FORMER HSMITH YARD &

BELLEFIELD ROAD

FORDCROFT

ORPINGTON

LONDON BOROUGH OF BROMLEY

ASSESSMENT OF AN

ARCHAEOLOGICAL WATCHING

BRIEF & EXCAVATION

BFF 05

FEBRUARY 2008

DOCUMENT VERIFICATION

FORMER HSMITH YARD & BELLEFIELD ROAD FORDCROFT ORPINGTON LONDON BOROUGH OF BROMLEY

WATCHING BRIEF & EXCAVATION

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Assessment of Archaeological Investigations at the former H Smith Yard and Bellefield Road, Fordcroft, Orpington, London Borough of Bromley

Site Code: BFF05

National Grid Reference: TQ 4668 6757

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Pre-Construct Archaeology Ltd, February 2008

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CONTENTS

Illustrations

Plates

Appendices

1 ABSTRACT

1.1 This document details the results and working methods of archaeological investigations conducted at the former H Smith Yard and Bellefield Road, Fordcroft, Orpington, London Borough of Bromley. The site comprises part of Scheduled Ancient Monument: Roman Bath House & Saxon Cemetery (SAM 145) and is centred at National Grid Reference TQ 4668 6757.

1.2 The investigations at the former H Smith Yard consisted of a primary evaluation conducted between 4th and 17th May 2005, a secondary evaluation conducted between 19th and 28th June 2006 and a phase of archaeological mitigation, including excavation, 'enhanced observation and recording' and watching briefs, conducted between 15th September and 15th November 2006.

1.3 A third and fourth phase of evaluation was conducted within Bellefield Road itself between 6th and 14th November 2006 and between 30th March and 17th April 2007. The evaluations were followed by a watching brief conducted sporadically throughout the autumn of 2007.

1.4 With the exception of a Bronze Age tree throw, located within the former H Smith Yard, evidence for prehistoric activity on site was limited. Evidence of Roman occupation was found across the former H Smith Yard, possibly relating to industrial activity, and within the confines of Bellefield Road, itself the back foundation wall of the scheduled Roman Bathhouse was revealed. Four graves of Saxon date were recorded during the investigations conducted within Bellefield Road.

1.5 This report outlines the results of the archaeological investigations as a whole and assesses their importance. Recommendations for further analysis are also made, along with proposals for the publication of the results.

2 INTRODUCTION

2.1 General

2.1.1 This document details the results and working methods of archaeological investigations conducted at the former H Smith Yard and Bellefield Road, Fordcroft, Orpington, London Borough of Bromley. The redevelopment site was centred at National Grid Reference TQ 4668 6757.

2.1.2 The former H Smith Yard is bound to the north by Bellefield Road, to the west and east by residential properties and to the south by workshop buildings. Bellefield Road itself is orientated on a NNW/SSE axis with residential and workshop buildings located on its southern edge, and open land and residential properties located to the north. Situated within the area of open ground are the remains of a bathhouse structure dating to the Roman period. The bathhouse and its surrounds, including the areas of excavation discussed in this report, are designated as Scheduled Ancient Monument: Roman Bathhouse & Saxon Cemetery (SAM 145). All phases of archaeological investigation were conducted with Scheduled Ancient Monument Consent as a requirement of Planning Permission sought, and consequently granted, to develop the land for residential dwellings and improve the existing road surface of Bellefield Road.

2.1.3 Temporary benchmarks were transferred from the Ordnance Survey Bench Mark located at 43 Lower Road (50.33m OD).

2.1.4 The completed archive comprising written, drawn and photographic records and artefactual material will be deposited at the Museum of London under the site code BFF05.

2.2 Former H Smith Yard

2.2.1 The investigations at the former H Smith Yard consisted of a primary evaluation conducted between 4th and 17th May 2005, a secondary evaluation conducted between 19th and 28th June 2006 and a phase of archaeological mitigation, including excavation, 'enhanced observation and recording' and watching briefs, conducted between 31st October and 15th November 2006.

2.2.2 The primary evaluation, supervised by Eliott Wragg in 2005, consisted of the excavation of eight trenches, 1a, 1b, 2a, 2b, 3, 4, 5a and 5b, located within the footprint of the proposed buildings. The evaluation found evidence to indicate that Roman structures, occupation deposits and possible industrial activity, potentially associated with the bathhouse, were present on site (Wragg 2005).

2.2.3 The secondary evaluation, supervised by Andrew Sargent in 2006, consisted of the excavation of five trenches, 7, 8, 9 and 10, within the garden area of the new houses. A number of undated features predating the Roman stratigraphy were recorded. The secondary evaluation also found evidence of an NWW/SEE gully dating to the Roman period in addition to further evidence suggesting that industrial activity was being undertaken on site (Sargent 2006).

2.2.4 On the basis of the findings of the two phases of evaluation, primarily the presence of Roman occupation and possible industrial activity, a mitigation strategy for the removal of archaeological deposits prior to the redevelopment of the site was devised (Brown 2006). The mitigation consisted of four areas of investigation, supervised by Antony Baxter and the author, which are detailed below:

- **Area 1**

  Area 1 was located in the east of the former H Smith Yard, adjacent to Bellefield Road. The design of the new houses in this area were anticipated to significantly impact on the underlying archaeological deposits and full archaeological excavation of Area 1 was required.

- **Area 2**

  Area 2 was located along the western boundary of the site. The area forms the gardens of new houses that will cause minimal impact to the underlying archaeological deposits. As a requirement of the mitigation design between 600mm and 900mm of ground was stripped off the area which was then subject to an “enhanced observation and recording” exercise.

- **Area 3**

  Area 3 was located in the northwest of the site adjacent to Bellefield Road. The presence of Japanese knotweed, which “is only one of two terrestrial plants dealt with by the current version of the UK Wildlife and Countryside Act under which it is illegal to cause it to grow in the wild.” (www.cabi-bioscience.org/html/japanese_ knotweed_alliance.htm#prob), ensured that it was impossible to conduct archaeological excavation in this area of the site. As a consequence “enhanced observation and recording” was undertaken during the removal of the plant.

- **Area 4**

  Area 4 was located in the west of the site and was bordered on its northeast, east and southwest edges by Areas 3, 1 and 2 respectively. The design of the new houses was anticipated to have minimal impact on the underlying archaeological deposits and the area was mitigated through archaeological watching brief.

2.3 Bellefield Road

2.3.1 Two phases of evaluation were conducted within Bellefield Road itself between 6th and 14th November 2006 and between 30th March and 17th April 2007 (Baxter 2006; Taylor 2007a; Taylor 2007b). The evaluations were followed by a watching brief conducted sporadically throughout autumn 2007.

2.3.2 As part of the redevelopment of the former H Smith Yard, Bellefield Road was removed and re-lain. As a consequence of the scheduled Roman bathhouse and Saxon cemetery being located immediately to the north of the road a targeted evaluation, supervised by Antony Baxter, consisting of three trial holes, 1, 2 and 3, was required. The evaluation found that a Roman masonry foundation was present indicating that parts of the bathhouse existed below Bellefield Road (Baxter 2006).

2.3.3 As a consequence, an evaluation trench measuring 32m in length, was opened in the vicinity of the bathhouse and the full extent of the Roman masonry was recorded prior to its preservation *in situ*. The area of excavation also contained a number of Roman features associated with the bathhouse in addition to continuations of features recorded during previous excavations to the north of Bellefield Road. Two Saxon graves were recorded although only one was fully excavated as the second was almost entirely located beyond the northern limit of excavation (Taylor 2007a; Taylor 2007b).

2.3.4 The evaluation of Bellefield Road demonstrated that significant archaeological deposits existed below the road surface and would be placed at risk during its removal and reinstatement. As a consequence a watching brief was conducted during the removal of the existing road surface during which time a further two Saxon graves were recorded.

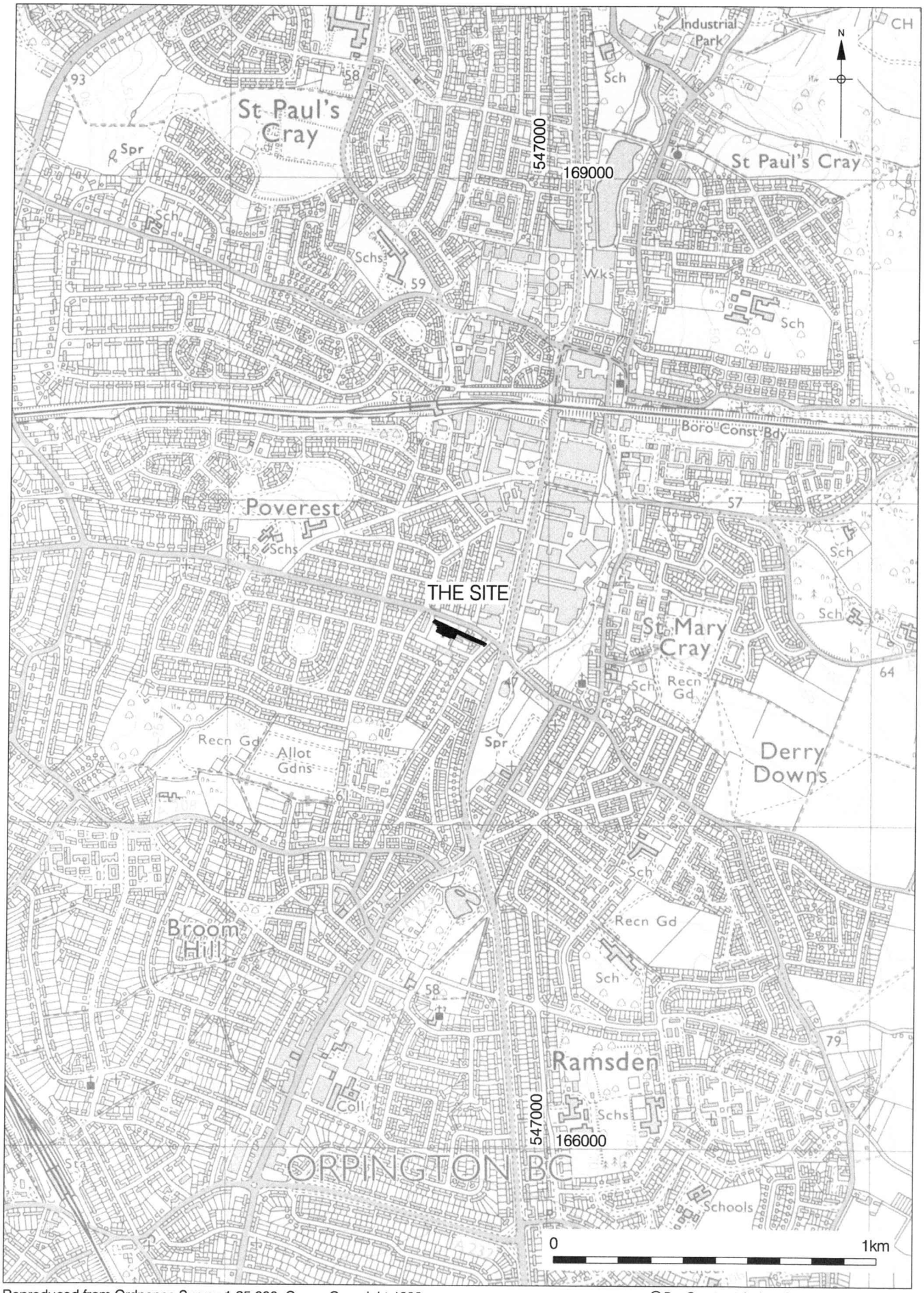


Figure 1
Site Location
1:16,000 at A4

3 PLANNING BACKGROUND

3.1 The site is located within one of the London Borough of Bromley's Archaeological Priority Zones (APZ) and also comprises part of Scheduled Ancient Monument: Roman Bathhouse & Saxon Cemetery (SAM 145). The following is a summary of the Borough's Unitary Development Plan:

ANCIENT MONUMENTS AND ARCHAEOLOGY
POLICY BE16

Planning permission will not be granted for development that would adversely affect scheduled ancient monuments or other nationally important archaeological sites, involve significant alterations to them or harm their settings. When considering planning applications for development involving excavation or other ground works the Council will require that:

> *(i) within Areas of Archaeological Significance, as defined on the Proposals Map and listed in Appendix IV, a written statement of the likely is submitted in the form of an archaeological assessment (which can be desk based); where necessary information cannot be obtained by other means, an archaeological field evaluation should be carried out prior to determination;*
>
> *(ii) at sites of potential archaeological importance (as defined below), where permanent preservation in situ is not justified, provision shall be made for an appropriate level of investigation and recording to be is undertaken by a recognised archaeological organisation before any development commences. Where investigations indicate that in situ preservation is inappropriate, excavation and recovery should be carried out by a reputable archaeological body, before development commences. Any such investigations shall be in accordance with a detailed scheme to be approved in advance by the Council and the results shall be subsequently published. Where in situ preservation is appropriate, suitable designs, land uses and management strategies will be required and the Council's archaeology strategy promoted.*

6.41 Ancient monuments and archaeological remains constitute the principal surviving evidence of the Borough's past. However they are vulnerable to modern development and changes in land use and are easily lost or damaged. The Council considers that preservation of archaeological sites and ancient monuments is a legitimate objective against which the demands of development must be balanced and fully assessed. The destruction of such remains should be avoided and should never take place without prior archaeological excavation and record.

6.42 In addition to Areas of Archaeological Significance, there are locations outside these defined boundaries where archaeological remains have been found and where there may be potential for further finds. Where development is proposed within an Area of Archaeological Significance (as shown on the Proposals Map), or near a site of archaeological potential, the Council will require a preliminary archaeological site evaluation before proposals are considered. The council will seek the appropriate professional advice and will require applicants proposing development to do the same. Where the Council considers it appropriate, detailed investigation shall be carried out to an agreed written specification of work by a professionally qualified archaeological organisation or archaeological consultant.

6.43 The Council will encourage early co-operation between landowners, developers and archaeologists in accordance with the Developers Liaison Group Code of Practice, and by attaching appropriate conditions to planning consents, and/or negotiate appropriate planning obligations (section 106 agreements).

6.44 It is important to increase public awareness of the historical and archaeological heritage of the Borough and to encourage its effective management as an educational and recreational resource. The Council will promote the conservation, protection and enhancement of ancient monuments and archaeological sites and their interpretation and presentation to the public.

6.45 The following sites in the Borough have been scheduled as Ancient Monuments:

(i) Fordcroft, Poverest Road, Orpington – Romano-British Site/Anglo Saxon Cemetery
(ii) Caesar's Camp, Holwood Park, Keston - Iron Age hill fort
(iii) Camp on Keston Common, Keston – earthworks
(iv) The Temple, west of Keston Court, Westerham Road, Keston –Romano British mausoleum
(v) Romano-British villa, Crofton Road, Orpington
(vi) St.Botolph's Church, Ruxley - former medieval church on site of earlier church
(vii) Romano-British site, Wickham Court Farm, West Wickham – site of substantial Romano British settlement
(viii) Ice Well at High Elms.
Sites (i), (iii), (iv), (v), (vii) and (viii) are owned by the Council.

6.46 The Council has published its Archaeological Strategy and will seek to use the planning process to implement its objectives. The Strategy provides a framework for dealing with archaeological issues and draws upon Planning Policy Guidance Note 16: Archaeology and Planning published by the Department of the Environment in 1990. Supplementary planning guidance will be prepared on archaeological issues and the preparation of statements.

4 GEOLOGY AND TOPOGRAPHY

4.1 The site lies in the River Cray valley some 200m west of the river on a gentle downwards slope from west (52.35m OD) to east (47.24m OD). There are no watercourses or bodies of water within the site.

4.2 The British Geological Survey (England and Wales Sheet 271) indicates that the underlying geology of the site is formed of a natural River Terrace deposit of Taplow Gravel. The natural gravel is overlain by a naturally deposited brickearth horizon.

4.3 An evaluation immediately to the east of the former H Smith Yard revealed natural gravel at levels between 47.23m OD and 47.43m OD. This was in turn overlain by a brickearth layer which sloped downwards to the east and was revealed at a height of 47.92m OD at the west of the site and at 46.20m OD at the east (Wragg 2003).

4.4 Spot heights obtained on the brickearth horizon during the archaeological investigations discussed in this report indicate that the site is situated on a west to east slope in the natural topography. The brickearth was encountered at 51.91m OD in the west of the former H Smith Yard and at 47.24m OD, c.160m to the east, at the eastern terminus of Bellefield Road.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 General

5.1.1 The following text has been extracted from the initial method statement and evaluation report compiled in 2005 (Butler 2005; Wragg 2005) which itself drew heavily from a number of documents pertinent to an understanding of the archaeology of the Fordcroft area (Densem & Potter 2002; Philp & Keller 1995; Meekums 2001; Wragg 2003). No further archaeological or historical research has been undertaken for the assessment document although further research will be undertaken as part of the future publication of the site.

5.2 Prehistoric

5.2.1 Mesolithic activity is well documented within the Cray Valley. In the immediate vicinity of the site Mesolithic flint artefacts were found at 64 May Avenue to the north, and a scatter of Mesolithic tools and flint waste were recorded at Poverest Road. In 2003 an evaluation of the east of the former H Smith Yard recovered a mixed assemblage of struck and burnt flints including one struck flint blade, one multi-platformed flint core and one struck flint flake of probable Mesolithic date. One sherd of pottery of possible Iron Age date was found residually during the evaluation (Wragg 2003; 2004).

5.3 Roman

5.3.1 There is much evidence for Roman activity throughout the Cray Valley including the area surrounding the study site. 200m to the north of the site a small Roman cremation cemetery was recorded at 34 May Avenue; a corn drying oven and pit were recorded near Lower Road; a ditch was excavated at Kent Road; areas of metalling and quarry pits were recorded at Wellington Road; 376 silver denarii were found in a hoard at Forest Way; and Roman pottery and building material was recovered from a garden in Chelsfield Road.

5.3.2 The remains of a Romano- British bathhouse stands to the immediate north of Bellefield Road. To the west of this, excavations have revealed the presence of a kiln or furnace, outbuildings, metalled surfaces, a courtyard and an animal urine soakaway or flue. Excavations to the east of the bathhouse revealed a ditch, several pits, postholes and an area of flint rubble dating to this period. Romano-British pottery was recovered in 1946 from a sewer trench being dug along Bellefield Road and also from excavations undertaken to the immediate east and south of the former H Smith Yard.

5.4 Saxon

5.4.1 Excavations to the northeast and east of the bathhouse revealed a Saxon cemetery containing 71 burials dating from the mid 5th to 6th century. 10 burials were recorded in close proximity to the bathhouse during later excavations, and a further burial was found to the west of the bathhouse. An isolated grubenhaus was recorded in excavations at 10-20 Kent Road some 300m to the east of the site.

5.5 Medieval

5.5.1 The River Cray is first attested in AD 798, the name meaning clean or pure. The settlement at *Sudcrai* is mentioned in the Domesday Book, meaning south of the Cray. The parish church of St Mary Cray, standing on the other side of the river, on the High Street 750m north east of the site, dates to the thirteenth century, by which time the settlement is documented as *Creye Sancte Marie*. The settlement is thought to have comprised a small town, concentrated along the High Street. A medieval burnt clay hearth was discovered during excavations to the north of the site. The study site is thought to have comprised open farmland during this period.

5.6 Post-medieval

5.6.1 The maps of the 16th century showing St Mary Cray suggest that the land south of the river containing the site was open land. The Ordnance Survey map of 1864 shows the site was occupied by a field. The Ordnance Survey maps of 1894-6, 1909, 1937 and 1950 show allotment gardens on the site, with surrounding housing developments.

6 ARCHAEOLOGICAL METHODOLOGY (Fig. 2)

6.1 Former H Smith Yard: Evaluations

6.1.1 The investigations at the former H Smith Yard consisted of a primary evaluation conducted between 4th and 17th May 2005 and a secondary evaluation conducted between 19th and 28th June 2006.

6.1.2 The primary evaluation, supervised by Eliott Wragg in 2005, consisted of the excavation of eight trenches, 1a, 1b, 2a, 2b, 3, 4, 5a and 5b, located within the footprint of the proposed buildings (Wragg 2005).

6.1.3 The secondary evaluation, supervised by Andrew Sargent in 2006, consisted of the excavation of five trenches, 7, 8, 9 and 10, within the garden area of the new houses (Sargent 2006).

6.1.4 Details of the archaeological methodology employed during the first two phases of evaluation can be found in Wragg 2005 and Sargent 2006 respectively.

6.2 Former H Smith Yard: Mitigation

6.2.1 On the basis of the findings of the two phases of evaluation a mitigation strategy for the removal of archaeological deposits prior to the redevelopment of the site was devised (Brown 2006). The mitigation consisted of four areas of investigation, conducted between 31st October and 15th November 2006, which are detailed below:

- **Area 1**

  Area 1 was located in the northeast of the site, adjacent to Bellefield Road. Requirements concerning the design of the new houses in this area were anticipated to significantly impact on the underlying archaeological deposits and full archaeological excavation of Area 1 was required. Located within the boundary of Area 1, either partially or in their entirety, were evaluation Trenches 1a, 1b, 5b, 2a, 5a, 4 and 8.

- **Area 2**

  Area 2 was located along the southwestern boundary of the site. The area forms the gardens of the new houses that will cause minimal impact to the underlying archaeological deposits. As a requirement of the mitigation design between 600mm and 900mm of ground was stripped off the area which was then subject to an “enhanced observation and recording” exercise. Located within the boundary of Area 2, either partially or in their entirety, were evaluation Trenches 6, 10, 7, 8, 9 and 2b.

- **Area 3**

  Area 3 was located in the northwest of the site adjacent to Bellefield Road. The presence of Japanese knotweed, which "is only one of two terrestrial plants dealt with by the current version of the UK Wildlife and Countryside Act under which it is illegal to cause it to grow in the wild." (www.cabi-bioscience.org/html/japanese_ knotweed_alliance.htm#prob), ensured that it was impossible to conduct archaeological excavation in this area of the site. As a consequence "enhanced observation and recording" was undertaken during the removal of the plant. Partially located within the boundary of Area 3 was evaluation Trench 8.

- **Area 4**

  Area 4 was located in the west of the site and was bordered on its northeast, east and southwest edges by Areas 3, 1 and 2 respectively. The design of the new houses was anticipated to have minimal impact on the underlying archaeological deposits and the area was mitigated through archaeological watching brief. Located within the boundary of Area 1, either partially or in their entirety, were evaluation Trenches 8, 3 and 10.

6.2.2 In Areas 1, 2 and 4 the removal of ground level surfaces and obstructions was undertaken by Green Acre Homes South East using a 360° mechanical excavator under the observation of an attendant archaeologist. Following the removal of the uppermost deposits (concrete and hardcore) the machine was fitted with a flat bladed ditching bucket. Areas of investigation were reduced in 200mm spits under archaeological supervision until the uppermost archaeological horizon, natural horizon or a predefined project level were reached. In Area 3 an attendant archaeologist monitored the removal of the Japanese Knotweed.

6.3 Bellefield Road: Evaluation

6.3.1 Two phases of evaluation were conducted within Bellefield Road itself between 6th and 14th November 2006 and between 30th March and 17th April 2007 (Taylor 2007a; Taylor 2007b). The evaluations were followed by a watching brief conducted throughout autumn 2007.

6.3.2 As part of the redevelopment of the site Bellefield Road was removed and re-lain. As a consequence of the scheduled Roman bathhouse and Saxon cemetery being located immediately to the north of the road a targeted evaluation, supervised by Antony Baxter and consisting of three trial holes was undertaken (Baxter 2006). The trial holes demonstrated that Roman masonry was present below the road and as a consequence an additional evaluation trench was opened in the vicinity of the bathhouse.

6.3.3 The evaluation trench was excavated in two phases (Trench BR1 and Trench BR2) and measured 2m n/s by 32m e/w. The existing road surface and made ground were removed by a mechanical excavator to the first significant archaeological horizon or a pre-determined project level (c.0.50m below the existing road surface) (see Taylor 2007 fig. 4). Following the completion of the evaluation trench the masonry remains encountered were preserved *in situ* beneath protective sheeting and sterile sand.

6.3.4 The excavation of human burials within the evaluation trench was conducted behind protective sheeting and all grave goods were recorded and lifted on the same day of excavation.

6.4 Bellefield Road: Mitigation

6.4.1 The two phases of evaluation demonstrated that significant archaeological deposits existed below Bellefield Road and would be placed at risk during the removal and reinstatement of the road surface. As a consequence a watching brief was conducted on the removal of the existing road surface and, when encountered, archaeological deposits were fully recorded.

6.4.2 During the watching brief a further two Saxon graves were recorded, one of which was excavated. Once again the excavation of human burials was conducted behind protective sheeting and all grave goods were recorded and lifted on the same day of excavation.

6.5 General Methodology

6.5.1 Following machining, all faces of the excavation areas that required examination were cleaned using appropriate hand tools. All investigation of archaeological deposits was by hand, with cleaning, examination and recording both in plan and section.

6.5.2 In areas of excavation or “enhanced recording and observation” a 5m grid was established whilst in the watching brief areas and the evaluation and watching brief in Bellefield Road baselines were utilised. All areas of investigation were surveyed and located to the National Ordnance Grid using a Total Station Theodolite.

6.5.3 Recording was undertaken using the single context recording system as specified in the Museum of London Site Manual. Plans were drawn at a scale of 1:20, and full or representative sections at a scale of 1:10. Contexts were numbered sequentially and recorded on *pro-forma* context sheets.

6.5.4 Temporary benchmarks were transferred from the Ordnance Survey Benchmark located at 43 Lower Road (50.33m OD).

6.5.5 The site was given the code BFF05

6.5.6 Areas of excavation were fenced off during the excavation to protect the archaeology and the public. Areas of excavation were backfilled on completion of each phase of archaeological investigation.

