Archaeology South-East

ASE

ARCHAEOLOGICAL INVESTIGATIONS AT GRAIN - SHORNE PIPELINE, ISLE OF GRAIN, KENT

Phase 7

POST-EXCAVATION ASSESSMENT AND PROJECT DESIGN FOR PUBLICATION

NGR: TQ862755 to TQ691746
Project No. 3254
Site Code: IOG07

ASE Report No. 2009031
OASIS ID - archaeol6-56499

By Giles Dawkes

With contributions by
Lucy Allot, Luke Barber, Anna Doherty
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Archaeology South-East
Units 1 and 2
2 Chapel Place
Portslade
East Sussex
BN41 1DR
Tel: 01273 426830
Fax: 01273 420866
Email: fau@ucl.ac.uk

Summary

Archaeology South-East (ASE), part of the Centre for Applied Archaeology, UCL, were commissioned by the Isle of Grain to Shorne Gas Transmission Partnership to undertake archaeological mitigation along the route of the 21km Grain-Shorne Gas Transmission pipeline between the Isle of Grain Terminal site (NGR TQ 862755) and the Gravesend Thames South AGI (NGR TQ 691746). A total of eleven mitigation areas were excavated (Areas A1-K11), based on the results of a desk-based assessment, field-walking, and two phases of evaluation. A watching brief was maintained on the entire pipeline strip and pipe trench excavation.

The excavations revealed archaeological evidence from the Mesolithic to post-medieval periods across the pipeline route. The majority of the findings were of middle and late Bronze Age, Iron Age and Roman date, although there was a notable dearth of middle Iron Age activity across the whole area. There was also artefactual evidence for early medieval activity in the area, and for later medieval and early post-medieval agriculture.

The Mesolithic period was represented by a pit in area J10 and finds of residual Mesolithic flints recovered from later features. Evidence for Neolithic activity was also minor and was confined to a few discrete pits. The first significant archaeological episode was in middle Bronze Age (MBA) and late Bronze Age (LBA) with the establishment of an enclosure related to salt-working at area H8 and a possible enclosure at area B2. Field boundary ditches of LBA also occurred in other areas.

Areas B2 and H8 had the most early Iron Age (EIA) activity and this appeared to be a continuation of the LBA activity. An apparent hiatus in activity occurred in the middle Iron Age (MIA) with only a few isolated pits and ditches identified. The late Iron Age (LIA) saw a rapid increase in activity with field boundary ditches identified on most areas and two ring-ditches were identified near hill-crests overlooking the River Medway.

The early Roman period saw a continuation of the field systems in some areas and re-organisation of land in others. A corn-drying kiln was also found at area I9. Three mid 2nd century AD cremations were excavated at area B2 which included a notable multi-vessel amphora cremation.

Evidence for local Roman pottery manufacture was found indirectly from two areas, J10 near the village of Higham and B2, near Upper Stoke. Four large clay quarry pits were excavated including one from B2 which was later used as a water-hole with the postholes for a tripod superstructure to lift the water. The water-hole backfills also contained a large assemblage of pottery all in the same rare OXIDE fabric, indicating local production close to the site. Kiln waste of burnt clay fire bars and slabs were also recovered from area J10, adjacent to a known kiln site on Oakleigh farm.

The most significant late Roman feature, dating to the late 3rd century AD was a sub-rectangular timber building, possibly a workshop, located in the corner of a contemporary field.

Finds of 5th - mid 9th century AD date were recovered from the upper fills of Roman quarry pits at B2 and I9 at Cliffe Woods, suggesting that these areas were located close to early medieval settlements. Later medieval features were identified between the villages of Higham and Cliffe Woods with 13th century AD enclosures at I9 and possibly K11 and a late medieval field boundary ditch at J10.

In the light of these results, this assessment proposes further analysis of the stratigraphic sequence, the finds assemblages of pottery, macrobotanicals and charcoal, fired clay, Roman glass, registered finds, flintwork, ceramic building material, cremated bone and animal bone. Illustration of selected finds is also proposed and the undertaking of six C14 radiocarbon dates on appropriate material from samples, including the residue adhering to potential early medieval pottery. Publication is proposed in a monograph or in Archaeologia Cantiana.

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1.0 INTRODUCTION

1.1 *Site Background*

1.1.1 Archaeology South-East (ASE), part of the Centre for Applied Archaeology, UCL, were commissioned by the Isle of Grain to Shorne Gas Transmission Partnership (AMEC, A B Rhead Associates and National Grid, hereafter the Partnership) to undertake archaeological mitigation along the route of the Grain-Shorne Gas Transmission pipeline (Figure 1).

1.1.2 This post-excavation assessment relates to the archaeological mitigation works undertaken during construction of the 21km pipeline between the Isle of Grain Terminal site (NGR TQ 862755) and the Gravesend Thames South AGI (NGR TQ 691746) with an intermediate connection to the Shorne AGI (NGR TQ 688730).

1.1.3 The need for these mitigation works was set out in the Environmental Statement (ES) produced by AMEC and submitted to the Department of Trade and Industry (DTI) in February 2007 (AMEC 2007). As the local statutory body with responsibility for Archaeology and Cultural Heritage, the Heritage Conservation Group at Kent County Council (HCG KCC) were consulted at all stages of the project and the proposals set out within the ES were approved by them.

1.1.4 All the works followed the standard procedures for an archaeological excavation as set out by HCG KCC in the Manual of Specifications Part B – Mitigation – Strip, Map and Sample (HCG KCC 2007).

1.1.5 A staged approach integrated with the pipeline construction was adopted to the archaeological assessment, evaluation and mitigation. In summary, these phases were: Phase 1 Route Corridor Investigation Study; Phase 2 Desk-based Assessment; Phase 3 Field Surveys of preferred pipeline route including field-walking, geophysical and augur/borehole surveys; Phase 4 Field Evaluation of targeted areas including machine-excavated trenches, test-pits and hand auguring; Phase 5 Mitigation; Phase 6 Watching Brief.

1.1.6 The desk-based assessment (CAT 2006a) and field-walking (CAT 2006b) was undertaken by Canterbury Archaeological Trust. The Phase 4 Field Evaluation was undertaken by ASE in two stages, October 2007 (ASE 2008) and early 2009 and identified a total of eleven mitigation areas (Areas A-K), Some additional evaluation trenches were excavated to further define the extent of the mitigation areas. A watching brief was maintained on the entire pipeline strip and pipe trench excavation. This document represents the initial Stage 7 report on the post-construction dissemination of results of Phases 1 to 6.

1.1.7 This post-excavation assessment has been prepared broadly in accordance with the guidelines laid out in *Management of Archaeological Projects 2* (Andrews 1991). This document seeks to summarise the results of archaeological work at the site and the potential for future analysis, as well as determining future requirements for publication and archiving of these results. The ultimate aim is to provide a framework for carrying the report through to publication, including the resources required for analysis, publication and archiving.

1.1.8 The initial archaeological and palaeoenvironmental evaluation was undertaken in October and November 2008 (ASE 2008). The mitigation areas and further evaluation was undertaken between February and May 2009. The watching brief was undertaken between March and October 2009. The site code for the evaluation, mitigation and watching brief was IOG07 and where relevant the results from the watching brief and evaluations have been integrated with the results of this report.

1.1.9 The project and fieldwork was managed by Darryl Palmer, post-excavation management was undertaken by Louise Rayner and Dan Swift (report editor).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Geological Background

2.1.1 The Isle of Grain is located on the north Kent coast, at the eastern end of the Hoo Peninsula, between the River Medway to the south and the Thames Estuary to the north. Much of the isle is low-lying marshland frequently less than 10m above sea level, and is linked to the Hoo Peninsula across reclaimed marshland. The higher crest of the Hoo Peninsula spinal ridge stretches from Allhallows in the east to High Halstow in the west, and in places is as high 70m AOD.

2.1.2 The pipeline corridor runs from the Isle of Grain Terminal at the eastern end of the isle, and rises up from the marshes onto the gently undulating valleys of the Hoo Peninsula. To the east of High Halstow, it attains a maximum height of c.57m AOD close to the top of Lodge Hill, before and dropping back down to lower, flatter ground to the south of Cooling, and on to Shorne. It then returns to the north continuing over the Shorne Marshes, to Shornmead Fort. The furthest extent of the pipeline route on these marshes, roughly 50m south of the fort, lies at between 1m-2m AOD.

2.1.3 The 21km stretch of pipeline crosses a variety of geological strata. For the most part the underlying geology is London Clay over outcrops of Woolwich Beds, both laid down during the Palaeocene period. However, a significant part of the route is shown to cross different Quaternary Drift Deposits, including Head Gravels, Head Brickearth, Head, River Terrace Gravels and Alluvium, with an area of landslip also recorded, to the south of Spendiff (British Geological Survey: Chatham England and Wales Sheet 272 Drift Edition 1:50 000 Series).

2.1.4 The topographical and geological background for the route corridor has been extensively researched and reported on previously, in the *Isle of Grain Gas Pipeline Archaeological Desk Based Assessment* (CAT 2006a) and that document should be referred to for further detail.

2.2 Archaeological Background

2.2.1 All prehistoric periods are represented within the area traversed by the proposed pipeline route, ranging from the Palaeolithic through to the Iron Age (CAT 2006a). Whilst finds from the Palaeolithic and Mesolithic are often recovered from secondary depositional contexts, Neolithic and early Bronze Age sites are frequently found *in situ*, often associated with ritual activities and ceremonial burial monuments. During the late Bronze Age and Iron Age periods, agricultural field systems and settlements became increasingly common and many have been identified either from aerial photographs as crop marks, or during archaeological fieldwork (for example see James 1999, Griffin 1999).

2.2.2 Hoo Peninsula was extensively occupied during the Roman period, and a number of sites have been identified along the pipeline corridor. Several pottery kilns have been recorded close to the easement, whilst a major centre of pottery production has possibly been located at the western end of the route, between Shorne and Higham (CAT 2006a).

2.2.3 Historical and archaeological evidence clearly shows that the Hoo Peninsula was densely occupied during both the early medieval and medieval periods and it has remained an important strategic, industrial and religious area up to and including modern times.

2.2.4 B*y the 20th century, an array of military installations and fortifications had been constructed across the Hoo Peninsula. Many of these relate to World War I and II defences, although Shornmead Fort, located at the western extremity of the route had its origins as a 18th century AD gun battery. This was built in 1796 to defend the River Thames, and refurbished in 1850.*

2.2.5 As with the geological and topographical background, the archaeology of the route corridor has been extensively researched and reported on in the Isle of Grain Gas Pipeline Archaeological Desk Based Assessment (CAT 2006a) and that document should be referred to for further detail.

2.2.6 The field-walking (CAT 2006b) and the evaluation (ASE 2008) phases of work identified ten areas of potential archaeological significance with finds and features from the Mesolithic to the post-medieval period. These were selected to become 10 of the 11 mitigation areas. The last area was identified during the phase of evaluation undertaken during the excavation of the mitigation areas.

2.2.7 The palaeoenvironmental evaluation consisted of 34 test pits excavated by JCB to a maximum depth of 5.1m or to a depth at which bedrock was attained. The results confirmed the occurrence of extensive spreads of fluvial sediments belonging to a number of different river terraces across the study region. The presence of hominid activity was not identified although the test pitting did not include sieving of gravels for artefacts. Suitable sediments for the recovery of reworked artefacts (gravels) and *in situ* artefacts (sands) (both contexts for which artefacts are known in the Medway) were located as well as contexts (terrace edges) known to be preferred niches of hominid activity. However, the pipeline was excavated to an insufficient depth to impact on the potential deposits and no further work was considered necessary.

3.0 EXCAVATION AIMS AND OBJECTIVES

3.1 *Introduction*

3.1.1 The original research aims (ORAs) of the mitigation according to the KCC Specification were (HCG KCC 2007, 2):

- ORA1 To define and characterise the Roman occupation identified at Area A.
- ORA2 Further define the potential Prehistoric occupation at Area B2.
- ORA3 To date define and characterise the occupation activity at Areas C and D, and to understand the extent to which the two areas are related.
- ORA4 Date, define and characterise the potential occupation activity at area E5.
- ORA5 To define and characterise the prehistoric activity at area F6, in particular the potential ring ditch.
- ORA6 Understand the Roman field system and area G7 and identify any occupation associated with this activity.
- ORA7 To define and characterise the prehistoric occupation identified at area H8.
- ORA8 To define the extent and nature of Roman period industrial activity at areas I and J, and to understand the extent to which the areas may be linked.
- ORA9 Additionally to evaluate the potential of those areas that will be affected by the changes to the proposed construction methodology.

4.0 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.2 Within this text the basic archaeological context unit is shown in brackets [1090], and contexts from the evaluation phase are shown thus [7/003], with the first number denoting a specific evaluation trench. Contexts have been grouped together during post-excavation analysis and features are also referred to in the text by their group label thus GP **. In this way, linear features, such as ditches which may have numerous individual slots and context numbers, are discussed as single entities, and other cut features such as ring-gullies, pits and postholes are grouped together by structure, common date and/or type. Environmental samples are referred to within triangular brackets <**>, and registered finds thus: RF<*>.

4.1.3 Periods and phases of activity are referred to within the text as follows:

- **Period 1** **Natural**
- **Period 2** **Mesolithic** (c. 10,000 BC – c. 5,000 BC)
- **Period 3** **Neolithic**
  - Phase I Early Neolithic (c. 5,000 BC – c.4,000 BC)
  - Phase II Late Neolithic/Early Bronze Age (c.3,000 BC – 1,500 BC)
  - Phase III Neolithic/Bronze Age (c.5000 BC – c.600 BC)
- **Period 4** **Bronze Age**
  - Phase I Middle Bronze Age (c.1500 BC – c.1000 BC)
  - Phase II Middle/Late Bronze Age (c.1500 BC – c.800 BC)
  - Phase III Late Bronze Age (c.1000 BC – c.600 BC)
  - Phase IV Late Bronze Age/Early Iron Age (c.1000 BC – c.500 BC)
- **Period 5** **Iron Age**
  - Phase I Middle to Late Iron Age (c. 300 BC – c.100 BC)
  - Phase II Late Iron Age (c. 150 BC – c.AD 50)
  - Phase III Late Iron Age/Early Roman (c. AD 0 – c.AD100)
- **Period 6** **Roman**
  - Phase I (1st - 2nd century AD)
  - Phase II (2nd - early 3rd century AD)
  - Phase III (Late 3rd - early 4th century AD)
  - Phase IV (4th century AD)
- **Period 7** **Early Medieval**
  - Phase I Early Medieval (5th - mid 7th century AD)
  - Phase II Early Medieval (5th - mid 9th century AD)
- **Period 8** **Medieval**
  - Phase I (13th century AD)
  - Phase II Late Medieval/Post-Medieval (15th – 16th century AD)
- **Period 9** **Post-medieval**
  - Phase I (Late 16th-17th century AD)
  - Phase II (17th century)
- **Period 10** **Modern**

4.2 ***Area A1*** (Figs 3-8, 62 and 63)

The area was located on a south-west facing slope of a hill immediately north of the village of Lower Stoke, with views over the River Medway. The land-use of the area was middle/late Iron Age (MIA/LIA) field boundary ditches which were superceded by a different alignment of Roman field boundary ditches and quarrying. Little subsoil was identified in the northern part of the area and suggesting the few shallow features here had suffered truncation from ploughing.

4.2.1 *Period 1: Natural*
The natural [1002] orange brown silt sand with lenses of gravel was encountered at 18.47m AOD on the crest of the hill in the north-east, falling to 14.1m AOD to the south-west.

4.2.2 *Period 3: Neolithic*
No features of this date were identified, only a single residual Neolithic fabricator with a 'D' shape profile was recovered from MIA/LIA ditch [1080].

4.2.3 *Period 4, Phase IV: Late Bronze Age/Early Iron Age Pits*
This phase consists of three small features and a tentatively dated large shallow pit.

Identified in the evaluation, pit [7/003] was 0.8m long, 0.64m wide, 0.16m deep with concave sides and a flat base. Fill [7/004] was light brown grey clay silt with finds of LBA pottery sherds.

Posthole [1042] was 0.2m in diameter and 0.18m deep with steep sides and a tapered base. Fill [1041] was orange brown silt clay with finds of a small assemblage of flint-tempered LBA/EIA pottery body sherds. Pit [1040] and fill [1039] was cut by [1042] and is tentatively dated to this phase.

Large pit GP109 was up to 17.5m in diameter, 0.18m deep with concave sides and a flat base. The three sondages [1255, 1261 and 1248] were filled by grey brown clay silt [1254, 1260 and 1249] with a finds of undiagnostic worked flints from [1249].

Residual LBA/EIA pottery sherds were also recovered from MIA/LIA pits [1087 and1090].

4.2.4 *Period 5, Phase I: Middle/Late Iron Age*

4.2.4.1 *Ditches*
This phase is typically characterised by a series of ditches aligned north to south and east to west. These features were often inter-cutting, probably representing the re-cutting and slight realignment of land boundaries.

East to west Ditch GP100 consisted of two contemporary shallow parallel ditch lengths with a connecting gully. The ditch lengths had concave sides and bases. The north and south ditch lengths were excavated with three sondages each, [1070 and 1066] and [1056 and 1076] respectively. Fills [1069, 1065, 1055 and 1075] were grey brown sand clay with no finds. The shallow gully was excavated with two sondages [1064 and 1074] and fills [1063 and 1073] were

brown silt clay. Two small pottery sherds of probable LIA date were recovered from fill (1063).

North to south aligned Ditch GP101 was excavated in three sondages [1142, 1120 and 1146]. There were no finds from fills [1141, 1119 and 1145] but the ditch was cut by MIA/LIA ditch. The ditch was shallow with concave sides and base.

Ditch GP102 was aligned east to west and terminated in the east. The ditch was excavated in three sondages [1174, 1182 and 1186] and fills (1173, 1181 and 1185). The ditch was shallow with steep sides and a flat base. Two sherds of MIA/LIA pottery were recovered from fill (1173). This ditch appears to respect Ditch G101 to the east possibly forming an entrance to a field.

Ditch GP103 was aligned east to west, 3.10m wide, 0.5m deep with irregular sides and a concave base. The ditch was excavated in two sondages [1080 and 1078]. The fills [1079 and 1077] were dark brown silt with finds of later prehistoric pottery sherds.

Ditch GP104 was aligned east to west, 1.7m wide and 0.74m deep with steep sides and a concave base. The ditch was excavated in four sondages [1253, 1259, 1230 and 1238] and terminated at the west end, respecting Ditch GP107. Fills [1252, 1258, 1229 and 1237] were brown orange silt clay with no finds. The ditch is tentatively dated by the similarity with other ditches of this phase and by being cut by two Roman ditches.

Parallel to Ditch GP104 and possibly forming a droveway, was Ditch GP105. The ditch was 1m wide, 0.18m deep with steep sides and a flat base. Three sondages were excavated [1210, 1224 and 1212]. The ditch terminated at the west end and respected Ditch G106. Fills [1209, 1223 and 1211] were grey clay silt. The ditch was undated but was cut by a Roman ditch.

Ditch GP106 was aligned north to south, and measured 0.68m wide, 0.15m deep with near vertical sides and an uneven base. Two sondages were excavated [1156 and 1122] and fills [1155 and 1121] were grey sand silt. No finds were recovered but MIA/LIA Ditch G108 cut the ditch.

Also cutting Ditch GP106 was Ditch GP107, also aligned north to south. Ditch GP107 was 1m wide and 0.3m deep with steep sides and a stepped base. Three sondages were excavated [1158, 1214 and 1267] and fills [1157, 1213 and 1266] were grey brown silt.

Ditch GP108 was aligned north to south and appeared to curve westward to the south. However this southern portion was truncated by a Roman quarry pit. The ditch was 3.5m wide, 0.77m deep with gradual irregular sides and a concave base. Two sondages were excavated [1127 and 1140] with multiple fills [1126, 1125 and 1136, 1137, 1138, 1139]. The fills were mostly grey sand silts. A small assemblage of MIA/LIA pottery sherds were recovered from the fills.

Ditch GP110 had no finds but was cut by a Roman ditch and is tentatively dated to this phase. The ditch was aligned north to south, 0.9m wide, 0.44m deep with concave sides and base. One sondage was excavated [1153] and fills [1159 and 1160] were brown clay and orange clay respectively.

Ditch GP111 was aligned east to west, 1.65m wide, 0.63m deep with steep irregular sides and a flat base. Two sondages were excavated [1246 and 1264] and a possible re-cut [1262] was also identified. Fills [1247 and 1265] and re-cut fill [1263] were brown clay silts. Finds of Late Iron Age/Early Roman (LIA/ER) briquetage fragments were recovered from [1246] and a large group of MIA/LIA pottery sherds with some intrusive Roman pottery from [1263].

Ditch GP112 was aligned north to south, 0.5m wide, 0.28m deep with vertical sides and a concave base. Identified in the evaluation as [7/007] filled by [7/008] with finds of IA pottery sherds. A further sondage was excavated [1022] and fill [1021].

Parallel to and of similar form to Ditch GP112 were Ditch GP113 and Ditch GP114. Ditch GP113 had two sondages excavated [7/005 and 1020] with fills [7/006 and 1019]. Ditch GP114 also had two sondages [1024 and 1026] and fills [1023 and 1025]. No finds were recovered from both ditches but they are likely to be of a similar date to Ditch GP112.

Further north was Ditch GP115, an undated ditch mostly likely of this phase. The ditch was aligned east to west with a north to south spur. Six sondages were excavated [5/007, 1018, 1006, 1004, 1008, 1010, 1268 and 1012] and fills [5/008, 1017, 1005, 1003, 1007, 1009, 1267 and 1011].

4.2.4.2 *Pits*

A number of small pits of uncertain function were scattered across the area, with no particular pattern or concentration.

Pit [1114] was cut by a Roman ditch and was 0.7m long, 0.48m wide and 0.18m deep with convex sides. Fill [1113] was brown silt with no finds.

Pit [1111] was also cut by a Roman ditch and was 0.75m long, 0.5m wide and 0.15m deep with concave sides. Fill [1110] orange yellow sand silt with no finds.

The upper portion of pit or ditch [1135] was cut by a Roman ditch. The pit was 1.82m long, 1.1m wide and 0.37m deep with concave sides and a flat base. Fill [1134] was dark brown sand silt and had finds of LIA pottery sherds.

Pit [1087] was 2.3m long, 0.7m wide, 0.24m deep with concave sides and a flat base. The pit had a clay-lining [1088] and was filled with charcoal-enriched sand clays [1094 and 1089] with finds of residual LBA/EIA pottery sherds and MIA/LIA pottery sherds. The environmental remains were dominated by the charred seeds of arable weeds.

Cutting pit [1087] was pit [1090], and was 0.9m long, 0.7m wide and 0.15m deep with concave sides and a flat base. Fill [1091] was charcoal-enriched grey brown sand clay with finds of residual LBA/EIA pottery sherds.

4.2.5 *Period 6, Phase I: Roman (1st–2nd Centuries AD)*

4.2.5.1 *Ditches*

North to south Ditch GP116 was 1.7m wide and 0.3m deep with irregular convex sides and a concave base. The ditch was excavated in two sondages [1133 and 1144]. Fills [1132 and 1143] were orange brown sand silt. A small assemblage of Roman brick fragments and residual MIA/LIA pottery sherds was recovered from [1132].

Cutting Ditch GP116 was Ditch GP117, on a similar alignment. Ditch GP117 was excavated in three sondages [1131, 1109 and 1116]. Fills [1130, 1108, 1112 and 1115] were orange grey sand silt. Finds of LIA/ER pottery sherds were recovered from [1108, 1115 and 1130]. The fills of both Ditch GP116 and GP117 had slumped and fill [1129] had accumulated above.

North to south Ditch GP118 was 5m wide, 0.9m deep with concave sides and a flat base. Originally identified in the evaluation as [7/009] and fill [7/010], a further sondage was excavated [1083] and fill [1081] was brown grey silt sand with finds of pottery sherds dating to AD70-90, including an imported Gallo-Belgic platter.

East to west Ditch GP119 was 1.9m wide, 0.42m deep with concave sides and a flat base. The west end terminated and respected Ditch GP120. Three sondages were excavated [1241, 1257 and 1201] and fills [1239, 1240, 1256 and 1200] were brown silt clay with finds of pottery sherds dating to AD50-100.

North to south Ditch GP120 was 2.16m wide, 0.36m deep with irregular concave sides and an uneven base. Six sondages were excavated [1205, 1208, 1222, 1243, 1251 and 1236] and fills [1204, 1206, 1207, 1220, 1221, 1242, 1250 and 1235] were mostly grey sand silt with finds of a small assemblage of LIA and Roman pottery sherds. Posthole [1245] was cut into the ditch base and filled with [1244].

Parallel to Ditch GP120 was Ditch GP121. The ditch was 1.72m wide, 0.6m deep with straight regular sides and a concave base. Two sondages were excavated [1128 and 1152] and fills [1123, 1124 and 1149, 1150, 1151] were mostly brown silt clay with finds of residual possible LBA and LIA/ER pottery sherds. This ditch cut MIA/LIA Ditch GP108.

Ditch GP122 was curvilinear, aligned north to south and east to west. The ditch was 1.35m wide, 0.2m deep with irregular sides and base. Five sondages were excavated [1172, 1180, 1184, 1118 and 1148] and fills [1171, 1179, 1183, 1117 and 1147] were mostly dark brown sand silt. The few finds of pottery sherds were only datable to the late prehistoric period and the LIA/ER period. This ditch cut Ditch G101 and its location must have made the earlier field system redundant.

Ditch GP123 cut Ditch GP122 and this ditch is tentatively dated to the Roman period. The ditch was 0.9m wide, 0.4m deep with concave sides and base. Two sondages were excavated [1168 and 1178] and fills [1167 and 1177] were grey brown silt clay. No finds were recovered.

Ditch GP124 cut Ditch GP123 and lying on a very similar alignment. This ditch is tentatively dated to the Roman period and was presumably a ditch re-cutting. The ditch was 0.94m wide, 0.41m deep with steep sides and a concave base. Two sondages were excavated [1170 and 1176] and fills [1169 and 1175] were both grey brown silt clays with no finds.

4.2.5.2 *Pits*

Pit [1046] was 1.1m by 0.5m and 0.15m deep with steep sides and a flat base. Fill [1045] was grey brown sand clay with finds of Roman *imbrex* and sherds of LIA/ER pottery sherds.

To the south of pit [1046] was pit [1016] measuring 1.4m long, 0.6m wide, 0.2m deep with concave sides and base. Fills [1013, 1114 and 1015] were orange and brown clays with finds of two pottery sherds dating AD50-100.

Pit [1154] was cut into the base of Ditch GP118. The pit was 0.88m long, at least 0.85m wide, 0.47m deep with concave sides and base. Fill [1082] was brown sand clay with finds of Roman pottery sherds dating to AD70-100 and a glass annular black bead with yellow whirls (RF<67>).

4.2.5.3 *Quarry Pit* (Fig 63)

A large irregular negative feature located in an area of sand silt natural appeared to have been a quarry pit. Quarry pit GP125 was 18m long, at least 8m wide, 1.45m deep with steep sides and an irregular, undulating base. The cut feature [8/010, 1107, 1105, 1103, 1100, 1164, 1166, 1188, 1190, 1219, 1216, 1193 and 1196] was fully excavated by machine and hand. Fills [8/011, 8/012, 1097, 1098, 1099, 1101, 1102, 1104, 1106, 1161, 1162, 1163, 1165, 1187, 1189, 1197, 1217, 1218,1215, 1191,1192, 1199, 1195, 1198, 1194] were mostly orange clays and brown silts. The finds were of Roman brick and pottery sherds, dating to the second half of the 1st century and the first half of the 2nd century. The environmental remains were dominated by the charred remains of arable weeds.

4.2.6 *Period 10: Modern*

An undated ceramic building material fragment was recovered from fill [1043] of pit [1044] and this is tentatively dated as modern. Stakehole [1050] cut [1043]. The fill was [1049] and contained no finds.

4.2.7 *Undated Pits*

A series of undated pits were excavated across the area. These were pit [1034] and fill [1033]; pit [1072] and fill [1071]; pit [1048] and fill [1047]; pit [1038] and fill [1037]; pit [1028] and fill [1027]; pit [1032] and fill [1031]; pit [1036] and fill [1035]; pit [1092] and fill [1093]; pit [1052] and fill [1051]; pit [1060] and fill [1059]; pit [1062] and fill [1061]; pit [1058] and fill [1057]; pit [1096] and fill [1095]; pit [1030] and fill [1029]; pit [1054] and fill [1053].

4.2.8 *Undated Ditches*

Ditch GP126 was aligned north to south and was excavated in two sondages [1068 and 1085] with fills [1067, 1084 and 1086]. This ditch is likely to be either of Roman or MIA/LIA.

4.2.9 *Non-archaeological Features*
Features [CT2/006, CT2/004, 9/003, 8/004, 8/006, 8/008, 7/011, 7/012, 7/013, 7/014, 6/003, 5/009 and 5/005] initially identified in the evaluation trenches were found to be non-archaeological after further investigation.

4.2.10 *Subsoil and Topsoil*
Subsoil [1001] was grey brown silt sand up to 0.2m thick with overlying topsoil [1000] up to 0.25m thick.

4.3 **Area B2** (Figs 9-14, 64 and 65)

The area was situated on a low hill, immediately to the west of Upper Stoke, with a down slope to the north-east and a relatively level plateau to the south-west. The area had extensive views over the River Medway to the south and south-east. The majority of the LBA/EIA activity and three Roman cremations were located on the hill crest. Roman field boundary ditches were seen across the area. A late Roman timber building, possibly a workshop, was located in the corner of one such field. A large late Roman water-hole with evidence for a tripod superstructure was also identified. Early medieval activity may be represented by finds of pottery in the upper fills of the water-hole. The area had little or no subsoil, especially on the hill-crest, and ploughing must have truncated, to a lesser or greater extent, the uppermost fills of the archaeological features.

4.3.1 *Period 1: Natural*

The orange brown silt clay with gravel lenses [2001] was seen at 25.94m AOD on the crest of the hill, sloping down to 24.17m AOD to the north-east.

4.3.2 *Period 4, Phase IV: Late Bronze Age/Early Iron Age*

Most of the activity of this period was located on the ridge crest centred on a possible enclosure.

4.3.2.1 *Enclosure*

Ditch GP200 formed a possible enclosure with the entrance to the south-east and the ditch curved approximately east to west and terminating in the east. The ditch sondages [2076, 2217, 2161 and 2163] were up to 1.4m wide, 0.2m deep with uneven sides and base. Fills [2075, 2218, 2162 and 2160] were orange brown silt clay.

4.3.2.2 *Pits and Hearths*

Located outside the enclosure was a scatter of pits with no particular pattern or alignment. Most of the pits contained often abundant finds of LBA, LBA/EIA or EIA pottery sherds. Three possible hearths were also identified just outside of the enclosure entrance.

Pit GP201 consisted of five sub-circular and irregular pits [2195, 2188, 2177 and 2174/2172]. Fills [2194, 2187, 2175, 2176 and 2173/2171] were mostly mottled orange and brown clay silt.

Pit GP217 was irregular pits [2165, 2167 and 2151] and brown clay silt fills [2164, 2166, 2152, 2153, 2154 and 2155].

Pit GP202 consisted of two sub-circular pits [2182 and 2190] with fills [2183, 2184, 2189, 2191, 2192 and 2193]. The fills were similarly mostly orange and brown clay silt.

Hearths GP203 were two sub-circular hearth pits [2074 and 2068] with fills [2067 and 2073] and the natural geology displayed disclouration suggesting heat affection. The fills were charcoal-enriched grey brown sand silt.

Hearth [2098] was filled with charcoal-enriched black silt [2099] with frequent orange burnt clay.

Further down the slope to the north-east was Pit GP204. The pit group consisted of seven mostly sub-circular features [2104, 2126, 2108, 2085, 2087, 2039 and 2013]. Posthole [2087] was cut into the base of [2085] but no overall structural form could be discerned. Fills [2103, 2127, 2107, 2084, 2086, 2037, 2038 and 2012] were orange brown and grey silt clays.

4.3.3 *Period 5, Phase I: Middle/Late Iron Age*
The main feature of this period was a shallow curvilinear ditch located on the ridge crest amongst the early Period 2 activity

Curvilinear Ditch GP218 was aligned east to west and terminated at both ends. The ditch sondages [2216 and 2185] were up to 0.6m wide, 0.26m deep with concave sides and flat base. Fills [2196, 2197, 2178, 2215 and 2186] were grey brown sand silt with finds of near complete MIA/LIA pottery vessels.

Pit [2222] was located immediately north-east of Ditch GP218 and was cut by Roman cremation pit [2200]. The pit was filled with grey clay silt [2223] with no finds.

Further east was Pit GP205 with four pits [2096, 2110, 2137 and 2135]. The pits were generally sub-circular, up to 2.6m in diameter, 0.52m deep with steep sides and flat bases. Fills [2097, 2109, 2136 and 2134] were grey and orange silt clays.

4.3.4 *Period 6, Phase I: Roman (1st - 2nd Centuries AD)*
The activity on the ridge crest continued into the Roman period with its use as a cremation ground, including a multi-vessel cremation pit dating to the mid 2nd century AD.

Three cremation pits were identified towards the southern boundary of the area and these may have been part of a larger burial ground extending south beyond the area boundary.

Cremation pit [2200; Fig 64] was 2.2m long, 1.2m wide, 0.23m deep with stepped concave sides and a flat base. Placed in the north-west end of the pit was the bottom portion of a Baetican (south Spanish) amphora, 1.08m in diameter, containing the cremated remains of an adult [2208]. Fuel ash slags were recovered from the environmental samples and a small quantity of charcoal was recovered.

Clustered around the amphora to the south-east were five accessory vessels: a stamped (illegible) samian cup; two samian dishes, one stamped with BALBINUS.F.; an unusual, probably locally-produced flagon and a poppy-head beaker. The stamped samian dish was the most closely datable vessel, to AD100-120. The pit was filled with dark grey clay silt [2201, 2214 and 2221] and the vessels were filled with similar dark grey clay silt [2211, 2212, 2213]. The flagon and poppy-head beaker were empty of fill.

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Cremation pit [2179] was cut into the backfilled MIA/LIA Ditch GP204 and this appears to have been a deliberate insertion of a cremation into an earlier landscape feature. The cut was 0.5m in diameter, 0.2m deep with concave sides and a flat base. The fragmentary cremation vessel contained the remains

of an adult [2180] and the vessel could be dated to AD40-100. The cremation backfill was [2224] was grey silt clay.

To the south of [2179] was cremation pit [2168]. The pit was 0.8m long, 0.56m wide, 0.24m deep with concave sides and a flat base. In the base was the fragmentary lower portion of an olive oil amphora, dating to AD50-170, with the cremated remains of an adult [2170]. Recovered from the cremation were the fragmentary remains of a tubular glass vessel with a flat base, possibly an accessory vessel.

4.3.4.1 *Linear Posthole Alignments*

Further down the slope to the north-east were two groups of postholes forming north-west to south-east linear alignments, perhaps of a fenced trackway leading to the cremation cemetery on the hill crest. Posthole GP206 was four postholes [2054, 2051, 2053 and 2064], sub-circular and up to 1m in diameter. Fills [2055, 2050, 2052 and 2063] were grey silt clay.

Posthole GP207 was four postholes [2049, 2045, 2225 and 2091], again sub-circular and up to 1.2m in diameter. Fills [2048, 2044, 2226 and 2090] were grey silt clay. Some of these postholes were cut by the later Roman field boundary ditches.

The north side of large shallow pit [2102] was seen. The pit appeared to be sub-circular, 13m in diameter and 0.25m deep with concave sides and base. Fill [2101] was dark brown silt clay with finds of residual LBA pottery.

4.3.5 *Period 6, Phase III: Roman (Late 3rd- Early 4th Century AD)*

The later Roman activity was concentrated to the north-east, down slope from the ridge crest. Unusually, rectilinear field boundaries were established with little evidence for any earlier field systems. These field boundaries could have been established much earlier in the Roman period but were not allowed to silt-up until this later period. A sub-rectangular timber building, 9m wide and at least 18m long, was located in a corner of the eastern most field. This building eventually burnt down in the late 3rd - early 4th century AD and was not replaced.

4.3.5.1 *Field Boundary Ditches*

The ditches were aligned north-east to south-west and north-west to south-east in a rectilinear pattern.

On the crest of the hill were three ditches. Ditch GP208 was aligned north-east to south-west and sondage [2131/2119] was up to 1.2m wide, 0.46m with a V-shaped profile. The fill was [2130/2100] was grey silt clay with finds of pottery dating AD120-250.

Cutting Ditch GP208 and located on a similar alignment was Ditch GP209. Sondages [2062, 2133 and 14/003] were 3.25m wide 1.02m deep with stepped irregular sides and a flat base. Fills [2132, 2061 and 14/004] brown grey silt clay with finds of residual MIA/LIA pottery.

Ditch GP210 was aligned north-west to south-east, terminating at the latter end. The ditch sondages [2157 and 2159] were 1.6m wide, 0.38m deep with

irregular convex sides and a concave base. Fills [2156 and 2158] were orange brown sand clay.

Further down the slope to the north-east were five ditches. Ditch GP211 was aligned north-west to south-east and was up to 3.4m wide, 1m deep with concave sides and a flat base. Sondages [2111 and 2079] were filled with grey silt and gravel [2112, 2113/2114, 2077 and 2078].

Two parallel ditches, GP212 and GP213 were aligned north-east to south-west and represent a possible trackway or droveway. The ditches both terminated to the north-east respecting Ditch GP211.

Ditch GP212 was 0.96m wide, 0.2m deep with concave sides and a flat base. Sondages [2060, 2093 and 2095] were filled with grey silt clay [2059, 2092 and 2094] with a find of a late 3rd century AD coin. Ditch GP213 was 1.05m wide, 0.17m deep with steep sides and a flat base. Sondages [2032, 2125 and 2089] were filled with brown orange clay [2031, 2124 and 2088].

The eastern most identified field was bounded by Ditches GP214 and GP215. Ditch GP214 was aligned north-west to south-east and was 2.2m wide, 0.64m deep with straight sides and a flat base. Sondages [2066, 2106 and 2047] were filled with grey brown silt clay [2065, 2105 and 2046].

Ditch GP215 was aligned north-east to south-west and was 1.4m wide, 0.3m deep with concave sides and base. Sondages [2022 and 2005] were filled by brown sand clay [2021 and 2004] with a find of a later 2nd Century coin.

4.3.5.2 *Possible Workshop Building* (Fig 65)

Located in the south-east corner of the eastern most field was the remains of sub-rectangular building, 9m wide and at least 18m long, aligned north-east to south-west.

The foundations of the building were intermittent sill beam slots with shallow postholes. The building was divided approximately in half into two rooms. The building was an unusual shape, a rectangle with rounded corners. This suggests that at least the corner sill beams were composed of a series of small horizontal beams and/or vertical split logs rather than a long single timber. The postholes were very shallow, some as little as 50mm deep. This suggests ploughing truncation or that the posts were not earth-fast but rather resting directly on the natural ground or perhaps even the post-pad stone bases had been lost to ploughing and these represent their indentations.

There was no masonry and little CBM found in the fills suggesting the building superstructure was timber and the roof was thatched. Finds from the sill beams and postholes included a large nail with timber still adhering and a plano-convex forge bottom, perhaps indicating its use as a rural workshop for light industrial activity. This use may have been the cause of its end. The charcoal-blackened fills show that the building was burnt down.

The building was clearly contemporary and aligned with the surrounding field system. Pottery from the fills was dated to the end of the 3rd century AD, similar to the silting of the ditches.

The sill beam and posthole GP216 was [2035 and 2033/12/008], [2017], [2024, 2041 and 2016], [2011 and 2026], [2003], [2007] and [2043]. The widths were between 0.4 and 0.6m and were up to 0.14m deep with steep sides and a flat base. The fills were consistently black, and mottled black and grey, charcoal and silt [2036 and 2034], [2018], [2023, 2040 and 2015], [2010 and 2025], [2002], [2006] and [2042].

The four postholes were [2020, 2008, 2030 and 2028] and were sub-circular and up to 1m in diameter and up to 0.14m deep. Fills [2019, 2009, 2029 and 2027] were similar to the sill beam fills.

4.3.6 *Period 6, Phase IV: Roman (4th Century AD)*
After the possible workshop building had burnt down and the field system had fallen out of use, Roman activity continued on the area apparently into the 4th century AD with the digging of a large water-hole, cutting through a field boundary ditch and the south end of the remains of the burnt-down building.

The water-hole pit [2058/2199/2210] was up to 8.2m wide, 2m deep with stepped irregular sides and a concave base. This pit may have been excavated as a clay-extraction quarry pit for the local pottery manufacture and then re-used as a water-hole. The pit was excavated at least 1m below the modern water table and lower fill [2198/2209] was blue grey water-lain clay, up to 0.9m thick, with finds of residual 1st century AD pottery.

Cut into the stepped sides of the pit were three postholes [2145, 2147 and 2149]. These appeared to represent the impressions of the base of a timber tripod superstructure, erected over the centre of the pit to facilitate the lifting of water or clay with a rope and bucket.

The postholes were up to 0.9m in diameter, 0.35m deep with a near vertical outer side and a shallow inner side. Fills [2148, 2146 and 2144] were grey silt sand.

Above blue clay fill [2198] was mottled orange and grey clay [2141], up to 0.7m thick, and dark grey silt clay [2140] up to 0.2m thick. Over 7 kg of pottery in OXID2 were recovered from [2141] including 3 near complete vessels. This pottery could be securely dated to 270-300AD and the homogeneity and sheer amount of a relatively obscure fabric, strongly suggests that these were dumps from nearby pottery kilns.

4.3.7 *Period 7, Phase II: Early Medieval (5th - mid 9th Century AD)*
This period is represented only by the uppermost fills [2057 and 2056/2014] of the water-hole which contained an assemblage of possible early medieval pottery sherds and the possible re-cut or cleaning out of a Roman ditch.

The water-hole was no-longer a functioning feature but would still have been a convenient hollow for the dumping of rubbish from an apparent nearby settlement. Fill [2057] was dark grey silt clay, up to 0.32m thick and grey brown silt clay fill [2056] was 0.36m thick.

The only early medieval cut feature was an apparent re-cutting of late Roman Ditch GP211. Ditch re-cut [2115] was only seen in sondage [2111] and was

much smaller than the original ditch, only 1.02m wide and 0.75m deep. Fill [2116] was yellow grey silt clay.

The pottery from these features is not securely identified and may in fact be residual Iron Age, in which case this period can only be dated to the post-Roman period.

4.3.8 *Period 9, Phase I: Post-Medieval Pits (Late 16th – 17th Century AD)*
Three post-medieval pits were identified cutting earlier features and with finds of pottery dating to 1550-1700AD including Westerwald German stoneware.

Pits [2081, 2083 and 2154] were subcircular and up to 3m in diameter and 0.26m deep. Fills [2080, 2082 and 2150] were grey clay silt.

4.3.9 *Period 10: Modern*
Linears [12/004 and 12/006, 12/013, 12/010, 14/009, 14/005] initially identified in the evaluation were found to be modern after further investigation.

4.3.10 *Non-Archaeological Features*
Features [13/013, 13/011, 13/009, 13/007, 13/005, 13/003, 14/007, 14/011] initially identified in the evaluation were found to be non-archaeological after further investigation.

4.3.11 *Ploughsoil*
Ploughsoil [2000] sealed the features and natural and was up to 0.35m thick.

4.4 ***Area C3*** (Figs 15-17)

This area was on the west-facing slope of the same hill as area B2 with views to the south over the River Medway. Other than a few prehistoric field boundary ditches, little archaeology was encountered. This lack of archaeology appears to have been genuine as subsoil was seen throughout the area and there is little reason to believe that the survival of archaeology was effected by ploughing.

4.4.1 *Period 1: Natural*
The natural orange brown silt clay with gravel lenses [3002] was seen at 26.25m AOD in the east sloping down to 24.28m AOD in the west.

4.4.2 *Period 3: Neolithic*
This period was represented by a residual Neolithic worked flint recovered from a Late Bronze Age ditch.

4.4.3 *Period 4, Phase I: Middle Bronze Age*
Pit [3031] was the only feature datable to this period. The undated pits in the vicinity may have also belonged to this period. The pit was 3m long, 1.7m wide, 0.1m deep with shallow concave sides and a flat base. Fill [3030] was grey brown clay silt.

4.4.4 *Period 4, Phase III: Late Bronze Age*
Two field boundary ditches aligned north-east to south-west were identified.

Ditch GP300 had terminals at each end and was 1.4m wide, 0.32m deep with concave sides and base. Sondages [3021 and 3011] were filled by light grey sand silt [3020 and 3010]. Ditch GP301 terminated in the north-east and was 0.5m wide, 0.18m deep with concave sides and base. Sondage [3003] was filled with grey clay [3004].

Pit [16/011] was 1.5m long, 0.75m wide, 0.1m deep with concave sides and base. Fill [16/012] was grey silt. Pit [16/019] was 2.8m long, 1.5m wide, 0.55m deep with irregular sides and base. Fills [16/020 and 16/021] were yellow and brown clays.

The pits [3025, 3033, 3027 and 3029] and fills [3024, 3032, 3026 and 3028] contained no finds but were filled with similar yellow brown clays and are likely to have dated to this phase.

Undated

4.4.5 Pits [3006, 3013 and 3015] and grey brown silt fills [3005, 3012 and 3014] contained no finds and could not be ascribed to a period with any confidence.

4.4.6 *Non-Archaeological Features*
Features [16/005, 16/007, 16/009, 16/015, 16/013, 16/017, 17/004, 17/008, 17/006, 18/004, 18/006, 18/008, 18/010 and 18/012] initially identified during the evaluation were found to be non-archaeological after further excavation.

4.4.7 *Subsoil and Topsoil*
Subsoil [3001] was up to 0.3m thick and overlying topsoil [3000] was 0.25m thick.

4.5 ***Area D4*** (Figs 18-19)

This area was located at the bottom of the slope from area C3. After the stripping of the area and further investigation, the features identified in evaluation trench 19 and contingency trench 8 were found to be non-archaeological. Similar to area C3, thick subsoil was seen across the area and this lack of archaeology appears to be genuine.

4.5.1 *Natural, Subsoil and Topsoil*
The natural orange brown clay [4002] was seen at 18.09m AOD with overlying subsoil [4001] and topsoil [4000] up to 0.75m thick.

4.6 ***Area E5*** (Figs 20-24)

This area was located on the hill to the west of areas B2, C3 and D4 on the east-facing slope with views over the River Medway to the south and east, and the River Thames to the north. The land-use of this area was mostly later prehistoric field boundary ditches, and some later Roman activity. Subsoil was seen throughout the area and the archaeology does not appear to have been effected by ploughing.

4.6.1 *Period 1: Natural*
The natural orange brown silt clay with gravel lenses [5002] was seen at 37.28m AOD in the south-west sloping down to 34.08m AOD in the north-east.

4.6.2 *Period 4, Phase IV: Late Bronze Age/Early Iron Age*
The period was represented by rectilinear field boundary ditches with a droveway and a possible ring ditch.

Ditch GP500 was aligned north-west to south-east and was 1m wide, 0.12m deep with shallow sides and a concave base. Sondages [5052 and 5058] were filled by dark grey sand silt [5051 and 5057] with finds of briquetage pedestal fragments.

To the north-east were parallel ditches GP501, GP502 and GP503 were aligned north-east to south-west and appeared to form a droveway with an entrance to the field formed by ditch GP500 to the west.

Ditch GP501 was 0.6m wide, 0.14m deep with concave sides and base. Sondages [5054 and 5056] were filled with grey silt clay [5053 and 5055]. Ditch GP502 was intermittent forming an apparent entrance 2m wide. The ditch was 0.4m wide, 50mm deep with shallow sides and a concave base. Sondages [5063, 5076 and 5084] were filled by grey clay silt [5062, 5075 and 5083]. Ditch GP503 appeared to be a replacement for Ditch GP502 dug on a slightly different alignment. The ditch was 0.9m wide, 0.31m deep with steep sides and a concave base. Sondages [5061 and 5074] were filled by orange brown clay silt [5060 and 5073].

Ditch GP504 was curvilinear with an estimated diameter of 9.5m. This possible ring ditch was 1.15m wide, 0.54m deep with steep sides and an uneven base. Sondage [5040] was filled by brown silt [5039].

Pit [20/004] was 2m long, 0.9m wide, 0.24m deep with steep sides and an irregular base. Fill [20/005] was grey brown silt.

4.6.3 *Period 5, Phase I: Middle Iron Age/Late Iron Age*
Scatters of pits and a large ditch were dated to this period. The LBA field systems had apparently fallen out of use and were cut by features of this period.

Pit GP505 were pits and postholes [5069, 5071, 5080, 5082, 22/003, 22/005 and 22/007] which were up to 0.95m in diameter and 0.2m deep. Fills [5070, 5072. 5079, 5081, 22/004, 22/006 and 22/008] were grey silts. No structures were apparent.

