

**A PHASE III
ARCHAEOLOGICAL
EVALUATION ON BLOCKS
E, F, G, K, M AND N,
MARDYKE ESTATE,
RAINHAM, LONDON
BOROUGH OF HAVERING,
RM13 8PS
SITE CODE: MYE08**

REPORT NO: R11482



**A Phase III Archaeological Evaluation on Blocks E, F, G, K, M and N,
Mardyke Estate, Rainham, London Borough of Havering, RM13 8PS**

Site Code: MYE 08

Central National Grid Reference: TQ 5057 8339

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Pre-Construct Archaeology Limited, July 2013

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CONTENTS

1	ABSTRACT	3
2	INTRODUCTION	4
3	PLANNING BACKGROUND	7
4	GEOLOGY AND TOPOGRAPHY	9
5	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	10
6	ARCHAEOLOGICAL METHODOLOGY	12
7	ARCHAEOLOGICAL PHASE DISCUSSION	14
8	INTERPRETATIONS AND CONCLUSIONS	28
9	ACKNOWLEDGEMENTS	30
10	BIBLIOGRAPHY	31

FIGURES

FIGURE 1- SITE LOCATION	5
FIGURE 2-DETAILED SITE AND TRENCH LOCATION	6
FIGURE 3- PLAN OF TRENCH 25	22
FIGURE 4- PLAN OF TRENCH 26	23
FIGURE 5: PLANS OF TRENCHES 27 AND 28A/28B	24
FIGURE 6: PLANS OF TRENCHES 35 AND 36	25
FIGURE 7: PLANS OF TRENCHES 34, 39 AND 40	26
FIGURE 8: SECTIONS 100 AND 110	27

APPENDICES

APPENDIX 1- CONTEXT INDEX	32
APPENDIX 2 - SITE MATRICES	38
APPENDIX 3: ROMAN POTTERY	46
APPENDIX 4: FIRED CLAY AND CERAMIC BUILDING MATERIAL	50
APPENDIX 5: ENVIRONMENTAL RAPID ASSESSMENT	53
APPENDIX 6: LITHICS	55
APPENDIX 7: OASIS DATA COLLECTION FORM	58
APPENDIX 8: PHOTOGRAPHS	61

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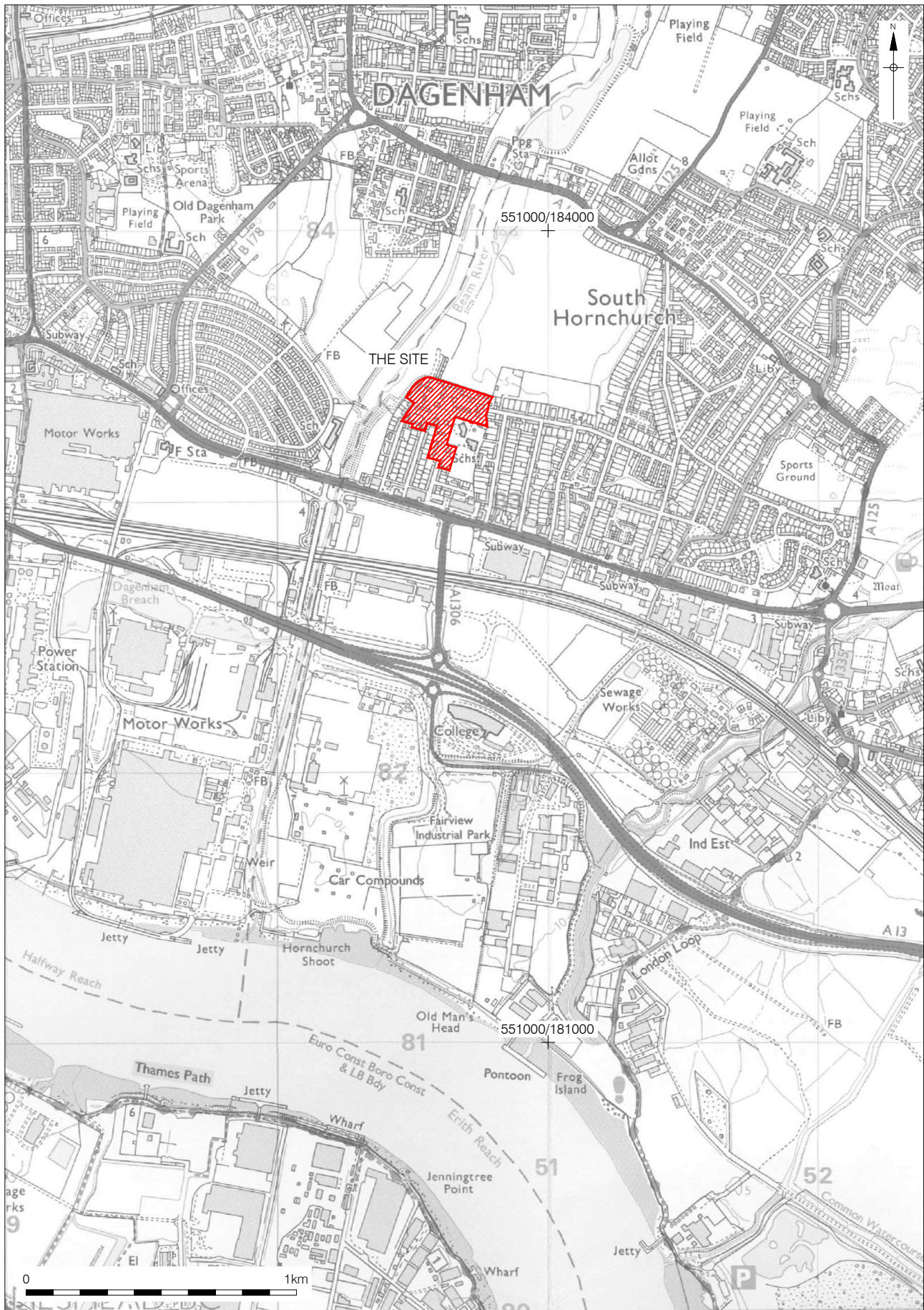
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1 ABSTRACT

- 1.1 Pre-Construct Archaeology Ltd was commissioned by Willmott Dixon Housing Ltd to carry out a third phase of archaeological evaluation on Blocks F, F, G, K, M and N, Mardyke Estate, Rainham, London Borough of Havering, centred on Ordnance Survey NGR TQ 5057 8339, in advance of the demolition of the existing structures in those areas and construction of new-build accommodation. The site is located within an archaeological priority area as specified in the London Borough of Havering's Unitary Development Plan, in an area where both prehistoric and Roman archaeological remains have been found. Significant remains relating to Bronze Age settlement activities have been found just south of the site while a Roman settlement has been found just to the west of the site. However, of particular significance are the Roman remains found during the construction of the Mardyke Estate in the 1960s. The evaluation follows previous evaluation work during 2008 and 2009 and was required by Adam Single, English Heritage Greater London Archaeological Advisor (North East).
- 1.2 The evaluation fieldwork was conducted between 10th and 25th June 2013. Sixteen trenches were opened during the evaluation. Trenches 25 - 28 were situated in hardstanding areas in Blocks E, F and G to the north of the site and revealed evidence of Roman activity. Trenches 31 and 32 were located in hardstanding to the north of the proposed Block K and showed the existence of undated archaeological features. Trenches 35 and 36 were located in soft landscaping in Block N and showed the presence of prehistoric features, while Trenches 33, 34, 37 – 41 were located in Block M and also showed the presence of prehistoric features beneath hardstanding and soft landscaping.
- 1.3 Natural geological deposits were observed in the bases of all trenches and comprised coarse sandy gravels, overlain to the south by Langley Silt (Brickearth). Archaeological features were recorded in all but four of the trenches, cut into these natural deposits.
- 1.4 In contrast to previous phases of evaluation, the archaeological deposits appeared to be relatively untruncated by previous construction, with the exception of Trenches 31 and 32 (Block K) where the postulated presence of a higher spur of natural gravel, observable in the current topography has resulted in the greater truncation of potential archaeological features.

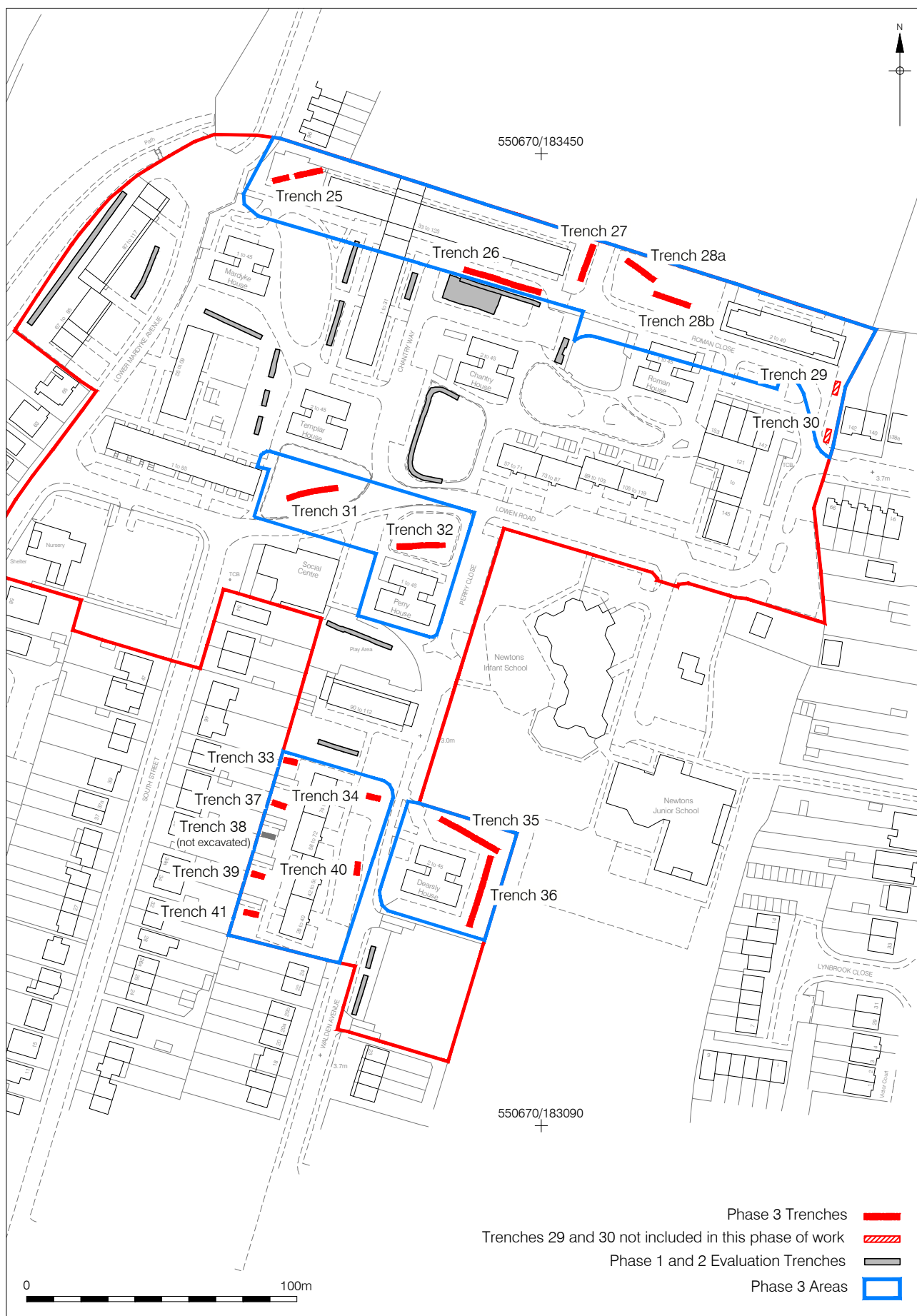
2 INTRODUCTION

- 2.1 Pre-Construct Archaeology Ltd was commissioned by Willmott Dixon Housing Ltd to carry out a Phase III archaeological evaluation on Blocks F, F, G, K, M and N, Mardyke Estate, Rainham, London Borough of Havering, centred on Ordnance Survey NGR TQ 5057 8339, in advance of the demolition of the existing structures in those areas and construction of new-build accommodation.
- 2.2 The evaluation was conducted between 10th and 25th June 2013, in accordance with the Institute of Field Archaeologists' *Standard and guidance for archaeological field evaluation* (1994, revised 2001) and a Written Scheme of Investigation (Hawkins, 2013), which was agreed in advance of the fieldwork by Adam Single, English Heritage Greater London Archaeological Advisor (North East).
- 2.3 The development site lies entirely within the Mardyke Estate, which is bounded by a field and Lower Mardyke Avenue to the north, fields and the River Beam to the west, housing to the south and Newtons Infant School to the east (**Figures 1 and 2**).
- 2.4 The site was assigned the code **MYE 08**.



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Figure 1
 Site Location
 1:20,000 at A4



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Figure 2
Detailed Site and Trench Location
1:2,000 at A4

3 PLANNING BACKGROUND

3.1 National Planning Policy Framework (NPPF)

3.1.1 The National Planning Policy Framework (NPPF) was adopted on 27 March 2012, and now supersedes the Planning Policy Statements (PPSs). The NPPF constitutes guidance for local planning authorities and decision-takers both in drawing up plans and as a material consideration in determining applications.

3.1.2 Chapter 12 of the NPPF concerns the conservation and enhancement of the historic environment, with the following statements being particularly relevant to the proposed development:

128. *In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.*

129. *Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.*

3.1.3 Additionally:

141. *Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.*

3.1.4 In considering any planning application for development the local planning authority will now be guided by the policy framework set by the NPPF.

3.1.5 The NPPF also states that:

214. *For 12 months from the day of publication, decision-takers may continue to give full weight to relevant policies adopted since 2004 even if there is a limited degree of conflict with this Framework.*

215. *In other cases and following this 12-month period, due weight should be given to relevant policies in existing plans according to their degree of consistency with this framework (the closer the policies in the plan to the policies in the Framework, the greater the weight that may be given).*

- 3.2 In considering any planning application for development, the local planning authority will be guided by the policy framework set by government guidance, in this instance the NPPF, by current Unitary Development Plan policy and by other material considerations.
- 3.3 The relevant Strategic Development Plan framework is provided by 'The London Plan, Spatial Development Strategy for Greater London Consolidated with Alterations since 2004' (Feb 2008). It includes the following policies relating to archaeology and cultural heritage within central London:

POLICY 4B.15 ARCHAEOLOGY

The Mayor, in partnership with English Heritage, the Museum of London and boroughs, will support the identification, protection, interpretation and presentation of London's archaeological resources. Boroughs in consultation with English Heritage and other relevant statutory organisations should include appropriate policies in their DPDs for protecting scheduled ancient monuments and archaeological assets within their area.

- 3.4 Havering's Local Development Framework (LDF) was adopted in October 2008. Relevant policies for Archaeological and Cultural Heritage include:

DC70 – ARCHAEOLOGY AND ANCIENT MONUMENTS

The Council will ensure that the archaeological significance of sites is taken into account when making planning decisions and will take appropriate measures to safeguard that interest. Planning permission will only be granted where satisfactory provision is made in appropriate cases for preservation and recording of archaeological remains in situ or through excavation. Where nationally important archaeological remains exist there will be a presumption in favour of their physical preservation. Particular care will need to be taken when dealing with applications in archaeological 'hotspots' where there is a greater likelihood of finding remains. Planning permission will not be granted for development which adversely affects the three Ancient Monuments in the Borough of their settings.

- 3.5 The site lies partially within an Archaeological Priority Area. No Scheduled Ancient Monuments lie within the boundary of the subject site.
- 3.6 In accordance with the conditions laid down in Havering's LDF, a programme of evaluation by trial trenching was designed (Hawkins 2013) and carried out in consultation with the archaeological advisor for the London Borough of Havering. Sixteen trenches were proposed within the curtilage of the proposed Phase 3 development.

4 GEOLOGY AND TOPOGRAPHY

4.1 Geology

- 4.1.1 The British Geological Survey 1:50,000 series (Map Sheet 257) indicates that part of the site lies within worked or made ground; wholly or partly backfilled pits. The underlying geology is London Clay which overlies Woolwich and Reading beds. These outcrop approximately 400m to the south.
- 4.1.2 Within the central part of the site, drift geology is absent. In the south-eastern areas Flood Plain gravels are present, and in the northwest alluvium associated with the Beam River is present. The latter lies to the west of Mardyke Avenue.

4.2 Topography

- 4.2.1 The area of the subject site is fairly level with a slight downwards slope from east to west, varying between 4m and 6m OD. The site is covered in a number of raised flower beds, hardstanding, grassed and playground areas.
- 4.2.2 The Beam river is located directly to the west of the site and the River Thames is located c. 2km to the south of the subject site.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 5.1 Unless referenced otherwise, the archaeological and historical background information cited below was obtained from the Archaeological Desk Based Assessment previously carried out by Pre-Construct Archaeology Ltd (Payne 2008)

5.2 PREHISTORIC

- 5.2.1 Excavations by Compass Archaeology, approximately 500m to the south of the subject site yielded a blade of early Mesolithic to late Neolithic date. A further Mesolithic blade was discovered during the development of the existing estate in 1963.
- 5.2.2 Recent excavations on the opposite side of the Beam River at the Washlands site, c. 100m to the west of the subject site on the opposite side of the River discovered flint artefacts of Mesolithic date. These were encountered within alluvial deposits which filled the Wantz stream; a tributary of the Beam River. An Iron Age ditch and kiln were also revealed during the excavations.
- 5.2.3 A prehistoric pit and three postholes were identified during excavations undertaken at 15-17 New Road, approximately 500m to the south of the proposed development. Other artefacts described as being of prehistoric date were encountered during the construction of dams in the early 18th century within the vicinity of the site.

5.3 ROMAN

- 5.3.1 Extensive evidence for Roman activity has been found within the area of the subject site.
- 5.3.2 During the construction of the existing Mardyke Estate in 1963, evidence emerged for a Roman cemetery plus artefacts associated with settlement activity which included quernstone fragments and quantities of pottery.
- 5.3.3 Details of the 1963 discoveries are vague, but also refer to cut features filled with dark earth interpreted by the excavator as latrine pits. The naming of the easternmost of the tower blocks as Roman House and the associated road as Roman Close may indicate the approximate location of the previously excavated archaeology.
- 5.3.4 The evaluation at Beam Washlands unearthed evidence of a Roman ditch and cremation cemetery which were located approximately 200 metres to the west of the site boundary. This contained twenty cremation burials. Settlement activity in the form of kilns, wells, pits and a small post structure were encountered to the west of the cemetery.
- 5.3.5 In 1929, at the junction of Manser Road and Frederick Road, a stone coffin of Roman date was discovered. A textual reference places this approximately 250 metres to the east of the subject site's eastern boundary.
- 5.3.6 An archaeological evaluation during the Phase 1 development of the site in September 2009 (Fairman 2009a) revealed a number of cut features of Roman date. The finds significantly included relatively unabraded lids from at least four separate vessels. An excavation within the same area in November 2009 (Fairman 2009b) identified three broad phases of Roman activity, dating between the mid 1st and mid 2nd century AD. These were defined by an initial curvilinear ditch which was later bisected by a linear ditch dating from the late 1st century AD. This feature was truncated by numerous intercutting pits dated to the late 1st to mid 2nd century AD. All features were indicative of settlement, and the finds included two near complete vessels.

5.4 SAXON & MEDIEVAL

- 5.4.1 There is no evidence for the Saxon period within the vicinity of the site.

- 5.4.2 Documentary sources state that the Manor of Mardyke originated in ½ Virgate of land which belonged to Gillian, daughter of Ellis, who married William of Mardyke, prior to 1240. However, by 1300 the manor had passed to Richard of Barking. By 1662 the Estate comprised 140 acres and a Mill.
- 5.4.3 The medieval Manor of Mardyke is documented as lying on the edge of the Hornchurch marshes, about half a mile south of Dagenham Bridge. The Manor has not been located, but the presence of two ponds visible on the John Carey map of 1786 is intriguing as they clearly pre-date the construction of Mardyke Farm. It is possible that they were associated with the original Manor of Mardyke. No evidence of the Manor was noted during the destruction of Mardyke Farm in the 1960s so a possibility remains that it may lie within the development area.