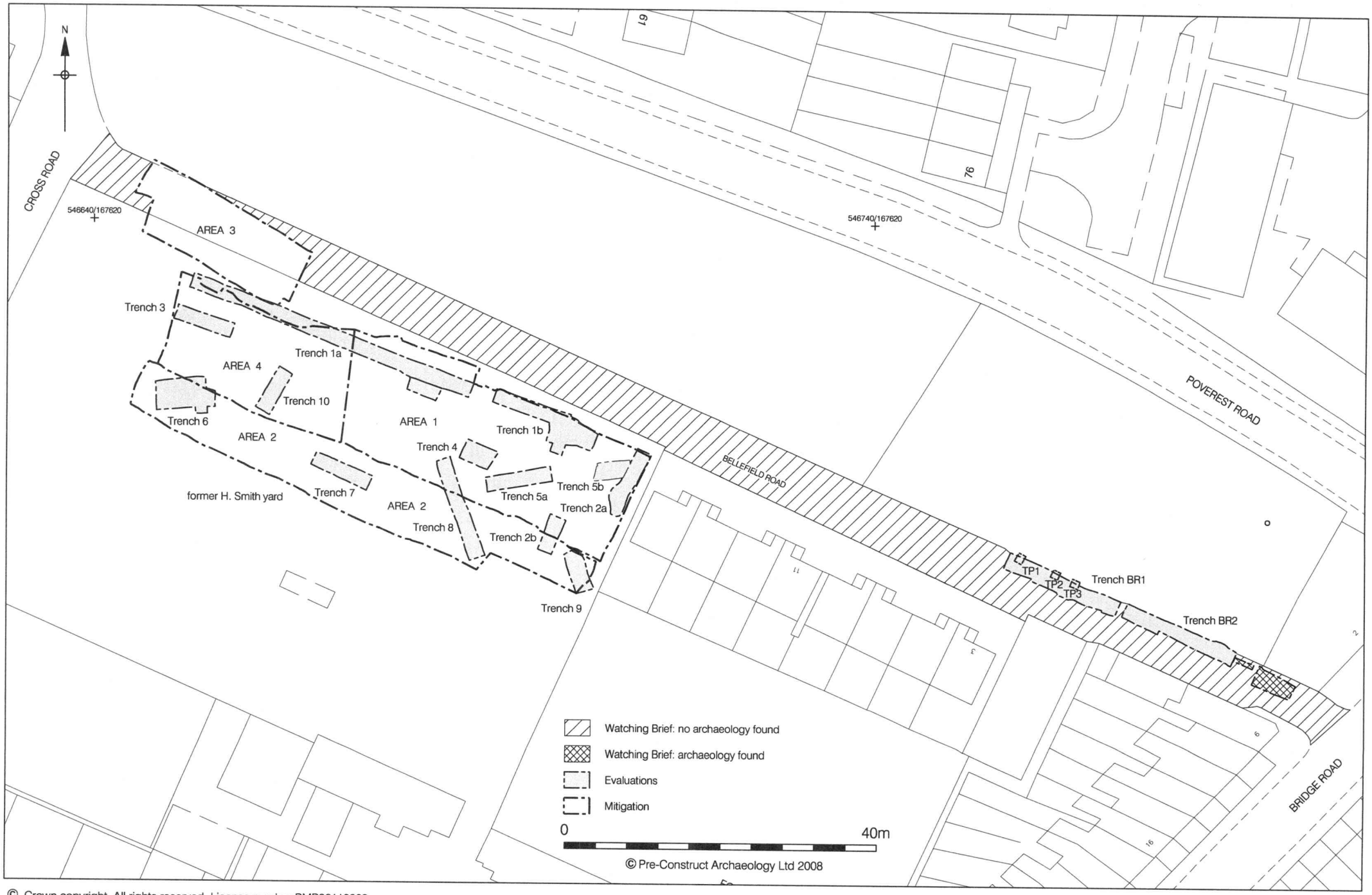


Figure 2
Locations of areas of investigation
1:625 at A4

7 THE ARCHAEOLOGICAL SEQUENCE

7.1 Introduction

7.1.1 The following description of the stratigraphy details the main characteristics of each context and its position in the phased stratigraphic matrix. Ordnance Datum levels, physical dimensions and descriptions are referenced when relevant to an understanding of the archaeological sequence and when not cited can be found referenced in Appendix 1.

7.2 Phase 1a: Natural (Fig. 9)

7.2.1 The earliest deposit recorded during the archaeological investigations was a naturally deposited sandy gravel horizon [8], [110], [111], [148], [517], [601] and [1009] encountered at heights between 50.27m OD and 47.23m OD.

7.2.2 Sealing the earlier horizon was a firm, mid orange brown brickearth horizon [7], [26], [27], [37], [42], [46], [49], [51], [53], [109], [137], [142], [171], [204], [296], [302], [349], [524], [525], [600] and [1012] containing occasional to moderate quantities of gravel inclusions. The layer was encountered between heights of 51.91m OD in the west and 47.24m OD in the east demonstrating a gradual downwards slope in the natural topography on site.

7.3 Phase 1b: Bioturbated Natural

7.3.1 During the primary evaluation of the former H Smith Yard a bioturbated brickearth horizon [45], [48] and [52] was recorded above the natural brickearth. The layer was encountered at heights between 51.60 m OD and 50.50m OD and represents a reworking of the upper natural horizon either through natural or human activity. Whilst this horizon was evident in the northwest of the site it was not seen elsewhere and may represent a localised disturbance of the uppermost natural brickearth, possibly relating to Mesolithic use of the site (Appendix 11).

7.3.2 A north-south orientated palaeochannel [523] was recorded in section during the secondary evaluation of Bellefield Road. The n/s orientated channel measured 2.67m in width, contained a firm, light greenish brown, silt fill [522] and was encountered at a height of 47.35m OD. The base of the naturally formed feature was not encountered during the excavation of the evaluation trench.

7.4 Phase 2: Prehistoric (Fig. 3)

7.4.1 Whilst a number of lithics of probable Mesolithic date were found during the archaeological investigations all were found residually in later contexts. However, the presence of this

material suggests there to have been some activity on site at this time although any definitive evidence has since disappeared (see Appendix 8).

7.4.2 Truncating the natural horizon at a height of 50.47m OD within the former H Smith Yard were the remains of a tree throw hollow [231]. Contained within the tree throw was a firm, mid brownish orange, clay silt fill [230] within which were found small fragments of poorly preserved pottery and a number of lithics, including 2 scrapers, a core and a flake, all of which are of probable Bronze Age date (Appendix 8). It is possible that the lithics, which were in good condition and showed no evidence of having been redeposited, may represent a small tool kit used for a particular task and deposited in the tree throw hollow after use. Environmental evidence from context [230] suggests the presence of a nearby wetland or waste ground, perhaps on the margin of a stream, river or pond (Appendix 11).

7.4.3 In addition a number of residual flints of probable Bronze Age date were found during the investigations, however they were all residual within later features. The material collected during the investigations suggests that the site was only sporadically utilised at this time most probably on an opportunistic basis, with any settlement or zone of activity being located away from the study area.

7.5 Phase 3a: 1st century (Fig. 4)

7.5.1 The secondary evaluation of the former H Smith Yard recorded an irregular shaped feature [158], probably a tree throw hollow, truncating the natural horizon in the west of the site. The feature was encountered at 51.75m OD and contained two sandy clay fills [156] and [157] from which pottery dating to the 1st century AD was retrieved (Appendix 2).

7.5.2 Two other features, [301] and [312], located in the central southern area of the site have also been interpreted as tree throw hollows. The tree throws were encountered at c.50.84m OD and contained sandy silt fills, [300] and [311] respectively. No cultural material was retrieved during the excavation of the features and it remains possible that they may date to the prehistoric period (see above). However, should the tree throws date to the early Roman period it is possible that these features in addition to tree throw [158] may represent a phase of tree clearance during the mid 1st century.

7.6 Phase 3b: Late 1st century/ early 2nd century (Fig. 5)

7.6.1 NNE/SSW [274] and NNW/SSE [177] orientated linear features were recorded in the western part of the former H Smith Yard. The ditches measured between 1.00m and 1.20m in width. The full extent of the linear features are unknown due to later truncations, however it is probable that the features should be interpreted as ditches.

7.6.2 Contained within the ditches were sandy silt fills, [266] and [175]/[176] respectively, within which were occasional flecks of CBM and frequent quantities of charcoal and gravel. Pottery and CBM dating to AD120-200 was retrieved from fill [266] (Appendices 2 & 4) which together with the nature of the fill suggest that the ditch was deliberately backfilled some time in the early 2nd century indicating a change in definition of space at this time. Iron working debris retrieved from the fills may indicate that industrial practices were conducted in the vicinity (Appendix 6).

7.6.3 Crossing the southern half of the former H Smith yard on a NNW-SSE axis was a shallow gully, [126], [132], [130], [122], [306], [210] and [208], measuring c.57m in length, between 0.52m and 0.24m in width and between 0.29m and 0.07m in depth. The gully was encountered at a maximum height of 51.41m OD in the west and 47.41m OD in the east and extended beyond the eastern limit of excavation.

7.6.4 Contained within gully was a silty sandy clay fill, [125], [131], [129], [121], [305], [209] and [207] respectively, suggestive of gradual accumulation as opposed to deliberate backfilling. With the exception of pottery dated to AD 50-120 (Appendix 2) within fill [125] and AD50-250 in fill [305] limited cultural material was retrieved from the gully, however, the date of the material collected may suggest that the gully had fallen out of use by the mid 2nd century. As a consequece it remains possible that the gully remained in use for a long period of time transcending the chronological phases attributed to the site. Iron working debris retrieved from fill [305] may indicate that industrial practices were conducted in the vicinity (Appendix 6).

7.6.5 Located centrally to the former H Smith Yard and continuing beyond the southern limit of excavation was a second shallow gully, [128], [228] and [299] orientated on a NNE/SSW axis. The gully measured c.14m in length, between 0.84m and 0.34m in width and between 0.14m and 0.09m in depth. The gully was encountered at 51.15m OD in the south and 50.97m OD in the north.

7.6.6 Contained within the gully was a silty sandy clay fill, [127], [229] and [298] respectively, once again suggestive of gradual accumulation as opposed to deliberate backfilling. The fills of the NNE/SSW gully yielded a significant amount of cultural material with pottery dating to between AD120-200 (Appendix 2) retrieved from both [229] and [298]. The date of the material found within the gully suggests that it remained in use during the 2nd century before eventually falling out of use.

7.7 Phase 3c: 2nd/early 3rd century (Fig. 6)

7.7.1 Numerous features have been attributed to Phase 3c suggesting that the late 2nd/early 3rd century was the dominant phase of activity on site.

7.7.2 Originally encountered during the primary evaluation and fully exposed during the main excavation were the remains of a rotted out well. It is thought that construction cut [18]/[219] once contained a timber well lining however due to soil conditions on site only ephemeral staining [278] of the original lining remained. However, fill deposits, that would once have represented backfill deposited behind timber planks, was clearly distinguishable [2]/[218] and pot dates obtained suggest a date of construction sometime between AD140-180 (Appendix 2). Iron working debris retrieved from fill [218] may indicate that industrial practices were conducted in the vicinity (Appendix 6). A copper alloy bracelet (SF12) and fragments of lava quern were retrieved from fill [218] (Appendix 5).

7.7.3 Truncating the backfill of the well were four postholes [17]/[239], [243], [246] and [251] containing fills [16]/[238], [242], [245] and [250]. The postholes were uniformly located around the outside of the well and appear to have formed a small structure, presumably to prevent contamination of the water. CBM retrieved from the postholes indicate a date range of AD100-120 and are probably residual in nature (Appendix 4).

7.7.4 Numerous fills [3], [54], [217], [256], [261], [273] and [277] infilled the well. Quantities of iron slag working debris within fill [217] and a smithing hearth bottom from fill [256] may indicate that industrial practices were conducted in the vicinity (Appendix 6) whilst the fragment of a large rotary quern (SF19) within fill [256] may indicate that grain processing was conducted in the vicinity (Appendix 5). The lower fills contained no dateable cultural material whilst the upper fills contained a mixed assemblage of pottery. The presence of three sherds of pottery post-dating AD250 within infill [2] suggests that the well had fallen out of use by the mid 3rd century although it remains possibly that these sherds are intrusive (see Appendix 2 for further discussion).

7.7.5 In addition fill [217] yielded an interesting assemblage of animal bone including the remains of a single (?) adult cattle skull and a single (?) horse skull. The presence of two complete skulls within a well fill may represent a ritual deposit, possibly denoting the closure of the well. However, it is also possible that the animal bone assemblage may represent butchery waste (Appendix 10).

7.7.6 Located in the central south of the former H Smith Yard were two post built structures probably representative of small huts or storage areas. The first, comprising postholes [308], [310] and [314] filled respectively by [307], [309] [313], was located adjacent to the southern limit of excavation whilst the second, comprising postholes [221], [233] and [255] filled respectively by [220], [232] and [254], was located slightly to the north. The cultural material

retrieved from the fills was generally of a wide date range, however, fill [220] contained pottery dated between AD120-200 suggesting the postholes as a whole may date to the later half of the 2nd century (Appendix 2). Iron working debris retrieved from fill [254] may demonstrate that industrial practices were conducted within the vicinity (Appendix 6).

7.7.7 In addition to the two possible structures discussed above a sizeable number of postholes were excavated during the evaluation and excavation of the former H Smith Yard. Located in the central north of the site were two large postholes [30]/[214]/[216] and [35]/[223], containing fills [28]/[29]/[31]/[43]/[211]/[212]/[213]/[215] and [32]/[33]/[34]/[222]. Iron working debris and lava quern fragments retrieved from the fills may demonstrate that industrial practices and grain processing were conducted within the vicinity (Appendices 4 & 5). A small copper-alloy ring (SF10) and a brooch fragment (SF11) was retrieved from fill [211] (Appendix 5).

7.7.8 The postholes measured c.1.50m in diameter and would clearly have contained sizeable posts. Whilst the absence of similar postholes within the excavation area inhibits further interpretation at this time the presence of comparable postholes recorded during excavations to the north of Bellefield Road may elucidate on their collective purpose in the future. Pottery retrieved from the postholes suggests that they date to the latter half of the 2nd century (For further discussion of the characteristics of the postholes see Wragg 2005; Appendix 2)

7.7.9 Scattered across the site, yet exhibiting no particular form nor function, were a further seven postholes [120], [173], [225], [286], [226], [263] and [303] containing fills [119], [174], [224], [285], [227], [262] and [304] respectively, and three stakeholes [23], [24] and [25] containing fills [13], [14] and [15]. Limited pottery and ceramic building material was retrieved from the postholes though when present was generally dated to the mid 2nd century (Appendices 2 & 4).

7.7.10 Three distinct “clusters” of pits, denoting zones of activity and demonstrating evidence of industrial practices (Appendix 6), were recorded during the evaluation and excavation of the former H Smith Yard. The most concentrated, located in the northeast corner of the site, was comprised of intercutting pits [10], [12], [20], [21], [39], [41], [235], [237], [241] and [253] containing fills [9] [11], [19], [4]/[5]/[22], [38], [40], [234], [236], [240]/[244]/[247] and [252] respectively. Iron working debris retrieved from fills [240], [244], [247] and [252] may indicate that industrial practices were conducted in the vicinity whilst a number of fragments of lava quern found within the pit fills may indicate grain processing in the vicinity (Appendices 5 & 6). In addition, the animal bone assemblage from pits [21] and [241], which demonstrated a preponderance towards cattle bone, may indicate the presence of a butcher (Appendix 10). In addition a coin of Faustina (SF13) dated to AD146-175 was found within fill [240] and a

copper alloy sheet/disc (SF15) was found within [244] (Appendix 5). The only fragment of Roman glass found on site was retrieved from fill [244] (Appendix 7).

7.7.11 A particularly interesting assemblage of pottery, mainly comprised of local patchgrove wares but also including an example of decorative Samian previously undocumented in Britain, was retrieved from pit [241]. The elaborate mythological scenes depicted on the Samian vessel in addition to its semi complete state may indicate that pit [241] served a ritual purpose (Appendix 2). In terms of chronology it is possible that this pit group may transcend Phases 3b and 3c and refinement of the phasing of the pit group will be necessary prior to publication.

7.7.12 A second "cluster" of intercutting pits, comprised of pits [164], [260], [265], [270] and [289] containing fills [163]/[165], [257]/[258]/[259]/[276]/[279]/[280], [264], [267]/[268]/[269]/[287] and [288] was located in the west of the former H Smith Yard. Once again iron working debris retrieved from the fills may indicate that industrial practices were conducted in the vicinity (Appendix 6). Pottery retrieved from the fills suggests they were in use during the middle and latter half of the 2nd century although once again further refinement of the site phasing should provide further clarification (Appendix 2). The presence of daub fragments within the fills of the postholes may indicate the presence of clay and timber buildings in the near vicinity (Appendix 4).

7.7.13 The third pit cluster was located in the southwest of the site and was comprised of intercutting pits [201], [203] and [206] filled respectively by [200], [202] and [205]. Pottery retrieved from the pit fills indicated a date of deposition during the middle/latter parts of the 2nd century (Appendix 2).

7.7.14 In the vicinity of the first two pit groups and the well, a number of "external" brickearth and gravel surfaces [55], [155], [166], [248] and [275] were recorded. For the most part the external surfaces seemed to be the consequence of human utilisation of the upper natural brickearth horizon whereon the composition and colour of the natural deposit had been altered *in situ* by human use, most probably as a consequence of heat. It should be noted that iron working debris was retrieved from layers [248] and [275] possibly indicating industrial activity (Appendix 6).

7.8 Phase 3: Roman (sub phasing unknown at present) (Figs. 7, 9 & 10)

7.8.1 At this stage in the post-excavation process it has not been possible to attribute Roman contexts recorded within Bellefield Road to the sub-phases apparent during the excavation of the former H Smith Yard. As a consequence the Roman contexts recorded during the investigations of Bellefield Road are simply phased as Phase 3 with further refinement to be undertaken during the publication of the site.

7.8.2 Encountered throughout the investigations within Bellefield Road was a homogenous, friable, yellowish brown, silty sand layer [408], [409], [411], [417], [426], [427], [429], [431], [432], [435], [516] and [1010]. The layer pre-dated the Roman features recorded in the area and would appear to represent colluvial accumulation prior to the construction of the bathhouse. The layer was encountered at heights ranging from 47.79m OD to the west and 47.37m OD to the east. Pottery retrieved from layer [1010] was dated to between AD250-400, however, given the lateness of the spot date and the absence of material within the other colluvial contexts it is probable that this material is intrusive and may belong to the post-Saxon colluvial layer that sealed it (Appendix 2; see 7.9.1).

7.8.3 Truncating the colluvial horizon was construction cut [422] containing foundation [328]/[421]. The foundation was orientated east-west, with returns to the north and was constructed from flint nodules and mortar with coursings of Roman tile at the western and eastern corners. The foundation was encountered at a height of 47.90m OD, measured 3.45m in length and represents the back (e.g. southern) wall of the scheduled bathhouse. Analysis of the tiles used in the construction of the foundation suggests a date range of AD50-120 (Appendix 4). Whilst no excavation of the masonry took place it was fully recorded prior to preservation *in situ*.

7.8.4 A number of other features of Roman date were recorded during the investigations within Bellefield Road including a posthole [1007] containing fill [1005] and a pit [1016] containing fill [1015]. However, whilst it is apparent that these features are Roman in date it remains unclear at present how these features relate to the bathhouse.

7.8.5 In addition two north-south orientated ditches [521] and [1019] recorded during the secondary evaluation and associated watching brief of Bellefield Road have been attributed to Phase 3. The ditches were countered at heights of 47.39m OD and 47.28m OD and measured 1.80m and 1.72m in width respectively. Ditch [521] had been dug through an earlier palaeochannel (see Phase 1b) and may have served to provide water to the bathhouse. No cultural material was retrieved from the ditch fills, [512]/[520] and [1017]/[1018] respectively, and it is through comparison with excavations conducted immediately to the north that these ditches have been assigned to the Roman period.

7.8.6 A number of layers containing large quantities of flint nodules [428], [430] and [1011] and either representative of dumping or roughly lain external surfaces were recorded. The layers were encountered at c.47.50m OD and whilst no cultural material was retrieved it is probable that they relate to the use of the bathhouse.

7.8.7 Environmental evidence retrieved from samples taken during the course of the entire investigations suggest that the site as a whole was situated near to wetland, waste ground or grassland at this time. During the Roman occupation, there is unequivocal evidence for the utilisation of both wheat and barley, with both cereals probably forming part of the diet. Other plant taxa present in a variety of features suggests that alder woodland was growing close to the settlement, together with areas of waste ground and grassland with docks and sorrels, fat hen and grasses, and shrubland, probably with blackberry bushes (Appendix 11).

7.9 Phase 4: Saxon (Figs. 8, 9 & 10)

7.9.1 During the secondary evaluation and associated watching brief of Bellefield Road four east-west aligned graves [503], [519], [1003] and [1021] dating to the Early Saxon period were recorded. Of these only graves [503] and [1003] were excavated owing to the location of graves [519] and [1021] being largely beyond the northern limit of excavation.

7.9.2 Grave [503] contained skeleton [502]. The grave had been dug to a depth of 47.05m OD with the skeleton lain supine with the head positioned at the western end. The bones were in a severely degraded state and with the exception of the skull and long bones very little of the skeleton survived. Analysis of the skeleton suggest it was probably of adult age and elements of the skull indicate that the burial was of a female (Appendix 9).

7.9.3 Positioned around the skeleton were a number of grave goods including an iron shield boss located to the south of the head (SF206), an iron spearhead located to the north of the head (SF207) and an iron knife positioned across the pelvis (SF205). The grave had been backfilled by two firm, dark black brown, sand silt fills [500] and [501], the later of which contained pottery fragments dating to between 400-600AD (Appendix 3). A copper alloy stud possibly representative of a shield fitting (SF200), an iron nail/fitting (SF201), a fragment of a copper alloy strap fitting (SF202), two possible disc mounts from a shield (SF203), a thin copper alloy disc/rivet (SF204) and an iron coffin nail were also retrieved during the excavation of the grave.

7.9.4 Grave [519] was partially present in the south facing section of the secondary road evaluation trench and like grave [503] contained a firm, dark black brown, sand silt fill [502]. No excavation of the grave took place due to its location largely beyond the limit of excavation.

7.9.5 Grave [1003] contained skeleton [1002]. The grave had been dug to a depth of 47.02m OD with the skeleton lain supine with the head positioned at the western end. Once again the bones were in a severely degraded state and with the exception of the skull and long bones very little of the skeleton survived. Analysis of the skeleton suggests that the burial was of a middle aged adult male (Appendix 9).

7.9.6 An iron knife (SF500) had been deposited within the grave and two coffin nails were retrieved from the fill (Appendix 5). The grave had been backfilled by a loose, dark brown, silty sand [1001] which contained residual fragments of Roman pottery and Saxon pottery dated to between AD400-600 (Appendix 3).

7.9.7 Grave [1021] was recorded during the watching brief of the road and was located largely beyond the limit of excavation. The grave contained a firm, dark grey black, clay silt fill [1020]. Whilst no excavation of the grave took place due to its location largely beyond the limit of excavation a complete iron socketed spearhead (SF1020) was retrieved for further analysis (Appendix 5).

7.9.8 No evidence of Saxon activity was found during the investigations conducted at the former H Smith Yard.

7.10 Phase 5: Post Saxon (Fig. 9)

7.10.1 Sealing the Saxon graves and encountered throughout the investigations within Bellefield Road was a homogenous, friable, yellowish brown, silty sand layer [317], [322], [325], [326], [327], [329], [406], [407], [410], [416], [420], [423], [424], [425], [436], [437], [508], [509], [527], [1004], [1008], [1014], [1022] and [1023]. The layer, which contained daub and CBM fragments (Appendix 4), residual Roman pottery (Appendix 2) and Saxon pottery dated to between AD400-750 (Appendix 3), was encountered at heights ranging from 48.13m OD at the west to 47.31m OD at the east of the road. The layer most probably represents colluvial accumulation.

7.10.2 A similar deposit sealed some of the Phase 3c features in the former H Smith Yard and most probably represents contemporary deposition. The layer was encountered at 49.87m OD.

7.11 Phase 6: 19th/20th century (Fig.9)

7.11.1 A number of 19th/20th century pits [116], [118], [150], [152], [160], [162] and [272], filled respectively by [115], [117], [149], [151], [159], [161] and [271], were excavated during the investigations at the former H Smith Yard. The majority of the pits were encountered during the secondary evaluation in the vicinity of Trench 6 with a second group of pits in the southern central area in the vicinity of Trench 8. Pottery and CBM retrieved from the fills indicate a date of deposition between 1800-1900 (Appendices 3 & 4).The pits produced very little material to indicate their use and it has been proposed (Sargent 2006) that they represent localised pitting associated with 19th/20th century allotments.

7.11.2 The remains of two gullies, [181] and [291]/[293], and a posthole [295], filled respectively by [167], [290]/[292] and [294], were excavated during the course of the investigations at the former H Smith Yard. All three features date to the 19th/20th century (Appendices 3 & 4) and are probably associated with the 19th/20th century allotments discussed above.

7.11.3 Sealing the earlier features within the former H Smith Yard was a 19th/20th century ploughsoil horizon [6], [36], [44], [47], [50], [108], [136], [141], [146], [147], [170], [180], [282] and [283]. The horizon was encountered at heights between 52.23m OD in the west of the site to 49.48m OD in the east demonstrating the preservation of the natural gradient on site into the 19th/20th century.

7.11.4 Seen to truncate the post-Saxon colluvium during the road investigations were two east-west aligned ditches [405]/[419] and [434]. The ditches were filled by [404]/[405] and [433] respectively and probably represent drainage ditches predating the existence of Bellefield Road. Analysis of the ceramic building material assemblage indicates a date range of 1480-1900 (Appendix 4).

7.12 Phase 7: Modern

7.12.1 A number of dumped layers, [145], [135], [138], [103], [104], 107], [105], [106] and [102], structural foundations, [143]/[144] and [112]/[113]/[114], and a pit, [153]/[154], dating to the early 20th century were recorded during the secondary evaluation of the former H Smith Yard. These were sealed by dump layers, [169], [140], [134] and [179], and concrete surfaces, [168], [139], [133], [101] and [178], dating to the latter half of the 20th century and associated with the land's recent use as the former H Smith Yard (For a more detailed discussion of these contexts see Sargent 2006).

7.12.2 Excavation in Area 1 recorded the presence of a large concrete subterranean feature [281] thought to represent a processing tank associated with the former H Smith Yard. No other layers, cut features or structural remains were recorded as part of the mitigation phase of work within the former H Smith Yard.