Pit GP506 were pits and postholes [5003, 5009, 5006, 5013 and 5008], which were up to 0.75m in diameter and 0.12m deep. Fills [5004, 5010, 5011, 5005, 5012 and 5007] were mostly grey brown silts. No structures were apparent.

Posthole GP507 formed an apparent curvilinear structure 3m long. The postholes were [5044, 5023, 5026/20/007, 5028, 5030/20/008, 5032, 5034 and 5036] and were typically 0.2m in diameter, 80mm deep with a tapered base. Fills [5043, 5024, 5025, 5027, 20/009, 5029, 5031, 5033 and 5035] were grey silts.

Four pits identified across the area can be ascribed to this period. Pit [5022] was 0.6m in diameter, 0.15m deep and was filled with grey silt clay [5021]. Pit [5017] was 0.78m in diameter, 0.18m deep and was filled with grey silt sand [5018]. Pit [5042] was 0.3m in diameter, 0.1m deep and filled with brown grey silt sand [5041]. Pit [5068] was 0.2m in diameter, 0,12m deep and filled with grey clay silt [5067].

Ditch GP508 was either a large linear ditch or a quarry pit. The feature was up to 6m wide, 0.52m deep with shallow concave sides and an uneven base. Sondages [5078 and 21/004] were filled by grey sand silt [5077, 21/005 and 5059].

4.6.4 *Period 5, Phase II: Late Iron Age*
This period was represented by a single pit.

Pit [5038] was 0.6m in diameter, 80mm deep with steep sides and a flat base. The pit cut possible ring ditch GP504 and contained finds of residual LBA/EIA pottery as well as a vessel base dated to between 50BC and AD40. The earlier pottery most probably originated from the ring ditch fill. Pit fill [5037] was light brown silt.

4.6.5 *Period 6, Phase I: Roman (1st - 2nd Centuries AD)*
This period saw a digging of a field boundary ditch and some tentatively dated fire pits.

Ditch GP509 was aligned north-east to south-west and was 0.84m wide, 0.26m deep with concave sides and base. Sondages [5020, 5016 and 20/010] were filled by grey brown silt clay [5019, 5015 and 20/011] with finds of furnace lining fragments.

Fire pits GP510, were three sub-circular pits [5066, 5050 and 5047], up to 1.85m in diameter, 0.13m deep with shallow concave sides and base. Fills [5065, 5064, 5049, 5048, 5046 and 5045] were charcoal and burnt clay. The function of these pits may have been related to the furnace lining recovered from Ditch GP509.

4.6.6 *Non-Archaeological and Undated Features*
Features [22/009] initially identified in the evaluation were found to be non-archaeological after further investigation. Pits [086 and 082] were undated.

4.6.7 *Subsoil and Topsoil*
Subsoil [5001 and 5014] was up to 0.3m thick and topsoil [5000] was up to 0.15m thick.

4.7 ***Area F6*** (Figs 25-27)

This area was located on the steep south-facing slope and hill crest to the south-west of the village of High Halstow. The hill crest had extensive views over the River Thames to the north. Other than some late prehistoric and Roman field boundary ditches, little was found. Subsoil was seen across the area and the archaeology did not appear to have suffered truncation from ploughing.

4.7.1 *Period 1: Natural*
On the crest of the hill orange brown clay silt natural [6002] was identified at 54.49m AOD and at the bottom of the north-east slope at 49.54m AOD.

4.7.2 *Period 3, Phase III: Neolithic/Bronze Age*
Three small pits were dated to this broad period. Pits [30/006, 30/004 and 30/008] were up to 0.35m in diameter, 0.1m deep. Fills [30/007, 30/005 and 30/009] was brown silt sand.

4.7.3 *Period 4, Phase III: Late Bronze Age*
A field boundary ditch and a series of pits were tentatively dated to this phase as only a few sherds of LBA pottery were recovered.

Ditch GP600 was aligned north-east to south-west, 1m wide, 0.22m deep with concave sides and a flat base. Sondages [6014 and 6024] was filled by [6013 and 6023] blue grey silt clay.

Pits [28/009, 28/007, 28/003, 30/010, 6012 and 6006/27/009] were mostly sub-circular, up to 3.8m long and 0.22m deep. Fills [28/010, 28/008, 28/004, 30/011, 6011 and 6006/27/009] were mostly orange brown clays.

4.7.4 *Period 5: Iron Age*
The south-west terminal end of curvilinear Ditch GP601 was excavated on the crest of the hill. The ditch was 2.8m wide, 0.32m deep with concave sides and an undulating base. Sondages [31/006, 6051, 6069 and 6101] were filled by dark brown sand clay with frequent charcoal flecks and lenses [31/007, 6050, 6068 and 6100].

4.7.5 *Period 6: Roman*
The north terminus of a field boundary ditch and a scatter of features with a relatively few undiagnostic finds were broadly dated to the Roman period.

Ditch GP602 was 0.72m wide, 0.28m deep with concave sides and a flat base. Sondages [31/004, 6055 and 6046] were filled by orange grey silt clay [31/005, 6054 and 6045].

Sub-circular pits [CT13/003, 6053 and 6020] were up to 3.4m in diameter, 0.28m deep and filled by [CT13/004, 6052 and 6019].

Stakehole [6071] was 0.1m in diameter and 0.18m deep with near vertical sides and a tapered point. Fill [6070] was grey clay silt.

4.7.6 *Undated Features*
A series of undated pits [6049, 6018, 6016, 6008, 6007, 6022/27/003 and 6009], with fills [6047, 6048, 6017, 6015, 6007, 6021/27/004 and 6010] were excavated which could not be confidently ascribed to any period.

4.7.7 *Non-Archaeological Features*
A series of features identified in the evaluation [27/005, 27/007, 28/005, CT13/007, CT13/005, 62/010, 62/008, 62/006 and 62/004] were found to be non-archaeological after further investigation.

4.7.8 *Subsoil and Topsoil*
Grey brown sand silt subsoil [6001] was on average 0.25m thick across the area and above topsoil [6000] was 0.2m thick.

4.8 ***Area G7*** (Figs 29-30)

The area was aligned east to west and measured 29m by 8m with a gentle slope down from south to north. The area was located immediately in front of a WWII pill-box with views over the River Thames to the north. Subsoil was seen across the area and the archaeology did not appear to have suffered truncation from ploughing.

4.8.1 *Period 1: Natural*
Yellow brown sand silt natural [7002] was identified at 24.01m AOD.

4.8.2 *Period 6, Phase I: Roman (1st -2nd Centuries AD)*
A field boundary ditch and two small pits were excavated.

Ditch GP700 was aligned east to west, 2.3m wide, 0.32m deep with concave sides and base. Sondages [7006 and 63/009] were filled by orange brown sand silt [7005 and 63/010].

Pits [63/004/7004] and [63/007] were up to 0.6m in diameter and were filled by [63/005, 63/006/7003 and 63/008]. Pit [63/004/7004] contained two partial pottery vessels with apparent vessel fills rich in charred botanical remains. These do not appear to be food remains, but rather were deliberately deposited in the vessel and interred.

4.8.3 *Non-Archaeological Features*
A feature identified in the evaluation [63/011] was found to be non-archaeological after further investigation.

4.8.4 *Subsoil and Topsoil*
Grey brown sand silt subsoil [7001] was on average 0.25m thick across the area and above topsoil [7000] was 0.2m thick.

4.9 ***Area H8*** (Figs 31-36)

Area H8 measured 220m by 27m and was aligned east to west. The area sloped down gently from east to west and had views over the River Thames to the north. The most significant archaeological features identified was a LBA/EIA enclosure and a series of later prehistoric field boundary ditches. No subsoil was seen, with the ploughsoil directly overlying the natural clay. It is reasonable to assume that the archaeology had suffered to a greater or lesser degree from ploughing.

4.9.1 *Period 1: Natural*
The natural orange brown clay [8001] was seen at 22.98m AOD in the east sloping down to 20.68m in the west.

4.9.2 *Period 3, Phase III: Neolithic/Early Bronze Age*
The activity of this period is represented by two pits and a group of five postholes.

Pit [8098] was 0.98m long, 0.5m wide, 0.1m deep with shallow sides and a concave base. Fill [8099] was dark grey clay with a find of a Neolithic/EBA end scraper. The pit was cut by a LBA/EIA feature.

Pit [33/020] was 1.4m in diameter, 0.22m deep with concave sides and an undulating base. Fill [33/021] was brown grey clay silt with finds of pottery broadly dated to the Neolithic and Bronze Age.

Posthole GP827 comprised of five postholes set in a circle approximately 2m in diameter. The postholes were [33/004, 33/006, 33/008, 33/010 and 33/018] and ranged from 0.20m to 0.40mm in diameter and 50mm to 80mm in depth. Fills [33/005, 33/007, 33/009, 33/011 and 33/019] were grey brown silt clay with finds of pottery broadly dated to the Neolithic and Bronze Age.

4.9.3 *Period 4, Phase IV: Late Bronze Age/Early Iron Age*
The majority of features in Area H8 were of LBA/EIA date. The features were largely pits and ditches with a moderate amount of fire-cracked flint, briquetage fragments and perforated slabs finds.

Three distinct phases can be identified within the LBA/EIA. The first, phase IVi, is a sub-circular enclosure with related features. The second, phase IVii sees the enclosure fall into disuse and being cut by field boundary ditches. The third phase, phase IViii, sees the minor reorganisation of the field boundaries and quarrying in the area of the enclosure.

4.9.3.1 *Period 4, Phase IVi LBA/EIA Enclosure*
The earliest series of LBA/EIA features form an apparent sub-circular enclosure. There are two linear groups of postholes/pits aligned either side of an entrance facing to the south-west. The enclosure was only partially exposed within Area H8, but was at least 98m in diameter with segmental elements. The ditch sections were on average 1m wide, 0.3m deep with concave sides and base. The ditch fills were mostly grey silt clays with finds of pottery, and fire-cracked flint.

Ditch GP800 was aligned north to south and continued north beyond the area, and consisted of cut [8061] and fill [8060]. Ditch GP 801 was to the south and was 5.5m long ditch portion forming the north side of the entrance. The cut was [8102] and fills [8130 and 8118].

Ditch GP802 was positioned in the centre of the entrance slightly within the enclosure, forming a north entrance 2.2m wide and a southern 4m wide. The cut was [8272] and the fill [8271]. This ditch was mirrored by a similar parallel Ditch GP811 located approximately 6m inside the enclosure. Ditch GP811 consisted of [8093, 8096 and 8259] and was filled by [8094, 8095, 8097 and 8258].

Further south and continuing beyond the area was Ditch GP803 with sondages [8273, 8195 and 8189] and fills [8274, 8194 and 8188].

To the east was Ditch GP804 aligned north-east to south-west and forming the apparent east side of the enclosure. The sondages were [8173, 8140 and 8245] and the fills were [8172, 8139 and 8244].

4.9.3.1.1 *Enclosure Entrance Postholes and Pits*

A group of eight postholes was aligned north-east to south-west immediately inside of the entrance on the north side. This Posthole GP805 was mirrored by parallel Posthole GP806 immediately inside on the south side. Some of the fills contained finds of LBA/EIA pottery sherds but most were undated.

Posthole GP805 consisted of [8007, 8005, 8015, 8011, 8035, 8049, 8047 and 8051] with fills [8006, 8004, 8014, 8010, 8034, 8050, 8048 and 8052]. The postholes varied in size from 0.8m to 0.2m in diameter and were aligned for 16m.

Posthole GP806 was made up of eight postholes [8199, 8201, 8203, 8197, 8193, 8177, 8214 and 8167] with fills [8198, 8200, 8202, 8196, 8192, 8176, 8213 and 8166]. The postholes were aligned for 18m and some of the postholes inter-cut, indicating occasional replacements.

Immediately outside of the entrance were two small posthole groups, GP807 and GP808. GP807 had three postholes [8082, 8069 and 8067] with fills [8066, 8068 and 8081]. Posthole GP808 had two [8222 and 8235] with fills [8221 and 8234].

4.9.3.1.2 *Internal Features*

A series of internal features within the enclosure including a hearth and two posthole/pit groups were identified.

Hearth [8087] was located some 32m inside from the entrance and was 1.1m in diameter, 0.14m deep with irregular sides and a flat base. The sides were heat-affected and fills [8086 and 8085] contained LBA pottery sherds, perforated slab fragments and frequent fire-cracked flint.

Posthole GP809 consisted of [8165, 8175, 8171, 8169, 8191 and 34/005]. The fills were [8163, 8164, 8170, 8174, 8168, 8190 and 34/006] and some had finds of LBA/EIA pottery sherds.

Pit GP810 were five features varying greatly in size from 3.2m to 0.2m in diameter. Pits/postholes [8027, 8080, 8084, 8154 and 8157] were filled by [8026, 8079, 8083, 8153, 8155 and 8156].

Ditch GP822 was the south terminal of a north to south aligned ditch. The ditch appeared to be parallel to the enclosure ditch and the two ditches may have formed a chicane entrance. The entrance was 1.7m wide, 0.28m deep with concave sides and a flat base. Two sondages were excavated [8055 and 8229] and fills [8054, 8126, 8227 and 8228] were charcoal-enriched dark grey and black sand silt with frequent fire-cracked flint and finds of perforated slab fragments, briquetage vessel and pedestal fragments. Finds of LBA/EIA pottery also included a single intrusive sherd of MIA/LIA date.

Ditch GP823 was the north-west terminal of a north-west to south-east aligned ditch. One sondage was excavated [8179] and fill [8178] had no finds.

4.9.3.1.3 *External Pit Groups*

Four external posthole/pit groups may have been contemporary with the use of the enclosure.

To the west of the enclosure were three pit/posthole groups GP812, GP813 and GP814.

Pit GP812 with three features [8270, 8243 and 8138] with fills [8269, 8242 and 8137]. Pit [8243] contained environmental remains of moderate amounts of wheat grain and chaff, barley grain and common pea. Pit GP813 was [8268, 8249, 8251, 8253, 8123 and 35/006] with fills [8267, 8248, 8250, 8252, 8122 and 35/007]. Posthole GP814 were [8033, 8019, 8013, 8218, 8073, 8071, 35/008 and 35/003] and formed an approximate linear aligned east to west. The fills were [8032, 8018, 8012, 8217, 8072, 8070, 35/009 and 35/004].

Immediately outside of the enclosure to the east of Ditch GP804 was pit [8057]. Fill [8056] had frequent fire-cracked flint, worked flints, LBA/EIA pottery sherds and perforated slab fragments.

Further to the east of the enclosure was Posthole GP815 with features [8181, 8183, 8185, 8187, 8150, 8148, 8146, 8021, 33/023, 33/012 and 33/014]. Features [8185 and 8187] were pits and the others were postholes. The fills were [8180, 8182, 8184, 8186, 8145, 8149, 8147, 8020, 33/024, 33/013 and 33/015] and most had finds of LBA/EIA pottery sherds.

4.9.3.1.4 *South-West Ditch*

Curvilinear Ditch GP816 to the south-west of the enclosure may have been contemporary. The ditch was up to 4m wide, 0.28m deep with steep sides and an uneven base. The ditch sondages were [8003, 8207, 8134, 8255 and 8065] and fills [8002, 8064, 8133, 8254 and 8206]. The northern extent of this feature lay beyond the area.

Two pits can be tentatively ascribed to this period. Pit [8212] was cut by Ditch GP816 and pit [8092] was cut by a later ditch. The fills of [8212] were orange sand silt [8211] and dark grey sand silt [8210] with frequent fire-cracked flint. The fill of [8092] was dark brown silt [8091] with no finds.

Posthole GP828 formed an arc of four postholes [36/003, 36/005, 36/007, 36/009]. Fills [36/004, 36/006, 36/008 and 36/010] were grey brown silt and a sherd of LBA pottery was found in [36/004].

4.9.3.2 *Period 4, Phase IVii: Field Boundary Ditches*

Cutting the enclosure was curvilinear Ditch GP817 aligned north-east to south-west, 0.9m wide, 0.2m deep with concave sides and a flat base. The ditch sondages were [8128, 8031, 8224 and 8063] and fills [8127, 8030, 8223 and 8062] were reddish brown silt clay.

To the south-west, Ditch GP818 may have been contemporary with Ditch GP817. The ditch was aligned south-east to north-west before curving west to a similar north-east to south-west alignment as GP817. The ditch was up to 3m wide, 0.6m deep with concave side and a flat base. The ditch sondages were [8205/8241, 8125, 8110, 8101, 8151 and 8160] and fills [8204/8240, 8124, 8141, 8109, 8100, 8152, 8159 and 8158] had finds of perforated slab fragments, a briquetage pedestal, dumps of fire-cracked flint and LBA/EIA pottery sherds.

4.9.3.2.1 *Pit*

Cut into upper fill [8118] of enclosure Ditch GP801 just north of the entrance was pit [8129]. The pit was 0.3m in diameter, 0.24m deep with steep sides and a concave base. In the pit was a near complete pottery vessel placed placed up-right at the base of the pit. Pit fill [8117] was grey clay silt. It appears that this pit was deliberately located in the backfilled ditch of an enclosure, which although apparently out of use, still held some significance and the enclosure still survived as a landscape earthwork.

4.9.3.3 *Period 4, Phase IViii: Later Field Boundary Ditches*

The Period 4 Phase IVii field boundaries were allowed to silt up and new field boundaries were dug on a similar alignment but cutting through the earlier ditches.

The southern terminal of Ditch GP819 cut Ditch GP817 and was aligned north-west to south-east. The ditch was 0.4m wide, 0.18m deep with concave sides and base. The ditch sondage was [8090 and 8075] and grey brown clay silt fill [8088 and 8074] had a find of a near semi-complete pottery vessel.

To the south-west and apparently respecting Ditch GP819 was Ditch GP820 aligned north-east to south-west with terminals at each end. The ditch was on average 1.1m wide, 0.35m deep with near vertical sides and an uneven base. The ditch sondages were [8220, 8112, 8136, 8116, 8143, 8132 and 8257] and the fills [8219, 8111, 8131, 8135, 8115, 8142, 8144 and 8256] were mostly grey sand silts and included finds of perforated slab fragments and finds of LBA/EIA pottery sherds.

4.9.3.3.1 *Pits*

Two pits [8266 and 8009] and stakehole [8261] were located within the enclosure entrance suggesting that the enclosure was no longer in use. The fills of pit [8266] were [8262, 8263, 8264 and 8265] had finds of fire-cracked flint and LBA/EIA pottery sherds. Pit [8009/8029] was filled by [8008/8028] with finds of fire-cracked flint. Stakehole [8261] was filled by [8260].

Only the southern edge of large amorphous Quarry Pit GP826 was intermittently visible. The pit was at least 68m long, 4.5m and 0.25m deep with shallow sides and a flat base. Sondages [8023, 8059 and 33/016] were dug by machine and hand. Fills [8022, 8058, 33/017 and 33/022] were orange brown clay silt. The quarry pit cut through the enclosure ditch suggesting that the enclosure was no longer visible as an earthwork or was considered to be of no significance.
A scatter of pits in the south-west of the area is considered to be contemporary with this period as some of the pits cut the earlier ditches.

Pit GP821 consisted of six features of various sizes [8121, 8114, 8108, 8044, 8231 and 8209]. Fills [8119, 8120, 8113, 8107, 8043, 8230 and 8208] were mostly brown silt clays with fire-cracked flint.

4.9.4 *Period 5, Phase I: Middle/Late Iron Age*
A single intrusive sherd of MIA/LIA pottery in a LBA/EIA Ditch GP822 represented this period. In general, a total absence of features and other finds of this date indicated the area had a hiatus in activity until the early Roman period.

4.9.5 *Period 6, Phase I: Roman (1st - 2nd Centuries AD)*
The features of this period are dominated by a huge north-west to south-east aligned ditch. Elsewhere the period is characterised by a scatter of mostly small pits. The finds, where they can be dated with any certainty, are from the 1st century AD, suggesting that most of the activity is early Roman.

Ditch GP824 was up to 10.8m wide, 0.84m deep with shallow concave sides and a flat base. One sondage was excavated during the evaluation [34/008] and a further one excavated in mitigation by machine [8036]. The fills were [8037, 8038, 8039, 8040, 8041, 8042 and 34/007] and the origin of all were apparent silting. A single find of Roman *tegula* was recovered from [34/007]. As this ditch is much larger than usual field boundary ditches and did not have a defensive profile, its function is not readily apparent.

To the east of Ditch GP824 were two intersecting ditches, Ditches GP825, aligned north-east to south-west and north-east to south-west. The north-east to south-west portion had terminals at each end and was 18.4m long, 1.5m wide, 0.26m deep with irregular convex sides and a concave base. Sondages [8237, 8247 and 8226] were filled by [8236, 8246 and 8225] with finds of fire-cracked flint, residual LBA pottery and pottery sherds dating to AD40-100. The contemporary north-west to south-east portion was curvilinear, 1.8m wide, 0.27m deep with steep sides and a flat base. Sondages [8233, 8045, 8053, 8239 and 34/003] were filled by [8232, 8046, 8238 and 34/004] with finds of pottery dated AD40-100.

A scatter of pits was recorded across the area with no particular pattern or grouping.

Pit [8024] was 1.4m in diameter with irregular sides and a concave base. Fill [8025] was orange brown silt with finds of residual LBA pottery and Roman tile.

Pit [8103] was 5.4m long, 3.5m wide, 0.75m deep with steep sides and a flat base. Fill [8104] was grey brown silt with finds of pottery dating to AD40-100 and Roman tile.

Pit [8078] was 0.8m in diameter, 0.14m deep with shallow sides and a flat base. Fills [8076 and 8077] were charcoal-enriched grey clay with finds of pottery dating to 50BC-AD100.

Juvenile pig burial [8277] was 0.4m in diameter, 40mm deep with shallow sides and a flat base. Juvenile pig skeleton [8276] was aligned with the head to the north and the legs to the west. Grave fill [8275] was dark grey silt clay with a find of a single fragment of Roman pottery.

4.9.6 *Non-Archaeological Features*
Feature [34/010] identified in the evaluation was found, after further investigation, to be non-archaeological.

4.9.7 *Ploughsoil*
Ploughsoil [8000] was up to 0.35m thick and seen across the area.

4.10 ***Area I9*** (Figs 37-41, 66 and 67)

This area was located in a relatively level broad valley bottom immediately north of the village of Cliffe Woods. This area appeared to be located on the northern edge of an enclosure first occupied in the MBA/LBA and intermittently occupied through to the medieval period. These enclosure ditches were located in an area of low-lying ground and it was not readily apparent how the enclosures related to the wider topography. A Roman corn-dryer and early medieval quarry pit/ditch were also identified. The area was covered in thick deposit of subsoil and it is unlikely that the archaeology had been effected by ploughing.

4.10.1 *Period 1: Natural*
The natural mottled grey and orange brickearth [9002] was seen at 10.52m AOD in the north-west of the area sloping down to 9.01m AOD in the middle and south-east.

4.10.2 *Period 2: Mesolithic*
This period is represented by finds of residual Mesolithic worked flint, including a multi-platform flake core and bladelet recovered from later features.

4.10.3 *Period 3, Phase I: Early Neolithic*
Similarly, this period is again represented only by finds of Neolithic worked flint from later features. Finds included a blade core and bladelet fragment.

4.10.4 *Period 4, Phase I: Middle Bronze Age*
A large enclosure ditch and a series of pits are the first dated features identified on the area. Most of these features contained finds of MBA/LBA pottery sherds and some could belong to Period 5 LBA.

Ditch GP900 was aligned east to west, at least 17m long, 4m wide, 0.96m deep with convex sides and a flat base. Two sondages were excavated [9022 and 9154] and fills [9023, 9021, 9153 and 9152] were brown orange silt clay which contained a find of a briquetage pedestal. The ditch appeared to be the northern side of an enclosure lying beyond the area to the south.

Pit [9043] was 0.58m in diameter, 0.12m deep with concave sides and a flat base. Fill [9042] was dark brown clay. Pit [9045] was 0.62m in diameter, 0.15m deep with concave sides and a flat base. Fill [9044] was dark brown silt clay with finds of briquetage wedge fragments.

Pit [9065] was up to 0.9m in diameter, 0.2m deep with near vertical sides and a flat base. Fill [9064] was dark brown clay silt.

Pit group GP901 consisted of five sub-circular pits/postholes up to 1m in diameter. The pits/postholes were [9013, 9011/CT20/010, 9007/CT20/008, 9015 and 9005] and did not form any apparent pattern. Fills [9012, 9010/CT20/011, 9006/CT20/008, 9014, 9003 and 9004] were brown orange clays.

4.10.5 *Period 4, Phase III: Late Bronze Age*

This period was characterised by an east to west aligned ditch and a series of pits. Ditch GP902 could be seen as a replacement for earlier enclosure ditch GP900.

Ditch GP902 was at least 120m long and on average 1.8m wide, 0.4m deep with concave side and base. Thirteen sondages were excavated [9041, 9025, 9187, 9194, 9198, 9181, 9234, 9183, 9229, 9190, 9206, 9208 and 9218] and fills [9040, 9024, CT20/004, 9186, 9193, 9197, 9180, 9236, 9182, 9228, 9189, 9188, 9204, 9205, 9207 and 9217] were mostly orange brown and grey clay sand.

Three north to south aligned gullies were identified and were contemporary with Ditch GP902. Gullies [9231, 9233 and 9221] were up to 0.8m wide, 0.22m deep with concave sides and base. Fills [9230, 9232, 9220 and 9219] were dark grey and orange silt sand.

Pit group GP903 was a series of eight sub-circular pits, up to 1.4m in diameter. Pits [9055, 9051, 9049, 9053, 9039, 9028 and 9031] were filled by orange brown clays [9056, 9050, 9048, 9052, 9038, 9026, 9027, 9030 and 9029].

4.10.6 *Period 5: Iron Age*

Ditch GP910 is tentatively dated to this period as the ditch cut LBA ditch GP902 and was cut by Roman ditch GP904. The only find from the ditch was a fragment of prehistoric worked flint. The ditch was at least 32m long, and up to 1m wide, 0.6m deep with steep sides and a flat base. Sondages [9223, 9203, 9196 and 9214] were filled by [9222, 9202, 9195 and 9213].

This ditch probably represents a field boundary ditch or the south side of an enclosure.

4.10.7 *Period 6, Phase I: Roman (1st – 2nd Centuries AD)*

The early Roman period saw the Iron Age ditch superceded by another east to west aligned ditch. A Roman corn-dryer was also found.

Ditch GP904 was at least 52m long, 2.5m wide, 0.6m deep with stepped sides and a flat base. Sondages [9225, 9201, 9235, 9216 and 9185] were filled by orange brown sand and clays [9224, 9226, 9199, 9200, 9237, 9238, 9215 and 9184].

Gully [9175] was aligned north-east to south-west and was at least 3m long, 0.7m wide, 0.12m deep and was filled by grey brown sand silt [9174].

Pit [9192] was 0.8m in diameter and 0.95m deep with near vertical sides and a concave base. Fill [9191] was brown silt clay.

4.10.7.1 *Corn-Dryer Kiln*

Corn-dyer GP905 and the stoke-hole were constructed in a large rectangular cut [9149] measuring 5.4m long, 3.7m wide, 0.48 deep with near vertical sides and a flat base. This was clearly intended to shelter the structure from the prevailing winds. The corn-dryer itself was set into sub-circular construction cut [9017], up to 1.7m in diameter.

The foundation of the corn-dryer was of flint cobbles and rammed silt clay [9036], up to 2.2m in diameter, 0.15m thick with finds of Roman brick and tile fragments. Above this a gravel and rammed clay floor was recorded [9035], this was up to 80mm thick. Built onto the floor was the surviving stub of the domed sub-circular superstructure [9170]. Wall [9170] was composed of fired clay, burnt-out organics and chalk fragments and was up to 0.1m high and 0.2m wide. The entrance into the kiln from the stoke-hole was located on the east side and was at least 0.35m wide.

Cut through the floor were sixteen stakeholes [9169, 9243, 9245, 9247, 9249, 9251, 9253, 9255, 9257, 9259, 9261, 9263, 9265, 9267, 9269 and 9271] set around the edge of wall [9170] and were possibly related to the original construction of the domed roof. The stakeholes were sub-circular and between 50mm and 120mm in diameter and up to 105mm deep. The stakeholes were filled by black charcoal-enriched silt [9242, 9244, 9246, 9248, 9250, 9252, 9254, 9256, 9258, 9260, 9262, 9264, 9266, 9268, 9270 and 9272].

The floor was apparently re-lined with burnt pink clay and gravel [9034], up to 40mm thick and the walls were lined with flint cobbles lining [9037] and burnt clay lining [9157].

On floor [9034] sporadic patches of charcoal [9146] and grey brown silt sand [9016] with fired clay fragments of the collapsed clay walls.

To the south of the corn-dryer was large posthole [9148]. The post had been driven into the ground and its wooden base [9147] survived. The post was roughly squared, 0.4m by 0.45m and 0.5m long with a tapered point. Its function is uncertain.

The stoke-hole was located within [9149] on the east side. Here the cut was filled by a series of corn-dryer rake-outs. Abutting the outer face of wall [9037] was black charcoal and silt [9156], grey water-lain silt clay [9155] and black charcoal and silt [9058]. The moderately rich environmental samples were dominated by wheat grains and from the recovered wood charcoal, oak, hazel/alder, sloe/cherry, hawthorn/whitebeam/apple and elm could be identified.

4.10.8 *Period 7, Phase I: Early Medieval (5th - 6th Centuries AD)*
Large Quarry pit or Ditch GP906 was aligned north to south and was at least 35m long, 9m wide, 0.64m deep with concave sides and a flat base. Two sondages [39/004 and 9046] and fills [39/005, 9047 and 9061] were grey and orange brown mottled silt clay and sand with finds of residual Roman pottery and an early medieval copper alloy brooch RF<1>. A dog skeleton was also recovered from [9047].

4.10.9 *Period 8, Phase I: Medieval (13th Century AD)*
This period consisted of the north side of an enclosure ditch and three pits.

Curvilinear ditch GP907 appeared to be the northern side of an enclosure, apparently enclosing the roughly the same area as the Period 4 and 5 ditches. The ditch was at least 56m long, 2.4m wide, 0.5m deep with concave sides and base. Sondages [9020, 9009, 9033 and 9068] were filled by mottled grey and brown clay silt [9018, 9019, 9008, 9032 and 9063].

Pit [9209 and 9179] was at least 4m long, 1.4m wide, 0.2m deep with irregular sides and a flat base. Fills [9210 and 9178] were dark brown silt clay.

Pit [9240] was at least 8m long, 0.6m wide, 0.4 m deep with a concave side. The majority of the feature lay beyond the area to the north. Fill [9239] was dark brown sand silt.

Fire pit [9143/9067] was 1.8m in diameter, 0.12m deep with shallow concave sides and base. Fills [9066/9142] were charcoal-enriched dark brown silt.

Cutting the stoke-hole of the Roman corn-dryer was Pit group GP909 consisting of four sub-circular inter-cutting pits [9161, 9159, 9141 and 9163]. Fills [9160, 9158, 9140 and 9162] were mostly grey brown sand silt with finds of 12th century AD pottery sherds. Sealing the pits and filling the remainder of the hollow of the former stoke-hole pit was grey brown silt clay [9057] with frequent burnt clay fragments.

4.10.9.1 *Medieval Stakeholes*

Stakehole group GP908 consisted of 35 stakeholes with no finds but some were cut by a medieval pit. The stakeholes were clustered into a 4m by 4m area with no discernible structure or pattern. Posthole [9145] and fill [9144] to the south was probably related to these stakeholes.

The stakeholes were [9069, 9071, 9073, 9075, 9077, 9079, 9081, 9083, 9085, 9087, 9089, 9091, 9093, 9095, 9097, 9101, 9103, 9105, 9107, 9109, 9111, 9113, 9115, 9117, 9119, 9121, 9123, 9125, 9127, 9129, 9131, 9133, 9135, 9137 and 9139] and fills [9070, 9072, 9074, 9076, 9078, 9080, 9082, 9084, 9086, 9088, 9090, 9092, 9094, 9096, 9098, 9100, 9102, 9104, 9106, 9108, 9110, 9112, 9114, 9116, 9118, 9120, 9122, 9124, 9126, 9128, 9130, 9132, 9134, 9136, 9138 and 9240] were all grey clay silt.

4.10.10 *Undated Features*

Pit [9173] with fill [9172] and pit [9177] with fill [9176] were undated and could not be assigned a period with any confidence.

4.10.11 *Subsoil and Topsoil*

Subsoil [9001] was up to 0.45m thick and overlying topsoil [9000] was 0.3m thick.

4.11 ***Area J10*** (Figs 42-46)

This area was located on the gentle west- and east-facing slopes of a broad ridge aligned north to south. The land-use of the area included a tentatively dated Mesolithic pit, and later prehistoric and Roman field boundary ditches. A 16th/early 17th century AD water-hole was also excavated. Subsoil was seen across the area and it is unlikely that the archaeology had been greatly effected by ploughing.

4.11.1 *Period 1: Natural*

The natural dark orange brown clay and sand silt [10003 and 10104] was seen at 13.88m AOD on the crest of the hill, 10.92m AOD at the bottom of eastern slope and 11.33m AOD on the western.

4.11.2 *Period 2: Mesolithic*

This period was represented by residual finds of worked flint recovered from later features and a possible Mesolithic pit. A total of 51 finds of worked flint mostly of from early prehistoric period suggests the site was at the very least frequented during the Mesolithic and early Neolithic, if not actually habited. Pit [10039] was 1.15m in diameter, 0.4m deep with stepped sides and a flat base. Fill [10038] was orange brown silt sand with no inclusions. Although a find of a Mesolithic bladelet was recovered from the pit fill, residual flintwork was recovered from later pits and this pit could well be a later feature containing only a single find of a residual Mesolithic flintwork.

4.11.3 *Period 3, Phase II: Later Neolithic/Early Bronze Age*

A single pit with finds of three worked flint flakes could be tentatively dated to the later Neolithic/early Bronze Age. Pit [10034] was 2.6m in diameter, 0.34m deep with steep concave sides and an uneven base. Fill [10033] was brown sand silt with occasional charcoal flecks. Like pit [10039], the dating of this pit is very tentative, and this could well be a later pit containing only residual finds.

4.11.4 *Period 5, Phase II: Late Iron Age*

4.11.4.1 *Field Boundary Ditches*

Ditch GP1000 was aligned north-east to south-west and was 0.8m wide, 0.2m deep with concave sides and base. Six sondages were excavated [10016, 10036, 10011, 10029, 10050/10057 and 10048] and fills [10015, 10035, 10010, 10030, 10049/10058 and 10047] were mostly dark brown clay silt. A small assemblage of possible LIA pottery sherds and worked flints were recovered.

Ditch GP1001 appeared to be a north-west to south-east aligned spur of Ditch GP1000 as it was a similar size and shape. Two sondages were excavated [10054 and 10064] and fill [10053 and 10065] had finds of later prehistoric pottery and residual Mesolithic/early Neolithic worked flints.

4.11.4.2 *Pits and Tree-Throw*

Pit [10131] was 1.06m in diameter, 0.14m deep with concave sides and a flat base. Fill [10130] was brown grey clay with finds of LIA/early Roman pottery sherds. Pit [10020] was 4.2m long, 1.2m wide, 0.4m deep with concave sides and base. Fill [10019] was grey brown silt clay with finds of later prehistoric worked flints and pottery sherds.

Tree-throw [10154] was 2.3m in diameter, 0.47m deep with convex and concave sides and a concave base. Fill [10153] was grey brown clay silt with a find of one LIA/early Roman pottery sherd.

4.11.5 *Period 5, Phase III: Late Iron Age/Early Roman*
As the dating for this and the previous phase is fairly broad and based on small assemblages, it is feasible that some of the features dated to this period in fact originate in Period 3 but contained intrusive material.

Rectilinear Ditch GP1002 was aligned north-east to south-west and north-west to south-east. The ditch was 2.1m wide, 0.7m deep with concave sides and base. The sondages excavated were [42/006, 10281, 10215, 10182 and 10190] and fills [42/007, 10280, 10277, 10278, 10213, 10214, 10181 and 10189] were mostly brown silt representing a gradual accumulation. A very small assemblage of LIA/early Roman pottery sherds were recovered as well as a residual Mesolithic/early Neolithic core fragment. This feature was more substantial than the field boundary ditches and may represent an enclosure ditch.

East to west aligned Ditch GP1003 was slightly sinuous, 1.3m wide, 01.8m deep with regular sides and an uneven base. Four sondages were excavated [10265/10262, 10291, 10140 and 10134] and fills [10266/10261, 10290, 10139 and 10133] were mostly grey brown silt clay. Finds were a small assemblage of LIA/early Roman pottery sherds.

To the south, Ditch GP1004 appeared to be contemporary with Ditch GP1003 and was a sinuous spur aligned north to south. The ditch appeared to have been excavated respecting the position of tree-throw [10154] suggesting the tree was an existing feature. The ditch was 0.84m wide, 0.2m deep with concave sides and base. The sondages excavated were [42/012, 10156/10158, 10132 and 10120] and fills [42/013, 10155/10157, 10121 and 10119] were grey brown silt clay. The finds were of Roman brick and a very small amount of Roman pottery sherds.

East to west aligned Ditch GP1005 was 0.9m wide, 0.6m deep with steep sides and a concave base. The ditch terminated in the south-west. Two sondages were excavated [10203 and 10301] and fills [10202 and 10300] were grey brown silt clay. No finds were recovered but the ditch was cut by a Period 5 Roman ditch.

Although the finds from Ditch GP1006 were Roman, the ditch appeared to be part of the Period 3 ditches and is perhaps the best indication that this Late Iron Age field system was retained into the early Roman period. Ditch G1006 was 1.2m wide, 0.3m deep with concave sides and base. Three sondages were excavated [60/007/10006, 10014 and 10009] and fills [60/008, 10004, 10005, 10012, 10013, 10007 and 10008] were mostly orange brown silt clay.

Pit [10150] was 0.6m in diameter, 0.1m deep with steep sides and a flat base. Fill [10149] was orange brown clay with finds of LIA/early Roman pottery sherds and a residual Mesolithic flake.

Pit [10292] was 1.5m in diameter with concave sides and base. Fills [10293 and 10295] were charcoal-enriched silt clay.

4.11.6 *Period 6, Phase II: Roman (2nd - Early 3rd Centuries AD)*
This period saw a reorganised landscape with new field boundary ditches on a slightly different alignment, cutting through the Period 4 features.

Apparently later than Ditch GP1002 was a series of four rectilinear ditches cut through enclosure. Ditch GP1007 was aligned north-west to south-east, 0.65m wide, 0.14m deep with steep sides and a concave base. Four sondages were excavated [10270, 10188, 10194 and 10198] and fills [10269, 10187, 10193 and 10197] were grey brown sand silt. A moderate assemblage of pottery sherds dating to AD120-200 and including a near complete vessel, were recovered.

Ditch GP1008 was aligned north-east to south-west, 1.15m wide, 0.4m deep with steep sides and a flat base. The ditch terminated at each end. The sondages excavated were [42/018, 10274, 10162, 10116, 10210, 10201 and 10218] and fills [42/019, 10273, 10161, 10115, 10208, 10209, 10199, 10200 and 10217] were mostly orange clay, brown silt with charcoal lenses. Finds included pottery sherds dating to AD120-250 and three oven bars and two oven slabs from [10208]. Also residual Mesolithic end scraper was recovered from [10208].

Ditch GP1009 was undated but appeared to relate to this field system. The ditch was aligned north-west to south east with a terminus at the former. The ditch was 0.28m wide, 60mm deep with concave sides and base. One sondage was excavated [10101] and fill [10100] was brown orange silt clay.

Ditch GP1010 was parallel to Ditch GP1009 and was 1m wide, 0.16m deep with concave sides and base. Three sondages were excavated [10118, 10129 and 10106] and fills [10117, 10128 and 10105] were dark brown silt clay. One sherd of pottery, dating to AD120-300, was recovered.

Rectilinear Ditch GP1011 comprised of two parallel north-east to south-west ditches and an adjoining contemporary north-west to south-east ditch. The ditches were on average 1.5m wide, 0.5m deep with steep irregular sides and a concave base. The sondages excavated were [61/005, 61/013, 10244, 10232, 10248, 10258, 10252, 10173, 10207 and 10178] and fills [61/004, 61/006, 61/014, 10257, 10174, 10206, 10243, 10247, 10251, 10177 and 10231] were mostly brown clay silt. The pottery recovery dated to AD120-250 with residual LIA and earlier Roman sherds.

4.11.6.1 *Pits and Hearth*
Three pits and two hearths were excavated. Hearth [10123] was cut through the fills of Ditch GP1008 but the similarity to some of the burnt ditch fills suggests this hearth was located in the open ditch. The hearth was 0.9m in diameter, 0.16m deep with shallow concave sides and a concave base. Fill [10122] was dark grey and black charcoal-enriched sand and burnt stone.

Hearth [60/004] was 0.9m long, 0.5m wide, and up to 90mm deep with steep sides and a flat base. Lower fill [60/005] was brown orange silt clay and finds of pottery dated to AD120-200. Upper fill [60/006] was black silt clay with frequent fire cracked flints, and charcoal.

Pit [42/004 and 10212] was 1.2m in diameter, 0.54m deep with concave sides and base. Fills [42/005, 42/016, 42/107, 10211, 10219, 10220, 10221, 10222, 10223 and 10224] were charcoal-enriched dark brown and black silt clay with frequent burnt clay fragments. The finds were a small group of pottery sherds dating to AD120-300.

Pit [42/014 and 10148] was 0.5m in diameter, 0.2m deep with concave sides and base. Fill [42/015 and 10147] was orange brown clay with finds of Roman pottery sherds.

Pit [61/015] was 1.2m long, 0.3m wide, 90mm deep with concave sides and base. Fill [61/016] was grey brown silt clay.

4.11.7 *Period 8, Phase II: Late Medieval/Post-Medieval Field System*
Late medieval/post-medieval field boundary ditches were identified with some potentially contemporary pits.

Ditch GP1012 comprised a north-east to south-west portion with north to south and north-west to south-east spurs. The ditch was typically 0.5m wide, 0.25m deep with concave sides and base. The sondages excavated were [61/003, 10176, 10298, 10296, 10283, 10234, 10267, 10264, 10253, 10136 and 10146] and fills [61/004, 10175, 10299, 10297, 10282, 10233, 10268, 10263, 10254, 10135 and 10145] were mostly dark grey silt. The finds included residual Mesolithic/early Neolithic end scraper, Roman and medieval pottery, an iron nail of probable medieval date and finds of post-medieval ceramic building material.

4.11.7.1 *Pits and Postholes*
The north-east terminus of Ditch GP1012 was cut by posthole [10164] filled by [10163] although they may have been contemporary. The pit was re-cut as posthole [10152] filled by [10151]. These may have been postholes for a gate post.

Further north-east were other potential pits or postholes relating to the field system. These were [10114] filled by [10113]; [10112] filled by [10111] and [10110] filled by [10109]. These were undated apart from 16th/early 17th century AD pottery from [10109].

4.11.7.2 *Water-hole Pit*
On the north-east side of the hill crescent was apparent water-hole pit [10061]. The pit was 2.2m in diameter, at least 1.5m deep with irregular, vertical and undercut sides. The base was tentatively identified at 1.5m below ground level but the water level precluded any further excavation. The primary fill was dark grey silt clay [10071] with a find of Raeren stoneware pottery dated AD1475-1550. Above was grey brown silt [10070] with finds of residual Roman pottery and mottled orange brown silt clay [10060] with finds of residual Roman pottery and intrusive modern brick. The uppermost fill was orange brown sand clay [10059] with finds of residual Roman pottery and prehistoric worked flints including Mesolithic fragments.

4.11.8 *Undated Pits*
Scattered across the area were numerous undated and mostly small pits. These were as follows: [10023] filled by [10022 and 10021]; [10018] filled by

[10117]; [10027] filled by [10028]; [10067] filled by [10066]; [10026] filled by [10024 and 10025]; [10041] filled by [10040]; 10043] filled by [10042 and10044]; [10228] filled by [10227]; [10056] filled by [10055]; [10192] filled by [10191]; [42/008 and10226] filled by [42/009 and 10225]; [10108 and 10125] filled by [10107 and 10124]; [10126] filled by [10127]; [10138] filled by [10137] [10272] filled by [10271]; [10144, 10260 and 10142] filled by [10143, 10259 and 10141]; [10256] filled by [10255]; [10285] filled by [10284]; [10287] filled by [10286]; [10246] filled by [10245]; [10242 and 10250] filled by [10241 and 10249]; [10240 and 10238] filled by [10239 and 10237]; [10205] filled by [10204]; [10052 and 10063] filled by [10051 and 10062]; [10196] filled by [10195]; [61/007] filled by [61/008]; [61/011] filled by [61/012]; [61/009] filled by [61/010].

4.11.9 *Subsoil and Topsoil*

Subsoil [10002, 10103 and 10037] was up to 0.35m thick and contained a find of a near complete Roman pottery vessel [find spot 10216]. Above was topsoil [10001 and 10102] up to 0.25m thick.

4.11.10 *Non-Archaeological Features*

Features [60/011, 60/009, 42/010] identified in the evaluation were found to be non-archaeological after further excavation.

4.12 ***Area K11*** (Figs 47-49)

This area was identified after additional evaluation trenches ET74 to ET78 were excavated. The trenches were not recorded as the area proceeded immediately to excavation. The area was located on a gentle east-facing slope to the north-east of Higham village and with views to Higham Hill to the south-east. The land-use was a late prehistoric land boundary ditch and a large Roman quarry pit. A medieval enclosure was also tentatively identified. Subsoil was seen across the area and it is unlikely that the archaeology had been greatly effected by ploughing

4.12.1 *Period 1: Natural*
Mottled light and dark brown sand silt natural [11006]

4.12.2 *Period 5, Phase II: Late Iron Age*
This period was represented by north-east to south-west aligned field boundary Ditch GP1100. The ditch was up to 4m wide, 1.1m deep with irregular sides and a concave base. Sondages [11062, 11046, 11058, 11056, 11030 and 11052] were filled by [11063, 11064, 11065, 11044, 11045, 11059, 11060, 11061, 11057, 11028, 11029 and 11051] which were mostly dark grey sand silt.

Pit [11067] was 0.9m in diameter, 0.49m deep with steep sides and a concave base. Fill [11066] was grey silt clay.

4.12.3 *Period 6, Phase I: Roman (1st – 2nd Centuries AD)*
Field boundary ditch had fallen out of use and silted up by the Early Roman period. The ditch was cut by large irregular Quarry pit GP1101, which was over 32m long, at least 9m wide, 1.2m deep with straight sides and flat base. Sondages [TP8/003, 11035, 11031, 11039 and 11050] were filled by [TP8/004, 11036, 11037, 11038, 11032, 11033, 11034, 11040, 11041, 11042, 11043, 11049, 11053 and 11054] which were mostly dark grey brown silt clay.

To the east of the quarry pit were two sub-circular pits [11025 and 11027] up to 1.8m in diameter and 0.36m deep. Fills [11024] and [11026] were dark brown sand silt.

4.13.4 *Period 8, Phase I: Medieval (13th Century AD)*
A possible enclosure was identified, 35m long and at least 8m wide with an entrance at the south-west corner. The enclosure was formed by north to south aligned Ditch GP1102 and north-east to south-west aligned Ditch GP1103. Ditch GP1102 was 0.68m wide, 0.2m deep with concave sides and base. Sondage [11016 and 11018] were filled with orange brown silt sand [11015 and 11017].

Ditch GP1103 was aligned north-east to south-west and curved north to south at the east end. The ditch was 1.7m wide, 0.4m deep with concave sides and base. Sondages [11008, 11005 and 11021] were filled by mottled brown and orange silt sand [TP9/003, 11007, 11004 and 11022].

Three undated pits within the enclosure may have related to its usage. Pits [11003, 11012 and 11010] were up to 0.8m wide, 0.12m deep and were filled with orange brown silt sands [11002, 11011 and 11009].

4.13.5 *Undated pits*
Pits [11014] and [11019] were filled by [11013] and [11020] contained no finds and could not be confidently ascribed to any period.

4.13.6 *Subsoil and Topsoil*
Subsoil [11001/11055] and topsoil [11000].

4.14 *Additional Evaluation Trenches*

Unless specified elsewhere, the additional evaluation trenches did not encounter significant archaeological remains. These trenches were ET68, ET70, ET71, ET73, ET79 to 88. ET72 was not excavated as Area I9 was extended.

4.15 ***Watching Brief*** (Figs 50-59)

An archaeological watching brief was undertaken during the entire topsoil strip of the easement. Overall, very little was identified outside of the mitigation areas; the majority of the features that were recorded during the watching brief were in areas, such as hill tops, with very little subsoil. No archaeological features were recorded during the subsequent pipe trench excavation which was excavated following the topsoil strip using tracked excavators with toothed buckets. Excavated archaeological features are referred to according to the field plot numbers.

4.15.1 *Plot 0-13*

This plot was located on a south-facing slope, immediately south-east of Area A. The plot had views over the River Medway and marshes.