5.5 POST-MEDIEVAL

- 5.5.1 The character of Havering appears on the earliest maps as marsh and agricultural land, occupied by small scattered farms.
- 5.5.2 By 1702 the Manor of Mardyke was owned by the Fanshaws who sold it to the Tyler family in 1734. The estate remained in their possession until 1849 when it was finally sold. At this time the estate comprised 177 acres.
- 5.5.3 By 1918 Mardyke Farm, located directly to the north of the site, comprised 122 acres and Little Mardyke Farm comprised 72 acres.
- 5.5.4 Documentary sources state that a Dam was built across the Beam River by a Captain Perry after the Great Breach of the River Thames of 1707. This was followed by the construction of a series of earth banks, to prevent further flooding.
- 5.5.5 A review of cartographic sources suggests that parts of the Hornchurch Marsh, which spread throughout the south-western limits of the subject site, were drained during the late 18th or mid 19th centuries. Gravel extraction along the line of New Road also occurred at this time.
- 5.5.6 The area of the subject site remained in use as farmland from 1867 until 1939, with the farmhouse located at the north-western limits of the site boundary. Construction of the extant Mardyke Estate began in the 1960s and remains unchanged to the present.

6 ARCHAEOLOGICAL METHODOLOGY

- 6.1 In accordance with the Written Scheme of Investigation (Hawkins 2013) the trenches were excavated within the Phase 3 development blocks to assess the potential archaeological deposits in these areas.
- 6.2 Trench numbers were continued from the previous two phases of evaluation.
- 6.3 Sixteen archaeological trenches were excavated (Figure 2), the dimensions of which at ground level were:
- | | |
|-----------|--|
| Trench 25 | 20m x 1.8m (divided into two by a live service) |
| Trench 26 | 30m x 1.8m |
| Trench 27 | 15m x 1.8m |
| Trench 28 | 30m x 1.8m (divided into Tr. 28a & 28b by hoarding between Blocks F & G) |
| Trench 31 | 20m x 1.8m |
| Trench 32 | 20m x 1.8m |
| Trench 33 | 5m x 1.8m |
| Trench 34 | 5m x 1.8m |
| Trench 35 | 26m x 1.8m |
| Trench 36 | 26m x 1.8m |
| Trench 37 | 5m x 1.8m |
| Trench 38 | 5m x 1.8m |
| Trench 39 | 5m x 1.8m |
| Trench 40 | 5m x 1.8m |
| Trench 41 | 5m x 1.8m |
- 6.4 Two trenches, Trenches 29 and 30 were excluded from this phase of evaluation works as they are not part of this phase of redevelopment.
- 6.5 Trench locations were CAT scanned prior to excavation. Trenches were excavated using a 360° machine with a flat bladed ditching bucket, under the supervision of the attendant archaeologist, to the top of archaeological or natural horizons, or to a maximum depth of 1.2m below ground level. Potential archaeological features were then hand cleaned and partially excavated, in accordance with the WSI. The excavation of Trench 38 was halted when quantities of asbestos bearing materials (ABMs) were observed within modern topsoil. The trench was backfilled, ensuring fragments of ABM were covered and no further work was undertaken in this area.
- 6.6 Once recorded, the trenches were backfilled with the material removed from them. Tarmac and concrete was excavated and stored separately and not backfilled with the arisings.
- 6.7 One or more representative sample sections were cleaned and recorded in each trench. The base of each trench was also hand-cleaned before recording, along with any archaeological features. The latter were half sectioned or slotted in order to obtain dating evidence prior to recording.
- 6.8 The recording systems employed during the evaluation were fully compatible with those most widely used elsewhere in London; that is those developed out of the Department of Urban Archaeology Site Manual, now published by the Museum of London Archaeology Service (MoLAS 1994). Individual descriptions of all archaeological strata and features excavated and

exposed were entered onto pro-forma recording sheets. All plans and sections of archaeological deposits were recorded on polyester based drawing film, the plans being drawn at a scale of 1:50 or 1:20 as appropriate and the sections at 1:10. The OD heights of all principal strata were calculated and indicated on the appropriate plans and sections. A full photographic record of the investigation was prepared, including both black and white prints and colour transparencies on 35mm film.

- 6.9 Levels were taken from Temporary Bench Marks established across the site by GPS. The baselines of each trench were established using GPS and tied into the Ordnance Survey Grid.

7 ARCHAEOLOGICAL PHASE DISCUSSION

7.1 Trench plans are shown on Figures 3-7 and sections on Figure 8.

7.2 Phase 1 – Natural

7.2.1 Natural deposits were encountered in all excavated trenches, and broadly comprised yellow brown sandy gravels to the north, with Langley Silt (brickearth) and red brown sands and gravels to the south.

7.2.2 In Trench 25 the natural deposits comprised orange yellow sandy gravel [500] with an upper surface at 3.44m OD. A similar yellow orange sandy gravel [670] was recorded in Trench 26 at an upper level of 3.56m OD, while in Trench 27 the natural deposits are described as a mid-grey yellow sandy gravel [530] at an upper level of 3.68m OD. In Trench 28a & b, mid-yellow orange sandy gravel [532] and mid-yellow brown sandy gravel [564] were recorded at 3.83m OD and 3.21m OD respectively.

7.2.3 Further to the south, the natural deposits in Trenches 31 and 32 were recorded as mid-orange brown sandy gravel [590] and mid-yellow orange sandy gravel [671] with an upper surface at 2.75m OD and 2.78m respectively.

7.2.4 In Trenches 33, 34 and 37, dark brown red sandy gravel [675], orange brown yellow sandy gravel [665] and mid-brown grey sandy gravel [677] was recorded at a height of 1.97m OD, 1.61m OD and 1.73m OD respectively,

7.2.5 In Trenches 35, 36, 39, 40 and 41, to the south of the site the natural deposits consisted of brickearth deposits, described as light yellow brown grey sandy silt [636], light orange brown grey sandy silt [630], light yellow brown grey sandy silt [674], light grey yellow sandy silt [635] and light yellow brown grey sandy silt [678] respectively. The brickearth lay at an upper level of 1.73m OD in Trench 35, at 1.88m OD in Trench 36, at 1.56m OD in Trench 39, at 1.46m OD in Trench 40 and at 1.69m in Trench 41

7.2.6 In Trench 28a, a single feature of probable natural origin was recorded cutting the natural gravel. This consisted of an irregular feature [545] measuring 0.93m x 0.50m x 0.25m depth with concave sides and an irregular base (3.69m – 3.44m OD), and filled with sterile mid-grey sand [544].

7.3 Phase 2 – Prehistoric Features

7.3.1 Features of prehistoric date were recorded truncating the natural deposits in Trenches 34, 35, 36, 39 and 40 to the south of the site.

7.3.2 In Trench 34, an east-to-west aligned linear feature, returning to the south, was recorded to the north of the trench. This consisted of a u-shaped cut [660] measuring 4.60m long with a 1.9m return to the south and was 0.45m deep (1.64m – 1.32m OD), filled by an upper fill of mid-red brown sandy silt clay [659] with a lower fill of yellow red brown re-deposited sandy gravel (663). This cut a north-to-south aligned linear ditch or gully [662], consisting of a linear u-shaped cut measuring 1.30m x .50m x 0.30m depth (1.64m – 1.36m OD). This was filled by an upper fill of mottled mid-yellow brown sandy clay [661] overlying a mid-orange brown grey sandy gravel clay [664].

7.3.3 To the south of this, in Trench 40, a linear gully of similar size may represent a continuation of this feature. Cut [634] consisted of a linear u-shaped cut measuring 2.40m x 0.80m x 0.35m depth (1.47m – 1.27m OD), filled with a single fill of mid-grey silt [633]. An undated flake fragment and a single piece of heavily burnt flint was recovered from this fill (Appendix 6).

7.3.4 A further ditch was recorded in Trench 39. This consisted of a linear cut [658] with concave sides to a flat base and measured 4.60m x 1.05m x 0.60m deep (1.56m – 0.97m OD). This was filled with light yellow grey blue clay silt [657]. An undated flint flake fragment, a

Mesolithic to Bronze Age flint flake and five pieces of heavily burnt flint were recovered from the fill and a small quantity of charcoal was noted in the soil sample from this feature (Appendix 5).

- 7.3.5 To the east of these trenches, in Block N, further prehistoric features were recorded in Trenches 35 and 36. In Trench 35 a number of inter-cutting probable linear features were recorded. Due to excavation conditions, these features were excavated in a continuous slot along the north-facing section of the trench and recorded largely in section. The relationships and alignments were further obscured by the fact that the features in both trenches were filled with similar light yellow brown grey sandy silt, derived from natural weathering of the surrounding brickearth. Whilst this served to characterise the features and sequence and to recover dating evidence, the apparent north-to-south alignment of these features is probably misleading, particularly when compared to the alignments of those features excavated in Trench 36 whose alignments are broadly east-to-west.
- 7.3.6 To the western end of Trench 35, cut [642] was a linear u-profiled feature, truncated to the west by [640], and measuring 2.30m wide x 0.40m deep (1.65m – 1.20m OD), and filled with light yellow brown grey sandy silt [641].
- 7.3.7 To the east of these, a further two inter-cutting probable ditches were recorded. Feature [652] was a u-profile probable linear cut measuring 1.10m wide x 0.35m deep (1.70m – 1.33m OD) filled with light yellow brown grey sandy silt [651]. This cut an earlier probable ditch [650] on a broadly similar alignment. This was another u-profile feature measuring 1.80m wide x 0.50m deep (1.73m – 1.28m OD) and filled with a similar light yellow brown grey sandy silt [649]. Two pieces of heavily burnt flint and a moderately burnt near-complete cobble were recovered from the fill.
- 7.3.8 Two further linear features, [656] and [654], were recorded at the eastern end of the trench. Cut [656] was an apparently linear feature with a u-shaped profile measuring 1.90m wide x 0.45m deep (1.65m – 1.31m OD). This was filled with light yellow brown grey sandy silt [655], and cut probable ditch [654]. Again, this was a similar u-profile cut measuring 1.40m wide x 0.40m deep (1.70m – 1.32m OD) and filled with light yellow brown grey sandy silt [653], from which a retouched flint flake of Mesolithic to Bronze Age date and two pieces of heavily burnt flint were recovered.
- 7.3.9 Prehistoric features of a similar nature were excavated to the south of Trench 35 in Trench 36. Toward the south end of Trench 35, an east-to-west aligned ditch [603] was recorded. This was a u-profiled linear feature measuring 2.10m wide x 0.35m deep (1.84m – 1.53m OD) and filled with mid-orange brown grey sandy silt [602]. Four pieces of heavily burnt flint were recovered from the fill. Cut [607], to the north of these features was a section of possible curvilinear ditch with a u-shaped profile measuring 1.85m wide x 0.30m deep (1.79m – 1.50m OD). This ran broadly east to west and trended slightly to the north at the western end, although it was not possible within the confines of the trench to ascertain whether the feature did curve or whether this was a variation in the shape of the edge. It was filled with light yellow brown grey sandy silt [606], from which a single piece of heavily burnt flint was recovered.
- 7.3.10 To the north of this, two small, shallow gullies were recorded. The first of these, cut [609] was a curvilinear u-profiled gully aligned east-to-west and curving to the north at the eastern end. It measured 1.90m x 0.70m x 0.20m deep (1.84m – 1.65m OD) and was filled with mid-orange brown grey sandy silt (608), from which seven pieces of heavily burnt flint was recovered. There was no indication of a return to this feature further to the north. The second consisted of a straight linear gully [611] on a north-east to south-west alignment, with a u-shaped profile and measuring 2.10m x 0.60m x 0.10m depth (1.81m – 1.69m OD). This was filled by mid-orange brown grey sandy silt [610], from which nine pieces of heavily burnt flint were recovered.
- 7.3.11 Gully [611] was cut to the north by an east-west aligned linear feature, [613]. This was a u-profiled probable ditch measuring 1.20m wide x 0.40m deep (1.84m – 1.45m OD), the fill of which was distinct from other fills in this trench, being a mid brown grey sandy silt [612] from

which the proximal end of a retouched prismatic blade of Mesolithic or early Neolithic date with light bifacial damage consistent with use and seven pieces of burnt flint were recovered.

- 7.3.12 Gully [613] also cut a second feature to the north. This was a curvilinear ditch [615] running east-to-west across the trench, with a possible right-angle corner apparent at the western extent of the trench. It measured 1.5m wide x 0.50m deep (1.84m – 1.27m OD) and was filled with mid orange brown grey sandy silt [614]. Twelve pieces of heavily burnt flint were recovered from this fill. No obvious return to this feature was apparent in the trench, but the possible corner recorded to the south in ditch [609] may represent an extension of this feature, although the relative depths of this feature would tend to argue against this.
- 7.3.13 A north-to-south aligned feature, ditch [627], consisting of a linear cut measuring 0.80m x 0.30m x 0.35m deep (1.76m – 1.40m OD), and passing into section to north and west. This was filled with mid-grey brown silt [626], and probably represents a continuation of ditch [656] in Trench 35 to the north. Four pieces of heavily burnt flint were recovered from fill [626].

7.4 Phase 3 – Roman

- 7.4.1 Features dated to the Roman period were recorded to the north of the site in Trenches 25 – 28b. Undated features in 31 and 32 are also included in this phase due to their stratigraphic position below the post-Medieval deposits of Phase 4. In Trench 25, a number of inter-cutting pits and linear features were recorded. At the eastern end of the trench a north-east to south-west aligned ditch [522] cut three discrete pits. Ditch [522] was a linear feature with concave side to an unexcavated base measuring 2.30m x 1.70m x 0.50m deep (2.95m – 2.45m OD), filled with dark grey coarse sand (521). This contained a single sherd of Romano-British date (Appendix 3). To the east this cut a sub-circular pit [525] with concave sides to a concave base, and filled with mid- to dark grey brown sand, (524). This measured 1.30m x 0.70m x 0.23m deep (2.79m – 2.56m OD) and passed into section to north and east. This in turn cut a layer of light grey brown sand (527) at an upper level of 2.80m OD. The interpretation of this material is not clear as full excavation could not be achieved due to the trench depth, and may represent a layer of re-deposited natural sand or fill of an underlying feature. Charcoal and industrial waste/clinker was recorded in the soil sample from this material (Appendix 5).
- 7.4.2 To the west, ditch [522] cut a second pit [520]. This consisted of a concave-profiled cut measuring 1.7m x 0.90m x 0.45m deep (2.93m – 2.48m OD) and was filled with mid-brown coarse sand [519]. This in turn cut pit [518]; a sub-circular pit with vertical sides to a concave base filled with mid –brown sand (517). This measured 1.16m x 1.02m x 0.50m deep (3.05m – 2.56m OD).
- 7.4.3 In the western extension of the trench, a large possibly linear feature [502] was recorded over most of the trench. This had concave edges to an unexcavated base and measured 6.10m x 1.80m x 0.54m excavated depth, and passed into section to the west, east and south (3.82m x 3.28m OD). It was filled by mid-brown sandy silt [501] and has provisionally been interpreted as being a ditch, but may equally be a large pit or quarry pit. The fill contained 2 sherds of undiagnostic pottery with a broad Romano-British date. This cut a second possible linear feature [504], again with concave edges to an unexcavated base, measuring 1.80m x 1.15m x 0.32m excavated depth (3.73m – 3.41m OD). This was filled with a light cream grey sandy silt gravel [503] and passed into section to the north and east. Again, this feature may represent a ditch or large pit.
- 7.4.4 In Trench 26 further features of Roman date were recorded. To the west end of the trench, cut [553] was a possible linear feature with stepped sides to a flat base, aligned north-west to south-east and passing into section to west and south. It measured 3.0m x 1.13m x 0.52m deep (3.42 – 2.96m OD) and was filled with mid-brown grey sandy silt [552]. The fill contained 34 sherds of pottery including two jars, two straight sided dishes and a beaded rim bowl dating to AD120-300, and a fragment of daub with a possible withy impression. To its eastern end, feature [553] cut a pit, [561]; consisting of a circular cut with concave sides to a sloping base, filled with mid-grey sandy silt [560] and measuring 1.26m x 0.92m x 0.42m deep (3.40m

– 2.96m OD). Two un-diagnostic sherds of pottery were recovered from this context, with the fabrics suggesting a date of AD50-200.

- 7.4.5 To the east of these features a probable rubbish pit passed into section to the south. Pit [557] was a sub-circular feature with concave sides, undercut/slumped to the west with a concave base. It measured 1.30m x 0.90m x 0.50m (3.36m – 2.80m OD) and was filled with mid-grey brown sandy silt interleaved with lenses of natural sand [556]. This context yielded the bulk of the pottery assemblage for the trench (Appendix 3), with a total of 132 sherds. This assemblage comprised a minimum of 14 different vessels including fragments from 10 jars, 3 dishes and one bowl dating to AD120-300. Four fragments of a triangular loom-weight including an apex, and a fragment of possible daub were also recovered from the fill (Appendix 4). Loom-weights of this type are considered to be of Iron Age date, although they appear to have continued in use into the early Roman period. Also recovered from the fill was a single heavily burnt stone.
- 7.4.6 To the east of this, pit [555] passed into the section to the north. This consisted of a rectangular pit with vertical sides to a flat base, filled with mid-grey brown coarse sand [554] which contained a heavily burnt cobble. The feature measured 0.70m x 0.40m x 0.30m depth (3.27m – 3.03m OD). To the east of this, pit [563] had a concave profile, and was only observed in section to the north. It measured 1.50m wide x 0.20m deep (3.76m – 3.44m OD), and was filled with mid brown silt sand [562] from which a single sherd of pottery dated AD50-200 was recovered. Further to the east again and passing into section to the south, pit [549] was a sub-circular pit with concave sides to a flat base, measuring 0.70m x 0.60m x 0.15m deep (3.42m – 3.23m OD) and filled with mid grey brown sand [548].
- 7.4.7 A cluster of features was recorded to the east end of the trench. Pit [547] was a sub-circular concave-profiled feature measuring 1.60m x 1.20m x 0.40m deep (3.48m – 3.22m OD), passing into section to the north, and filled with dark grey brown sandy silt [546]. Thirty-one sherds of pottery dated to AD120-300 and three fragments of possible daub, one of which had a withy impression, were recovered from the fill. Charcoal, industrial waste/clinker and burnt flint was recovered from a soil sample from this context. To the south-east of this a similar pit [559] was a sub-circular feature with concave sides to a flat base, measuring 1.94m x 1.30m x 0.22m deep (3.51m – 3.29m OD) and passing into section to the south. It was filled with mid-grey brown fine sandy silt [558]. This contained 57 sherds of pottery from a lid-seated jar and 5 sherds from a ledge-rimmed jar dated to AD100-200, and a single fragment of possible daub, and charcoal, industrial waste/clinker and burnt flint was recovered from a soil sample from the context.
- 7.4.8 To the east of this a group of shallow probable post-holes were recorded; [570], [572] and [574]. These were all sub-circular cuts with concave sides to flat or irregular bases and were between 0.30m – 0.40m in diameter and between 0.04m – 0.13m deep (3.63m – 3.40m OD). These were filled with mid-grey brown sandy silt [569], [571] and [573] respectively. Three sherds of pottery dating to AD100-300 were recovered from fill [569].
- 7.4.9 The easternmost of these post-holes [574], cut the fill of a wide shallow feature [551]. This consisted of a north-south aligned linear feature with concave sides to a flat base, filled with mid grey red brown fine sandy silt [550]. Three sherds of pottery dated AD50-400 were recovered from the fill. The feature measured 3.84m wide by 0.25m deep (3.56m – 3.44m OD). Parallel to this to the east was the base of a narrow gully [576]. This was a linear feature with straight sides to a flat base, filled with mid grey brown sandy silt [575] and measuring 0.34m wide by 0.03m deep (3.54m – 3.51m OD). These two parallel features are provisionally interpreted as being the truncated bases of a possible track with a flanking ditch to the east, although the limitations of the evaluation trench make any firm interpretation problematic.
- 7.4.10 To the east of these features a sub-rectangular feature [578] with vertical sides to a flat base was recorded. This measured 0.70m x 0.56m x 0.07m deep (3.49m – 3.42m OD) and was filled with mid grey brown sandy silt [577].