7.12.3 During the investigations within Bellefield Road a hard, light greyish white layer, [321], [316], [324], [438], [439], [526], [602] and [1013] comprised of chalk and flint nodules was encountered. The layer had been deposited as preparation for gravel surfaces, [320], [315] [334] and [323] which were encountered at heights ranging between 48.33m OD and 48.12m OD. Investigation of the northern boundary of the road indicated that the layers did not extend beyond this point and it would appear that the chalk and gravel layers represents elements of a 20th century precursor to the existing Bellefield Road.

7.12.4 A pit [342] and a post hole [319], filled by [341] and [318] respectively, had been dug through the upper gravel surface and it would appear that the road may have fallen out of use temporarily during the 20th century.

7.12.5 Truncating the length of the precursor to Bellefield Road was the construction cut [510]/[514] for an unknown service, filled by [511]/[515]. This in turn was truncated by the construction cut for an electricity power cable, [340]/[346]/[333]/[401]/[413]/[507] filled by [339]/[345]/[332]/[400]/[412]/[506]. A local inhabitant recalls that the electricity cable was installed some time after WWII probably during the 1950's. The service trench for the electricity cable was, in turn, truncated by a third service trench [403]/[415]/[505] containing [402]/[414]/[504].

7.12.6 The remainder of the deposits encountered during the investigations in Bellefield Road were comprised of mixed dump deposits, [338], [348], [331], [336], [347], [337] and [344] which represent a phase of ground levelling during the latter half of the 20th century. These layers were in turn sealed by mixed topsoil deposits [335], [343] and [330] encountered at heights ranging between 48.66m OD and 48.42m OD and a roughly lain tarmac road surface.

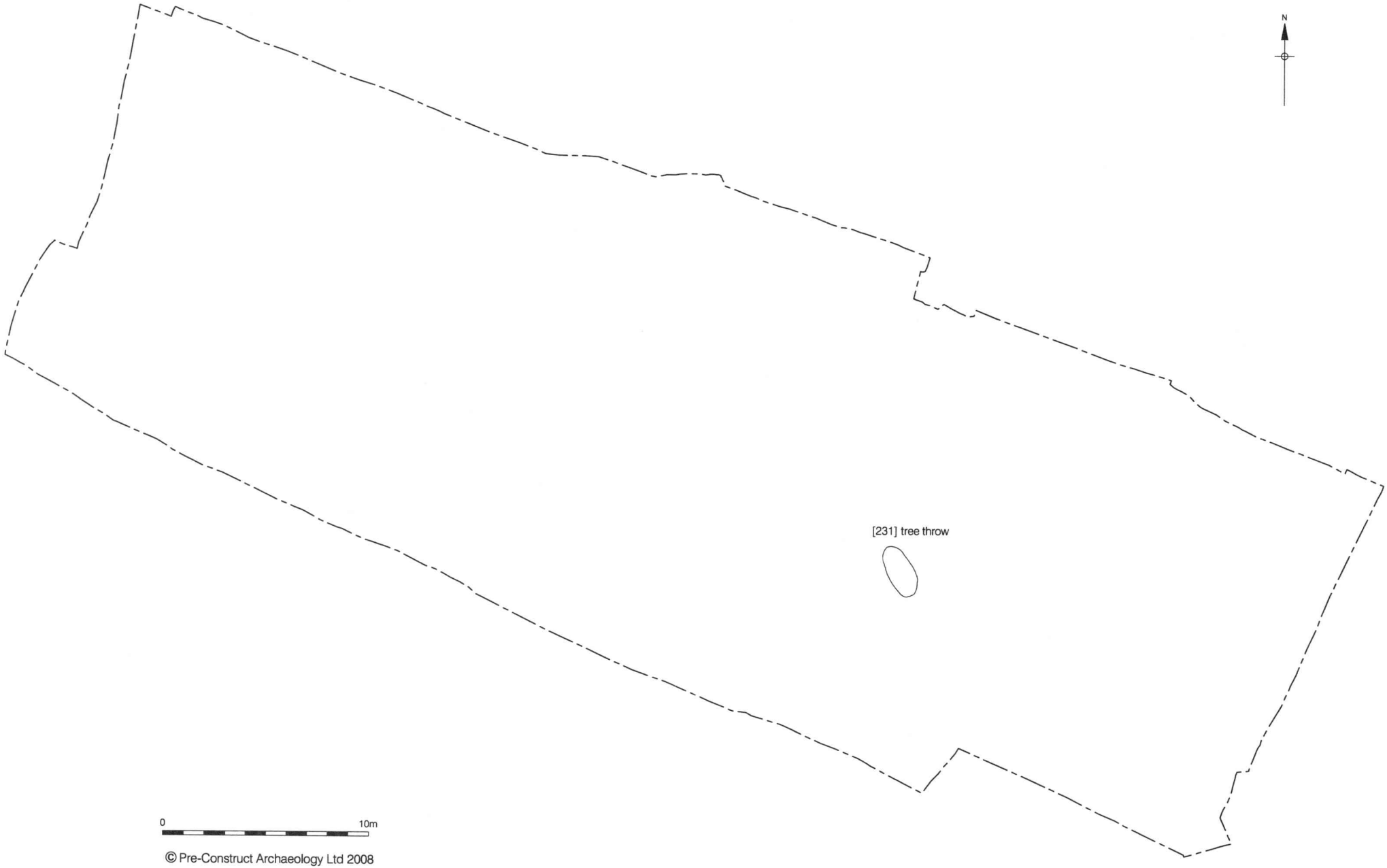


Figure 3
Former H. Smith Yard - Phase 2: Prehistoric
1:250 at A4

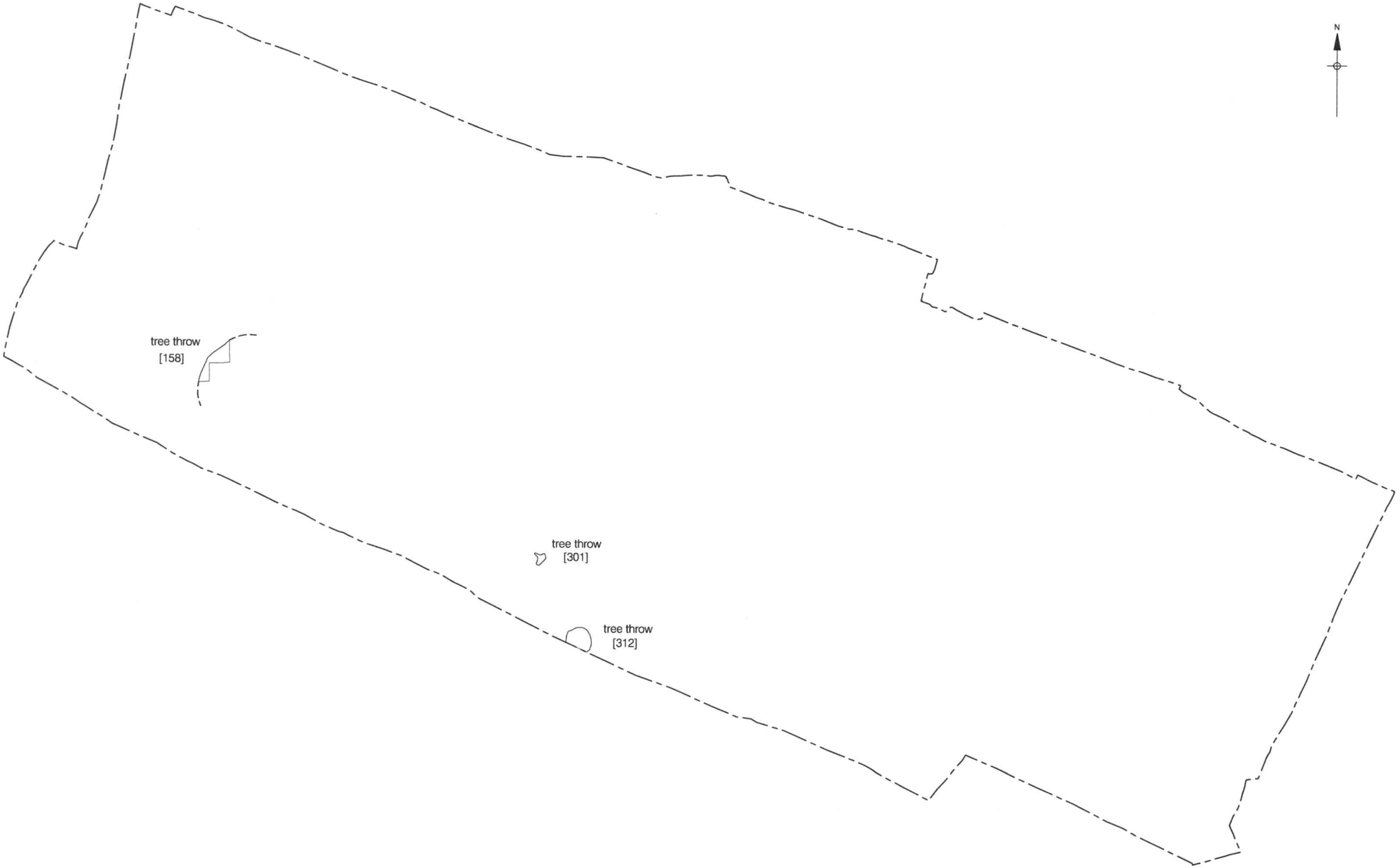


Figure 4
Former H. Smith Yard - Phase 3a: 1st century
1:250 at A4

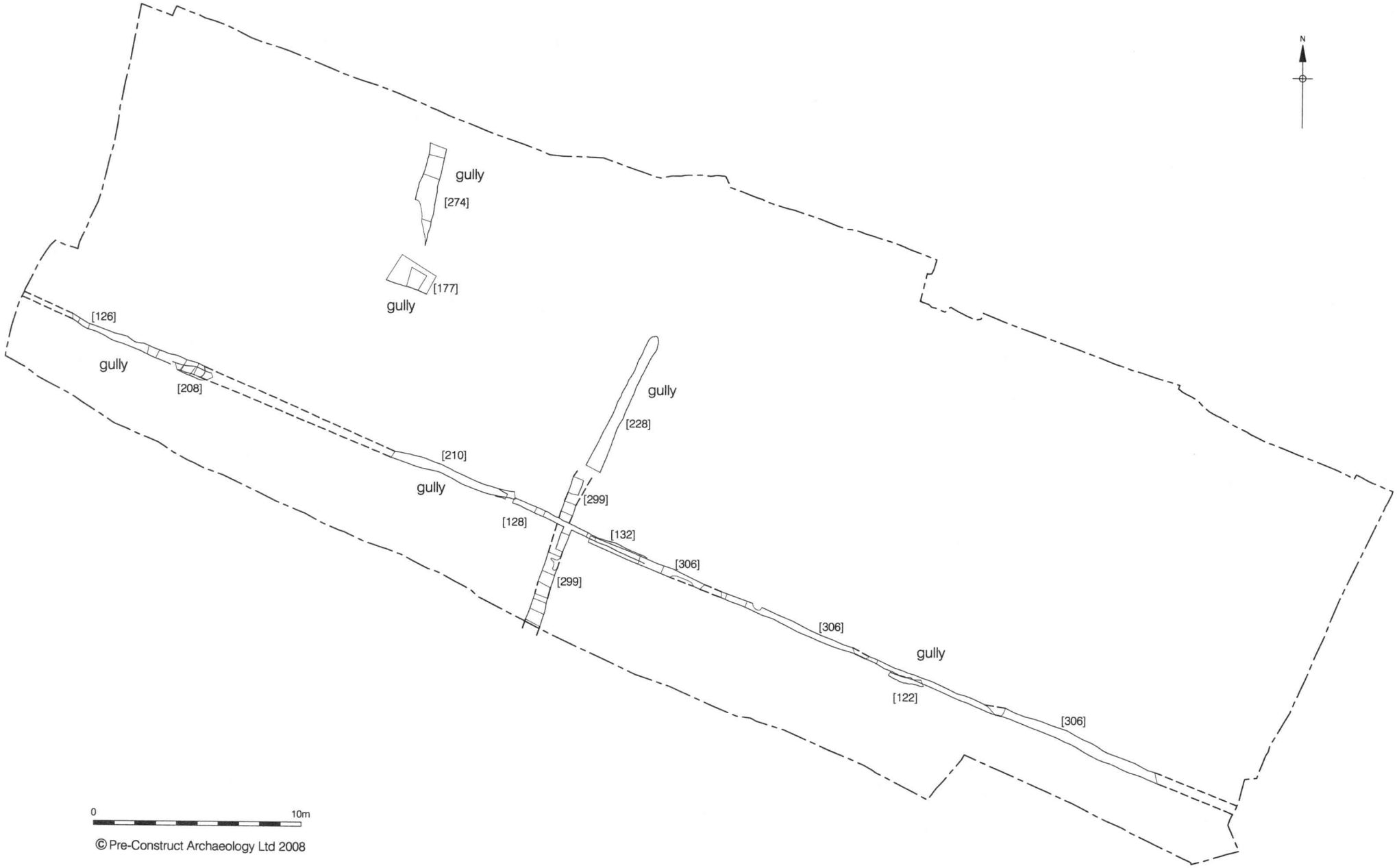


Figure 5
Former H. Smith Yard - Phase 3b: Late 1st century/early 2nd century
1:250 at A4

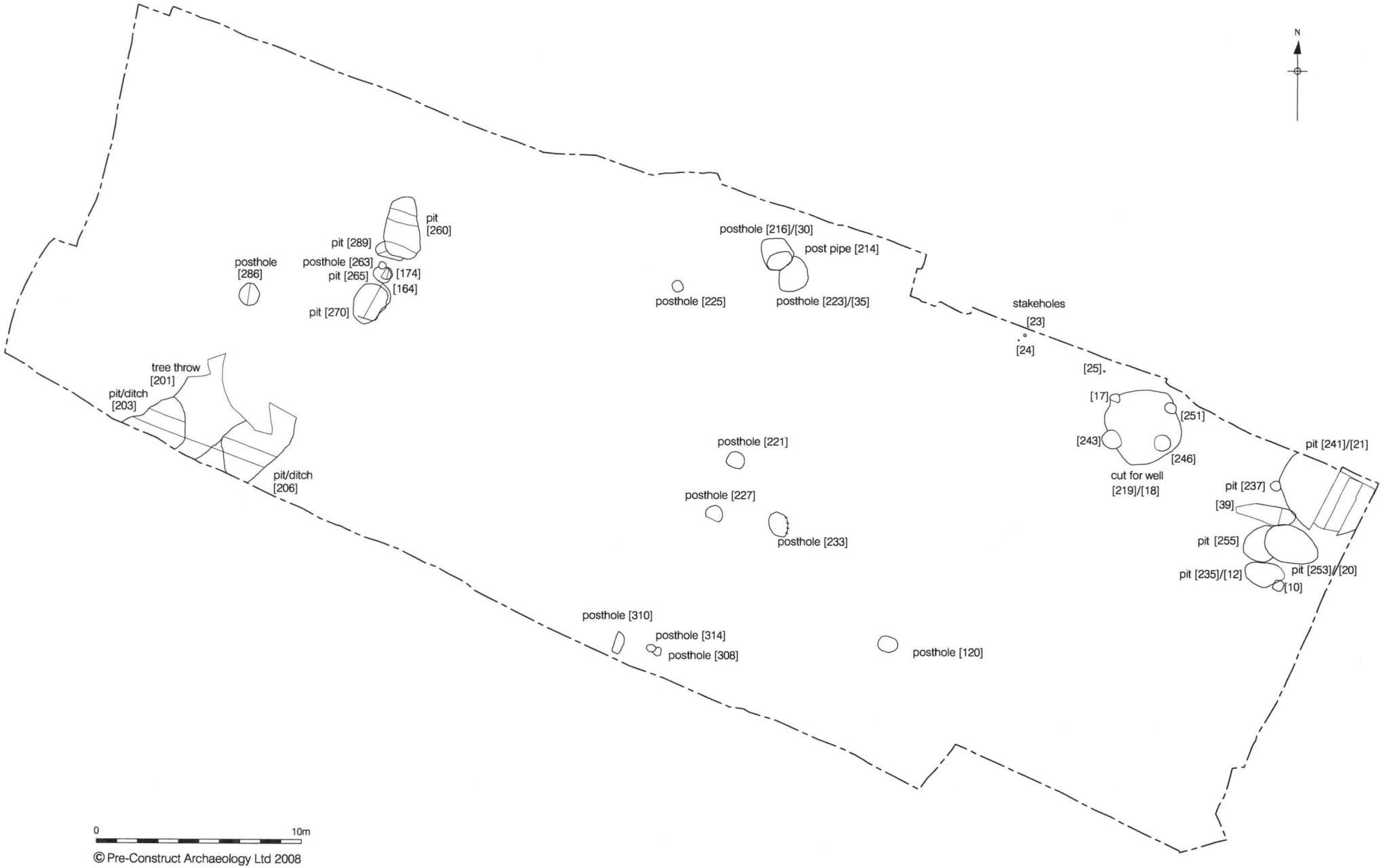


Figure 6
Former H. Smith Yard - Phase 3c: 2nd/early 3rd century
1:250 at A4

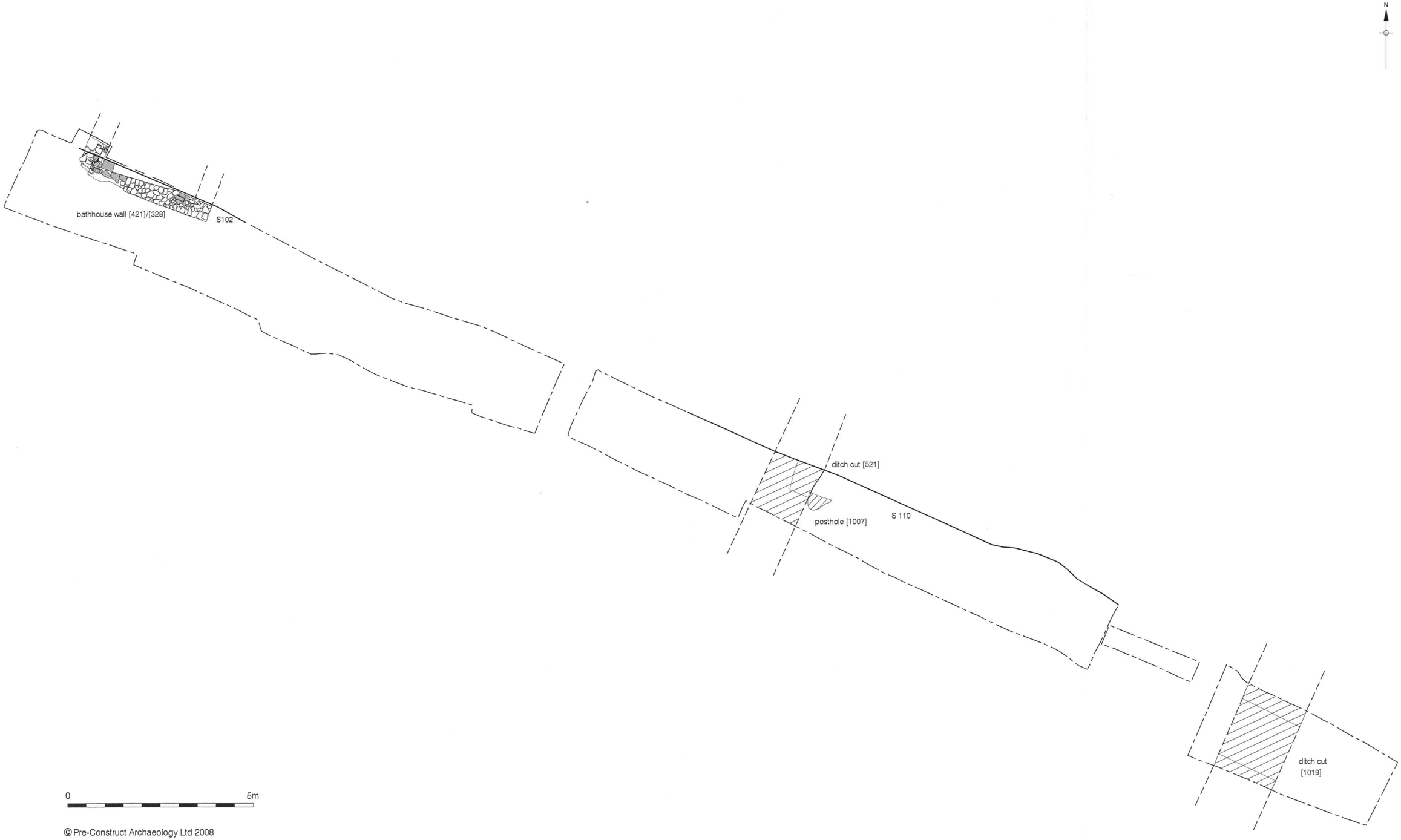


Figure 7
Bellefield Road - Phase 3: Roman
1:100 at A3

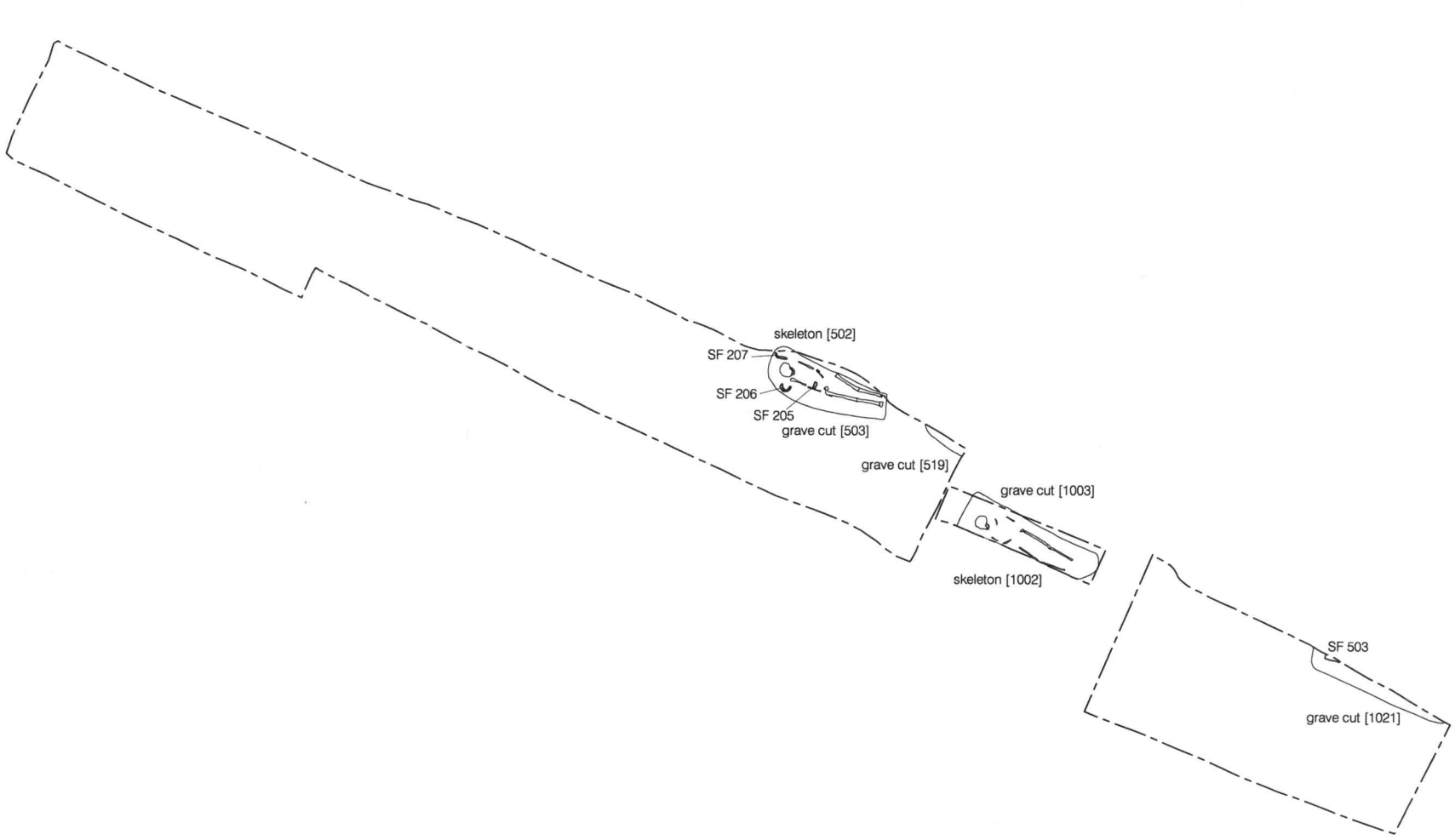
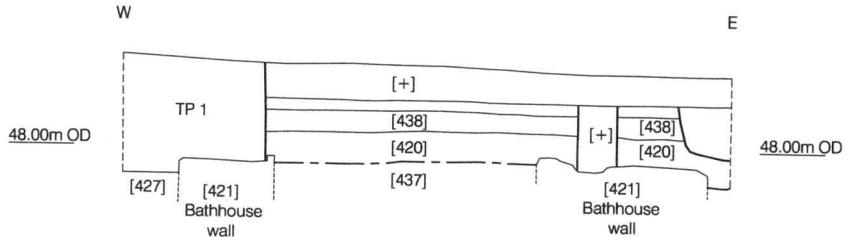


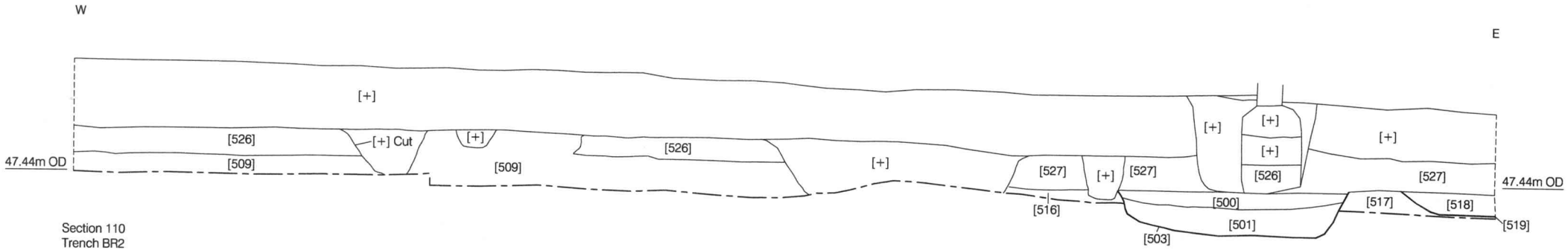
Figure 8
Bellefileld Road - Phase 4: Saxon
1:100 at A4