4.15.1.1 *Period 1: Natural*

The gravely light brown clay natural [0 and 25] was identified at m AOD near the crest of the hill and at m AOD at the bottom of the slope to the east.

4.15.1.2 *Period 4, Phase IV: Late Bronze Age*/*Early Iron Age*

Field boundary Ditch GP1 comprised a north to south ditch and two contemporary east to west ditches. The ditches were up to 1.2m wide, 0.26m deep with concave sides and base. Sondages [50, 52, 55, 61 and 63] were filled with mottled grey and brown sand silt [51, 53, 54, 60 and 62]. These ditches appeared to form a narrow strip field some 6m wide.

Small pits [59] and [57] were up to 0.5m in diameter and were filled by grey brown silt clay [58] and [56].

4.15.1.3 *Period 5, Phase III: Late Iron Age*/*Early Roman Ring Ditch*

Ring Ditch GP2 was located on the upper slope near the crest of the hill. The ring ditch was 22m in diameter and the ditch was up to 2.7m wide, 0.7m deep with concave and stepped sides and a flat base. Sondages [3, 8, 12, 47, 40, 73, 70, 39, 69 14 and 22] were filled by primary fills [4, 7, 11, 13, 21, 37, 41, 43, 46, 68, 71 and 74] secondary fills [2, 6, 10, 20, 38, 42, 45, 72 and 75] and uppermost fills [5, 9, 19 and 76]. The primary fills were dark brown silt clay with finds of LIA/Early Roman pottery sherds. The secondary fills were gravely brown clay silt with finds of LIA/Early Roman pottery sherds and a fragment of a possible Middle Bronze Age fired clay loom weight. The uppermost fills were mostly dark brown sand silt. Although no cremated bone was recovered from the samples of the fills, this ring ditch presumably had a funerary function and a contemporary monument to the field boundary ditches of Area A1 Period 5 Phase I and Period 6 Phase I.

4.15.1.4 *Period 6: Roman*

Palaeochannel [49] was aligned north to south and cut through Ditch GP1. The linear feature was up to 5.5m wide, 0.5m deep with irregular sides and base. Fill [48] was water-lain grey silt clay.

Either side of linear [49] were pits [65] and [30]. The elongated pits were up to 3.5m long, 0.6m wide, 0.3m deep with concave sides and base. Fills [64] and [29] were blue grey silt clay.

4.15.1.5 *Period 9, Phase I: Post-Medieval (Late 16th-17th Centuries AD)*

Large pit [67] was up to 6.5m in diameter, 0.32m deep with shallow concave sides and flat base. The fill was orange grey silt clay [66].

4.15.1.6 *Ploughsoil*

Ploughsoil [77] was seen across the area and was up to 0.35m thick.

4.15.2 *Plots 3-9, 3-8 and 3-7*

A series of features were excavated along the top of the hill crest to the west of Area E5. The features were all undated, and did not appear to be related. No period can be assigned to them with any confidence. The features were: pit [106] and fill [107]; burnt spread [78]; pit [82] and fills [80 and 81]; pit [86] and fill [77]; pit [95] and fill [114]; burnt spread [89]; and pit [92] and fill [111].

The yellow brown silt clay natural [77] was seen at 40.44m AOD. Overlying and sealing the features was ploughsoil [112] was up to 0.25m thick.

4.16 ***Evaluation Trenches Outside Of Mitigation Areas*** (Figs 60-61)

A few features were identified outside of the mitigation areas during the evaluation.

4.16.1 *Plots 9.1 and 9.2*

4.16.1.1 *Period 1: Natural*

The natural brown orange silt clay [ET41/002 and ET59/003] was seen between 8.11m AOD and 7.6m AOD. The natural sloped gently down to a small north-west to south-east running stream.

4.16.1.2 *Period 4, Phase III: Late Bronze Age*

Three small features were identified either side of the stream in ET 41 and 59. Pit [41/003] was 0.7m in diameter, 0.15m deep with shallow sides and a flat base. Fill [41/004] was brown orange clay. Pit [59/007] was 0.25m in diameter, 0.15m deep with steep sides and concave base. Fill [59/008] was grey silt. Gully [59/005] was 1.3m long, 0.2m wide, 0.1m deep with concave sides and base. Fill [59/006] was brown silt clay.

4.16.2 *Plot 10.1*

4.16.2.1 *Period 1: Natural*

The natural was orange brown silt clay [66/003].

4.16.2.2 *Period 2-5: Prehistoric*

In ET 66, Pit [66/005] was 0.48m in diameter, 0.2m deep with vertical sides and a concave base. Fill [66/006] was mottled black and brown silt clay with frequent fired clay fragments, fire-cracked flint and charcoal flecking.

4.16.3 *Plot 11.8*

4.16.3.1 *Period 1: Natural*

The natural was orange brown silt clay [ET43/002 and ET45/002].

4.16.3.2 *Period 3 and Period 4: Neolithic/Bronze Age*

Three pits and a ditch were tentatively dated to this period in ET 43 and 45.

Pits [43/005, 43/007 and 43/009] were up to 1.9m in diameter and 0.2m deep. Fills [43/006, 43/008 and 43/010] were grey brown silt clays.

Ditch [45/005] was aligned north-east to south-west, 0.7m wide, 0.15m deep. Fill [45/006] was orange brown clay.

4.17 *Post-Medieval and Modern Field Boundaries*

Seven former post-medieval and modern field boundary ditches were identified in the watching brief. These features were hand excavated unless finds of post-medieval or modern finds were visible in the upper surface fill in which case they were recorded but not excavated. The ditches were located in two main areas: plot 0-12 on Stoke Marshes and plots 3-7 to 3-10 west of Area E5.

On the Stoke Marshes, two east to west ditches [122 and 124] were identified in Plot 0-12. These were up to wide and were filled with grey blue alluvial clay [121 and 123] and finds of modernglass and metalwork. The ditches were not excavated.

To the west of Area E5, were four ditches [85, 112, 94 and 25/011], three were aligned north-east to south-west and [94] was aligned north-west to south-east. The ditches were up to 1.9m wide and 0.4m deep with concave sides and base. Ditch fills [102, 103, 111 and 25/010] were mostly grey brown silt clays with finds of modern glass and pottery. These field boundary ditches suggest that in this area numerous smaller fields have been merged into a single much larger entity.

Ditch [117] was identified in Plot 9-5 and was aligned north to south, parallel to the farm track. The ditch was 0.65m wide, 0.17m deep with concave sides and a flat base. Ditch fill [116] was light grey silt clay with no finds.

In addition to the ditches seen in the watching brief, at least six intercutting post-medieval and modern field boundary ditches [2228, 2230, 2232, 2234, 2236 and 2238] were identified in Area B2, adjacent to the existing farm track, forming the north-east corner of a former field and appear to represent at least three separate phases.

4.18 *Non-Archaeological and Unidentified Features*
During the watching brief, some features identified in the evaluation were found to be non-archaeological or simply could not be re-located. These were [3/006, 3/004, CT3/004, 10/006, 10/004, CT4/006, CT4/004, 11/003, 11/005, CT7/005, CT9/005, CT9/003, 23/004, 24/006, 24/004. 25/007, 25/009, 25/009, 25/013, 25/004, 26/006, 26/004, 62/010, 62/005, 62/004, 62/006, 64/004, CT27/007, CT27/005, 67/004, 43/015, 44/004, 45/003, 45/007, 46/003, 48/003 and 48/005].

4.19 Quantification of Site Archive

Type	Description	Quantity	Notes
Context sheets	Excavation and watching brief	1,539	Individual context sheets
Section sheets	Excavation and watching brief	45	A1 Multi-context permatrace sheets
Digital Plans	Excavation and watching brief	All features	Multi-context DWG plan
Photos	Excavation and watching brief	All contexts	Black and white transparency Colour slide Digital
Environmental sample sheets	Excavation and watching brief	146	Individual sample sheets
Context register	Excavation and watching brief	All contexts	Context register sheets
Environmental sample register	Excavation and watching brief	All sampled contexts	Environmental sample register sheets
Photographic register	Excavation and watching brief	All contexts	Photograph register sheets
Drawing register	Excavation and watching brief	All contexts	Section register sheets
Small finds register	Excavation and watching brief	6	Small finds register sheets

Table 1: Site archive quantification table

5.0 FINDS AND ENVIRONMENTAL: QUANTIFICATION AND DESCRIPTION

5.1 **The Prehistoric and Roman Pottery** by Anna Doherty

An assemblage of pottery totalling 6470 sherds, weighing 75.63kg, was retreived from all phases of work along the length of the pipeline. By far the largest assemblage came from area B2 which yielded sizable quantities of both later prehistoric and Roman pottery. A later prehistoric assemblage of comparable size was also recovered from area H8. Areas A1, J10 and K11 each produced predominantly Roman assemblages of several hundred sherds, whilst smaller assemblages were recovered from areas C3, E5, F6, G7 and I9. A small quantity of pottery comes from watching brief areas or evaluation trenches outside the main areas of excavation. This material is all of a similar type to the pottery from areas A1-K11 and does not include any large groups or sherds of intrinsic interest and is therefore not considered further in the following report.

The pottery was examined using a x20 binocular microscope and quantified by sherd count and weight to the nearest 2 grams. Late Iron Age and Roman forms were also quantified by Estimated Vessel Equivalents. In the absence of a universally accepted type-series for Kent, Roman fabrics and forms have been defined according to the Southwark typology (Marsh and Tyers 1979). Prehistoric fabrics, and some additional Roman ones, have been defined according to a project specific type series, following the guidelines of the Prehistoric Ceramic Research Group (PCRG 1995).

5.1.2 *Fabric type-series*

FL1 Romanised grey or oxidised grey or sandy wares with sparse well-sorted flint of 0.5-1.5mm

FL2 Well-sorted, moderate to common flint of 0.5-2mm. The sandy background matrix is very similar to Q1. The surfaces are usually well finished and/or burnished.

FL3 Ill-sorted flint of 1-5mm in a slightly silty matrix occasionally containing rare elongate voids, possibly from burnt out organics

FL4 Sparse to moderate, moderately-sorted flint of 0.5-2mm, usually with well burnished surfaces

FL5 Moderate to common, moderately- to ill-sorted flint mostly between 1-2mm, usually with rare examples up to 3mm in a silty matrix

FL6 Common, very well-sorted fine flint between 0.5-1mm, usually very well-burnished and often very thin-walled

GL1 Common to abundant glauconite of 0.2-0.4mm, often with sparse larger quartz grains up to 0.7mm.

GR1 Sparse to moderate grog of 1-3mm in a fairly sandy background matrix with moderate quartz most of around 0.1mm and occasional grains up to

0.5mm, usually unoxidised. A few examples also contain rare or sparse flint of 0.5-2mm

GR2 Sparse to moderate well-sorted grog of 1-2mm in a matrix with sparse or moderate sand around 0.1-0.2mm. Many examples are either grey or oxidised and the firing possibly indicates Romanised kiln technology.

OXID2 Moderate, moderately-sorted, quartz of variable coarseness but usually ranging from 0.1-0.4mm, in a micaceous matrix with rare red and black iron rich inclusions. Sherds often feature a combination of bright reddish orange and purplish grey firing colour sometimes with a 'sandwich firing' effect

Q1 Moderate to common quartz usually of around 0.1mm, with sparse larger grains up to 0.4mm

QFL1 Silty matrix with sparse/moderate large quartz grains of 0.1-0.3mm, with rare/sparse flint of 1-2mm (Note for archive QFL1 and QFL2 were merged into QFL1 after initial recording)

SAND2 Romanised sandy grey-ware fabric probably of north Kent origin with rare to sparse fine shell voids

SH1 Sparse voids from leeched shell, mostly between 0.3-0.7mm in a silty/sandy matrixes resembling Q1. Mostly unoxidised.

SH2 Similar to SH1 but usually oxidised and noticeably softer fired. Usually associated with storage jars.

5.1.3 *Area A1*

5.1.3.1 *Late Bronze Age to Middle Iron Age*

A total of 113 sherds, weighing 1658 grams are in fabrics considered more likely to pre-date the late Iron Age. The vast majority of these are in fabric FL5, a coarse-ware typical of the post Deveral-Rimbury (PDR) tradition of the late Bronze Age to early Iron Age. However, there are very few diagnostic feature sherds amongst this group and it seems possible that many of these sherds represent the survival of atypically coarse fabrics into the middle Iron Age and some could even be of late Iron Age date.

Only two contexts include sherds diagnostic of form. Pit fill [1088] (Period 5.II) contains rim-sherds from two jars: one with a simple slightly out-flaring profile and one with a well-defined shoulder and a strongly out-flaring rim which is internally expanded. This context contains one sherd of a more typically middle or late Iron Age sandy fabric (Q1) and other fills of the same feature also contain material of this date so the PDR sherds may be residual. In fact, it seems likely that the earlier material is redeposited from pit fill [1091] (Period 5.I) which contains very large sherds including a plain jar with an incurving profile alongside another shouldered jar with a flaring and internally expanded rim. This latter form seems more likely to date to the later developed or decorated PDR phases (post c.950 BC).

There is fairly scant evidence of middle Iron Age pottery but a few contexts, for example [1089], [1126] and [1173] (all Period 5.I), contain sherds in fabric FL5,

alongside sandy and glaucontic pottery which could be either middle or late Iron Age in date. If these are contemporary, a middle Iron Age date would seem more likely, but it is equally possible that they are late Iron Age groups containing residual PDR pottery. The presence of a partial rim possibly from an s-profile jar, in context [1126] (Period 5.I), does seem to suggest a date after c.100-50BC for the filling of this feature.

5.1.3.2 *Late Iron Age and Roman*

The late Iron Age and Roman assemblage amounts to 524 sherds, weighing 4573g (2.24 EVE). Although there are relatively few well-dated groups, the majority of this material represents earlier Roman activity. Much of the pottery is noticeably abraded but this includes sherds from some of the larger stratified groups, and may not be indicative of redeposition.

About half of the sherds are late Iron Age/early Roman tempered wares but these are almost always found with Romanised fabrics, except where only a few sherds are present, so it seems unlikely that there is any substantial pre-conquest activity, although the groups from [1089], [1126] and [1173] (all Period 5.I), discussed above, could fall into this category. The continuing use of flint-tempering in the late Iron Age to early Roman period is striking; fabrics of this type make up about 15% of the total. The associated forms include a fine necked jar with a double cordon, and several bead rim jars. Lyne has suggested a terminal date of around AD60 for the use of flint-tempering in north Kent (Lyne unpublished). This evidence of pre-Flavian activity is also supported by the presence of an imported Terra Nigra platter of *Camulodunum* form 8, dated to AD20-65 (Hawkes and Hull 1947, plate XLIX).

The Hoo peninsula is situated at the intersection of four of Thompson's (1982, 7-17) South-Eastern regional pottery zones but had not been assigned to any of the zones. The continuing use of flint-tempering in early Roman groups suggests some affinities with sites east of the River Medway, along the length of the North Kent coast (zone 5). However the rarity of grog-tempering, which makes up around 5% of the total is more comparable to south-east Essex and west Kent (zones 2 and 3). As in south-east Essex, shell-tempered wares are well-represented, accounting for nearly 10% of the total sherd count. This may only reflect the availability of this natural resource around the Thames estuary, although the preference for plain and bead rim jars also mirrors production on south Essex kiln sites, such as Mucking (Jones and Rodwell 1973)

It is perhaps not surprising that the pottery would have similarities to assemblages from many of the coastal regions surrounding the Hoo peninsular, but is interesting to note that it is relatively unlike pottery from the River Medway zone located immediately to the south, except perhaps in the presence of a relatively small quantity of glauconitc wares, probably originating from the narrow east-west band of Upper Greensand geology located 10-20km south of the north Kent coastline. These wares make up about 5% of the total, although a large proportion of this was recovered from a single ditch fill [1247] (GP111, Period 5.I) which may be atypical.

The fact that around half of fabrics are Romanised suggests continuing activity throughout the 1st century AD. Most of these fabrics are coarse grey and oxidised wares, and necked jars derived from the Aylesford-Swarling tradition are amongst the common forms. North Kent fine grey and oxidised wares are

also fairly well represented; only a few rim-sherds are present but include necked beaker/bowls and a platter similar to Monaghan's types 2G and 7A (Monaghan 1987, 68-71; 158-159).

There are several examples of black-burnished ware influenced forms which must date to at least the Hadrianic period. These are mostly rounded-rim bowls (4H), often in oxidised wares, some of which are similar to the possible kiln fabric identified from area B2. These were found across only three contexts, [1199] (Quarry Pit GP125, Period 6.I), [1247] (GP111, Period 5.I) and [8/011] (Quarry Pit GP125, Period 6.I), and seem to represent the latest material in an assemblage of an otherwise late 1st to early 2nd century AD character. A sherd of Lezoux samian and one of Lower Rhineland (Cologne) colour-coated ware, possibly from a 'double-curve' (3D) beaker, both from [1199], represent the only other demonstrable 2nd century AD material.

5.1.4 *Area B2*

5.1.4.1 *Late Bronze Age to Middle Iron Age*

The later prehistoric assemblage from area B2 totals 1311 sherds, weighing 14479g. This is the largest prehistoric assemblage by weight although there are slightly fewer sherds than on area H8. This probably reflects a greater ratio of the, generally thicker-walled, FL3 fabric to the generally thin-walled FL4 and FL6 fabrics. A number of large plain ware PDR groups of late Bronze Age (c.1150-950 BC) date are present and it is likely that the majority of the prehistoric contexts are of this period. However, there are also a small number of contexts which can be dated to the early Iron Age (c.6-5th century BC). At present it remains unclear whether the assemblage represents continuous activity during this period or two distinct and separate phases, since smaller groups cannot be very closely dated within this range. A small quantity of diagnostic middle or middle to late Iron Age material was also recovered from the area.

Considering that there is no clear evidence of contexts pre-dating the late Bronze Age, there is a relatively high proportion (c.17% by count, c. 28% by weight) of the very coarse FL3 fabric. This fabric is associated with thick-walled plain barrel- and bucket-shaped forms which derive from middle Bronze Age Deveral-Rimbury traditions. However, it is sometimes associated with clearly late Bronze Age PDR style forms, including a large jar with a very pronounced shoulder from [2154] (GP217, Period 4.IV), and it is almost always associated with finer fabrics and other PDR. Seager-Thomas (unpublished) emphasizes considerable continuity between DR and PDR assemblages in Kent, and it seems likely that the earliest sealed contexts on the area can be dated to the late Bronze Age.

By far the most common fabric type in the Area B2 assemblage, making up almost half by sherd count and a third by weight, is FL5: a typical PDR flint-tempered coarse ware. Nearly all the forms associated with this fabric are jars, either with plain incurving rims and a slight shoulder, or with slightly out-flaring plain profiles. Very squared, flattened rims are particularly common although, as in FL3 some are externally expanded. Another typical PDR trait associated with this fabric is heavy flint-gritting on the underside of bases. One sherd from context [2101] (Period 6.I) features perforations which fail to penetrate the wall fully. A number of sherds of this type have been found alongside fully

perforated vessels, from a recently assessed assemblage from Yalding, Kent (Doherty unpublished a). They also have affinities to perforated vessels from two east Kent sites, Bridge and Christ Church College, the former being associated with a radiocarbon date of 1246-1066 Cal BC (Macpherson-Grant 1992, 60).

Interestingly there are no bi-partite bowls in FL5; especially as these are common in the area H8 assemblage. The rarity of bowls may have some implications for the interpretation of the function or status of the assemblage. Interestingly though, there are a number of stylistically similar bipartite jar forms, for example in context [2142] (Period 10).

Fabric QFL1, which makes up a further c. 9%, is slightly sandier with fairly sparse flint but could be regarded as a sub-type of FL5, as it appears in association with a similar range of late Bronze Age plain coarse ware forms. This fabric is found disproportionately in context [2073] (GP203, Period 4.IV), a well-dated plain ware group, which nevertheless lacks the potentially early FL3 fabric. However, the forms associated with the fabric are again mainly plain profile jars with a slightly incurving or 'hooked' rim. At Coldharbour Road, Gravesend, it has been argued that this might be an early PDR form on the basis of its association with fragments of bucket urn (Barclay 1994, 389). The only example of a bi-partite bowl in the area B2 assemblage, a near complete vessel from [2073] (GP203, Period 4.IV), is in QFL1.

This fabric is not present in the area H8 assemblage, and this could indicate that potters close to area B2 were exploiting slightly different clay deposits. However the difference between this fabric and FL5 is subtle and may be somewhat subjective.

It is interesting to note that many examples of the probable LBA/EIA coarser flint-tempered fabrics are often oxidised to a distinctive bright orange colour, sometimes with a slight purplish tinge, a trait not so prevalent in the areas further to the west of the pipeline. Similar distinctive colouring was seen on the possibly locally produced Roman wares and might reflect the chemical properties of locally available clays, probably indicating very high iron content.

Fabrics FL4 and FL6, which together make up around 10% of the prehistoric wares are both fine fabrics which tend to be thin-walled with well-burnished surfaces, the main difference between the two being in the sorting and size of flint. Fabric FL4 does not appear to be confined to one chronological period as it includes non-fitting sherds from a probable tripartite bowl, in early Iron Age context [2195] (GP201, Period 4.IV), and a bi-partite form from a well-dated plain ware PDR group [2154] (GP217, Period 4.IV). The fineware fabrics were otherwise seen on a variety of other forms including a fine-ware jar with a strong shoulder, and a lid or platter from [2099] (Period 4.IV), as well as very unusual everted rim jar in [2073] (GP203, Period 4.IV), for which parallels should be sought. Fabric FL6 was not associated with any diagnostic forms, apart from a strainer base in [2073] (GP203, Period 4.IV), but was found in both plain ware and possible later PDR or early Iron Age groups. Overall, both the proportion of fine ware fabrics and the number of bowl forms is significantly lower than in the other large prehistoric assemblage from area H8. Further detailed comparison with other Kent assemblages at the analysis stage may

help to define whether this simply reflects chronological variation, or a difference in the function and/or status or the two sites.

The dating of LBA/EIA assemblages in the south-east relies heavily on parallels with a number of large assemblages with radiocarbon and metal work dates from the Upper Thames Valley. The resulting typology is discussed in detail by Needham (1996) but can be broadly summarised in the following way: undecorated plain ware PDR forms predominate in the period c.1150-950 BC; after this 'developed plain ware' assemblages appear, characterised by low but increasing levels of decoration, in the period c.950-800 BC, whilst truly decorated PDR assemblages are thought to begin at the turn of the 8th century BC. It is remains unclear whether this typological development is wholly applicable to the rest of the south-east (*ibid.*, 123), especially in areas such as north and west Kent, where few assemblages have been published, but this scheme has been applied to east Kent assemblages such as Monkton Court Farm and Highstead (Macpherson-Grant 1994, 277-278).

On the basis of the Thames Valley typology, the coarseness of fabrics and predominance of plain jars in the assemblage strongly suggests that most contexts should be dated to the plain ware PDR phase, with very little evidence of continuing activity in the decorated phase. There are very few examples of finger-tipped or fingernail impressed sherds; only five vessels feature such decoration and three are from contexts which contain flint-with shell fabrics, suggesting an early Iron Age date. Of the larger groups, decoration is absent in [2073] (GP203, Period 4.IV), and only represented by a single sherd in both [2099] and [2171] (Period 4.IV).

Relatively few true plain ware assemblages are known from east Kent, where the largest quantity of PDR pottery has been recovered: assemblages from Canterbury, Bridge and Netherhale Farm being the only convincing examples published to date (Macpherson-Grant 1992). Highstead, whose earliest phase (dated to around is 950-850/750 BC) falls within the developed plain ware tradition, is one of a much larger group of sites clustered around Thanet which have produced mainly decorated PDR assemblages (Macpherson-Grant 1994, 278). What little information is available from central north Kent suggests a different picture. The assemblage from Kingsnorth power station (Seager-Thomas unpublished), contains both plain ware PDR and Early Iron Age material with a notable absence of decorated PDR pottery. Two other small and relatively undiagnostic assemblages, both located within a few kilometres of site B, have also been interpreted as late DR or plain ware PDR (Macpherson-Grant 2006, 80; Moore 2002, 264). Decoration on coarse wares appears to be widespread in the large assemblage from Cliffe (Trow and Cameron 1998, fig 14-19), but this has been dated into the early Iron Age. In fact no decorated PDR assemblages of c. 8th to 7th century BC date are known in the vicinty and until further excavation is carried out in the area, it will remain unclear whether plain wares remained dominant for a longer period on the Hoo peninsular than in east Kent or the Thames Valley.

Around 5% of the assemblage is made up fabrics FLSH1 and FLSH2. Flint with shell fabrics of this type are tentatively assigned to the early Iron Age, based on 6th century BC dates assigned to shell-tempered vessels at North Shoebury in south Essex. (Brown 1995, 83). The limited number of feature sherds associated with this fabric seems to support up this suggestion. These include a

very large thick-walled jar with a double row of finger impressed decoration on the shoulder, from context [2176] (GP201, Period 4.IV). Sherds of the same vessel are associated with a very sharply carinated shoulder sherd with a row of deep finger impressions in [2175] (GP201, Period 4.IV), whilst, in context [2195], FLSH1 occurs alongside an early Iron Age tri-partite bowl. However, the dating of the first introduction of shell-tempering is by no means certain. On the Sussex coastal plain for example, a limited amount of shell-tempering may be seen from the developed plain ware PDR phase onwards (Seager-Thomas 2008, 41).

Of the small number of contexts which contain diagnostic middle or middle to late Iron Age material, most contain surprisingly high quantities of the FL5 fabric variant and it remains unclear whether these are all residual or whether atypically coarse flint-tempered wares persist into this period. For this reason, groups only containing a few bodysherds of fabric FL5 have been broadly dated to the later prehistoric period although it is likely that most are late Bronze Age or early Iron Age.

Middle or late Iron Age fabrics are present in small quantities and include glauconitic fabric, GL1 and similar non-glauconitic sandy fabric Q1. It should however be stated that a few sherds of a similar matrix to Q1 are of indeterminate middle to late Iron Age or early medieval date (see post-Roman pottery below). Where diagnostic middle to late Iron Age dating is present, these fabrics are primarily associated with well-burnished S-shaped jars. This form probably has later middle Iron Age origins and, although possibly more common in the late Iron Age, may be considered as early as c.150BC, when occurring alongside middle Iron Age fabrics and forms, as in group [2132] (GP209, Period 6.III) (Hamilton 2007, 83).

5.1.4.2 *Late Iron Age and Roman*

The late Iron Age and Roman assemblage from the site totals 1553 sherds weighing 32714g, amounting to 14.71 EVEs. There is quite a wide range of dated contexts ranging from some small probable pre-conquest groups to later 3rd century AD material.

The earliest material in the assemblage probably demonstrates some degree of continuity with the middle to late Iron Age groups considered above. For example, a small group from [2178] (GP218, Period 5.I), contains only flint-tempered wares, including possible middle Iron Age plain rim forms, but also contains a high pedestal footring base appears to be influenced by Aylesford-Swarling forms and probably does not pre-date 50BC.

The composition of the Roman assemblage is clearly shaped by the proximity of the sites to an extensive centre of pottery production on the Upchurch marshes and Hoo peninsular (Pollard 1988, 173-177). The widely traded fine wares of this industry, are as expected, quite common. A grey slightly sandy variant of north Kent fine ware is particularly well represented. There are also many examples of similar fine oxidised wares. Most of the forms can be paralleled in Monaghan's (1987) typology, and most of the forms date from the Late 1st to earlier 2nd century AD. These include three examples of a dish form possibly derived from Dragendorff 36, similar to Monaghan's type 5B.3. There are also several sherds from a carinated beaker form derived from imported Terra Nigra proto-types (Monaghan form 2G). Later local fine-wares include a

disc-neck flagon, fairly similar to Monaghan's 1E6.1. He dates this to AD100-200 based on the context of the individual vessel but parallels from other Romano-British industries suggest that a mid 3rd century AD date is more likely.

Most of the coarse wares are probably local products although they may have come from a range of different kilns, exploiting different local clay sources. Black-burnished ware 2 is surprisingly uncommon in the assemblage considering the proximity to known production locations on the Hoo peninsular. One local fabric, OXID2, stands out as distinctive; its bright orange/red colouring, sometimes with a slight purplish grey tinge, has some similarities to the regionally traded white-slipped flagon fabric produced at Hoo and possibly indicates a very iron-rich local clay source and/or a distinctive method of firing.

The forms associated with OXID2 are mainly based on black-burnished plain and rounded rim dish/bowl forms (5J/4H), but there are also many examples of necked jars, including a distinctive variant with a rim which is triangular in section. The earliest form in this ware has burnished diagonal lines on a zone delineated by cordons. This form is ultimately derived from late Iron Age Aylesford-Swarling traditions although it probably remained common until at least the first half of the 2nd century AD. Another earlier form is a ring-neck, cup-mouth flagon datable to AD140-200. The 4H form is known from AD120 onwards, and remains very common until the mid 3rd century (Pollard 1988, 123). Other clearly 3rd century AD types include two tall folded beakers and one flint-gritted hammer-head mortarium. The only sherds in OXID2, which necessarily post-date AD250, are a few examples of bead and flange bowls.

Interestingly OXID2 is particularly concentrated in one pit, water-hole [2058] (Period 6.IV), which is well-dated to AD270-300. This feature contains over 7 kg of pottery, and this fabric makes up nearly two thirds by sherd count (though under a half by weight) Despite a lack of direct evidence of pottery production on the site, the homogeneity of this group strongly suggests that the ware is a local kiln product, although there are no obvious wasters. The dating of the pit suggests that most of the OXID2 material is, to some degree, residual but the huge concentration in this feature might suggest it has been back-filled with material from a dump related to kilns in the vicinity. However, the fact that a near-complete beaker has been deposited on the base of the cut, in the centre of the feature, probably also suggests some element of structured deposition in this feature, although this basal fill [2142], which also contains two other semi-complete vessels, is the only one which does not contain OXID2. The near-complete vessel is a tall rouletted beaker which is a developed from squatter poppy-head forms. Monaghan considered this form to date to around AD190-230; however, Pollard suggests this form may continue as late as the early 4th century AD (Monaghan 1987, type 2A6, 61; Pollard 1988, 150, 114). The patchy white slip on this example is possibly intended to imitate Alice Holt grey-wares which were not distributed in Kent until the final quarter of the 3rd century AD (Pollard 1988, 123). It is recommended that this group be analysed further and illustrated in the publication.

Also of particular note are two cremation groups, each featuring truncated Baetican Dressel 20 amphorae as the cremation vessel. One of these, from [2169] (Period 6.I) is unaccompanied, whilst the other from [2200] (Period 6.I), is associated with five accessory vessels: a Lezoux samian Dragendorff 33 cup, with a stamp possibly reading VIAII…; a Les Martres-de-Veyre samian

Dragendorff 18/31 platter, stamped BALBINVS.F; A La Graufesenque samian Dragendorff 36 dish; a poppy-head beaker with a flaring rim, in a locally produced coarse sandy fabric; and a flagon in a red-slipped fabric. This last vessel is particularly distinctive in both fabric and form. The matrix contains abundant well-sorted angular quartz of around 0.2mm and the slip is thick and matt. Rare inclusions of flint and glauconite strongly suggest that this is a local fabric but red-slipped wares are not well-known from the north Kent/Thameside industry. The vessel has a very long narrow-neck which is quite unusual in 1st and 2nd century AD forms although the rim form suggests it is contemporary with the rest of the group. Overall the cremation can be dated to the period AD120-150, although the presence of both South Gaulish and Les Martres-de-Veyre samian would suggest a date earlier in this range. The number of vessels and the quantity of samian may suggest a fairly high-status individual, although it has recently been argued that number of vessels is a poor indicator of status compared to metal or glass objects, which are absent here. (Biddulph 2005, 34).

Amphora burials are well-known in east Kent, particularly in the Thanet area, with examples recently recovered from Manston Road, Ramsgate, and Brooksend, near Monkton (Doherty unpubished b; Canterbury Archaeological Trust Website). The occurrence of this burial practice on area B2, perhaps adds to evidence from area A1, suggesting that material culture on the Hoo peninsular is particularly subject to influences from coastal areas of north and east Kent. One other cremation vessel, from context [2180] (Period 6.I), is in a coarse oxidised fabric, probably of local origin; the form, although truncated above the shoulder, is mainly paralleled by pre-Flavian forms from local production sites (see Monaghan 1987, type 4C, 118), and therefore may not be associated with the amphora burials

5.1.5 *Area C3*

Only 31 sherds weighing 400g were recovered from area C3 and all but one of these are flint-tempered bodysherds, almost certainly of later Bronze Age date, from a single context, [3020] (GP300, Period 4.III). The only other sherd, from context [3030] (Period 4.I), is of a barrel-shaped urn with finger-nail impressions along the top of the rim, showing clear affinities to middle Bronze Age, Deveral-Rimbury traditions. The fabric is a-typically coarse even for the FL3 fabric category and also suggests a middle Bronze Age date. Although the sherd is relatively small and could simply be residual, this may be one of the only contexts from the overall project to pre-date the late Bronze Age. However Seager-Thomas (unpublished) suggests that Kentish DR vessels tend to be later within the broader DR tradition, and this vessel may not substantially predate the beginnings of the PDR. Middle to late Bronze Age assemblages have previously been excavated from sites close to east and west extents of the current pipeline at Middle Stoke and Coldharbour Road, Gravesend (Macpherson-Grant 2006; Barclay 1994).

5.1.6 *Area E5*

A small assemblage of 152 sherds weighing 1072g was recovered from area E5. Pottery fabrics of late Bronze or early Iron Age date were encountered as well as some middle or late Iron Age material and two Romanised sherds. However, only 10 contexts contained pottery and none were particularly large or well-dated: one small partial rim sherd from a later prehistoric flint-tempered

vessel and another bodysherd with late Bronze Age to early Iron Age finger-tipping decoration are the only diagnostic feature sherds in the assemblage.

5.1.7 *Area F6*

A very small assemblage of 21 sherds of prehistoric and Roman pottery weighing 72g was recovered from area F6. This material was found across just three stratified contexts: [6013] (GP600, Period 4.III), [6019] (Period 6) and [6045] (GP602, Period 6). Although the majority of these are flint-tempered they are predominantly finer sandier fabrics and are probably more likely middle or late Iron Age although, as no diagnostic feature sherds are present, they could potentially be of any later prehistoric date. A single late Iron Age to early Roman sherd was found in context [6045] (GP602, Period 6) alongside a small Romanised sherd. Another oxidised sandy sherd was recovered from context [6019] (Period 6).

5.1.8 *Area G7*

No prehistoric or Roman pottery was recovered from the excavation phase but 109 sherds weighing 1030g were excavated in evaluation trenches: predominantly from trenches 31 and 63. There are few diagnostic sherds amongst this material, but a mixture of shell-tempered and Romanised wares suggests a broad date range of around AD40-200. The only group of note comes from pit fill [63/003] (Period 6.I) where sherds from two partially complete grey ware jars, one heavily sooted on the exterior, have been deposited on the base of a shallow probably truncated pit cut, possibly indicating some element of structured deposition.

5.1.9 *Area H8*

5.1.9.1 *Late Bronze Age to Middle Iron Age*

Area H8 produced a later prehistoric assemblage of comparable size to that from area B2, totalling 1578 sherds, weighing 9762 grams. As on area B2, the assemblage is generally of a PDR character and can be dated to the late Bronze Age to early Iron Age. The exact dating of the assemblage within this range remains uncertain but larger groups appear either to have affinities to the plain ware PDR phase or contain a small number of sherds with more developed traits, and at least one context is datable to the early Iron Age. The average sherd weight is only just over half that of the area B2 assemblage, but as there is no evidence of unusual levels of abrasion, this may only reflect a preference for thinner-walled vessels, and does not necessarily mean a higher degree of fragmentation caused by redeposition. General background on PDR assemblages in Kent and the south-east is provided in the discussion for area B2 and, where possible is not repeated in the text below.

It is striking that the area H8 assemblage contains a much lower proportion (c. 7% by sherd count) of the coarsest flint-tempered fabric, FL3, when compared with area B2. As discussed above, this fabric is interpreted as representing the gradual phasing out of very coarsely-tempered thick-walled vessels, deriving from middle Bronze Age Deveral-Rimbury traditions, and this may be taken as evidence that this assemblage is, in general, slightly later than that from area B2. However, apart from two typical PDR splayed or pinched bases, no diagnostic feature sherds are associated with this fabric on area H8. Some continuity with DR pottery styles is also demonstrated by a sherd, form context [8025] (Period 6.I), in fabric FL5 with very a thick, finger-impressed, applied

cordon, almost creating the effect of raised bosses. One FL3 sherd, from context [8054] (GP822, Period 4.IV.i), where this fabric is particularly concentrated, features a carbonised residue which will be submitted for C14 radiocarbon dating.

About two-thirds of the prehistoric sherds are in the more standard PDR coarse ware fabric, FL5. There are generally fewer jar forms than would be expected in a plain ware PDR assemblage although part of a lug-handle, a flint-gritted base and large wiped bodysherds from the lower portion of a jar were found in contexts [8088] (GP819, Period 4.IV.iii), [8130] (GP801, Period 4.IV.i) and [8117] (Period 4.IV.ii) respectively. One other jar, from [8240] (GP818, Period 4.IV.ii), which is very well-formed with a slight neck and out-turning rim which is of uncertain date, has a carbonised residue which may be suitable for C14 radiocarbon dating. One of the most well-represented forms in FL5, is the bi-partite bowl and it particularly interesting that this form (along with bowls more generally), is much more common than in the area B2 assemblage. Shouldered bowls with gently curving profiles are also quite well-represented although these are more associated with fine ware fabrics, FL4 and FL6. As noted above, the lack of an existing framework for the dating of PDR assemblages in north and west Kent makes it difficult to assess whether the proportion of bowls has any implications for the relative dating of groups from areas B2 and H8. However, it seems possible that this difference may reflect functional or societal differences between the two sites, which are located less than 10km apart.

As on area B2, finger-tipping is almost absent; only a single bodysherd of this type was recovered. However the area H8 assemblage perhaps provides some evidence that the absence of decoration may not be a very reliable indicator of dating in PDR assemblages on the Hoo peninsula. One context, [8118] (GP801, Period 4.IV.i), has been assigned an early Iron Age, (c.6-5th century BC) date because of the presence of an omphalos base and a probable tripartite bowl. However, although containing over 60 sherds, the group has no finger-tipped coarse wares. The latter vessel is particularly of note because of finely incised or tooled horizontal and diagonal lines on the shoulder. Further research on local parallels for this type of decoration is required; it has broad parallels with decorated pottery of the 5th to 3rd centuries BC elsewhere in southern Britain, for example the Darmsden-Linton group (Cunliffe 2005, 624). However, fine tooled lines are also found amongst the phase 2 assemblage from Highstead (Couldrey, 2007)(dated to the 8th to 6th centuries BC) and this may partly explain why similar decoration is seen on two sherds from a large group from context [8242] (GP812, Period 4.IV.i), which on the basis of the coarse wares, would be assigned to the plain ware PDR phase.

5.1.9.2 *Late Iron Age and Roman pottery*

A small assemblage late Iron Age/early Roman pottery totals 117 sherds, 522 grams and 0.42 EVES. These are spread across only nine contexts, none of which are large groups. The vast majority of these sherds are shell-tempered wares dating to around AD10-100. Of note is a semi-complete shell-tempered necked jar with a slight lid-seated profile, similar to Thompson's form B1-6, from ditch fill [8104] (Period 6.I). About a fifth of the sherds are Romanised grey wares but many of these contain rare or sparse shell inclusions, indicating that they are unlikely to post-date the 1st century AD.

5.1.10 *Area I9*

An assemblage of 86 sherds, weighing 796g, amounting to 0.23 EVEs was recorded from area I9. Later prehistoric groups from the site are all small and poorly-dated although it was notable that several contexts contained mainly the coarser FL3 fabric which may suggest earlier PDR dating. All other contexts could be dated to the late Iron Age to early Roman period. Again there is very little diagnostic material but the proportions of shell-tempered and Romanised sandy wares is comparable to the contemporary assemblage from area K11, which probably suggests similar dating.

5.1.11 *Area J10*

A total of 696 sherds, weighing 6719g and amounting to 6.06 EVEs was recovered from area J10. With the exception of a few, possibly residual, later prehistoric flint-tempered sherds, almost the entire assemblage from this area can be dated to the Roman period

Late Iron Age to early Roman tempered fabrics are present in very small quantities, and these are mostly made up by shell-tempered fabrics but include a few grog- or flint-tempered wares. However these are almost always associated with Romanised pottery which, in contrast to assemblages from areas A1 and K11, makes up over 90% of the pottery. When compared with area K11, north Kent fine wares dating to the late 1st to early 2nd century AD, are also very uncommon possibly suggesting that most activity post-dates this period.

In fact by far the most common form is the rounded rim black-burnished style (4H) bowl (datable to AD120-300), mostly in grey or oxidised sandy wares but including a few examples in BB2 and two in a fabric comparable to the possible kiln ware recognised on area B2. No other fabric or form is particularly diagnostic of date, but the predominance of necked jars and the lack of any other late material probably indicate the assemblage does not date much beyond the mid to late 2nd century AD.

Particularly of note in the assemblage is a concentration of a distinctive lid form with a central handle often with a central perforation, presumably to let out steam. This form is particularly concentrated in contexts [10199] and [10208] (both GP1008, Period 6.II). This might indicate a particular type of food preparation in this area or alternatively may suggest that these contexts are linked to pottery production. Another context, [10037] (Period 6.II), contains at least six examples of the 4H bowl form, many in a semi-complete condition. Although there is no direct evidence of production on the site or in the pottery assemblage, this could be waste associated with a kiln, considering the widespread nature of pottery production on the Hoo peninsula (Pollard 1988, 173-177)

5.1.12 *Area K11*

The Area K11 assemblage totals 375 sherds, weighing 5363, amounting to 3.9 EVEs. These are found across just 12 contexts, almost all of which can be dated to the mid to late 1st century AD.

A single context, [11048], containing two necked jars in glauconitic fabric may pre-date the conquest, since one of the vessels, which is semi-complete has a continuous S-shaped profile of a type whose origins pre-date Aylesford-

Swarling tradition, although this form may have continued in use until the 1st century AD.

Around half of the assemblage is made up by Romanised fabrics and around half by late Iron Age/early Roman tempered wares. However, apart from [11048], all contexts with more than one or two sherds were certainly filled in the post-conquest period. In this respect the assemblage is very comparable to that from area A1. However, the most striking difference between the two assemblages is that nearly all of the native tradition fabrics are shell-tempered wares with only around 1% of the total made up by flint-tempered wares. This may reflect a slight chronological difference between the two sites, since Lyne suggests flint-tempering died out by around AD60 (Lyne unpublished), whereas shell-tempered fabrics remained common throughout the 1st century AD. However, it is also possible that, since area K11 is considerably further west than area A1, pottery traditions here were more subject to influences from the west Kent and River Medway regions where flint-tempering was always less common. Grog-tempering is just as rare as on area A1, making up around 4% of the total.

By far the most common forms are bead-rim jars, all associated with shell-tempered fabrics, and necked jars mostly in Romanised greywares. It is also worth noting that north Kent fine wares (mostly a fine grey variant but including some similar oxidised fabrics) make up around 20% of the total. The forms include a carinated beaker (3G) based on Terra Nigra proto-types and a number of dishes which may be loosely based on Dragendorff 36 samian forms (see Monaghan 1987, 5B.3). Amongst the forms in oxidised fabric variants are a globular beaker with short everted rim and an imitation of a Dragendorff 27 cup.

Of some note is a sherd of Cadiz amphora, associated with the transport of fermented fish sauces, which is fairly unusual in low-status rural assemblages. Although many of the areas have clear 1st century AD activity, area K11 also produced the only La Graufesenque samian sherds. This may be partly down to chronological factors since samian is generally uncommon on rural sites before the Flavian period. However it may also reflect the fact that it is the most westerly site, and being located around 5km from Watling Street, probably had better access to imported goods.

On the whole, most of the material in the assemblage suggests a date of around AD60-120. However context [11026] (Period 6.I) contains partially complete examples of semi-complete black-burnished style (2F) jars with acute lattice decoration and a number of flat rim (4F) bowls. Although this context clearly post-dates AD120, it also shows continuity with the pottery found across the rest of the site is probably not much later than mid 2nd century AD in date.

5.2 The Post-Roman Pottery by Luke Barber

The archaeological work at the site produced 81 sherds of pottery (weighing a little under 1.5kg) which have been tentatively ascribed to this period. The material is derived from a total of 25 individually numbered contexts spread across the area of work thus: evaluation x6 contexts, Area B2 x7 contexts, Area I9 x6 contexts, Area J10 x3 contexts, Area K11 x1 context and watching brief x2 contexts. The material is in variable condition ranging from small relatively abraded sherds (mainly from evaluation contexts) to larger unabraded pieces recovered from sealed contexts.

5.2.1 *Periods and Fabrics*

5.2.1.1 *Early Medieval or Mid/Late Iron Age*

Five contexts in Area B2 produced 46 sherds (1,042g) of ambiguous date. The largest group was from waterhole [2058] (Period 6.IV) where fills [2056] and [2057] produced 35 relatively large unabraded sherds of notably very different character from the Roman material which formed the majority of the assemblage from these deposits. The dominant fabric consists of a hand-made, low-fired, dense sand tempered ware usually with burnished surfaces, reduced black throughout and sometimes with grass impressions on interior surfaces. A number of vessel forms are represented including a narrow pedestal base, a shouldered jar, a convex-sided jar with simple rim and a round-shouldered jar with bead rim (fill [2056] Period 6.IV). Other related fabrics include a similar sand tempered ware but with notable rare inclusions of chalk/shell (including a shallow cup with raised lug on the simple rim) as well as a ware heavily tempered with organic/chaff inclusions. There are also a number of sandy sherds with notable sparse coarse quartz inclusions (fill [2057] of Period 7.II; ditch [2111], fill [2114] of GP211, Period 6.III and cut [2115], fill [2116] of Period 7.II) including an example found in association with an organic tempered sherd (fill [2057]). The fabric and forms would be in keeping with an early medieval date in Kent (at Canterbury and Darenth: Macpherson-Grant 1995; Willson 1984 respectively) as would the unabraded nature of the sherds in features containing possibly residual Roman pottery. However, the fabric and forms can also be matched closely with Iron Age material, most notably from Farningham Hill, where sand and organic tempered wares were recovered in notable quantities from a late Iron Age settlement (Couldrey 1984, Fabrics E and K respectively). If this low-fired material is of the late Iron Age then its unabraded nature in a Roman feature needs explanation.

5.2.1.2 *Medieval (12th to early 14th centuries AD)*

Eighteen sherds, weighing 149g, are of the medieval period. The majority of these were recovered from Area I9 though areas J10 and K11 produced a few sherds as did evaluation trench 54. The earliest material consists of three unabraded low fired shell tempered cooking pot sherds (most notably context [9016], demolition fill of oven [9017] of GP905, Period 6.I and ditch [11016], fill [11015]) of GP1102, Period 8.I of probable 12th century AD date. More numerous are the better fired sand and shell tempered wares, probably of the 13th century AD. Most of these consist of slightly abraded cooking pot body sherds, though a cooking pot with triangular club rim was recovered from pit [9067], fill [9066] and one with an out-turned rim was recovered from ditch [9240], fill [9239] (all Period 8.I). Probably contemporary with these sand and shell tempered sherds are a few fine sand tempered jug sherds with thin dull

green glaze. A tiny chip of one, possibly intrusive, was recovered from ditch [10283], fill [10282] (GP1012, Period 8.II) while ditch [9033], fill [9032] (GP907, Period 8.I) contained three larger sherds from a single vessel. The latest medieval sherd probably consists of a single small medium sand tempered foot from a tripod vessel, likely to be of later 13th to mid/late 14th century AD date (evaluation 54/002).

5.2.1.3 *Late Medieval/ Early Post-Medieval (16th to 17th centuries AD)*

The assemblage includes six sherds (86g) of this period. The earliest consists of a somewhat abraded rim from a handled mug of probable Raeren stoneware, likely to be of later 15th- to mid 16th- century date (pit [10061], fill [10071] of Period 8.II). Area J10 also produced a sherd of early glazed red earthenware of probable 16th to early 17th century date (pit [10110], fill [10109] of Period 8.II). The remaining sherds are more likely to be of the later 16th to 17th centuries. These include two pieces of unglazed high-fired oxidised earthenware with sparse chalk inclusions, including a jar with a heavy moulded club rim (pit [2126], fill [2127] of GP204, Period 4.IV) and part of a Westerwald stoneware globular mug with cobalt blue and manganese purple decoration (pit [2083], fill [2082] of Period 9.I). In addition an abraded sherd of Frechen stoneware bottle was found during the evaluation, in topsoil (51/001).

5.2.1.4 *Post-Medieval (19th to 20th centuries AD)*

The assemblage includes 11 sherds, weighing 106g, of this period. The earliest consists of a small sherd from a blue transfer-printed pearlware saucer of probable early 19th century AD date (evaluation [14/005]). The remainder of the material consists of a variety of wares including unglazed earthenware (flower pot), yellow ware (bowl), English stoneware (preserve jar), English porcelain and stone china all of probable later 19th to early 20th century AD date. All of this material was recovered during the evaluation or subsequent watching brief.