- 7.4.11 In Trench 27, a single ditch was recorded. This was a linear feature with a concave profile [529] aligned east to west across the site. It measured 1.50m wide x 0.35m deep and was filled with mid-brown silt sand [528].
- 7.4.12 Further to the east, more Roman features were identified in Trench 28a. In the west of the trench a rectilinear pit [540] was aligned north-east to south-west and passed into section to the west and south. The pit measured 1.90m x 0.40m x 0.25m deep (3.80m - 3.62m OD) and was filled with mid-brown coarse sand [539]. To the south-east of this a linear feature [534] ran across the trench on a parallel alignment. This consisted of a concave profile cut measuring 0.80m wide x 0.30m deep (3.91m – 3.68m OD) and was filled by mid-grey gravelly sand [533].
- 7.4.13 In the west of the trench, two pits were recorded. The first of these, [538] was a sub-rectangular/sub-circular feature filled with an upper fill of mid-brown grey sandy gravel silt [537], overlying a fill of light grey brown sandy clay silt [541], over a fill of charcoal and burnt clay [542]. Charcoal and occasional charred seeds and occasional fragments of daub were recovered from a soil sample from this context. This in turn overlay a layer of orange brown clay [543] and a fill of mid-yellow orange re-deposited natural sandy gravel [669]. The pit measured 1.55m x 1.50m x 0.50m deep with vertical sides to a flat base (3.65m – 3.26m OD). Fill [537] contained pottery dated to AD120-300 including a straight-sided dish and a beaded rim bowl that re-fitted with sherds from the lower fill [542]; fill [541] contained 47 sherds of pottery including five different jars and a straight sided dish dating to AD120-300, while fill [542] contained 4 sherds dating to AD100-200/40. The second pit [536] was sub-circular with vertical sides to a conical base and was filled with mid-grey brown coarse sand [535]. It measured 0.76m x 0.66m x 0.30m deep (3.66m – 3.36m OD).
- 7.4.14 A single feature in Trench 28b was ascribed to this phase. Feature [568] was a possible linear ditch or large pit with concave sides to a flat base measuring 3.40m wide x 0.16m deep (3.34m – 3.13m OD), and filled with mid-brown coarse sand [567].
- 7.4.15 A number of features in Trenches 31 and 32 were ascribed a Roman date in the absence of any dating evidence, partially on the broad similarity with fills recorded in trenches to the north but mainly through the dissimilarity between the post-medieval fills identified elsewhere and the lack of post-medieval finds within them.
- 7.4.16 In Trench 31 a probable ditch was recorded at the western end of the trench, consisting of a linear cut [592] with straight sides to a concave base, running north-to-south across the trench. This measured 2.00m wide x 0.34m deep (2.75m – 2.44m OD), and was filled with mid orange grey brown gravelly clay [591]. To the east of this, a parallel probable ditch [594] was recorded. This consisted of a linear feature with straight sides to a concave base measuring 2.00m wide x 0.16m deep (2.72m – 2.56m OD), filled with mid-yellow grey coarse sand [593].
- 7.4.17 To the east of this, a possible feature [598] consisted of a sub-circular cut, measuring 2.49m x 2.00m x 0.27m deep, with irregular sides to an irregular base (2.82m – 2.42m OD) and filled with mid-grey brown coarse sand [597], over mottled grey red brown coarse sand (601). This cut a further possible linear feature [600] with vertical sides to a flat base, measuring 2.30m wide x 0.14m deep and filled with mid-yellow coarse sand [599]. Whilst these features may represent archaeological deposits, the confines of the evaluation trench prevented any certain interpretation. The lack of any dating evidence and their shape and size may argue that they are of natural origin.
- 7.4.18 In Trench 32, a number of linear and discrete pits were recorded. Parallel to each other in the middle of the trench, two probable ditches [583] and [585] ran north-to-south across the trench. Ditch [583] consisted of a linear cut measuring 1.08m wide x 0.21m deep (2.77m – 2.58m OD), while ditch [585] measured 0.78m wide x 0.11m deep (2.76m – 2.68m OD). Both had shallow u-shaped profiles with concave sides to a concave base, and were filled with mid-purple grey sandy silt [582] and mid-grey brown silty sand [584] respectively.

- 7.4.19 Three discrete small pits or post-holes were recorded in Trench 32. At the western end of the trench, a small pit or post-hole was recorded. Cut [587] was a sub-circular cut with concave sides to a concave base measuring 0.50m x 0.42m x 0.12m deep (2.73m – 2.73m OD) and filled with mid-grey brown sandy silt [586]. To the western edge of ditch [583], cut [581] was a truncated sub-circular pit or post-hole with concave sides to a concave base. This measured 0.41m x 0.30m x 0.16m deep (2.75m – 2.59m OD) and was filled with an upper fill of mid-purple grey sandy silt [579] overlying a fill of light grey brown silty sand [580]. To the east of the trench, and passing into section to the east and north, pit [589] was a semicircular feature with straight sides to a flat base. This measured 1.22m x 0.38m x 0.22m (2.75m – 2.65m OD), and was filled with mid-grey brown silt sand [588].
- 7.4.20 In Trench 35, a number of probable ditches were recorded. To the west of the trench, a probable linear feature [640] was a u-shaped cut measuring 1.8m x 1.5m wide x 0.35m depth (1.68m – 1.30m OD) and apparently aligned north-to south. This was filled with a single fill of light yellow brown grey sandy silt [639]. This cut two further linear features, both on apparent north-south alignments. Cut [638] was a possible linear feature with concave sides to a flat base (1.66m – 1.37m OD), but was 5.80m wide x 0.35m deep and may represent either a large shallow pit or more than one feature. This was filled with light yellow brown grey sandy silt [637], from which a small sherd of pottery dating to AD40-200 was recovered. Infrequent charcoal was noted in a soil sample from the context.
- 7.4.21 To the east of these features, probable linear feature [648] was a u-profile cut measuring 1.75m wide and 0.40m deep (1.64m – 1.25m OD), filled with light yellow brown grey sandy silt [647]. This cut a second similarly aligned linear feature [646], comprising a u-profile probable ditch measuring 2.20m wide x 0.55m deep (1.65m – 1.10m OD) and filled with light yellow brown grey sandy silt [645]. A single sherd of pottery dated to AD50-400 was recovered from this fill, as well a retouched Mesolithic or early Neolithic flint blade, a retouched Mesolithic to Bronze Age flint coarsely denticulated tool, a small trimming flake of Mesolithic to Bronze Age date and two pieces of heavily burnt flint.
- 7.4.22 In Trench 36, cut [605] was a linear ditch to the south of the trench with a u-shaped profile measuring 1.30m wide x 0.20m deep (1.86m – 1.65m OD) and filled with light yellow brown grey sandy silt (604). A single sherd of un-diagnostic pottery broadly dated as Romano-British was recovered from this fill, as well as two pieces of burnt flint. To the north of this, was a linear cut [625] with concave sides to a flat base measuring 1.00m wide x 0.35m deep (1.76m – 1.40m OD) and filled with mid-grey brown silt (624). A single sherd of pottery broadly dated to AD40-400 and five pieces of heavily burnt flint were recovered from fill [624].
- 7.4.23 To the north the trench, a series of inter-cutting linear features were recorded. Ditch [623] was an east-to-west aligned feature with concave sides to a flat base, measuring 1.50m wide x 0.40m deep (1.76m – 1.36m OD), and filled with mid-grey brown silt [622] from which eight pieces of heavily burnt flint were recovered. To the south, this cut a north-west to south-east aligned linear feature, ditch [621]. This was recorded as [619] at the south of the feature. Ditch [619]/[621] was a linear feature with concave sides to a flat base, measuring 3.40 x 1.50m x 0.35m deep (1.74m – 1.36m OD) and filled with mottled mid-yellow grey silt [618] and mid-grey brown silt [620]. Three sherds of un-diagnostic pottery dated to AD50-200, a retouched Mesolithic to early Neolithic prismatic blade and six pieces of burnt flint were recovered from fill [618], while two pieces of heavily burnt flint were recovered from [620]. It is likely that this feature continues to the north into Trench 35, but correlation with the features recorded in Trench 35 is not conclusive.

7.5 Phase 4 – Post-Medieval

- 7.5.1 Significant deposits and features of post-medieval date were recorded in Trenches 25, 27, 28b, 31, 35, 36, 37, 39, 40 and 41. Other less significant post-medieval intrusions were recorded as truncations (+).
- 7.5.2 In Trench 25, to the west of the eastern extent of the trench a sub-rectangular pit [512] was recorded, passing into section to the west and south. This consisted of a sub-rectangular cut with vertical sides to a flat base, filled with mid-brown silty sand [511]. The feature measured

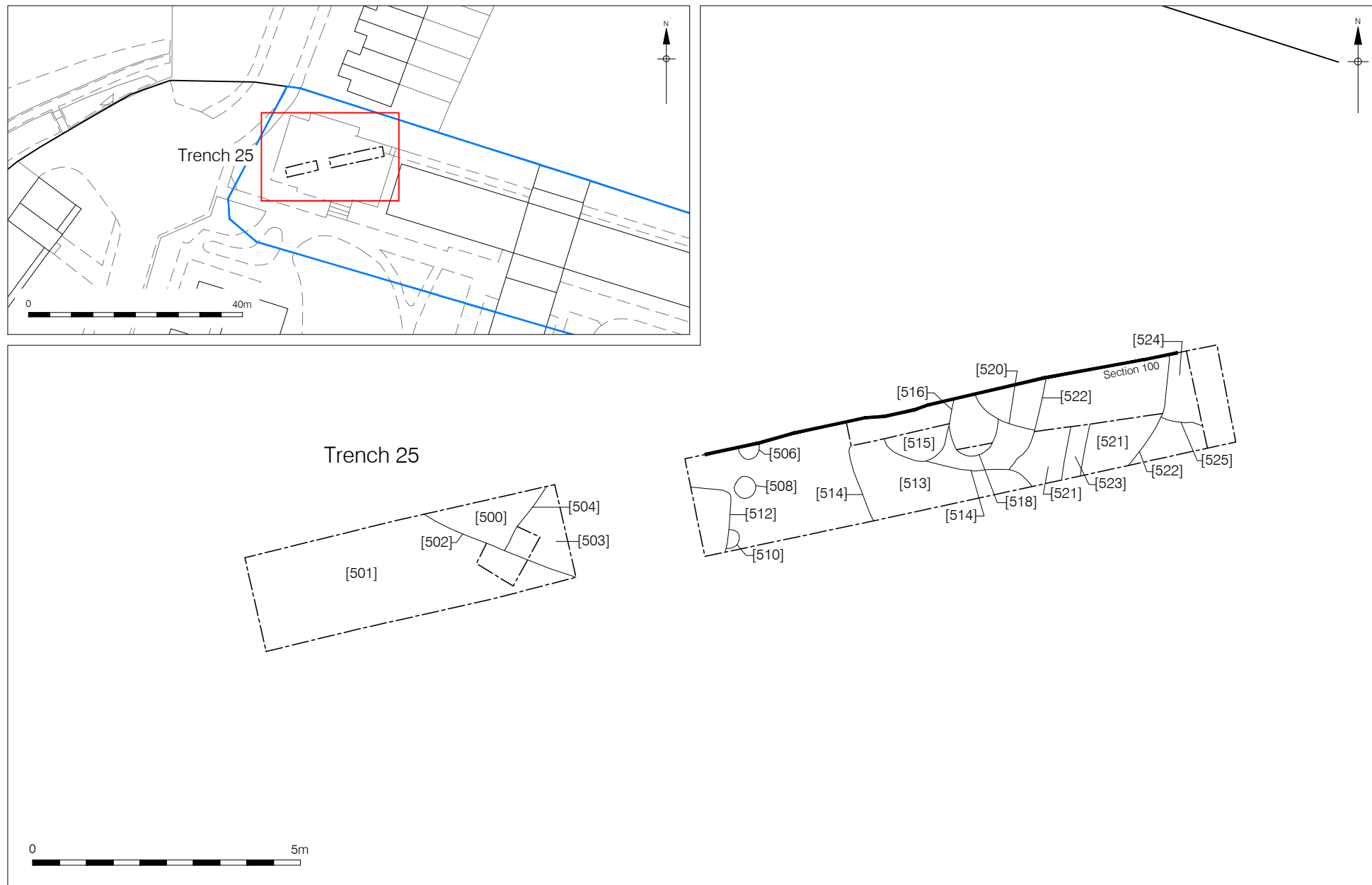
- 1.06m x 0.56m x 0.36m deep (2.95m – 2.59m OD). Five fragments of post-medieval dating 1480-1900 and two small fragments of re-used pre-Great Fire red brick dating 1450-1700 were recovered from fill [511].
- 7.5.3 To the west of this, a line of three post-holes were recorded, cuts [506], [508] and [510]. These were all three sub-circular features with concave sides to a concave, flat and irregular base respectively, and were aligned broadly north-to-south across the trench. Post-hole [506], to the north of the alignment, measured 0.30m x 0.20m x 0.07m depth (2.91m – 2.84m OD), while [508] measured 0.40m diameter x 0.10m depth (2.95m – 2.85m OD) and [510] was 0.40m in diameter x 0.07m deep (2.94m – 2.90m OD). These features were filled with mid-orange grey coarse sand [505], mid-red brown coarse sand [507] and mid-yellow grey coarse sand [509] respectively. A fragment of peg-tile dating to 1480-1900 was recovered from fill [507].
- 7.5.4 To the east of this, a possible linear feature [514] ran broadly north-east to south-west across the trench. This had concave sides to a concave base, measured 3.20m x 1.44m x 0.41m deep (3.20m – 2.79m OD), and was filled with mid-grey mottled gravelly sand [513]. This cut a sub-circular pit with concave sides to a flat base [516], passing into the northern main section. This was filled with mixed yellow orange brown burnt silty sand [515]. Two fragments of post-medieval peg-tile dating 1480-1900 were recovered from the fill. These two features cut a layer of mid-brown gravelly silt sand [526], with an upper level of 3.20m OD. Although [526] is recorded as extending further to the east, it is likely that the material labelled as [526], along fills [513] and [515] represents fills of a larger cut extending from the planned edge of [516] / [514] to the western edge of the eastern extent of the trench. It is thought that this may represent a quarry pit or similar feature.
- 7.5.5 The material recorded as [526] further to the east may be similar in composition and colour but is unlikely to be the same context and probably constitutes a ploughsoil or subsoil. This is cut to the east by a drain cut [667], aligned north-to-south across the trench, consisting of a linear cut measuring with vertical sides to a flat base (3.20m – 2.87m OD). This measured 1.40m wide x 0.30m deep. The cut contained a brick drain [523] consisting of a single base course of bricks on bed with sides of bricks on edge and a cover of bricks on bed. The drain was backfilled by a fill of dark brown grey sandy silt [668].
- 7.5.6 It is likely that these features relate to Mardyke Farm, the southern range of which is shown from the 1867 Ordnance Survey to fall in the approximate location of Trench 25.
- 7.5.7 In Trench 27 deposits from this phase were represented by a layer of ploughsoil or subsoil [531]. This was a layer of mid-grey brown silty sand 0.40m thick with an upper level of 4.09m OD.
- 7.5.8 In Trench 28b a large pit occupied the majority of the western end of the trench. This consisted of a cut of uncertain shape [566] with concave sides to an unexcavated base measuring 7.20m x 1.80m x 0.90m excavated depth (3.87m – 2.79m OD), the base of which was not reached due to depth restrictions. This was filled with dark brown sandy gravel [565] and is thought to represent a quarry pit related to activity around Mardyke Farm.
- 7.5.9 In Trench 31, a possible feature [596] was aligned north-to-south across the trench. This measured 4.12m wide x 0.25m deep (2.78m – 2.63m OD) with concave sides to a flat base, and was filled with mid-brown coarse sand [595]. Two small fragments of post-medieval peg-tile dating to 1480-1900 were recovered from this fill. This was overlain by a truncated layer of subsoil or ploughsoil [672], consisting of a layer of mid-brown grey sandy silt 0.20m thick with an upper level of 3.05m OD.
- 7.5.10 In Trench 35, a ceramic field drain was recorded running north-to-south across the trench. This consisted of a sectional ceramic pipe within a linear cut [644] with vertical sides to an unexcavated base. This measured 2.00m x 0.20m x 0.40m deep (1.65m – 1.26m OD) and was filled with dark yellow brown grey sandy silt [643]. This fill was overlain by a layer of probable ploughsoil [666], consisting of a layer of mid-brown grey sandy clay silt 0.30m thick

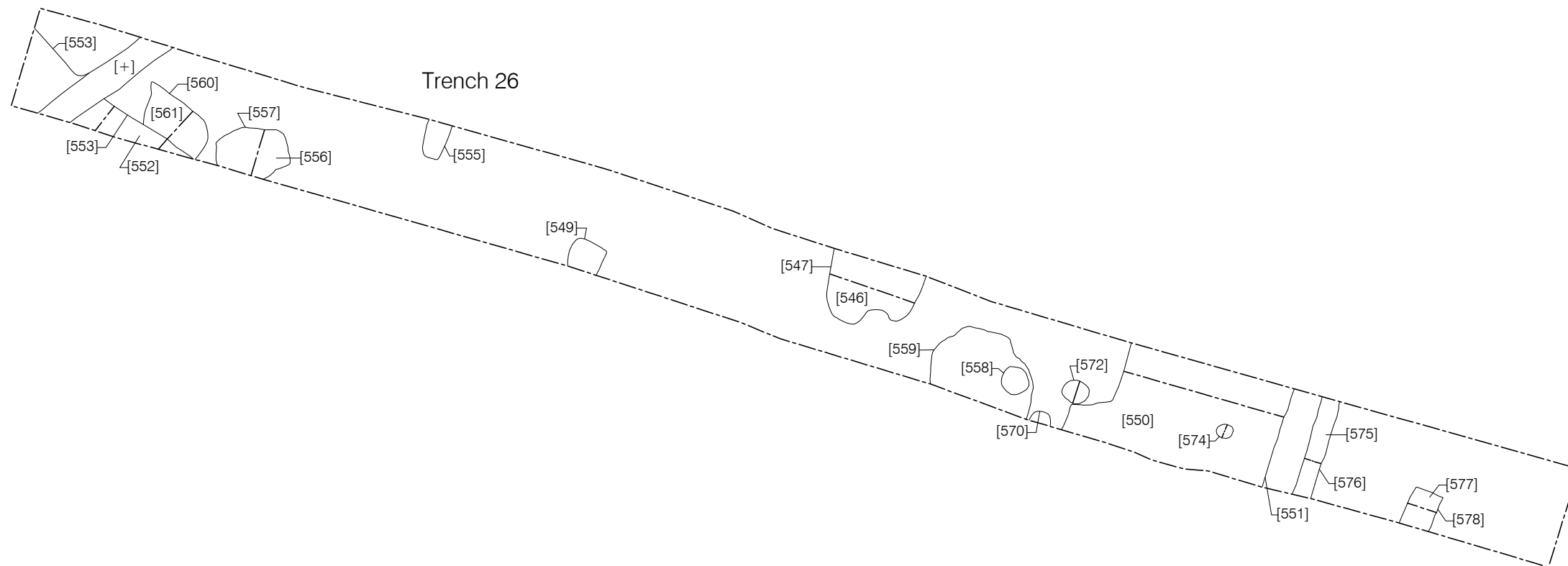
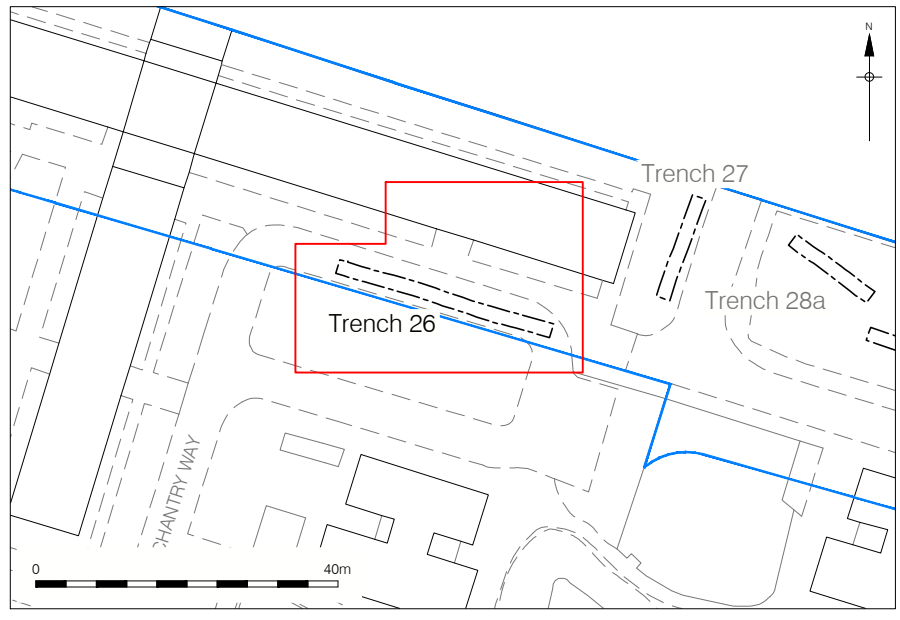
with an upper level of 2.15m OD. It is probable that the drain cuts the ploughsoil but subsequent ploughing has obscured the upper part of the cut.