Plate 1 Roman Bathhouse Masonry [421]

Plate 2 Saxon Grave [501]



Section 102
Trench BR1
South facing



Section 110
Trench BR2
South facing

0 2m

Figure 9
Sections 102 and 110
1:50 at A4

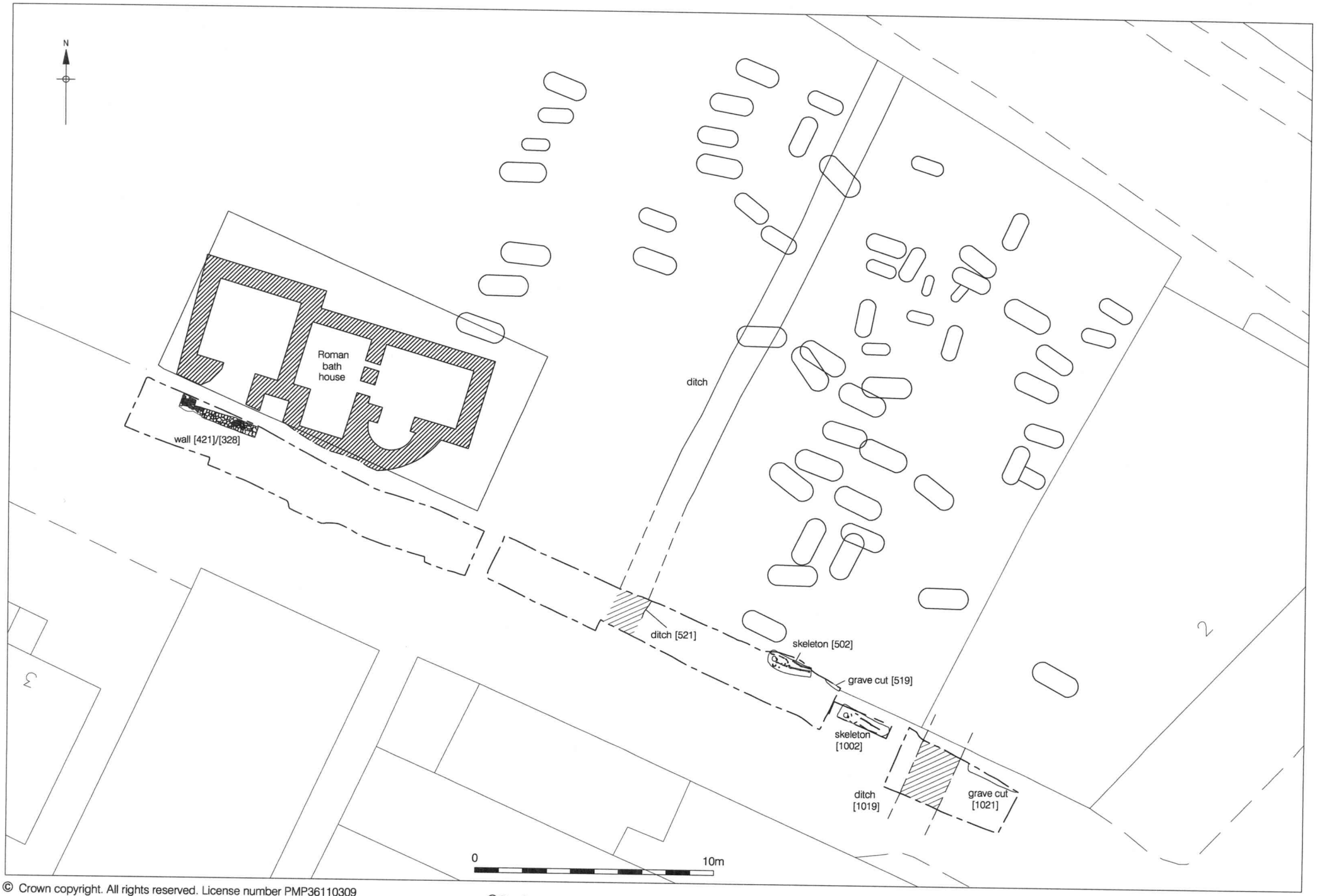


Figure 10
Recent investigations shown in relation to previous excavations
1:200 at A4

8 RESEARCH OBJECTIVES

8.1 Original research objectives

8.1.1 Specific research objectives for the site were lain out in the original "Method Statement" compiled in 2005 (Butler 2005). These are discussed below:

- *Is there any evidence of prehistoric, especially Mesolithic, activity on the site?*

  Whilst no evidence of a Mesolithic presence was found during the investigations conducted within Bellefield Road some evidence was found during the investigations of the former H Smith Yard although all of the flints retrieved were found residually within later contexts. Perhaps of more significance was the presence of a tree throw within the former H Smith Yard which contained a number of flints and fragments of pottery dating to the Bronze Age. It is believed that the flints represent a discarded tool kit and it is suggested that parts of the site may have experienced opportunistic utilisation during the Bronze Age.

- *Is there any evidence of Roman settlement on the site, which can be associated with the Roman bathhouse, putative settlement and road to the north at Poverest Road?*

  Plentiful evidence was found for Roman activity during investigations at the former H Smith Yard whereon it appears to have served as an area of low-level industrial activity, most probably associated with the presence of the bathhouse to the east. Investigations within Bellefield Road itself located the rear wall of the scheduled bathhouse, confirming the southern limit of the bathhouse complex.

- *Is there any evidence of structures, such as a villa or mansio, associated with the Roman bathhouse to the north?*

  Whilst no masonry remains were encountered during the investigations conducted at the former H Smith Yard the presence of a number of postholes, some of which appear to form small four post structures, indicates that small timber buildings once stood on site. These structures are most probably associated with the low-level industrial activity that appears to have been taking place on site. The presence of two large postholes in the central north of the former H Smith Yard are at present unexplained but may relate to similarly large postholes recorded during excavations to the north of Bellefield Road. To summarise there is no newly acquired evidence to suggest that a villa or mansio was associated with the scheduled bathhouse and, with the exception of post-built structures present in its vicinity, the bathhouse remains an example of an "isolated bathhouse" as attested elsewhere in the Cray Valley (Boyce 2007).

- *Is there any evidence of Saxon inhumations on site, associated with the Saxon cemetery to the north?*

  Whilst no evidence of Saxon burials was found during the investigations at the former H Smith Yard, the work conducted within Bellefield Road itself identified four additional burials, two of which were excavated prior to the redevelopment of the site. The presence of Saxon burials to the east of the bathhouse and within Bellefield Road, indicates that the cemetery extends further to the south then originally known.

- *Is there any evidence of the Saxon settlement on site associated with the cemetery at Poverest Road?*

  No evidence was found to indicate that a Saxon settlement was present on site.

- *Is there any evidence of medieval deposits or structures associated with the medieval settlement known in the area from the Domesday Book of 1086?*

  No evidence of medieval activity or occupation was found on site.

- *Are there any post medieval remains on the site?*

  Whilst no evidence of post-medieval activity was found pre-dating the 19th century plentiful evidence existed to demonstrate the sites development during the 19th and 20th centuries.

8.2 Additional Research Questions

8.2.1 Whilst a great deal of archaeological investigation has been conducted in the vicinity of the site a full understanding of the archaeological sequence is largely impossible at present. This is primarily a consequence of the fragmented nature of the work that has been undertaken, the time span that it has been conducted over (excavations in the area commenced in the 1950's) and the varying level of analysis and publication that has been undertaken. As a consequence most of the research questions listed below are focused primarily on the need to integrate the data obtained from the recent investigations with a reappraisal of the wealth of data that has been obtained during the numerous excavations conducted within the environs of the site.

- *What evidence exists in the vicinity to indicate a Bronze Age presence in the area?*
- *In many ways Phases 3b and 3c can be considered to represent one phase of activity. Can further refinement of the site phasing address this?*

- *To what extent can the material culture assemblage from the Phase 3c deposits be considered to denote ritualised deposition on site?*
- *Can the bathhouse be considered isolated given the extent of contemporary activity in the area?*
- *Is it possible to refine the dating of the bathhouse, primarily its date of construction, modification and disuse?*
- *What are the implications of the identification of an area of low-level industry to the west of the Roman bathhouse? Is it possible to identify the industrial activities that were undertaken and if so do these effect our current understanding of Roman activity in the area, specifically the role of the bathhouse?*
- *What evidence exists to suggest the location of the Saxon settlement associated with the cemetery?*
- *Can a full understanding of both the Roman and Saxon activity at Fordcroft be obtained without a full and comprehensive reappraisal and integration of all phases of archaeological investigation conducted in the area over the past 50 years?*

9 CONTENTS OF THE ARCHIVE

9.1 PAPER RECORDS

Contexts	376
Plans	94
Sections	45
Environmental Sheets	153
Photographs:	
Black and White Prints (35mm)	8 films
Colour Slide (35mm)	8 films
Digital shots	53 shots

9.2 THE FINDS

Pottery	14.5 boxes
Ceramic building material	5 boxes
Human bone	3 boxes
Animal bone	5 boxes
Metal	4 boxes
Glass/lithics	0.5 boxes
Registered Small Finds	4 boxes

10 IMPORTANCE OF RESULTS AND PUBLICATION OUTLINE

10.1 Importance Of The Results

10.1.1 The investigations conducted within the former H Smith Yard and Bellefield Road have the potential to significantly contribute to our current understanding of this area during both the Roman and Saxon periods and, to a lesser extent, during the Bronze Age. However, to achieve this it is necessary to fully integrate both the data obtained during the recent investigations and the data, both published and unpublished, that exists from excavations conducted over the past 50 years. However, whilst much of the importance of the investigations are inevitably tied to a reappraisal of the archaeology of the area, it remains possible to summarise the importance of the site generally.

10.1.2 The presence of previously unforeseen Bronze Age activity on site is significant. Whilst the activity on site is indicative of opportunistic activity it remains probably that a settlement exists in the near area. Analysis of Bronze Age findspots elsewhere in the vicinity, alongside the material retrieved on site, may assist in suggesting the possible location of an associated Bronze Age settlement.

10.1.3 The scheduled bathhouse at Orpington is traditionally considered to be an example of an "isolated bathhouse" (Boyce 2007). However, the presence of low-level industrial activity on the former H Smith Yard suggests that this assumption may no longer be valid. Therefore, the results obtained during the investigations are of paramount importance when considering the role of the bathhouse during the Roman period. In addition the dating of the bathhouse has always been considered tentative and it is possible that the recent investigations may assist in identifying and refining dates of construction and disuse.

10.1.4 The presence of four Saxon graves beneath Bellefield Road has demonstrated that the Saxon cemetery extends further to the south then originally known, whilst the absence of Saxon material, either *in situ* or residual, on the former H Smith Yard suggests that the associated settlement is not located to the west of the cemetery. The Saxon cemetery is at present poorly understood and the excavation of Saxon graves during the recent investigations should offer an opportunity to redress questions that remain outstanding.

10.2 Further work

10.2.1 Generally it will be necessary to further refine the site phasing, particularly Phases 3a, 3b and 3c and specifically it will be necessary to link the Roman contexts recorded beneath Bellefield Road with the provisional sub-phases identified within the former H Smith Yard.

10.2.2 In addition further analysis of the artefactual archive will require incorporation and an emphasis should be placed on identifying the scale and type of Roman industrial activity, interpreting the possible evidence for Roman ritual whilst in addition a consideration of the ramifications of the discovery of further Saxon burials will need to be addressed.

10.2.3 Any interpretations formed from the data retrieved from the investigations will require consideration within the archaeological setting of the Fordcroft area as a whole.

10.2.4 Future work has been identified by the appropriate specialists included in the report (see appendices) and are listed below:

10.2.5 Roman Pottery

- *Vessels from pits [241] ad [260] should be reconstructed and select examples illustrated.*
- *The Samian assemblage, especially stamps and unusual Dr37 'Reginus I' pot from pit [241], should be sent for further specialist comment.*
- *The assemblage should be placed within its local context. This should involve a brief review of the material held in Orpington Museum from earlier excavations at the site and the integration of ceramic archives from earlier PCA evaluations in to this archive prior to publication.*
- *Is there patterning within the distribution of ceramics on the site? The absence of large quantities of third and fourth-century material compared to the earlier excavation by Philp and Keller (1995) and Palmer (1984) is noticeable, as is the presence of unusual forms like lamps in Tester's (1969) excavations. Is there a functional or taphonomic explanation for this?*
- *The pottery should be written up with a maximum of 10-12 illustrations and a discussion of the key groups alongside a broader discussion of the material in its local context.*
- *Further research on the potential Otford material would be desirable but is not essential, although reference should be made to it in the publication*

10.2.6 Post-Roman Pottery

- *The decorated Saxon sherd needs to be illustrated and the Saxon pottery also needs to be compared to the other pottery found on the site from previous excavations.*
- *There are no research aims generated from the small number of sherds recovered from the excavation. A short publication of the Saxon pottery is required. No recommendations for further work are made for the post-medieval pottery assemblage and if required, information should be taken from this report for the publication.*

10.2.7 Ceramic Building Material

- *It is recommended that more detailed analysis of the ceramic building material fabric and stone fabric from the bathhouse should be undertaken. It would, for example, be interesting to see whether there is any correlation in the ceramic building material obtained during previous investigations of the bathhouse and this assemblage.*
- *Is the early (AD50-120) Radlett fabric 3023 present throughout, or indeed whether even earlier Eccles 2454 (AD50-80) material is present? Also what stone types were used in its construction and what can this tell us about supply (procuratorial or private) and ownership.*

10.2.8 Small Finds

- *The majority of ironwork from the Saxon burials requires x-ray for identification; the block-lifted shield boss from Grave [503], if fragile, may need examination by a conservator. In addition, a selection of unidentified Roman iron objects also needs to be x-rayed.*
- *The coin of Faustina should be identified and provided with an RIC number.*
- *To help resolve issues of site chronology and function during the Roman period, it would be worth integrating the lists from various excavations and publishing a statistical analysis and discussion of them; coin lists from the previous excavations at Bellefield Road are extensive, numbering over 200 issues.*
- *The Saxon grave finds need close identification and analysis to help integrate the newly excavated burials with the published material, and to further understanding of the Fordcroft cemetery.*

10.2.9 Iron Slag

- *No recommendations have been made regarding the iron slag found on site although it is anticipated that further work will be required*

10.2.10 Glass

- *Roman vessel [244] requires illustration.*

10.2.11 Lithics

- *It is recommended that a description of the assemblage, including illustrations of relevant pieces, should be included in any published account of the fieldwork.*
- *The publication should include consideration of local geology, raw material sources and previous finds and research in the local area.*

10.2.12 Human Bone

- *No further work is required*

10.2.13 Animal Bone

- *It is recommended that further work should concentrate on the ritual and butchers waste elements of the second century occupation of this site. It would be advantageous to compare this bone assemblage to others in the general area.*

10.2.14 Environmental

- *Due to the low plant macrofossil and charcoal concentrations, no further analysis of the samples is recommended. Nevertheless, the results of the assessment may usefully form a minor part of the publication text.*

10.3 Publication outline

The results of the archaeological excavations will be published in an appropriate journal, e.g. *Archaeologica Cantiana*, or as part of the forthcoming PCA Kent Monograph. The publication of the investigations will focus on the Bronze Age, Roman and Saxon archaeological sequence, with an emphasis placed on understanding the site within the wider archaeological landscape of the area.

11 ACKNOWLEDGMENTS

11.1 Pre-Construct Archaeology Limited would like to thank Green Acre South East Homes for commissioning the work and Mark Stevenson (English Heritage) and Steven Brindle (English Heritage Scheduled Ancient Monument Inspector) for monitoring the site.

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Appendix 1: Context Index

Context No	Type	Description	Trench	N-S	E-W	Depth	High	Low	Phase
1	Layer	External surface	Primary eval	1.60	2.70	0.30	50.20	n/a	3c
2	Fill	Fill of [18]	Primary eval	4.28	3.70	n/a	50.06	n/a	3c
3	Fill	Fill of [18]	Primary eval	4.28	3.70	n/a	50.06	n/a	3c
4	Fill	Fill of [21]	Primary eval	2.80	2.00	n/a	50.48	n/a	3c
5	Fill	Fill of [21]	Primary eval	3.20	2.00	0.29	49.03	n/a	3c
6	Layer	Ploughsoil	Primary eval	4.80	2.20	0.20	50.14	n/a	6
7	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	49.99	n/a	1a
8	Layer	Natural gravel	Primary eval	n/a	n/a	n/a	49.90	n/a	1a
9	Fill	Fill of [10]	Primary eval	0.53	0.50	0.10	49.51	n/a	3c
10	Cut	Posthole	Primary eval	0.53	0.50	0.10	49.51	49.41	3c
11	Fill	Fill of [12]	Primary eval	1.18	0.64	0.15	49.50	n/a	3c
12	Cut	Pit	Primary eval	1.18	0.64	0.15	49.50	49.35	3c
13	Fill	Fill of [23]	Primary eval	0.07	0.07	0.08	50.20	n/a	3c
14	Fill	Fill of [24]	Primary eval	0.13	0.13	0.08	50.20	n/a	3c
15	Fill	Fill of [25]	Primary eval	0.07	0.07	0.09	50.05	n/a	3c
16	Fill	Fill of [17]	Primary eval	0.40	0.47	0.30	50.01	n/a	3c
17	Cut	Posthole	Primary eval	0.40	0.47	0.30	50.01	49.71	3c
18	Cut	Construction cut for rotted out well	Primary eval	4.28	3.70	n/a	50.06	n/a	3c
19	Fill	Fill of [20]	Primary eval	1.46	0.98	0.80	49.95	n/a	3c
20	Cut	Pit	Primary eval	1.46	0.98	0.80	49.95	49.15	3c
21	Cut	Pit	Primary eval	3.20	2.00	1.69	50.48	48.79	3c
22	Fill	Fill of [21]	Primary eval	n/a	n/a	0.40	50.89	n/a	3c
23	Cut	Stakehole	Primary eval	0.07	0.07	0.08	50.20	50.12	3c
24	Cut	Stakehole	Primary eval	0.13	0.13	0.08	50.20	50.12	3c
25	Cut	Stakehole	Primary eval	0.07	0.07	0.09	50.05	49.96	3c
26	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	50.26	n/a	1a
27	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	50.48	n/a	1a
28	Fill	Fill of [30]	Primary eval	1.38	1.20	0.33	50.62	n/a	3c
29	Fill	Fill of [30]	Primary eval	1.10	0.95	0.15	50.32	n/a	3c
30	Cut	Posthole	Primary eval	1.08	1.39	0.78	50.70	49.92	3c
31	Fill	Fill of [30]	Primary eval	n/a	2.67	0.26	50.20	n/a	3c
32	Fill	Fill of [35]	Primary eval	1.38	1.13	0.47	50.42	n/a	3c
33	Fill	Fill of [35]	Primary eval	n/a	0.20	0.37	50.37	n/a	3c
34	Fill	Fill of [35]	Primary eval	n/a	1.17	0.30	50.41	n/a	3c

35	Cut	Posthole	Primary eval	1.40	1.40	0.49	50.42	49.93	3c
36	Layer	Ploughsoil	Primary eval	n/a	n/a	0.24	50.94	n/a	6
37	Layer	Natural gravel/brickearth	Primary eval	n/a	n/a	n/a	50.72	n/a	1a
38	Fill	Fill of [39]	Primary eval	0.90	2.90	0.30	49.89	n/a	3c
39	Cut	Gully	Primary eval	0.90	2.90	0.30	49.89	49.59	3c
40	Fill	Fill of [41]	Primary eval	2.00	3.00	0.30	49.90	n/a	3c
41	Cut	Pit	Primary eval	2.00	3.00	0.30	49.90	49.60	3c
42	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	49.59	n/a	1a
43	Fill	Fill of [30]	Primary eval	n/a	0.65	0.46	50.70	n/a	3c
44	Layer	Ploughsoil	Primary eval	n/a	n/a	0.24	50.94	n/a	6
45	Layer	Bioturbated brickearth	Primary eval	n/a	n/a	0.12	50.69	n/a	1b
46	Layer	Natural gravel/brickearth	Primary eval	n/a	n/a	n/a	50.72	n/a	1a
47	Layer	Ploughsoil	Primary eval	n/a	n/a	0.20	51.79	n/a	6
48	Layer	Bioturbated brickearth	Primary eval	n/a	n/a	0.19	51.60	n/a	1b
49	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	51.69	n/a	1a
50	Layer	Ploughsoil	Primary eval	n/a	n/a	0.05	50.02	n/a	6
51	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	50.33	n/a	1a
52	Layer	Bioturbated brickearth	Primary eval	n/a	n/a	0.19	50.50	n/a	1b
53	Layer	Natural brickearth	Primary eval	n/a	n/a	n/a	50.38	n/a	1a
54	Fill	Fill of [18]	Primary eval	1.40	1.20	0.70	49.79	n/a	3c
55	Layer	External surface	Primary eval	3.80	3.28	n/a	49.96	n/a	3c
101	Layer	External surface	Secondary eval	5.40	2.00	0.08	50.04	n/a	7
102	Layer	Dump/levelling layer	Secondary eval	5.40	2.00	0.38	49.96	n/a	7
103	Layer	Dump/levelling layer	Secondary eval	1.49	2.00	0.21	49.82	n/a	7
104	Layer	Dump/levelling layer	Secondary eval	1.49	2.00	0.17	49.73	n/a	7
105	Layer	Dump/levelling layer	Secondary eval	1.58	2.00	0.20	49.73	n/a	7
106	Layer	Dump/levelling layer	Secondary eval	1.59	2.00	0.18	49.53	n/a	7
107	Layer	Dump/levelling layer	Secondary eval	4.95	2.00	0.39	49.72	n/a	7
108	Layer	Ploughsoil	Secondary eval	4.95	2.00	0.28	49.48	n/a	6
109	Layer	Natural brickearth	Secondary eval	1.70	2.00	0.58	49.28	n/a	1a
110	Layer	Natural gravel	Secondary eval	6.00	2.00	0.45	49.22	n/a	1a
111	Layer	Natural gravel	Secondary eval	1.50	0.80	n/a	49.19	n/a	1a
112	Cut	Construction cut for [114]	Secondary eval	0.30	1.20	0.90	49.48	48.58	7
113	Fill	Fill of [112]	Secondary eval	0.30	1.20	0.90	49.48	n/a	7
114	Masonry	Foundation within [112]	Secondary eval	0.30	1.20	0.90	49.32	n/a	7
115	Fill	Fill of [116]	Secondary eval	1.19	0.75	0.25	50.29	n/a	6

116	Cut	Pit	Secondary eval	1.19	0.75	0.25	50.29	49.68	6
117	Fill	Fill of [118]	Secondary eval	2.00	1.05	0.52	50.25	n/a	6
118	Cut	Pit	Secondary eval	2.00	1.05	0.52	50.25	49.67	6
119	Fill	Fill of [120]	Secondary eval	0.97	0.80	0.19	50.43	n/a	3c
120	Cut	Posthole	Secondary eval	0.97	0.80	0.19	50.43	50.24	3c
121	Fill	Fill of [122]	Secondary eval	0.24	2.93	0.10	50.35	n/a	3b
122	Cut	Gully	Secondary eval	0.24	2.93	0.10	50.35	50.28	3b
123	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
124	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
125	Fill	Fill of [126]	Secondary eval	0.52	7.00	0.29	47.41	n/a	3b
126	Cut	Gully	Secondary eval	0.52	7.00	0.29	47.48	47.21	3b
127	Fill	Fill of [128]	Secondary eval	0.72	0.36	0.09	50.89	n/a	3b
128	Cut	Gully	Secondary eval	0.72	0.36	0.09	50.89	50.78	3b
129	Fill	Fill of [130]	Secondary eval	0.29	0.43	0.07	51.01	n/a	3b
130	Cut	Gully	Secondary eval	0.29	0.43	0.07	51.01	50.90	3b
131	Fill	Fill of [132]	Secondary eval	0.39	0.50	0.08	50.85	n/a	3b
132	Cut	Gully	Secondary eval	0.39	0.50	0.08	50.85	50.71	3b
133	Layer	External surface	Secondary eval	2.00	13.17	0.15	50.99	n/a	7
134	Layer	Dump/levelling layer	Secondary eval	2.00	13.17	0.31	50.99	n/a	7
135	Layer	Dump/levelling layer	Secondary eval	2.00	13.17	0.36	50.84	n/a	7
136	Layer	Ploughsoil	Secondary eval	2.00	13.17	0.17	50.64	n/a	6
137	Layer	Natural brickearth	Secondary eval	2.00	13.17	n/a	50.49	n/a	1a
138	Layer	Dump/levelling layer	Secondary eval	2.00	3.20	0.03	50.76	n/a	7
139	Layer	External surface	Secondary eval	2.00	8.00	0.15	51.47	n/a	7
140	Layer	Dump/levelling layer	Secondary eval	2.00	8.00	0.31	51.32	n/a	7
141	Layer	Ploughsoil	Secondary eval	2.00	6.80	0.17	51.22	n/a	6
142	Layer	Natural brickearth	Secondary eval	2.00	6.95	n/a	50.77	n/a	1a
143	Masonry	Foundation within [142]	Secondary eval	1.86	0.70	0.50	51.47	n/a	7
144	Cut	Construction cut for [143]	Secondary eval	1.86	0.70	0.50	51.47	50.97	7
145	Layer	Dump/levelling layer	Secondary eval	2.00	2.25	0.15	51.47	n/a	7
146	Layer	Ploughsoil	Secondary eval	2.00	13.17	0.28	50.39	n/a	6
147	Layer	Ploughsoil	Secondary eval	2.00	6.95	0.32	51.17	n/a	6
148	Layer	Natural gravel	Secondary eval	0.40	1.40	n/a	50.27	n/a	1a
149	Fill	Fill of [150]	Secondary eval	0.90	0.90	0.28	47.51	n/a	6
150	Cut	Pit	Secondary eval	0.90	0.90	0.28	47.51	47.25	6
151	Fill	Fill of [152]	Secondary eval	1.10	1.20	0.42	47.51	n/a	6