5.2.2 *The Assemblages*

All contexts produced only small assemblages of pottery. The largest consists of the 35 sherds of early medieval or mid/late Iron Age material from the two fills in water-hole [2058] (Period 6.IV). All other contexts produced under five sherds and are generally widely spread across the area of works. Despite the small size of the assemblages there are a number of drawable sherds, most notably from water-hole [2058] (Period 6.IV), where five large feature sherds are present. The degree of residuality/intrusiveness is impossible to gauge in most instances due to the low number of sherds involved.

5.3 Macrobotanicals and charcoal from environmental samples by Lucy Allott

A total of 148 bulk environmental samples were taken during archaeological works at eight site localities along the Isle of Grain pipeline. These were processed in their entirety in a flotation tank, the flots and residues were captured on 250µm and 500µm meshes respectively and were air dried. The residues were sieved at 4 and 2mm and all fractions were sorted by hand for environmental and artefact remains (Tables 23 to 33). The flots were scanned under a stereozoom microscope at x7-45 magnification and their contents recorded in Tables 34 to 44. Preliminary identifications, abundance and preservation have been recorded to establish the potential of these samples for further analysis.

Samples abundant in charcoal were submitted for a preliminary assessment to establish the quality of preservation and their potential for further analysis. Charcoal fragments were fractured along three planes (transverse, tangential longitudinal and radial longitudinal sections) following standardised procedure (Gale and Cutler 2000), and viewed under an incident light microscope at x50, 100, 200 and 400 magnifications. Condition of preservation and, where possible, the maturity of the wood have been recorded with the identifications in Table 45.

Preliminary identifications of macrobotanicals and charcoal have been made using modern comparative material held at the Institute of Archaeology, University College London and in reference texts (Cappers *et al.* 2006, Jacomet 2006, Hather 2000, Schweingruber 1990). Nomenclature used follows Stace (1997). The results, their significance and potential are presented by site and phase.

5.3.1 *Area A1*

The majority of the 20 samples from area A1 are dominated by uncharred vegetation including small roots and *Chenopodium album* (fat hen) seeds, indicating some evidence for modern disturbances. Charred plant remains including wood charcoal and charred macrobotanicals are moderately well preserved in these samples and small quantities of bone are also evident.

5.3.1.1 *Mid/Late Iron Age (Period 5.I)*

Three samples <305>, <304> and <307> were taken from two pit features, [1090] and [1087] from this occupation phase. Crop seeds including barley (*Hordeum* sp.), occasional wheat (*Triticum* sp.) and legumes of pea (*Pisum sativum)* are moderately frequent in these pit fill contexts. The charred weed seed assemblage is dominated by taxa common on arable land and disturbed ground. These include bindweed / knotgrass / docks (*Fallopia* / *Polygonum* / *Rumex* sp.), fat hen (*Chenopodium album*), and wild grass seeds (Poaceae).

Samples <311>, pit [1135] and <312>, ditch [1186] (GP102) contain indeterminate cereals and barley (*Hordeum* sp.). Glume wheat (*Triticum spelta* / *diccocum*) may also be indicated by the presence of a glume base in sample <312>. These samples contain small quantities of charred weed seeds of bindweed / knotgrass / docks (*Fallopia* / *Polygonum* / *Rumex* sp.), campion / catchfly (*Stellaria* / *Silene* sp.), daisy (Apiaceae) and grass seeds (including cf. *Bromus* sp). Small quantities of knotgrass / dock seeds are present in ditch [1153], sample <315> (GP110).

Charcoal fragments were examined from two of the samples. Pit fill (1089), [1087], sample <304> was particularly rich in charcoal. The assemblage contains deciduous oak (*Quercus* sp.), beech (*Fagus sylvatica*) and birch (*Betula* sp.) wood. Charcoal was less well preserved in sample <305> from pit [1090] however oak, willow / poplar (*Salix* / *Populus* sp.), sloe / wild cherry (*Prunus* sp.), and hawthorn / whitebeam / apple (Maloideae taxa) are evident in small quantities (Table 3).

5.3.1.2 *Early Roman 1st-2nd Centuries AD (Period 6.I)*

The majority of samples (12) fall within the early Roman occupation. Very few macrobotanicals are evident in these and preservation is generally moderate to poor. One exception is sample <308>, quarry pit [1196] (GP125) which contains a moderate quantity of barley (*Hordeum* sp.) grain. Weeds represented in this feature include buttercup (*Ranunculus* sp.), poppy (*Papaver* sp.), knotgrass / dock (*Polygonum* / *Rumex* sp.), grass (Poaceae) and radish (*Raphanus* sp.) fruit pods. A similar range of weeds are present in sample <313>, ditch [1083] (GP118). All of these taxa are arable weeds or may have occurred on disturbed or waste ground. The samples from this area also contain some chaff that will assist in providing cereal identifications even though the associated grains may be absent. Vetch / tare (*Vicia* / *Lathyrus* sp.) which probably grew as arable weeds or was used for fodder are present in sample <316> from ditch [1118] (GP122). Other samples <317>, <318> and <319> from this ditch feature contain infrequent, poorly preserved and indeterminate charred plant remains.

No macrobotanical remains are present <314>, pit [1154] and only small indeterminate charred plant remains are present in samples <310>, and <309> from ditches [1133] (GP116) and [1131] (GP117) respectively.

Samples <300>, <301> and <302> from pit [1016] also contain no macrobotanicals however charcoal fragments recovered in two of the sample residues from this pit were assessed. Samples <300> and <301> both contain deciduous oak (*Quercus* sp.) including some round wood specimens. A single fragment of rose (*Rosa* sp.) is present in the sample from <301>. Both have sufficient material for further analysis and it is possible that further taxa in addition to the oak wood are present. The assessment of charcoal from <308>, quarry pit [1196] (GP125) produced oak wood which appears to derive from mature specimens.

5.3.1.3 *Undated*

Two undated pits were sampled. Sample <306> from pit [1093] conatins oraches (*Atriplex* sp.), fat hen (*Chenopodium album*) and oat (*Avena* sp.) seeds and indeterminate cereal grains. No macrobotanicals are present in sample <303>, [1034] however Yew (*Taxus baccata*) is present in the charcoal assemblage from this pit/posthole feature.

5.3.2 *Area B2*

The 39 samples taken from area B2 reveal highly variable evidence for modern disturbances and preservation of environmental remains. Roots and seeds resulting from modern post depositional disturbances are present in approximately half the flots while other samples, in particular those from cremation and accessory vessels, show very little evidence for post depositional disturbances.

Charcoal fragments are present in many of the samples however the majority of fragments are small and poorly preserved. Identifications have not been obtained for these at present. Charred macroplant remains are not numerous but are better preserved than the charcoal and these are considered by phase below. Cremated bone fragments are prominent and have been documented in the finds report. Land and marine molluscs are infrequent.

5.3.2.1 *Late Bronze Age/Early Iron Age (Period 4.IV)*

Eleven samples were taken from late Bronze Age/early Iron Age features. On the whole macrobotanicals are infrequent and moderately to poorly preserved. Samples <223>, <216> and <222> contain crop seeds of barley (*Hordeum* sp.), wheat (*Triticum* sp.), and small quantities of pulses. Arable weed seeds are more common and include bindweed / knotgrass / docks (*Fallopia* / *Polygonum* / *Rumex* sp.), daisy (Apiaceae), violet (*Viola* sp.), radishes (*Raphanus* sp.), bromes (*Bromus* sp.) and oats (*Avena* sp.). Sedges (*Carex* sp.) from sample <223>, pit [2188] (GP201) provide evidence for wetter ground in the site vicinity. This sample provided the richest macrobotanical assemblage and further identifications are likely to add to the vegetation interpretation.

5.3.2.2 *Roman (1st - 2nd Centuries AD)*

With the exception of a single dock (*Rumex* sp.) seed in sample <700>, from the fill of cremation vessel in pit [2200] and a single indeterminate legume fragment in sample <215>, from the fill of cremation vessel [2169] in pit [2168] macrobotanicals were entirely absent in samples from this occupation phase. It is interesting to note however the presence of possible fuel ash slags within samples from cremation vessel [2200]. They are significantly more abundant in sample <711>, spit 5 in cremation [2208] in which very small fragments of white, calcined bone were also common. Although there is evidence in the form of calcined bone and fuel ash slags for cremation activities the small quantity of charcoal is noteworthy in itself. It suggests that bones were selected from the cremation pyre before being placed within the vessel and charcoal was either excluded or, given the presence of ash slag, the fuel wood was almost entirely burnt leaving calcined bone only. Flots from the remaining samples are very small and contain small highly fragmented charcoal only.

5.3.2.4 *Roman (Late 3rd - Early 4th Century AD)(Period 6.III)*

Samples <201> and <202> from gully beam slots [2007] and [2011], within a possible workshop building feature, contain moderate quantities of charcoal, occasional wheat cereal grains and weed seeds including knotgrass / dock (*Polygonum* / *Rumex* sp.) daisy (Apiaceae) and a sedge (*Carex* sp.). A further sample, <203>, from ditch [2062] produced indeterminate cereal grains and a possible violet (*Viola* sp.) seed. The remaining sample <207>, from pit [2089] is almost devoid of environmental remains.

5.3.2.5 *Roman (4th Century AD)(Period 6.IV)*

Samples <208>, <228> and <229> from three fills within water-hole pit [2058] contain small quantities of barley and wheat, including bread wheat (*Triticum aestivum*) grain, and grass seeds including oat (*Avena* sp.) and brome (*Bromus* sp.) grasses.

5.3.3 *Area C3*

Three samples were taken during excavation at Area C3 from an undated post hole [3013], a middle Bronze Age post hole [3027] and pit [3029] (both Period 4.III). They contain very few environmental and artefact remains. The pit fill is dominated by uncharred roots and the post hole fills contain small poorly preserved wood charcoal fragments only. Charcoal fragments in these samples are too small and infrequent for further analysis and identification, or to be of value for radiocarbon dating.

5.3.4 *Area E5*

Ten samples from the fills of pits [5013] (Period 5.I), [5038] (Period 5.II), [5047] (Period 6.I), [5050] (Period 6.I) and [5066] (Period 6.I) and postholes [5069] (GP505, Period 5.I) and [5071] (GP505, Period 5.I) at area E5 were sampled. Macrobotancial remains are infrequent however several samples are rich in charcoal fragments of all size classes.

5.3.4.1 *Middle to Late Iron Age (Period 5.I)*

A few macrobotanical remains including occasional charred weed seeds of knotgrass / docks (*Polygonum* / *Rumex* sp.) and fat hen (*Chenopodium album*) are present in sample <400>, (5012), pit feature [5013] GP506. This sample contains a small quantity of oak wood (*Quercus* sp.) charcoal, some of which is vitrified suggesting it was heated to very high temperatures.

Charcoal fragments are almost completely absent in samples <408> and <409> from the posthole features [5069] and [5071] GP505, suggesting the posts were not burnt *in situ*. The firecracked flint noted in the residues may have been used as post packing but the fire cracking does not result from *in situ* heating.

5.3.4.2 *Late Iron Age (Period 5.II)*

Sample <401> from pit feature [5038] contains wood charcoal fragments only. Willow / poplar (*Salix* / *Populus* sp.), sloe / wild cherry (*Prunus* sp.) and hawthorn / whitebeam / apple (Maloideae taxa) are present in the charcoal sample and although limited the range of taxa present hold some potential for dating.

5.3.4.3 *Undated*

Samples <402, 403, 404, 405, 406 and 407> from a series of pits within fire pit GP510 contain very few macrobotanical remains although further seeds may be present within the small, charcoal rich, component of the flots. Charcoal fragments are particularly well preserved in these undated pit fills and ten fragments from each were assessed. Deciduous oak is prominent in the assessment sub-samples however other taxa including willow / poplar (*Salix* / *Populus* sp.), sloe / wild cherry (*Prunus* sp.) and ash (*Fraxinus excelsior*) are also evident. These trees and shrubs provide evidence for wood being sourced from a range of vegetation habitats including deciduous woodland (oak and ash), more open woodland and perhaps hedgerows (*Prunus* sp.) as well as providing evidence for damp ground associated with rivers or a high ground water level (willow/poplar).

5.3.5 *Area F6*

Evaluation sample from ditch fill [26/004] at the edge of area F6 is rich in charcoal fragments. Due to the isolation of this feature however it will not

provide a detailed representation of the vegetation environment and the potential for further analysis is limited.

Sample <123> from undated ditch fill (6047), [6049] is dominated by wheat (including possible bread wheat - *Triticum* cf. *aestivum*) and contains a rich assemblage of arable weeds, including plantain (*Plantago* sp.) and daisy (Apiaceae). This sample is also rich in charcoal including oak (*Quercus* sp.), hazel / alder (*Corylus* / *Alnus* sp.) and sloe / cherry (*Prunus* sp.). Much of the assemblage consists of round wood and has good potential for dating.

5.3.6 *Area G7*

Trench ET63 contained two samples, <Ev10> and <Ev15>, from Roman contexts that were rich in charred botanicals including wheat (*Triticum* spp.) and oat (*Avena* sp.) grains, peas (*Pisum sativum*), bramble (*Rubus* sp.) seeds and hazel (*Corylus avellana*) nut shell fragments. Sample <Ev10>, context [63/005], was taken from the fill of a vessel. The cereal grains are unlikely to represent residue from food within the vessel as they do not appear to have been processed (beyond separation from chaff) prior to charring. They are perhaps more likely to have been deliberately placed within the vessel. There is some evidence for similar deposits associated with cremations or other rituals on Roman sites (Davis 2000, Kreuz 2000). The charred crop plants evident in sample <Ev15> are similar to those noted in sample <Ev10> and it is possible that they derive from the same original source. Full analysis would help determine this.

5.3.7 *Area H8*

Samples from area H8 were dominated by uncharred vegetation suggesting some evidence for modern disturbances. Flots from these samples contain small quantities of wood charcoal frequently <2mm in size, charred crop and weed seeds and elements of chaff. Occasional land snail molluscs and bone fragments including small mammal bones are also present in the flots and residues.

5.3.7.1 *Late Bronze Age*/*Early Iron Age (Period 4.IV)*

The majority of samples from area H8 are from features dating to the late Bronze Age/early Iron Age. These can be further divided into features within the LIA/EIA enclosure and two phases of field boundaries although sample contents do not appear to vary greatly across these different land-uses. The macrobotanical assemblage is small and preservation is generally poor to moderate. Crops of barley (*Hordeum* sp.), wheat (*Triticum* sp.) and pea (*Pisum sativum)* are present. Glume wheats (*T. spelta* / *dicoccum*) are indicated by glume bases in several samples and there is some potential for further identification to confirm the species present. The weed seed assemblage is dominated by charred seeds from arable land and disturbed ground such as vetch / tare (*Vicia* / *Lathyrus* sp.), knotgrass / docks (*Polygonum* / *Rumex* sp.), fat hen (*Chenopodium album*), daisy (Apiaceae), occasional sedges (*Carex* sp.) and grass (Poaceae) seeds.

Samples <505> and <506> from hearth [8087] contain moderate quantities of cereal seeds and weeds. It appears that the charred staining in this feature is predominantly due to the presence of these charred macrobotanicals rather than wood fuel. Wood charcoal fragments are present as small flecks only within the hearth feature. Sample <522> from pit [8243] GP812 is also

noteworthy as it contains moderate amounts of wheat (*Triticum* sp.) grain and chaff, barley (*Hordeum* sp.) grain and common pea (*Pisum sativum*).

Charcoal fragments are scarce within the majority of samples however fragments from samples <516>, pit [8177] and <521>, [8261] were included in the charcoal assessment. This was in part to establish their state of preservation. All of the identified charcoal fragments are oak wood (*Quercus* sp.). They are small and moderately well preserved. The scarcity of charcoal across the site as a whole may reflect a lack of charring events (with the exception of hearth [8087]) that provide conditions suitable for charcoal production and preservation.

5.3.7.2 *Early Roman (Period 6.I)*

Three features dating to the early Roman occupation were sampled. Pit/posthole [8054], sample <513> contains a moderate quantity of wheat grains including possible emmer wheat (*Triticum diccocum*) glume bases. Pea and vetch / tare are also evident and these macrobotanicals are moderately well preserved. Sample <501>, ditch [8036] and <513> contain small amounts of weeds including fat hen (*Chenopodium album*), daisy (Apiaceae) and bedstraw / woodruff (*Galium* / *Asperula* sp.). Only small quantities of charcoal are present in sample <514> from pit [8162].

5.3.8 *Area I9*

Preservation of botanical remains within samples from area I9 is quite variable, however where macrobotanicals are abundant their preservation tends to be good. Charcoal fragments are less abundant and less well preserved than the macrobotanical remains. Marine molluscs and land snails are present in a few of the samples.

5.3.8.1 *Middle to Late Bronze Age (Period 4.II)*

A single sample, <101>, taken from a mid to late Bronze Age pit contains small charcoal fragments only. Samples <103>, <104> and <106> from three further pits, [9039], [9051], and [9053] GP903 contain small charcoal fragments and occasional macrobotanicals of wheat and barley cereal grains, *Fallopia* / *Polygonum* / *Rumex* sp. (bindweed / knotgrass / dock) seeds. There are insufficient botanical remains in these samples to provide further information regarding Bronze Age economy or vegetation.

5.3.8.2 *Early Roman (1st - 2nd Centuries AD, Period 6.I)*

Samples from oven/corn dryer feature GP905 contain moderately rich macrobotanical assemblages dominated by wheat grains. Barley (*Hordeum* sp.) grains are present in sample <122> and a single possible lentil (cf. *Lens cullinaris* L.) is evident in sample <113>, (9034). Wheat caryopses are particularly well preserved in sample <122> oven rake out (9058). A variety of wheat species are present in samples from the oven but unfortunately the apparent absence of glume bases will restrict the potential for identifying the glume wheats. Weed seeds in these samples include wild grasses (Poaceae), cultivated or wild oats (*Avena* sp.), bedstraff / woodruff (*Galium* / *Asperula* sp.), knotgrass / dock (*Polygonum* / *Rumex* sp.), radish (*Raphanus* sp.) and daisy (Apiaceae).

Two samples (<122> and <112>) from the oven feature were sufficiently rich in wood charcoal fragments to merit analysis. Oak, hazel / alder (*Corylus* / *Alnus*

sp.), sloe / cherry (*Prunus* sp.), hawthorn / whitebeam / apple (Maloideae taxa) and elm (*Ulmus* sp.) are present in these deposits. Round wood fragments, including some that retain their bark, are present and well preserved. These samples have good potential to characterise the range of fuel used and given the presence of round wood and taxa that are often coppiced they may assist in establishing evidence for woodland management.

The secondary fill of ditch feature [9235], <121> and the fill of a post hole [9148], <114> contain very small quantities of poorly preserved charcoal and macrobotanical remains. The marine mollusc assemblage in sample <121> is dominated by oyster shells.

5.3.8.3 *Early Medieval (5th - 6th centuries AD, Period 7.I)*
A single sample taken from quarry pit feature [9046] GP906, <108> contains small charcoal fragments, a single wheat grain and fire cracked flint fragments.

5.3.8.4 *Medieval (13th Century AD, Period 8.I)*
Three samples from the fills of two pits [9067] and [9143] and a ditch [9240] contain charcoal and macrobotanicals that are poorly preserved. Only occasional indeterminate cereals and fat hen weed seeds are evident. Land snail shells and marine molluscs are moderately common in ditch fill (9239), sample <120>.

5.3.9 *Area J10*
These samples are dominated by uncharred vegetation including roots and seeds. The majority of samples date to the late Iron Age/early Roman and Roman 2nd - 3rd century AD occupations. Three further samples were taken from a waterhole feature associated with post medieval occupation.

Charred crop seeds are present in five of the 16 samples. LIA/ER ditches contain indeterminate cereals and wheat (*Triticum* sp.) grains. Sample <15> from the waterhole feature contains peas (*Pisum sativum*) and indeterminate pulse fragments. No chaff or weed seeds are evident in any of the samples. Preservation of wood charcoal is poor and no further assessment work has been undertaken on the small assemblages. Fragments of large mammal bone are infrequent. Some microfauna is evident in sample <16>, (10070) the fill of waterhole pit feature [10061].

5.3.10 *Area K11*
A total of six samples were taken during excavation at Area K11. Samples were extracted from a LIA field boundary ditch GP1100 (cut 11052), an early Roman 1st - 2nd century AD quarry pit [11031] that cuts this boundary ditch and two Early Roman 1st - 2nd AD century pit features [11025] and [11027]. The ditch fill is dominated by uncharred vegetation which was otherwise scarce in the samples. Small quantities of poorly preserved charred macrobotanicals and wood charcoal are present in the quarry pit and ditch samples. Slightly richer macrobotanical assemblages are evident in samples <601> and <600> from pits [11025] and [11027] respectively. Crop seeds of wheat are moderately well preserved and glume bases, spikelet forks and other chaff are likely to clarify the wheat species identifications. Arable weed seeds of knotgrass / dock (*Polygonum* / *Rumex* sp.), taxa in the pink (Caryophylaceae) family and wild grasses (Poaceae) were slightly less numerous than the cereal crop seeds although these were also moderately well preserved.

Wood charcoal fragments in these samples are generally small and poorly preserved however the assessment of charcoal in sample <601>, pit [11025] revealed hazel (*Corylus avellana*) and willow (*Salix* sp.) are present.

5.3.11 *Watching Brief*

Small quantities of macrobotanicals and charcoal are present in samples taken during the watching brief. Sample <155>, fill (109) of pit [108] is rich in wheat and barley cereal grains. Sample <154> from pit [106] contains occasional chaff and stem fragments. Sample <150>, (20), sondage [22] in ring ditch GP2 at Plot 0-13 contains occasional knotgrass / dock (*Polygomun* / *Rumex* sp.) weed seeds and chaff fragments. This sample and sample <153> were also noted as moderately rich in charcoal however the assessment of charcoal from these revealed poor preservation. Sloe / cherry (*Prunus* sp.) round wood and hawthorn / whitebeam / apple (Maloideae taxa) are present in the ring ditch sample <150> and have limited potential for dating. Sample <150> contains oak wood only and present no potential for dating.

5.4 **The Fired Clay** by Elke Raemen

5.4.1 The excavations produced a medium-sized assemblage, consisting of 1453 pieces of fired clay (wt 21482 g) from 178 individual contexts. Most fragments were recovered from Area B (617). As can be expected, most of these pieces (668) are undiagnostic of form. Setting the amorphous pieces aside, the assemblage is mainly typified by briquetage. It is likely that a large proportion of the more undiagnostic fragments also represent briquetage, especially where they were contained by the same contexts. Perforated clay slabs (52) were recovered as well. These have been assigned unique Registered Finds numbers (RF >00>), but are included in the bulk fired clay report as their purpose may be related to salt extraction. The majority of the assemblage was recovered from features dating to Period 4, Phase IV (730 pieces), followed by 110 pieces from 2nd- to early 3rd- century features (Period 6.II). A large group (224 pieces) remains undated. Most fragments were recovered from pit or ditch fills. A number of contexts contain residual pottery, which implies fired clay may in some cases be residual too. Although all have been included in the current assessment, it should be kept in mind that data may be slightly contaminated.

All pieces have been recorded in detail on pro forma sheets for archive.

Fabric Description
A total of 11 main fabrics have been identified. Some of these have been subdivided, making a total of 20 fabrics.

Fabric 1A Sparse fine sand-tempered with occasional to moderate organic temper, some with rare to occasional iron oxide inclusions to 2 mm and/or rare crushed flint inclusions to 7 mm. Some with rare mica inclusions.

Fabric 1B Sparse fine sand-tempered with abundant organic temper, some with rare to occasional iron oxide inclusions to 2 mm and/or rare crushed flint inclusions to 1 mm.

Fabric 2 Sparse fine sand-tempered with occasional quartz to 1 mm and rare crushed flint to 4 mm.

Fabric 3A Sparse fine sand-tempered, some with rare to occasional oxides to 2 mm and/or rare mica inclusions.

Fabric 3B Sparse fine sand-tempered with rare organic temper.

Fabric 4A Moderate fine to medium sand-tempered with rare to occasional organic temper. Some with rare to occasional iron oxide inclusions to 2 mm and/or occasional quartz inclusions to 1 mm. Some with rare mica inclusions.

Fabric 4B Moderate fine to medium sand-tempered. Some with rare to occasional iron oxide inclusions to 2 mm and/or occasional quartz inclusions to 1 mm.

Fabric 4C Moderate fine to medium sand-tempered. Rare iron oxide inclusions to 1 mm, rare crushed flint to 9 mm; rare chalk inclusions to 9 mm and rare organic temper.

Fabric 5 Sparse fine sand-tempered with rare iron oxide inclusions to 2 mm and rare to occasional crushed flint to 4 mm.

Fabric 6 Sparse fine sand-tempered with rare to occasional organic inclusions, rare iron oxide inclusions to 5 mm and occasional to moderate chalk inclusions to 4 mm. Some with rare crushed flint inclusions to 10 mm.

Fabric 7A Sparse fine sand-tempered with abundant organic temper and rare to occasional chalk inclusions to 3 mm (sometimes burnt out leaving voids with traces of a white deposit). Some with rare iron oxide inclusions to 1 mm and/or rare crushed flint inclusions to 10 mm.

Fabric 7B Sparse fine sand-tempered with rare to occasional chalk inclusions to 3 mm (sometimes burnt out leaving voids with traces of a white deposit). Some with rare iron oxide inclusions to 1 mm and/or rare crushed flint inclusions to 10 mm.

Fabric 8A Sparse fine sand-tempered with moderate to abundant crushed/fire-cracked flint-temper to 6 mm. Some with rare to occasional iron oxide inclusions to 2 mm.

Fabric 8B Sparse fine sand-tempered with moderate to abundant crushed/fire-cracked flint-temper to 6 mm and occasional to moderate organic temper. Some with rare to occasional iron oxide inclusions to 2 mm.

Fabric 8C Sparse fine sand-tempered with occasional crushed/fire-cracked flint-temper to 6 mm.

Fabric 8D Sparse fine sand-tempered with occasional crushed/fire-cracked flint temper to 6 mm and moderate organic temper.

Fabric 9 Sparse fine sand-tempered with moderate flint grits to 4 mm and rare iron oxide inclusions to 4 mm.

Fabric 10A Fine silty fabric with rare burnt out chalk inclusions to 2 mm.

Fabric 10B Fine silty fabric, some with occasional iron oxide inclusions to 1 mm and/or rare organic inclusions.

Fabric 11 Moderate medium to coarse sand-temper.

5.4.2 *The Assemblage*

Evaluation and Watching Briefs

Most trenches are discussed below with their relevant area. A total of 109 fragments were recovered from a further nine trenches and WB RDX1neg [4], [74] and [76]. Pottery dates range between the Mid Bronze Age and Later Roman period, with a single amorphous piece from a feature containing post-medieval pot (Ditch [ET61/003], fill [ET61/004]). Most fragments are undiagnostic or exhibit one flat surface. A perforated clay slab fragment (RF <6>) was recovered from plough soil [37/001]. The piece (Fabric 8A) measures 22 mm thick and exhibits a partial piercing.

5.4.3 *Area A*

The area contained a total of 157 fired clay fragments, mainly belonging to phase 5.I. The earliest fragments date to period 4.IV. Most pieces (91) do not show any diagnostic features.

Period 4.IV
Two amorphous fragments (Fabric 10B) date to this period. Both were recovered from ditch [1261] GP109, (fill [1260]).

Period 5.I
A total of 81 fragments, 51 of which are amorphous, were produced during the excavations. Most of these are in Fabric 3A, followed by Fabric 4B. Pieces were recovered from seven different contexts and include 21 fragments with one flat surface (mainly from ditch [1246], GP111, fill [1247]) and a fragment exhibiting a wattle imprint (di. 10 mm; pit [1090], fill [1091]). A total of eight briquetage fragments was recovered as well. These consist of a pedestal or bar fragment, three wedge fragments, including a triangular wedge fragment, and two vessel fragments, undiagnostic of form, all from ditch [1246], GP109, (fill [1247]). A further two briquetage vessel fragments, both in Fabric 7A and probably representing square or rectangular containers, were contained by pit [1090], fill [1091]).

Period 6.1
A group of 42 fragments was recovered from 14 different contexts. The majority of these are in Fabric 3A. Most pieces are amorphous (24 fragments) with a further 12 pieces exhibiting one flat surface. Three fragments, two of which are conjoining (ditch [1109], GP117, fill [1108]), show two parallel flat surfaces (11.5mm thick). Two conjoining pieces from pit [1016] (fill [1013]) exhibit a rounded surface.

Undated
A number of pieces are from contexts which did not contain any dating evidence. Included are seven briquetage fragments. A possible pinch prop was recovered from pit [1032] (fill 1031]). Three vessel and three briquetage bar fragments were located in linear [ET7/007] (fill [ET7/008]. Both Fabrics 1 and 9 are represented. Two pieces with wattle impressions (di. 15 and 22mm) were also recovered. All other fragments are either amorphous or exhibit one flat surface.

Three clay objects (RF <186> - <188>) were block-lifted together from Ditch [1085] (fill [1084]). RF <186> consists of four conjoining pieces in Fabric 3A, forming a fragment of a clay slab (22 mm thick) with rounded edges and a central piercing. The shape is reminiscent of a tuyere. RF <187>, in Fabric 8D, consists of three clay slab fragments (20 mm thick), with no piercings surviving. The fabric however is identical to some of the perforated clay slabs. The third object, RF <188> consists of 19 fragments of a crude, ill-fired, circular-sectioned bar end. Six pieces (wt 968 g) of fire-cracked flint were recovered in the area between RF <186> and RF <187>-<188>. Unfortunately, no pottery or other dating evidence survives for this feature.

5.4.4 *Area B*

A relatively large assemblage of 617 pieces was recovered, mainly dating to the late Bronze Age to early Iron Age (Period 4.IV). Most fragments (282) are featureless. A further 240 pieces are identified as briquetage, almost all recovered from contexts assigned to period 4.IV.

Period 4.IV
A total of 489 pieces was contained by 15 individually numbered contexts, dated to the late Bronze Age to early Iron Age. Most of the fragments (239) consist of briquetage fragments, with as dominating fabrics Fabric 1A and 7A. In total, 47 pedestal fragments were recovered, 137 container fragments, 6 wedges, a single possible pinch prop and 29 pieces which could not be attributed to a form. Briquetage was recovered from nine different contexts (i.e. pit [2074], GP203, fill [2073], pit [2098], fill [2099] and pit [2172], GP201, fill [2171]). Most pedestal fragments (45) are from pit [2074], GP203, fill [2073], which contained a further 27 amorphous pieces which through their association and fabric –all pedestal fragments are in Fabric 4C- are likely to represent pedestal fragments as well. A large proportion of the container fragments (72), all in Fabric 1A, were contained by pit [2039], GP204, (fill [2038]). Included are 46 body sherds, 18 base sherds and 8 rim sherds. The fragments are from cylindrical containers (di. c. 160 to 180 mm), with at least two significantly larger vessels (di. >220 mm). Five of the base sherds have been cut before firing, a feature which has been noted on other sites, for example Hengistbury Head, Dorset (Poole 1987: 178-180) and Billingborough, Lincolnshire (Cleal 1990: 58). The exact use of vessels which have been cut in half is not clear. They may have formed two separate troughs for salt extraction, but examples are also known from Danebury, Hampshire (Poole 1984: 430), where they were probably used for salt transportation.

Other briquetage container fragments were recovered from possible hearth [2068], GP203, (fill [2067]), Pit [2174], GP201, (fill [2173]), Pit [2177], GP201, (fill [2176]), Pit [2182], GP202, (fill [2184]) and Pit [2195], GP201. Most of these identifications are uncertain, with fairly undiagnostic fragments. However, Pit [2182], GP202, (fill [2184]) contained two body sherds and six rim sherds (Fabric 6) of at least one cylindrical, fairly large container. Nineteen additional pieces in the same fabric exhibit two parallel flat surfaces and could represent either slab fragments or briquetage container sherds. The same context also contained two pedestal fragments and six wedge fragments (all in Fabric 6), some of the latter from fan-shaped wedges.

Two perforated clay slab fragments were contained by from pit [2126], GP204, (fill [2127]). Pieces measure 18.7 to 25.2mm thick. Only one exhibits a complete aperture (RF <43>), measuring 17.6mm in diameter. A short discussion on perforated slabs can be found under Area H.

Six unperforated slab fragments were recovered as well, four of which were located again in pit [2126].The two remaining slab fragments include a 16 mm thick fragment with right-angled corner, located in pit [2177], GP201, (fill [2175]). Pit [2182], GP202, (fill [2184]) contained a crude handmade, oval slab measuring 21 to 26mm thick and 85 to 122mm across. The function of this slab is not clear and may or may not be briquetage-related.

Most other fired clay pieces are amorphous (195), with a further 47 fragments exhibiting one flat surface. Most of the latter were recovered from Pit [2182], GP202, (fill [2184]). Although they could be briquetage related, they are in a different fabric (Fabric 7A) from the other briquetage fragments in this context.

Period 5.I
Three amorphous fragments, both in Fabric 3A, are from contexts dated to the mid to late Iron Age. Pieces were recovered from pit [2110], GP205, (fill [2109]) and pit [2179] (fill [2178]).

Period 6.I
Only ten pieces were recovered from three different contexts. Pieces are mainly featureless and all in Fabric 3A. Four fragments with one flat surface were recovered from pit [2064], GP206, (fill [2063]) and ditch [2102] (fill [2101]).

Period 6.III
A small assemblage of 56 pieces dates to this period. Pieces were recovered from ten different contexts (i.e. linear [2003], fill [2002]; ditch [2047], GP214, fill [2046]) and include 35 amorphous fragments and 18 pieces with one flat surface. Most pieces are in Fabric 3A. A slab, block or wedge fragment was recovered from ditch [2062], GP209, (fill [2061]) and may be related to briquetage. Ditch [2060], GP212, (fill [2059]) contained a perforated clay slab fragment (RF <123>) exhibiting a straight edge and measuring 22 to 28mm thick. No perforations survive. A fragment of furnace lining was recovered from the same context.

Period 6.IV
Sixteen pieces were recovered, nine of which are amorphous. Seven pieces exhibit one flat surface. All are from waterhole [2199] (fill [2198]), with 3A as main fabric.

Period 7.II
A small group of 32 pieces is of early medieval date. Included are 27 amorphous fragments and five pieces with one flat surface. Most are from waterhole [2058] (fill [2057]), with a single piece recovered from pit [2059] GP212 (fill [2014]). Fabric 3A dominates.

Modern
Three fragments were found residual in 20th-century features. Ditch [2123] (fill [2122]) contained an amorphous fragment as well as the corner fragment of

an unperforated slab (16mm thick). A fragment with one flat surface and exhibiting a finger mark was recovered from pit [2058] (fill [2142]).

Undated
Eight fragments are from undated features (i.e. ditch [ET12/006], fill [12/007]; ditch [ET13/013], fill [13/014]). Six of these are amorphous with a further two exhibiting one flat surface. Most are in Fabric 1.

5.4.5 *Area C*

Only four fired clay fragments were recovered from this area, all dating to Period 4.III and from ditch [3021], GP300, (fill [3020]). All are in Fabric 4A and amorphous, apart from one straight edge fragment.

5.4.6 *Area D*

Two amorphous fragments were recovered during the evaluation. Pieces were contained by gully [ET19/008] (fill [ET19/009]) and posthole [ET19/012] (fill [ET19/013]), both undated contexts.

5.4.7 *Area E*

A small assemblage of 31 pieces was recovered from ten different features in this area. Fragments from undated contexts, 20 in total, are mainly amorphous. However, ditch [ET22/009] (fill [ET20/010]) also contained a tine fragment from a briquetage pedestal (Fabric 7A) as well as a rectangular-sectioned briquetage bar fragment (Fabric 5).

The earliest dated pieces belong to Period 4.IV (6). Ditch [5052], GP500, (fill [5051]) contained three conjoining briquetage pedestal fragments (115+ mm high; di.78 mm) in Fabric 1A. Two amorphous fragments and a piece with one flat surface were recovered as well.

A featureless fragment as well as a two pieces with one flat surface date to Period 5.I. Ditch [5016], GP509, (fill [5015]), dating to Period 6.I, contained an amorphous fragment as well as a piece of furnace lining.

5.4.8 *Area F*

Only undated Ditch [6009] (fill [6010]) contained fired clay (11 pieces). Most fragments show one flat surface (7). A possible slab fragment (16mm thick) was recovered as well. All fragments are in Fabric 8A, and it is not unlikely they form part of a perforated clay slab. There are however no features confirming this.

5.4.9 *Area G*

A total of 14 pieces were recovered from four different contexts, all undated. Pieces are mainly amorphous. Linear [ET28/009] (fill [ET28/010]) contained three fragments with one flat surface, as well as a piece with two parallel flat surfaces (all Fabric 1A). A perforated clay slab fragment (RF <4>) was recovered from linear [ET28/003], GP700, (fill [ET28/004]). The piece, in

Fabric 8A, measures 20 to 25 mm thick and exhibits two partial perforations (di. c. 30 mm). Two fragments with straight edge were also recovered.

5.4.10 *Area H*

A medium-sized assemblage of 281 pieces of fired clay was recovered from this area. Most of these date between the Late Bronze Age and Early Iron Age (Period 4.IV; 233 pieces). All briquetage fragments and most perforated clay slab fragments were found in features dating to Period 4.IV.

The majority of perforated clay slabs (47 of 52) were recovered from this area. Perforated clay slabs are frequent finds on Late Bronze Age sites in the Thames Valley. Examples are known from amongst others Mucking, Essex (Bond 1988: 39), North Shoebury, Essex (Brown 1996: Fig 5, 35), Carshalton, London (Adkins and Needham 1985: Fig 12, 34 and Fig 13, 36) as well as from the Hoo peninsular (Hoo St Werburgh, Moore 2002: Fig 4, 274).

Perforated clay slabs from the excavations are usually in Fabric 8 A-D, incorporating occasional to abundant fire-cracked (crushed) flint, although other fabrics have been represented as well. The function of these objects is currently still debated, and suggestions made include a use as oven slabs for pottery bonfire kilns (Adkins and Needham 1985: 38) and a relation to salt extraction or cooking activities (Moore 2002: 269).

It should be noted that only in four cases perforated clay slab fragments were recovered from the same context as briquetage fragments. The fabric however is in at least some cases identical (i.e. ditch [8055], fill [8054]). Similarities between the fabrics of briquetage and perforated clay slab fragments have been noted elsewhere (i.e. Bond 1988: 39). A preliminary scan also learns that in at least some cases, fire-cracked flint was recovered from the same context, an association which has been previously remarked on (Moore 2002: 269). No complete perforated clay slab was recovered and they were usually found in pits or ditches, suggesting discard rather then in situ survival.

Period 4.I
A single perforated clay slab (Period 4.Ii) was located in pit [8102], GP801, (fill [8130]). The fragment (RF <96>), in Fabric 1A, measures 22mm thick and retains a perforation with a diameter of 18.5mm. No other fired clay was recovered from this period.

Period 4.IV
An assemblage of 233 pieces dates to the late Bronze Age to early Iron Age. Most fragments are in Fabric 8A, followed by Fabric 1A.

Period 4.IVi
Briquetage pieces (33) were recovered from six different contexts (i.e. ditch [8055], GP822, fill [8054]; pit [8185], fill [8184]) including 18 pedestal fragments (including tines), 14 container sherds and one pinch prop (pit [8057], fill [8056]). Where identifiable, container fragments appear to have derived from cylindrical vessels.

A total of 36 perforated clay slab fragments were contained by 12 individual contexts. Most of these are in Fabrics 8A-D, although Fabrics 1A-B and 3B are also represented. The largest number (9) was recovered from pit [8102], GP801, (fill [8118]). Where measurable, perforations range in diameter between 13.3 and 28 mm. An equally wide range was noted for the thickness, which ranges between 13 and 31 mm. Both straight and slightly rounded edge fragments survive, as well as rounded and right-angled corner fragments.

In addition, 16 unperforated slab fragments were recovered from six contexts. Their fabrics (1A and 8A, D) and thickness (14 to 19 mm) indicate that it is not unlikely they form part of perforated slab fragments as well, although no perforations survived. Most are from pit [8197], GP806, (fill [8196]). Other pieces feature just one flat surface or two parallel flat surfaces, some again in Fabric 8A (i.e. ditch [8055], GP822, fill [8054]). A total of 51 amorphous fragments was also recovered.

Period 4.IVii
An assemblage of 21 fragments of fired clay was located in eight individual contexts. Most of these are in Fabrics 1A and 3A.

Only two briquetage fragments were recovered (ditch [8125], GP818, fill [8124]; ditch [8224], GP817, fill [8223]), one of which can be identified as a pedestal tine fragment (fabric 1A). The second piece consists of a straight-edged slab or wedge fragment with right-angled corner (23.5mm thick).

Five perforated slab fragments were also recovered, all with only partial apertures surviving. The complete thickness survives in only one piece (23.5mm), recovered from ditch [8241], GP818, (fill [8240]).

Other pieces are either amorphous or exhibit one or two smooth surfaces.

Period 4.IViii
A total of 35 pieces was recovered from six individually numbered contexts. Five of these consist of perforated slab fragments (Fabric 8A, D-C). No complete perforations survive. Pieces measure between 18 and 23mm thick and exhibit both straight (i.e. RF <170>) and curving (i.e. RF <196>) edges.

A further 19 slab fragments were recovered from ditch [8090] (fill [8088]) and ditch [8257], GP820, (fill [8256]), the latter feature containing 17 pieces. Fragments from ditch [8257], GP820, all in Fabric 8A, are from at least one slab with straight edges and measuring 19mm thick. The pieces from ditch [8090] are both in Fabric 1A and contain a partial circular aperture. Although the complete diameter does not survive, apertures appear too large for the slab to be of the same function as all other perforated clay slabs. Edges are straight, in one case folded and pieces measure between 16 and 19mm thick.

Period 6.I
Ditch [8036], GP824, (fill [8041]) contained an edge or corner fragment in Fabric 3A. A straight-edged slab fragment (19 to 24mm thick) in Fabric 8A was recovered from pit [8225].

Undated
A total of 45 pieces are from undated contexts. All other pieces are from ditch [8090], GP819, (context [8089]). They all belong to a thick, tapering slab (Fabric 1A), with a minimum thickness of 18mm and maximum thickness of 27+mm.

5.4.11 *Area I*

A total of 64 fragments of fired clay was recovered from this site. Pieces are mainly of 13th-century date (Period 8.I).

Period 4.I
The excavations produced 21 pieces from five individual contexts dated to this period. Ten of these are amorphous and four fragments exhibit one flat surface. Two briquetage fragments were recovered. A pedestal base (Fabric 1A) with traces of two possible tines was recovered from Ditch [9022], GP900, (fill [9021]). The fragment is oval in section (50 by 47 mm) and measures 77+ mm high. In addition, Pit [9045] (fill [9044]) contained a possible wedge fragment, of which no complete dimensions have been preserved. Five possible slab fragments were recovered from Pit [9045] (fill [9044]), including four pieces from a thick slab in Fabric 8B.

Period 4.III
Pit [9055], GP903, (fill [9056]) contained four fired clay fragments, two of which exhibit one flat surface. Pieces are all in Fabric 1A.Two short rod or tine fragments, one of which exhibits a finger print, were also recovered.

Period 6.I
Three fragments were recovered from oven [9017], GP905, (demolition fill [9016]). Included is a rounded corner fragment and a piece exhibiting one flat surface. Both Fabrics 3A and 4B are represented.

Period 7.I
Quarry pit [9046], GP906, (fill [9047]) contained two pieces, including a piece with parallel flat surfaces. Both are in Fabric 3A.

Period 8.I
A total of 27 pieces was recovered from two individually numbered contexts. The majority (25) are amorphous, with a further two fragments exhibiting one flat surface. Both Fabrics 1A and 4B are represented.

Undated
A further seven pieces are from undated contexts. These include a possible briquetage container sherd in Fabric 1A (ditch [ET33/016], fill [ET33/017]). The piece appears to be from a rectangular-sectioned vessel, with the rim formed by a finger mark.

5.4.12 *Area J*

The excavations produced 152 pieces from this area, mainly of 2nd- to early 3rd-century date (Period 6.II).

Period 5.II
Nine fragments were recovered from three throw [10154] (fill [10153]). Three of these are amorphous, with a further six fragments exhibiting a rounded surface. All are in Fabric 4C.

Period 5.III
Four fragments were recovered, three of which are amorphous. Ditch [10182], GP1002, (fill [10181]) contained a possible corner fragment form a wedge, slab or bar.

Period 6.II
A total of 110 pieces was recovered, 80 of which are amorphous. Three pieces with rounded surface and 21 fragments with one flat surface were recovered as well. Of interest are three oven bar and two oven slab fragments from Ditch [10210], GP1008, (fill [10208]). All are in Fabric 1A. A large, rounded oven slab fragment with a total diameter of 220 mm, measures 72+ mm thick. The second fragment exhibits a straight, bevelled edge, measuring 53 mm thick. No measurements could be taken of the bar fragments. A possible briquetage wedge fragment (Fabric 3A) was recovered from ditch fill [10115], GP1008.

Undated
A total of 27 fragments were recovered from undated contexts. All are amorphous, apart from nine pieces exhibiting one flat surface. A piece from Posthole [CT20/010] (fill [CT20/011]) exhibits two wattle imprints (diameter 8 and 14 mm) in addition to its flat surface.

5.4.13 *Area K*

The last area contained only 11 pieces, all dating to Period 6.I. A possible crude briquetage container base sherd (Fabric 1A) was recovered from Pit [11027] (fill [11026]). Two pieces exhibiting one flat surface were contained by Pit [11025] (fill [11024]). All other pieces are amorphous.

5.5 **The Glass** by Elke Raemen

Four pieces of glass (wt. 9g) were produced by the excavations. All of these are of post-medieval date. Two were recovered from evaluation trenches. Represented are a green glass wine bottle fragment of 19th century AD date from modern feature/spread [ET4/004] (fill [4/005]) and an undiagnostic clear glass chip, again of 19th century AD date, from linear [48/005].

Two window glass fragments were recovered from Area J10. Included are a clear rectangular pane fragment (pit [10032] fill [10031]) dating to the 20th century AD and a pale green rectangular pane fragment with ragged edge (Ditch [10175], GP1012, fill [10176]), dating to the late 17th to late 18th century AD. The latter piece is possibly intrusive, as the pottery from this context is of early Roman date.

Of interest are the 62 clear glass fragments (RF <46>; Area B2) which were recovered from the fill of olive oil amphora [2169] (fill [2170], Period 6.I). The amphora, recovered from pit [2168], dates to AD50-170, although this type of amphora stayed in use long after their production date (note by Anna Doherty). The glass fragments all form part of the tubular, fairly flat base of a small cylindrical vessel (base di. c. 60 mm). As this type of base has been noted on a wide variant of forms, dating between the 1st and 4th centuries AD, a closer identification is not possible.

5.6 **The Clay Tobacco Pipe** by Elke Raemen

Two clay tobacco pipe fragments were recovered during the excavations. A plain stem fragment of mid 18th to 19th century AD date was recovered during the watching brief (WB1). A second plain stem fragment, dating to the second half of the 17th century AD, was contained by Area J10 (ditch [10118] (fill [10117], Period 6.II, GP1010).

5.7 **The Metalwork** by Elke Raemen

A small bulk metalwork assemblage was recovered during the excavations. None of the pieces required either X-radiography or conservation. None of the non-ferrous metalwork is stratified.

5.7.1 *Evaluation and Watching Brief*
Where possible, trenches have been assigned to an area. In addition, WB1 produced two pieces of metalwork (90g), including a single heavy duty iron nail and a copper-alloy strip fragment, both of late 19th to 20th century AD date.

Alluvial deposit [ET59/004] contained a single general purpose iron nail fragment (heavily mineralised).

5.7.2 *Area A1*
No ironwork was produced by the excavations in Area A1. A total of 18 pieces of non-ferrous metalwork (wt 262 g) was recovered from the topsoil. Included are six pieces of lead waste and two lead off-cuts. A copper-alloy sheet off-cut was recovered as well. All other pieces consist of strip or sheet fragments,

including four lead-alloy sheet fragments. In addition, an incomplete general purpose copper-alloy nail was recovered. All dateable pieces have been assigned to the 19th to 20th century AD.

5.7.3 *Area B2*
A small ironwork assemblage, consisting of 10 pieces (wt 216 g) from four individual contexts, was recovered from Area B2. No non-ferrous metalwork was recovered.

The earliest piece consists of a heavy duty nail fragment with adhering wood, which was recovered from building ground beam slot [2007] (fill [2006], Roman Period 6.III).

General purpose nail fragments were recovered from pit [2083] (fill [2082], Period 9.I) and pit [2126] (fill [2127] Period 4.IV, GP204). The latter is of Bronze Age date indicating the nail is intrusive .