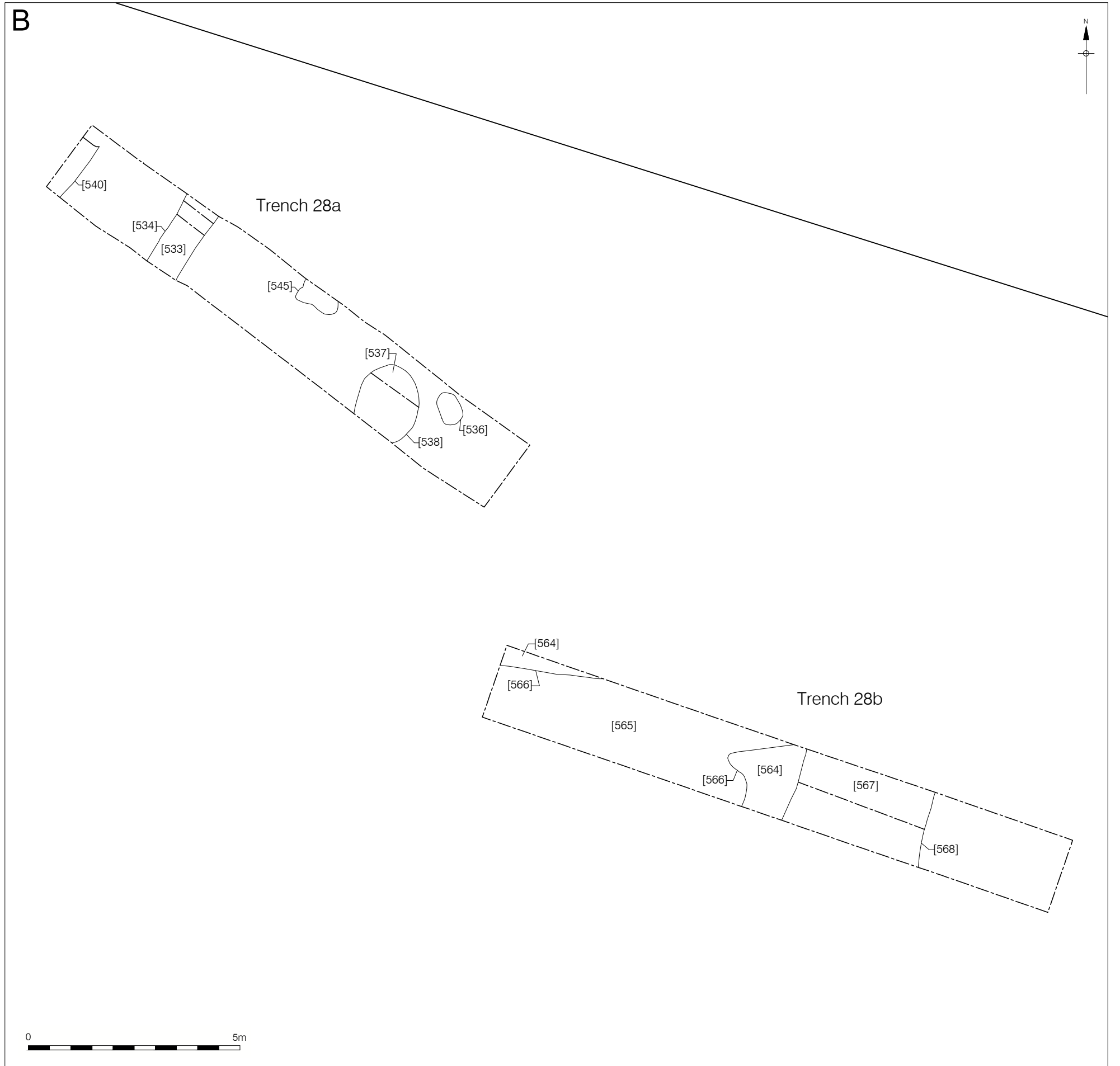
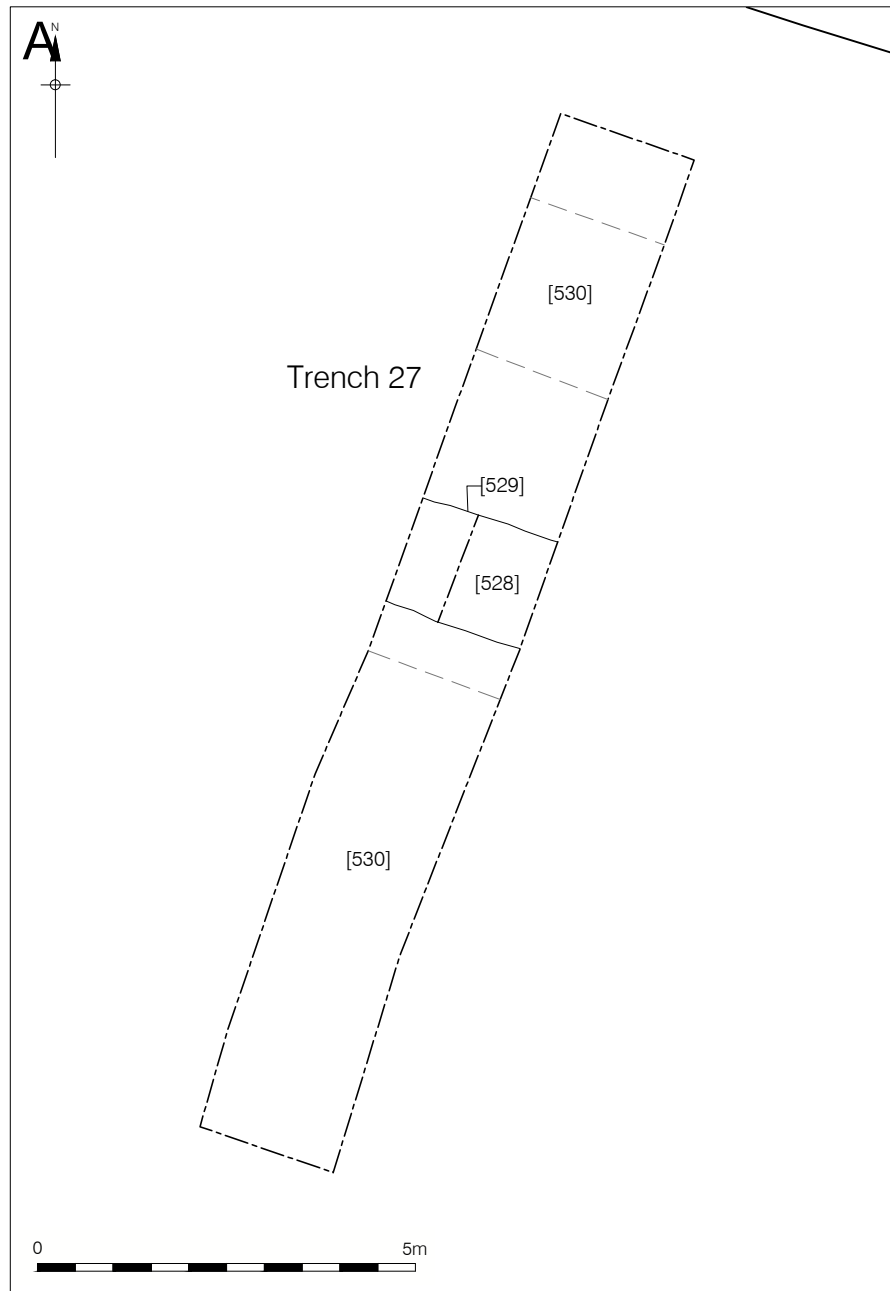
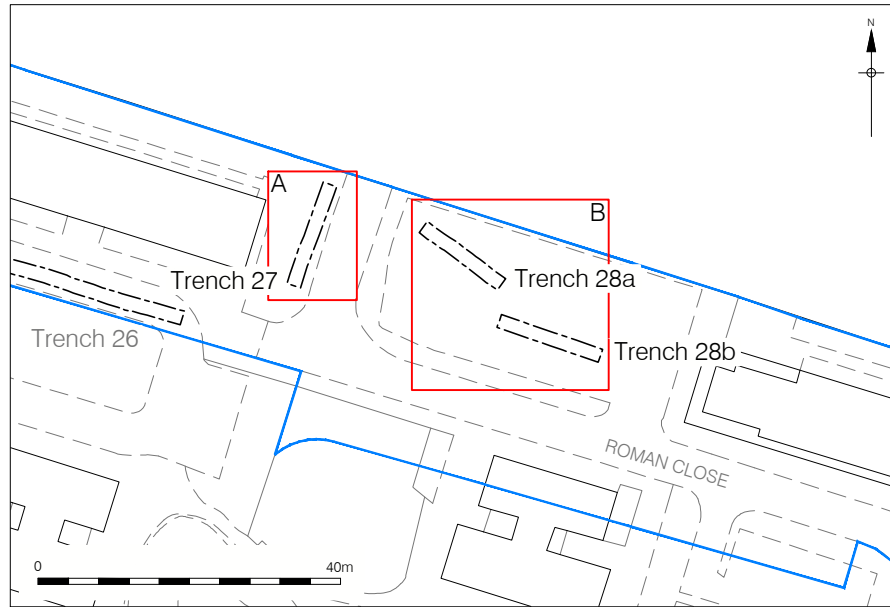
- 7.5.11 A similar ceramic drain was observed in Trench 36, running on an east-to-west alignment, and recorded as [+]. This truncated a large linear ditch [617] running east-to-west across the trench. This consisted of a linear cut with straight sides to an unexcavated base, filled with mid-grey brown sandy silt [616], from which two fragments of post-medieval peg tile dated to 1480-1900 were recovered. The feature measured 2.70m wide x 0.70m excavated depth (1.60m – 1.14m OD). It is likely that this feature corresponds to the southern field boundary of field 437 as shown on the 1867 Ordnance Survey.
- 7.5.12 This ditch was overlain by two layers of probable ploughsoil, the lower of which [629] consisted of a layer of mid-orange brown grey sandy silt to a depth of 0.10m at an upper level of 1.91m OD. This was overlain by a layer of mid-brown grey sandy clay silt [628] to a depth of 0.20m, at an upper level of 2.20m OD. The fact that these probable ploughsoil layers overlie the upper fill of ditch [617] may be a reflection of the fact that by 1898 the feature is no longer shown on the OS mapping, suggesting that the feature had been backfilled and the two fields amalgamated.
- 7.5.13 A probable continuation of this feature was recorded in Trench 40 to the west. Here ditch [632] was a linear feature aligned east-to-west with straight sides to an unexcavated base. This measured 2.40m wide x 0.40m excavated depth and was filled with dark grey brown clay silt [631] (1.51m – 1.10m OD). Two pieces of heavily burnt flint were recovered from the fill.
- 7.5.14 The ploughsoil observed in other trenches to the south of the site was recorded in Trenches 37, 39 and 41. In Trench 37 a 0.20m thick layer of dark brown grey sandy silt ploughsoil [676] was recorded directly overlying the natural deposits in the trench at an upper level of 1.93m OD. In Trench 39 the ploughsoil consisted of a layer of mid grey clay silt [673], 0.25m thick at an upper level of 1.81m OD, while in Trench 41 it consisted of dark brown grey sandy silt [679], lying 0.20m thick at an upper level of 1.99m OD.

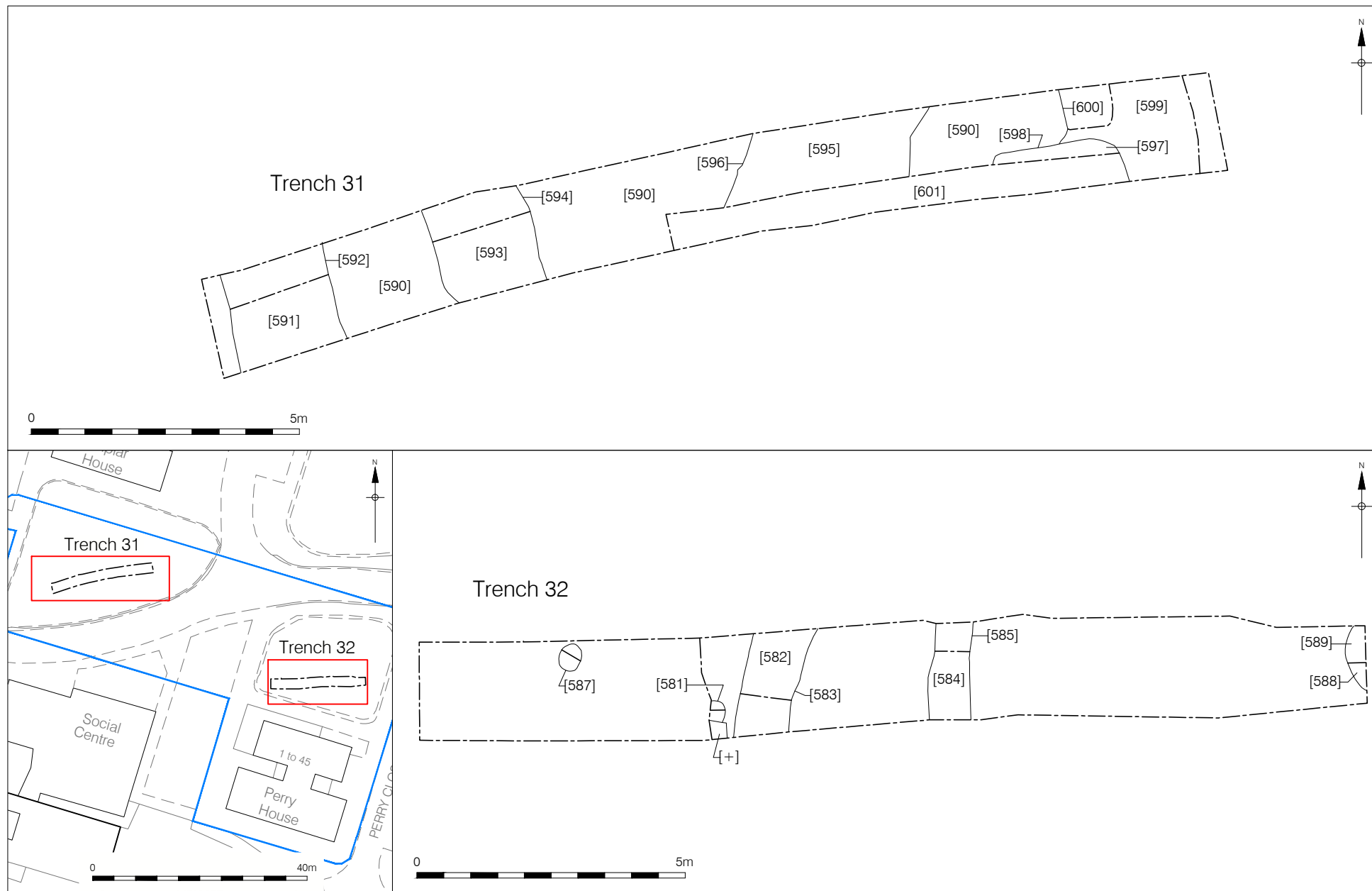
7.6 Phase 5 – Modern

- 7.6.1 Modern deposits were identified in all trenches, and comprised ground raising and levelling deposits, sub-formation and formation levels, concrete and tarmac hard-standing, topsoil, modern service cuts and other recent intrusions. All of these deposits relate to the construction, use, and in the case of a probable back-filled geotechnical pit in Trench 35, disuse of the current estate. All modern levels and intrusions were denoted as unstratified (+).