152	Cut	Pit	Secondary eval	1.10	1.20	0.42	47.45	47.08	6
153	Fill	Fill of [154]	Secondary eval	0.85	0.75	0.10	47.52	n/a	7
154	Cut	Pit	Secondary eval	0.85	0.75	0.10	47.52	47.42	7
155	Layer	External surface	Secondary eval	0.34	1.15	n/a	51.27	n/a	3c
156	Fill	Fill of [158]	Secondary eval	1.00	0.50	0.30	51.45	n/a	3a
157	Fill	Fill of [158]	Secondary eval	1.60	1.10	0.42	51.71	n/a	3a
158	Cut	Tree throw?	Secondary eval	1.90	1.50	0.42	51.75	51.23	3a
159	Fill	Fill of [160]	Secondary eval	0.40	0.75	0.04	51.75	n/a	6
160	Cut	Pit	Secondary eval	0.40	0.75	0.04	51.75	51.71	6
161	Fill	Fill of [162]	Secondary eval	1.00	1.30	0.15	51.70	n/a	6
162	Cut	Pit	Secondary eval	1.00	1.30	0.15	51.70	51.54	6
163	Fill	Fill of [164]	Secondary eval	2.00	1.00	0.32	51.35	n/a	3c
164	Cut	Pit	Secondary eval	2.00	1.00	0.32	51.30	50.99	3c
165	Fill	Fill of [164]	Secondary eval	0.45	0.25	0.30	51.26	n/a	3c
166	Layer	External surface	Secondary eval	1.50	1.50	n/a	51.29	n/a	3c
167	Fill	Fill of [181]	Secondary eval	1.95	0.40	n/a	51.26	n/a	6
168	Layer	External surface	Secondary eval	2.00	6.53	0.12	52.43	n/a	7
169	Layer	Dump/levelling layer	Secondary eval	2.00	6.53	0.24	52.33	n/a	7
170	Layer	Ploughsoil	Secondary eval	2.00	6.53	0.35	52.23	n/a	6
171	Layer	Natural brickearth	Secondary eval	2.00	6.53	0.30	51.91	n/a	1a
172	Layer	Natural brickearth	Secondary eval	5.96	2.00	51.29	51.31	n/a	1a
173	Fill	Fill of [174]	Secondary eval	0.60	0.46	0.12	51.26	n/a	3c
174	Cut	Posthole	Secondary eval	0.60	0.46	0.12	51.27	51.11	3c
175	Fill	Fill of [177]	Secondary eval	2.20	0.50	0.40	50.88	n/a	3b
176	Fill	Fill of [177]	Secondary eval	2.20	0.90	0.30	51.19	n/a	3b
177	Cut	Ditch	Secondary eval	2.20	1.20	n/a	51.22	50.48	3b
178	Layer	External surface	Secondary eval	2.00	5.40	0.10	51.89	n/a	7
179	Layer	Dump/levelling layer	Secondary eval	2.00	5.40	0.26	51.77	n/a	7
180	Layer	Ploughsoil	Secondary eval	2.00	5.40	0.35	51.47	n/a	6
181	Cut	Gully?	Secondary eval	2.36	0.40	n/a	51.31	n/a	6
200	Fill	Fill of [201]	Area 2	0.70	1.70	0.43	51.65	n/a	3c
201	Cut	Tree throw	Area 2	0.70	1.70	0.43	51.65	51.20	3c
202	Fill	Fill of [203]	Area 2	0.70	2.60	0.58	51.80	n/a	3c
203	Cut	Pit/ditch	Area 2	0.70	2.60	0.58	51.80	51.09	3c
204	Layer	Natural brickearth	Area 2	9.40	26.00	n/a	51.85	n/a	1a
205	Fill	Fill of [206]	Area 2	0.70	2.64	0.77	51.60	n/a	3c

206	Cut	Pit/ditch	Area 2	0.70	2.64	0.77	51.55	50.98	3c
207	Fill	Fill of [208]	Area 2	0.48	2.00	0.23	51.41	n/a	3b
208	Cut	Gully	Area 2	0.48	2.00	0.23	51.41	51.18	3b
209	Fill	Fill of [210]	Area 2	0.52	7.00	0.17	51.08	n/a	3b
210	Cut	Gully	Area 2	0.52	7.00	0.17	51.08	50.91	3b
211	Fill	Fill of [214]	Area 1	1.20	0.80	0.20	50.36	n/a	3c
212	Fill	Fill of [214]	Area 1	1.20	0.80	0.20	50.16	n/a	3c
213	Fill	Fill of [214]	Area 1	1.20	0.80	0.10	50.06	n/a	3c
214	Cut	Post pipe	Area 1	1.20	0.80	0.40	50.36	49.94	3c
215	Fill	Fill of [216]	Area 1	1.20	0.80	0.30	50.61	n/a	3c
216	Cut	Posthole	Area 1	1.60	1.60	0.65	50.61	49.94	3c
217	Fill	Fill of [219]	Area 1	1.04	1.40	0.02	48.85	n/a	3c
218	Fill	Fill of [219]	Area 1	4.90	4.80	1.25	50.10	n/a	3c
219	Cut	Construction cut for rotted out well	Area 1	4.90	4.80	1.27	50.10	48.83	3c
220	Fill	Fill of [221]	Area 1	0.78	0.86	0.40	50.64	n/a	3c
221	Cut	Posthole	Area 1	0.78	0.86	0.40	50.64	50.24	3c
222	Fill	Fill of [223]	Area 1	1.80	1.50	0.40	50.36	n/a	3c
223	Cut	Posthole	Area 1	1.80	1.50	0.40	50.36	49.96	3c
224	Fill	Fill of [225]	Area 1	0.56	0.62	0.16	50.72	n/a	3c
225	Cut	Posthole	Area 1	0.56	0.62	0.16	50.72	50.56	3c
226	Fill	Fill of [227]	Area 1	0.80	0.70	0.30	50.69	n/a	3c
227	Cut	Posthole	Area 1	0.80	0.70	0.30	50.69	50.41	3c
228	Cut	Gully	Area 1	7.14	0.84	0.14	50.97	n/a	3b
229	Fill	Fill of [228]	Area 1	7.14	0.84	0.14	50.97	n/a	3b
230	Fill	Fill of [231]	Area 1	2.62	1.31	0.30	50.47	n/a	2
231	Cut	Tree throw	Area 1	2.62	1.31	0.30	50.47	50.17	2
232	Fill	Fill of [233]	Area 1	1.02	1.10	0.28	50.60	n/a	3c
233	Cut	Pit	Area 1	1.02	1.10	0.28	50.60	50.32	3c
234	Fill	Fill of [235]	Area 1	1.20	1.96	0.28	49.61	n/a	3c
235	Cut	Pit	Area 1	1.20	1.96	0.28	49.61	49.33	3c
236	Fill	Fill of [237]	Area 1	0.45	0.45	0.10	50.69	n/a	3c
237	Cut	Pit	Area 1	0.45	0.45	0.10	50.69	50.58	3c
238	Fill	Fill of [239]	Area 1	0.52	0.74	0.34	50.05	n/a	3c
239	Cut	Posthole	Area 1	0.52	0.74	0.34	50.05	49.73	3c
240	Fill	Fill of [241]	Area 1	3.30	3.66	0.35	49.67	n/a	3c
241	Cut	Pit	Area 1	3.30	3.66	0.74	49.67	48.94	3c

242	Fill	Fill of [243]	Area 1	0.40	0.50	0.25	50.11	n/a	3c
243	Cut	Posthole	Area 1	0.40	0.50	0.25	50.11	49.76	3c
244	Fill	Fill of [241]	Area 1	3.30	3.66	0.36	49.55	n/a	3c
245	Fill	Fill of [246]	Area 1	0.80	0.82	0.45	49.91	n/a	3c
246	Cut	Posthole	Area 1	0.80	0.82	0.45	49.91	49.46	3c
247	Fill	Fill of [241]	Area 1	3.30	3.66	0.41	49.32	n/a	3c
248	Layer	External surface/burnt natural	Area 1	3.50	7.90	n/a	50.08	n/a	3c
249	Layer	Colluvium	Area 1	n/a	2.03	0.22	49.87	n/a	5
250	Fill	Fill of [251]	Area 1	0.50	0.56	0.45	49.87	n/a	3c
251	Cut	Posthole	Area 1	0.50	0.56	0.45	49.87	49.42	3c
252	Fill	Fill of [253]	Area 1	1.82	2.81	0.34	49.63	n/a	3c
253	Cut	Pit	Area 1	1.82	2.81	0.34	49.63	49.25	3c
254	Fill	Fill of [255]	Area 1	1.86	1.56	0.32	49.62	n/a	3c
255	Cut	Pit	Area 1	1.86	1.56	0.32	49.62	49.31	3c
256	Fill	Fill of [219]	Area 1	1.10	1.15	1.20	47.97	n/a	3c
257	Fill	Fill of [260]?	Area 4	0.40	0.40	0.05	51.28	n/a	3c
258	Fill	Fill of [260]	Area 4	3.06	1.96	0.17	51.28	n/a	3c
259	Fill	Fill of [260]	Area 4	3.06	1.96	0.48	51.11	n/a	3c
260	Cut	Pit	Area 4	3.06	1.96	0.65	51.28	50.63	3c
261	Fill	Fill of [219]	Area 1	1.00	0.95	2.00	48.78	n/a	3c
262	Fill	Fill of [263]	Area 4	0.36	0.35	0.21	51.30	n/a	3c
263	Cut	Posthole	Area 4	0.36	0.35	0.21	51.30	51.09	3c
264	Fill	Fill of [265]	Area 4	0.58	0.70	0.23	51.31	n/a	3c
265	Cut	Pit	Area 4	0.58	0.70	0.23	51.31	51.00	3c
266	Fill	Fill of [274]	Area 4	4.10	1.00	0.18	51.36	n/a	3b
267	Fill	Fill of [270]	Area 4	2.07	1.50	0.15	51.26	n/a	3c
268	Fill	Fill of [270]	Area 4	2.07	1.50	0.10	51.11	n/a	3c
269	Fill	Fill of [270]	Area 4	2.07	1.50	0.43	51.01	n/a	3c
270	Cut	Pit	Area 4	2.07	1.50	0.80	51.35	50.58	3c
271	Fill	Fill of [272]	Area 1	3.30	4.00	1.07	50.27	n/a	6
272	Cut	Pit	Area 1	3.30	4.00	1.07	50.27	49.20	6
273	Fill	Fill of [219]	Area 1	n/a	n/a	0.72	46.78	n/a	3c
274	Cut	Ditch	Area 4	4.10	1.00	0.18	51.36	n/a	3b
275	Layer	External surface/burnt natural	Area 1	3.12	4.66	n/a	49.95	n/a	3c
276	Fill	Fill of [260]	Area 4	3.06	1.96	0.10	51.28	n/a	3c
277	Fill	Fill of [219]	Area 1	n/a	n/a	0.07	46.06	n/a	3c

278	Fill	Fill of [219]	Area 1	n/a	n/a	0.17	45.81	n/a	3c
279	Fill	Fill of [260]	Area 4	3.10	2.00	0.60	51.28	n/a	3c
280	Fill	Fill of [260]	Area 4	3.06	1.96	0.60	51.28	n/a	3c
281	Masonry	Industrial pit	Area 1	5.80	8.00	0.41	50.42	n/a	7
282	Layer	Ploughsoil?	Area 1	0.26	0.45	n/a	51.26	n/a	6
283	Layer	Ploughsoil?	Area 1	0.24	0.46	n/a	51.24	n/a	6
284	Layer	External surface/burnt natural	Area 4	0.75	0.54	n/a	51.26	n/a	3c
285	Fill	Fill of [286]	Area 4	1.05	0.98	0.16	52.60	n/a	3c
286	Cut	Posthole	Area 4	1.05	0.98	0.16	52.60	52.44	3c
287	Fill	Fill of [270]	Area 4	2.07	1.50	0.80	51.35	n/a	3c
288	Fill	Fill of [289]	Area 4	0.60	1.37	0.29	51.29	n/a	3c
289	Cut	Pit	Area 4	0.60	1.37	0.29	51.29	51.00	3c
290	Fill	Fill of [291]	Area 4	6.20	1.22	0.09	51.91	n/a	6
291	Cut	Gully	Area 4	6.20	1.22	0.09	51.91	51.78	6
292	Fill	Fill of [293]	Area 4	3.30	1.04	0.05	51.69	n/a	6
293	Cut	Gully	Area 4	3.30	1.04	0.05	51.69	51.64	6
294	Fill	Fill of [295]	Area 4	0.80	0.80	0.12	51.46	n/a	6
295	Cut	Posthole	Area 4	0.80	0.80	0.12	51.46	51.34	6
296	Layer	Natural brickearth	Area 3	n/a	n/a	n/a	51.84	n/a	1a
297	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
298	Fill	Fill of [299]	Area 2	7.30	0.64	0.12	51.15	n/a	3b
299	Cut	Gully	Area 2	7.30	0.64	0.12	51.15	50.82	3b
300	Fill	Fill of [301]	Area 2	0.74	0.74	0.24	50.82	n/a	3a
301	Cut	Tree throw	Area 2	0.74	0.74	0.24	50.82	50.62	3a
302	Layer	Natural brickearth	Area 2	n/a	n/a	n/a	50.85	n/a	1a
303	Fill	Fill of [304]	Area 2	0.30	0.25	0.12	50.03	n/a	3c
304	Cut	Posthole	Area 2	0.30	0.25	0.12	50.03	49.91	3c
305	Fill	Fill of [306]	Area 2	0.45	29.60	0.09	50.71	n/a	3b
306	Cut	Gully	Area 2	0.45	29.60	0.09	50.71	49.90	3b
307	Fill	Fill of [308]	Area 2	0.35	0.40	0.11	50.76	n/a	3c
308	Cut	Posthole	Area 2	0.35	0.40	0.11	50.76	50.65	3c
309	Fill	Fill of [310]	Area 2	1.03	0.40	0.13	50.81	n/a	3c
310	Cut	Pit	Area 2	1.03	0.40	0.13	50.81	50.68	3c
311	Fill	Fill of [312]	Area 2	1.00	1.25	0.11	50.85	n/a	3a
312	Cut	Tree throw	Area 2	1.00	1.25	0.11	50.85	50.74	3a
313	Fill	Fill of [314]	Area 2	0.25	0.45	0.07	50.76	n/a	3c

314	Cut	Posthole	Area 2	0.25	0.45	0.07	50.76	50.69	3c
315	Layer	External surface	Road Area	0.72	1.00	0.05	48.12	n/a	7
316	Layer	Dump/levelling layer	Road Area	0.60	1.00	0.15	48.08	n/a	7
317	Layer	Colluvium	Road Area	0.60	1.00	0.29	47.93	n/a	5
318	Fill	Fill of [319]	Road Area	0.22	0.46	0.57	48.15	n/a	7
319	Cut	Posthole	Road Area	0.22	0.46	0.57	48.15	47.58	7
320	Layer	External surface	Road Area	0.72	0.67	0.03	48.16	n/a	7
321	Layer	Dump/levelling layer	Road Area	0.79	0.75	0.21	48.15	n/a	7
322	Layer	Colluvium	Road Area	0.79	0.75	0.23	47.96	n/a	5
323	Layer	External surface	Road Area	0.88	1.00	0.05	48.33	n/a	7
324	Layer	Dump/levelling layer	Road Area	0.88	1.00	0.17	48.28	n/a	7
325	Layer	Colluvium	Road Area	0.88	1.00	0.13	48.13	n/a	5
326	Layer	Colluvium	Road Area	0.84	1.00	0.35	48.01	n/a	5
327	Layer	Colluvium	Road Area	0.60	1.00	0.20	47.70	n/a	5
328	Masonry	Foundation	Road Area	0.85	0.58	0.23	47.89	n/a	3
329	Layer	Colluvium	Road Area	0.79	0.75	0.23	47.82	n/a	5
330	Layer	Topsoil	Road Area	1.20	n/a	0.15	48.66	n/a	7
331	Layer	Burnt horizon	Road Area	1.20	n/a	0.05	48.52	n/a	7
332	Fill	Fill of [333]	Road Area	0.34	1.20	0.38	48.40	n/a	7
333	Cut	Construction cut for power cable	Road Area	0.34	1.20	0.38	48.40	48.02	7
334	Layer	Dump/levelling layer	Road Area	0.85	n/a	0.18	48.47	n/a	7
335	Layer	Topsoil	Road Area	1.00	0.98	0.12	48.42	n/a	7
336	Layer	Dump/levelling layer	Road Area	0.45	n/a	0.08	48.26	n/a	7
337	Layer	Dump/levelling layer	Road Area	1.00	0.98	0.06	48.27	n/a	7
338	Layer	Burnt horizon	Road Area	1.00	0.95	0.06	48.21	n/a	7
339	Fill	Fill of [340]	Road Area	0.27	1.00	0.62	48.17	n/a	7
340	Cut	Construction cut for power cable	Road Area	0.27	1.00	0.62	48.17	47.55	7
341	Fill	Fill of [342]	Road Area	n/a	0.36	0.60	48.17	n/a	7
342	Cut	Pit	Road Area	n/a	0.36	0.60	48.17	47.57	7
343	Layer	Topsoil	Road Area	1.00	n/a	0.10	48.45	n/a	7
344	Layer	Burnt horizon	Road Area	1.00	n/a	0.08	48.20	n/a	7
345	Fill	Fill of [346]	Road Area	0.67	n/a	0.65	48.10	n/a	7
346	Cut	Construction cut for power cable	Road Area	0.67	1.00	0.65	48.10	47.45	7
347	Layer	Dump/levelling layer	Road Area	0.65	n/a	0.06	48.22	n/a	7
348	Layer	Burnt horizon	Road Area	0.65	n/a	0.04	48.15	n/a	7
349	Layer	Natural brickearth	Area 1	n/a	n/a	n/a	n/a	n/a	1a

400	Fill	Fill of [401]	Road Area	0.44	15.20	0.42	47.85	n/a	7
401	Cut	Construction cut for power cable	Road Area	0.44	15.20	0.42	47.85	47.43	7
402	Fill	Fill of [403]	Road Area	0.68	15.20	0.42	47.84	n/a	7
403	Cut	Construction cut for services	Road Area	0.68	15.20	0.42	47.84	47.42	7
404	Fill	Fill of [405]	Road Area	0.40	10.80	0.55	47.83	n/a	6
405	Cut	Ditch?	Road Area	0.40	10.80	0.55	47.83	47.38	6
406	Layer	Colluvium	Road Area	0.52	1.00	0.10	47.85	n/a	5
407	Layer	Colluvium	Road Area	0.50	1.00	0.13	47.83	n/a	5
408	Layer	Colluvium	Road Area	0.52	1.00	0.26	47.79	n/a	3
409	Layer	Colluvium	Road Area	0.47	1.00	0.34	47.72	n/a	3
410	Layer	Colluvium	Road Area	0.20	1.00	0.12	47.77	n/a	5
411	Layer	Colluvium	Road Area	0.20	1.00	0.12	47.64	n/a	3
412	Fill	Fill of 413]	Road Area	0.40	1.00	0.35	47.78	n/a	7
413	Cut	Construction cut for power cable	Road Area	0.40	1.00	0.35	47.78	47.43	7
414	Fill	Fill of [415]	Road Area	0.46	1.00	0.35	47.80	n/a	7
415	Cut	Construction cut for services	Road Area	0.46	1.00	0.35	47.80	47.45	7
416	Layer	Colluvium	Road Area	0.37	1.00	0.16	47.80	n/a	5
417	Layer	Colluvium	Road Area	0.45	1.00	0.20	47.66	n/a	3
418	Fill	Fill of [419]	Road Area	0.45	1.00	0.33	47.77	n/a	6
419	Cut	Ditch?	Road Area	0.45	1.00	0.33	47.77	47.44	6
420	Layer	Colluvium	Road Area	n/a	3.05	0.20	48.10	n/a	5
421	Masonry	Foundation	Road Area	0.47	3.45	0.35	47.90	47.81	3
422	Cut	Construction cut for [421]	Road Area	0.47	3.45	0.35	47.90	n/a	3
423	Layer	Colluvium	Road Area	0.64	1.22	0.24	47.63	n/a	5
424	Layer	Colluvium	Road Area	0.40	1.32	0.26	47.68	n/a	5
425	Layer	Colluvium	Road Area	0.50	2.15	0.30	47.52	n/a	5
426	Layer	Colluvium	Road Area	0.08	3.40	n/a	47.61	n/a	3
427	Layer	Colluvium	Road Area	0.57	2.05	n/a	47.75	n/a	3
428	Layer?	Dump/levelling layer?	Road Area	0.50	1.95	n/a	47.57	n/a	3
429	Layer	Colluvium	Road Area	0.50	2.20	n/a	47.47	n/a	3
430	Layer?	Dump/levelling layer?	Road Area	0.80	0.70	n/a	47.50	n/a	3
431	Layer	Colluvium	Road Area	0.50	1.00	n/a	47.49	n/a	3
432	Layer	Colluvium	Road Area	0.40	1.32	n/a	47.41	n/a	3
433	Fill	Fill of [434]	Road Area	0.50	0.70	0.30	47.82	n/a	6
434	Cut	Linear cut	Road Area	0.50	0.70	0.30	47.82	47.52	6
435	Layer	Colluvium	Road Area	0.64	1.22	n/a	47.45	n/a	3

436	Layer	Colluvium	Road Area	0.80	1.50	0.10	47.59	n/a	5
437	Layer	Colluvium	Road Area	0.25	1.80	n/a	47.88	0	5
438	Layer	Levelling layer	Road Area	n/a	3.05	0.15	48.25	n/a	7
439	Layer	Levelling layer	Road Area	n/a	5.40	0.19	48.12	n/a	7
500	Fill	Fill of [503]	Road Area	0.65	1.97	0.12	47.38	n/a	4
501	Fill	Fill of [503]	Road Area	0.65	1.97	0.23	47.24	n/a	4
502	Skeleton	Skeleton within [503]	Road Area	0.38	1.66	0.18	47.23	47.07	4
503	Cut	Grave	Road Area	0.65	1.97	0.33	47.38	47.05	4
504	Fill	Fill of [504]	Road Area	0.54	15.40	n/a	47.44	n/a	7
505	Cut	construction cut for services	Road Area	0.54	15.40	n/a	47.44	n/a	7
506	Fill	Fill of [506]	Road Area	0.50	15.40	n/a	47.44	n/a	7
507	Cut	Construction cut for power cable	Road Area	0.50	15.40	n/a	47.44	n/a	7
508	Layer	Colluvium	Road Area	0.22	5.10	n/a	47.41	n/a	5
509	Layer	Colluvium	Road Area	0.74	6.45	0.60	47.39	n/a	5
510	Fill	Fill of [510]	Road Area	0.07	2.60	n/a	47.41	n/a	7
511	Cut	Construction cut for services?	Road Area	0.07	2.60	n/a	47.41	n/a	7
512	Fill	Fill of [521]	Road Area	0.88	1.00	0.08	47.39	n/a	3
514	Cut	Construction cut for services	Road Area	0.90	2.10	n/a	47.47	n/a	7
515	Fill	Fill of [514]	Road Area	0.90	2.10	n/a	47.47	n/a	7
516	Layer	Colluvium	Road Area	1.05	2.30	0.10	47.36	n/a	3
517	Layer	Natural gravel	Road Area	1.00	2.40	0.20	47.38	n/a	1a
518	Fill	Fill of [519]	Road Area	0.18	0.84	0.20	47.40	n/a	4
519	Cut	Grave?	Road Area	0.18	0.84	0.20	47.40	47.20	4
520	Fill	Fill of [521]	Road Area	n/a	0.98	0.12	47.27	n/a	3
521	Cut	Ditch?	Road Area	0.88	1.80	0.28	47.39	47.13	3
522	Fill	Fill of [523]	Road Area	0.88	2.67	0.35	47.35	n/a	1b
523	Cut	palaeochannel?	Road Area	0.88	2.67	0.35	47.35	47.11	1b
524	Layer	Natural brickearth	Road Area	0.88	0.95	0.10	47.30	n/a	1a
525	Layer	Natural brickearth	Road Area	n/a	2.38	0.25	47.24	n/a	1a
526	Layer	Levelling layer	Road Area	n/a	10.80	0.28	47.84	n/a	7
527	Layer	Colluvium	Road Area	n/a	4.40	0.34	47.72	n/a	5
600	Layer	Natural brickearth	Road Area	n/a	n/a	0.58	50.38	n/a	1a
601	Layer	Natural gravel	Road Area	n/a	n/a	1.42	49.78	n/a	1a
602	Layer	Levelling layer	Road Area	n/a	n/a	0.08	50.00	n/a	7
1001	Fill	Fill of [1003]	Road Area	0.62	2.25	0.18	47.20	n/a	4
1002	Skeleton	Skeleton within [1003]	Road Area	n/a	n/a	n/a	47.19	47.02	4

1003	Cut	Grave	Road Area	0.62	2.25	0.18	47.20	47.02	4
1004	Layer	Colluvium	Road Area	1.00	3.30	0.40	47.31	n/a	5
1005	Fill	Fill of [1007]	Road Area	0.26	0.38	0.15	47.23	n/a	3
1006	Fill	Fill of [1007]	Road Area	0.40	0.64	0.15	47.23	n/a	3c
1007	Cut	Posthole	Road Area	0.40	0.64	0.15	47.23	47.08	3
1008	Layer	Colluvium	Road Area	0.80	4.88	0.52	47.46	n/a	5
1009	Layer	Natural gravel	Road Area	n/a	n/a	n/a	47.23	n/a	1a
1010	Layer	Colluvium	Road Area	0.84	0.62	0.45	47.59	n/a	3
1011	Layer	Dump/levelling layer?	Road Area	0.84	1.74	n/a	47.46	n/a	3
1012	Layer	Natural brickearth	Road Area	n/a	n/a	n/a	47.59	n/a	1a
1013	Layer	Levelling layer	Road Area	n/a	n/a	0.21	47.78	n/a	7
1014	Layer	Colluvium	Road Area	n/a	n/a	0.23	47.46	n/a	5
1015	Fill	Fill of [1016]	Road Area	n/a	1.55	0.32	46.96	n/a	3
1016	Cut	Pit	Road Area	n/a	1.55	0.32	46.96	46.64	3
1017	Fill	Fill of [1019]	Road Area	3.30	1.72	0.37	47.28	n/a	3
1018	Fill	Fill of [1019]	Road Area	3.30	1.72	0.10	47.02	n/a	3
1019	Cut	Ditch	Road Area	3.30	1.72	0.47	47.28	46.79	3
1020	Fill	Fill of [1021]	Road Area	n/a	2.40	0.45	47.26	n/a	4
1021	Cut	Grave?	Road Area	n/a	2.40	0.45	47.26	46.81	4
1022	Layer	Colluvium	Road Area	n/a	n/a	0.30	n/a	n/a	5
1023	Layer	Colluvium	Road Area	n/a	n/a	0.30	n/a	n/a	5

Appendix 2: Roman Pottery Assessment

James Gerrard

Introduction

Excavations at Bellefield Road, Orpington (BFF05) recovered 2819 sherds of Romano-British pottery weighing 43.685kg from 75 contexts. This material survived in a variety of states from very abraded to fresh. The majority of assemblages were very small in size (1-30 sherds) with smaller numbers of contexts containing medium (30-100 sherds) or large (100+ sherds) quantities of pottery.