A further four iron sheet fragments were recovered from modern field drain [ET14/005] and may represent food tin pieces.

5.7.4 *Area F6*
No ironwork was recovered from this area. A small assemblage of non-ferrous metalwork consisting of fifteen pieces (wt 126 g) was recovered from the topsoil. Most of these are copper-alloy, including a general purpose nail fragment, shelll and fuse fragments (WW2) and a piece of molten waste. Lead objects include an off-cut, two pieces of waste and an agricultural bag seal.

5.7.5 *Area G7*
A single iron sheet fragment (wt 3 g) was recovered from plough soil [ET29/001]. The topsoil also produced a copper alloy shell fragment (driving band; wt 6 g).

5.7.6 *Area H8*
Only non-ferrous metalwork was recovered from this area, all from the topsoil. The assemblage consists of eight pieces weighing 94g. Included are six copper-alloy shell fragments, three of which are driving band fragments, a copper-alloy strip fragment and a piece of molten lead waste.

5.7.7 *Area I9*
The assemblage consists solely of non-ferrous metalwork (25 pieces weighing 258 g), recovered from the topsoil. Copper-alloy fragments include six waste pieces, sheet fragments, and four strip fragments. Lead off-cuts (2) and molten waste (1) were recovered, as well as a later 18th to 19th century AD curtain or dress weight. Two white metal/pewter crude discs where recovered as well.

5.7.8 *Area J10*
A single general purpose iron nail fragment (4 g) was recovered from the site. The piece, probably of medieval date, was contained by ditch [10283] (fill [10282]).

5.8 **The Shell** by Elke Raemen

A small assemblage of shell consisting of 74 fragments weighing 468 g was produced by the excavations. A mixture of land snails and marine shell was recovered, all from Areas I9 and J10.

5.8.1 *Area I9*
Fragments (70) were recovered from six different contexts. Only two of these contained pottery, which in both cases has been identified as Roman.

Oyster shell consists of 46 fragments, resulting in 22 minimum individual upper valves and 16 minimum individual lower valves, all of which are immature and show traces of parasitic activity. Four different contexts contained oyster shell, with the largest group (minimum number of 10 individuals) being recovered from ditch [9235] (secondary fill [9237], Period Roman 6.I, GP904).

All other fragments (24) are from land snails, representing a minimum number of 19 individuals. Landsnails were recovered from four different contexts. Most are from ditch [9223] (fill [9222]), which did not contain any dating evidence. A further minimum number of six individuals was recovered from ditch [9225] (fill [9224]), which is of Roman date.

5.8.2 *Area J10*
Four fragments were recovered from three individual contexts, all dated by the pottery to the Roman period. Included are a whelk and scallop fragment, both from pit [10060] (fill [10059]). Two oyster shell fragments were recovered as well (pit [10061], fill [10060] and ditch [CT20/005], fill [CT20/006]), including a lower valve and an undiagnostic fragment.

5.9 **The Registered Finds** by Elke Raemen

All registered finds have been washed and dried or air dried. Each object has been packed according to IFA guidelines and has been assigned a unique registered finds number (RF <00>). All registered finds have been recorded individually, with preliminary identifications, on pro forma sheets for archive. Metal objects have been X-rayed where appropriate and have been boxed in airtight Stewart tubs with silica gel. A number of objects (RF <1>, <3>, <8>, <10>-<11>, <13>, <17>, <42>, <50>, <66>, <68>-<70>, <74>, <124> and <190>) have been conserved by the Fishbourne Conservation Laboratory, both to prevent further detoriation through bronze disease and for analytical purposes.

An overview of all objects has been given by area. Certain categories however, such as perforated clay slabs, stamped Samian and glass vessels have been discussed together with their functional type, and have therefore been included in the bulk finds section. At this stage, only a brief summary has been given.
Thanks are due to Luke Barber for the identification of the stone objects.

5.9.1 *Unstratified*
A large number of finds were recovered from the topsoil (RDX11>12 (120)). A possible early medieval strap-end (RF <42>) with incised decoration is potentially the earliest find in this unstratified assemblage. Medieval pieces

include a copper-alloy strap guide (RF <41>) as well as a number of copper-alloy buckle frames (RF <21>-<22> and <37>) and a complete copper-alloy buckle with buckle-plate (RF <13>). A copper-alloy buckle plate with repoussé figural decoration (RF <40>) was recovered as well.

Early post-medieval activity is represented by a few musket balls, as well as two possible 17th-century tokens (RF <16>-<17>) and a crude copper-alloy crotal bell (RF <18>).

Most objects however are of late post-medieval date, including 19th and 20th century AD coins (i.e. RF <14>-<15>), agricultural lead bag seals (i.e. RF <19>-<20>), an eyelet (RF <23>) and buttons (i.e. RF <27>-<34>). The latter includes several service buttons, i.e. from the Royal Marines.

5.9.2 *Evaluation and Watching Brief*

Evaluation trenches have been incorporated in the summaries by area. However, a few trenches fell outside these areas. Pit [ET39/004] (fill [39/005]) contained an early medieval brooch (RF <1>) of later 5th to 6th AD century date. The piece incorporates both characteristics of the small-long brooches and cruciform brooches. The same pit also contained a short oblong bead in dark blue glass (RF <5>) and a whetstone (RF <206>). As the context contains early Roman pottery and the form of the bead is fairly undiagnostic, the latter two finds can not be firmly attributed to either the Roman or early medieval (5th – 6th AD centuries) period.

The evaluation also produced a copper-alloy circular decorative mount (Subsoil [ET65/002]; RF <3>), which is of probable 16th to 17th century AD date.

A number of objects were recovered from the topsoil (WB1) during the watching brief. These include unfired bullets and bullet cases (.303), a horse shoe fragment (RF <193>) and a late post-medieval iron peg (RF <104>). In addition, a rounded fragment of fired clay (Fabric 4B) with central piercing (di. 14.7 mm) was recovered from ring ditch [22] (fill [20]). The piece may have formed part of a mid Bronze Age cylindrical loom weight (RF <194>).

5.9.3 *Area A1*

The only stratified object from this area consists of a glass annular black bead with yellow whirls (RF <67>). The bead was contained by pit [1154] (fill [1082]), the pottery of which has been dated to AD70-100.

Most objects, mainly of post-medieval date, were recovered from the topsoil. These include lead weights (i.e. RF <47>), Victorian and early 20th century AD coins (i.e. RF <49>, RF <82>), an 18th to early 19th AD century mixed-alloy button (RF <58>), copper-alloy buttons (i.e. RF <61>), a copper-alloy key fragment (RF <86>), two copper-alloy horse rings (RF <50> and <63>) iron wire fragments (i.e. RF <61>) and lead window came fragments (i.e. RF <64>-<65>). A copper-alloy possible shoe buckle (RF <57>) of late 16th- to 17th-century AD date was recovered as well.

5.9.4 *Area B2*

Nine objects were recovered from six individual contexts. Where a date is available, pieces can be attributed to the Roman period.

5.9.4.1 *Coins*

Area B2 contained five Roman coins. Included are two later 2nd century AD sestertii (RF <7>, building ground beam slot [2003] (fill [2004]) and <8>, pit [2058], fill [2140]), two later 3rd century AD radiates (RF <10>, boundary ditch [2032], GP213, fill [2031] and <11>, waterhole [2058], fill [2140]) and a later 1st to 2nd century AD as or dupondius (RF <74>, waterhole [2058], fill [2140]).

5.9.4.2 *Quern Stone*

Three German lava quern stone fragments (RF <106>, <119>> and <210>) were recovered from two individual contexts, both of 3rd century AD date (waterhole [2058], fills [2142] and [2057]). Due to the friable nature of German lava, only a few pieces show traces of the grinding surface.

5.9.4.3 *Other*

A circular-sectioned tapering rod-fragment (RF <9>) was recovered from undated pit [2053] (fill [2052]).

5.9.5 *Area E5*

The topsoil contained a Victorian farthing (1838-1860; RF <124>). No other registered finds were recovered from this area.

5.9.6 *Area F6*

All registered finds were recovered from the topsoil. The earliest piece is a medieval, copper-alloy composite strap-end with spacer (RF <190>). The majority of pieces however are of late post-medieval date, including decorative fittings (i.e. RF <189>), 20th century AD bullet cases (.303, i.e. RF <135>), lead and copper-alloy buttons (i.e. RF <136>), a key-hole escutcheon (RF <143>), a Victorian barrel tap (RF <134>) and a drop handle (i.e. RF <146>).

5.9.7 *Area G7*

The earliest finds consist of an as or dupondius of late 1st to 2nd AD century date (RF <70>) and a late 13th to 14th century AD silver long-cross penny (RF <68>). German lava quern stone fragments (RF <205>) were recovered from the plough soil ([ET31/001]). Due to their friable nature, no form can be established.

All other finds are of post-medieval date, including 15 lead musket balls (RF <149>) and two 17th century AD trading tokens (RF <150>-<151>). Pieces of late post-medieval date include a copper-alloy button (RF <152>) and decorative fittings (i.e. RF <153>).

5.9.8 *Area H8*

The only stratified Registered Find consists of four featureless German lava fragments (RF <207> from ditch [8103] (fill [8104]), the pottery of which dates to the 1st century AD.

All other objects were recovered from the topsoil. Most objects are of post-medieval date, including some musket balls (RF <164>) and a D-shaped buckle frame, possibly from a shoe or spur (RF <168>). Late post-medieval pieces include copper-alloy and lead buttons (i.e. RF <191>) and a lead agricultural bag seal (RF <163>). Pennies, halfpennies and farthings were recorded, ranging in date between 1860 and 1932.

5.9.10 *Area I9*

German lava quern stones (RF <2>, <120> and <208>) represent the only stratified registered finds from this area. Only the fragments of oven [9017], GP905, (fill [9016]) are from a dated context (12th century AD). Pieces are too abraded too establish form.

The earliest object was represented by a 2nd century Sestertius (RF <12>). Early post-medieval topsoil finds include a pewter buckle frame with copper-alloy buckle plate (RF <66>), dating to the end of the 16th to 17th century. The object may represent a spur buckle. Musket balls were also present (i.e. RF <125>). The majority of objects are of late post-medieval date. A wide range of objects is represented, including a 20th-century lead toy solder (RF <203>), a copper-alloy keyhole escutcheon (RF <204>), a 19th- to 20th- century copper-alloy tap fragment (RF <129>), shell fragments (WWII), copper-alloy buttons of 19th- and 20th- century date, some of which are service buttons (i.e. RF <111>) and agricultural bag seals (i.e. RF <94>). A silver 1914-1918 war medal (Service Number 7324, Pte. H. … (surname illegible)) was recovered as well (RF <127>).

5.9.11 *Area J10*

The subsoil contained a 19th to 20th century AD iron bolt (RF <107>). No other registered finds were recovered from this area.

5.9.12 *Area K11*

Three finds were allocated a registered finds number. Four large Tertiary sandstone pieces from upper and lower quern stones, possibly from a single rotary quern, were recovered from two early Roman contexts (RF <148> and <209>; ditch [11005], GP1103, fill [11004] and pit [11025], fill [11024]). A piece of copper-alloy molten waste (RF <69>) was recovered from quarry pit [11039], GP1101, (fill [11043]).

5.10 **The Prehistoric Flintwork** by Chris Butler

The assessment comprised a visual inspection of each bag, counting the number of pieces of each type of worked flint present, noting details of the range and variety of pieces, general condition, and the potential for further detailed analysis. Classification follows Butler (2005). A hand written archive of the assemblage was produced at this stage, together with an excel spreadsheet. Those pieces of flint that were obviously not worked were discarded during the assessment.

5.10.1 *The flint assemblage*
An assemblage of 276 pieces of worked flint weighing 4.584kg was recovered during the excavation on the Isle of Grain, and is listed in Table 2 (see also Appendix 2 for quantification by area and group). The raw material is typical of flint obtained from local sources, and includes a few pieces of orange-stained flint and six pieces of Bullhead flint. A few of the pieces have a mottled grey patination, whilst some are patinated to a lighter blue-grey colour. Two pieces may have been heat-treated. There were also six un-worked fire-fractured flints (49gms).

Hard hammer-struck flakes	131
Soft hammer-struck flakes	38
Soft hammer-struck blades	5
Soft hammer-struck bladelets	7
Bladelet fragments	3
Flake and blade fragments	57
Chips	3
Shattered pieces	5
Core rejuvenation pieces	2
Cores	5
Core fragment	1
Chunks	7
Scrapers	8
Piercers	1
Fabricator	1
Hammerstones	2
Total	276

Table 2 Prehistoric Flintwork

5.10.2 The majority of the assemblage is made up of hard hammer-struck debitage (52%), although there are a significant proportion of pieces that are soft hammer-struck (20%). A small group of similarly-patinated flakes from [9021] may have been struck with a soft stone hammer. There are a number of blades and bladelets, together with fragments of these pieces, although little of the debitage had any evidence of platform preparation. A high proportion (26%) of the assemblage is made up of undiagnostic fragments. Chips and shattered pieces are rare, suggesting that the majority of the knapping was possibly taking place elsewhere, or perhaps was not recovered during the excavation, as cores and hammerstones are also present.

5.10.3 There are only five complete cores, comprising two-platform flake cores, one of which has some platform preparation, and both may be early Neolithic in date; two multi-platform flake cores, one of which has platform preparation and may be early Neolithic, but the other is more typically later prehistoric in date. The final core was a single-platform blade core of early Neolithic date. There are two core rejuvenation pieces in the assemblage, one of which is a *flanc de nucleus*, and a single core fragment.

5.10.4 It is likely that a reasonable percentage (24%) of the debitage is Mesolithic or early Neolithic, with the remainder being later Neolithic or Bronze Age in date.

5.10.5 The implements comprised predominantly scrapers: six end scrapers, a side scraper and a hollow scraper. Two of the scrapers were small expedient end scrapers, one on a hard hammer-struck flake and the other on a soft hammer-struck flake. These are both typical of the expedient scrapers found in Mesolithic assemblages. Another end scraper is manufactured on a long blade-like flake with platform preparation and is probably Mesolithic or early Neolithic. The remaining scrapers, one of which has been broken, are all typical of Neolithic/Bronze Age types.

5.10.6 The remaining implements comprise a piercer manufactured on a hard hammer-struck flake, with a small point abruptly retouched at the distal end, and a finely made fabricator [1080] with a 'D' shape profile and abrasion at both ends. Both of these are typically Neolithic. There were also two hammerstones from [8242], on rounded nodules, with patches of abrasion.

5.10.7 The assemblage contains a small number of diagnostically Mesolithic pieces, predominantly residual in later contexts, which suggests that there was some Mesolithic activity in the vicinity of the site. The majority of Neolithic pieces are residual, with the only potential *in situ* features found in areas F6 and H8. The presence in some contexts of pieces which could be either Mesolithic or early Neolithic, may hint at activity during the transitional phase between these two periods.

5.10.8 The majority of the assemblage falls into the later prehistoric period, which covers the later Neolithic and the Bronze Age. Many pieces are undiagnostic, and therefore it is difficult to assign them to a specific part of this timeframe. However, given the other dating evidence, it is most likely that this part of the assemblage is largely of middle to later Bronze Age date. The lack of any apparent concentrations of flintwork or in-situ knapping, or large numbers of implements, would suggest that any centre of activity for this period is not within the site boundary.

5.11 The Metallurgical Remains by Luke Barber

The excavations recovered only 45 pieces of slag, weighing a little over 4.5kg, from 20 individually numbered contexts. The assemblage has been fully listed by context and type on a metallurgical pro forma sheet, which is housed with the archive. The assemblage is characterised in Table 3.

Period	Undated	LBA-EIA	IA	RB	PM	Totals
No. contexts	*5*	*4*	*1*	*9*	*1*	***20***
Fuel ash slag	-	2/6g	1/5g	5/60g	-	**8/71g**
Iron smelting slag	3/618g	-	-	1/196g	-	**4/814g**
Undiagnostic iron slag	13/724g	-	-	1/216g	-	**14/940g**
Iron smithing slag	-	1/42g	-	10/2,660g	-	**11/2,702g**
Furnace/heath lining	1/4g	-	-	1/8g	-	**2/22g**
Clinker (C19th)	3/8g	2/8g	-	**-**	1/8g	**6/24g**
Totals	**20/1,364g**	**5/56g**	**1/5g**	**18/3,140g**	1/8g	**45/4,573g**

Table 3 Characterisation of slag assemblage.

5.11.1 The earliest slag from the site is from contexts spot-dated to the late Bronze Age/early Iron Age. However, the two small pieces of clinker are almost certainly intrusive from 19th century AD agricultural activity (pit [2174], fill [2173] and pit [2188], fill [2187]) and it is considered likely that the single piece of iron smithing slag in pit [2177], fill [2176], dated to the early Iron Age, is Roman intrusive material. As such the slag which may actually be of this period consists of only two pieces of fuel ash slag from ditch [8055], fill [8054]. Although such slag can be generated from any high temperature process, including domestic hearths, the white patination on these pieces is suggestive of salt-working waste. The late Iron Age only produced one piece of slag: a small fragment of fuel ash slag from pit [2179], fill [2178].

5.11.2 The vast majority of the slag from dated deposits is of the Roman period though even here the quantities are so low as to suggest very small-scale metal-working. Of particular interest is the presence of iron smelting tap slag and a piece of furnace/hearth lining from a ditch in Trench 20 of the evaluation [20/011] as the Isle of Grain is not close to the main sources of Wealden ore. The same trench produced three further pieces of smelting slag from an undated post-hole [20/009] as well as notable quantities of iron slag (undiagnostic of process) from post-holes [20/007] and [20/009]. These undated features are almost certainly of Roman date. The quantity of slag involved is small, and considering the sites geographical location, it is possible the material was imported as waste down the River Medway from the Weald and subsequently used for post-packing. There is notably more iron smithing slag in the Roman assemblage and it is quite probable this process was carried out on the site at a low level. Of note are three plano-convex forge bottoms from pit [009] (evaluation trench 7: 694g), beam-slot [2041] (Area B2, fill [2040]: 798g) and ditch 10291 (Area J10, fill [10290]: 230g but

incomplete). Smithing on a small domestic scale is found on most rural Roman sites and its presence here is not unexpected. The only later piece of slag consists of a fragment of clinker from an early 19th AD century field drain in the evaluation [14/005].

5.12 The Geological Material by Luke Barber

The excavations recovered 279 pieces of stone, weighing a little over 12kg, from 58 individually numbered contexts. The material has been fully quantified by context and stone type on geological material forms, which are housed with the archive. The assemblage characterized in Table 4.

5.12.1 Some 14 stone types were recorded from the site though most of these are variants of seven main groups. The variation may simply reflect differing beds within a single outcrop or geographically different outcrops of the same bed. Much of the material shows signs of water-wear and is likely to have been collected from the beach/foreshore, particularly as there is little stone available naturally at the site itself.

5.12.2 *The decalcified chert (3 variants) almost certainly was originally derived from the Hythe Formation of the Lower Greensand, but subsequent geological reworking has probably included most of the material in the 2nd Terrace gravels found locally. The water worn nature of all of this material would be in keeping with this and as such the material is available close-by and is probably natural to the site. The bulk of the assemblage is composed of fine to coarse grained Tertiary sandstones (8 variants) which, as with the chert, appear in contexts of all periods. Most of these stone types are likely to derive from the Oldhaven/Woolwich Beds which outcrop in the area, for example at Upnor, making them locally available, particularly from the foreshore. Although some pieces are water worn, the majority are not, suggesting direct collection from the outcrops may have been employed. The fine grained types, particularly the ferruginous examples, are most abundant in contexts of late Bronze Age to early Iron Age date though no large context groups are present and only one example shows signs of having been burnt (Area H8: ditch [8055], fill [8054]). The only worked stone of this type consists of a cobble (196g) which clearly shows signs of having an artificially worn/smoothed face. Although in a context dated to the early Roman period (evaluation ET 39, [pit 004], fill [005]) it is possibly a residual piece. The coarser Tertiary sandstones are much rarer though there is a significant concentration of these in the Roman period, most notably four large pieces from the upper and lower stones of perhaps a single rotary quern in medieval Period 8.I, Area K11 (ditch [11005], fill [11004] GP1103), part of a c. 430mm diameter lower stone measuring 45mm thick at its outside edge, and Roman Period 6.I pit [11025], (fill [11024]) three pieces from an upper stone measuring 56mm thick at its outside edge).*

5.12.3 The only stone not available locally consists of a single fragment of coal, almost certainly of the post-medieval period (unstratified in evaluation trench 42), and a significant quantity of friable German lava. The latter is certainly all derived from querns though most pieces consist of amorphous lumps, with only a few having traces of the grinding face surviving. The most significant concentration of this material is in Roman contexts, particularly of the 2nd to

3rd centuries AD (pit [2058], fill [2057], Period 6.IV) contained 714g while fill [2142] in the same pit contained a further 1,802g). However, fill [8104] of Roman Period 6.I ditch [8103] in Area H8, dated to the 1st century AD also produced 94g suggesting a wide chronological spread for lava querns during the period. Although querns of this type were used in the medieval period it is probable the remaining lava fragments on the site are residual Roman pieces considering the lack of medieval domestic activity.

5.12.4 The range of worked stone from the site, all recovered from Roman contexts, is very similar to that from the Kingsnorth assemblage (Barber in prep). All in all the assemblage shows a very limited use of stone at the site. This is particularly the case in the prehistoric periods and is almost certainly the result of having a very limited geological resource to exploit.

Period	Undated	prehistoric	LBA-EIA	IA	RB	Med	PM	*Totals*
No. of contexts	*14*	*6*	*18*	*2*	***15***	***1***	***2***	***58***
Greensand chert (3 varieties)	4/182g	2/36g	14/152g	1/32g	9/398g	-	-	**30/800g**
Tertiary fine sandstone (4 varieties)	9/158g	10/714g	42/2,991g	2/18g	6/284g	-	8/288g	**77/4,453g**
Tertiary coarse sandstone (3 varieties)	-	-	2/148g	-	6/3,236g	-	-	**8/3,384g**
Tertiary fine/medium sandstone (1 variety)	-	-	-	-	2/156g	-	-	**2/156g**
Iron concretion	3/12g	-	1/3g	-	1/2g	-	-	**5/17g**
German lava	26/460g	-	-	-	111/2,610g	18/162g	1/146g	**156/3,378g**
Coal	1/5g	-	-	-	-	-	-	**1/5g**
Totals	**43/817g**	**12/750g**	**59/3,294g**	**3/50g**	**135/6,686g**	**18/162g**	**9/434g**	**279/12,193g**

Table 4 Characterisation of geological material by stone type and period

5.13 **The Ceramic Building Material** by Sarah Porteus

A total of 352 fragments of Roman, medieval, post-medieval and modern CBM weighing a total of 15.014kg has been examined from 67 contexts. Of these, two contexts, [2056] and [2057], contained a large amount of CBM (between 25 and 50 fragments). Fine grained sandstone fragments were present in two contexts and are not of archaeological interest. The total number of fragments and weight from each period is detailed in . The date range and fabric type by context and area is detailed in Table 6 to Table 16.

Table 5 Total number of CBM fragments and weight by period.

Period	No. of fragments	% of total count	Weight in grams	% of total weight
Roman	270	78%	10426	69%
Medieval	1	<1%	26	<1%
Post-medieval	27	7%	1496	10%
Modern	1	<1%	20	<1%
Undated CBM	53	15%	3046	21%
Total	352		15014	

The ceramic building material has been recorded on standard recording forms by context and entered into an Excel database. Brick and tile have been quantified by fabric, form, weight and fragment count. A provisional type series has been drawn up for the fabrics. Fabric descriptions have been compiled with the aid of a x20 microscope. The following conventions were used in the fabric descriptions: frequency of inclusions is described as sparse, moderate, common or abundant; inclusion size categories are fine (up to 0.25mm), medium (between 0.25 and 0.5mm), coarse (between 0.5 and1mm) and very coarse (greater than 1mm).

5.13.1 *Watching brief*

Ceramic building material was recovered from two features during the watching brief. Ring ditch fill [17] contained undated brick in fabric 10, though undated this fabric usually occurs in association with Roman fabrics. Linear ditch fill [48] contained a single fragment of Roman tile. Table 2 shows the quantity of CBM by context.

Context	Group	Period	Count	Weight (g)	Form and date	Fabrics present
17	GP2 Ringditch	5.III	1	660	Undated Brick	10
48	-	6	1	276	Roman Tile	6

Table 6 CBM by form, fabric and context from watching brief phase.

5.13.2 *Evaluation trenches not within excavation areas*

A small amount of CBM was recovered from evaluation trenches which were outside of the excavation areas. Most contexts yielded a small quantity of CBM with a majority being residual recovered from the topsoil or subsoil deposits. A small pit feature in trench 41 contained an undated brick in fabric 10. Trench 59 was located in between excavation areas I9 and J10, the subsoil [59/002] contained CBM of mixed date, possible intrusive Roman brick was identified from alluvial context [59/004] and an undiagnostic flake was found from context [59/008] which could also be intrusive to the feature.

5.13.3 *Area A1*

Area A1 contained Roman brick fragments, a single fragment of roof *imbrex* and some undated CBM fragments.

Context	Count	Group	Period	Weight (g)	Form /date	Fabrics
9/001	1	Topsoil	-	26	Medieval Roof tile, C12th-C14th.	1
26/001	1	Topsoil	-	18	Post-medieval Peg tile C17th-C19th	2
29/001	1	Topsoil	-	18	Roman, possible Tegulae	6
41/004	1	-	4.III	78	Undated Brick	10
45/001	3	Topsoil	-	116	Residual Roman brick, post-medieval tile C17th-C19th.	3,6
47/001	1	Topsoil	-	22	Post-medieval Tile C19th-C20th.	5
57/001	3	Topsoil	-	50	Undated Brick	9
57/002	2	Subsoil	-	120	Post-medieval Roof tile C17th-C19th.	4
59/002	5	Subsoil	-	222	Residual Roman Brick, Post-medieval tile C16th-C18th, undated brick fragment.	6,7,8
59/004	2	-	10	170	Roman Brick	12
59/008	1	-	4.III	<1g	Roman undiagnostic fragment.	6

Table 7: CBM by form, fabric and context from evaluation phase

Context	Count	Group	Period	Weight (g)	Form / date	Fabrics
1043	1	-	10	4	Undated Brick	10
1045	1	-	6.I	12	Roman Imbrex	6
1081	1	118	6.I	4	Undiagnostic, undated fragment	10
1082	3	-	6.I	122	Roman and Undated Brick	6,10
1132	10	116	6.I	340	Roman Brick	6
1194	2	Quarry Pit 125	6.I	288	Roman Brick	6
1195	2	Quarry Pit 125	6.I	964	Roman brick and undiagnostic fragment.	6
1218	1	Quarry Pit 125	6.I	4	Roman undiagnostic fragment.	6
8/012	1	Quarry Pit 125	6.I	36	Roman Brick	6

Table 8: CBM by form, fabric and context from area A1

5.13.4 *Area B2*

A moderate amount of Roman CBM was present in area B2 including *imbrex, tegula* and brick. A majority of the CBM was recovered from two pit features. Context [2056] and [2057] are fills of the same pit feature and a second pit contained fill [2063]. A single tegula fragment from context [2057] had two arc marks impressed in the upper surface. The quantity and type of CBM is suggestive of a Roman structure in the vicinity of area B2 though a greater concentration would be expected if a tiled structure was directly related to the features in area B2.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
2014	2	-	7.II	78	Roman Tile	6
2031	1	213	6.III	18	Roman Imbrex	6
2040	6	-	6.III	294	Roman brick, tile, imbrex and tegula	6,12
2042	11	-	6.III	130	Roman tile and brick and undated brick and undiagnostic fragment.	6,8,10
2046	1	214	6.III	50	Roman Tile	6
2056	49	-	7.II	2366	Roman Imbrex, tile, brick, tegula and undated brick.	6,9,8,10, 16
2057	27	-	7.II	1532	Roman tile, brick, tegula and undated brick and tile fragments.	6,8,11,12
2063	6	206	6.I	1888	Roman Brick, Roman Tegula and tile.	6
2112	1	211	6.III	174	Roman Imbrex	6
2128	4	-	10	164	Roman tile and tegula and intrusive post-medieval Pipe, C18th-C19th.	4,6
2132	4	209	6.III	194	Undated Brick or burnt mud brick and small brick or tessera fragment.	6, 18
2158	1	210	6.III	164	Roman Tegula	6
2195	2	201	4.IV	16	Roman undiagnostic fragment and undated Brick fragment.	6,10
13/014	1	-	10	72	Roman Brick	6
14/005	12	-	10	702	Undated Brick	11

Table 9 CBM by form, fabric and context from area B2

5.13.4 *Area C3*

No CBM was recovered from this area during the excavation phase. Context [18/007] from the evaluation phase contained three fragments of post medieval CBM.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
18/007	3	-	10	538	Post-medieval brick Brick and field drain. C17th-C19th.	4, 11

Table 10: CBM by form, fabric and context from area C3

5.13.5 *Area E5*

A total of 3 fragments of CBM were recovered from both phases of investigation with both post-medieval and Roman fabrics present.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
5077	1	508	5.I	6	Post-medieval tile, C16th-C17th.	2
20/006	1	-	10	214	Post-medieval Peg tile C17th-C19th.	2
20/011	1	509	6.I	56	Roman Brick	12

Table 11 CBM by form, fabric and context from area E5

5.13.6 *Area F6*

Ditch fill [6027] contained post-medieval tile and a possible fragment of pipe or tile with cream colour slip.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
6027	2	-	10	48	Post-medieval tile, C16th-C17th. Pipe/Tile.C19th-C20th.	7,14
6035	1	-	10	2	Undated Brick	10

Table 12 CBM by form, fabric and context from area F6

5.13.7 *Area H8*

Excavation area H8 yeilded a small quantity of Roman CBM. There is insufficient CBM to suggest a structure within area H8, though the material may have originated from the possible Roman settlement to the north of the area.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics
8025	1	-	6.I	20	Roman Tile	6
8046	1	825	6.I	218	Roman Tegula	6
8100	6	818	4.IV.ii	38	Undated Brick	11
8104	1	-	6.I	114	Roman Tile	6
8115	1	820	4.IV.iii	10	Undated Brick	10
8124		818	4.IV.ii		Sandstone fragment only.	
34/004	1	825	6.I	28	Roman Tile	6
34/007	1	824	6.I	102	Roman Tile	6
36/002		-	10		Sandstone fragment only.	

Table 13 CBM by form, fabric and context from area H8

5.13.8 *Area I9*

Floor foundation deposit [9036] contained the greatest quantity of CBM from area I9 though there is insufficient to suggest Roman building activity.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
9001	3	Subsoil		94	Roman tile, Undated Brick and Post medieval tile C16th-C17th.	6,7,10
9036	8	905 Kiln Floor foundation	6.I	1126	Roman Brick and tile.	6
9047	2	906 Quarry Pit	7.I	370	Roman Brick	6,12
9155	1	905	6.I	22	Roman Imbrex	6

Table 14 CBM by form, fabric and context from area I9

5.13.9 *Area J10*

Area J10 contained fragments of post-medieval tile most likely introduced by ploughing activity in the area. Post-medieval tile from context [10298] consists of two unusual forms in fabric 13. A single fragment of valley tile and an unusual fragment of possible pantile with a tight curve were present (see post-medieval fabrics). A small amount of Roman material was also present.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
10059	2	-	8.II	40	Roman Brick and Tile	6,12
10060	6	-	8.II	80	Residual Roman Tile and imbrex, Post medieval peg tile C16th-C17th and modern brick fragment.	6,7,15
10134	1	1003	5.III	74	Undated Brick	8
10155	2	1004	5.III	156	Roman Brick	6
10199	1	1008	6.II	264	Roman Brick	6
10297	3	1012	8.II	62	Post medieval Tile C16th to C19th.	4,7
10298	2	1012	8.II	178	Post medieval Tile C18th-C19th?	13
10176	3	1012	8.II	448	Roman Tile and undated brick fragments.	6,10,17
60/008	2	1006	5.III	50	Post-medieval tile, C16th-C17th.	7
61/004	1	-	10	90	Post-medieval roof tile C17th-C18th.	3
61/014	1	1011	6.II	2	Roman Tile	6

Table 15 CBM by form, fabric and context from area J10

5.13.10 *Area K11*

A single fragment of Roman tile was present in pit fill [11026] and may be residual to the context.

Context	Count	Group	Period	Weight (g)	Form and date	Fabrics present
11026	1	-	6.I	12	Roman Tile	6

Table 16 CBM by form, fabric and context from area K11.

5.13.11 *Summary of fabrics and form*

5.13.11.1 *Roman Fabric*

Contexts: [48], [1045], [1082], [1132], [1194], [1195], [1218], [2014], [2031], [2040], [2042], [2046], [2056], [2057], [2063], [2063B], [2112], , [2158], [2195], [8025], [8046], [8104], [9036], [9047], [9155], [10059], [10155], [10199], [10176], [11026], [8/012], [13/014], [20/011], [34/004], [34/007], [59/008], [61/014]. Contexts containing residual Roman material: [2128], [9001], [10060], [59/002], [29/001], [45/001], [59/004]. Context containing intrusive Roman material: [2132]

Roman CBM was recovered from 45 contexts, the Roman material was residual to seven of these contexts. A majority of the material came from two contexts within the same pit feature, [2056] and [2057]. Roof tiles, *tegulae* and *imbrices*, and brick are represented within the assemblage, no complete examples were present. The main fabric type is fabric 6, an orange fine sand tempered fabric with sparse fine quartz grain inclusions. Fabric 16 appears to be a higher fired version of fabric 6. Fabric 12, a brick fabric, is poorly mixed with cream silty banding. Fabric 18 occurs infrequently in the assemblage and has a greater frequency of quartz inclusions. The fabrics could not be compared with other fabric from the region and dating was limited to the broad category of 'Roman', further refining of dates was not possible.

Fabric 6: Orange fine sand tempered fabric with sparse fine quartz grain inclusions. Roman.

Fabric 12: Reddish orange, fine sand tempered, poorly mixed fabric with cream silty banding and sparse coarse iron rich inclusions. Roman.

Fabric 16: Orange, high fired fine sanded tile with sparse calcareous inclusions. Roman.

Fabric 18: Orangish brown, medium sand tempered fabric with abundant fine quartz inclusions and moderate calcareous inclusions. Roman.

Signature arc marks were present in two *tegula* fragments, both in fabric 6. A single arc was present on a fragment from [2040] and a double arc was present on a fragment from [2057]. These are common to *tegulae* and are most likely impressed with a finger whilst the clay is still soft (Broadribb 1987). The abraded upper surface of a brick fragment from context [59/002] suggests it had been used, or re-used, as a floor tile.

Context [2132] contained a single, broken, possible tessera or small brick of fabric 6 measuring 23mm in thickness, reducing in width from 52mm to 42mm and is a tapered rectangle shape and broken off at one end. Also from this context were two undated conjoining pieces of brick or possible burnt mud brick. The small brick or tessera fragment may be intrusive to this context.

5.13.11.2 *Medieval Fabric*

Contexts: [9/001] residual.

A single abraded fragment of medieval glazed peg tile (Fabric 1) was identified from the plough soil of test pit 9 ([9/001]) and is 14th to 15th century in date. The fragment is likely to be residual to the context.

Fabric 1. Orange, fine sand tempered fabric with reduced core and occasional coarse quartz and calcareous inclusions. Glazed on one surface. 14th - 15th centuries AD.

5.13.11.3 *Post-Medieval Fabric*

Contexts: [2128], [5077], [6027], [9001], [10297], [10298], [18/007], [20/006], [57/002], [59/002], [60/008], [61/004].

Context containing residual post-medieval material: [10060], [26/001], [47/001]

A majority of the post medieval material was represented by fragments of peg tile with two examples of ceramic pipe or field drain. No complete examples were present in the assemblage. One peg tile fragment from context [10060] of fabric 7 contained two surviving peg holes, 50mm apart and between 7 and 12 mm from the upper edge of the tile. Where thickness could be established, peg tile thicknesses ranged between 5 and 14mm and fragments of ceramic pipe ranged in thickness between 10 and 18mm. No meaningful data regarding tile thickness by fabric type could be drawn due to insufficient quantities of each fabric type. Peg tile fabrics 2 and 7 were broadly similar and both thought to date from the 16th to 17th century AD. Fabric 3 was a poorly mixed fabric containing abundant calcareous material and dated to the 16th to 17th century AD. Fabric 4 contained sparse calcareous inclusions and quartz and had more regular surfaces than the earlier fabrics and dates to the 18th or 19th century AD. Fabrics 5 and 14 are late post-medieval to modern in date and contain a higher abundance of inclusions and are each represented by a single fragment. Fabric 5 is a probable machine made roof tile fragment and fabric 14 is fragment of pipe. Fabric 13 is a typical Kentish fabric and represented by two fragments from context [10298]; a fragment of pantile with an unusually tight curve and an incomplete valley tile with an obtuse angle bend on one side and white surface. The possible pantile dates the 17th century AD, AD1630 onwards, and the valley tile is 19th century AD in date.

Fabric 2: Orange, fine sand tempered, high fired fabric with reduced core. Sparse coarse quartz inclusions. Unglazed. 16th - 17th centuries AD

Fabric 7: Orange, fine sand tempered fabric with moderate coarse quartz and red iron rich inclusions. 16th - 17th centuries AD

Fabric 3: Orange poorly mixed fabric with fine silt bands and abundant calcareous inclusions. 17th - 18th centuries AD

Fabric 4: Orange, medium sand tempered fabric with sparse calcareous and quartz inclusions. 18th - 19th centuries AD

Fabric 5: Pinkish orange, medium sand tempered fabric with abundant coarse calcareous inclusions and sparse slag inclusions up to 2mm. 19th - 20th centuries AD

Fabric 14: Orange, medium sand tempered fabric with frequent coarse calcareous and iron rich inclusions. Sparse coarse rose quartz and large calcareous inclusions up to 2mm also present. 19th - 20th centuries AD

Fabric 13: Pinkish orange, fine sand tempered fabric with abundant fine to coarse calcareous inclusions. 17th - 20th centuries AD

5.13.11.4 *Modern Fabric*
Contexts: [10060]

A single fragment of modern brick was present in context [10060]. The context also contained Roman and post-medieval CBM.

Fabric 15: Pink, coarse textured fabric with moderately frequent silt balls. Modern.

5.13.11.5 *Undated Fabric*
Contexts: [17], [1043], [1081], [1082], [2042], [2065], [2057], [2195], [6035], [8100], [8115], [9001], [10134], [10176], [14/005], [41/004], [57/001], [59/002].

Undated fabrics comprised of mostly brick or undiagnostic small fragments with a single tile fragment in fabric 8. The undated material was abraded and fragmentary. Fabric 18 occurred in context [2132] and may be an example of burned mud brick.

Fabric 8: Pinkish orange, poorly mixed fabric with clay marbling and occasional iron rich inclusions. Undated.

Fabric 9: Orange medium sand tempered brick fabric, high fired with abundant quartz and sparse iron rich inclusions. undated

Fabric 10: Orangey-red, medium sand tempered fabric with occasional quartz grains and sparse iron rich and calcareous inclusions. Undated though possibly Roman based upon close association with other Roman fabrics.

Fabric 11: Orangey-red, medium sand tempered fabric with frequent voids and sparse geological inclusions up to 20mm and burnt coarse calcareous inclusions. Undated.

Fabric 17: Orange, medium sand tempered porous fabric with frequent silt balls and moderate coarse iron rich inclusions. Undated.

Fabric 18: Brownish-orange fabric with frequent voids, sparse geological inclusions up to 20mm and sparse burnt calcareous inclusions up to 6mm. Possible burnt mud brick.

5.13.12 *Conclusion*
The ceramic building material ranges in date from Roman to modern. A majority of the material is fragmentary Roman brick, *tegula* and *imbrex,* with two examples of signature marks in *tegula* fragments. It has not been possible to more closely date the fabric types identified from the areas. None of the excavation areas yielded sufficient CBM to suggest an *in situ* tiled building

though the quantity recovered from area B2 suggests this area has the closest proximity to such a building.

The post-Roman assemblage is represented by a single medieval glazed peg tile sherd and some post-medieval peg tile, ceramic pipe and brick. This assemblage was fragmentary with no complete brick or tile examples.

A large quantity of undatable CBM was present and mostly comprised of small brick fragments and a single tile fragment. Context [2132] contained a possible sample of un-dated burned mud brick.

5.14 **The Cremated Bone** by Lucy Sibun

Cremated human bone was recovered from three urned cremation burials [2170], [2180] and [2208] dating to Roman Period 6.I, 1st and 2nd centuries AD. All three burials were disturbed or truncated to varying degrees: the least disturbed was [2180], within vessel [2181] which had lost its rim, [2208], (vessel [2202]) was broken and had lost its rim, and [2170] (vessel [2169]) was heavily truncated.

Vessel [2202] was subjected to careful recording and excavation in spits of approximately 20mm. Bone fragments were collected per spit and accurate plans drawn at each stage of the excavation. The excavated fill underwent flotation and all additional bone fragments recovered have been included in this assessment. The remaining cremation deposits were collected and processed as environmental samples and sieve fractions of 2-4mm and >4mm were recovered.

The assessment of this material was undertaken according to standard guidelines (McKinley 2004). The total of weight of each cremation deposit was established. Each assemblage was then examined to record the degree of fragmentation and fragment colour. The presence and weight of fragments from all skeletal areas (skull, axial skeleton, upper limb, lower limb) was noted. The potential of each assemblage to yield demographic or other information was then considered.

All recognisable finds were removed during the processing stage but the material was scanned for the presence of possible staining on bone or for animal bone.

5.14.1 *Results*

The table below summarises the results of the analysis.

	WEIGHT (grams)						**AGE**	**SEX**	**IDENTIFIABLE**			
	Fragment size (mm)					**Total (g)**			**S**	**A**	**U**	**L**
	0-4	**4-10**	**10-20**	**20-30**	**>30**							
2170	3.7	83.2	25.6	12.7		**125.2**	A?	?	Y	Y	Y	Y
2180	37.1	334	492.9	87.2	113.1	**1064.3**	A	?	Y	Y	Y	Y
2208	106.4	439.8	319.2	256.9	23.8	**1146.1**	A	?	Y	Y	Y	Y

Table 17: Summary results of cremated human bone analysis.

(S= skull, A = axial, U= upper limb, L = lower limb)

The largest quantity of cremated bone recovered was 1146 grams from [2208], closely followed by [2180], which produced 1064 grams. The least bone was recovered from [2170] which produced only 125 grams, probably as a result of the heavy truncation it had suffered.

From the initial assessment it would appear that each cremation deposit contained the remains of a single individual, with no repeated elements noted. Identifiable fragments were present in all three burials, at least to the level of skeletal area.

Due to the high degree of fragmentation, fragments enabling age at death to be confidently established were not present in [2170]. For this individual the estimation as a probable adult is based upon size alone. Despite the large quantity of cremated bone recovered from [2208] and [2180] there were no sexually diagnostic fragments identified. This is probably a result of the degree of fragmentation in each case. No evidence of pathology was noted on any fragments.

Cremation burials [2208] and [2180] were almost completely calcined with 95% of fragments an off-white colour. The remaining 5% of fragments, which included the only tooth roots recovered, were either charred black or blue/grey. Those fragments recovered from [2170] were 100% calcined. No animal bone or other intrusive material was noted in the assemblages.

5.15 **The Animal Bone** by Gemma Driver

Areas A1, B2, H8, I9, J10 and K11 produced 676 fragments of animal bone from 31 datable contexts. The six areas will be analysed separately. The bone from these sites falls into two chronological assemblages. Assemblage 1 includes contexts dated from the late Bronze Age to the Late Iron Age and Assemblage 2 includes Roman contexts dated AD50-400. Areas A1, H8, I9, and J10 produced very small quantities of animal bone and the fragments were generally small and weathered. Area B2 produced the largest quantities and the fragments were in a better state of preservation with a greater number being identified to species level. This indicates that area B2 was an area of more intense animal husbandry presumeing that all six areas were subject to similar taphonomic activities.The bone from all six areas came from ditch and pit fills.

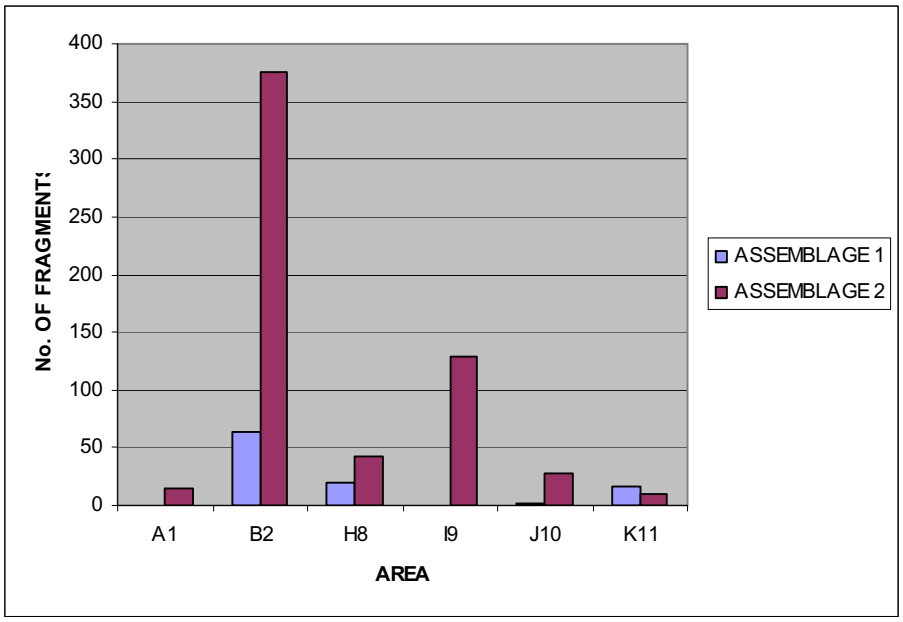

Table 18 Graph showing the number of fragments recovered from each area.

Wherever possible bone fragments have been identified to species and the skeletal element represented. Though the majority of the areas produced very small assemblages, bone from area B2 will produce NISP (Number of Identified Specimen) counts. The NISP totals will include all skeletal elements such as skull fragments, ribs and vertebrae. The elements have been recorded according to the part and proportion of the bone present. The assemblages were not large enough to produce counts for the MNE (Minimum Number of Elements) or MNI (Minimum Number of Individuals).

Epiphyseal fusion was recorded and subsequently interpreted using data provided by Silver (1969). Dental wear will be recorded using Grant's system (1982) and measurements were taken using methods outlined by Von Den Driesch (1976). Each fragment will then be studied for signs of butchery, burning, gnawing and pathology.

5.15.1 *Species Representation*
Area B2 produced the largest assemblage. Assemblage 1 bone included cattle (*Bos Taurus)*, sheep/goat (*Ovis*/*caprid)* and horse (*Equus caballus)*. Assembalge 2 included bone fragments from cattle (*Bos Taurus)*, sheep/goat (*Ovis*/*caprid)*, pig (*Sus scrofa*), horse (*Equus caballus)*, and deer (*Cervus)*.

Area I9 produced 129 fragments attributed to Assemblage 1. As well as cattle and sheep, dog (*Canis familliaris)* bones were also recovered from context [9047]. Also of note is context [8276], Period 6.I, from area H8 which contained the articulated remains of a juvenile pig skeleton.

5.15.2 *Body Part Data and Age Data*
Area B2 produced the largest assemblage though, due to the fragmentary nature and small size of both assemblages 1 and 2, there is little body part or age data available.

The assemblage 1 bone from area B2 consisted mainly of teeth and mandible fragments. This is more likely to be due to taphonomic factors than butchery practices. A small number of fused ends were recovered from [2132], GP203, Period 6.III, and include proximal cattle humerus and tibia and proximal horse metapoidal. The lack of juvenile bones and high number of teeth are likely to be due to taphonomic factors than selective husbandry practices.

The assemblage 2 bone from area B2 contains both meat bearing elements, such as humerus and femur, and skeletal extremities such as metapoidals and phalanges. There is a lack of juvenile bones though this is likely to be due to the fragmentary nature of the assemblage.

Context [8276], area H8 produced an articulated juvenile pig skeleton dated to the 1st and 2nd centuries AD. Although the bone was in a poor condition, the animal was identified through the presence of a complete patella and a small fragment of mandible. The remaining assemblage consisted of rib fragments, unfused epiphysis and long bone fragments. The presence of an unfused proximal humerus epiphyses ages the animal to less than three years (Silver 1969).

5.15.3 *Contextual Analysis: Area B2*
The largest quantity of animal bone from within this period was derived from [2132]. The material was recovered from ditch GP203 dated to the late 3rd-early 4th centuries AD, Assemblage 1, and contains 49 identifiable fragments of cattle, cattle sized, sheep-sized and horse bone. The preservation of this context is relatively good when compared to the rest of the period. The presence of larger fragments allowed measurements to be taken on a complete horse metacarpal and a proximal horse metatarsal. The measurements are displayed in Table 19.