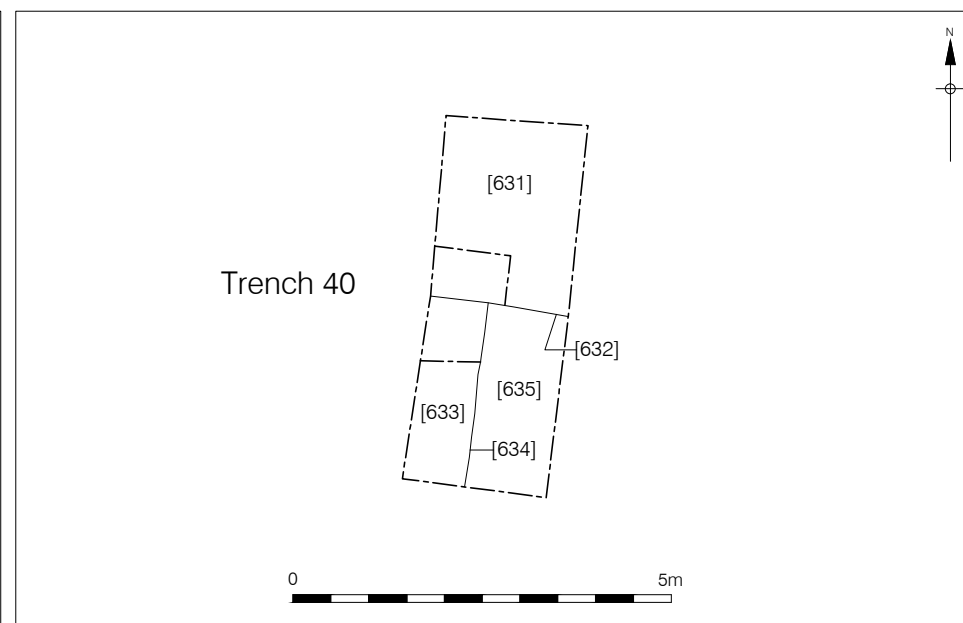
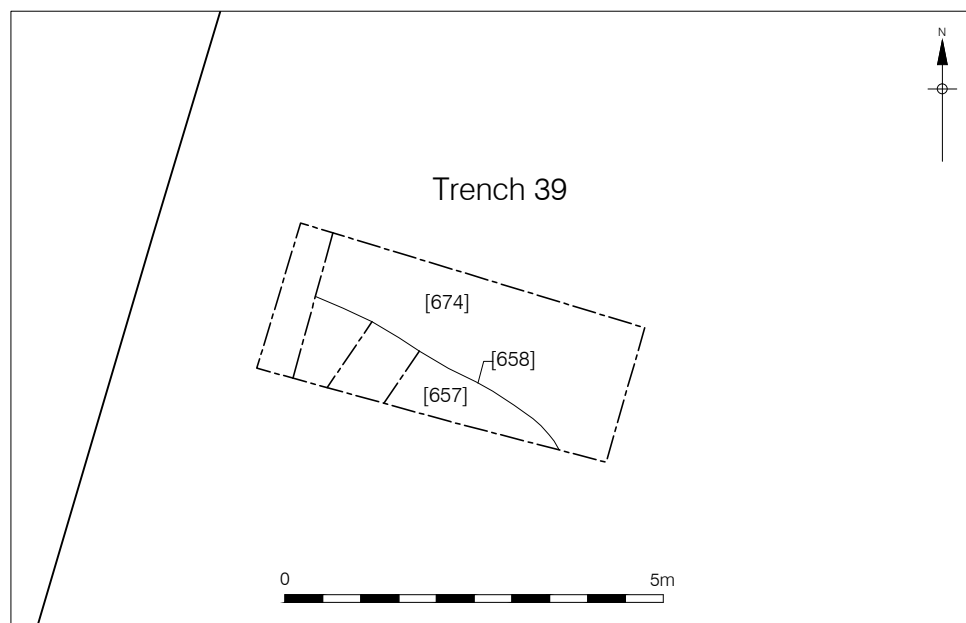
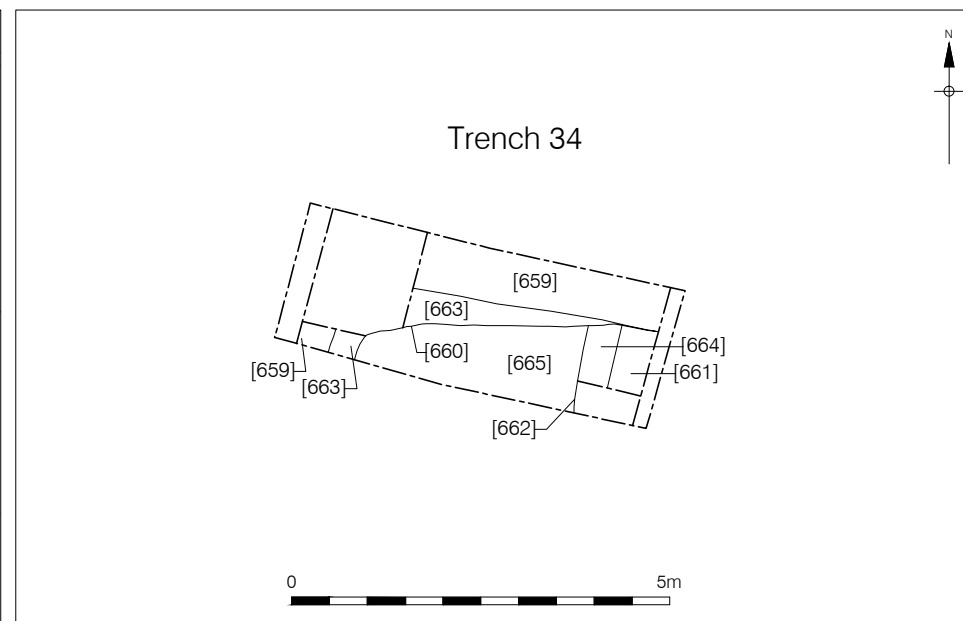
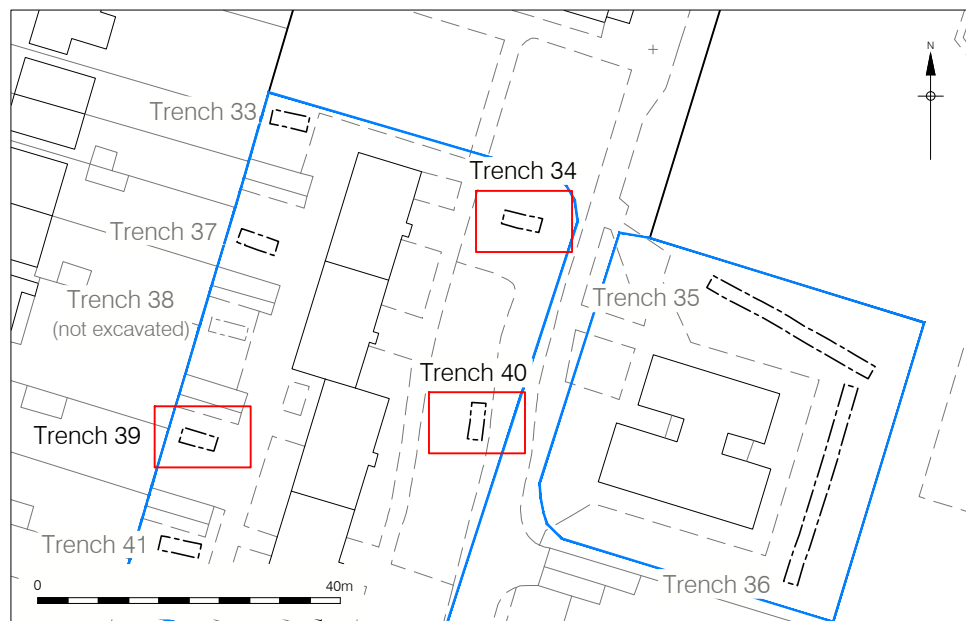


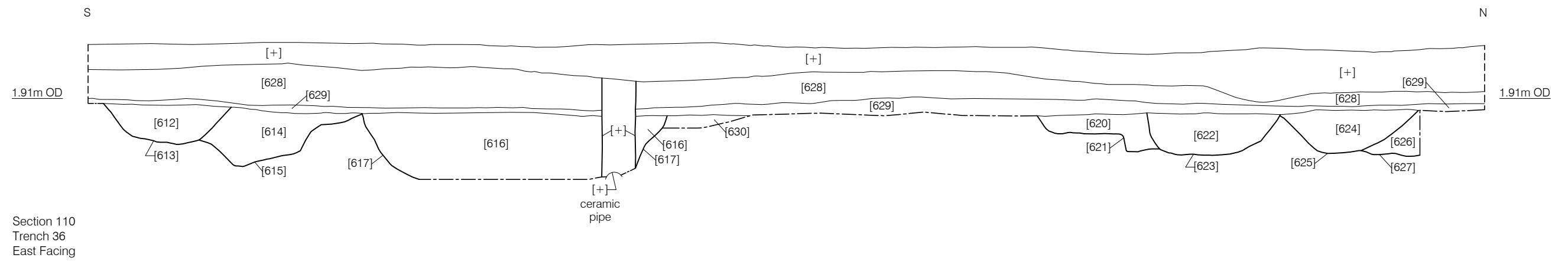
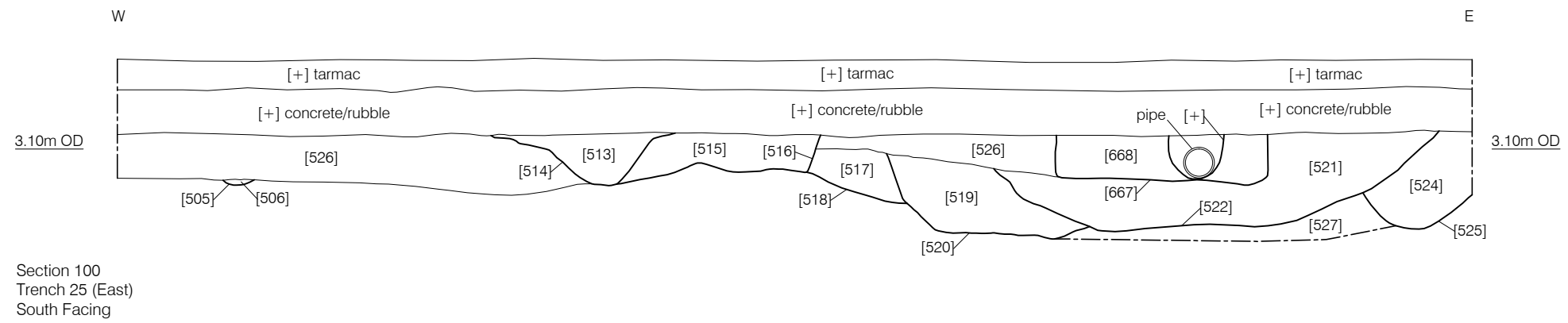












8 INTERPRETATIONS AND CONCLUSIONS

- 8.1 The Written Scheme of Investigation (Hawkins 2013 defined the aims and objectives of the evaluation as being:
- To determine if there is further evidence for prehistoric remains within the site as found at nearby investigations;
 - To determine if there is further evidence for Roman remains within the Phase 3 area as found during the evaluation and excavation of the Phase 1 and 2 areas and during the construction of the current estate;
 - To determine the extent, condition, nature, character, quality and date of any archaeological remains present
 - To inform the strategy for any further mitigation.
- 8.2 These objectives were achieved and the results are summarised below.
- 8.3 Features provisionally identified as being of prehistoric date were identified in Trenches 34, 35, 36, 39 and 40 to the south of the site. These features consisted of linear ditches and gullies with two curvilinear features in Trench 36. No coherent pattern is discernible from the evaluation trenches, and it is assumed that these features represent a probable field system. A single shallow curvilinear gully in Trench 36 may represent a small ring ditch truncated by later features and what may be a sharper corner in one other feature in the same trench may represent a larger enclosure ditch. No ditch terminals were identified in the trenches. No pits or other discrete features were recorded to suggest any settlement activity.
- 8.4 Finds from these features consist of lithics and burnt flint (Appendix 6). A Bronze Age date for some of the material appears to be consistent with the presence of field systems, while the presence of Mesolithic to early Neolithic flint tools suggests that activity of this date is present, and the generally good condition of the assemblage suggests that the material was discarded in close proximity to where they were recovered. This would accord with the known potential of the area as indicated from nearby investigations. The burnt flint, while generally heavily burnt is indicative of the casual inclusion of terrace gravels in kilns or hearths rather than the deliberate production of this material.
- 8.5 Roman activity appears to be broadly split in character to the north and south. To the south, in Trenches 31, 32, 35 and 36, the remains of this period consist of linear ditches, and are interpreted as field systems overlain on the pattern of prehistoric fields. To the north the character of the Roman activity is indicative of a small scale domestic settlement locus to the north of the site with a peak in activity around AD120-200/40.
- 8.6 The Roman features consist of pits ditches and post-holes in Trenches 25, 26, 27 and 28, confirming the findings of the previous two phases of evaluation. Pottery from the site is predominantly locally-sourced coarseware storage or cooking vessels with a lack of finewares or imported wares (Appendix 3), perhaps indicating a low status settlement probably sourcing the vessels from the nearby Beam Valley kilns. The environmental assessment (Appendix 5) suggests the presence of industrial working in the area in the form of unspecified industrial residues, and the possibility of food production in the form of charred seeds/grains.
- 8.7 It appears likely that the Roman activity represents either peripheral occupation to a larger nearby settlement, or a satellite settlement to the Beam Washlands (Biddulph *et al*, 2010).
- 8.8 The post-medieval remains recorded on site are likely to relate to Mardyke Farm. In Trench 25 and 28b, large deep features have been interpreted as being probable quarry pits, and are likely to relate to gravel extraction around the farm. In trench 25, a linear brick drain, pits and probable post-holes may well relate to the south range of farm buildings shown to lie in the vicinity of the trench on the Ordnance Survey (OS) maps from 1867 to 1939. In Trenches 36

and 40, a large post-medieval ditch appears to correspond closely to the line of a field boundary on the 1867 OS. This appears to have been backfilled to the east – in the area of Trench 36 – by 1898 and the fields amalgamated, and it is conjectured that the ceramic field drains recorded in Trenches 35 and 36 may have superseded the earlier open field drain.

9 ACKNOWLEDGEMENTS

- 9.1 Pre-Construct Archaeology Ltd would like to thank Hatib Singateh of Willmott Dixon Housing Limited for commissioning the work and for all his help on site and Adam Single for monitoring the evaluation on behalf of the London Borough of Havering.
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APPENDIX 1- CONTEXT INDEX

Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
500	25	Layer	orange yellow sandy gravel	1.80	20.00	--	3.44	--	Natural
501	25	Fill of [502]	mid-brown sandy silt	1.80	6.10	0.54	3.82	--	Roman
502	25	Ditch	linear, concave edges, base not excavated	1.80	6.10	0.54	3.82	3.28	Roman
503	25	Fill of [504]	light cream grey sandy silt gravel	1.80	1.15	0.32	3.73	--	Roman
504	25	Ditch/pit	linear, concave edges, base not excavated	1.80	1.15	0.32	3.72	3.41	Roman
505	25	Fill of [506]	mid orange grey coarse sand	0.20	0.30	0.07	2.91	--	Roman
506	25	Pit	circular, concave sides to concave base	0.20	0.30	0.07	2.91	2.84	Roman
507	25	Fill of [508]	mid-red brown coarse sand	0.40	0.40	0.10	2.95	--	Roman
508	25	Post-hole	circular, concave sides to flat base	0.40	0.40	0.10	2.95	2.85	Roman
509	25	Fill of [510]	mid-yellow grey coarse sand	0.40	0.40	0.07	2.94	--	Roman
510	25	Post-hole	sub-circular, concave sides to irregular base	0.40	0.40	0.07	2.94	2.90	Roman
511	25	Fill of [512]	mid-brown silty sand	1.06	0.56	0.36	2.95	--	Post-med
512	25	Pit	sub-rectangular, vertical sides to flat base	1.06	0.56	0.36	2.95	2.59	Post-med
513	25	Fill of [514]	mid-grey mottled gravelly sand	1.44	3.20	0.41	3.20	--	Post-med
514	25	Ditch	linear, concave sides to concave base	1.44	3.20	0.41	3.20	2.79	Post-med
515	25	Fill of [516]	mixed yellow orange brown burnt silty sand	1.00	1.44	0.40	3.19	--	Post-med
516	25	Pit	sub-circular, concave sides to flat base	1.00	1.44	0.40	3.19	2.87	Post-med
517	25	Fill of [518]	mid-brown sand	1.16	1.02	0.50	3.05	--	Roman
518	25	Pit	sub-circular, vertical sides to concave base	1.16	1.02	0.50	3.05	2.56	Roman
519	25	Fill of [520]	mid-brown coarse sand	0.90	1.70	0.45	2.93	--	Roman
520	25	Pit	sub-circular, concave sides to concave base	0.90	1.70	0.45	2.93	2.48	Roman
521	25	Fill of [522]	dark grey coarse sand	1.70	2.30	0.50	2.95	--	Roman
522	25	Ditch	linear, concave sides, base unexcavated	1.70	2.30	0.50	2.95	2.45	Roman
523	25	Masonry	linear, brick drain	2.20	0.24	0.20	3.10	--	Post-med
524	25	Fill of [525]	mid- to dark grey brown sand	1.30	0.70	0.23	2.79	--	Roman
525	25	Pit	sub-circular, concave sides to concave base	1.30	0.70	0.23	2.79	2.56	Roman
526	25	Layer	mid-brown gravelly silt sand	20.00	1.80	0.40	3.20	--	Post-med
527	25	Layer/fill	light grey brown silt sand	2.20	1.00	0.25	2.80	--	Roman
528	27	Fill of [529]	mid-brown silt sand	1.50	2.00	0.35	3.68	--	Roman
529	27	Ditch	linear, concave sides to concave base	1.50	2.00	0.35	3.68	3.21	Roman
530	27	Layer	mid-grey yellow sandy gravel	14.00	2.00	--	3.68	--	Natural
531	27	Layer	mid-grey brown silty sand	14.00	2.00	0.40	4.09	--	Post-med

Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
532	28a	Layer	mid-yellow orange sandy gravels	2.00	12.50	--	3.83	3.59	Natural
533	28a	Fill of [534]	mid-grey gravelly sand	2.00	0.80	0.30	3.91	--	Roman
534	28a	Ditch	linear, concave sides to concave base	2.00	0.80	0.30	3.91	3.68	Roman
535	28a	Fill of [536]	mid-grey brown coarse sand	0.66	0.76	0.30	3.66	--	Roman
536	28a	Pit	sub-circular, straight sides to conical base	0.66	0.76	0.30	3.66	3.36	Roman
537	28a	Fill of [538]	mid-brown grey sandy gravel silt	0.92	0.18	0.14	3.79	--	Roman
538	28a	Pit	sub-rectangular, vertical sides to flat base	1.50	1.55	0.50	3.65	3.26	Roman
539	28a	Fill of [540]	mid-brown coarse sand	1.90	0.46	0.25	3.80	--	Roman
540	28a	Pit	linear, concave sides to concave base	1.90	0.46	0.25	3.80	3.62	Roman
541	28a	Fill of [538]	light grey brown sandy clay silt	1.27	1.50	0.36	3.78	--	Roman
542	28a	Fill of [538]	charcoal and burnt clay	0.62	1.00	0.09	3.56	--	Roman
543	28a	Fill of [538]	orange brown clay	1.00	0.78	0.06	3.49	--	Roman
544	28a	Fill of [545]	mid-grey sand	0.50	0.93	0.25	3.69	--	Natural
545	28a	Pit	irregular, concave sides to irregular base	0.50	0.93	0.25	3.69	3.44	Natural
546	26	Fill of [547]	dark grey brown sandy silt	1.20	1.60	0.40	3.48	--	Roman
547	26	Pit	sub-circular, concave sides to concave base	1.20	1.60	0.40	3.48	3.22	Roman
548	26	Fill [549]	mid-grey brown sand	0.60	0.70	0.15	3.42	--	Roman
549	26	Pit	circular, concave sides to flat base	0.60	0.70	0.15	3.42	3.23	Roman
550	26	Fill of [551]	mid-grey red brown fine sandy silt	2.00	3.84	0.25	3.69	--	Roman
551	26	Ditch	linear, concave sides to flat base	2.00	3.84	0.25	3.56	3.44	Roman
552	26	Fill of [553]	mid-brown grey sandy silt	1.13	3.00	0.52	3.42	--	Roman
553	26	Ditch/pit	linear, stepped sides to flat base	1.13	3.00	0.52	3.42	2.96	Roman
554	26	Fill of [555]	mid-grey brown coarse sand	0.70	0.40	0.30	3.27	--	Roman
555	26	Ditch/pit	rectangular, vertical sides to flat base	0.70	0.40	0.30	3.27	3.03	Roman
556	26	Fill of [557]	mixed mid-grey brown sandy silt	0.90	1.30	0.50	3.36	--	Roman
557	26	Pit	sub-circular, concave sides to concave base	0.90	1.30	0.50	3.36	2.80	Roman
558	26	Fill of [559]	mid-grey brown fine sandy silt	1.30	1.94	0.22	3.51	--	Roman
559	26	Pit	sub-circular, concave sides to flat base	1.30	1.94	0.22	3.51	3.29	Roman
560	26	Fill of [561]	mid-grey sandy silt	0.92	1.26	0.42	3.40	--	Roman
561	26	Pit/tree throw	circular, irregular sides to sloping base	0.92	1.26	0.42	3.40	2.96	Roman
562	26	Fill of [563]	mid-brown silt sand	--	1.50	0.20	3.76	--	Roman
563	26	Pit	shape uncertain, concave sides to concave base	--	1.50	0.20	3.76	3.44	Roman
564	28b	Layer	mid-yellow brown sandy gravel	2.00	14.00	--	3.21	--	Natural
565	28b	Fill of	dark brown sandy gravel	1.80	7.20	--	2.87	--	Post-med