Methodology and recording

The methodology used for recording this ceramic assemblage is based on the scheme proposed by the Museum of London Specialist Services and widely used in London and its immediate hinterland (Symonds 2002). The pottery fabrics have been recorded using Museum of London form and fabric codes, although recourse has been made in some instances to regional typologies created by Pollard (1988) and Monaghan (1987). The pottery has been quantified using the standard measures of sherd count, weight and Estimated Vessel Equivalents (EVEs) and all data has been recorded directly into an *Access 2000* database. The database design is that used by medieval and post-medieval pottery specialists within Pre-Construct Archaeology (with some variation) and is ultimately based on standards established by the Museum of London's Archaeology and Specialist Services (Symonds 2002). A copy of this database is available for consultation in the archive.

Discussion

The majority of features on the site contained only small and abraded assemblages of pottery. These are of little importance other than as dating evidence for their individual contexts and by extension phases, although the five crumbs of prehistoric pottery from early tree throw [230] should be noted. There are also a number of Roman sherds occurring residually in the fills of later Saxon graves. These small assemblages are not discussed further here, but spot dates are provided in Appendix 1 and full details are contained within the archive.

A minority of features contained assemblages that can be classed as medium or large in size and these groups of pottery are the subject of further discussion here. Of particular importance are the large groups of material associated with the construction, use and backfill of well [217], pit [241] and pit [260].

[Well 217]

The construction backfill [218] of well [217] contained a large assemblage of pottery (224 sherds, 3.168kgs) that should date the construction of this feature fairly closely (pre-well contexts [248 and [275] contained no pottery). BB2 flanged bowls were present (Type 4H, 0.42 EVEs) as was a single sherd of a BB2 jar (Type 2F, 0.10 EVE), suggesting a date after AD120. Fragments of VCWS flagons necks (Type 1B7-9, 0.94 EVEs) indicate a slightly later date, after *c*.AD140. The presence of

diagnostic Samian sherds and fragments from an oxidised, rough cast beaker (possibly COLCC) may enable this date to be refined. Certainly the occurrence of a Dr 27 body sherd and a number of bead rim storage vessels in PATCH and allied GROG fabrics are not expected to have been produced much after *c.*AD160. This suggests that the construction cut of the well was backfilled with material dating to *c.*AD140-160/180. Pottery from the first stage evaluation from this feature [2] included three sherds dated to after AD240 (including a fragment dated to after AD270) that were used to date this feature to the late third century (Lyne in Wragg 2005, 36). It seems, on analysis of the more extensive assemblage from the current excavations, that these late sherds were intrusive.

No pottery was recovered from well fills [277], [273], [261]. However, a small assemblage was recovered from the upper fill [256] (22 sherds, 279g). This material is not particularly diagnostic but can be broadly dated to AD100-250. There were no late Roman sherds in this fill suggesting that the feature had either been backfilled by *c.*AD250 or that it had been backfilled at a later date with wholly residual material. The fills of the well structure's postholes [238], [242], [245] and [250] also include small early Roman assemblages, including fragments of Samian Dr 33 and Dr18/31 vessels. A piece of post-medieval tile in [242] is probably intrusive.

Pit [241], Fills [240], [244] and [247]

The bulk of the pottery on the site came from the fills of pit [241] (924 sherds, 14.538kgs, 20.75 EVEs). The lower fill [247] contained relatively little material suggesting that this feature was not originally intended as a 'rubbish' pit (Table 1). The pottery from the lower fill included the complete rim circumference of a Type 3B1 beaker (dated AD55-100) in a variant NKFW fabric (discussed further below) as well as substantial fragments of another beaker in ?HWC and sherds of a VCWS flagon and bead rim jars. In dating terms much depends on the presence of two fragments of BB2 (weighing 28g). If these are *in situ* finds then it would date this context to after AD120. However, if they are intrusive, which would suit the date of the 3B1 beaker, then the pit fill should be dated a little earlier. On balance it seems reasonable to date this primary fill to *c.*AD70-130.

Context	Sherd Count	Weight (g)	EVE
240	410	4852	5.59
244	449	8697	12.32
247	65	989	2.84

Table 1: Quantification of pottery from Pit [241]

The secondary and tertiary fills of this pit contained much greater quantities of pottery than the primary fill and seem to indicate the use of a partially silted pit for rubbish disposal (Table 1). The pottery from contexts [244] and [240] was in fresh unabraded condition and clearly represents primary refuse from nearby settlement activity. Of particular note were several semi-complete Samian vessels (1.63 EVEs) including forms Dr 33, Dr 37 and Dr 31. The Dr 37 bowl was highly decorated with an unusual scheme: instead of the usual ovolo (egg-and-dart) border at the top of the decorative panels this sherd had a border formed of triangles ('dogtooth') (Fig 1). This type of decoration is indicative of the

Rheinzabern potter Reginus I and the vessel can be dated to AD160-190. The decorative panels on the vessel include depictions of Minerva, Hercules and other mythological scenes. The Dr. 31 vessel is stamped AVENTINI.M who worked at Lezoux *c.*AD150-175 (J. Bird *pers. comm.*). Three other Samian sherds exhibit complete or partial maker's stamps that should also provide a means of narrowing the date range on this group.

The non-Samian assemblage from this pit was dominated by Patchgrove vessels (PATCH) and other fabrics produced in Kent (TSK, BB2, HOO, NKFW, NKSH). Some of this material may have originated from kilns at Otford (below) while the rest can probably be sourced to the North Kent Marshes. Unsourced but probably local grog-tempered wares (GROG) were also present, alongside small quantities of amphora (BAET, AMPH) and Verulamium Region products (VRW, VCWS) indicating connections with London. A fragment of ?Tazza in OXID should also be noted.

Further work, particularly on the Samian, may refine the dating of this feature. However, at present the virtual absence of BB2 (2 sherds, 28g) and the presence of VCWS in the lower fill [247] of this feature may suggest that it was probably dug in the late first – early second century (*c.*AD70-120). The upper fills appear to be slightly later, with much greater quantities of BB2 and bead rim TSK jar forms indicating a second century date range. The Samian suggests a date for the infilling of this feature in the period AD160-180 and the single coin find - of Faustina Junior dated AD146-175 (see Appendix 5) - is in agreement with this dating.

Given the fresh nature of the assemblage it seems reasonable to undertake a functional analysis of the pottery within it by comparing the assemblage with those excavated from London (Davies *et al*. 1993, Fig 148) (Fig 1). A number of aspects are immediately striking. Firstly, the absence of mortaria is noticeable and true of these excavations as a whole (only three mortaria sherds were recovered, including an unstratified wall-sided example), although 1.7 percent of the pre-AD250 pottery from Palmer's excavations were mortaria (Palmer 1984, 33). Secondly, there is a somewhat elevated number of drinking vessels with slightly fewer flagons than might be expected and finally, the percentage of jars is quite high too. On the whole the assemblage looks quite rural (Evans 2001), with perhaps a slight emphasis on drinking and limited evidence for the preparation of foodstuffs using 'Roman' utensils like mortaria. In this context it is interesting to note that the few sherds of amphora from the site are almost exclusively from BAET Dressel 20 olive oil jars. Whether these jars arrived on site with their original cargo is, of course, unknown. However, the absence of wine amphora and the presence of Samian cup forms (like Dr 33) might suggest that some of flagons carried smaller quantities of wine than amphora from London's docks out into the city's hinterland for consumption.

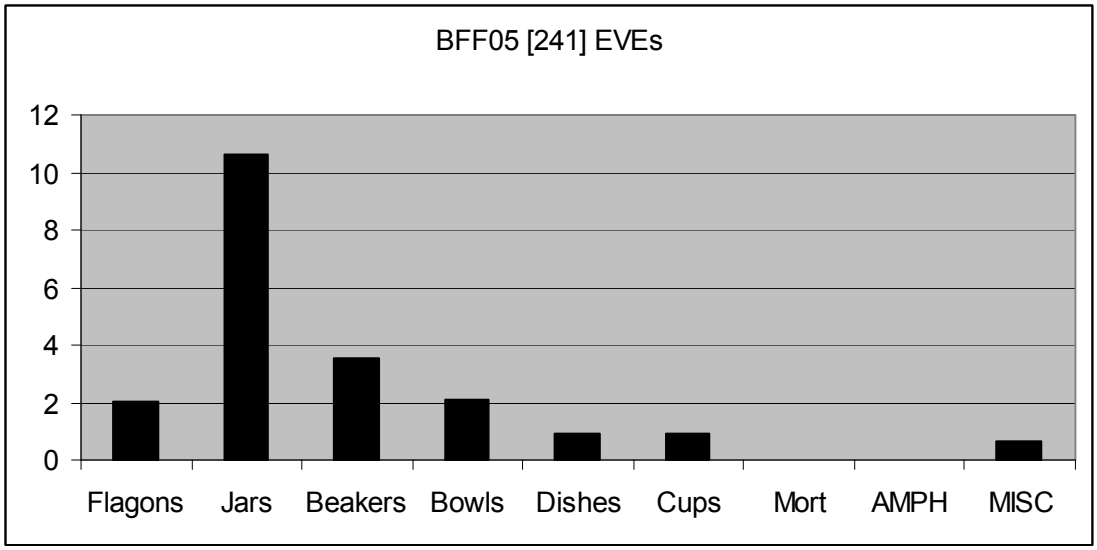

Fig 2: Quantification of pottery from Pit [241] by EVE and functional class.

Pit [260]

Pit [260] contained a large fresh assemblage of pottery (370 sherds, 2.727kgs, 4.64 EVEs) which was recovered from fills [279], [276], [259] and [258]. There was comparatively little BB2 in this pit (those sherds that were present may be intrusive) suggesting a slightly earlier date than for some other features and there were some slight indications that it had been filled in over time. Thus pottery from [279] could be dated to AD50-120, while the succeeding fills [276] and [259] were probably deposited in quick succession on the basis of sherd links between pots in these fills. The assemblage from these two fills can be dated to AD70-150. The penultimate fill contained material of a slightly later date (AD120-160) and the final fill was devoid of ceramic finds.

Fabrics

In the first stage evaluation report Lyne drew attention to the similarities between some of the pottery from Bellefield Road (Lyne in Wragg 2005) and material recovered at Frog Farm, Otford (Taylor 2005). Variations in BB2, HOO, TSK and NKFW fabrics were identified which, it was suggested, might be indicative of fabrics produced at Otford, a known centre of Patchgrove pottery production (Pearce 1931). These variant fabrics were catalogued in the database using the coding system utilised by Lyne in his earlier discussion of the pottery from the site. If these variations could be tied to a known centre of production then this would be a valuable addition to our knowledge of Romano-British pottery in north-west Kent. However, it is unlikely that this site provides enough material on its own to enable this goal to be achieved.

Recommendations

Vessels from pits [241] and [260] should be reconstructed and select examples illustrated. Pit [241] is important as a useful closed group associated with a dated coin.

The Samian assemblage, especially stamps and unusual Dr37 'Reginus I' pot from pit [241], should be sent for further specialist comment. This would help tighten many of the dates proposed here.

The assemblage should be placed within its local context. This should involve a brief review of the material held in Orpington Museum from earlier excavations at the site and the integration of ceramic archives from earlier PCA evaluations in to this archive prior to publication.

Is there patterning within the distribution of ceramics on the site? The absence of large quantities of third- and fourth-century material compared to the earlier excavation by Philp and Keller (1995) and Palmer (1984) is noticeable, as is the presence of unusual forms like lamps in Tester's (1969) excavations. Is there a functional or taphonomic explanation for this?

The pottery should be written up with a maximum of 10-12 illustrations and a discussion of the key groups alongside a broader discussion of the material in its local context. This should be achievable once the specialist Samian reports have been provided within 3-4 days (including a visit to Orpington Museum).

Further research on the potential Otford material would be desirable but is not essential, although reference should be made to it in the publication

Acknowledgements

Joanna Bird kindly provided some provisional comments on the Samian from pit [241].

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Appendix 1: Spot dates

Spot dates are provided here for every deposit containing Roman pottery. Further information regarding assemblage composition is available from the archive.

Context	Assemblage Size	ED	LD	Comments
119	S	40	100	
125	S	50	120	
156	S	50	250	
157	S	50	120	
163	M	60/100	120	
173	S	50	160	
200	S	120	250	
202	S	50	120	
205	S	120	200	
213	S	50	200	
215	S	50	200	
217	S	100	140	
218	L	140	160/80	
220	S	120	200	
222	S	120	200	
226	S	50	200	
229	M	120	200	
230	S	LBA?	EIA?	Crumbs
234	S	120	200	
232	S	50	200	
236	S	120	200	
238	S	120	200	
240	L	160	180	
242	S	70	200	Post-med tile
244	L	160	180	
247	M	70	130	
250	S	50	120	
252	M	120	160	
254	S	50	200	
256	S	100	250	
258	M	120	160	
259	S	70	150	Sherd link to [276]
262	S	50	130	
266	S	120	200	
267	S	50	120	
268	S	120	200	
271	S	50	120	
276	S	70	150	Sherd link to [259]
279	M	50	120	
285	M	120	160	
287	S	50	120	

290	S	50	200	
294	S	50	200	
298	S	120	200	
303	S	50	100	
305	S	50	250	
307	S	50	400	
309	S	50	400	
317	S	50	400	
322	S	50	200	
325	S	50	250	
326	S	50	200	
327	S	120	200	
329	S	70	90	
404	S	50	200	
407	S	50	200	
416	S	50	200	
420	S	250	400	Saxon sherd
423	S	250	400	Saxon sherd
424	S	70	200	
425	S	180	300	
500	S	250	400	Odd sherd – Saxon?
501	S	250	400	
502	S	50	250	
1001	S	240	400	
1002	S	50	300	
1004	S	50	200	
1005	S	50	400	
1006	S	50	200	
1008	S	240	400	Saxon sherd
1010	S	250	400	
1015	S	250	400	
1023	S	120	250	

Appendix 3: Post-medieval Pottery Assessment

Chris Jarrett

Introduction

A small sized assemblage of pottery was recovered from the site (1 box). Some sherds show evidence for abrasion and are representative of probable horticultural activity. The pottery is fragmentary and no complete profiles are represented, but on the whole forms could be identified. Pottery was recovered from six contexts and individual deposits produced only small groups of pottery (under 30 sherds).

All the pottery (37 sherds and eleven are unstratified) was examined macroscopically and microscopically using a binocular microscope (x20), and recorded in an ACCESS database, by fabric, form, decoration, sherd count and estimated number of vessels. The classification of the pottery types is according to the Museum of London Archaeological Service. The pottery is discussed by types and its distribution.

The Pottery Types

There are six/seven (one sherd from [501] needs further identification) of Saxon pottery, dated 400-750 and 37 sherds of a post-medieval date of ceramic types found between 1500-1900+ and except for a small number of typical 17th-century wares, the assemblage is mostly dated to the 19th-century.

Saxon

Chaff-tempered

Chaff-tempered ware with moderated to abundant sand and sparse sandstone (CHFS ST), 400-750. One sherd, probably from a closed vessel. Chaff-tempered wares become more common from the mid 6th-century.

Sand-tempered wares

Sand-tempered ?brickearth, coarse (ESANC), 400-600+, Three sherds probably from closed forms. All the sherds show evidence for burnishing, but one small sherd is decorated with repeating groups of four vertical parallel incised lines sandwiching a discrete group of three diagonal lines.

Sand-tempered, very fine with sparse fine organic matter (ESAND), 400-600+. Two sherds probably from closed vessels with burnished surfaces.

Post-medieval

Local coarse red earthenware

Post-medieval redware (PMR), 1580-1900, six sherds, forms: flowerpot and unidentified.

Essex fine red earthenwares

Post-medieval black-glazed ware (PMBL), 1580-1700, one sherd, form: mug; cylindrical.

Non-local earthenwares

Uncoded fine red earthenware *c.*1580-1900, possibly a local or Wealden product, one sherd, form: uncertain.

Industrial finewares

English Majolica (MAJO), 1850-1900, one sherd, form: bowl.

Refined whiteware (REFW), 1800-1900, eight sherd, forms: bowl; rounded, plate saucer.

Refined whiteware (REFW) with chrome colour decoration, 1830-1900, one sherd, form: unidentified.

Transfer-printed ware (TPW), 1780-1900, four sherds, forms: bowl or dish, plate.

Transfer-printed ware with green, mulberry or red designs (TPW 4), 1825-1900, one sherd, form: bowl.

Yellow ware (YELL), 1825-1900, two sherds, form: unidentified.

Stonewares

English stoneware (ENGS), 1700-1900, one sherd, form: blacking bottle.

English stoneware with Bristol-glaze (ENGS BRST), 1835-1900, one sherd, form: uncertain.

Porcelain

Hard-paste English porcelain (ENPO HP), 1780-1900, one sherd, forms: electrical socket.

Imports

Frechen stoneware (FREC), 1550-1700, one sherd, form: jug

Distribution

Table 1 shows the contexts containing pottery, the number of sherds, the date range of the pottery types in the deposit and a spot date for the group.

Context	Trench	Phase	Sherd Count	Date range of pottery types	Spot date
[115]	secondary evaluation	6	1	1800-1900	1800-1900
[117]	secondary evaluation	6	3	1550-1900	1780-1900
[151]	secondary evaluation	6	8	1580-1900	1850-1900
[271]	Area 1	6	4	1580-1900	1800-1900
[290]	Area 4	6	1	1580-1900	1580-1900

Context	Trench	Phase	Sherd Count	Date range of pottery types	Spot date
[294]	Area 4	6	2	1700-1900	1800-1900
[420]	Road	5	1	400-750	400-750
[423]	Road	5	1	400-600+	400-600+
[500]	Road	4	1	400-600+	400-600+
[501]	Road	4	1	Requires further analysis	
[1004]	Road	5	1	400-600+	400-600+
[1008]	Road	5	1	400-600+	400-600+
[1023]	Road	5	1	400-600+	400-600+

Table 1. BFF 05, distribution of pottery showing the number of sherds, date range of the pottery types and the suggested deposition spot date for the context.

Unstratified

Of note amongst the unstratified material is a stamped Electrical socket in English porcelain and made by Crabtree, with a patent number indicating that it was registered in 1919.

Stratified material

Post-Roman pottery is restricted to Phases 4 to 6

Phase 4: Saxon

Contemporary Saxon pottery is recorded as a single sherd of very fine-sand tempered ware with sparse organic material (ESAND) in fill [501] of grave [503] and dates the fill to between AD 400-750.

Phase 5: Post-Saxon features

The Saxon chaff-tempered ware with moderated to abundant sand and sparse sandstone (CHFS ST) was recovered in layer [420]. This sherd dates the contexts to between 400-750. The Saxon sand-tempered wares occur as single sherds solely found in the deposits they were found in and so date those contexts to between 400-600+. ESANC is found in layers [423] and [1004] and [1023], the latter containing the incised decorated sherd. The Saxon very fine-sand tempered ware with sparse organic material (ESAND) was found in layer [1008]

Phase 6: 19th-19th century

Evidence for activity dated between 1580-1700 is indicated by the presence of post-medieval black-glazed ware (PMBL) and German Frechen stoneware (FREC), but these wares are residual in a later dated deposit: [117]. All other contexts would appear to date to the 19th or 20th centuries by the

presence of industrial finewares. The presence of transfer-printed ware (TPW) with the willow pattern dates context [117] to after c.1789, while refined white earthenware (REFW), dated 1800-1900 are the latest ceramics in deposits [115] and [295]. A sherd of an English majolica (MAJO) bowl decorated with a diced brown-slip pattern and green-glaze is the latest ceramic type found in context [151] and indicates activity after 1850.

Flowerpots in Post-medieval redware are additionally noted in context [151] and indicate horticultural activity on the site. A single deposit, [271], produced pottery dated to after 1800 by the presence of refined white earthenware (REFW), together with a flower pot and two other abraded sherds in Post-medieval redware.

Significance, potential, research aims and recommendations of the Collection

The Saxon pottery is of significance for demonstrating the local types of wares present on the site. The decorated sherd needs to be illustrated. The Saxon pottery also needs to be compared to the other pottery found on the site from previous excavations. The post-Roman pottery is of little significance and follows the local 19th-century ceramic trends, whilst the earlier 17th-century ceramics are typically found in the London area. The main potential of the pottery is as a dating tool to the contexts it was found in. No vessels merit illustration. There is no research aims generated from the small number of sherds recovered from the excavation. A short publication of the Saxon pottery is required. No recommendations for further work are made for the post-medieval pottery assemblage and if required, information should be taken from this report for the publication.

Appendix 4 Ceramic Building Material Assessment

Dr Kevin Hayward

Introduction and Aims

Two hundred and eighty seven examples of building material (28.7kg) from 62 contexts were retained from various phases of investigation between 2005 and 2007 at the BFF05 site (Wragg 2005; Sargent 2006; Taylor 2007). Building Material from masonry structures, however, could not be sampled as the site forms part of the Scheduled Ancient Monument Roman Bathhouse and Saxon Cemetery (Tester 1969; Palmer 1975; 1976). Finally, referral has been made to the building material report from the adjoining site BFI03 (Wragg 2003).

Together this material was assessed in order to:

- Identify (under binocular microscope) the Roman and Post-medieval ceramic building material fabric and form and stone type at Orpington.
- Mention any interesting or unusual pieces.
- Identify if ceramic building material fabric and form can relate to buildings nearby. For example, the Fordcroft Bathhouse (Tester 1969; Palmer 1975; 1976) or a possible villa or *mansio* associated with the bathhouse. In addition to these structures, the Cray valley also has a very high concentration of Roman buildings such as villas (Boyce 2007).
- Date ceramic building material on fabric and forms and how it may relate to the occupation phases at Bellefield Road.
- Assess the potential for further study.

Methodology

The building material was examined using the London system of classification with a fabric number allocated to each object. The application of a 1kg masons hammer and sharp chisel to each example ensured that a fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10).

Ceramic Building Material Form and Fabric

As expected, Roman ceramic building material dominated the assemblage with nearly all of the material in an abraded, fragmentary condition. However, with exceptions e.g. [266] concentrations are relatively low. This pattern has been identified from the results of an adjoining site BFI 03 (Wragg 2003).

Another exception is the foundation [421], believed to be the south wall from the western room of the Fordcroft Bathhouse. This consisted of courses of flint alternating with tile. The fragmentary nature of the remainder of the assemblage has been variously interpreted as colluvial and dump deposits. There is no doubt that one, if not all of these interpretations had some influence on the overall

character of the assemblage. Condition and intermixing of different ceramic fabrics and forms has also made it difficult to draw out any spatial or chronological conclusions.

In contrast, Saxon and medieval ceramic building materials are not represented, whilst post-medieval fabrics and forms are limited to the occasional brick, peg or pan tile from the Victorian or Modern occupation phases (Phase 6). This dearth of material corroborates evidence from the pottery that re-occupation only really took off again in this area during the 20th century.

Roman Ceramic Building Material

Fabric:

2815 Group (2452; 2459a; 2459b)	15 (8.6%)
3023/3060 Group	66 (37.7%)
Silty Fabrics 3018; 3011; 3238	87 (49.7%)
Other (unknown; 3030)	7 (6.8%)

The composition of this assemblage reflects in part the proximity of the site to kilns along the Cray River, which use local Wealden clays from North-West Kent/Weald for the production of silty fabrics *(3018[1]; 3011; 3238)*. These fabrics, which date to between AD60 and AD200 are mainly associated with late first to early second century occupation layers of the site (Brown 2005).

However it is not so easy to account for the preference in the use of iron-oxide fabrics from Hertfordshire (37.7%) over other contemporary sandy fabrics e.g. London *2815* (8.6%) and Eccles *2454* (0%) at the site, especially in the early occupation levels (1st century) at Bellefield Road. The absence of the Eccles fabric *2454* from here and BFI 03, should be seen as chronological as they are used between AD50-80. However, the Radlett Groups *3023* (AD 50-120) are broadly contemporary with many of the London groups (AD50-160).

What is clear, however, is that early silty, sandy and iron oxide fabrics identified in these dumped bricks, tiles and box-flue tiles must relate to an earlier building in this area. In particular, the presence of the silty fabric *3018* at BFF05, which has a restricted chronological range of between AD100 and AD120, must relate to a building from this period. This fabric has been identified from the Orpington bathhouse (*Sudds pers. obs*.). Forms :

Box Flue:

A small quantity of box-flue tile fragments, recovered from as early as Phase 3b early-late second century clearance phase [266] and later phases at this site and BFI03 (Sudds 2003) attests to the presence of a hypocaust building nearby possibly the remains of the Romano-British Bathhouse site

[1] Fabric *3018* has been sourced to the Hartfield Area of Sussex

to the north of the site (Philp & Keller 1995). These are all scored with comb marks that place them in the late first to early second century.

Brick:

Apart from *Lydion* and *Bipedalis* brick fragments from a 1st to 3rd century pit [155] and [164] interpreted as an industrial hearth or flue contemporary with the main bathhouse and an example from tile courses (fabric *3023*) of the foundation [421] nearly all this category of ceramic building material is broken up, abraded and residual.