5.15.4 *Area I9*
Context [9047], GP906, Period 7.I, an early medieval quarry pit, contained the skeleton of a dog. Fused long bones, vertebra, mandible and cranial fragments were identified and are likely to represent a single, mature animal (Silver 1969). Measurements were taken on complete and complete ends of bones and are shown in Table 19.

5.15.5 *Area H8*

The survival of the juvenile pig skeleton from context [8276] suggests that the animal was purposefully buried and undisturbed and has some ritualistic significance

CONTEXT	DATE	SPECIES	ELEMENT	SIDE	MEASUREMENT
2132	Later MIA (c.150-50BC)	HORSE	MC	L	Bp 43.1mm, Bd 41.7mm. GL88mm
2132	Later MIA (c.150-50BC)	HORSE	MT	R	Bp 38.4mm
9047	Early Roman	DOG	HUM	L	Dp 32.5mm
9047	Early Roman	DOG	HUM	R	Dp 32.3mm
9047	Early Roman	DOG	HUM	L	Bd 27.2mm
9047	Early Roman	DOG	FEM	R	Bp 30.6mm
9047	Early Roman	DOG	TIB	L	Bp 29.7mm
9047	Early Roman	DOG	RAD	R	Bp15.4mm

Table 19 Bone Measurements.

5.15.6 *Environmental Samples*

A small amount of bone was recovered from bulk samples taken from all sites. 29 contexts produced just 56g of bone. The fragments are very small, less than 2cm, and unidentifiable. A number of contexts produced fragments of cremated animal bone, areas A1, B2 and I9, and teeth. These were unidentifiable to species.

6.0 OVERVIEW and SIGNIFICANCE OF RESULTS

6.1 The Stratigraphic Sequence

6.1.1 *Area A1*
The earlier prehistoric periods, Neolithic and LBA/EIA are represented by only sporadic activity and are only of minor significance.

The first time the landscape is systematically organised is during the MIA/LIA, with the digging of rectilinear field boundary ditches aligned north to south and east to west. Two possible east to west drove or trackways, GP100 and GP104, were also identified. These field boundary ditches were allowed to silt-up, but during the early Roman period, new field boundaries were established on more or less the same alignment. Contemporary to the Roman fields was quarrying for brickearth or clay probably relating to a nearby pottery manufacture. Combined with the evidence for later prehistoric and Roman field systems and the evidence for Roman pottery manufacture, these features can be considered as a group of local/regional significance. ORA1, to define and characterise the Roman occupation of the area, was achieved.

6.1.2 *Area B2*
The majority of the LBA/EIA activity and three Roman cremations were located on the hill crest. The late prehistoric is characterised by a possible enclosure and pits, and is of local significance. ORA2 to define the prehistoric occupation of the area was achieved.

The Roman cremations were probably part of a larger urn field, and were located, like the prehistoric ring ditches of area E5 and the watching brief Plot 0.13, on a hill crest with views over the River Medway. The presence of fuel ash slags and only a small quantity of charcoal recovered from the environmental samples suggests that the bones were selected from the cremation pyre before being placed within the vessel and charcoal was either excluded or, given the presence of ash slag, the fuel wood was almost entirely burnt leaving calcined bone only.

Roman field boundary ditches, aligned north-east to south-west and north-west to south-east, were seen across the area and included a late Roman timber building, possibly a workshop, located in the corner of a field. This building was of an unusual sub-rectangular plan and late Roman buildings are not well represented in north Kent.

The large water-hole was dug through the silted-up field boundary ditches and the burnt-down building and clearly indicated a change in land-use. The pit may have been originally excavated as a clay-extraction pit for pottery manufacture and then subsequently utilised as a water-hole. The tripod superstructure could have related to either or both of these uses.

The cremations, field system, building and water-hole features, as well as the pottery assemblage are considered of regional significance.

The possible early medieval pottery, recovered from the upper fills of the water-hole, suggest waste dumping from a nearby settlement. The scarcity of these finds from stratified excavations makes these of local/regional importance.

6.1.3 *Area C3*
The few MBA pits and LBA field boundary ditches are considered only of minor significance. ORA3 to define and characterise the occupation of areas C and D was achieved. There was no relationship between the sites.

6.1.4 *Area D4*
No archaeological features were identified in this area.

6.1.6 *Area E5*
The LBA/EIA field boundary ditches and features are only of local significance. The potential LBA/EIA ring ditch is of regional significance and appears to be part of the prehistoric and Roman trend for establishing funerary monuments on or near hill crests overlooking the River Medway.

The MIA/LIA pits are of minor significance. The ditch/quarry is potentially more significant if this perhaps relates to near by pottery manufacture. Equally the LIA and Roman pits and ditches are of minor significance but do add group value to the overall significance of the organised landscape. ORA4 to date, define and characterise the occupation of area E5 was achieved.

6.1.7 *Area F6*
Sporadic activity in the area is suggested by the scatter of small pits of Neolithic to Roman date excavated. The LBA and Roman field boundary ditches followed the usual rectilinear alignment of north-west to south-east and north-east to south-west. These features are considered to be of local significance.

The Iron Age curvilinear ditch was not a ring ditch and its function is uncertain. This feature may have been related to field boundaries or a small hill-top enclosure. This feature is similarly regarded as of local significance. ORA5 to define and characterise the prehistoric activity of area F6 was achieved. The potential ring ditch was found to only be a curvilinear feature with no apparent funerary function.

6.1.8 *Area G7*
The Roman field boundary ditch is only of minor significance. ORA6 to characterise and identitfy any occupation was to a limited extent, achieved.

6.1.9 *Area H8*
The scatter of excavated Neolithic/EBA features suggest only sporadic activity and are of minor significance.

The most significant aspect of the site is the LBA/EIA enclosure with apparent posts in linear alignments flanking the entrance. The relatively large amounts of briquetage recovered from the features in the vicinity of the enclosure suggests it may have been a focus for salt-production although it is not located particularly close to any apparent source of salt-water. The later LBA/EIA phases represent changes to the use of the landscape with the abandonment of the enclosure and the division of the land into fields. Possible quarrying is again of significance if it can be potentially related to nearby pottery manufacture. Overall the features of this period are of local/regional significance. ORA7 to define and characterise the prehistoric occupation was achieved.

The large Roman ditch is unusual and is perhaps better understood as a linear quarry pit. This and the scatter of other Roman pits and ditches are of local significance.

6.1.10 *Area I9*

This area appears to have been on the northern edge of a series of enclosures, extending south beyond the site towards Cliffe Woods. The earliest enclosure is MBA/LBA, which is replaced or perhaps augmented by a parallel LBA enclosure.

The enclosure is out of use by the Iron Age, when field boundaries are established. This land-use continues into the Roman period with a re-cutting of the Iron Age ditch and the construction of a corn-drying kiln.

The corn-drying kiln was initially thought to be a pottery kiln, mainly due to the presence of such kilns in the next field (Catherall et al, 1983). However, the archaeomagnetic dating on this kiln failed as it had not fired to a sufficiently high temperature, strongly suggesting a lower temperature function than the firing of ceramics. The kiln also had a flat floor, lacked a central pedestal and fire bars to separate the upper pottery chamber from the lower furnace chamber. Furthermore, no kiln wasters, fire bars, slabs or even a moderate amount of Roman pottery was recovered from the site.

The corn-drying kiln is indicative of organised cereal farming and suggests a move towards agricultural specialism.

The early medieval quarry pit/ditch was probably originally dug for clay in the Roman period for supplying the pottery kilns immediately to the north-west (Catherall et al, 1983) [. Like the water-hole in area B2, this large feature filled gradually over the centuries, with the upper fills dating to the early medieval period. The brooch find indicates sporadic activity in the near vicinity. This feature is of local significance.

The 13th century AD enclosure is located on the site of the Bronze Age enclosure, although this must be coincidence as no evidence it could have survived. The enclosure is of note, and may relate to the early occupation of the village of Cliffe Woods immediately to the south.

Overall, the features from this area are of local/regional significance.

6.1.11 *Area J10*

The tentatively dated Mesolithic and Neolithic pits are potentially of great interest, as this period is only represented by residual artefacts elsewhere on the pipeline and cut features of this date are rare. However, it must be re-iterated that the dating of these features is very tentative, and is based on no more than a couple of flintwork finds. The amount of residual worked flints suggest the occupation in the vicinity of, or on the ridge during the earlier prehistoric periods.

The LIA and early Roman field boundary ditches were rectilinear and aligned north-east to south-west suggesting an element of continuity. The possible early Roman enclosure was probably related to this field system.

The later Roman landscape reorganisation appeared to be motivated by the start of pottery production in the immediate environs. Three kilns were excavated at in the next field to the north-east of the area (Catterall et al, 1983). The Period 6 features, including enclosure and boundary ditches dating to the 2nd - early 3rd centuries AD, contained possible kiln waste of pottery, oven slabs and oven bars. In this broader context, these features can be considered of local/regional significance. ORA8 to define and characterise the nature of Roman industrial activity of areas I9 and J10, and to undertstand the extent the areas may be linked has been achieved. Pottery manufacture and corn processing were being undertaken either on these sites or in the near vicinity. Clay-extraction for supplying the potteries was identified in areas I9 and K11.

The medieval finds from the late medieval/post-medieval field boundary ditches suggest they may have been originally dug in the medieval period and survived as boundaries into the 18th - 19th centuries AD. These features could be related to the medieval enclosures identified in areas I9 and K11, to the east and west.

6.1.12 *Area K11*

The LIA field boundary ditch is of minor significance. The Roman quarry pit is indicative of nearby pottery manufacture in the vicinity, and in association with the other evidence, including the presence of known kilns to the east, is of local/regional significance.

The medieval enclosure is tentatively dated and due to its relative scarcity is potentially of local/regional significance. This feature appears to have been part of wider medieval farming/activity also identified at areas I9 and J10, north of the villages of Cliffe Woods and Higham.

6.1.13 *Watching Brief and Other Features*

The LIA/early Roman ring ditch in Plot 13 is of local and regional significance. The other features from the watching brief and from outside of the mitigation areas are of local significance.

6.2 Prehistoric and Roman Pottery by Anna Doherty

6.2.1 *Area A1*

The later prehistoric assemblage holds little potential for further work, but the illustration of vessels, from contexts [1088] and [1091], both Period 5.I, is recommended

The LIA and Roman assemblage is small but has some potential for exploring important research questions about the nature of interaction in and around the Thames estuary (Williams and Brown 1999, 3.1.4, 26). The limited evidence from the pottery on area A1, could suggest that, at least until the late 1st century, AD transport and trade links overland were less established than those by sea. The only large group, from ditch fill [1247], GP111, Period 5.I, appears to have been filled in the Hadrianic period but contains slightly mixed earlier Roman dating and so is not considered suitable for illustration and further analysis

6.2.2 *Area B2*

Our understanding of the basic chronology of PDR pottery from outside the Thames Valley is poor, and this is especially true of west and central Kent (Champion 2007 296-297) and for this reason the assemblage is certainly of regional significance.

Unfortunately no carbonised residues suitable for C14 radiocarbon dating are present on the sherds and there is a low potential for obtaining other C14 radiocarbon dates for any of the contexts containing large pottery groups.

Because this assemblage was recorded simultaneously with the pottery from area H8, it provides a good opportunity to compare the two assemblages closely. Area H8 has a relatively small number of feature sherds so the most practical way to achieve this may be to plot fabric groups and look for spatial patterning in their distribution.

There are a number of large groups suitable for illustration and further discussion at the analysis stage, many of which contain large fresh sherds including some partially complete vessels, possibly indicating some form of primary or structured deposition. Particularly of note are: PDR groups from contexts [2073] (GP203, Period 4.IV), [2099] (Period 4.IV), [2154] (GP217, Period 4.IV) and [2171] (GP201, Period 4.IV); early Iron Age group [2195] (GP201, Period 4.IV) and residual middle to late Iron Age group [2132] (GP209, Period 6.III). The PDR groups are also associated with substantial fired clay assemblages which should be taken into account in the discussion at the analysis stage.

The Roman assemblage is of clear regional importance. Further research on the nature of the Romano-British pottery industry of the north Kent/Thameside industry has been identified as a specific research aim for the Thames estuary region (Williams and Brown 1999, 3.5.1.10). Although no direct evidence of pottery production was recovered from the site, the fairly distinctive fabric associated with a clear repertoire of forms, which is concentrated in pit [2058] (Period 6.IV) strongly suggests that kilns may be located in the immediate vicinity. As this ware may be recognised in other local assemblages it is recommended that this group be illustrated along with the cremation group from [2200] (Period 6.I).

Recent research agendas have also emphasised the need to understand the relationship between villa estates in the River Medway and Darenth valleys and landscapes devoted to industrial processes such as salt-working and pottery production in the Thames estuary (Williams and Brown 1999, 3.6.1.2). Further work could therefore include comparing the pottery with published villa assemblages to try to establish similarities and differences in supply and distribution and/or status and function.

6.2.3 *Area C3*

This assemblage holds very little potential for further analysis and no further work is required although the rim sherd from context [3030] (Period 4.I) should be illustrated

6.2.4 *Area E5*
The small size and lack of diagnostic material from this site means that this assemblage holds little potential for further analysis.

6.2.5 *Area F6*
The small size and lack of diagnostic material from this site means that this assemblage holds little potential for further analysis.

6.2.7 *Area G7*
The small size and lack of diagnostic material from this site means that this assemblage holds little potential for further analysis.

6.2.8 *Area H8*
The later prehistoric assemblage is clearly of regional importance because of the large quantity of material, and because of the opportunity it provides for direct comparison with the assemblage from area B2 (refer to significance and potential section for the area B2 assemblage). There are several large groups but most of these contain only one or two illustratable rim sherds. For this reason it is suggested that further work on the assemblage might focus more on proportions of fabrics as, for example, the potentially earlier fabric FL1 is particularly concentrated in context [8054] (GP822, Period 4.IV.i), whilst the latest known LBA/EIA context, [8118] (GP801, Period 4.IV.i), has larger proportions of the fine-wares FL 4 and FL6. This could involve plotting of individual fabrics across all site features and/or selecting larger assemblages and comparing the relative proportions of all the fabrics within them in order to see whether any chronological or functional patterns emerge.

Two sherds from [8054] (GP822, Period 4.IV.i) and [8240] (GP818, Period 4.IV.ii) have carbonised residues with potential for C14 radiocarbon dating.

The small size and lack of diagnostic late Iron Age and Roman material from this site means that this assemblage holds little potential for further analysis.

6.2.9 *Area I9*
The small size and lack of diagnostic material from this site means that this assemblage holds little potential for further analysis.

6.2.10 *Area J10*
This is a small assemblage with relatively little diagnostic material and few large stratified groups. The only aspect of the assemblage which is highlighted as of some significance is the limited and indirect evidence that may suggest pottery production in the vicinity. Furthering our understanding of the north Kent/Thameside pottery industry has been highlighted as a research aim for the Thames Estuary (Williams and Brown 1999, 3.5.1.10). These groups could therefore be illustrated in the publication.

6.2.11 *Area K11*
This is a small assemblage which is probably only of local significance but one large group from [11026] (Period 6.I) may be illustrated and further discussed at the analysis stage

6.3 **Post-Roman Pottery** by Luke Barber

The assemblage is considered to hold mixed potential for further analysis. The ambiguous material from area B2 needs to be positively identified by C14 radiocarbon dating. The material is considered to be of significance whichever period it proves to be as the fabrics are unusual at the site. If the material proves to be of early medieval date it not only demonstrates activity at this time but, considering the small size of the assemblage, provides a very useful insight into the fabrics and forms in use for a period (and geographical area) which is notoriously bereft of material from domestic sites of this date. If the material proves to be of later Iron Age date then its presence will need to be interpreted in the light of the early Roman activity in the area and how the two relate.

The medieval assemblage demonstrates agricultural activity in the area throughout the 12th and 13th centuries AD and will help identify features associated with the medieval agricultural landscape. The pottery assemblage itself is too small to warrant any further analysis. The early post-medieval assemblage is very similar in that it demonstrates agricultural activity during the 16th to 17th centuries AD but is too small to warrant any further analysis. The late post-medieval assemblage is both small and in the main from unstratified deposits. As such it does not hold potential for any further study.

6.4 **Macrobotanicals and charcoal from environmental samples** by Lucy Allott

Areas A1, B2 and E5 located towards the eastern end of the pipeline route, areas F6, G7 and H8 in the middle and areas I9 and K11 to the west contain sufficient macrobotanicals and charcoal to merit some further analysis and quantification. Samples from areas C3 and J10 contain insufficient environmental remains to provide further information regarding the economy and vegetation environment or to further interpretation of the deposition events at these localities.

The evidence for agriculture and vegetation between the late Bronze Age and Roman periods for the Isle of Grain and its environs is scanty and this pipe line work provides an opportunity to examine evidence from across the region. On the whole samples from Bronze Age, Iron Age and in particular Roman deposits present the best potential for further analysis. The later medieval deposits were less numerous and therefore provide limited data for comparison with each other and with other sites in the region. Waterlogged and charred plant remains (Hinton 2004) from Damhead Creek Power Station, near Hoo St. Werburgh provide detailed data for cereals and non-cereal crops and fodder, the weeds associated with these crop plants as well as some evidence for natural vegetation in the immediate vicinity of the site. In addition charcoal and waterlogged wood specimens from the same site have provided evidence for woody vegetation habitats and woodland resources used for fuel and other purposes. The current pipeline sites are located on higher ground running east west along the Isle of Grain and should provide a contrast to the Damhead Creek site which is located further south on significantly lower and wetter ground. In addition the samples from the current pipeline work originate from agricultural locations as well as settlement localities and will provide evidence, not only for changes in agriculture, but also for domestic plant use and fuel use. In some instances this information will be limited as the quantities of

macrobotanicals and charcoal recovered are generally small. These sites may not provide rich information for single localities but nevertheless they will provide windows of information across the region as a whole and will assist in developing an image of the broader landscape.

6.4.1 *Vegetation Evidence*

Trees and shrubs identified in the charcoal assemblage provide evidence for wood being sourced from a range of vegetation habitats including deciduous woodland (oak, ash and hazel), more open woodland and perhaps hedgerows (*Prunus* sp. and Maloideae taxa) as well as providing evidence for damp ground associated with rivers or high ground water level (willow/poplar). The yew tree wood noted at area A1 is unlikely to have grown locally. It prefers lime rich and chalk soils more akin to the soils further west and south. Vegetation evidence provided by the macrobotancials is heavily skewed towards plants associated with crop production. There are however some taxa that may also indicate grassland vegetation such as buttercups as well as some, such as the sedges, that support the evidence for damper ground. Given that the sites are located on varying underlying geology, from river gravels in the east, through London clay deposits, to the Thanet beds in the west the analysis should aim to establish whether there is evidence in the macrobotanical assemblage for localised vegetation at each site. The analysis will also aim to establish evidence for change in vegetation through time. Currently clear differences between occupation phases are not apparent.

6.4.2 *Agriculture*

Macrobotanicals of both crop and weed seeds provide a predominantly arable agricultural signature. The samples provide evidence for several types of wheat as well as barley. They have the potential to help characterise changes in agriculture through time and across the region. It should be possible for example to establish whether there is evidence for a shift towards spelt wheat production during the Roman occupation as was observed at Damhead Creek power station (Hinton 2004) and also whether there is a later shift away from glume wheat towards free threshing wheat. From the results of the post excavation assessment the occurrence of emmer and spelt wheat is not clearly differentiated but fully sorting and identifying the chaff as well as the cereals will provide further data towards this aim. Samples from the corn-dryer/oven present good potential from comparison with literature (such as Van der Veen 1989) and other contemporary corn dryer features in the area. Contaminants of weed seeds are common within the grains and these together with the chaff will be used to help establish evidence for crop processing and the stages at which these assemblages became charred. There is some evidence for a limited amount of non-cereal crop production and also for fodder plants such as the vetch / tare however these are not frequent and do not appear to contribute significantly to the assemblages.

6.4.3 *Fuel Resources and Woodland Management*

Assemblages from the pits at area E5 provide the best potential for further charcoal analysis. It appears from the assessment of these samples that wood was being sourced from a range of vegetation habitats. Analysis of this assemblage will provide further information about these habitats. The assemblages from this site contain round wood and should be suitable to examine the evidence for woodland management and provide material suitable for dating.

Only a small proportion of the total charcoal fragments within these features have been assessed and further analysis is likely to reveal evidence for wood selection and perhaps woodland management. The charcoal assemblage from Damhead Creek Power Station, located approximately 1 mile to the south of area E5, contains a similar range of taxa (Gale 2004) and will provide a good comparison to the current assemblage. Several taxa such as gorse / broom (*Ulex* / *Cytissus* sp.) that were common in some of the Romano British assemblages from Damhead Creek (Gale 2004) have not yet been identified in this post-excavation assessment.

Samples from the cremations have unfortunately produced only small assemblages of charcoal and macrobotancial remains and they therefore present no potential for examining fuel used in the funerary process or the ceremonial use of plants. The presence of what has been interpreted as fuel ash slag is noteworthy and should be viewed by a metal work specialist to corroborate this interpretation.

6.5 **The Fired Clay** by Elke Raemen

Briquetage fragments were recovered from seven areas, with the majority coming from area B2. Three areas (B2, H8 and I9) contain pieces of mid to late Bronze Age date, with a further three areas (B2, E5 and H8) producing fragments of late Bronze Age to early Iron Age date. A small number of briquetage was recovered from contexts of later date, the latest being late Iron Age to early Roman. It is likely that these pieces are residual.

Of the early pieces, most are fairly small fragments and originate from pit or ditch fills. However, especially the pedestal fragments, which would not have travelled, indicate that salt was produced in the near vicinity of the site, mainly (or exclusively) during the late Bronze Age. As late Bronze briquetage assemblages are relatively scarce in north Kent, the current group merits further research. In doing this, it is recommended to focus on well-dated groups with little or no residual material. It is proposed to undertake a spatial analysis, to establish any concentrations of the material. In addition, material needs to be looked at in the wider context of the Thames Estuary, with a particular focus on nearby sites such as Hoo St Werburgh (Moore 2002).

Perforated clay slabs are as yet still an enigma. As stated by Bond in the Mucking report (Bond 1988: 39), as long as material is not found *in situ*, their function will remain difficult to establish. None of the pieces from the current site appear to have been found *in situ*. A relatively large number has been recovered; however, none of them are complete. Although it is unlikely their function will be established from an analysis of the assemblage, further study is still deemed necessary in order to contribute to the ongoing research. It is recommended to undertake a spatial analysis in order to establish any concentrations, as well as similarities in distribution pattern to the briquetage assemblage. In addition, it is proposed to establish the presence of fire-cracked flint as well as briquetage fragments for each (well-dated) context containing perforated clay slabs. A brief comparison to other Thames Estuary sites should be included as well, mainly establishing whether perforated clay slabs usually appear on sites containing salt production or transportation evidence.

More undiagnostic pieces cannot with certainty be identified as either daub, briquetage or oven furniture and it is therefore recommended to exclude them from publication. Further, the few wattle imprints are too isolated to be of any potential. The oven furniture fragments from area J10 however are the only pieces of this nature and although the exact related activity is not likely to be established, they do need including in the report for publication. The group of objects (RF <186>-<188>) associated with fire-cracked flint from area A1 may be of interest as well, despite the current lack in date. A closer identification of RF <186> is needed to establish whether this indeed is a tuyere, as this indicates the presence of a furnace nearby.

6.6 **The Glass** by Elke Raemen

The unusual association of the Roman glass vessel fragments with olive oil amphora [2169] (Period 6.I), indicating a possible ritual deposit, merits further research. It is recommended to investigate if similar correlations occur on other sites as well as to place the feature in the wider context of the site, with the aim of establishing whether the two vessels where purposively deposited.

Apart from providing dating evidence for otherwise undated contexts, the post-medieval glass is not considered to hold any potential for further analysis. The assemblage is too small and does not relate to the main occupation phases of the site.

6.7 **The Clay Tobacco Pipe** by Elke Raemen

The assemblage is small and does not relate to the main occupation phases of the site. Although there appears to be no other material dating evidence from ditch [10118], fill [10117], a date based on just one clay tobacco pipe stem fragment can be tentative, as pieces are often intrusive. The assemblage therefore does not warrant inclusion in the publication report or any further analysis.

6.8 **The Metalwork** by Elke Raemen

The assemblage is relatively small, with the vast majority recovered from the topsoil. As only nine iron nail fragments were recovered, a spatial analysis is superfluous. Most non-ferrous metalwork is of 19th to 20th century AD date and all non-ferrous pieces are unstratified, which means they do not contribute to the main occupation phases of the site. These are likely to have been spread over the fields during manuring in the past two centuries. They are therefore not considered to contribute any further information to the site.

6.9 **The Shell** by Elke Raemen

The assemblage is too small to provide any further information on the represented areas. Furthermore, a large proportion consists of land snails and/or was recovered from undated contexts. The assemblage is therefore not considered to benefit from further research.

6.10 **The Registered Finds** by Elke Raemen

Only a small number of finds are from stratified contexts. It is recommended to focus on these in the report for publication, as they contribute to the overall narrative of the site, i.e. the Roman coins shed more light on the Roman chronology of the site, whereas quern stones shed further light on the Roman activity.

The only early medieval find (RF <1>) needs further parallels, as brooches of this period are not often found outside cemeteries.

The majority of objects are unstratified. Medieval and post-medieval objects will have ended up in the topsoil through manuring, but could also reflect accidental losses. This sheds light on later activity on the site, which has on the whole left few archaeological features. Some objects, such as unstratified copper-alloy buckle plate with repoussé figural decoration RF <40>, particularly stand out and need further parallels.

6.11 **The Prehistoric Flintwork** by Chris Butler

Much of the assemblage is residual in later features, or present in individual features in small quantities, which makes it difficult to extract much further information about the functions and economies it represents.

6.12 **The Metallurgical Remains** by Luke Barber

The small assemblage of slag does not warrant any further analysis. Low quantities of slag are frequently found on Roman rural sites and simply represent sporadic domestic iron-smithing work. There are too few pieces of smelting slag present to reliably draw conclusions. The current site has not produced the quantity of slag one would expect if the process were undertaken on any 'industrial' scale. The slag from all other periods is either intrusive or present in insignificant quantities to warrant any further work.

6.13 **The Geological Material** by Luke Barber

The assemblage of geological material is small and is virtually exclusively composed of unworked stone that would have probably been natural to the site or available very close by. This is most notable for the prehistoric assemblage, which is not considered to hold any potential for further analysis due to lack of worked/modified pieces, limited range of types and absence of notable concentrations. The Roman material, although generally of similar stone types (excluding the German lava), is a little more interesting as it demonstrates the sources of quern supply, which appears to correlate well with those noted before on the Isle of Grain (Barber in prep). Local sources may have been tapped to provide basic materials for help in construction and early in the period, for quern production. The locally produced querns would have been notably inferior in their properties to the imported lava and it is unsurprising that the lava querns dominate the later contexts (though the current sample is unreliably small). The post-Roman and undated assemblages are not

considered to hold any further potential for analysis due to their small size, lack of dating or danger of containing residual material.

6.14 **Ceramic Building Materials** by Sarah Porteus

The fragmentary nature of the assemblage leaves little potential for typological comparison. The Roman material may be of use in a synthesis of fabric types from the local area should further sites become known. The material is of little significance beyond the research into the local area.

6.15 **The Cremated Bone** by Lucy Sibun

Despite the degree of fragmentation, a number of identifiable fragments were recorded in all three cremations. A study of the analysis results will enable the degree of fragmentation to be established. The percentage by weight of the fragments from each skeletal area can also be calculated. It is not thought that further examination of the material will result in more accurate age or sex estimates.

As a result of the careful excavation and recording of cremation burial [2208], it should be possible to look for any patterns of bone distribution within the vessel.

6.16 **The Animal Bone** by Gemma Driver

The bone from the environmental samples has no potential for further work due to its fragmentary nature.

Although the assemblage is relatively small it does provide enough data to carry out a small amount of comparative research. The areas of interest for comparison are the NISP counts and the horse and dog measurements. Further investigations can be carried out into the possible ritualistic aspects of context [9047] (quarry pit GP906, Period 7.I), area I9 and context [8276] (Period 6.I), area H8. This will include a closer examination of the feature and the surrounding site as a whole, as well as comparisons with similar assemblage from other Roman sites.

7.0 REVISED RESEARCH AIMS

7.1 This section combines those original research aims that the site archive has the potential to address with any new research aims identified in the assessment process by stratigraphic, finds and environmental specialists to produce a set of revised research aims that will form the basis of any future research agenda. Original research aims (ORAs) are referred to where there is any synthesis of subject matter to form a new set of revised research aims (RRAs) posed as questions below. The research aims are based, to a greater or lesser extent, on the South-East Research Framework developed by KCC (see KCC website).

7.2 ***General***

RRA1 How can these sites be related to the results of the field-walking and other archaeological sites identified in the Desk-based Assessment, and can detailed study of aerial photography of the Isle of Grain assist in unlocking the use of the landscape from prehistory to the present day as recorded in the narrow trenches of the fieldwork? In other words, can the provisionally phased plan data be better understood through the context of wider mapping of the area in various media, in order to assist in the interpretation of the findings of the excavation?

RRA2 Is there any evidence from the environmental samples from the field ditches for agricultural land-uses, such as arable or pasture? Can changes in the land-use be identified over time? Can changes of land-use be identified over the length of the pipeline? Is there contrasting activities between the lowland and upland areas?

RRA3 Is the amount of briquetage finds significant? Is salt-production potentially occurring at any of the areas?

RRA4 The overall field boundary systems from all the main periods were aligned north-east to south-west and north-west to south-east, despite the main topography of the Isle of Grain being an east to west aligned central ridge. Is there any reason for this apparent paradox?

RRA5 What was the nature of the 12th - 13th century AD medieval activity and can this be fitted into the wider the medieval background of the surrounding area?

RRA6 What was the nature of the late medieval/post-medieval activity and can this be fitted into the contemporary archaeology of the surrounding area?

RRA7 How does the environmental evidence compare to the Damhead Creek site, located further south on significantly lower and wetter ground? How do these sites compare with other local archaeological excavations, such as at Wainscott, Cliffe, Hoo St Werburgh and the A228? What changes in agriculture can be discerned between periods and areas? How does the domestic plant and fuel use evidence compare between settlement and agricultural localities? How does this add to the environmental profile of the broader landscape?

RRA8 Can a profile of the localised vegetation be established for each area from the macrobotanical assemblage?

RRA9 Is there evidence for a shift towards spelt wheat production during the Roman occupation, as was observed at Damhead Creek power station? Was there also a later shift away from glume wheat towards free-threshing wheat?

RRA10 How do the samples from the corn dryer/oven compare with the published literature and other contemporary corn dryer features in the area?

RRA11 Are there any significant concentrations or spatial relationships between the finds locations of the fire-cracked flint and fired clay assemblages? How do these assemblages compare with the wider context of the Thames Estuary, and with nearby sites such as Hoo St Werburgh?

RA12 Is the lack of evidence of MIA settlement and activity a real absence or a a results of an analytical failure, such as imprecise pottery dating? If this is considered a real absence, can it be assumed that the Isle of Grain experienced a significant expansion of settlement and activity in the LIA?

7.3 ***Area A1***

RRA13 The frequency of MIA/LIA ditches perhaps suggests something more than just field boundaries. Is this site on the periphery of a potential settlement?

RRA14 Is Roman quarry pit GP125 likely to have supplied the pottery production centre identified near area B2 to the west? Are there any closer kiln sites in the vicinity?

RRA15 Does the limited evidence from the pottery on area A1 suggest that, at least until the late 1st century AD, transport and trade links overland were less established than those by sea?

7.4 ***Area B2***

RRA16 How does the pottery assemblage improve our understanding of the basic chronology of PDR pottery from the Hoo peninsula?

RRA17 Are there other Roman cremation sites in the vicinity? Are these similarly located on or near hill-crests over looking the River Medway in particular or rivers in general? Are these sites at risk from plough damage due to the potential lack of subsoil on hill-crests?

RRA18 Are there similar associations of the Roman glass vessel fragments with olive oil amphora in funerary contexts from other sites? Is this a ritual deposit, and if so, what is the significance of the glass vessel?

RRA19 Can the function or structure of the Roman building be further understood from the finds analysis? For instance, is there any environmental evidence for burnt thatch? Is there any comparable structures known in the wider region of a similar late Roman date? Is the sub-rectangular plan significant?

RRA20 Are there any comparable water-holes in the vicinity? Is there any other evidence for the location of the manufacture of the OXID2 fabric pottery?

RRA21 If the pottery from water-hole [2058] is of early medieval date, what insights does it allow into the fabrics and forms in use in the Hoo Peninsula? If

the material proves to be of later Iron Age date, then how does its presence relate to the early Roman activity in the area?

RRA22 Is there any other evidence for the location of an early medieval settlement in the vicinity of area B2?

RRA23 What light does the pottery assemblage throw on the nature of the north Kent/Thameside Romano-British pottery industry?

RRA24 How does this pottery assemblage compare with published villa assemblages and what differences in supply and distribution and/or status and function can be discerned? Are there any relationships between villa estates in the River Medway and Darenth valleys and the Thames estuary industries such as salt-production and pottery manufacture?

7.5 ***Area E5***

RRA25 What evidence do the charcoal samples from area E5 provide of woodland management? How does this compare to the charcoal assemblage from the Damhead Creek Power Station site, located approximately 1 mile to the south?

RRA26 (ORA4) What are the dates, distribution and location of ring-ditches on the Isle of Grain? Is there any significant concentrations or distribution patterns?

7.6 ***Area G7***

RRA27 (ORA6) What is the significance of the Roman pottery vessel rich in charred botanic remains interred in pit [63/004/7004]?

7.7 ***Area H8***

RRA28 (ORA7) What is the function of the LBA/EIA enclosure? Are there any comparable sites in the region?

RRA29 (ORA7) Is this site a focus for salt-production? If so, during which periods and where was the likely source of salt-water?

RR30 What species is the Roman animal burial? What is the significance of this practise and are there any regional parallels?

RRA31 Are there any chronological or functional patterns of the late prehistoric pottery fabric distribution?

7.8 ***Area I9***

RRA32 (ORA8) Are any other Roman corn-dryer kilns known from the Isle of Grain? Are these possibly related to a larger estate or *fundus*?

RRA33 What are the likely origins of early medieval quarry pit GP906? Is there any other early medieval activity in the vicinity? Are there any parallels for the brooch especially others found outside of cemeteries?

RRA34 Is there any other evidence for the MBA/LBA enclosure north of Cliffe Woods?

RRA35 Is there any other evidence for the 13th century AD medieval enclosure north of Cliffe Woods? Is this related to the origins of the existing village?

7.9 ***Area J10***

RRA36 (ORA8) Can a precise location of the Oakleigh Farm pottery kilns excavated in the 1970s be identified in relation to the Roman features?

7.10 ***Area K11***

RRA37 Is Roman quarry pit GP1101 most likely to have supplied the Oakleigh farm pottery kilns approximately 700m to the east? Are there any closer kiln sites in the vicinity?

8.0 METHODOLOGY: ANALYSIS and PUBLICATION

8.1 *The Stratigraphic Sequence*

The major tasks to be completed by the principal stratigraphic author at the next stage of analysis and to complete the publication are summarised in Table 22, resources required for analysis and publication.

8.2 **Prehistoric and Roman Pottery** by Anna Doherty

It is envisaged that the prehistoric pottery will be illustrated in the format of the large key groups from area B2 with a few additional illustrations of intrinsically interesting vessels from other areas. Overall this would total around 40 illustrations.

For the Roman pottery, an illustrated form type-series will be formulated for the project as a whole, in order to avoid duplication of common forms probably amounting to around 20-30 vessels. The fills of pit [2058] contain over 50 rimsherds, but, as many of these are duplicates of very similar forms, they will be selectively chosen for illustration. Up to 20 other vessels from other small Roman key groups, including the 5 vessels from the area B2 cremation group, may be illustrated dependant on space in the publication.

Preparation of quantification tables and finalising type-series/key groups for illustration Time required: **0.5 day**

For the later prehistoric assemblages (particularly areas B2 and H8) further reading and more detailed comparison with other relevant assemblages from Cliffe, Kingsnorth, Coldharbour Lane, Monkton Court Farm, Highstead as well as further discussion of similarities and differenced with assemblages from the Upper Thames Valley and Sussex Coastal plain Time required: **1.5 days**

Plotting the prehistoric fabrics from areas B2 and H8, and interpreting their distribution. Time required: **2 days**

Further research on the affinities of late Iron Age and early Roman fabrics to other areas of Kent and Essex, with particular reference to the assemblages from areas A1 and K11**.** Time required: **1 day**

A comparison of Roman pottery, particularly from the area B2 assemblage, with villa assemblages from the Darenth and River Medway valleys. Time required: **0.5 day**

Further analysis of key groups**.** Time required: **3.5 days**

The following groups have been highlighted as of particular regional significance: [2073], [2099], [2171] and [2058]

Contexts for illustration [2195], [2132], [2058], [2154], [10199] [10208], [10037]. Time required: **12 days**

8.3 **Post-Roman Pottery** by Luke Barber

All of the material has already been spot-dated and quantified by fabric during the assessment. This information, together with the above factual statement, can be used during the compilation of the site narrative. The ambiguous pottery from area B2 needs further analysis and C14 radiocarbon dating. Initially the material must be conclusively dated and it is proposed to submit a sherd with internal sooting from [2057] for carbon dating in the first instance. Whatever the date outcome, the material will be subjected to further analysis of form and fabric, with minimum number of vessels being calculated. All feature sherds are proposed for illustration (up to five sherds). A concise report on the material, describing the fabrics and forms will be produced for publication. This will draw in parallels (whether Iron Age or early medieval) from other relevant Kent/Essex sites.

Fabric/form analysis and description inc. parallels	**1 day**
Summary report (500-700 words)	**1 day**
(NB. LB or AD depending on C14 date)	
Illlustrations	**1 day**

8.4 **Macrobotanicals and charcoal from environmental samples** by Lucy Allott

8.4.1 *Area A1*

It is recommended that flots from eight samples are sieved and the macrobotanicals present are fully sorted, identified and quantified. Samples have been selected to provide evidence for changes in agriculture and vegetation from the late Bronze Age to the early Roman occupation. These include LBA/EIA samples <305, 307, 304>, MIA/LIA samples <311> and <312> and samples <308, 313 and 316> from early Roman 1st-2nd century occupations.

Further analysis of charcoal is also recommended for LBA/EIA sample <304>, early Roman samples <300>, <301>, and <308?> and for undated sample <303>. Charcoal from sample <303> should be analysed to establish whether Yew is the only taxa present as indicated by the assessment. If other taxa are present it may be possible to obtain material suitable for dating.

8.4.2 *Area B2*

Samples <216>, <222>, <223> from LIA/EIA deposits present the best potential for further work. These samples contain interesting macrobotanical assemblages and should be fully sorted, identified and quantified. No further work is recommended for macrobotanicals or charcoal from the MIA/LIA phase at area B2 however the possible fuel ash slag, noted in the cremation deposits, should be viewed by a specialist. Macrobotanicals present in samples <208> and <228> from 4th century AD Roman deposits provide some limited evidence for agriculture during and although further identifications are unlikely they should be identified where possible and recorded prior to publication.

The charcoal assemblage at area B2 is not particularly noteworthy and therefore only one sample from the Roman 3rd - 4th century AD is recommended for further analysis. Sample <201> from gully beam slot [2007] within the possible workshop building should be identified to establish whether the

charcoal present results from insitu burning of structural timbers as postulated on site.

8.4.3 *Area C3*
No further work is recommended for macrobotanical remains or wood charcoal from Area C3.

8.4.4 *Area E5*
No further work is recommended for macrobotanical remains from this site.

It is recommended that wood charcoal fragments from MBA/LBA sample <400>, LIA sample <401> and the undated pit samples <402, 403, 404, 405, 406 and 407> are analysed prior to publication. This analysis will aim to characterise the vegetation environment from which wood was collected by providing a detailed list of taxa present, and to examine the evidence for wood selection and woodland management. Charcoal suitable for dating should be selected from the undated, pit GP510, samples.

8.4.5 *Area F6*
Further analysis is recommended for sample <123> from Iron Age ditch feature [6049]. Although isolated, it is very rich in macrobotanical remains and will provide evidence for the range of wheat taxa and weeds present.

Further analysis is recommended for the charcoal from sample <123> which appears to contain a relatively broad range of taxa and includes some round wood specimens.

8.4.6 *Area G7*
Full analysis of macrobotanical remains in evaluation samples <Ev10> and <Ev15> should be undertaken.

No further charcoal analysis is recommended.

8.4.7 *Area H8*
Only a few of the individual samples contain rich archaeobotanical assemblages. It is recommended that macrobotanicals from LBA/EIA samples <506> and <522> are fully sorted, identified and quantified. Macrobotanicals present in sample <513> from the early Roman occupation should also be documented as they provide a contrast to those from the earlier occupation. No further work is recommended for the poorly preserved charcoal present at this site.

8.4.8 *Area I9*
It is recommended that macrobotanical remains from samples associated with the corn dryer are fully analysed. These samples include <111>, <112>, <113>, <116> and <122>. This analysis may also produce material suitable for dating.

Further analysis is also recommended for the small charcoal assemblage from sample <112> and charcoal from sample <122> from the corn dryer feature. A full analysis of these should help establish which taxa were targeted for fuel, the nature of the woodland from which they were collected and any evidence for woodland management. Many of the taxa identified are also suitable for radiocarbon dating.

8.4.9 *Area J10*
No further work is recommended for samples from Area J10

8.4.10 *Area K11*
Prior to publication it would be valuable to fully identify and quantify the macrobotanical remains within samples <600> and <601> to further characterise these early Roman 1st - 2nd century AD pit deposits. It is also recommended that the sediment profile of the quarry pit is gained from the column sample and the pollen assessed. There is insufficient charcoal in samples from area K11 to merit further analysis and identification.

8.4.11 *Watching Brief Samples*
Sample <155>, (109) contains a rich macrobotancial assemblage that could be characterised through further analysis. However the isolation of this feature (away from the ring ditch) and lack of dating evidence may hinder any detailed interpretation and therefore no further work is recommended.

8.4.12 *Evaluation Samples*
No further work is recommended for macrobotanical remains or wood charcoal from the remaining evaluation samples (Table 33, Table 44 and Table 45). Evaluation samples rich in botanical remains have been included in the main text body under the appropriate sites. One exception, sample <Ev1> from [ET45/004] is rich in charcoal however any further analysis of this will not provide significant information as this feature is isolated away from other archaeological features.

Time required:

Task	Estimated Time
Macrobotanical analysis	8.5 days
Macrobotanical reporting	2.5 days
Charcoal analysis	6.5 days
Charcoal Reporting	1.5 day
Dating samples prep. and reporting	1 day
Column assessment and reporting	4 days
Total environmental work	**24 days**

8.5 **The Fired Clay** by Elke Raemen

A spatial analysis will be undertaken for well-dated contexts containing briquetage fragments and/or perforated clay slab fragments, in order to establish whether there are any concentrations, as well as to potentially exclude some hypotheses on the function of perforated clay slabs. Both assemblages are too be to correlated.

The briquetage assemblage needs to be compared to other late Bronze Age saltworking sites in the Thames Valley in order to establish whether despite its fragmentary nature the current assemblage could still indicate on-site salt working, as opposed to nearby salt production. Furthermore, the assemblage needs to be put in the wider context of Late Bronze Age salt production around the Thames Estuary.

Further to the spatial analysis, contexts containing perforated clay slab fragments will be correlated with the fire-cracked flint assemblage, in order to establish whether a cooking related function is likely. Further parallels need to be sought in order to compare the Isle of Grain assemblage to other Thames Estuary assemblages, mainly in order to establish whether there is a relation with salt production and/or transportation.

A catalogue containing the better preserved and well-dated pieces of both briquetage fragments and perforated clay slab pieces should be included.

In addition, it is recommended to include a short note and catalogue-entry on the oven furniture and possible tuyere.

Up to 20 pieces are recommended for illustration.

Time required:

Task	*Estimated Time*
Spatial analysis of briq and pers assemblages	0.5 day
Briquetage parallels	0.5 day
Perf clay slab correlation to FCF	0.5 day
Parallels Perf clay slabs	0.5 day
Prepare catalogue	0.5 day
Prepare report for publication	0.5 day
Illustration (up to 20 items)	4 days

8.6 **The Glass** by Elke Raemen

All glass has been recorded on pro forma sheets for archive. Parallels should be sought for the occurrence of Roman vessels in association with olive oil amphorae. In addition, the feature containing the vessels should be put in the wider context of the site, in an attempt to establish its purpose. A short note for publication as well as a catalogue entry should be prepared. No illustration needs to be included. No further work is required on the post-medieval assemblage.

Time required:

Task	*Estimated Time*
Parallels/spatial analysis for Roman glass vessel	0.5 day
Prepare report and catalogue entry for publication	0.5 day
Total	1 day

8.7 **The Clay Tobacco Pipe** by Elke Raemen

The assemblage has been recorded on pro forma sheets for archive. No report for publication is deemed necessary. No further work is required.

8.8 **The Metalwork** by Elke Raemen

All pieces have been recorded on pro forma sheets for archive. No report is proposed for publication and no further work is required.

8.9 **The Shell** by Elke Raemen

All shell has been recorded on pro forma sheets for archive. The assemblage does not need to be included in the report for publication and no further work is required.

8.10 **The Registered Finds** by Elke Raemen

As at this stage only a preliminary identification of the finds was undertaken, a full identification of all finds is required for the analysis stage, including parallels where needed. The report for publication is proposed to include an overview of stratified finds as well as a brief summary of unstratified finds, accompanied by a catalogue including some of the more diagnostic and unusual finds. Up to ten finds are recommended for illustration.

Time required:

Task	*Estimated Time*
Finds ID/parallels	3 days
Prepare report and catalogue entries for publication	1 day
Coins ID/report	1.5 days
Illustration	4 days

8.11 **The Prehistoric Flintwork** by Chris Butler

Much of the assemblage is residual in later features, or present in individual features in small quantities, which makes it difficult to extract much further information about the functions and economies it represents. It is therefore recommended that no further detailed work be undertaken on this assemblage, although the flintwork should be retained for possible further study in the future. However, the comparative material from the evaluation and excavation should be combined into a single report, and a number of selected artefacts drawn. The excel spreadsheet and handwritten assessment summary should be retained in the archive. Time required: 1 day

8.12 **The Metallurgical Remains** by Luke Barber

The slag was recorded on pro forma for the archive during the assessment and no separate specialist report is proposed for publication. Reference to the assemblage should be made in the site narrative/conclusions in order to demonstrate the presence of domestic smithing activity in the Roman period and indeed the presence of iron smelting slag at the site. This information can be extracted from the above factual statement and no further specialist work is proposed.

8.13 **The Geological Material** by Luke Barber

No separate specialist report is proposed for the final publication. However, the worked Roman stone should be published as part of the recorded finds catalogue, described in the narrative text of the site and considered in the overall conclusions on the site's exploitation of resources and economy. This information will be extracted from the above factual statement and the geological material archive. No further work is suggested and no pieces are proposed for illustration.

8.14 **Ceramic Building Material** by Sarah Porteus

It may be possible to further refine the dating of the Roman material through comparison with pottery dating from the site and other local sites if available. Spatial distribution of the ceramic building material may indicate a general location for a Roman structure. The ceramic building material information should be related to the stratigraphic information when the site is published. The fragment of possible pantile from [10298] is recommended for illustration. Time required: 1 person day.

8.15 **The Cremated Bone** by Lucy Sibun

The analysis results will be studied in detail in order to calculate the degree of fragmentation and the percentages by weight of fragments from each skeletal area. A report will be produced summarising and tabulating the results. The distribution of bone within burial [2208] will be examined to establish any patterns. All results will then be compared to each other and other burials of the same period. Time required: 2 days

8.16 **The Animal Bones** by Gemma Driver

Comparative research of NISP counts, horse and dog measurements.
Time required: 1 day

Research into possible ritualistic aspects as well as comparisons with similar assemblage from other Roman sites.
Time required: 1.5 days

8.17 **C14 Radiocarbon Dating**

Six samples have been identified for C14 radiocarbon dating. These samples have been identified from contexts that are either stratigraphically informative or have a significant pottery or environmental assemblage.