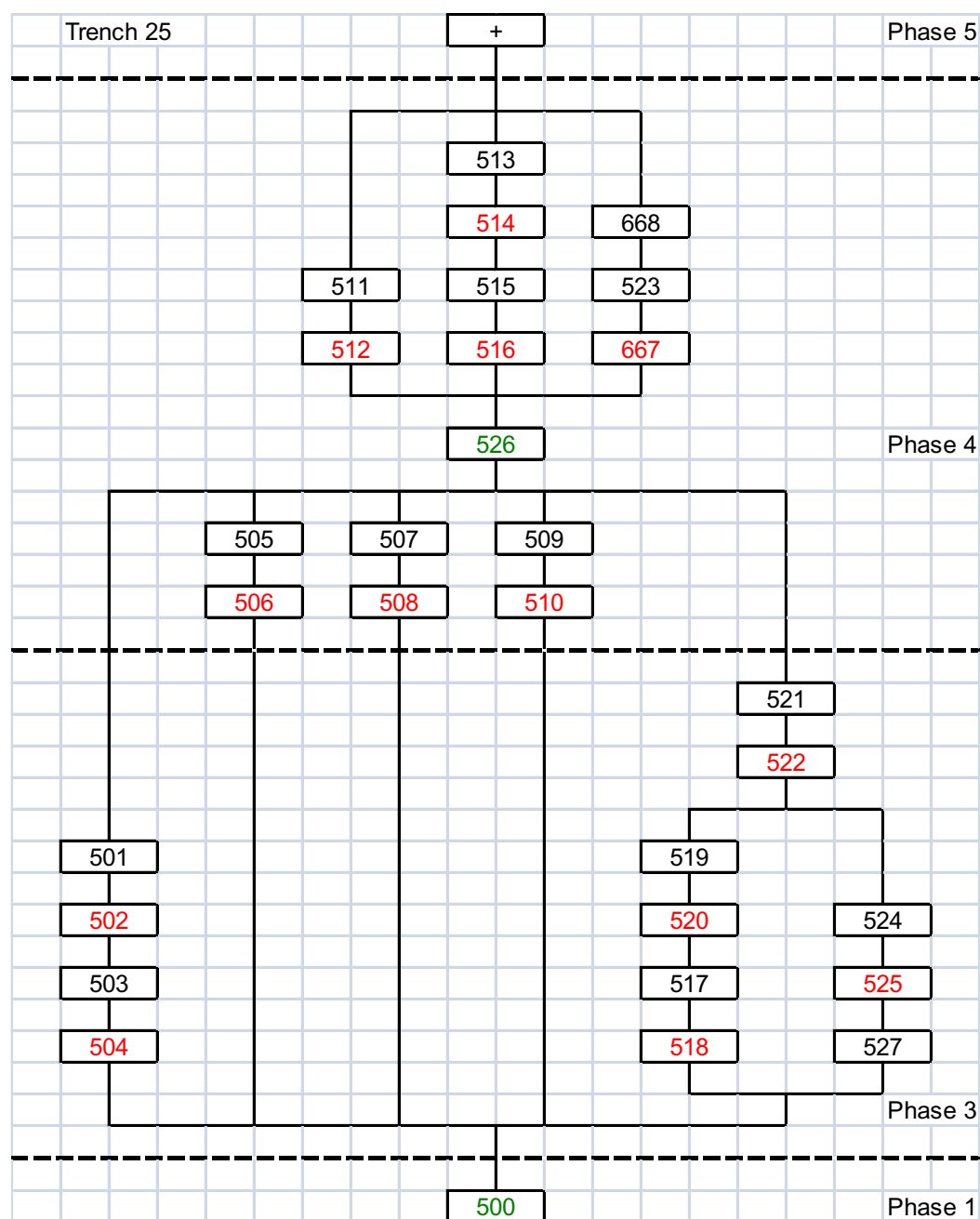
Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
		[566]							
566	28b	Quarry pit	shape uncertain, concave sides to unexcavated base	1.80	7.20	--	3.87	2.79	Post-med
567	28b	Fill of [568]	mid-brown coarse sand	1.80	3.40	0.16	3.34	--	Roman
568	28b	?Ditch	linear, concave sides to flat base	1.80	3.40	0.16	3.34	3.13	Roman
569	26	Fill of [570]	mid-grey brown sandy silt	0.20	0.40	0.13	3.53	--	Roman
570	26	Post-hole	sub-circular, concave sides to flat base	0.20	0.40	0.13	3.53	3.40	Roman
571	26	Fill of [572]	mid-grey brown sandy silt	0.40	0.50	0.11	3.54	--	Roman
572	26	Post-hole	circular, vertical sides to irregular base	0.40	0.50	0.11	3.54	3.43	Roman
573	26	Fill of [574]	mid-grey brown sandy silt	0.24	0.30	0.04	3.63	--	Roman
574	26	Post-hole	circular, vertical sides to flat base	0.24	0.30	0.04	3.63	3.59	Roman
575	26	Fill of [576]	mid-grey brown sandy silt	1.88	0.34	0.03	3.54	--	Roman
576	26	?hedge	linear, straight sides to flat base	1.88	0.34	0.03	3.54	--	Roman
577	26	Fill of [578]	mid-grey brown sandy silt	0.70	0.56	0.07	3.49	--	Roman
578	26	Ditch/gully	rectangular, vertical sides to flat base	0.70	0.56	0.07	3.49	3.42	Roman
579	32	Fill of [581]	mid-purple grey sandy silt	0.41	0.30	0.03	2.75	--	Roman
580	32	Fill of [581]	light grey brown silty sand	0.20	0.30	0.13	2.72	--	Roman
581	32	Pit	semi-circular, concave sides to concave base	0.41	0.30	0.16	2.75	2.59	Roman
582	32	Fill of [583]	mid-purple grey sandy silt	1.93	1.08	0.21	2.77	--	Roman
583	32	Ditch	linear, concave sides to concave base	1.93	1.08	0.21	2.77	2.58	Roman
584	32	Fill of [585]	mid-grey brown silty sand	1.82	0.78	0.11	2.76	--	Roman
585	32	Ditch	linear, concave sides to concave base	1.82	0.78	0.11	2.76	2.68	Roman
586	32	Fill of [587]	mid-grey brown sandy silt	0.50	0.42	0.12	2.73	--	Roman
587	32	Pit	circular, concave sides to concave base	0.50	0.42	0.12	2.73	2.58	Roman
588	32	Fill of [589]	mid-grey brown silty sand	1.22	0.38	0.22	2.75	--	Roman
589	32	Pit	semi-circular, straight sides to flat base	1.22	0.38	0.22	2.75	2.65	Roman
590	31	layer	mid-orange brown sandy gravels	1.80	18.50	--	2.75	--	Natural
591	31	Fill of [592]	mid-orange grey brown gravelly clay	2.00	2.00	0.34	2.75	--	Roman
592	31	Ditch	linear, straight sides to concave base	2.00	2.00	0.34	2.75	2.44	Roman
593	31	Fill of [594]	mid-yellow grey coarse sand	2.00	2.04	0.16	2.72	--	Roman
594	31	Ditch	linear, concave sides to concave base	2.00	2.04	0.16	2.72	2.56	Roman
595	31	Fill of [596]	mid-brown coarse sand	2.00	4.12	0.15	2.78	--	Roman
596	31	Linear	linear, concave sides to flat base	2.00	4.12	0.15	2.78	2.63	Roman
597	31	Fill of [598]	mid-grey brown coarse sand	2.00	2.49	0.27	2.82	--	Roman
598	31	?Pit	sub-circular, irregular sides to irregular base	2.00	2.49	0.27	2.82	2.42	Roman

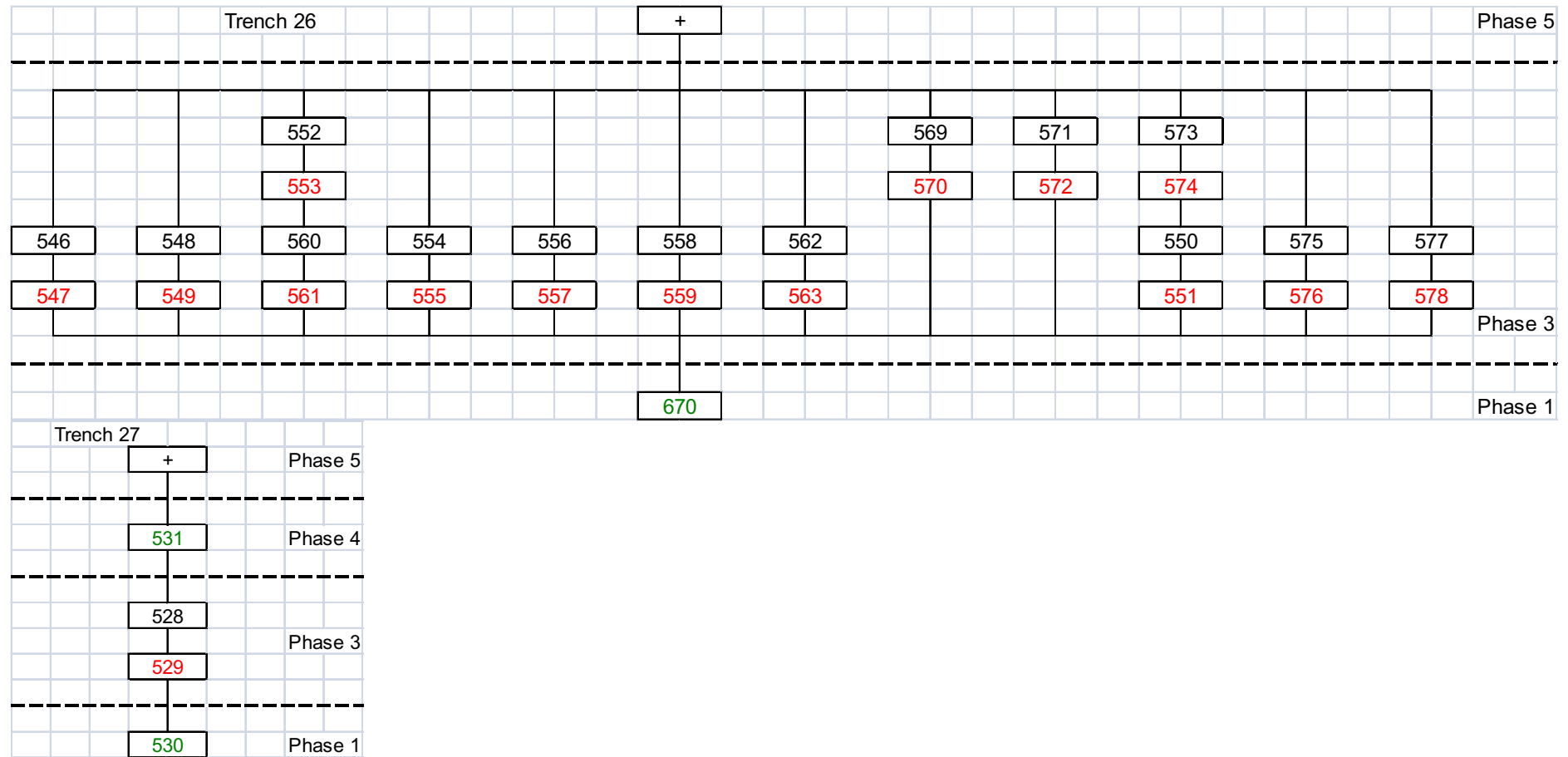
Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
599	31	Layer	mid yellow grey coarse sand	2.00	2.30	0.14	2.85	--	Roman
600	31	?Ditch	linear, vertical sides to flat base	2.00	2.30	0.14	2.85	2.71	Roman
601	31	Fill of [598]	mottled grey red brown coarse sand	2.00	2.30	0.25	2.42	--	Roman
602	36	fill of [603]	mid-orange brown grey sandy silt	1.80	0.95	0.35	1.84	--	Prehistoric
603	36	Ditch	linear, concave sides to concave base	1.80	2.10	0.35	1.84	1.53	Prehistoric
604	36	Fill of [605]	mid-orange brown grey sandy silt	1.30	0.60	0.20	1.86	--	Roman
605	36	Ditch	linear, concave sides to concave base	1.30	1.85	0.20	1.86	1.65	Roman
606	36	Fill of [607]	mid-orange brown grey sandy silt	1.40	0.55	0.30	1.79	--	Prehistoric
607	36	Ditch	curvi-linear, concave sides to concave base	1.40	1.85	0.30	1.79	1.50	Prehistoric
608	36	Fill of [609]	mid-orange brown grey sandy silt	0.70	1.90	0.20	1.84	--	Prehistoric
609	36	Gully	curvilinear, concave sides to concave base	0.70	1.90	0.20	1.84	1.65	Prehistoric
610	36	Fill of [611]	mid-orange brown grey sandy silt	0.60	1.20	0.10	1.81	--	Prehistoric
611	36	Gully	linear, concave sides to concave base	0.60	2.10	0.10	1.81	1.69	Prehistoric
612	36	Fill of [613]	mid-brown grey sandy silt	1.20	0.65	0.40	1.84	--	Prehistoric
613	36	Ditch	linear, concave sides to concave base	1.20	1.85	0.40	1.84	1.45	Prehistoric
614	36	Fill of [615]	mid-orange brown grey sandy silt	0.80	0.65	0.50	1.84	--	Prehistoric
615	36	Ditch	curvilinear, concave sides to concave base	1.50	1.85	0.50	1.84	1.27	Prehistoric
616	36	Fill of [617]	mid-grey brown sandy silt	2.70	1.85	0.70	1.60	--	Post-med
617	36	Ditch	linear, straight sides to unexcavated base	2.70	1.85	0.70	1.60	1.14	Post-med
618	36	Fill of [619]	mottled mid-yellow grey silt	1.80	1.50	0.35	1.74	--	Roman
619	36	Ditch	linear, straight sides to flat base	1.80	1.50	0.35	1.74	1.39	Roman
620	36	Fill of [621]	mid-grey brown silt	0.80	0.60	0.35	1.70	--	Roman
621	36	Ditch	linear, straight sides to flat base	3.40	1.50	0.35	1.70	1.36	Roman
622	36	Fill of [623]	mid-grey brown silt	1.50	1.85	0.40	1.76	--	Roman
623	36	Ditch	linear, concave sides to flat base	1.50	1.85	0.40	1.76	1.36	Roman
624	36	Fill of [625]	mid-grey brown silt	1.00	1.85	0.35	1.76	--	Roman
625	36	Ditch	linear, concave sides to flat base	1.00	1.85	0.35	1.76	1.40	Roman
626	36	Fill of [627]	mid-grey brown silt	0.80	0.30	0.35	1.76	--	Prehistoric
627	36	Ditch	linear, concave sides to flat base	0.80	0.30	0.35	1.76	1.40	Prehistoric
628	36	Layer	mid-brown grey sand clay silt	25.40	1.85	0.20	2.20	--	Post-med
629	36	Layer	mid orange brown grey sandy silt	25.40	1.85	0.10	1.91	--	Post-med
630	36	Layer	light orange brown grey sandy silt	25.40	1.85	--	1.88	--	Natural
631	40	Fill of [632]	dark grey brown clay silt	2.40	1.85	0.40	1.51	--	Post-med
632	40	Ditch	linear, straight sides to unexcavated base	2.40	1.85	0.40	1.51	1.10	Post-med
633	40	Fill of	mid-grey silt	2.40	0.80	0.35	1.46	--	Prehistoric

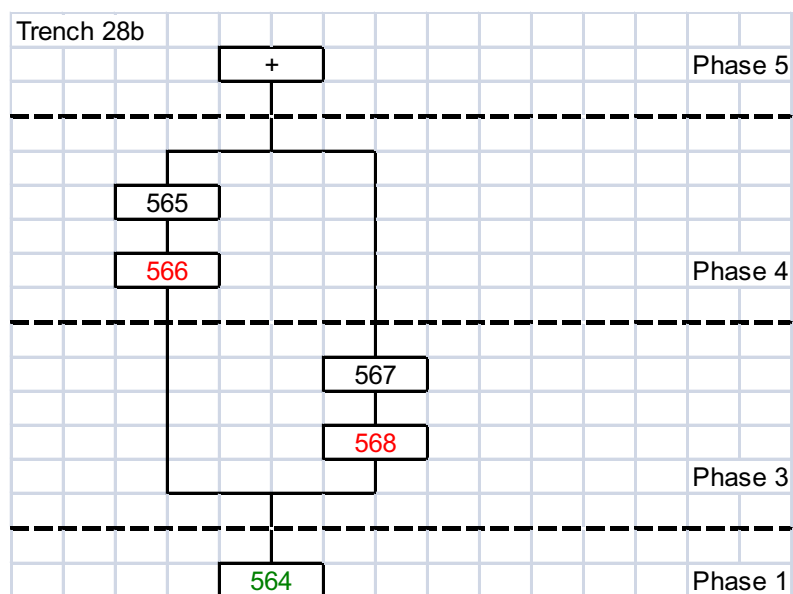
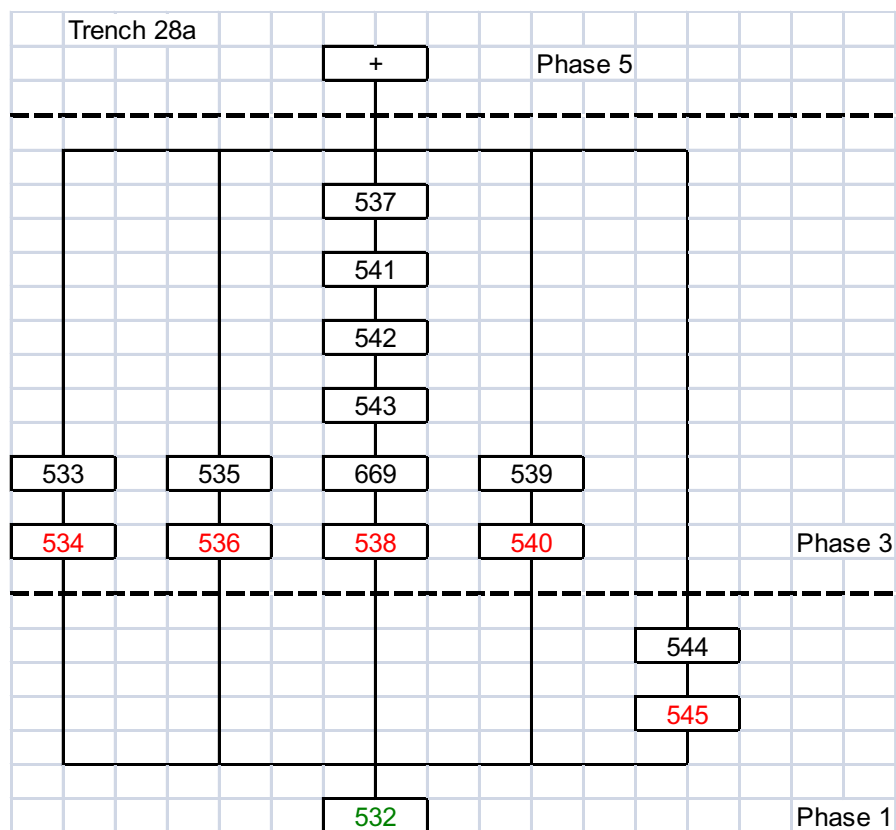
Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
		[634]							
634	40	Gully	linear, concave sides to concave base	2.40	0.80	0.35	1.46	1.27	Prehistoric
635	40	Layer	light grey yellow sandy silt	5.00	1.85	--	1.46	--	Natural
636	35	Layer	light yellow brown grey sandy silt	1.80	26.00	--	1.73	--	Natural
637	35	Fill of [638]	light yellow brown grey sandy silt	1.80	5.80	0.35	1.66	--	Roman
638	35	?linear	linear, concave sides to flat base	1.80	5.80	0.35	1.66	1.37	Roman
639	35	Fill of [640]	light yellow brown grey sandy silt	1.80	1.50	0.35	1.68	--	Roman
640	35	Linear	linear, concave sides to concave base	1.80	1.50	0.35	1.68	1.30	Roman
641	35	Fill of [642]	light yellow brown grey sandy silt	1.80	2.30	0.40	1.65	--	Prehistoric
642	35	Linear	linear, concave sides to concave base	1.80	2.30	0.40	1.65	1.20	Prehistoric
643	35	Fill of [644]	dark yellow brown grey sandy silt	0.20	2.00	0.40	1.65	--	Post-med
644	35	Linear	linear, vertical sides to unexcavated base	0.20	2.00	0.40	1.65	1.26	Post-med
645	35	Fill of [646]	light yellow brown grey sandy silt	1.80	2.20	0.55	1.65	--	Roman
646	35	Linear	linear, concave sides to concave base	1.80	2.20	0.55	1.65	1.10	Roman
647	35	Fill of [648]	light yellow brown grey sandy silt	1.80	1.75	0.40	1.64	--	Roman
648	35	Linear	linear, concave sides to concave base	1.80	1.75	0.40	1.64	1.25	Roman
649	35	Fill of [650]	light yellow brown grey sandy silt	1.80	1.80	0.50	1.73	--	Prehistoric
650	35	Linear	linear, concave sides to concave base	1.80	1.80	0.50	1.73	1.28	Prehistoric
651	35	Fill of [652]	light yellow brown grey sandy silt	1.80	1.10	0.35	1.70	--	Prehistoric
652	35	Linear	linear, concave sides to concave base	1.80	1.10	0.35	1.70	1.33	Prehistoric
653	35	Fill of [654]	light yellow brown grey sandy silt	1.80	1.40	0.40	1.70	--	Prehistoric
654	35	Linear	linear, concave sides to concave base	1.80	1.40	0.40	1.70	1.32	Prehistoric
655	35	Fill of [656]	light yellow brown grey sandy silt	1.80	1.90	0.45	1.65	--	Prehistoric
656	35	Linear	linear, concave sides to concave base	1.80	1.90	0.45	1.65	1.31	Prehistoric
657	39	Fill of [658]	light yellow grey blue clay silt	1.05	4.60	0.60	1.56	--	Prehistoric
658	39	Ditch	linear, concave sides to flat base	1.05	4.60	0.60	1.56	0.97	Prehistoric
659	34	Fiill of [660]	mid-red brown sandy silt clay	1.90	4.60	0.45	1.64	--	Prehistoric
660	34	Ditch	curvilinear, concave sides to concave base	1.90	4.60	0.45	1.64	1.32	Prehistoric
661	34	Fill of [662]	mid yellow brown with blue grey mottles	1.30	0.50	0.30	1.64	--	Prehistoric
662	34	Ditch	linear, concave sides to concave base	1.30	0.50	0.30	1.64	1.36	Prehistoric
663	34	Fill of [660]	mixed yellow brown and dark red brown	1.90	4.60	0.10	1.57	--	Prehistoric
664	34	Fill of [662]	mid-orange brown grey sandy gravel clay	1.30	0.90	0.10	1.64	--	Prehistoric
665	34	Layer	orange brown yellow sandy gravel	1.80	5.00	--	1.61	--	Natural
666	35	Layer	mid-brown grey sand clay silt	1.80	26.00	0.30	2.15	--	Post-med