Tegula/*Imbrex:*

All the tegulae and imbrex retained from excavation was in a fragmentary condition from Roman dumps. Nevertheless the angular flange profiles identified [1, 2, 14] do suggest Early Roman (1st - 2nd century) consistent with the fabric types.

Daub:

The presence of a small quantity of daub intermixed with the ceramic building material in early Roman contexts [157; 163; 276; 279] is an indication of some Roman clay and timber structures in the vicinity.

Post-Medieval/Early Modern Ceramic Building Material

Peg Tile: *2273nr2276; 2276; 2586; 2587*
Pan Tile: *2279; 3090*
Brick: *3032; 3033; 3035*
Drain: Stoneware drainpipe Modern.

Only a very small assemblage of post-medieval ceramic building material was retained from excavation mainly from 19th/20th century allotment pits and dumped layers of the 20th century H Smith Yard. The form and fabric of the bricks (*3035* frogged makers stamp OS) [107] are consistent with mid 19th century to 1940 use. Similarly concentrations of the peg tile fabric 2276 [103-104] fabrics are suggestive of 18th-19th century use. Finally, the intermixing of medieval and post-medieval forms in Roman contexts [218]; [242]; [290] is likely to be the result of garden allotment activity during the 19th/ 20th century.

Stone – Geological Description and Source

The quantity (31) and variety (4 types) of worked stone retained from excavation was very small. This in part reflects the soft, poor underlying geology of south-east England, where very few materials are suitable for decorative or construction purposes.

31 examples 4 rock types.

Fabrics and Forms

Flint *3117*, Upper Chalk, Upper Cretaceous, rubble.

Present as the predominant material in the walling rubble from the foundation of the bathhouse [421]. A small nodule of white burnt flint from context [425].

Flint occurs locally in nodules from the nearby Upper Chalk, which is widespread in North Kent and London. The use of this local stone in quantity for walling was done in order to minimise transport costs. This does not, however, account for its preference over Kentish Ragstone/Hassock Greensand at this site, also an accessible building stone[2], and one used in vast quantity in London and south-east England especially during the second century. One explanation could be that the walling at the Orpington bathhouse was constructed before the widespread quarrying and provincial supply of this stone. Alternatively, its absence may relate to ownership of the bathhouse. Procuratorial control of Kentish Ragstone, seems likely given its use in a large number of public buildings and defence projects in London. The use of flint in the bathhouse, on the other hand, may have been constructed through other means. One possibility is that it was done privately from a wealthy continental migrant that has been suggested for some of the smaller early bathhouses of the Cray Valley (Boyce 2007).

Hassock Greensand *3106* Lower Greensand (Lower Cretaceous) Maidstone Area of Kent.
Burnt rubble from [279] 1 example.

Neidermendig Lavastone *3123* Tertiary – Andernach region of the Rhineland.
Two rotary quernstone fragments of this lavastone from late first century levels [1] are represented by this lithology with many smaller abraded fragments from [28; 32]. The early use of this stone-type for grinding grain into course flour in Roman Britain is not unusual with large quantities identified from No1 Poultry (ONE 94) (Hayward pers. obs.). The hard vesicular texture of the lavastone was ideal for this purpose and distance was no object for transporting this unique material many hundreds of kilometres down the Rhine and then over the sea to Kent and London.

North Wales Slate *3115,* Palaeozoic, North Wales.
Thirteen small fragments of roofing tile [0] [248] [271] [321] [404]. This material is associated with 19th/20th century activity at this site.

Summary

Condition and intermixing of different ceramic fabrics and forms has also made it difficult to draw out detailed spatial or chronological conclusions. Nevertheless, a number of comments on the overall

[2] Accessible by boat from outcrops along the Medway valley at Maidstone and then into the Thames Estuary and down the Cray Valley.

chronology and function of the Bellefield Road site can be made from the form and fabric of the building material assemblage

The dominance of a variety of abraded and broken Roman Ceramic Building Material at Bellefield Road points at some stage to the construction of a large Roman building in the vicinity. The Roman assemblage apart, only small quantities of post medieval/early modern building material have been found at Bellefield Road. This evidence supports other material evidence (e.g. pottery) that there was a hiatus in occupation at this site (if one excludes the Saxon Cemetery) at the end of the Roman occupation.

Fragments of box-flue tile [163]; [217]; [266]; [268], *lydion* and bipedalis brick fragments [155]; [164] (Brodribb 1987) indicates that at least part of this assemblage derived from the hypocaust of a bathhouse. The obvious candidate is the small Roman bathhouse, where excavations adjacent to the bathhouse along Bellefield Road (Taylor 2007) identified the foundation of the south wall of the Western Room (including a *bipedalis* brick) [421].

The absence of the Kent Eccles fabrics *2454* would discount a very early construction date for the bathhouse and associated buildings e.g. *mansio* (AD50-80).

The presence of daub, however, does not discount the possibility of an earlier clay or timber construction in the vicinity.

The Hertfordshire Iron Oxide fabric *3023* is diagnostic of nearly all these hypocaust fragments. This fabric dates from between AD50-120 which would indicate that construction had begun on this bathhouse and adjoining buildings towards the end of the first century.

Evidence from the tegulae flange form (1 and 2),the combing of the box flue tiles and the dominance of associated silty *3011; 3018; 3238* and sandy fabrics *2815* scattered throughout the site in all the Roman phases (3a to 3c) would back up a late first to early/mid second century date.

An assessment of the Roman pottery (Gerrard 2007) from the primary fill of the pits [240]; [242]; [247] and the well [217] corroborates with a late first-early/mid second century date (AD70-150) from the Ceramic Building material.

It is not clear why the Radlett iron oxide fabrics *3023; 3050* were preferred over the very common sandy group *2815* in the construction of the bathhouse. It is easier to account for the dominance of the silty fabrics (50%) as these use the local Wealden Clays from the North West Kent/Weald area accessible to the Cray.

The German Lavastone querns apart, the poor quality and variety of the worked stone assemblage reflects the poor underlying geology of south-east England. The apparent absence of Kent Ragstone in the construction of the south-wall of the Western Room of the bathhouse walling requires further investigation. This material would have been accessible by boat from the Medway and was used in large quantities at London around the time of the bathhouse construction in the late first-early second century.

I would recommend more detailed analysis of the ceramic building material fabric and stone fabric from the bathhouse itself. It would, for example, be interesting to see whether there is any correlation in the ceramic building material fabric of the bathhouse and this assemblage, which would help date the bathhouse on the basis of building material fabric and form. Is the early (AD50-120) Radlett fabric *3023* present throughout, or indeed whether even earlier Eccles *2454* (AD50-80) material is present? Also what stone types were used in its construction and what can this tell us about supply (procuratorial or private) and ownership.

Dating table

Context	Size	Date range of material		Latest dated material	
1	26	55	1100	55	1100
2	9	50	120	100	120
3	11	100	120	100	120
4	5	50	160	50	160
16	3	100	120	100	120
38	2	50	120	50	120
103	16	1480	1900	1480	1900
104	4	1480	1900	1480	1900
107	2	1770	1940	1770	1940
125	1	50	120	50	120
151	1	1480	1900	1480	1900
155	2	55	160	55	160
156	1	50	120	50	120
163	9	-1500	1666	-1500	1666
205	2	100	1900	1666	1900
217	12	50	1600	50	1600
218	9	50	250	120	250
222	1	50	120	50	120
234	1	71	100	71	100
238	1	100	120	100	120

Context	Size	Date range of material		Latest dated material	
240	5	50	250	120	250
242	2	100	1800	1200	1800
245	2	71	120	100	120
247	3	71	120	100	120
252	3	50	120	50	120
256	8	50	120	50	120
258	1	50	120	50	120
259	1	50	120	50	120
266	23	50	120	50	120
268	3	-1550	1660	-1550	1600
271	7	50	1800	1200	1800
276	2	-1550	1660	-1550	1660
279	3	-1550	1660	-1550	1660
285	1	50	120	50	120
290	2	1200	1800	1200	1800
292	2	1450	1700	1450	1700
317	3	50	1450	1240	1450
325	7	50	1800	1200	1800
404	2	300	1900	1480	1900
407	6	50	1800	1180	1800
421	1	50	120	50	120
423	5	50	200	60	200
424	3	50	120	100	120
425	13	50	1800	50	1800
509	6	-1550	1660	-1550	1660

Table 1: Dating table

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Appendix 5: Small Finds Assessment

By James Gerrard and Märit Gaimster

Around 70 metal and small finds were recovered from the Bellefield Road excavations, with the majority associated with the Roman occupation phase on site. A smaller group of metal objects came from burials, forming part of a previously investigated Saxon cemetery (Tester 1968; Tester 1969). Only a handful of finds date from the post-medieval period.

Roman period items of note include a coin of Faustina Junior (SF13), a copper-alloy ring (SF10) and a brooch fragment (SF 11), along with a bracelet fragment (SF12). Iron objects are the most common category of finds with a number of large nails, perhaps indicating nearby timber structures. Non-metal finds include a large number of small fragments of Mayen/Niedermendig lava quern, which are typical of early urban/military contexts in the Roman period (Shaffery 2003, 154-155). These quern fragments may, therefore, indicate connections with London. A large sandstone quern fragment was also present, indicating production of flour nearby, probably on a domestic level. It may be possible to provenance this quern to a geological source. In addition, there is also a small amount of ferrous slag that might be related to the evidence for metalworking identified in earlier excavations (Palmer 1984, Philp and Keller 1995).

Three Saxon burials were investigated; all of these yielded metal finds, notably Grave [503] with a complete spearhead (SF 207) and a shield buckle (SF 206). This burial also included a tinned copper-alloy shield rivet (SF 200) and two possible disc-shaped shield mounts of iron; such mounts are known from previous excavation of the cemetery (Tester 1968, 138 and plate I). A further spearhead (SF 503) was recovered from Grave [1021), while Grave [1003] yielded a small iron knife (SF 500).

Context	SF	Description	Recommendation
ROMAN			
+	14	copper-alloy coin; obv: illegible, EW; rev: illegible, EW; ?first-second century; diam. 25mm	
+ (TP2)	20	copper-alloy coin; obv: illegible, EW; rev: illegible, EW; ?third century; diam. 12mm	
+	21	copper-alloy coin; corroded and illegible; 3rd/4th century; diam. 17mm	x-ray
1		six small iron nails	
2	1	lead repair patch for a large ceramic vessel	
16		curved iron object	x-ray
19		two iron fragments	x-ray
28		lava quern fragments	
32		lava quern fragments	
34		slag	
156		small iron nail	
157		incomplete iron nail	
200		seven small iron nails	
202		iron objects	
205		spherical iron object	x-ray
211	10	small copper-alloy ring , diam. 13mm	

211	11	copper-alloy rod wound with wire; brooch fragment?	
217		five heavily corroded iron objects	x-ray
218	12	copper-alloy ?bracelet; incomplete	
218		large iron nail and two fragments of iron sheet	x-ray
218		iron object	x-ray
218		lava quern fragments	
234		iron object	x-ray
240	13	copper-alloy coin; obv: FAVSTINAAVG PII[AVG FIL], SW; rev: Standing Fig (Diana?), S[C]; Dupondius, AD146-175; diam. 24mm	Needs *RIC* reference to tighten date
240		three iron objects	x-ray
244	15	copper-alloy sheet or disc	x-ray
244		two iron objects	x-ray
244		lava quern fragments; 100+ very small pieces	
247		iron nail	
247		lava quern fragments	
254		lava quern fragments	
256		Three pieces of iron sheet	x-ray
256	19	fragment of the upper part of a large, ?sandstone rotary quern	
256		lava quern fragments	
256		slag	
258		large iron nail	
260		large iron nail	
261		iron nail	
266	17	lead rod with a tapered point at one end and flattened at the other	
266		large iron nail or possibly punch	x-ray
285		iron object	x-ray
287		small iron nail	
309		iron nail	
424		iron nail	
425		two small iron nails	
1004		lava quern fragment	
1023	504	iron ?strap handle; L90mm W 25mm	x-ray
1023	505	iron ?clench bolt with domed head and ?diamond-shaped rove extant at one end; L 150mm	x-ray
1008	501	complete oval-section iron nail; L 158mm; traces of wood on shaft	
1008	502	complete oval-section iron nail; L 160mm; traces of wood on shaft	
SAXON			
Grave 503			
501	200	complete copper-alloy stud; tinned; diam. 20mm; probable fitting for wooden shield	
501	201	iron ?nail or fitting; L 45mm	x-ray
501	202	piece of small copper-alloy strap fitting; hooked at one end; W 4mm	
501	203	two pieces of iron sheet; possibly disc mounts from shield	x-ray
501	204	four fragments of thin copper-alloy disc or rivet; central perforation	
501	205	near-complete blade of iron knife; tip ?deliberately bent at right-angle; L 140mm	x-ray
501	206	iron shield boss; lifted as soil block	x-ray, may need examination by conservator

501	207	near-complete iron socketed spearhead; L 250mm	x-ray
501		iron ?slag; several pieces	x-ray
502		iron ?coffin nail; partly fused with ?human bone; L 65mm	x-ray
Grave 1003			
1001		two iron ?coffin nails; L 70mm	
1001	500	incomplete blade of iron knife; two pieces; L c.115mm	x-ray
Grave 1021			
1020	503	complete iron socketed spearhead; L 220mm	x-ray
POST-MEDIEVAL			
+		iron objects; ?post-medieval; Trench 1	
+ (TP2)		heel iron	
149		slag	
167		metal toy pistol; modern	

Table 1. Metal and small finds from Bellefield Road

Recommendations

The metal and small finds from Bellefield Road represent phases of site use previously recorded in the area, in the form of a Roman settlement and a Saxon cemetery, and should be included in any further publication of the site. For this purpose, the majority of ironwork from the Saxon burials requires x-ray for identification; the block-lifted shield boss from Grave [503], if fragile, may need examination by a conservator. In addition, a selection of unidentified Roman iron objects also needs to be x-rayed; these are listed in Table 1.

The coin of Faustina should be identified and provided with an *RIC* number. To help resolve issues of site chronology and function during the Roman period, it would be worth integrating the lists from various excavations and publishing a statistical analysis and discussion of them; coin lists from the previous excavations at Bellefield Road are extensive, numbering over 200 issues.

The Saxon grave finds need close identification and analysis to help integrate the newly excavated burials with the published material, and to further understanding of the Fordcroft cemetery.

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Appendix 6: Iron Slag Assessment

Lynne Keys

A small quantity of material (381g) was examined for this report. The assemblage consisted of tiny pieces of heat magnetised clay; iron flakes; micro-slags; one smithing hearth bottom (slag produced in the bottom of a hearth during smithing); and fuel ash slag. The latter is a very lightweight, highly porous, light coloured residue produced by any high temperature activity where alkaline fuel ash and siliceous material such as a clay lining or surface are present - including domestic hearths, burning down of buildings, accidental fires, and even cremations

The diagnostic micro-slags, hammerscale flake and spheres, were produced by ordinary and high temperature smithing, however the quantity does not indicate smithing took place on the site. It certainly indicates activity somewhere nearby, as does the smithing hearth bottom and the flakes of iron. If the material had been found close to a Roman road it could have fallen from the material to metal the surface but this is not the case here.

Belfield Road, Orpington, Kent (BFF05)

cxt	< >	slag identification	wt. (g)	len. (mm)	br.	dep
5	6	heat magnetised material & microslags	0			
28	7	heat magnetised material, very occasional flake hammerscale	1			
29	8	heat magnetised material, flake & spherical hammerscale	1			
31	9	hammerscale spheres & occ. flake, heat magnetised material & iron flakes	1			
32	10	heat magnetised material, iron flake, v. occ. hammerscale flake, one sphere	6			
34	12	iron flake & heat magnetised material	1			
34		fuel ash slag	39			
217	100	cindery run	14			
217	100	heat magnetised material, iron flakes, very little broken flake	3			
218	101	heat magnetised material, two hammerscale flakes & one sphere	0			
240	105	heat magnetised material, broken hammerscale flakes & two spheres	1			
244	106	heat magnetised material, hammerscale spheres & very little flake	1			
247	107	heat magnetised material	0			
248	120	heat magnetised material & iron flakes	0			
252	108	heat magnetised material, hammerscale flake & v. occ. spheres	0			
254	119	heat magnetised material, magnetic microslags, hammerscale flake & v. occ. spheres	1			
256		smithing hearth bottom	236	80	70	40
256		undiagnostic	68			
257	111	heat magnetised material & iron flakes	1			

266	118	heat magnetised material & iron flakes	1
275	119	heat magnetised material & microslags; very occ. flake hammerscale	2
278	117	heat magnetised material & hammerscale flakes	1
279	123	heat magnetised material & one or two hammerscale flakes	1
292	128	heat magnetised material & iron flakes	1
305	132	heat magnetised material, broken iron flakes, one hammerscale flake	1
		total = 381g	

Table 1: Quantification table

Appendix 7: Glass Assessment

John Shepherd

Assessment

Only fourteen fragments of glass were submitted for identification. All are late post-medieval, including three marbles, except for a single Roman fragment. This fragment [244] comes from the rim and side of a small pillar-moulded bowl, a form that is well-attested during the first century AD. The colour of the glass, dull brown, is not so usual and perhaps indicates that the vessel was made during the mid to late first century, when monochromes are known, rather than later in the first, when naturally coloured bowls predominate.

Recommendations

The Roman vessel [244] requires illustration. The two sentences describing it above should suffice as a publishable text entry. No further recommendations.

Context	no. frags	Colour	Form	Technique	Date	Full catalogue entry	Requiring illustration
+	1	Colourless	Window, Georgian wired	cast	L19th or 20th C.	n	n
+	1	Brown	Bottle, ribbed	machine made	L19th or 20th C.	n	n
+	1	Natural green blue	marble		L19th or 20th C.	n	n
+	1	Red/opaque white/colourless	marble		L19th or 20th C.	n	n
+	1	Natural green/opaque white	marble		L19th or 20th C.	n	n
+	1	Colourless	Bottle	machine made	L19th or 20th C.	n	n
+	1	Colourless	Window	cylinder	L19th or 20th C.	n	n
+	1	Natural green	Vess	free blown	Post-med	n	n
+	1	Natural green	Bottle	machine made	L19th or 20th C.	n	n
107	1	Green	Bottle, complete squat hexagonal pharmaceutical	machine made	L19th or 20th C.	n	n
117	1	Colourless	Vess	free blown	Post-med	n	n
151	1	Colourless	Vess	free blown	Post-med	n	n
153	1	Colourless	Vess	free blown	Post-med	n	n
244	1	Dull brown	Pillar-moulded bowl, rim and part side	cast and sagged	1st C	y	y

Table 1: Quantification of Glass

Appendix 8: Lithic Assessment

Barry John Bishop

Introduction

A total of twenty-five pieces of struck flint and just under 1.5kg of burnt flint fragments were recovered from three evaluation phases and a subsequent excavations conducted at the above site. This report assesses the archaeological potential of the lithic material. It quantifies, describes and discusses the material and recommends any further work required. The lithic material was recovered predominantly from Roman or later contexts and may be considered as mostly residually deposited.

Quantification

Context	Primary Flake	Core-shaping flake	Chip	Flake	Flake Fragment	Blade-like flakes	Flake Core	Minimal Core	Conchoidal Chunk	Axe/Adze	Edge-trimmed	Piercer	Scraper	Burnt Flint (no.)	Burnt Flint (Wt:g)
110/210														1	36
01														2	52
04		1		1		1						1		3	96
05														2	103
11						1								0	0
19						1								1	19
28														2	87
29	1			1							1			0	0
32			1		1									0	0
38														1	17
119														2	43
125	1													1	27
157														4	33
163														2	330
205														1	25
217														1	244
229														2	49
230			1	1				1					2	1	16
234														2	13
240														1	17
247														2	34
252														3	38
254										1					
267														6	92
271				2			1								
279														3	91
292														1	5
317											1				
327														1	29
1004	1						1		1						

Table 1: Quantification of Lithic Material by Context

Burnt Flint

A total of 45 pieces of otherwise unmodified burnt flint weighing 1492g was recovered from 23 different contexts. It was found mostly in small quantities within a number of separate contexts, most probably as incidentally incorporated background waste. Interestingly however, it had nearly all been heated uniformly to a very high temperature, resulting in it becoming heavily ‘fire-crazed’, attaining a

consistent grey-white colour and becoming extensively shattered. The uniformity and intensity of the burning may indicate that the flint was deliberately heated, rather than representing casually accumulated debris from domestic hearth use. It would appear that large nodules were selected and purposefully burnt, in a manner similar to 'potboilers', and perhaps associated with activities such as cooking or other industrial or craft processes (eg Barfield 1991).

Struck Flint

Condition

The condition of the struck flint was variable; most pieces exhibited some chipping and rounding to their thinner edges, although there was little evidence to indicate any extensive post-depositional movement and most pieces were probably recovered from close to where they were originally discarded.

Raw Material

The raw materials consisted of thermally affected nodular cobbles of fine-grained translucent black flint with varying proportions of opaque light grey cherty patches and a hard but relatively unweathered yellow or greyish white thick (c.1-5mm) cortex. It was typical of flint originating from the North Downs, the weathered and thermally shattered nature of the nodules would suggest that they were procured from derived deposits eroded from the parental chalk and had experienced a limited degree of later colluvial/alluvial reworking. Deposits of this kind of material are commonly found around the edges of chalk hills infilling valleys (Gibbard 1986), and would be easily available in the vicinity of the site.

Technology, Typology and Dating

The assemblage was small and contained few chronologically diagnostic implements. The most notable piece consisted of a single-ended transverse axe or –adze recovered from context [254]. This was manufactured from an appropriately shaped elongated nodule of mottled cherty grey and black flint with one end remaining unworked and still covered with a relatively thick but weathered cortex. It measured 128mm by 53mm by 38mm and weighed 287g, being within the typical range of those from the Thames as examined by Field (1989). It had a lozenge shaped cross section, sinuous edges and a slightly curved profile. It had been alternatively bifacially worked with the 'lower' face being relatively flat and formed by larger and more irregular flake removals, and with a domed 'upper' face which had been much more finely worked, with more-frequent and smaller 'thinning' type removals, forming a radial pattern. This may suggest the tool was used more like an adze or mattock than an axe. It had been sharpened with the characteristic tranchet blow on its 'lower' face and, although there was some abrasion to the cutting edge, it had not experienced any heavy use-wear. Its butt exhibited further abrasion, possibly indicating it had been hafted, although this may have been naturally occurring and its rounded shape would have enabled it to be comfortably held in the hand. Such implements are characteristically Mesolithic in date and may complement the blade-like flakes recovered during the investigations, which had Mesolithic or Early Neolithic technological characteristics.

Much, perhaps even the majority, of the remainder of the assemblage demonstrated an opportunistic and ad hoc approach to flint reduction that was more characteristic of Bronze Age industries, particularly those from the later second and early first millennium BC (cf Brown 1991; Herne 1991; Young and Humphrey 1999). These included many of the thicker and more-crudely produced flakes, the cores and the retouched pieces, all of which consisted of informal types that had been expediently produced.

Context

Most of the material was recovered from Roman or later contexts and can be considered as residually deposited. Of the two undated tree-throw hollows, [158] contained only small quantities of burnt flint which, although indicative of human activity in its vicinity, cannot be dated. The other, tree-throw hollow [231], contained a small but interesting assemblage. In addition to an unretouched flake and a chip, this included two crudely made scraper-type implements, both on thick flakes with short stretches of steep retouch along part of their edges, and a minimally reduced core consisting of an angular fragment with a number of very small flakes removed along a flat thermal plain, resulting in a similar 'edge' to that present on the scrapers. Although the two scrapers and the core varied in shape and size, they all shared very similar potential working edges and may all have fulfilled similar functions. The condition of this assemblage was good and it may represent a small tool-kit or a set of implements used for a particular task and subsequently deposited into the tree-throw hollow.

Discussion

The assemblage was small and, with the exception of the Mesolithic transverse axe/adze, contained no truly chronologically diagnostic implements. A few other flakes may be associated with this implement although the technological characteristics of much of the assemblage would be more compatible with a Middle Bronze Age or later date. The mix of Mesolithic and Bronze Age struck flint is a recurring feature of other assemblages found in the immediate vicinity of the site. At 3 Bellefield Road Mesolithic to Bronze Age lithics were present (Leary 2003), at the Fordcroft Roman Site, a relatively large assemblage of struck flint, including diagnostic Mesolithic implements such as microliths, as well as material described as Later Neolithic or Early Bronze Age but which could have been later in date, was recovered (Philp and Keller 1985), and further Mesolithic material was recovered at Poverest Road during the 1970s excavations by Palmer (Palmer 1984).

There is extensive evidence for Mesolithic occupation in this area and, in particular, it appears to concentrate around the Cray's springline, such as at Orpington Priory (Grey and Tyler 1991), its headwaters and along the North Downs escarpment (eg Meekums 2000; Densem and Potter 2002). This pattern mirrors that identified in the Beddington and Carshalton area where prolific quantities of Mesolithic material have been recovered from the River Wandle's headwaters and around that area of the North Downs (eg Turner 1965; Cotton and Hayes 1980; Leary *et al.* 2005).

Much less evidence of Bronze Age activity has been recorded from the Orpington area (eg Meekums 2000; Densem and Potter 2002) although the Cray's fertile river margins would no doubt have been as attractive to early agricultural communities as has been demonstrated for comparable locations within the Wandle Valley. There, an extensive agricultural landscape had been established by the Late Bronze Age (eg Lowther 1945; Adkins and Needham 1985; Bagwell *et al.* 2001; Yates 2001; Leary *et al.* 2005), and further archaeological excavation in the Cray Valley will no doubt throw more light on its exploitation during the Bronze Age.

Significance and Recommendations

Due to its size this report is all that is required of the material for the purposes of the archive and no further analytical work is proposed. It is, however, of some significance in that it represents activity at the site during the Mesolithic and Bronze Age periods not otherwise represented in the structural record. It also has the ability to contribute to a more comprehensive understanding of settlement and landscape exploitation of this area during these periods and could add to any future syntheses of the prehistory of this area. It is therefore recommended that a description of the assemblage, including illustrations of relevant pieces, should be included in any published account of the fieldwork. The publication should include consideration of local geology, raw material sources and previous finds and research in the local area.