C14 Sample No	Context	Group	Period	Comments
1	2057	Water-hole 2058	Late Roman/ Early Medieval	Residue on potential early medieval pot
2	5066/5050/5047	Fire pit GP510	?Roman	Environmental assemblage
3	2073	Hearth GP203	LBA	Pottery assemblage
4	8054	Ditch	LBA/EIA	Internal enclosure feature
5	8242	Pit GP812	LBA/EIA	External pits from enclosure
6	8240	Ditch GP818	LBA/EIA	Period 3.2 Field Boundary

Table 20 Samples for C14 Radiocarbon Dating

9.0 PUBLICATION AND ARCHIVING PROPOSALS

9.1 *Publication Synopsis*

It is suggested that the results of the excavation should be published in an article of around 15-20,000 words, in a small monograph or relevant archaeological journal such as *Archaeologia Cantiana*. This should present a chronological narrative and attempt to address the questions posed in the revised research agenda and would follow the suggested structure:

Introduction
Dates and circumstances of fieldwork
Acknowledgements
Graphic and textual conventions
Natural geology, topography and environment
Prehistoric, Roman, early medieval and medieval landscape

Mesolithic/Neolithic period
Bronze Age period
Iron Age period
Roman period
Early Medieval period
Medieval period
Dating and the finds

Comparisons, thoughts and conclusions

Bibliography

10.0 RESOURCES AND PROGRAMMING

10.1 Staffing
The project team will be composed as follows:

Table 21 Project Team

Team Member	**Initials**	**Tasks**
Giles Dawkes	GD	Site Analysis; Report production; archive collation
Anna Doherty	AD	Prehistoric and Roman Pottery
Luke Barber	LB	Post-Roman Pottery
Lucy Allott	LA	Plant Remains
Lucy Siburn	LS	Cremated Bone
Sarah Porteus	SP	CBM
Chris Butler	CB	Prehistoric Flintwork
Gemma Driver	GDr	Animal Bone
Elke Raemen	ER	Registered finds, fired clay, glass
Justin Russell and Fiona Griffin	JR/FG	Illustrations
Nicola Bentley	NB	Archive collation and deposition
Louise Rayner/Jim Stevenson/Dan Swift	LR/JS/DS	Post-Excavation Manager; editing

10.2 Resources

The resources allocated to each task are indicated below. This will enable a publication text as described above to be produced and the site archive deposited.

Tasks	**Team Member**	**Person Day**
Landuse definition and description, period definition and description, documentary, cartographic and aerial photography research, image selection, authorship of report	GD	30
Prehistoric and Roman pottery analysis and report	AD	9
Post-Roman pottery analysis and report	LB	2
Fired clay, glass and registered finds analysis and report	ER	9.5
CBM analysis and report	SP	1
Cremated bone analysis and report	LS	2
Prehistoric flintwork	CB	1
Animal bone analysis and report	GDr	2.5
Macrobotanical analysis, integration and report	LA	11
Charcoal analysis, integration and reporting	LA	8
Dating samples prepartion and reporting	LA	1
6 C14 Radiocarbon	Ext. Lab	Fee
Column assessment and analysis	External	4
Illustration: Prehistoric and Roman pottery	FG	12
Illustration: Post-Roman pottery	FG	1
Illustration: Fired clay	FG	4
Illustration: Registered finds, CBM and flintwork	FG	4
Editing (pre-submission and post-ref)	LR/DS	10
Preparation of archive for deposition	NB	3
Publication figures	JR	10
Project Management	LR/DS	5
Archaeologia Cantiana Publication Grant	External	Fee
TOTAL		**130**

Table 22: Resources required for analysis and publication

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Bibliography

Adkins L. and Needham S. 1985, 'New Research on a Late Bronze Age Enclosure at Queen Mary's Hospital', Carshalton, *Sussex Arch Coll 76*, 11-50.

AMEC, A B Rhead & Associates, National Grid, February 2007 *Grain To Shorne Gas Pipeline Environmental Statement* Ref;000135/F

Andrews, G. 1998, *Management of Archaeological Projects*. English Heritage

Archaeology South-East, 2008, *An Archaeological Evaluation Along the Route of the Proposed Isle of Grain Gas Transmission Pipeline (Stage 1)* (ASE Report 2007113)

Barber, L in prep., 'The Geological Material' in N. Griffin, *Archaeological Investigations on the new Kingsnorth Power Station site and its related works*. ASE report. Projects 1001 and 1129.

Barclay, A. 1994, 'Prehistoric Potter' in Mudd, A. 'The Excavation of a Later Bronze Age Site at Coldharbour Road, Gravesend'. *Arch Cant*. 114. 385-393

Biddulph, E. 2005, 'Last Orders: Choosing Pottery for Funerals in Roman Essex', *Oxford Journal of Archaeology*. 24i, 23-45

Bond D. and Barford P.M. 1988, 'The Fired Clay Objects', in *Excavations at the North Ring, Mucking, Essex: A Late Bronze Age Enclosure* (East Anglian Archaeology Report No. 43), 37-41, 49-51.

Broadribb, G. 1987, *Roman Brick and Tile*. Alan Sutton Publishing: Gloucester.

Brown N. 1996, 'The Archaeology of Essex, c. 1500-500 BC' in Bedwin O. (ed) *The Archaeology of Essex. Proceedings of the Writtle Conference* (Essex County Council), 26-37.

Brown, N.R. 1995, 'Pottery' in Wymer, J.J. and Brown, N.R. *Excavations at North Shoebury: Settlement and Economy in South-East Essex 1500BC-AD1500*. East Anglian Archaeology Report No. 175

Canterbury Archaeological Trust. 2006a, *Isle of Grain Gas Pipeline Archaeological Desk Based Assessment* (CAT Report 2327)

Canterbury Archaeological Trust. 2006b, *Isle of Grain Gas Pipeline Report on the Archaeological Fieldwork Survey* (CAT Interim Report 2392)

Canterbury Archaeological Trust Website, *Thanet Earth, Brooksend, Monkton, Isle of Thanet*. http://www.canterburytrust.co.uk/thanearth.html. Accessed 05/02/2009

Cappers, R.T.J., Bekker R.M. and Jans J.E.A. 2006, *Digital Seed Atlas of the Netherlands.* Groningen Archaeological Series 4. Barkhuis, Netherlands

Catherall, P. D., Pollard R. J., Turner C., Monk M.A., 'A Romano-British Pottery Manufacturing Site at Oakleigh Farm, Higham, Kent' *Britannia* Vol 14 (1983) pp 103-141

Champion, T. 2007, 'Settlement in Kent from 1500 to 300 BC' in Haselgrove, C. and Pope, R. (eds). *The Earlier Iron Age in Britain and the Near Continent*. Oxbow: Oxford

Cleal, R.M.J. 1990, 'Briquetage Containers' in Chowne, P., Cleal R.M.J and Fitzpatrick A.P. 2001 *Excavations at Billingborough, Lincolnshire, 1975-8: A Bronze-Iron Age Settlement and Salt-working Site* (East Anglian Archaeology Report No. 94), 57-59.

Couldrey, P. 2007, 'The Late Bronze Age/Early Iron Age Pottery' in Bennett, P., Couldrey, P. and Macpherson-Grant, N. *Highstead near Chislet, Kent: Excavations 1975-1977.* The Archaeology of Canterbury: New Series. Canterbury Archaeological Trust.

Couldrey, P. 1984, 'The Iron Age Pottery' B. Philp *Excavations in the Darent Valley, Kent.* Dover: Kent Archaeological Rescue Unit, 38-70.

Cunliffe, B. 2005, *Iron Age Communties in Britain: an account of England, Scotland and Wales from the seventh century BC until the Roman conquest.* 4th ed. London: Rouledge

Davis, A. (with de Moulins, D.) 2000, 'The Plant Remains', in B. Barber and B. Bowsher (eds), *The Eastern Cemetery of Roman London; Excavations 1983-90*, MoLAS Monograph 4

Devoy, R.J. 1980, 'Post-Glacial Environmental Change and Man in the Thames Estuary: a Synopsis' in Thompson F.H. (ed.), *Archaeology and* Coastal Change: Soc. of Antiq. Occ. Papers (New Series I)

Everitt, A. 1986, *Continuity and Colonization: The Evolution of Kentish Settlement*

Gale , R. 2004, 'Charcoal and Wood' in Griffin, N. *Archaeological Investigations at Damhead Creek Power Station and Associated Works, Hoo St Werburgh, Kent*. Unpublished ASE Report 1129

Grant, A. 1982, 'The use of tooth wear as a guide to the age of domestic ungulates' in Wilson, B., Grigson,C., and Payne,S. (Eds) *Ageing and Sexing Animals from Archaeological Sites.* BAR Brit Series. **109**, Oxford; 91-108

Griffin, N. 1999, *An Archaeological Post-Excavation Assessment of Damehead Creek, Kingsnorth Power Station and Associated Works, Hoo St Werburgh, Kent* (Unpublished ASE Report 1001)

Hather, J. G. 2000, *The Identification of the Northern European Woods: A Guide for archaeologists and conservators*. Archetype Publications Ltd, London.

Hattat R. 1989, *Ancient Brooches and other Artefacts*, Oxford.

Heritage Conservation Group at Kent County Council, 2007, *Specification for archaeological mitigation along the route of the proposed new Isle of Grain gas transmission pipeline*

Heritage Conservation Group at Kent County Council, 2007, *Manual of Specifications Part B – Mitigation – Strip, Map and Sample*

Hinton, P. 2004, 'Plant Remains' in Griffin, N. *Archaeological Investigations at Damhead Creek Power Station and Associated Works, Hoo St Werburgh, Kent*. Unpublished ASE Report 1129

Jacomet, S. 2006, *Identification of cereal remains from archaeological sites*. 2nd ed. Unpublished manuscript.

James, R. 1999, *An Archaeological Evaluation on Malmaynes Hall Farm, Stoke, Kent* (Unpublished ASE Report 1001)

James, R. 2006, Archaeological Investigations at Middle Stoke on the Hoo Peninsula. *Archaeologia Cantiana Vol. 126*: pp.71-86

Kent County Council Website http://www.kent.gov.uk/publications/environment/serf-seminar-notes.htm. Accessed 20/04/09

Kreuz, A. 2000, 'Function and conceptual archaeobotanical data from Roman cremations', in J. Pearce, M. Millet and M. Stuck (eds), *Burial, Society and Context in the Roman World,* Oxford, 45-51

Macpherson-Grant, N. 1995, 'Early to Late Saxon Pottery' in Blockley, K., Blockley, M., Blockley, P., Frere, S. and Stow, S. *Excavations in the Marlowe Car Park and Surrounding Areas. Part II The Finds.* The Archaeology of Canterbury V. Canterbury: Canterbury Archaeological Trust, 818-897.

Monaghan, J. 1987, *Upchurch and Thameside Roman Pottery: A Ceramic Typology, First to Third Centuries A.D.,* BAR Bri Ser, 173, Oxford

Moore C. 2002, 'Late Bronze Age, Romano-British and Early/Middle Saxon Features at Hoo St Werburgh', *Archaeologia Cantiana Vol. 122*, 259-274.

Pollard, R.J. 1988, *The Roman Pottery of Kent*. Kent Archaeological Society: Maidstone

Poole C. 1984, 'Briquetage Containers' in Cunliffe B. *Danebury: An Iron Age Hillfort in Hampshire. Vol 2. The Excavations 1969-1978: The Finds* (CBA Research Report No 52*),* 426-30.

Poole C. 1987, 'Salt Working' in Cunliffe B. *Hengistbury Head, Dorset. Vol. 1: The Prehistoric and Roman Settlement, 3500 BC-AD500*, Oxford University Committee for Archaeology Monographs 13, 178-180.

Schweingruber, F. H. 1990, *Anatomy of European woods. Eidgenössische Forshungsanstalt für Wald, Schnee und Landschaft, Birmensdorf (Hrsg.).* Haupt, Bern und Stuttgart

Silver, I.A. 1969, 'The Ageing of Domestic Animals' in Brothwell, D, Higgs,E., Clark,G (eds) *Science in Archaeology.* 2nd ed. London, Thames and Hudson; 283-302

Stace, C. 1997, *New Flora of the British Isles.* Cambridge University Press, Cambridge.

Thornhill, P. and Payne, P. 1980, 'Some Sites in North Kent'. *Archaeologia Cantiana 96*: p.379

Van der Veen, M. 1989, 'Charred grain assemblages from Roman-period corn driers in Britain'. *The Archaeological Journal*, 146, 302-319.

Von Den Driesch, A. 1976, *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin Harvard University.

Willson, J. 1984, 'The Saxon Pottery' in B. Philp *Excavations in the Darent Valley, Kent.* Dover: Kent Archaeological Rescue Unit, 129-131.

APPENDIX 1: ENVIRONMENTAL TABLES

Table 23 Site A Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Other (eg ind, pot, cbm)
300	1013	20	20	***	36	****	8					FCF ****/11026g
301	1014	20	20	***	16	**	2					Flint */8g
302	1015	20	20	**	6	***	4					FCF */150g
303	1033	20	20	***	716	****	40					CBM */8g
313	1081	20	20	**	8	**	<2					
314	1082	20	20									EMPTY
307	1088	70	40	*	<1	**	<1			**	4	FCF * 16g, Flint * <1g, Pot * 8g
304	1089	60	40	***	58	****	16					Pot **/94g, CBM */6g, FCF ***/216g, Burnt Clay **/30g, Flint? */<1g
305	1091	30	30	***	24	**	2	**	<1	*	2	Burnt Clay **/6g, CBM ***/16g, Pot ***/164g
306	1093	10	10	**	2	***	<1			*	<1	Pot */6g
317	1117	20	10									EMPTY
309	1130	20	10							*	<1	FCF */22g, Burnt Clay */56g
310	1132	20	20	*	1	**	1					Burnt flint*12g, Lithics*<1g
311	1134	20	20			*	<1					W. Flint */4g, Pot */12g
316	1147	20	20									EMPTY
315	1159	20	20			*	<1					Pot */4g, CBM */ 2g
319	1171	20	20							*	<1	FCF */8g, W. Flint */1g
318	1183	20	20			*	<1					
312	1185	20	20			*	<1					
308	1195	40	40	***	26	****	14					Pot *** 163g/54g, FCF * 40g, CBM */4g

Table 24 Site B Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Spit (if relevant)	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Marine Molluscs	Weight (g)	Other (eg ind, pot, cbm)
B	202	2010		20	20	*	2	**	4							Pot */16g, CBM */4g
B	203	2061		40	40	*	2	***	8			*	<1			Pot ****/286g, FCF **/24g
B	204	2057		40	40			**	6			**	8			Pot **/72g, CBM **/46g
B	205	2073		20	20	**	6	**	2							FCF */104g, Pot **/168g. Daub ***/260g
B	206	2067		20	20	**	2	**	2							Pot */14g, CBM **/36g
B	207	2099		30	30	***	10	****	7			*	<1			Burnt clay****/536g, Pot****/382g, Fe**6g, FCF***/310g, CBM **/298g
B	208	2140		40	40	**	6	**	3			*	4			FCF */84g, Flint */6g, FE */<1g, Pot ***/64g, CBM **/2g, Burnt Clay **/16g
B	210	2155		10	10			*	<1							CBM**34g, Pot***136g
B	211	2153		10	10	**	10	**	4					**	6	Pot **/162g
B	212	2164		20	20	*	4	**	2							CBM */6g, ind deb */2g, Pot */6g
B	213	2152		10	10	***	54	****	24			*	<1	**	<1	Pot **/112g, CBM */10g
B	214	2166		20	20	*	2	*	<1							CBM */2g
B	215	2170		20	20	*	<1	*	<1			****	174			CBM** 8g,Fe* 8g,Glass** 6g,Pot***54g,FCF **26g
B	216	2176		40	40	***	6	**	2							Burnt clay ***/68g, FCF****/58g, Fe?*14g, CBM **/26g, Pot **/8g
B	218	2171		30	20	*	<1	***	1							FCF***/102g, Burnt clay**16g, Fe?4g, CBM **/18g, Pot **/30g

Site	Sample Number	Context	Spit (if relevant)	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Marine Molluscs	Weight (g)	Other (eg ind, pot, cbm)
B	219	2180		20	20	*	0					****	1036			FE */18g, CBM **/44g
B	220	2208		20	20	*	0					**	44			Residue 514g
B	221	2214		20	20			***	<1							Pot */2g
B	222	2176		20	20	*	<1	**	1			*	<1			CBM */6g
B	223	2187		30	30	***	4	****	1	*	<1	**	1			Pot ****/66g, CBM **/16g, Burnt Clay **/8g, FCF */6g
B	224	2184		20	20			*	<1							Burnt Clay ** 100g, CBM ****/278g, Pot */6g
B	226	2140		10		*	<1	*	<1			*	<1			FCF**8g, Burnt clay***6g, Plant?*<1g
B	228	2140		40	40											EMPTY
B	229	2142		40	40	*	<1	**	<1							Pot */<1g, CBM */4g
B	700	2206	1													EMPTY
B	701	2206	2	3	3			*	2							Pot */4g
B	702	2206	3	3	3			**	1							Pot **/6g
B	703	2206	4	3	3			**	1							Pot */4g
B	704	2208	1	10	10			**	<1			**	12			Pot **/22g, Tile */2g
B	705	2208	2	6	6							****	56			Pot */6g
B	706	2213	1	1	1			*	1							
B	707	2212		1	1			***	1							
B	708	2211		1	1											EMPTY
B	709	2208	3	6	6							****	92			Pot */10g
B	710	2208	4	6	6			**	1			****	204			Pot **/20g
B	711	2208	5	12	12							****	736			FCF */74g, Burnt Clay **/10g
B	712	2208		10	10	*	<1	***	2			*	<1			Pot **/646g

Site	Sample Number	Context	Spit (if relevant)	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Marine Molluscs	Weight (g)	Other (eg ind, pot, cbm)
B	713	2207														EMPTY

Table 25 Site C Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Other (eg ind, pot, cbm)
C	320	3021	10	10	***	1	****	2	
C	321	3026	10	10	**	4	***	2	
C	322	3028	10	10					EMPTY

Table 26 Site E Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Other (eg ind, pot, cbm)
E	400	5012	20	20	***	180	****	212	*	2			
E	401	5037	10	10	**	4	***	2					Pot */2g
E	402	5045	40	40	***	266	****	918					Burnt Clay */12g
E	403	5046	20	20	***	6	***	4					Burnt Clay **/48g
E	404	5048	40	40	***	84	****	52					Burnt Clay ****/456g, Flint */1g, FCF */288g
E	405	5049	30	30	***	10	****	8					Pot **/56g, Burnt Clay **/92g
E	406	5064	90	40	***	100	****	1194					Pot */4g
E	407	5065	40	40	***	38	****	12			*	<1	Pot */4g
E	408	5070	3	3			*	2					FCF ***/478g
E	409	5072	3	3									FCF ****/408g

Table 27 Site F Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Other (eg ind, pot, cbm)
F	123	6047	40	40	***	16	***	10	*	1	

Table 28 Site H Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Other (eg ind, pot, cbm)
H	500	8012	6	6			*	<1					
H	501	8040	24	24									EMPTY
H	504	8054	30	30	*	1	**	<1	**	<1	*	<1	FCF ***/1036g, CBM */2g, Slag */26g, Pot **/62g
H	513	8054	60	40			**	<1	*	<1	*	<1	Burnt Clay */30g, Pot **/190g, FCF ***/1680g
H	503	8056	30	30	**	2	***	2					FCF **/850g, Pot ***/98g
H	502	8060	20	20	**	4	**	2					Pot */6g
H	508	8074	6	6			**	2			**	2	FCF ***/588g

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Other (eg ind, pot, cbm)
H	505	8085	30	30	**	5	****	8			*	1	Pot **/17g, Burnt Clay 2g, FCF 358g, CBM */2g
H	506	8086	24	24	**	2	**	1			**	6	Burnt Clay **/14g, Pot ***/32g, Flint */2g, CBM */8g, FCF ***/1470g
H	507	8088	1	1									EMPTY
H	511	8117	1	1	*	1							Pot */6g
H	510	8119	30	30									Pot **/152g, Burnt Clay **/60g, FCF ***/1910g
H	509	8124	40	40			**	1					Pot ***/52g, FCF */76g
H	512	8141	40	40	*	2	*	<1			*	<1	FCF **** 1013g, Burnt Clay ** 22g, Pot ***/110g
H	514	8161	5	5					*	<1			
H	515	8163	10	10									EMPTY
H	516	8176	20	20	*	<1	**	<1					
H	525	8205	20	20									EMPTY
H	520	8206	40	40	*	<1	**	1					FCF **/306g, Pot */14g, CBM */4g, Flint */6g
H	517	8213	20	20	**	4	**	<1			*	2	Pot **/84g, FCF */148g
H	518	8221	30	20	***	22	***	10					
H	519	8240	30										Burnt Clay ** 100g, Pot */14g
H	522	8242	40	40	*	4	***	5					Pot ***/199g
H	521	8260	10	10	**	2	**	4					
H	523	8267	20	20					*	<1			Burnt flint * 44g
H	524	8269	20	20			*	<1					

Table 29 Site I Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Marine Molluscs	Weight (g)	Land Snails	Weight (g)	Other (eg ind, pot, cbm)
I	111	9016	20	20	*	2	*	1									
I	113	9034	70	40	*	70	*	1									
I	119	9035	30	30			*	<1									Pot */2g, Flint */454g
I	117	9037	6	6	**	8	**	1									FCF */10g
I	103	9038	40	40	**	4	**	4									Flint */4g, Pot */4g
I	101	9043	40	40			*	1									Burnt clay*2g
I	102	9044	40	40	**	2	***	2			*	2					Flint**8g, Pot*2
I	104	9050	20	20	*	4	*	2									
I	106	9052	20	20													EMPTY
I	122	9058	110	40	***	32	***	34							*	<1g	
I	108	9061	40	40			*	<1									FCF */22g
I	109	9066	40	40													CBM */6g
I	110	9142	40	40			**	1									Burnt clay***40g, FCF*26g
I	116	9146	20	10	**	4	***	4									Flint */4g
I	114	9147	10	10			*	<1									
I	112	9156	40	40			***	12									
I	115	9157	10	10													FCF */104g
I	118	9170	20	20			*	2									
I	121	9237	80	40	*	<1	*	<1	*	<1	*	<1	***	1600			Pot */14g
I	120	9239	40	40			*	<1			*	4	***	20			Pot */<1g, CBM */10g, Burnt Clay */8g, FCF */8g

Table 30 Site J Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Fishbone and microfauna	Weight (g)	Other (eg ind, pot, cbm)
J	1	10019	40	40	**	4	**	2							Lithics*2g
J	15	10060	40	40			*	1							Pot */12g
J	16	10070	40	40			**	<1	*	<1	*	<1	***	12	Pot */6g, CBM */12g, Glass */<1g, IND debris */2g
J	17	10071	40	40	*	2	*	2	*	1	*	2			
J	2	10117	40	40	**	34									FCF */138g, Pot */12g
J	4	10119	40	40			*	<1							Pot */4g
J	3	10139	40	40	*	<1	**	<1	*	<1	**	6			Pot */10g
J	6	10149	40	40			*	1							Pot*1g
J	7	10193	40	40							*	<1			
J	8	10199	40	10											EMPTY
J	9	10200	40	40			*	<1							Burnt Clay ***/262g
J	11	10208	60	40							*	<1			Slag * 4g, Burnt Clay ** 78g, Pot ** 160g
J	14	10208	40	40											Burnt clay****/3460g, FCF*14g, Pot**/82g, Glass */<1g
J	10	10211	70	40											Pot 18g
J	12	10213	40	40	*	<1									FCF */12g
J	13	10217	40	40							*	<1			FCF * 6g, Burnt Clay *** 1274g, Pot ** 68g

Table 31 Site K Residue Quantification (=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams*

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Bone and Teeth	Weight (g)	Other (eg ind, pot, cbm)
K	601	11024	40	30	**	10	**	<2	*	2			Pot ***/188g
K	600	11026	40	40	*	2	***	6	***	8			CBM **/4g, Pot **/ 150g
K	602	11032	40	40	**	4	***	3					Pot **/47g, CBM */7g
K	603	11033	40	40	*	1	*	1			*	1	Pot */2g
K	604	11034	40	40	**	4	**	2	**	<1			FCF **/18g, Pot */6g
K	605	11051	40	40	*	<1	**	2			*	4	CBM */<1g, Pot */2g

Table 32 Watching Brief Residue Quantification (=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams*

Site	Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Charred botanicals (other than charcoal)	Weight (g)	Other (eg ind, pot, cbm)
WB	150	20	40	40	***	50	***	40			Flint */10g, FCF */34g, FE */1g
WB	152	104	5	5	*	2	*	1			
WB	153	105	10	10	***	24	****	8			FCF*88g
WB	154	107	10	10	***	20	**	36	**	1	
WB	155	109	10	10							Empty

Table 33 Evaluation Samples Residue Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Evaluation Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal <4mm	Weight (g)	Charcoal >4mm	Weight (g)	Charred plant remains <4mm	Weight (g)	Charred plant remains >4mm	Weight (g)	Bone and Teeth	Weight (g)	Molluscs	Weight (g)	Other
1	[45/004]	10	10		2g	**	2g									
2	[67/007]	20	20	*	4g	*	3g					*	4g	***	14g	Metal */2g, FCF 13g
3	[37/005]	40	40	***	6g	**	8g					*	8g			Burnt clay */4g, Flint */4g
4	[60/006]	6	60	**	1g	**	1g									Pot */2g
5	[59/006]	5	5	*	1g	*	1g									FCF 2g
6	[35/004]	3	3		EMPTY											
7	[33/077]	20	20	***	5g	*	6g									Pot */21g
8	[33/021]	40	40	**	5g											Pot */12g, FCF **/1199g. Flint */20g
9	[33/017]	40	40				4g									Pot */47g, FCF **/234g
10	[63/005]	10														
11	[63/008]	6	6	**	2g											Pot 12g
12	[33/024]	10	10	*	2g											Pot */8g, Burnt clay */8g
13	[33/016]	10	10	*	2g											Pot 80g
14	[26/005]	10	10		4g	**	4g									
15	[63/010]	40	40			*	4g	**	4g			**	2g			Pot **/153g, FCF 12g, Burnt Clay */4g
16	[31/005]	30	30	***	5g	**	6g									
17	[31/007]	30	30	*	4g	**	6g									
18	[28/004]	24	24													Pot */57g, Glass */7g
19	[28/008]	12	12	**	1g				1g							Pot */19g
20	[22/008]	40	40	****	22g	***	30g									Pot */8g
21	[20/005]	40	40	***	2g											Flint */14g
22	[21/003]	40	40	***	9g	*	4g									FCF 14g

Evaluation Sample Number	Context	Sample Volume litres	sub-Sample Volume litres	Charcoal <4mm	Weight (g)	Charcoal >4mm	Weight (g)	Charred plant remains <4mm	Weight (g)	Charred plant remains >4mm	Weight (g)	Bone and Teeth	Weight (g)	Molluscs	Weight (g)	Other
23	[12/009]	10	10	**	4g	**	6g									Pot **/68g, Lava stone **/96g
24	[12/012]	40	40	*	2g											Pot */4g
25	[7/008]	40	40	**	2g	**	6g									Pot **/59g
26	[7/009]	40	40	**	6g	*	2g				1g				1g	Pot **/137g
27	[8/011]	40	40					**	2g	*	4g					Pot */10g, FCF */6G
28	[63/006]	3	3		2g											

Table 34 Site A Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
Mid-Late IA	305	1091	Fill of Pit [1090]	4	10	60	30		*	*	*	*Triticum* sp. , *Hordeum* sp., Legume to id	+/++	**	*Polygonum*/*Rumex*/ *Fallopia*, *Chenopodium*, Amaranthaceae/ Caryophylaceae, & others	++			

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
Mid-Late IA	307	1088	Fill of Pit [1087]	12	55	90	5	*	**	**	**	*Triticum* sp., Legume cf. *Pisum sativum*	++	**	incl Poaceae & others to id	+/++	*	*Triticum* sp. g.b.	+/++
Mid-Late IA	304	1089	Fill of Pit [1087]	322	510	1	35	**	***	****	**(*)	*Triticum* sp. & others to find	+++	**	Poaceae & weed seeds	++			
Mid-Late IA	311	1134	Fill of Pit [1135]	<2	5	90	5		*	**	*	Cerealia, *Hordeum* sp.	+++	*	cf. *Bromus* sp., Poaceae	++			
Mid-Late IA	315	1159	Fill of Ditch [1153]	6	10	40	58		*	**				*	*Polygonum*/*Rumex* sp.	++			
Mid-Late IA	312	1185	Fill of Ditch [1186]	18	20	34	65		*	**	*	Cerealia, *Hordeum* sp.	+/++	*	Apiaceae, Poaceae, *Stellaria*/*Silene*	++	*	*Triticum* sp. g.b.	++
ER 1st-2nd Centuries	308	1195	Fill of Quarry Pit [1196]	12	18	17	24		*	**	***	*Hordeum* sp.	+/++	**	*Raphanus* sp., *Ranunculus* sp., cf. *Papaver*, *Polygonum*/*Rumex* sp., Poaceae	+/++	*	chaff, incl g.b., cf awn frags	++
ER 1st-2nd Centuries	313	1081	Fill of ditch [1083]	4	8	96	1	*	*	**	*	incl. *Triticum* spp.	+/++	**	cf. *Raphanus* sp. & others	++	*	*Triticum* cf. *spelta* g.b.	++
ER 1st-2nd Centuries	316	1117	Fill of Ditch [1118]	2	9	96	1		*	*				*	cf. *Vicia*/*Lathyrus* sp.	+	*	cpr indet	+
ER 1st-2nd Centuries	317	1117	Fill of Ditch [1118]	2	8	79	20		*	**				*		+			

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
ER 1st-2nd Centuries	318	1117	Fill of Ditch [1118]	6	10	85	15		*	**									
ER 1st-2nd Centuries	319	1117	Fill of Ditch [1118]	2	7	98	1		*	**							*	indet.	+
ER 1st-2nd Centuries	310	1132	Fill of Ditch [1133]	4	10	85	14			*							*	indet.	+
ER 1st-2nd Centuries	309	1130	Fill of Ditch [1131]	<2	1	45	0	*	*	*					indet.				

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
ER 1st - 2nd Centuries			Fill of Pit [1154]																
ER 1st - 2nd Centuries			Fill of pit [1016]																
ER 1st -			Fill																

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
2nd Centuries			of pit [1016]																
ER 1st - 2nd Centuries			Fill of pit [1016]																
Undated			Fill of P																

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
			H [1034]																
Undated			Fill of Pit [1093]									Cerealia			*Chenopodium album*, cf. *Atriplex*, *Avena*, Amaranthaceae & Caryophylaceae				

Table 35 Site B Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	burnt bone	Land snail shells	Ind debris hammerscale
LBA/EIA	206	2067	Fill of Pit/hearth [2068]	4	10	50	48		**	**												
LBA/EIA	205	2073	Fill of Pit [2074]	40	50	1	96	*	***	***				*	*Polygonum*/*Rumex*/*Fallopia*	+						**
LBA/EIA	213	2152	Fill of Pit [2151]	<2	2	4	95															
LBA/EIA	211	2153	Fill of Pit [2151]	<2	1	95	1		*	*												
LBA/EIA	210	2155	Fill of crem vessel [2154] in pit [2151]	15	100	98	1			*												
LBA/EIA	212	2164	Fill of pit [2165]	<2	2	88	10		*	**	*	indet.	+	*	cf.*Viola* sp.	+						
LBA/EIA	214	2166	Fill of Ditch [2167]	2	2	45	54			**	*	indet.	+									
LBA/EIA	216	2176	Fill of pit [2177]	2	2	55	44		*	*	*	indet.	+	**	*Chenopodium* sp., *Raphanus* sp., Apiaceae	++	*	Stem frags	+			
LBA/EIA	222	2176	Fill of pit [2177]	8	10	46	4	**	**	****	*	Legume to id. Cerealia	++	**	*Raphanus*, *Chenopodium*, & others to id, *Polygonum*/*Rumex* sp.	++	*	g.b. noted	++			

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	burnt bone	Land snail shells	Ind debris hammerscale
LBA/EIA	224	2184	Fill of pit [2182]	<2	3	99	0			**							*	indet frags	+			
LBA/EIA	223	2187	Fill of Pit [2188]	4	10	39	1	*	***	**	**	*Triticum* sp., *Hordeum* sp., Legume cf. *Pisum*	++	***	*Raphanus*, *Carex* sp., *Chenopodium*, Caryophylaceae/ Amaranthaceae	++	*	g.b. noted	++			
ER 1st-2nd Centuries	218	2171	Fill of crem/pit [2178]	<2	5	5	70	*	*	*	*	frags Indet	+									
ER 1st-2nd Centuries	704	2208	Fill of crem vessel in pit [2200]	2	10	35	25		**	***												
ER 1st-2nd Centuries	705	2208	Fill of crem vessel in pit [2200]	2	7	1	79		**	***											*	
ER 1st-2nd Centuries	709	2208	Fill of crem vessel in pit [2200]	4	8	1	80	*	**	***												*
ER 1st-2nd Centuries	710	2208	Fill of crem vessel in pit [2200]	4	6	1	89	*	**	***												**
ER 1st-2nd Centuries	711	2208	Fill of crem vessel in pit [2200]	12	10	2	88	*	***	****										***		***

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	burnt bone	Land snail shells	Ind debris hammerscale
ER 1st-2nd Centuries	712	2208	Fill of crem vessel in pit [2200]	6	7	8	5	*	****	****										*		*
ER 1st-2nd Centuries	700	2206	Fill of crem vessel in pit [2200]	<2	3	1	15		*	***				*	(1) *Rumex* sp.	+						
ER 1st-2nd Centuries	701	2206	Fill of crem vessel in pit [2200]	<2	0.5	1	1		*	***												
ER 1st-2nd Centuries	702	2206	Fill of crem vessel in pit [2200]	<2	3	1	40		*	***												
ER 1st-2nd Centuries	703	2206	Fill of crem vessel in pit [2200]	<2	3	1	39		**	***												
ER 1st-2nd Centuries	713	2207	Fill of crem vessel in pit [2200]	<2	4	1	15		**	***												
ER 1st-2nd Centuries	220	2208	Fill of crem vessel	4	5	97	1		*	***												
ER 1st-2nd Centuries	221	2214	Primary fill of Pit [2200]	4	5	2	5		**	****										*		*
ER 1st-2nd Centuries	215	2170	Fill of cremation vessel [2169] in Pit [2168]	2	3	96	2		*	*	*	Legume frag. Indet	+									

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	burnt bone	Land snail shells	Ind debris hammerscale
ER 1st-2nd Centuries	219	2180	Fill of crem vessel [2181]	<2	2	55	45															
ER 1st-2nd Centuries	708	2211	Fill of crem vessel [2203] / (2211), sf 116	<2	7	1	1	*	**	****												
ER 1st-2nd Centuries	706	2213	Fill of crem vessel [2205]	2	9	1	15	*	**	****												
ER 1st-2nd Centuries	707	2213	Fill of crem vessel [2205]	2	10	1	9	*	**	****												
R 3rd-4th Centuries	201	2006	Fill of GB slot [2007]	4	9	1	4	*	***	****				**	*Polygonum*/*Rumex* sp., Apiaceae, *Carex* sp.	++						
R 3rd-4th Centuries	202	2010	Fill of GB slot [2011]	<2	5	40	20		*	*	**	<15 *Triticum* sp.	++	*	indet.	+					*	
R 3rd-4th Centuries	203	2061	Fill of Ditch [2062]	<2	2	98	1		*	**	*	(2) cerealia	++	*	cf. *Viola* sp.	++						
R 3rd-4th Centuries	207	2099	Fill of Pit [2089]	<2	1	98	1			*												
R 4th Century	204	2057	Fill of Pit [2058]	<2	3	10	70															
R 4th Century	208	2140	Fill of Pit [2058]	<2	2	1	85	*	*	***	*	*Triticum* sp. & *Hordeum*	+	*	Poaceae, cf. *Bromus* sp.	++						

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	burnt bone	Land snail shells	Ind debris hammerscale
												sp.										
R 4th Century	228	2140	Fill of Pit [2058]	4	5	2	93		*	**	*	*Triticum* cf *aestivum*, & others	++	*	Poaceae, *Avena*/*Bromus* sp.	++						
R 4th Century	229	2142	Fill of Pit [2058]	8	6	1	97				*	cerealia	+				*	*Triticum* sp. g.b.	+			

Table 36 Site C Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	weed seeds charred	Identifications	Preservation	other botanical charred
MBA?	321	3026	Fill of PH [3027]	2	5	25	55		**	***					
MBA?	322	3028	Fill of Pit [3029]	2	8	98	1								
Undated	320	3012	Fill of PH [3013]	8	15	30	25	*	***	****					

Table 37 Site E Flot Quantification (=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)*

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	weed seeds charred	Identifications	Preservation	other botanical charred	Land snail shells
M/LIA	400	5012	Fill of Pit [5013]	6	20	10	5	**	**	***		*	*Polygonum*/*Rumex* sp., *Chenopodium* sp.	++		*
M/LIA	408	5070	Fill of PH [5069]	<2	1	5	30			***						
M/LIA	409	5072	Fill of PH [5071]	<2	<.5	1	98									
LIA	401	5037	Fill of Pit [5038]	<2	1	1	98		*	*						
Undated	402	5045	Fill of Pit [5047]	620	1520	1	1	****	****	****						*
Undated	403	5046	Fill of Pit [5047]	32	70	3	3	*	****	****		*	charred fruits	+		*
Undated	404	5048	Fill of Pit [5050]	380	850	4	6	****	****	****						*
Undated	405	5049	Fill of Pit [5050]	112	215	3	12	****	****	****						*
Undated	406	5064	Fill of Pit [5066]	688	1580	1	5	****	****	****		**	*Polygonum*/*Rumex* sp.	++		*
Undated	407	5065	Fill of Pit [5066]	74	165	2	5	****	****	****						*

Table 38 Site F Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation
Iron Age	123	6047	fill of pit [6049] orig. (6100)	24	80	7	3		**	***	***	*Triticum* sp., some *T.* cf. *aestivum*	++	***	cf. *Plantago* sp., Apiaceae, lots to id	++

Table 39 Site H Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	fish, amphibian, small mammal bone	Land snail shells
LBA/EIA	500	8012	Fill of Pit [8013]	2	2	98	1														
LBA/EIA	504	8054	Fill of Ditch [8055]	2	10	96	2	*	*	**	*	(1) *Hordeum* sp., (1) *Triticum* sp.	++	**	Poaceae, *Chenopodium* sp.,	++					**

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	fish, amphibian, small mammal bone	Land snail shells
															Rumex/*Polygonum* sp.						
LBA/EIA	503	8056	Fill of Pit [8057]	2	6	96	2		*	*	*	(1) *Hordeum* sp., (1) cf. Legume	+								
LBA/EIA	502	8060	Fill of Ditch [8061]	2	9	96	2			*	*	cerealia indet	+								
LBA/EIA	508	8074	Fill of Ditch [8075]	2	5	60	35		*	**	*						*	g.b. *Triticum* spp.	+		**
LBA/EIA	505	8085	Fill of hearth [8087]	4	10	67	3		*	**	**	cerealia indet	+	*	indet	+	*	indet cpr	+		
LBA/EIA	506	8086	Fill of hearth [8087]	6	15	77	3				**	cerealia & cf. *Triticum* sp., cf legume	+/++	*	*Carex* sp., *Chenopodium* sp., *Rumex*/*Polygonum*	++					
LBA/EIA	507	8088	Fill of Ditch [8090]	<2	0.5	49	49			*											
LBA/EIA	511	8117	Fill of Pit [8129]	<2	3	1	98			*	*	*Triticum* sp., cf. *Pisum sativum*, *Vicia*/*Lathyrus* sp.					*	g.b. & spikelet fork, *T.* cf. *dicoccum*	+/++		

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	fish, amphibian, small mammal bone	Land snail shells
LBA/EIA	510	8119	Fill of Pit [8121]	<2	40	93	2		**	*							*	indet.	+	* (1)	
LBA/EIA	509	8124	Fill of Ditch [8125]	6	50	95	4	*	*	**	*	cerealia	+	*	(1) *Polygonum*/*Rumex* sp.	++					
LBA/EIA	512	8142	Fill of Ditch [8143]	10	40	92	6		**	**	*	cerealia indet.	+	*	cf. *Rumex* sp.	+					**
LBA/EIA	515	8163	Fill of Pit [8165]	2	4	97	1		*	**				*	Poaceae		*	occ. Chaff stems	+		
LBA/EIA	516	8176	Fill of Pit [8177]	10	20	35	5	*	***	***											
LBA/EIA	520	8206	Fill of Ditch [8207]	4	40	93	2		*	**	*	cerelaia indet.	+								
LBA/EIA	525	8208	Fill of Pit [8209]	4	10	96	3		**	**											
LBA/EIA	517	8213	Fill of Pit [8214]	2	10	94	3		*	**	*	*Hordeum* sp., Cerealia indet.	++	?	poss. In agg or lump?						
LBA/EIA	518	8221	Fill of Pit [8222]	6	20	28	2	**	***	***											
LBA/EIA	519	8240	Fill of Ditch [8241]	4	10	96	1		**	**											

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	fish, amphibian, small mammal bone	Land snail shells
LBA/EIA	522	8242	Fill of Pit [8243]	14	40	50	60		**	***	**	*Triticum* sp., *Hordeum* sp., Legume cf. *Pisum*	+/++				*	*Triticum* sp. spikelet base			
LBA/EIA	521	8260	Fill of PH [8261]	12	30	35	1	**	***	****											
LBA/EIA	524	8263	Fill of Pit [8266]	4	10	98	1		*	*							*	1 g.b. *Triticum* cf. *dicoccum*	++		
LBA/EIA	523	8267	Fill of Pit [8268]	2	3	96	1			*											
Early Roman	501	8040	Fill of Ditch [8036]	<2	3	96	2		*	**				*	Apiaceae, *Galium*/*Asperula* sp.	+					
Early Roman	513	8055	Cut NO ?8054	10	45	74	1				**	*Triticum* sp., cf. *Pisum sativum*, *Vicia*/*Lathyrus* sp.	++	*	*Chenopodium* sp., occ. But few	+	*	g.b. cf. *Triticum dicoccum*	++		
Early Roman	514	8161	Fill of Pit [8162]	2	5	55	1	*	*	**											

Table 40 Site I Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	Land snail shells
LBA	103	9038	Fill of Pit [9039]	2	15	52	1	*	**	***	**	*Triticum* sp., *Hordeum* sp.	++	**	*Rumex* sp., *Fallopia*/*Polygonum*/*Rumex* sp., *Carex* sp.	++				
LBA	105	9048	Fill of Pit [9049]	NOT PROCESSED																
LBA	106	9052	Fill of Pit [9053]	2	8	89	1		**	**										
LBA	104	9050	Fill of Pit [9051]	<2	7	20	60		*	***	*	*Hordeum* sp.	++				*	chaff /stem	*	
Mid/LBA	101	9042	Fill of Pit [9043]	6	15	96	3		*	*										
Mid/LBA	102	9044	Fill of pit [9045]	4	20	50	1	*	***	****	*	*Vicia*/*Lathyrus* sp., *Triticum* sp.	++							
Early Roman 1st-2nd	122	9058	Burnt spread oven rake out	36	90	0	15		****	****	***	*Triticum* sp., incl. *T.* cf. *aestivum*, *Hordeum* sp.	++/ +++	**	*Galium*/*Asperula* sp., Apiaceae aggs, *Polygonum*/*Rumex* sp.	++				

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	Land snail shells
Early Roman 1st-2nd	112	9156	Fill of pit/oven rake out [9149]	8	20	18	80		**	***	*	*Triticum* cf. *aestivum*	+	**	*Raphanus* sp. fruit, Apiaceae, *Avena* sp.	+/ ++					
Early Roman 1st-2nd	121	9237	secondary fill of ditch [9235]	2	12	89	10			*							*	indet. frag	+	**
Early Roman 1st-2nd	111	9016	Demolition fill of oven [9017]	28	35	3	82		**	**	*	*Triticum* sp.	++	*	Poaceae, *Chenopodium* sp.	++	*	stem & chaff frags, v.few	+	**
Early Roman 1st-2nd	113	9034	Op Sig oven floor [9017]; heat affected	44	40	4	92		**	**	*	*Triticum* sp., cf. *Lens cullinaris* (1/2)	++		*Avena* sp.		*	occ. stems & chaff	+	**
Early Roman 1st-2nd	115	9157	Clay lining in oven [9149?]	<2	10	60	37		*	**				* (1)	cf. *Avena* sp.	+				**
Early Roman 1st-2nd	116	9146	Charcoal rich oven fill	12	20	1	4		**	****	*	*Triticum* sp.,	++	**	Poaceae, cf. Apiaceae	++	*	poss buds, & thorn & twig		
Early Roman 1st-2nd	117	9037	Oven wall [9017]	<2	0.5	0	30			***										
Early Roman 1st-2nd	118	9170	Oven wall ?? Masonry	<2	0.5	90	10													

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation	Land snail shells
Early Roman 1st-2nd	119	9035	Op Sig oven floor [9017]; heat affected	<2	2	2	97		*	**										
? Early Roman 1st-2nd	114	9147	insitu timber fill of PH [9148]	2	5	30	68			**										
5th-6th Century	108	9061	primary fill of quarry pit [9046]	6	5	5	92			***	*	(1) *Triticum* sp.	++							
13th Century	110	9142	Fill of Pit [9143]	2	10	9	90			*	*	cerealia indet.	+	*	*Chenopodium* sp.	+				
13th Century	120	9239	fill of ditch [9240]	8	20	80	10													***
13th Century	109	9066	Fill of pit [9067]	<2	7	96	2		*	**	*	cerealia indet.	+							

Table 41 Site J Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	other botanical charred
LIA	1	10019	Fill of Ditch [10020]	<2	5	60	40								
LIA/Early Roman	4	10119	Fill of Ditch [10120]	6	60	73	2		*	**	*	*Triticum* sp.	++		
LIA/Early Roman	3	10139	Fill of Ditch [10140]	16	200	93	4		*	**	*	cerealia	++		
LIA/Early Roman	6	10149	Fill of Pit [10150]	16	180	96	1			**	*	cerealia indet.	+		
LIA/Early Roman	12	10213	Fill of Ditch [10215]	8	130	98	1			**					
Roman 2nd-3rd Centuries	2	10117	Fill of Ditch [10118]	4	20	92	5								
Roman 2nd-3rd Centuries	5	10147	Fill of PH [10148]	NOT PROCESSED											
Roman 2nd-3rd Centuries	8	10199	Fill of Ditch [10201]	<2	5	48	50			**					
Roman 2nd-3rd Centuries	9	10200	Fill of Ditch [10201]	22	240	94	2								
Roman 2nd-3rd Centuries	11	10208	Upper Fill of Ditch [10210]	18	170	94	4								

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	other botanical charred
Roman 2nd-3rd Centuries	14	10208	Upper Fill of Ditch [10210]	34	225	96	3		*	**					
Roman 2nd-3rd Centuries	10	10211	Fill of Pit [10212]	18	205	93	6		*	**					
Roman 2nd-3rd Centuries	13	10217	Fill of Ditch [10218]	14	200	98	1								
Roman 2nd-3rd Centuries	7	10193	Fill of Ditch [10194]	16	190	98	1			**	*	cerealia indet.	+		
Tudor/Post Med	15	10060	Fill of Pit [10061]	28	30	9	85	*	**	***	*	cf. *Pisum sativum*, Legume frags, *Triticum* sp.	+		
Tudor/Post Med	16	10070	Fill of Pit [10061]	6	20	83	5								
Tudor/Post Med	17	10071	Fill of Pit [10061]	30	120	91	4								

Table 42 Site K Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications	Preservation
LIA	605	11051	Fill of Ditch [11052]	2	3	64	35		*	*				*	indet.	+			
Early Roman 1st-2nd Century	601	11024	Fill of Pit [11025]	10	10	1	10	**	***	****	**	*Triticum* sp., some Legume	+/++	*	Poaceae, Caryophylaceae *Polygonum*/*Rumex* sp.	++	*	g.b. to id	++
Early Roman 1st-2nd Century	600	11026	Fill of Pit [11027]	4	9	1	5		**	***	**	*Triticum* sp.	+/++	**	Poaceae to id, *Polygonum*/ *Rumex* sp.	++	**	chaff, spikelet fork, g.b. & rachis	++
Early Roman 1st-2nd Century	602	11032	Fill of Quarry Pit [11031]	2	1	8	91												
Early Roman 1st-2nd Century	603	11033	Fill of Quarry Pit [11031]	<2	1	4	95												
Early Roman 1st-2nd Century	604	11034	Fill of Quarry Pit [11031]	8	5	2	97		*	**	*	*Triticum* sp,	++	*	indet.	+			

Table 43 Watching Brief Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

group/phase	Sample Number	Context	Feature Type	weight g	Flot volume ml	Uncharred %	sediment %	Charcoal >4mm	Charcoal <4mm	Charcoal <2mm	crop seeds charred	Identifications	Preservation	weed seeds charred	Identifications	Preservation	other botanical charred	Identifications
LIA/Early Roman	150	20	Fill of Ditch [22] (ringditch)	10	35	37	3	*	***	****				*	*Fallopia*/*Polygonum*/*Rumex* sp.		*	Chaff frags, stem frag
Undated	154	107	Fill of Pit [106] (burnt material)	10	20	19	2		****	****							*	Parenchyma frags, stem frags and twigs
	152	104	Fill of Pit [105] (burnt material)	2	5	10	40		**	****								
	153	105	Cut No ?	6	12	20	5	*	***	****								
	155	109	Fill of Pit [108] (burnt material)	10	12	7	3	*	**	***	***	Cerealia dominant,*Triticum* sp., *Hordeum* sp. & *Vicia*/*Lathyrus* sp. noted	++	*				

Table 44 Evaluation Samples Flot Quantification (*=0-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

Sample Number	Context No.	Site Location	Phasing	Comments/ Excavator Interpretation	Flot volume (ml)	Uncharred vegetation %	Charcoal >4mm	Charcoal <4mm	Crop seeds	Identifications	Weed seeds	Identifications	Chaff and other CPR	Identifications	Land snail shells
Ev25	7/008	A	M/LIA	Fill of 7/007	25	95	*	*			*	1 *Polygonum*/*Rumex* sp.			
Ev26	7/010	A	ER1st-2nd centuries	Fill of 7/009	25	95		**							
Ev27	8/011	A	ER1st-2nd centuries	Quarry pit fill of 8/010	50	90		**							
Ev17	31/007	F	IA	Fill of Ditch 31/006	50	80	*	***	**	cereals					
Ev14	26/005	F		Fill of 26/004	480	<2	***	****							
Ev18	28/004	F	LBA	Fill of 28/003	10	98		*							
Ev19	28/008	F	LBA	Fill of 28/007	5	98		*							
Ev16	31/005	F	Roman	Fill of Ditch 31/004	70	80	**	***	**	cereals *Triticum* spp.	*	incl. *Galium* sp.			
Ev11	63/008	G	ER1st-2nd centuries	Fill of 63/007	<5	80	*	***							

Sample Number	Context No.	Site Location	Phasing	Comments/ Excavator Interpretation	Flot volume (ml)	Uncharred vegetation %	Charcoal >4mm	Charcoal <4mm	Crop seeds	Identifications	Weed seeds	Identifications	Chaff and other CPR	Identifications	Land snail shells
Ev15	63/010	G	ER1st-2nd centuries	Fill of Ditch 63/009	210	45	**	****	**	cereals *Triticum* sp., *Avena* sp., ** pulses *Pisum sativum*	**	incl. *Rubus* sp, cf. *Corylus* sp. & others			
Ev28	63/006	G	ER1st-2nd centuries	Fill of pot in ET63/004											
Ev10	63/006	G?			10	50	**	**	**	*Triticum aestivum*, *Triticum* sp., * *Pisum sativum*			*	stem fragments	
Ev7	33/017A	H	LBA/EIA	Upper Ditch 33/016 Fill	10	80	*	**	*	cereals (*Triticum* sp.)	*	to id			
Ev9	33/017B	H	LBA/EIA	Upper Ditch 33/016 Fill	65	90	*	**							
Ev12	33/024	H	LBA/EIA	Fill 33/023	<5	98		*							
Ev13	33/016	H	LBA/EIA later field boundary ditches	Ditch	30	85	*	**			*	1 *Raphanus* sp.			**
Ev8	33/021	H	Neo/EBA	Fill of Ditch 33/020	25	90		***					*	1 g.b.	
Ev3	39/005	I	Early AS 5th-6th centuries	Fill of large pit 39/004	15	70		***	*	cereals	*	grass weeds	*	g.b.	

