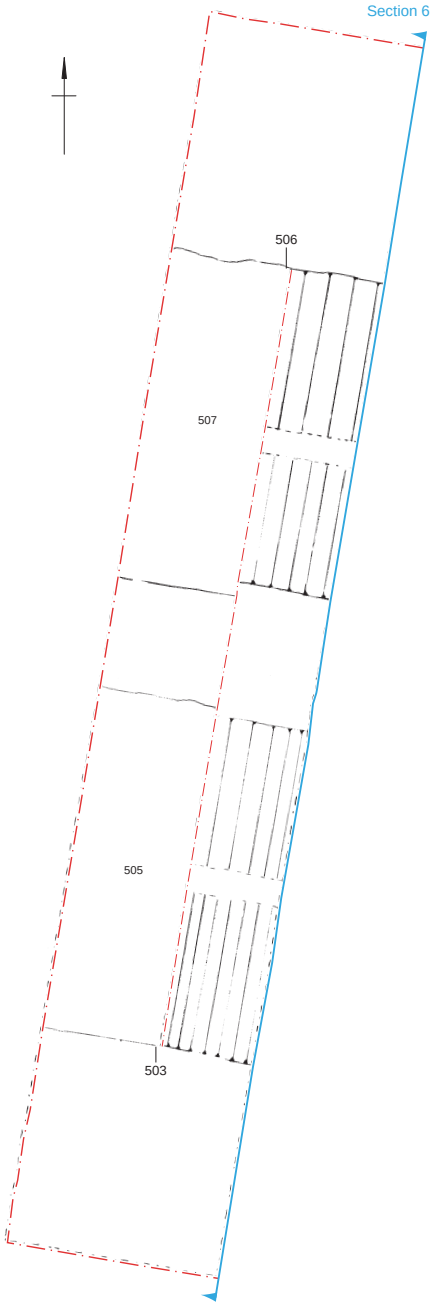
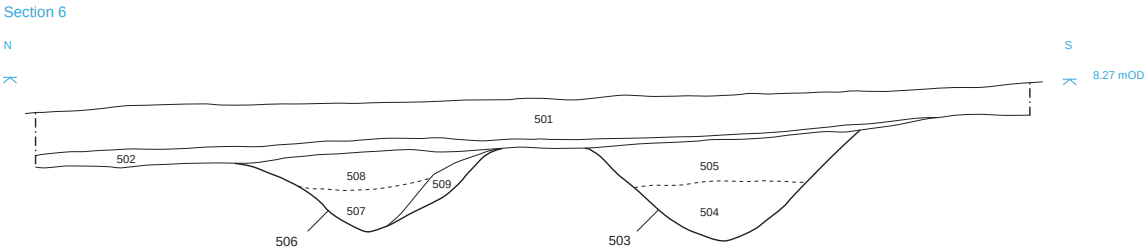


Plate 13: Trench 5, view from the south-west



West-facing section through ditches 503 and 506

0 1 m

Scale for plan and section

Date:	21/08/2014	Revision Number:	0
Scale:	Plan @ 1:80, section @ 1:40	Illustrator:	RG
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_trench05.ai		

Trench 5, survey, section and plate

Figure 9

Date:	18/08/2014	Revision Number:	0
Scale:	1:2000 @ A3	Illustrator:	RG
Path:	X:\PROJECTS\85209\Graphics_Office\Rep figs\assessment\2014_08_15\85209_master.dwg		

Postulated layout of Brancaster complex based on excavation, geophysical survey and cropmark evidence

Figure 10

wessex archaeology

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