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Appendix 9: Human Bone Assessment

Kathelen Sayer

Introduction

The following report details the results of the assessment of two Saxon burials from BFF05. Both burials were very poorly preserved and as such the amount of information that can be gained from the skeletal remains is limited.

Methodology

The skeletal remains were analysed to assess the condition of the remains and where possible the age, sex and stature of the individual, any gross pathology present was recorded to site and morphological changes described.

The condition and completeness of a skeleton affects the amount of data that can be recorded. The condition of the bone was recorded according to the stages of surface preservation suggested by McKinley (2004) and the completeness of the skeleton was based on a complete skeleton consisting of:

Skull	20%
Torso	40%
Arms	20%
Legs	20%

Age was assessed using the stages of epiphyseal fusion, measurement of long bone length, dental eruption, dental attrition (Brothwell, 1981), changes within the pubic symphysis (Brooks and Suchey, 1990) and the auricular surface (Lovejoy, 1985). All individuals where ageing data could be collected were placed into one of the following age ranges:

Neonate	0-1 month
Infant	birth - one year
Juvenile	1 - 12 years
Adolescent (Adol)	12 - 20 years
Young Adult (YA)	20 – 35 years
Middle Adult (MA)	35 – 50 years
Old Adult	50 + years
Adult	>20 years
Undetermined	

Sexually dimorphic traits in the pelvis and skull were used to ascertain the sex of the individual. Each individual was placed into one of the following categories:

male, female (positive identification)

male?, female? (compares favourably to a sex but not conclusive)

“I” (indeterminate)

‘?’ (inconclusive).

The living stature of the skeletons was, where possible, calculated from the long bone lengths using the regression equations devised by Trotter and Gleser (1958). The choice of long bones used was based on the preservation of the skeleton and the order of preference suggested by Brothwell and Zakrzewski (2004) for the regression equations.

The dentition was recorded in the following way:

	Right								**Left**							
Maxilla	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Mandible	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**

/	lost post-mortem	X	lost ante-mortem -
-	tooth present but jaw missing	U	present
NP	not present	PE	partially erupted
O	tooth erupting	B	broken
V	tooth unerupted	--	tooth and jaw not present
PU	pulp exposed	R	root only

Dental pathology was recorded to site and severity. Brothwell (1981) devised the scoring system used for calculus and the following grading system of severity was used for caries:

1 Pit/fissure

2 <half crown destroyed

3 >half crown destroyed

4 All crown destroyed

5

Results

Skeleton [502]

Condition and Completeness

All surviving skeletal elements are in poor condition, with moderate erosion of the shafts of the bones and some flaking of bone surfaces, including some articular surfaces. Only c. 25% of the skeleton was present. The skeletal elements present are:

Skull
Right humerus
Right femur
Right tibia and fibula
Left humerus
Left femur
Both feet.

Dentition

	Right	**Left**
Maxilla	**-- -- -- -- -- -- -- --**	**-- -- -- -- -- -- -- --**
Mandible	**X X / / / / / /**	**/ / / / / / X X**

Age and Sex

The only areas available for sex estimation were skull fragments, which had female characteristics. The individual was probably of adult age but due to the condition of the remains and the lack of skeletal elements no further assessment of age could be carried out.

Pathology

The only pathology recorded was the ante mortem loss of the 2nd and 3rd molars from the mandible.

Skeleton [1002]

Condition and Completeness

All of the skeletal elements are in very poor and fragile condition. There is extensive fragmentation and flaking of the bone surfaces of the elements that do survive. The ends of the long bones did not survive and the shafts were very fragmentary. Only c.20% of the skeleton survived: The skeletal elements present are:

Right femur
Left humerus shaft fragment.
Possible ulna or radius shaft fragment
Left tibia shaft and proximal surface. c 45 fragments
Left femoral shaft fragments and distal epiphysis. >25 fragments.
Very fragmentary skull. Including 3 fragments of mandible

Dentition

	Right								Left							
Maxilla	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mandible	-	B	B	B	B	U	U	U	U	R	U	/	/	/	/	/

Age and Sex

The only skeletal elements available for sex estimation were the fragments of mandible, which had male characteristics.

Dental attrition suggests the individual was of middle adult age.

Pathology

Due to the very poor condition of the remains the only pathology observable were heavy deposits of calculus on all of the teeth.

Recommendations for further work

Due to the condition and fragmentary nature of the remains no further work is required.

Appendix 10: Animal Bone Assessment

Kevin Rielly

Introduction

Animal bones were recovered from the various incursions at this site with the bones from the investigations within the former H Smith Yard being recorded by Frank Meddens (Meddens 2007) and those from investigations within Bellefield Road being recorded by the author. This present report aims to amalgamate the information from all incursions with that from the latest. Investigations within Bellefield Road provided two notable archaeological features, a Roman bathhouse situated just to the north of Bellefield Road and a Saxon cemetery to the east. The excavations within the former H Smith Yard provided evidence of Roman activity, including some structures and occupation deposits, which are presumably associated with the bathhouse just to the north. These deposits provided a moderately large animal bone assemblage. While there is some post-Roman activity (with very few bones), no additional evidence for the Saxon cemetery was discovered during investigations within the former H Smith Yard.

Methodology

The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered.

Description of faunal assemblage by phase

Following the initial phases of excavation, it was possible to divide the archaeological evidence into 9 provisional phases, as follows: - 1a - natural, 1b - disturbed natural, 2 - Bronze Age, 3a - 1st century, 3b - late 1st/2nd century, 3c - Late 2nd century/3rd century, 4 - Saxon and 5 – post-Saxon. The animal bone assemblage, amounting to 356 fragments (all hand collected) were limited to the later Roman and post-Roman phases. The great majority were recovered from the archaeological mitigation and in particular from Area 1 (see Table 1), which was fully excavated, unlike most of the other mitigation areas which were subject to ‘an advanced observation and recording exercise’ (Taylor 2007). This trench was located at the eastern part of the site adjacent to Bellefield Road.

	N bones	Area 1	Road Area
1st evaluation	24		
2nd evaluation	5		
Mitigation	294	291	3
Latest excavation	33		

Table 1. Distribution of animal bones

The bones were generally in moderate to good condition but the level of fragmentation was quite high. Most of the damage was clearly caused during excavation as shown by the very high proportion of bones with fresh breaks. This is probably related to the intractable nature of the brickearth matrix in combination with the natural gravel substrate, the latter tending to be detrimental for bone preservation.

Phase 3c

The majority of the site assemblage was taken from this phase, with most of the bones arising from three features – pits [21] and [241], and well [219] (see Table 2), all dating to the later 2nd century. Each of these features provided a similar assemblage with a notable dominance of cattle and cattle-size fragments. This pattern may be the result of the noted levels of preservation and fragmentation, where the larger and more robust bones would be expected to have a better chance of survival. One typical aspect of this type of assemblage is the good representation of loose teeth, as clearly seen from the well deposit (see Table 3).

Species/Animal size class		3c	3c	3dc	3c	4	5
		pit [21]	pit [241]	Well [219]	All	All	All
Cattle (Bos taurus)		11	47	26	90	4	1
Horse (Equus caballus)				7	7		1
Cattle-size		14	55	140	213	7	8
Red Deer (Cervus elaphus)			1	1	2		
Sheep/Goat (Ovis aries/ Capra hircus)			1		2	1	
Pig (Sus scrofa)					1	1	
Sheep-size			1	1	2	1	5
Unidentified			10		10		
Grand Total		25	115	175	327	14	15

Table 2: Counts of animal bone in each occupation phase and major feature

There are, however, other possible reasons for the noted species representation pattern. Both the pit fill groups provided cattle assemblages largely composed of head and foot parts. While the quantity of bones is small, the evidence suggests these assemblages may be the remains of dumps of butchers waste. A similar argument may be applied to the well fill collections, except that there are very few foot parts and the skull/mandible fragments could actually represent the remains of a single adult cattle skull (complete with horncores). The same fill [217] also provided a concentration of horse skull fragments, which are likely to belong to a single individual. It can be conjectured that two complete

skulls within a well fill could be the result of 'ritual' behaviour, perhaps representing a 'termination' deposit.

All of the cattle bones are clearly from adult individuals, as shown by the fusion of the distal metapodials (fusion at about 2 years of age, see Schmid 1972, 75) and by the worn to very worn maxillary and mandibular teeth. It should be stressed, however, that younger individuals might be under represented due to the aforementioned preservation and fragmentation biases. Apart from the cattle and horse bones, these three features also provided a single sheep/goat radius and two red deer metatarsal fragments, both from adult individuals.

Skeletal part	Well [219]	Pit [241]	Pit [21]
Skull	7(45)	3(6)	3(1)
Mandible	(1)	5(1)	1(5)
Tooth	14	8	1
Upper limb	(1)	1(4)	
Lower limb	1(1)	1	
Metapodial	2	15	6
Phalange		3	

Table 3: Cattle skeletal representation in phase 3d features, with numbers of cattle-size fragments in brackets.

The remainder of the phase 3c assemblage was recovered from two colluvial deposits and the fill of posthole [1007], from the latest excavation. These also provided mainly cattle bones, but with a greater mix of parts, and also one more sheep/goat fragment, a mandible, and the sole Roman pig bone, a humerus. One bone fragment, a cattle-size tooth, was retrieved from fill [254] of Area 1 pit [255].

Phase 4, Saxon

Most of the bones dated to this period where taken from the latest excavation, with 10 fragments from a definite and one from a possible Saxon grave ([503] and [1021] respectively). The former collection mainly consisted of cattle and cattle-size pieces, but also with single fragments of sheep/goat, pig and sheep-size bone. The similarity of these bones in terms of preservation and fragmentation with the previous Roman collections, probably suggests they are likely to be residual. The other bones in the phase 4 assemblage consist of three fragments, all cattle-size, taken from two colluvial deposits recorded within Bellefield Road.

Phase 5, Post Saxon

The small collection of bones dated to this phase included a single identifiable piece, a cattle tooth from a colluvial fill [1004] and various cattle-size fragments from another two colluvial fills [424] and [425].

Conclusion and recommendations for further work

The general state of the animal bone assemblages will undoubtedly act as a limiting factor concerning their interpretation. It can be assumed that the smaller and less robust bones will be under represented, resulting in a bias towards the skeletal parts of cattle and horse. There is indeed a dominance of cattle bones, but within these bovine collections there is a notable skeletal part distribution that cannot so easily be interpreted in terms of differential survival. This includes the possible 'termination deposit' within the well and the cattle butchers waste collections in the pits, all dated to the late 2nd century (phase 3c). These features provided the great majority of the bones from this site, and clearly represent those collections with the greatest potential value regarding any further study of the site assemblage.

The butcher's waste is particularly interesting. While the quantities are not large they obviously represent the remains of several animals, which suggests waste from a professional butcher rather than from a household kitchen. It can be conjectured that meat was being supplied to cookhouses catering for the clientele of the nearby bathhouse. The bathhouse appears to have remained in use until the mid 3rd century (Boyce 2007, 262). However, there may have been other outlets, as suggested by the clearly extensive Roman occupation of this locality (ibid, 261-2; Taylor 2007).

The possible 'ritual' deposit in the well could be viewed in terms of behaviour associated with a deeply religious society, which clearly used animals or parts of animals for various non-secular activities. There are a number of Roman wells within the city of London and Southwark with unusual bone assemblages (Merrifield 1987; Liddle in prep), while the relatively nearby villa site at Keston provided rather odd bone collections consisting of the remains of several complete domestic animals placed within 'ritual' shafts (Locker 1999).

The post-Roman assemblage is rather small and there is a good chance that the majority of these bones were redeposited from earlier levels. The bones recovered from the Saxon graves could be interesting considering the evidence for the use of animal offerings in Saxon burial practises. However, the wealth of evidence for such practises is clearly best represented amongst cremation rather than inhumation burials, as for example from Spong Hill (McKinley 1994 and also see Bond 1996). In addition, without any obvious association with the human remains or any clear evidence that they do in fact represent grave goods (for example, if some of the bones could be interpreted as a joint, say two or three articulated body parts, or as a food dump, say the remains of a chicken) these bones are most likely to have entered the grave when it was backfilled and probably also date to an earlier period.

It is recommended that further work should concentrate on the ritual and butchers waste elements of the second century occupation of this site. It would be advantageous to compare this bone assemblage to others in the general area. Excavations at the nearby bathhouse and environs (Philp and Keller, 1995) may have produced animal bone collections, while faunal remains were certainly recovered from another River Cray bathhouse, at Beden's Field. Rather large enclosures at this site, as well as a notable collection of butchered cattle remains, have been interpreted as evidence for cattle rearing (Parsons 1973 in Boyce 2007, 262). However, it is unclear whether this evidence is contemporary with the Bellefield assemblage.

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Appendix 11: Environmental Sample Assessment

Nick Branch (ArchaeoScape)

Introduction

This report summarises the findings arising out of the environmental archaeological assessment undertaken by *ArchaeoScape* in connection with the proposed development at H Smith Yard and Bellefield Road, Fordcroft, Orpington (Site Code: BFF05; National Grid Reference: TQ 4668 6757). The site forms part of Scheduled Ancient Monument (SAM) 145, comprising a Roman bathhouse and Saxon cemetery. The archaeological excavation, conducted by Pre-Construct Archaeology Ltd., permitted the recovery of twenty-seven bulk samples from a variety of contexts provisionally dated to the Roman period (Phases 1b to 3c); there was no evidence within the excavation area for Saxon burials. The assessment exercise consisted of an evaluation of the suitability of the bulk samples for reconstructing local environmental conditions, and the economy and diet of the former inhabitants.

Geological Context

The site is in the valley of the River Cray. The Cray is a left-bank tributary of the River Darent. The site is about 12km upstream from the confluence with the Darent. The British Geological Survey (1:50,000 Sheet 271 Dartford 1998) shows the alluvium of the Cray flanked throughout the course of the river by River Terrace Deposits identified as the Taplow Gravel. The Crayford Silt (brickearth) overlies the gravel in many places, most often masking the break of slope between the Taplow Gravel and the valley side. The Bellefield Road site lies on the west side of the valley on the featheredge of the Crayford Silt where it thins downslope towards the river. The bedrock underlying the site is probably the Upper Chalk although it must be very close to the featheredge of the Thanet Beds that overlie the Chalk here and form the lower slope of the valley-side. According to the BGS mapping, the sequence of Pleistocene deposits overlying the Chalk at the Bellefield Road site is an upstream continuation of the sequence in the Crayford area, near the confluence with the Darent, where, in the nineteenth century, pits in the 'brickearth' uncovered artefacts and working floors of Levallois age together with prolific faunal remains (Kennard 1944). There are no records of similar archaeological or faunal remains in the brickearth in the valley of the Cray upstream from Crayford. There are however records of Mesolithic artefacts from the surface of the brickearth in the vicinity of the site, including a substantial assemblage, disturbed by the Roman occupation, in Poverest Road (NGR: TQ 467 675) very close to the Bellefield Road site (Wymer 1977).

Methods

Twenty-seven bulk samples were assessed from a range of archaeological features, including a tree throw, gullies, pits and wells. Two samples were provisionally dated to Phase 1b, one sample from Phase 2, four samples from Phase 3b, twenty samples from Phase 3c. Sub-samples of the bulk samples were processed by flotation by Pre-Construct Archaeology Ltd, using 1mm and 300µm mesh sizes (Table 1). The bulk sub-sample ‘flots’ were scanned using a low-power zoom-stereo Olympus BX41 microscope and the residues were sorted ‘by eye’. Provisional identifications of charred and

waterlogged plant macrofossils were made using reference collections at Royal Holloway, and recommendations for further analysis are based on the concentration and standard of preservation of the remains. Plant nomenclature follows Stace (1997).

Results Of The Environmental Archaeological Assessment

Phase 1b

The contexts attributed to Phase 1b essentially represent human use of the upper surface of the natural brickearth (Taylor 2006). In parts of the site the upper natural horizon had been affected by bioturbation (Taylor 2006). Previous work undertaken nearby (Wymer 1977) suggests this is entirely consistent with what could be expected at the Bellefield Road site and could possibly infer Mesolithic occupation of the site. The assessment indicates that low concentrations of waterlogged plant macrofossils are preserved in contexts [275] and [248], namely *Alnus* (alder) and *Rumex* sp. (docks and sorrels). Based upon the assumption that these taxa are contemporaneous with their stratigraphic and chronological context, they indicate the presence of nearby wetland and waste ground, perhaps growing on the margins of a stream, river or pond.

Phase 2

The assessment indicates that low concentrations of waterlogged plant macrofossils are preserved in context [230], from a tree throw hollow [231], namely *Rumex* sp (docks and sorrels), *Alnus* (alder), *Rubus* (e.g. blackberries) and *Chenopodium album* (fat hen). Based upon the assumption that these taxa are contemporaneous with their stratigraphic and chronological context, they indicate the presence of nearby wetland and waste ground, perhaps growing on the margins of a stream, river or pond.

Phase 3b

A number of gullies, which would have defined areas, were excavated across the site (Taylor, 2006). The assessment indicates that low concentrations of charcoal, charred plant macrofossils and waterlogged plant macrofossils are preserved in contexts [305], [298], [266] and [128], namely Poaceae (grass family), *Alnus* (alder), *Rubus* (e.g. blackberries) and *Chenopodium album* (fat hen). They indicate the presence of nearby wetland, waste ground and grassland (meadow or pasture).

Phase 3c

The presence of a number of postholes, particularly within a northeast enclosure, suggests a phase of construction (Taylor 2006). The assessment indicates that low concentrations of waterlogged plant macrofossils are preserved in context [34], a posthole, namely *Rubus* (e.g. blackberries) and *Chenopodium album* (fat hen). They indicate the presence of nearby waste ground containing shrubland, although it is possible that the *Rubus* seeds are also indicative of fruit that was consumed. The excavations also recorded the remains of a timber well [218]; Taylor 2006), which contained low concentrations of waterlogged plant macrofossils, namely *Alnus* (alder).

A number of pits of Roman date were excavated during the investigations (Taylor 2006). The assessment indicates that low concentrations of charcoal, charred plant macrofossils and waterlogged plant macrofossils are preserved in contexts [279], [276], [259], [258], [257], [254], [252], [247], [244], [240] and [5], namely *Rumex* sp. (docks and sorrels), *Alnus* (alder), *Rubus* (e.g. blackberries), *Chenopodium album* (fat hen), Caryophyllaceae (campion family) and Poaceae (grass family). The presence of charcoal and charred plant remains in several pits suggests that they may have contained discarded domestic refuse or used for grain storage. Supporting this is the presence of charred cereal grains of *Hordeum* sp. (barley) and *Triticum* sp. (wheat). The absence of other charred component parts of wheat and barley, such as rachis, within the samples assessed does not exclude the possibility of on-site processing but may suggest that only the prime grain was stored.

Samples from three wells and four postholes were assessed, and the results indicate the presence of low concentrations of charcoal, charred plant macrofossils and waterlogged plant macrofossils in contexts (261), (256), (217), (32), (31), (29) and (28), namely *Rumex* sp. (docks and sorrels), *Alnus* (alder), *Rubus* (e.g. blackberries), *Chenopodium album* (fat hen) and Poaceae (grass family). The presence of charcoal and charred plant remains, including cereal grains, in well [219] suggests that it may have contained discarded domestic refuse.

The taxa as whole are indicative of a range of plant communities, including waste ground, shrubland, grassland and wetland.

Sample number	Context number	Volume processed (litres)	Volume remaining (litres)	Phase	Description	Concentration			Main Taxa
						Charcoal	Waterlogged	Charred	
119	275	10	20	3c	external surface/burnt natural	0	1	0	*Alnus*
120	248	7	20	3c	external surface/burnt natural	0	1	0	*Rumex* sp.
105	230	8	20	2	fill of [231] tree throw	0	1	0	*Chenopodium album*, *Rubus*, *Rumex*, *Alnus*
132	305	10	0	3b	fill of [306] gully	0	1	0	*Chenopodium album*, *Alnus*
131	298	10	0	3b	fill of [299] gully	1	1	0	*Rubus* sp.
118	266	10	20	3b	fill of [274] gully	1	0	1	*Chenopodium album*, Poaceae
292	128	10	20	3b	fill of [293] gully	0	0	1	*Chenopodium album*
102	218	10	20	3c	fill of [219] well	0	1	0	*Alnus*
12	34	8	10	3c	fill of [35] posthole	0	1	0	*Rubus* sp., *Chenopodium album*
123	279	10	20	3c	fill of [260] pit	0	1	1	*Chenopodium album*
117	276	10	30	3c	fill of [260] pit	1	0	1	*Chenopodium album, Rubus* sp., *Triticum* sp.
115	259	10	0	3c	fill of [260] pit	1	1	0	*Rubus* sp., *Chenopodium album*
112	258	10	10	3c	fill of [260] pit	0	1	0	*Rubus* sp.
111	257	10	0	3c	fill of [260] pit	1	1	0	*Chenopodium album, Rubus* sp., *Rumex* sp.
109	254	10	0	3c	fill of [255] pit	0	1	0	*Alnus*
108	252	10	20	3c	fill of [253] pit	0	1	0	*Chenopodium album, Alnus*
107	247	10	5	3c	fill of [241] pit	1	0	0	-
106	244	10	5	3c	fill of [241] pit	1	Wood	1	*Triticum* sp., *Chenopodium album*
105	240	10	0	3c	fill of [241] pit	1	1	0	Caryophyllaceae, Poaceae, *Alnus*
6	5	7	10	3c	fill of [21] pit	1	0	1	Cf. *Hordeum* sp.
113	261	8	20	3c	fill of [219] well	1	0	0	-
110	256	10	20	3c	fill of [219] well	1	0	0	-
100	217	10	20	3c	fill of [219] well	1	0	1	Cereal sp. Poaceae, *Chenopodium album, Rumex* sp.
10	32	10	0	3c	fill of [35] posthole	0	1	0	*Chenopodium album, Rubus* sp.
9	31	8	0	3c	fill of [30] posthole	1	0	1	*Chenopodium album, Rubus* sp. cf. *Alnus*
8	29	10	10	3c	fill of [30] posthole	1	1	1	*Rubus* sp, *Chenopodium album*
7	28	10	0	3c	fill of [30] posthole	1	1	0	*Rubus* sp.

Table 1: Plant macrofossil assessment

(Key to concentration values: 0 = absent, 1 = 0 to 25 fragments, 2 = 25 to 50 fragments, 3 = 50 to 75 fragments, 4 = 75 to 100 fragment

Conclusions And Recommendations

In conclusion, the environmental archaeological assessment of twenty-seven bulk samples has indicated that charcoal, waterlogged plant macrofossils and charred plant macrofossils are present but in low concentrations. During the Roman occupation, there is unequivocal evidence for the utilisation of both wheat and barley, with both cereals probably forming part of the diet. Other plant taxa present in a variety of features suggests that alder woodland was growing close to the settlement, together with areas of waste ground and grassland with docks and sorrels, fat hen and grasses, and shrubland, probably with blackberry bushes. However, due to the low plant macrofossil and charcoal concentrations, no further analysis of the samples is recommended. Nevertheless, the results of the assessment may usefully form a minor part of the publication text.

References

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Appendix 12: OASIS Form

OASIS ID: preconst1-26571

Project details

Project name	Archaeological Investigations at the former H Smith Yard and Bellefield Road, Orpington, London Borough of Bromley
Short description of the project	The investigations at the former H Smith Yard consisted of a primary evaluation conducted between 4th and 17th May 2005, a secondary evaluation conducted between 19th and 28th June 2006 and a phase of archaeological mitigation, including excavation, 'enhanced observation and recording' and watching briefs, conducted between 15th September and 15th November 2006. A third and fourth phase of evaluation were conducted within Bellefield Road itself between 6th and 14th November 2006 and between 30th March and 17th April 2007. The evaluations were followed by a watching brief conducted sporadically throughout the autumn of 2007. With the exception of a Bronze Age tree throw, located within the former H Smith Yard, evidence for prehistoric activity on site was limited. Evidence of Roman occupation was found across the former H Smith Yard, possibly relating to industrial activity, and within the confines of Bellefield Road itself the back foundation wall of the scheduled Roman Bathhouse was revealed. Four graves of Saxon date were recorded during the investigations conducted within Bellefield Road.
Project dates	Start: 04-05-2005 End: 22-10-2007
Previous/future work	Yes / No
Any associated project reference codes	BFF05 - Sitecode
Type of project	Recording project
Site status	Scheduled Monument (SM)
Current Land use	Other 11 - Thoroughfare
Current Land use	Industry and Commerce 1 - Industrial
Monument type	TREE THROW Bronze Age
Monument type	GULLIES Roman
Monument type	WELL Roman

Monument type	PITS Roman
Monument type	POSTHOLES Roman
Monument type	FOUNDATION Roman
Monument type	DITCHES Roman
Monument type	GRAVES Early Medieval
Significant Finds	SHIELD BOSS Early Medieval
Significant Finds	SPEARHEADS Early Medieval
Significant Finds	KNIFE Early Medieval
Investigation type	'Full excavation', 'Part Excavation', 'Recorded Observation', 'Test-Pit Survey', 'Watching Brief'
Prompt	Scheduled Monument Consent

Project location

Country	England
Site location	GREATER LONDON BROMLEY ORPINGTON The former H Smith Yard and Bellefield Road, Fordcroft, London Borough of Bromley
Study area	2530 Square metres
Site coordinates	TQ 466 675 51.3870629493 0.107109879247 51 23 13 N 000 06 25 E Point
Height OD	Min: 47.24m Max: 51.91m

Project creators

Name of Organisation	Pre-Construct Archaeology Ltd
Project brief originator	English Heritage

Project design originator	Gary Brown
Project director/manager	Gary Brown
Project supervisor	Joanna Taylor
Name of sponsor/funding body	Greenacre Homes

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Assessment of Archaeological Investigations at the former H Smith Yard and Bellefield Road, Fordcroft, Orpington, London Borough of Bromley
Author(s)/Editor(s)	Taylor, J
Date	2008
Issuer or publisher	Pre-Construct Archaeology
Place of issue or publication	London

Entered by	Joanna Taylor (jtaylor@pre-construct.com)
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