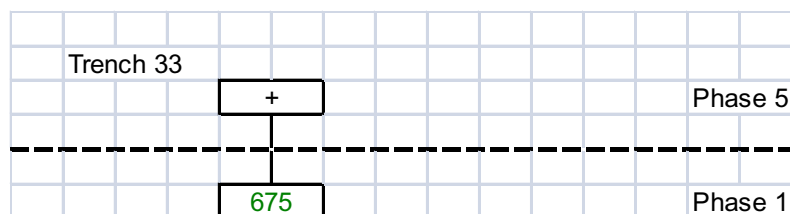
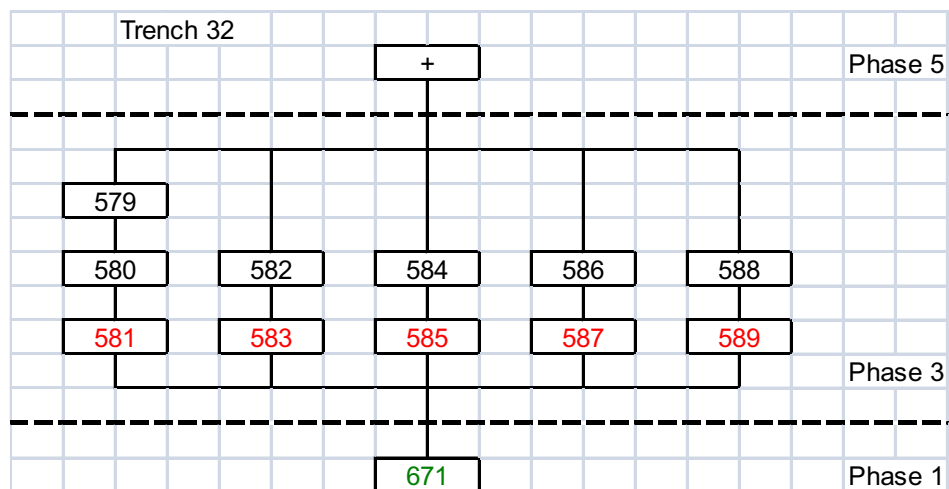
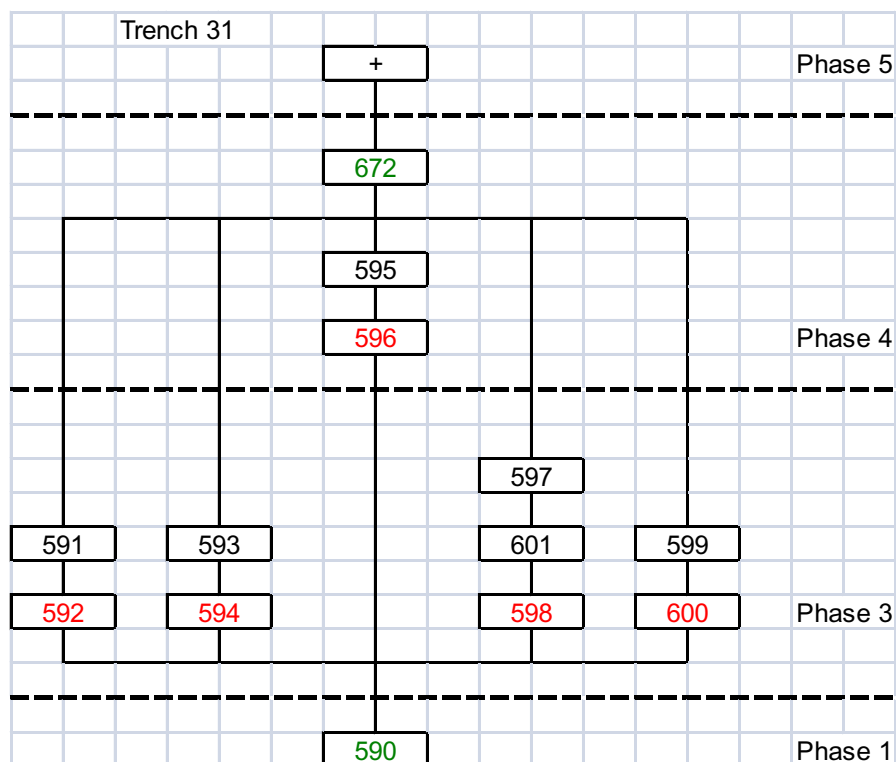
Context No	Trench	Interpretation	Description	N-S	E-W	Depth	High	Low	Prov. date
667	25	cut	linear, vertical sides to flat base	1.80	1.40	0.30	3.20	2.87	Post-med
668	25	fill of [667]	dark brown grey sandy silt	1.80	1.40	0.30	3.20	--	Post-med
669	28a	fill of [538]	mid-yellow orange sandy gravel	--	0.25	0.45	2.78	--	Roman
670	26	Layer	mid-yellow orange sandy gravel	30.00	1.80	--	3.56	--	Natural
671	32	Layer	mid-yellow orange sandy gravel	1.80	20.00	--	2.78	--	Natural
672	31	Layer	mid-brown grey sandy silt	1.80	20.00	0.20	3.05	--	Post-med
673	39	Layer	mid-grey clay silt	1.80	5.00	0.25	1.81	--	Post-med
674	39	Layer	light yellow brown grey sandy silt	1.80	5.00	--	1.56	--	Natural
675	33	Layer	dark brown red sandy gravel	1.80	5.00	--	1.97	--	Natural
676	37	Layer	dark brown grey sandy silt	1.80	5.00	0.20	1.93	--	Post-med
677	37	Layer	mid brown grey sandy gravel	1.80	5.00	--	1.73	--	Natural
678	41	layer	light yellow brown grey sandy silt	1.80	5.00	--	1.69	--	Natural
679	41	layer	dark brown grey sandy silt	1.80	5.00	0.20	1.99	--	Post-med

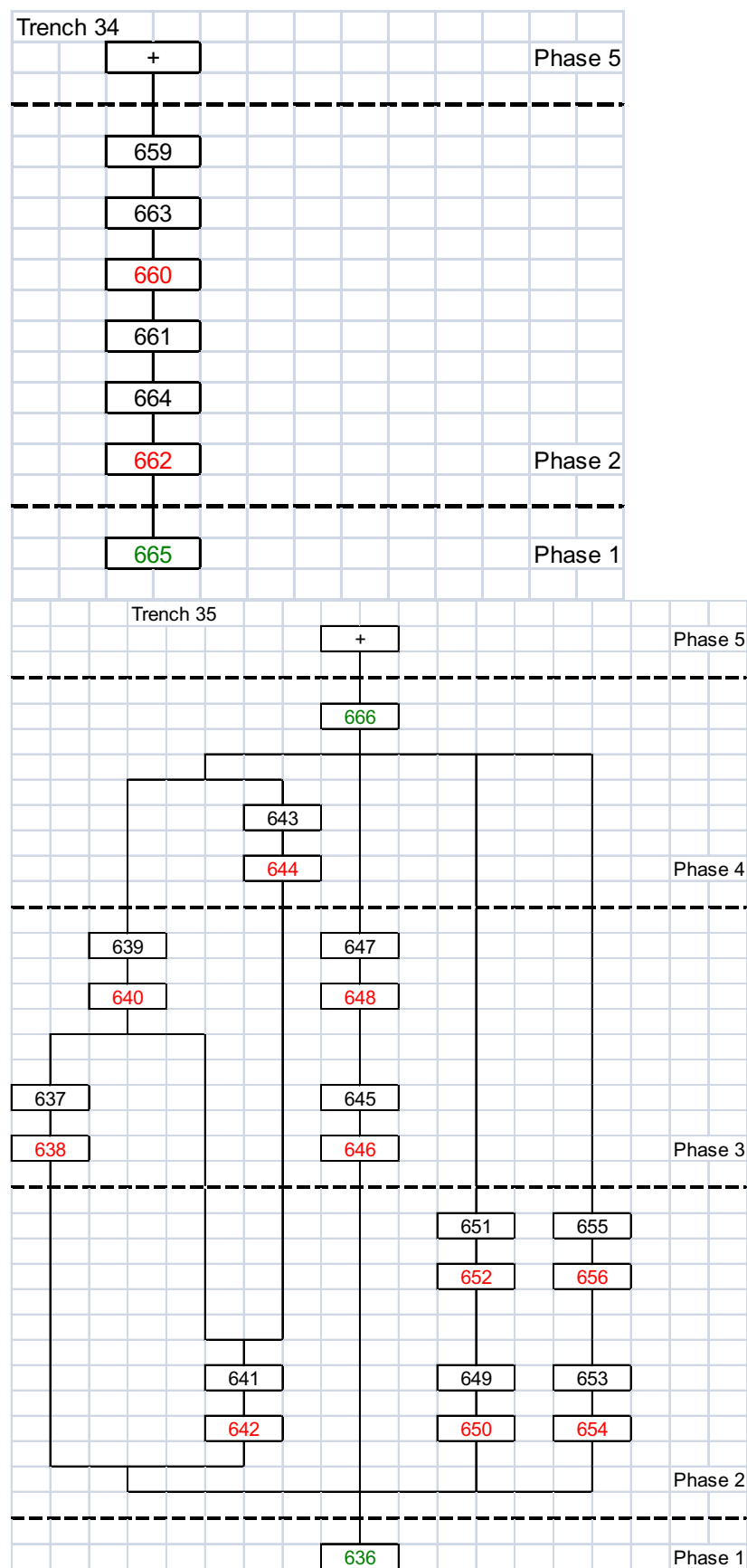
APPENDIX 2 - SITE MATRICES

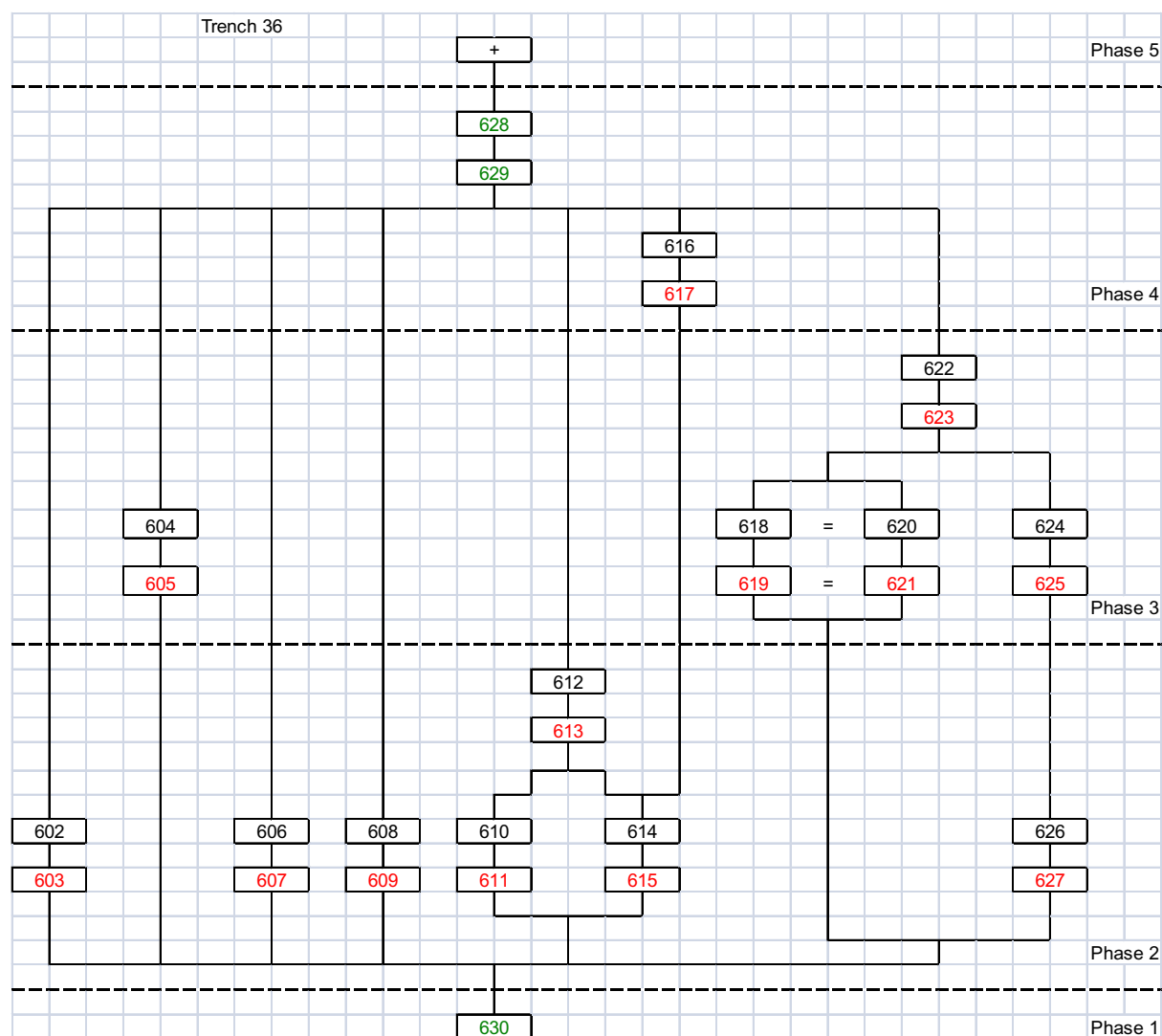


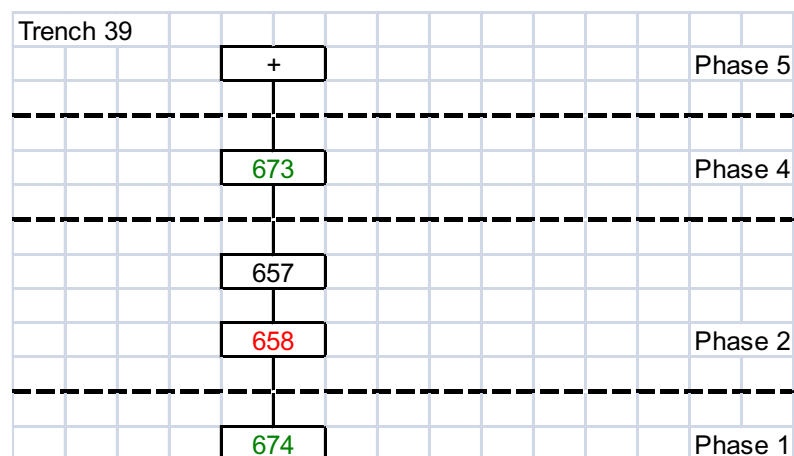
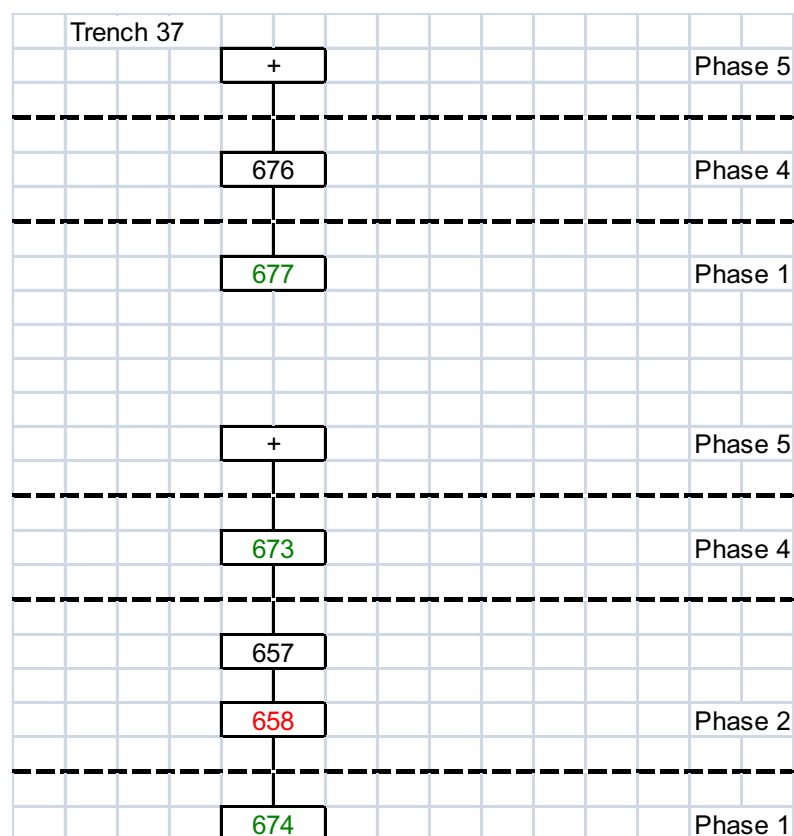


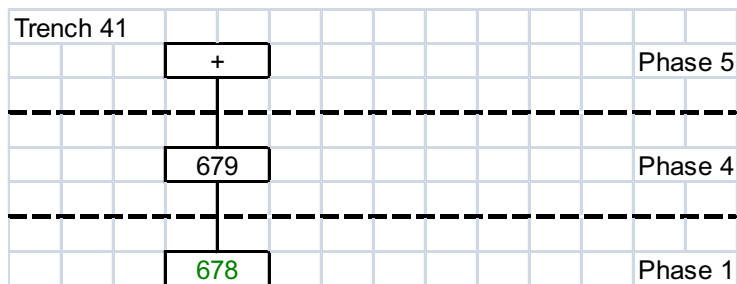
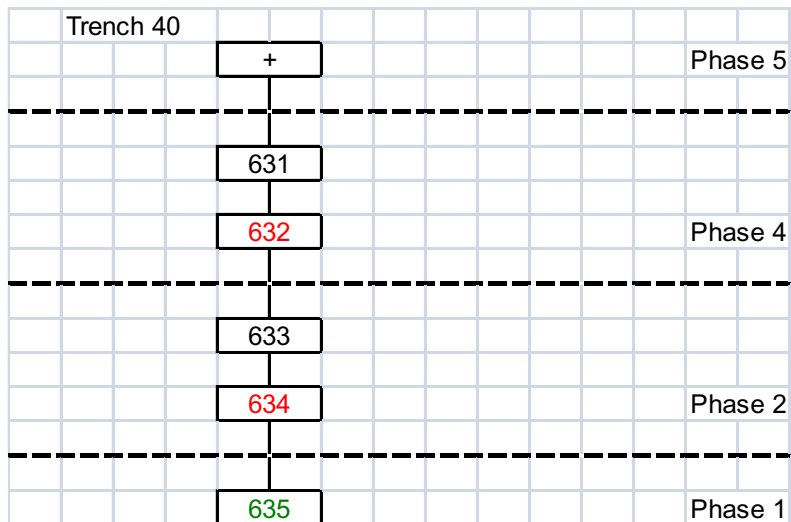












APPENDIX 3: ROMAN POTTERY

MYE08 Roman Pottery – Katie Anderson

Introduction

An assemblage of Roman pottery totaling 366 sherds, weighing 4351g and representing 6.45 EVEs was recovered from the evaluation. All of the pottery was examined and recorded in accordance with the guidelines laid out by the Study Group for Roman Pottery (Perrin 2011) and using the standard terminology and codes advocated by the Museum of London Archaeology Service (Symonds 2002).

Assemblage Composition

The pottery comprised primarily small to medium sized sherds, with a relatively low mean weight of 11.9g. This resulted in a 61% of the assemblage consisting of non-diagnostic body sherds, many of which could only be broadly dated as Romano-British. That said, the forms and to a lesser extent the fabrics present within the assemblage, do suggest a peak in activity between AD120-200/40.

A fairly limited range of fabrics were identified (Table 1). Locally made coarse sandy greywares (CSGW) were the most commonly occurring fabrics, representing 61% of the total assemblage, followed by SAND fabrics (28.4%). The remaining fabrics represented less than 2% of the assemblage each and included ten imitation black-burnished ware sherds (BBS), nine shell-tempered sherds and seven grog-tempered sherds. The only sourced ware comprised a single Verulamium whiteware sherd (VRW), recovered from context (541). It is of note that the assemblage did not contain any finewares or imported wares, and whilst the size of the assemblage is likely to be the main contributing factor, it is also a reflection on the relative status, function and/or wealth of the site.

Fabric	No.	Wt(g)
BBS	10	219
BUFF	1	5
CSGW	224	2529
FSGW	4	33
GROG	7	57
OXIS	5	64
SAND	104	1340
SHELL	9	94
VRW	1	6
WS	1	4
TOTAL	366	4351

Table 1: All Roman Pottery by Fabric

As discussed above, the majority of the assemblage comprised non-diagnostic body sherds, with just 39% of the assemblage consisting of diagnostic sherds (Table 2). Of this group, jars were the most commonly occurring form, totalling 91 sherds (1730g), representing a minimum of 25 different vessels. Within this group ledge-rimmed jars were the most commonly occurring type, with 11 different jars recorded, in varying sizes, with rim diameters ranging from 12cm-24cm. These jars are very similar in form to vessels identified as kiln products, from the adjacent site at Beam Valley (Figs 13-15, Biddulph 2010), therefore it can be suggested that the kilns were supplying the Mardyke Estate site with pottery. Other jar forms included necked, beaded rim jars and a flat rimmed jar. Other vessel forms identified comprised 12 straight-sided dishes (15 sherds, 304g), five of which were in imitation black-burnished ware fabrics with burnished lattice decoration, five bowls and two lids, the latter two also being similar to vessels from the kiln site (*ibid*). In terms of fabrics and forms, the assemblage is dominated by domestic coarseware vessels, for the storage and cooking of foodstuffs, with a limited repertoire of forms.

Form	No.	Wt(g)
Bowl	5	185
Closed form	29	260
Dish	15	304
Jar	91	1730
Lid	2	37
Unknown	224	1835
TOTAL	366	4351

Table 2: All Roman Pottery by form

Contextual Analysis

Roman pottery was recovered from 18 different contexts (Table 3), comprising one large assemblage (+100 sherds) (556), four medium sized assemblages (31-99 sherds) and 13 small assemblages. All of the Roman material derived from five trenches across the site with Trench 26, Phase 3 features, containing the bulk of the pottery (82% by count). Context (556) contained the largest quantity of pottery from a single context, totalling 132 sherds, weighing 1205g. This comprised a minimum of 14 different vessels, including ten jars, three dishes and one bowl, with a context date of AD120-300. Context (558) contained 95 sherds (1205g) which included 57 sherds (823g) from a SAND lid-seated jar and five sherds (59g) from a CSGW ledge-rimmed jar. Cut [561] comprised three fills, of which two contained Roman pottery. 34 sherds (581g) dating AD120-300, were recovered from upper fill (552) which included two jars, two straight-sided dishes and a beaded rim bowl. Lower fill (560) contained two sherds (6g), both of which were non-diagnostic, although the fabrics suggest a date of AD50-200.

Context	No.	Wt(g)	Spotdate
501	2	15	40-400
521	1	19	AD40-400
537	4	71	AD120-300
541	47	673	AD120-300
542	4	154	AD100-200/40
546	31	397	AD120-300
550	3	9	AD50-400
552	34	581	AD120-300
556	132	1205	AD120-300
558	95	1160	AD100-200
560	2	6	AD50-200
562	1	3	AD50-200
569	3	7	AD100-300
604	1	18	AD50-400
618	3	23	AD50-200
624	1	4	AD40-400
637	1	4	AD40-200
645	1	2	AD50-400
TOTAL	366	4351	x

Table 3: All Roman Pottery by Context

Trench 28a produced two contexts with Roman pottery. (541) contained 47 sherds, weighing 673g, dating AD120-300, including five different jars and a straight-sided dish. Context (542) contained four sherds (154g), with a context date of AD100-200/40.

Three different contexts contained pottery from Trench 25; (501), (521) and (537). The first two contexts contained body sherds, thus could only be dated as Romano-British. Context (537) however could be more closely dated based to AD120-300, based on the presence of a straight-sided dish and a beaded rim bowl, which interestingly refitted with a sherd from (542), Trench 28a.

Trench 36 comprised three contexts containing Roman pottery; (604), (618) and (624), albeit only a small quantity, totalling 5 sherds and weighing 45g. With the exception of a CSGW beaded rim jar from context (618), the remaining sherds were non-diagnostic thus could not be closely dated.

Finally two contexts in Trench 35 contained pottery. Context (637) contained one small GROG sherd, dating AD40-200, while a CSGW body sherd was recovered from (645), dating AD50-400.

Discussion

Overall the small size of the assemblage does limit any discussion on the pottery. That said, the pottery is indicative of a small-scale domestic site, with an apparent peak between AD120-200/40. The very limited range of vessel forms and the lack of any sourced wares (with the exception of a single VRW sherd) makes dating of this assemblage somewhat problematic. The most commonly occurring form – the ledge-rimmed jars – have a fairly long production life, however, if paralleled with some of the products from the kilns at the Beam Valley site, a tighter date range of AD125-200/40 is suggested (Biddulph 2010). The straight-sided dishes also provide a more specific date range, especially those which are in imitation black-burnished fabrics with burnished lattice decoration, with an AD120-300 date range. It certainly seems likely that at least some of the sites supply of pottery was coming from the kilns in the immediate vicinity, although fabric comparisons would need to be made in order to prove that this was the case.

The lack of fine and imported wares is of interest and implies the site had limited access, funds and/or desire to obtain pottery from outside of the local area, or vessels specifically used for the serving/presentation of foods.

Recommendations

All of the pottery has been fully recorded and therefore no further analysis is required. However, the assemblage should be considered as part of a larger assemblage recovered from the previous phases of excavations.

It would also be worthwhile to compare fabrics and forms with similar products identified at the kiln site at the Beam Valley (Biddulph 2010), perhaps including thin section analysis, to determine whether any of the vessels from this assemblage are kiln products.

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APPENDIX 5: RAPID ASSESSMENT OF BULK ENVIRONMENTAL SAMPLES FROM MARDYKE ESTATE, RAINHAM (PHASE 3).

By Lisa Snape

INTRODUCTION

This report summarises the findings arising from a rapid assessment of bulk environmental samples taken from various fills of prehistoric and Roman date. The aim of this report is to highlight the potential and significance of the samples for future work.

METHODOLOGY

Sub-samples (5 litres) of each 40 litre bulk sample were processed by the method of flotation by Pre-Construct Archaeology. Residues (heavy fraction) were collected using a 1.mm mesh and the flot (light fraction) was collected using a 0.3 micron sieve. Flots and residues were then dried at room temperature. Residues were scanned 'by-eye' to retrieve artefacts such as pottery, bone, industrial waste, CBM, macrocharcoal and recorded using *pro-forma* assessment forms. The flot was dried and rapidly scanned to assess concentration and preservation of organic remains. The following ranges of abundance were used to quantify organic and inorganic remains:

1. = Occasional (1-10)
2. = Fairly frequent (11-30)
3. = Frequent (31-100)
4. = Abundant (>100)

RESULTS

The results from the rapid assessment are presented in table 1.

Table 1. Rapid assessment of residues

[illegible]

DISCUSSION: POTENTIAL AND SIGNIFICANCE OF SAMPLES

The samples taken from Roman deposits produced flot material containing fairly frequent charred material. Charcoal and a few cereal chaff remains samples show that further sampling would enable the local environment to be better understood at. The samples yielded occasional fragments of daub, CBM and burnt flint and frequent pot sherds. The prehistoric fills produced only occasional flecks of charcoal. Due to the low preservation potential of organic material, no further work is required on the samples. A full schedule of sampling will be undertaken during the excavation process.

APPENDIX 4: FIRED CLAY AND CERAMIC BUILDING MATERIAL

The fired clay and ceramic building material (MYE08)

By Berni Sudds

A small assemblage of fired clay and ceramic building material was presented for assessment and is tabulated and spot dated below in Table 1.

Context	Type	Description	Date	Context considered date/ spot date
507	Ceramic building material	1 fragment of peg tile (50g). Abraded surfaces.	1480 – 1900?	1480 – 1900
511	Ceramic building material	5 fragment of post-medieval peg tile (382g). Fine moulding sand (fabrics nr 2586 and 2276). 2 small fragments of pre-Great Fire red brick (fabrics 3033 and 3046), reused (140g).	1480 – 1900 1450 - 1700	1480 – 1700 +
515	Ceramic building material	2 fragments of post-medieval peg tile (268g). Fine moulding sand (fabric 2276nr2586).	1480 – 1900	1480 – 1900 probably post c.1600.
546	Fired/ burnt clay	3 fragments of possible daub (14g). Possible withy impression.	Prehistoric – c.1800	Prehistoric – c.1800
552	Fired/ burnt clay	1 fragment of possible daub (88g). Abraded but possible remains of a withy impression.	Prehistoric – c.1800	Prehistoric – c.1800
556	Fired/ burnt clay	4 fragments from a triangular loomweight (130g) including one apex. 1 fragment of possible daub (6g).	Iron Age	Iron Age

Context	Type	Description	Date	Context considered date/ spot date
558	Fired/ burnt clay	1 fragment of possible daub (38g).	Prehistoric – c.1800	Prehistoric – c.1800
595	Ceramic building material	2 very small fragments of post-medieval peg tile (2g).	1480 – 1900	1480 – 1900
616	Ceramic building material	2 fragments of peg tile (58g). 1x post-medieval/ 1x transitional.	1400 – 1900	1480 – 1900

Table 1: The fired clay and ceramic building material.

There are two distinct phases of activity represented in the assemblage. Most of the fired or burnt clay is likely to be daub, derived from buildings of clay and timber construction. Given that this method of construction was utilised in Britain from the prehistoric period right up until the post-medieval era daub cannot be dated closely in isolation. It is likely, however, that the material is of Iron Age date, given the associated identification of part of a triangular loomweight from [556].

Triangular loomweights are typically Iron Age in date, although appear to have remained in use into the early Roman period and have been found on sites across the Greater London region. Locally examples have been identified at Moor Hall Farm, Rainham (Greenwood 1997), the Beam valley, Dagenham (Poole 2010) and Harold Wood Hospital, Romford (Sudds 2012). They have also been recovered from a number of other sites in south-west Essex (Major 1982). The form is commonly interpreted as a loomweight, thus inferring localised textile production, although other functions have been suggested including oven or kiln furniture and door or thatch weights (Major 1982; Poole 1984, 1995, 2010, 2011a, 2011b)

The remaining building material is of post-medieval date, comprised predominantly of peg tile. Two small fragments of early post-medieval brick were also recovered but appear to have been re-used as building rubble. The post-medieval assemblage is typical to the region in both fabric and form, having little intrinsic interest.

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APPENDIX 6: LITHICS

Phase III Archaeological Evaluation at the Mardyke Estate, Rainham, London Borough of Havering: Lithic Assessment

Site Code: MYE 08

NGR: 55057 18339

Dr Barry Bishop July 2013

Introduction

The archaeological evaluation at the above site resulted in the recovery of nine struck flints and just under 2kg of unworked burnt stone. This report quantifies and briefly describes the material, assesses its significance and recommends any further work required for it to achieve its full research potential. All metrical descriptions follow the methodology established by Saville (1980).

Burnt Stone

Context	Burnt Stone (no.)	Burnt Stone (wt:g)	Comments
554	1	59	Heavily burnt complete cobble
556	1	30	Heavily burnt
602	4	45	All heavily burnt
604	2	22	Both heavily burnt
606	1	54	Heavily burnt
608	7	110	Variably but mostly heavily burnt
610	9	205	Variably but mostly heavily burnt
612	7	87	Variably but mostly heavily burnt
614	12	170	Variably but mostly heavily burnt
618	6	112	Variably but mostly heavily burnt
620	2	100	Both heavily burnt
622	8	182	All heavily burnt
624	5	243	All heavily burnt
626	4	41	Variably but mostly heavily burnt
631	2	34	Both heavily burnt
633	1	4	Heavily burnt
645	2	39	Both heavily burnt
649	3	306	Moderately burnt near complete cobble 335g and two small heavily burnt fragments
653	2	18	Both heavily burnt
657	5	94	Variably but mostly heavily burnt

Table L01: Quantification of Unworked Burnt Stone by Context

A total of 84 fragments of burnt stone was recovered from twenty separate features, all but three of which ([554], [556] and [631]) have been provisionally dated to the prehistoric period although the burnt stone itself cannot be dated (Table L01). The burnt stone all comprises flint or cherty flint that, judging by surviving cortex, consisted of cobbles derived from the underlying terrace gravels. Overall it has been burnt to variable but mostly to a high temperature, resulting in it shattering, changing colour and becoming fire crazed. The quantities involved and the variable degrees of burning would be consistent with incidental incorporation within ground constructed hearths, rather than from deliberate production as has been recorded from some prehistoric sites in the area (e.g. Meddens 1996).

Struck Flint

Context	Flake	Flake Fragment	Retouched Flake	Retouched Blade	Condition	Date	Comments
612				1	Slightly chipped	Meso/E Neo	Proximal end of a prismatic probable blade with short length of straight abrupt retouch on left margin near break. Right margin shows light bifacial damage consistent with use. >25X16X4mm
645				1	Good	Meso/E Neo	Blade retaining cortex along left side with a notch measuring 12mm X 4mm cut into the left margin near the distal end and a shallower notch cut into the same side nearer to the proximal end. The right margin is sharp and shows convincing evidence for utilization. 58X19X8mm
645			1		Slightly chipped	Meso-BA	Flake with a series of medium sized flakes removed along right margin forming a coarsely denticulated tool. 45X32X13mm
645	1				Slightly chipped	Meso-BA	Small trimming flake
618				1	Slightly chipped	Meso/E Neo	Proximal end of a prismatic probable blade with straight abrupt retouch on its left margin towards break that become inverse and more irregular towards proximal end. The possibility that this is post-depositional damage cannot be excluded. >27X18X5mm
653			1		Slightly chipped	Meso-BA	Laterally split flake with coarse irregular inverse retouch along right margin forming an irregularly denticulated flake. 56X>42X9mm
657		1			Slightly chipped	Undated	
657	1				Good	Meso-BA	Has a trimmed striking platform but appears hard hammer struck and has multi-directional dorsal scars
633		1			Slightly chipped	Undated	

Table L02: Description of Struck Flint

Nine struck flints were recovered from six separate contexts, all of which have been provisionally dated to the prehistoric period (Table L02). All of the pieces were manufactured from a translucent or mottled opaque and translucent flint that become mineral stained to various shades of green, brown and dark grey. Where retained, cortex is weathered or smooth worn, indicating a source from the gravel terraces as present in the vicinity. Most of the struck pieces are in a good or only slightly chipped condition, indicating that, despite the potential of redeposition, they are unlikely to have experienced any significant post-depositional displacement and were probably recovered close to where they were originally discarded

The most diagnostic pieces comprise the blades which can be dated to the Mesolithic or possibly Early Neolithic periods. All are retouched and they comprise two edge-retouched or backed blades and a notched blade. The latter also exhibits damage along the opposite margin from the notching, consistent with cutting or chopping activities, and the notches may have been made in order to aid handling.

Apart from two flake fragments of indeterminate date, the remainder of the assemblage comprises two unretouched and two retouched flakes. Both retouched pieces consist of rather crudely denticulated flakes. None of these is particularly chronologically diagnostic and a similar Mesolithic or Early Neolithic date assigned to the blades cannot be excluded. However, they would perhaps be more comfortable within a later prehistoric context,

particularly those of the later 2nd or 1st millennia BC. If so, it is entirely possible that they are at least broadly contemporary with the structural evidence for prehistoric settlement and field-systems identified at the site.

Significance

The Mesolithic or Early Neolithic flintwork testifies to the intense occupation that the terrace and alluvial edges of the lower Thames witnessed, as demonstrated by numerous finds in this area, including close by at the Beam Washlands site (Oxford Archaeology 2011). At that site and in others along the lower Thames margins, more or less *in-situ* lithic scatters dating from the late Glacial to Early Neolithic period have been recorded (e.g. Leivers *et al.* forthcoming). This raises the possibility that, should favourable ground conditions be encountered, similar evidence might be found at the Mardyke Estate, should further work be considered.

It is also likely that some of the struck flint belongs to the later prehistoric period. Later prehistoric activity is also well represented along the terraces of the lower Thames and, at least for the Late Bronze Age, indicates a fully occupied agricultural landscape (e.g. Guttman and Last 2000). During this time flintworking tended to be casual and opportunistic, with discarded struck pieces usually being recovered in small quantities scattered around settlements and field-systems, a situation which would accord well with the quantities and contextual origins of the pieces here.

Recommendations

The assemblage is of significance in that it demonstrates flintworking occurring at the site during the Mesolithic or Early Neolithic and possibly during the later prehistoric period. However, its size and lack of secure contextual associations means that its interpretational value is limited and no further analytical work is recommended. It is likely that the evidence recovered so far represents a small part of a much more extensively used landscape and should further fieldwork be considered and a more informative assemblage be recovered, this material should be incorporated into the analyses and fully reported.

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APPENDIX 7: OASIS DATA COLLECTION FORM

OASIS ID: preconst1-156755

Project details

Project name	Mardyke Estate Havering: Phase 3 Evaluation
Short description of the project	Phase 3 of archaeological evaluation was carried out at the Mardyke Estate, Havering, 10th-25th June 2013. Sixteen trenches were opened. A concentration of Roman features was found in the north of the site, with prehistoric features being noted in the middle and south of the site. Only four trenches did not contain any archaeology.
Project dates	Start: 10-07-2013 End: 25-07-2013
Previous/future work	Yes / Yes
Any associated project reference codes	MYE08 - Sitecode
Type of project	Field evaluation
Site status	Local Authority Designated Archaeological Area
Current Land use	Residential 1 - General Residential
Monument type	PIT Roman
Monument type	DITCH Roman
Monument type	PIT Bronze Age
Monument type	DITCH Bronze Age
Significant Finds	FLINT FLAKE Mesolithic
Significant Finds	POTTERY Roman
Methods & techniques	"Sample Trenches"
Development type	Housing estate
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON HAVERING RAINHAM Mardyke Estate
Postcode	RM13 8PS
Study area	1.00 Hectares
Site coordinates	TQ 5057 8339 51 0 51 31 43 N 000 10 15 E Point
Height OD / Depth	Min: 1.00m Max: 4.00m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Adam Single
Project design originator	Helen Hawkins
Project director/manager	Helen Hawkins
Project supervisor	Mark Beasley
Type of sponsor/funding body	House builder
Name of sponsor/funding body	Willmott Dixon

Project archives

Physical Archive recipient	LAARC
Physical Archive ID	MYE08
Physical Contents	"Ceramics","Environmental","Worked stone/lithics"
Digital Archive recipient	LAARC
Digital Archive ID	MYE08
Digital Contents	"Ceramics","Environmental","Survey","Worked stone/lithics"
Digital Media available	"Spreadsheets","Survey","Text"
Paper Archive recipient	LAARC
Paper Archive ID	MYE08
Paper Contents	"Ceramics","Environmental","Worked stone/lithics"
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Publication type	Grey literature (unpublished document/manuscript)
Title	A Phase III Archaeological Evaluation on Blocks E, F, G, K, M and N, Mardyke Estate, Rainham, London Borough of Havering, RM13 8PS
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APPENDIX 8: PHOTOGRAPHS



Plate 1: Trench 25 facing south-west



Plate 2: Trench 28a facing north-west



Plate 3: Trench 26 facing east



Plate 4: Trench 31 facing west



Plate 5: Trench 36 facing north



Plate 6: Trench 35 facing east

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