Sample Number	Context No.	Site Location	Phasing	Comments/ Excavator Interpretation	Flot volume (ml)	Uncharred vegetation %	Charcoal >4mm	Charcoal <4mm	Crop seeds	Identifications	Weed seeds	Identifications	Chaff and other CPR	Identifications	Land snail shells
Ev4	60/006	J	R2nd-3rd centuries	fill of Hearth 60/004	<5	30	*	****			*	nut shell frag	*	chaff	
Ev1	45/004			Fill of 45/003	25	<5	**	****							
Ev2	67/007			Fill of Palaeochannel 67/006	10	50		**							***
Ev5	59/006			Fill of Gully 59/005	<5	90		**							
Ev6	35/004			Fill of 35/005	<5	98		*							
Ev20	22/008			Burnt Fill of 22/007	220		**	****							
Ev21	20/003			Sub Soil	70	60		**							
Ev22	21/003			Natural	70	95		**							
Ev23	12/009			Fill of 12/008	<5	5	*	***	**	cereal *Triticum* sp.	**	to id			
Ev24	12//012			Fill of 12/004	<5	30		**							

Table 45 Charcoal Assessment Identifications All Excavation Sites (rw = round wood)

Site	Sample Number	Context	*Quercus* sp.	*Fagus sylvatica*	*Betula* sp.	*Corylus/Alnus* sp.	cf. *Corylus avellana*	cf. *Alnus* sp.	*Salix/Populus* sp.	cf. *Salix* sp.	*Prunus* sp.	*Fraxinus excellsior*	Maloideae	*Taxus baccata*	*Ulnus* sp.	*Rosa* sp.
A	300	1013	10													
A	301	1014	9 (rw)													1
A	303	1033												10		
A	304	1089	14	2	2											
A	305	1091	1						1		1		1			1
A	308	1195	10													
B	213	2152									1					9
E	400	5012	10													
E	401	5037							3		3		4			
E	402	5045	6									3				
E	403	5046	10													
E	404	5048	9								2					
E	405	5049	10													
E	406	5064	9						1		1					
E	407	5065	10													
F	123	6047	5			1 rw					4 (rw)					
H	516	8176	7													
H	521	8260	5													
I	112	9156	6			3							1			
I	122	9058	6								1				2	1 rw with bark
K	601	11024					3	1		2						
WB	150	20									3 (rw)		2			
WB	153	105	4													

Table 46 Quantification of Prehistoric Flintwork by Area

Context	Total	weight	FF	weight	Excavation Area	Group	Period/Phase	Residual?	Date
U/S	1	22			WB	-	Modern	Y	
21	3	15			WB	2	5.III	Y	
37	1	7			WB	2	5.III	Y	
1077	2	4			A1	103	5.I	N	
1079	1	6			A1	118	6.I	Y	
1080	1	21			A1	103	5.I	N	
1129	1	11			A1	117	6.I	Y	
1173	1	1			A1	102	5.I	N	
1249	1	2			A1	109	4.IV	N	
2029	2	4			B2	216	6.III	Y	
2042	1	2			B2	216	6.III	Y	
2056	1	5			B2	-	7.II	Y	
2061	1	9			B2	209	6.III	Y	
2065	1	10			B2	214	6.III	Y	
2073	1	18			B2	203	4.IV	N	
2118	1	20			B2	-	Modern	Y	
2127	3	21			B2	204	4.IV	N	
2132	1	24			B2	209	6.III	Y	
2176	1	8			B2	201	4.IV	N	
2178	1	6			B2	218	5.I	N	
2183	1	4			B2	202	4.IV	N	
2187	2	16			B2	201	4.IV	N	
2195	1	7			B2	201	4.IV	N	
2198	1	3			B2	-	6.IV	Y	
2215	1	8			B2	218	5.I	N	
3019	1	1			C3	-	Modern	Y	
3020	4	147			C3	300	4.III	N	
5007	1	2			E5	506	5.I	N	
5010	2	9			E5	506	5.I	N	
5011	3	3			E5	506	5.I	N	
5014	1	4			E5	-	Subsoil	Y	
5019	1	4			E5	509	6.I	Y	
5021	1	4			E5	-	5.I	N	
5045	1	12			E5	510	6.I	Y	
5054	2	7			E5	501	4.IV	Y	
5055	2	40			E5	501	4.IV	Y	
5060	3	7			E5	503	4.IV	N	
5077	5	38	1	19	E5	508	5.I	N	
6011	1	8			F7	-	4.III	N	
8002	1	3			H8	816	4.4.I	N	
8008	3	3			H8	-	4.4.I	N	
8043	2	9			H8	821	4.4.III	N	
8054	1	8			H8	822	4.4.I	N	
8056	2	96			H8	-	4.4.I	N	
8060	3	33			H8	800	4.4.I	N	

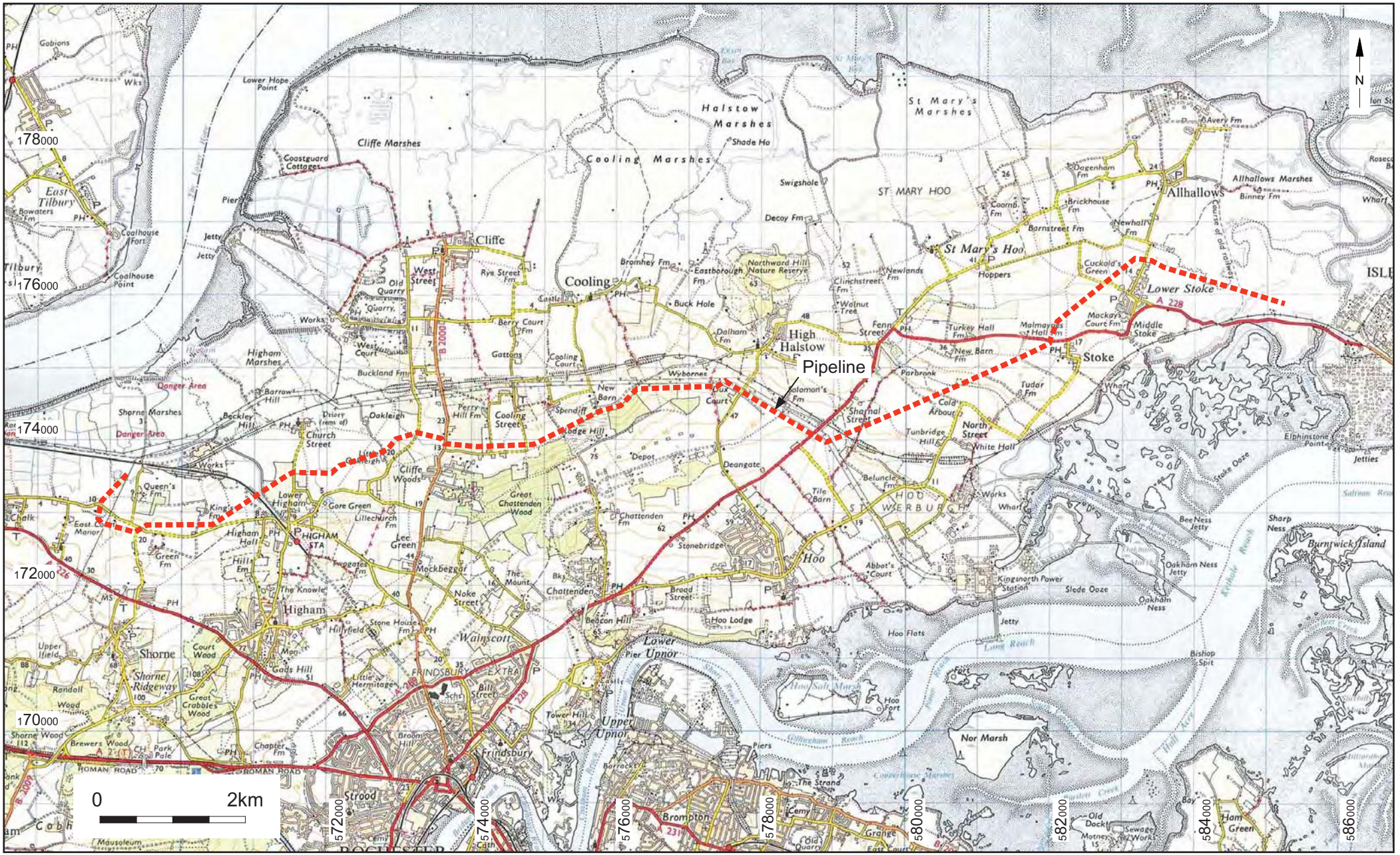
8095	1	15			H8	811	4.4.I	N	
8099	2	43			H8	-	3.III	N	
8100	4	15	1	2	H8	818	4.4.II	N	
8105	6	59	1	11	H8	-	Modern	Y	
8151	2	6			H8	818	4.4.II	N	
8172	1	13			H8	804	4.4.I	N	
8190	1	188			H8	809	4.4.I	N	
8198	2	8			H8	806	4.4.I	N	
8200	1	5			H8	806	4.4.I	N	
8227	1	5			H8	822	4.4.I	N	
8242	2	849			H8	812	4.4.I	N	
9001	5	72			I9	-	Subsoil	Y	Early Neolithic
9006	1	4			I9	901	4.I	Y	
9008	5	93			I9	907	8.I	Y	Neolithic
9012	1	1			I9	901	4.I	N	
9015	4	44			I9	901	4.I	N	
9018	2	12			I9	907	8.I	Y	
9021	14	409			I9	900	4.I	N	
9024	3	28			I9	902	4.III	N	
9032	1	4			I9	907	8.I	Y	Mesolithic
9038	4	35			I9	903	4.III	N	
9040	8	38			I9	902	4.III	N	
9047	15	207			I9	906	7.1	Y	
9066	1	9			I9	-	8.I	Y	
9158	6	40			I9	909	8.1	Y	
9174	3	20			I9	-	6.I	Y	
9178	4	35			I9	-	8.I	Y	
9180	6	32			I9	902	4.III	N	Early?
9182	2	8	1	2	I9	902	4.III	N	
9184	9	530			I9	904	6.1	Y	Eneo
9191	1	6			I9	-	6.1	Y	
9207	2	7			I9	902	4.III	N	
9209	3	34			I9	-	8.I	Y	
9211	1	3			I9	-	Modern	Y	Mesolithic
9217	2	5			I9	902	4.III	N	Mesolithic
9222	7	76			I9	910	5	N	
9224	4	12	1	10	I9	904	6.I	Y	
9237	1	17			I9	904	6.I	Y	
9239	3	177			I9	-	8.1	Y	Mesolithic
10002	9	223			J10	-	Subsoil	Y	Later Prehistoric
10006	1	1			J10	1006	5.III	Y	Mesolithic
10007	3	24			J10	1006	5.III	Y	
10012	2	4			J10	1006	5.III	Y	
10019	3	26			J10	-	5.II	N	
10030	4	31			J10	1000	5.II	N	
10033	3	93			J10	-	3.II	N	
10035	1	15			J10	1000	5.II	N	
10038	1	3			J10	-	2	N	Mesolithic
10059	2	11			J10	-	8.II	Y	

10060	5	37			J10	-	8.II	Y	
10065	3	25			J10	1001	5.II	Y	Meso/Eneo
10070	2	7			J10	-	8.II	Y	Mesolithic
10208	1	4			J10	1008	6.II	Y	Mesolithic
10211	1	8			J10	-	6.II	Y	
10213	1	73	1	5	J10	1002	5.III	Y	Meso/Eneo
10214	2	5			J10	1002	5.III	Y	
10277	2	7			J10	1002	5.III	Y	
10280	1	3			J10	1002	5.III	Y	
10135	1	11			J10	1012	8.II	Y	Meso/Eneo
10149	1	1			J10	-	5.III	Y	Mesolithic
10153	2	12			J10	-	5.II	N	
10155	1	10			J10	1004	5.III	Y	
10161	3	18			J10	1008	6.II	Y	
11015	1	6			K11	1102	8.I	Y	
11022	3	23			K11	1103	8.I	Y	
11028	2	1			K11	1100	5.II	N	
11055	1	15			K11	-	Subsoil	Y	
11066	1	32			K11	-	5.II	N	
Total	**276**	**4584**	**6**	**49**					

OASIS Form

OASIS ID: archaeol6-56499	
Project details	
Project name	Grain-Shorne Pipeline Mitigation
Short description of the project	Archaeology South-East (ASE), part of the Centre for Applied Archaeology, UCL, were commissioned by AMEC and partners National Grid and A B Rhead Associates to undertake archaeological mitigation along the route of the 21km Grain-Shorne Gas Transmission pipeline between the Isle of Grain Terminal site (NGR TQ 862755) and the Gravesend Thames South AGI (NGR TQ 691746). A total of eleven mitigation areas were excavated (Areas A1-K11), based on the results of a desk-based assessment, field-walking, and two phases of evaluation. A watching brief was maintained on the entire pipeline strip and pipe trench excavation.
Project dates	Start: 05-02-2007 End: 01-10-2008
Previous/future work	No / No
Any associated project reference codes	IOG 07 - Sitecode
Any associated project reference codes	3254 - Contracting Unit No.
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	PIT Mesolithic
Monument type	ENCLOSURE Bronze Age
Monument type	DITCHES Iron Age
Monument type	BUIDING Roman
Monument type	PIT Early Medieval
Monument type	CORN-DRIER Roman

Significant Finds	BROOCH Early Medieval
Investigation type	'Open-area excavation'
Prompt	Environmental Assessment regulations Schedule 1 projects (Obligatory)
Project location	
Country	England
Site location	KENT MEDWAY ISLE OF GRAIN Grain - Shorne Pipeline
Postcode	ME3
Study area	21.00 Kilometres
Site coordinates	TQ 862 755 51.4472777257 0.679894038118 51 26 50 N 000 40 47 E Point
Site coordinates	TQ 691 746 51.4445765690 0.433601700399 51 26 40 N 000 26 00 E Point
Lat/Long Datum	Unknown
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Kent County Council
Project design originator	Archaeology South-East
Project director/manager	Darryl Palmer
Project supervisor	Giles Dawkes
Type of sponsor/funding body	AMEC
Project archives	
Physical Archive recipient	Local Museum
Physical Contents	'Animal Bones','Ceramics','Environmental','Glass','Human Bones','Industrial','Metal','Worked stone/lithics'
Digital Archive recipient	Local Museum
Digital Media available	'Database','Images raster / digital photography','Survey','Text'
Paper Archive recipient	Local Museum
Paper Media available	'Context sheet','Correspondence','Diary','Drawing','Notebook - Excavation',' Research',' General Notes','Photograph','Plan','Report','Section','Survey ','Unpublished Text'
Entered by	giles dawkes (giles.dawkes@ucl.ac.uk)
Entered on	9 March 2009



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Project Ref: 3254	Sept 2009	Site Location Plan	
Report Ref: 2009031	Drawn by: JLR		

© Archaeology South-East		Grain - Shorne Pipeline	Fig. 2
Project Ref: 3254	Sept 2009	Plan of pipeline route	
Report Ref: 2009031	Drawn by: HLF		

N

Area A

Fig. 5

Fig. 4

Fig. 6

Period 4 Phase IV — Late Bronze Age/Early Iron-age
Period 5 Phase I — Mid-Late Iron Age
Period 6 Phase I — 1st-2nd Century AD
Undated

0 20m

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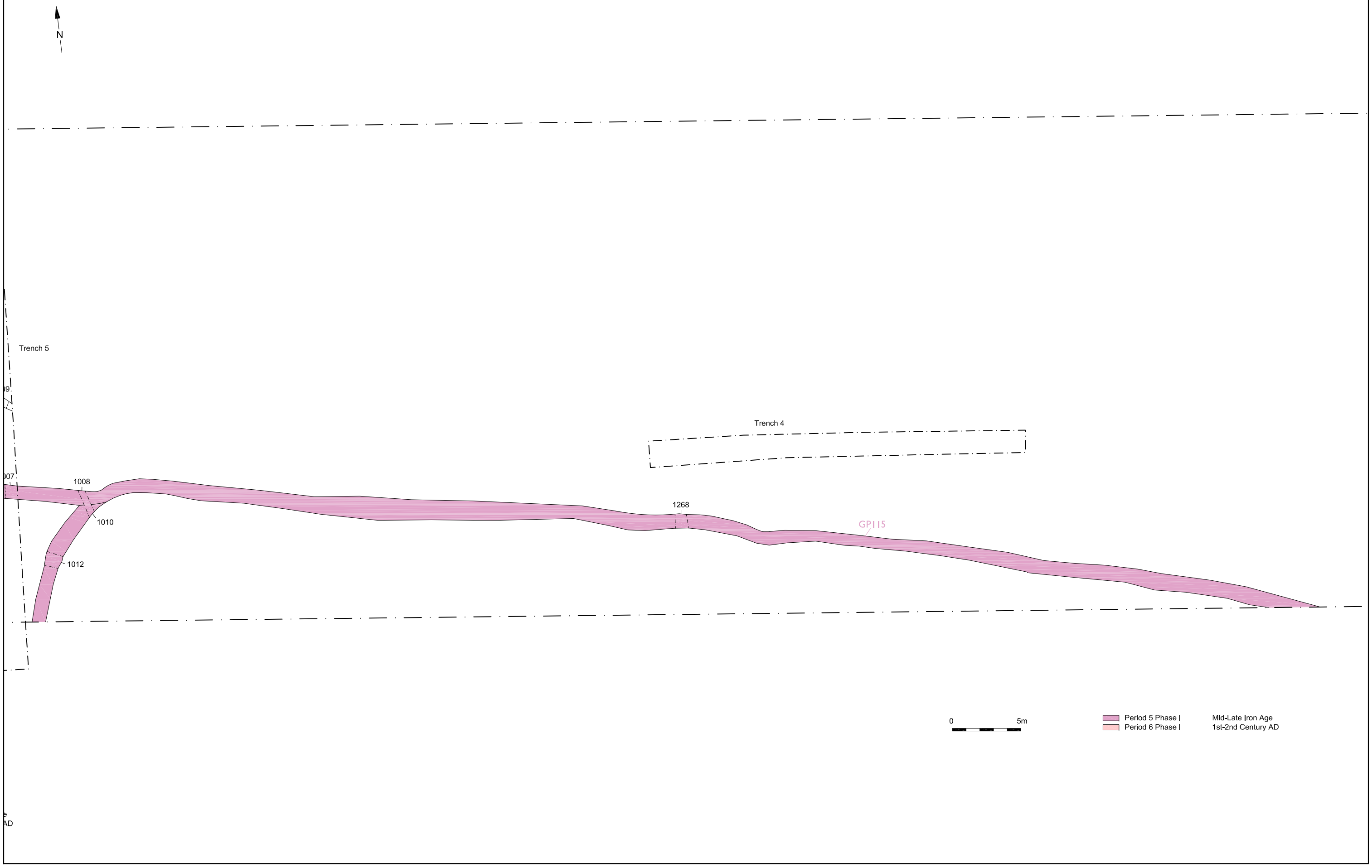
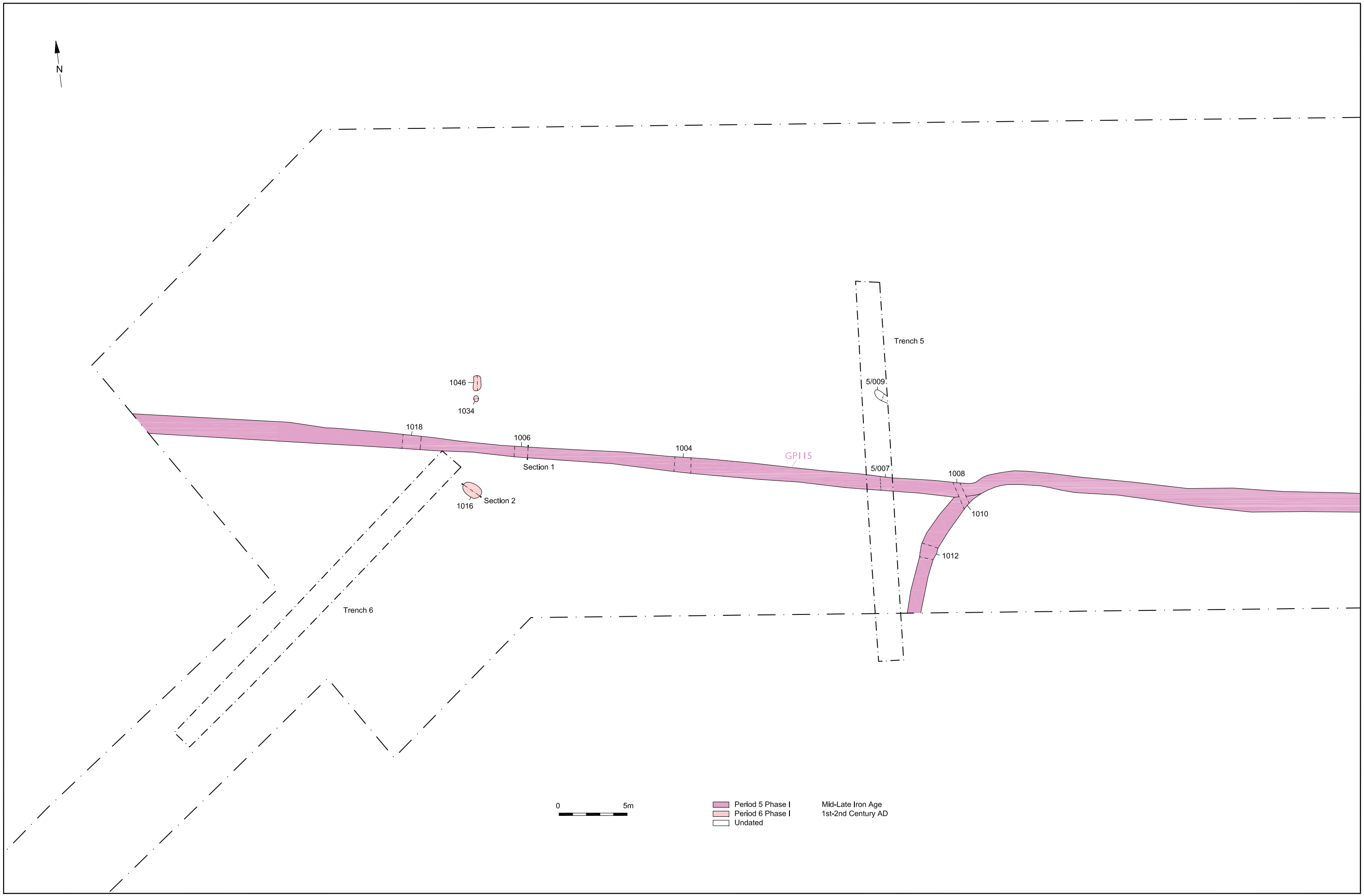
Project Ref: 3254	Sept 2009	Master plan of Area A1	
Report Ref: 2009031	Drawn by: HLF		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 4
Project Ref: 3254	Sept 2009	Area A1	
Report Ref: 2009031	Drawn by: HLF		



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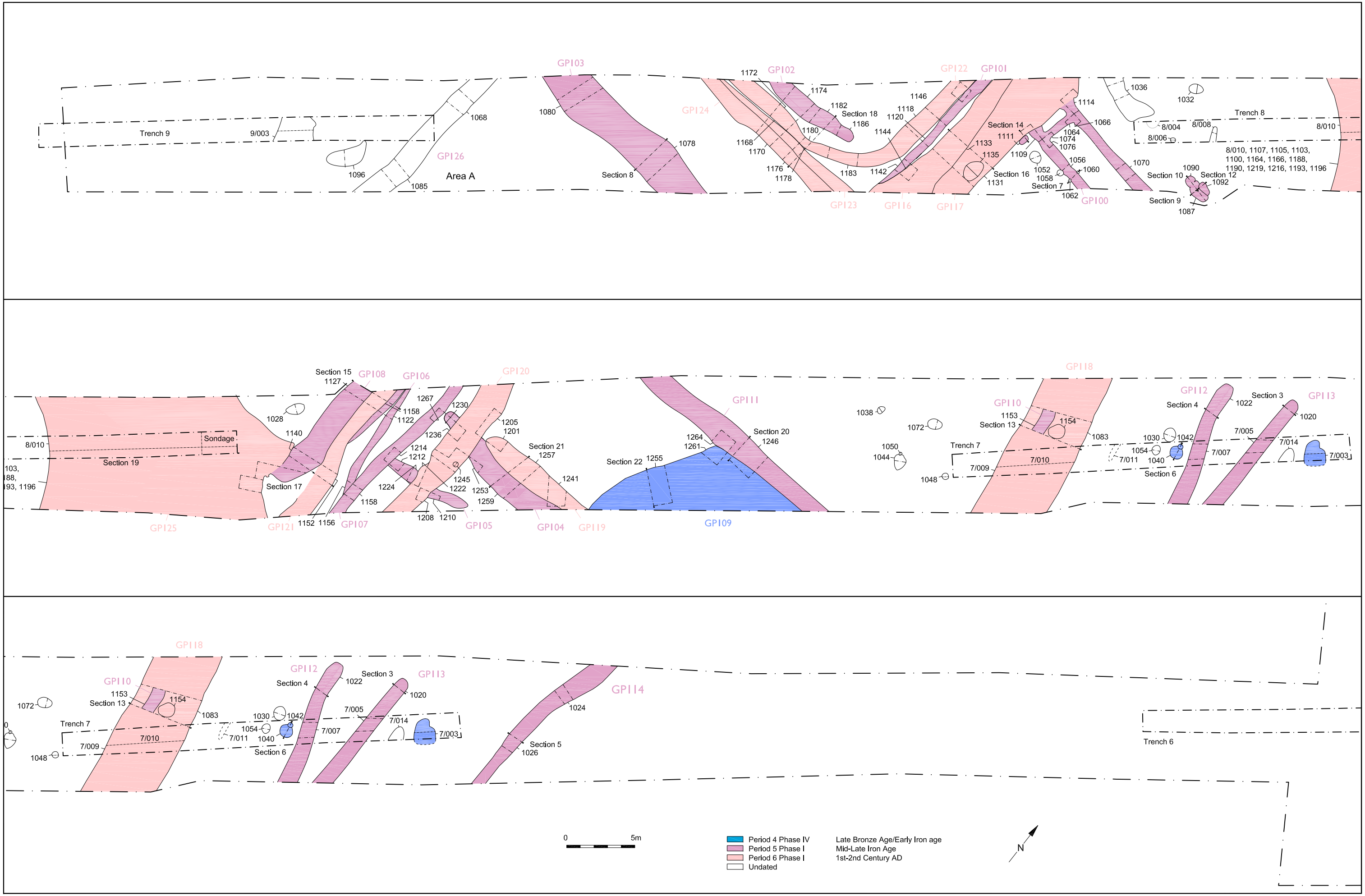
Project Ref: 3254	Sept 2009	Area A1	
Report Ref: 2009031	Drawn by: HLF		



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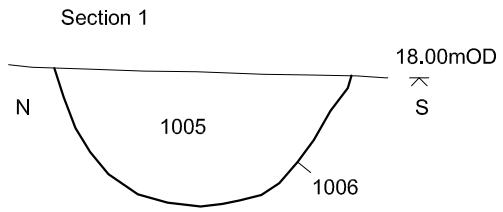
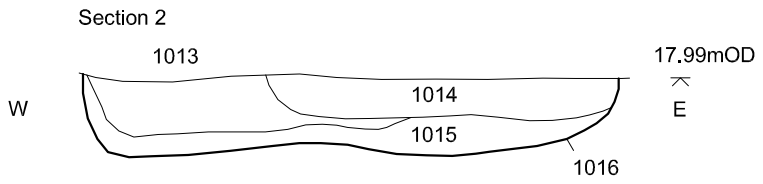
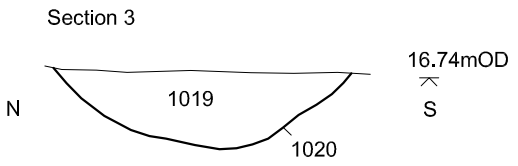
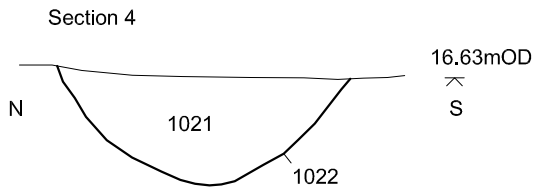
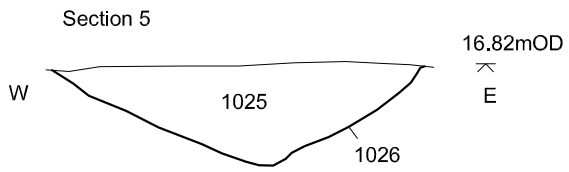
Project Ref: 3254	Sept 2009	Area A1	
Report Ref: 2009031	Drawn by: HLF		

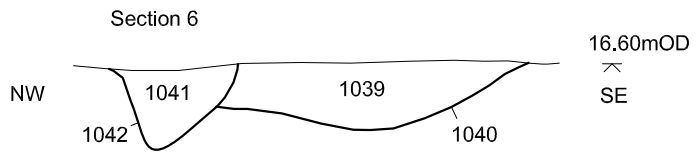


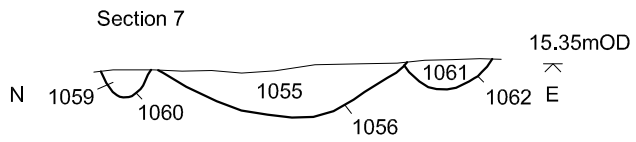


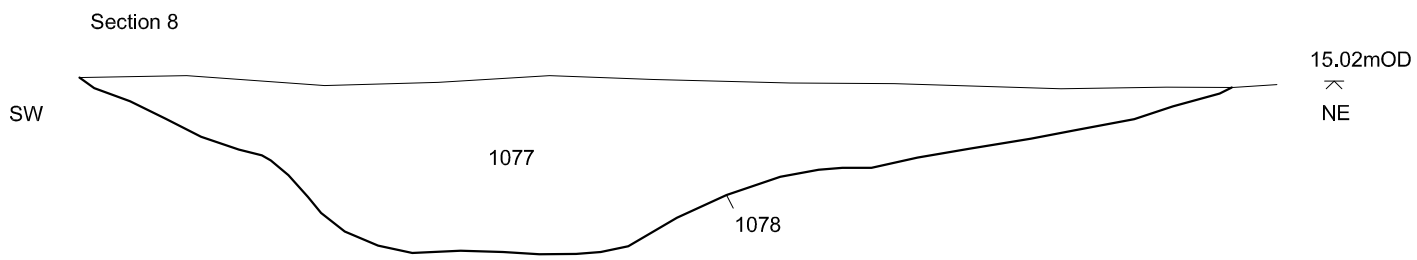


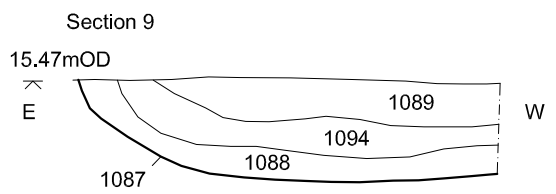


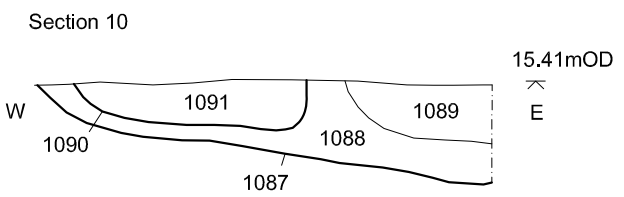


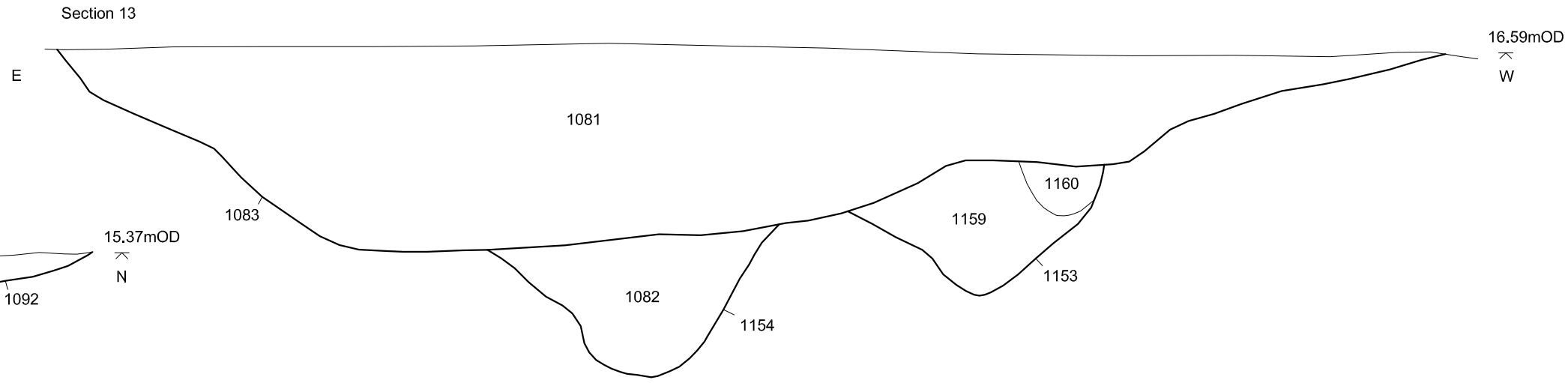


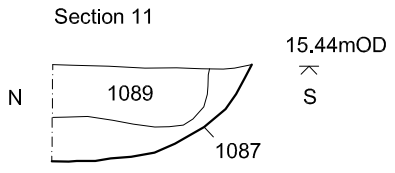


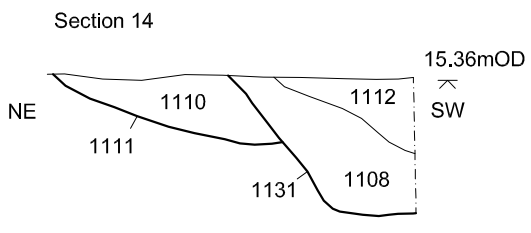


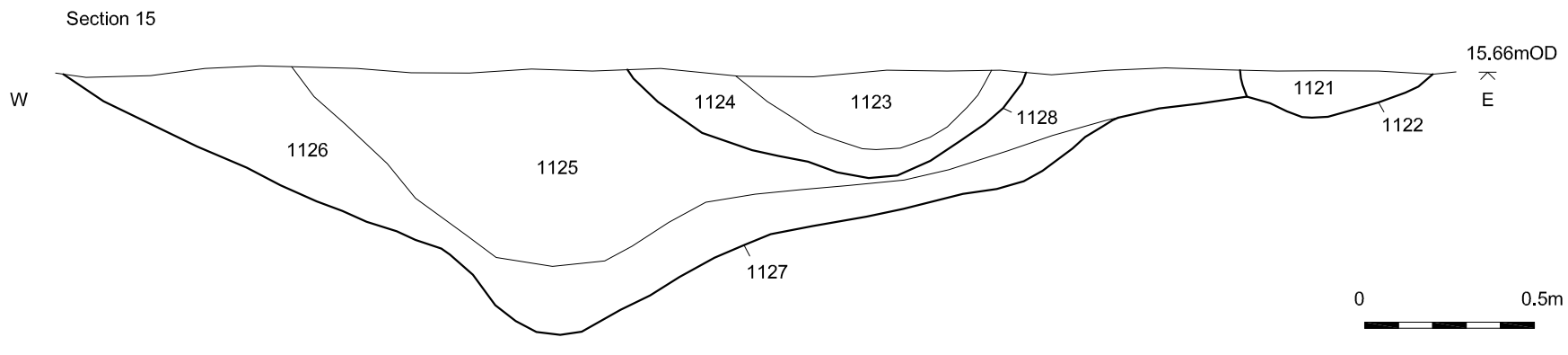












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Project Ref: 3254	March 2009	Selected Sections from Area A1 @ 1:20	
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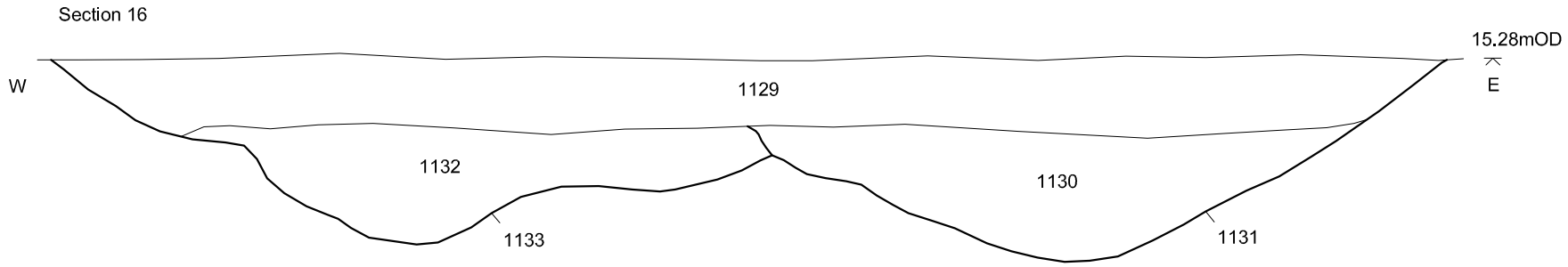

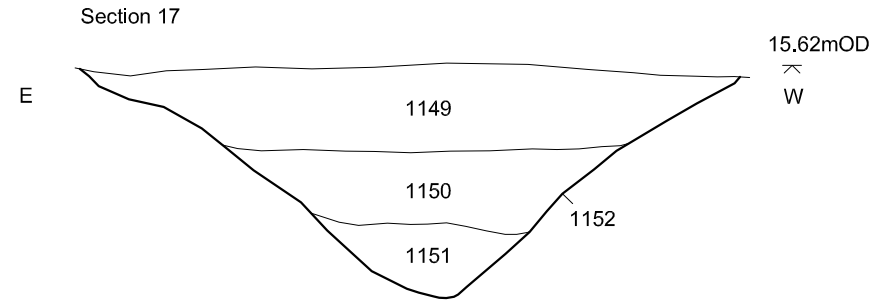

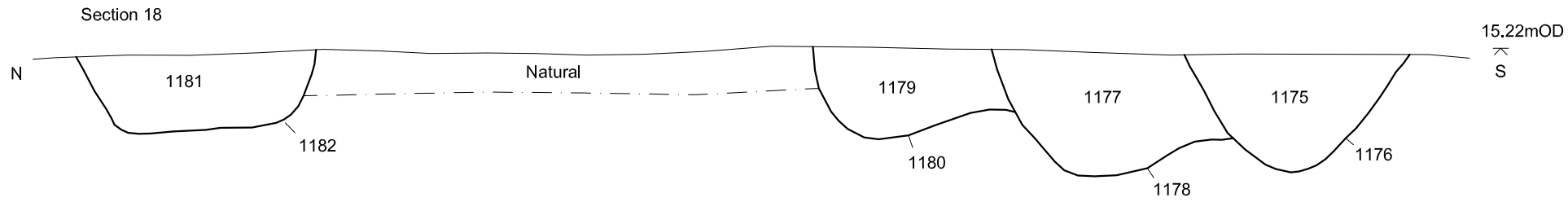

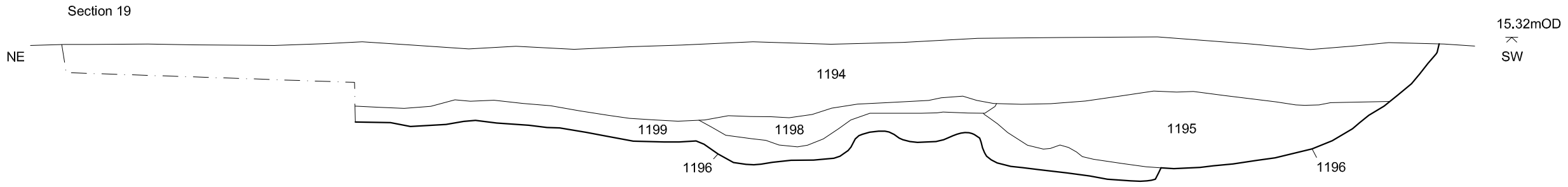

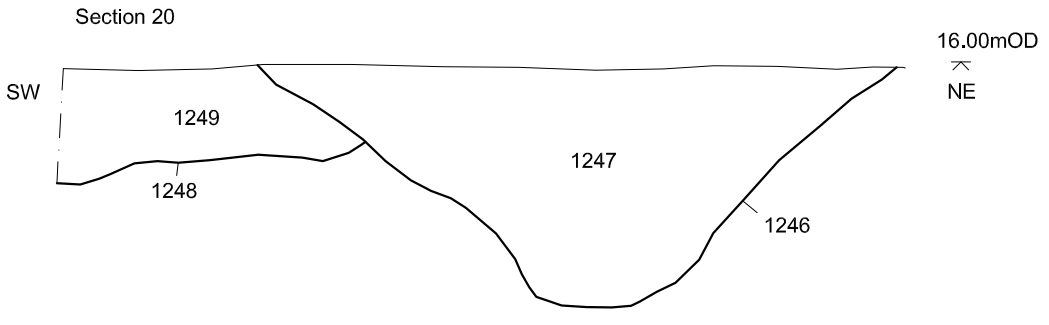

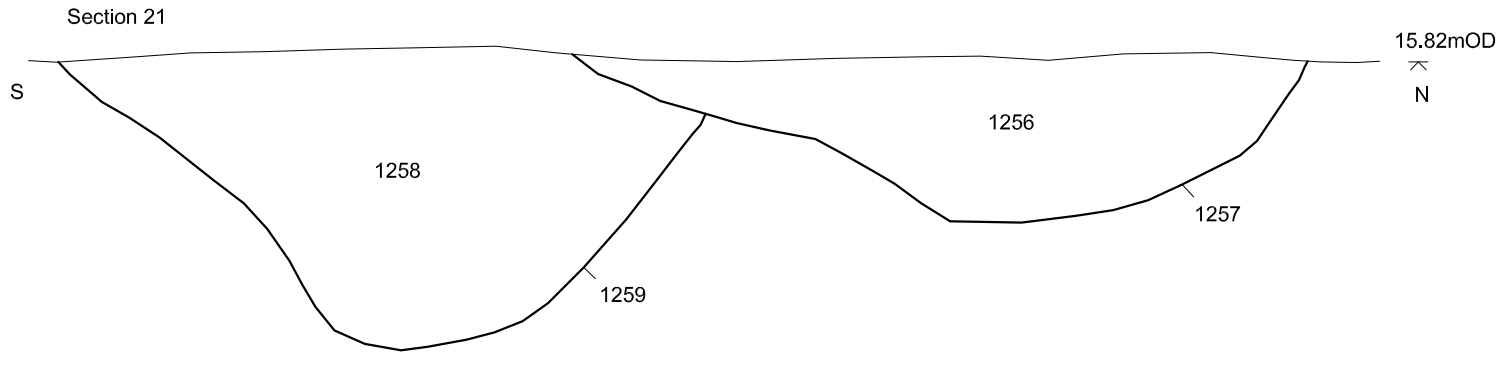

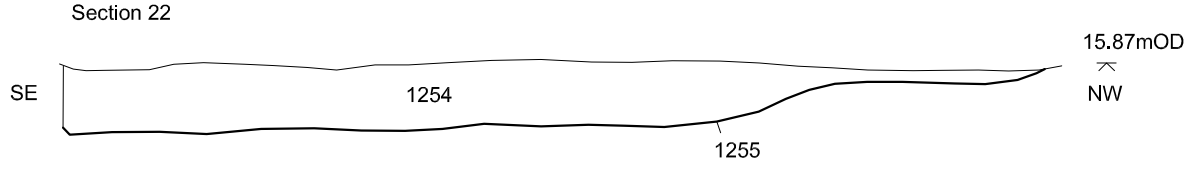

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Project Ref: 3254	March 2009	Selected Sections from Area A1 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

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Area B2

Fig. 10

Fig. 11

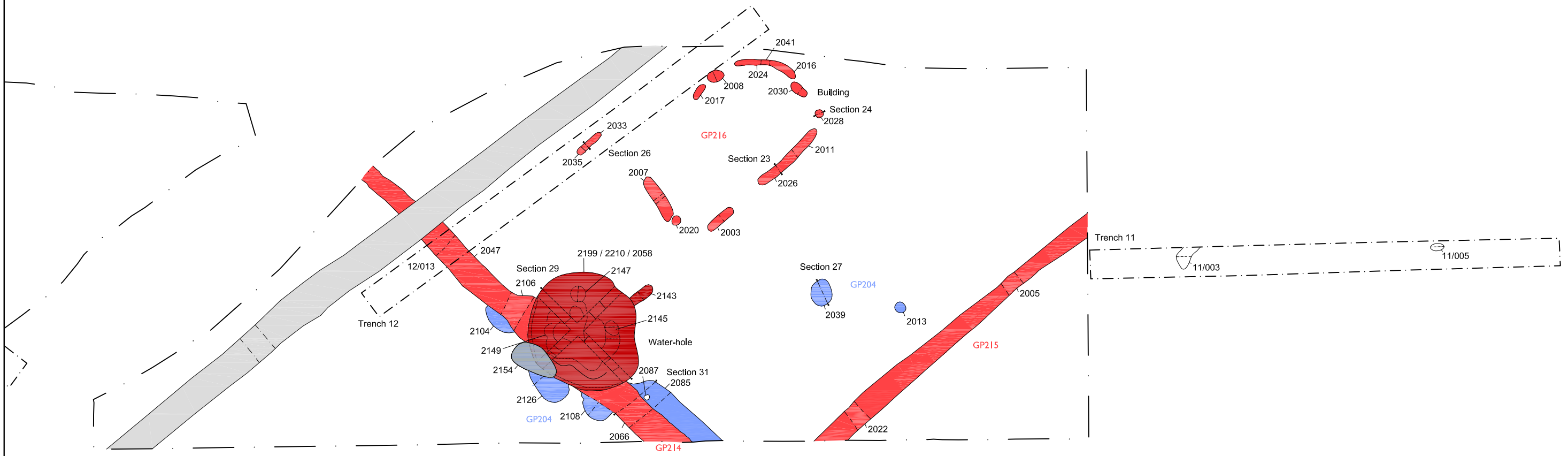
Fig. 12

ET11

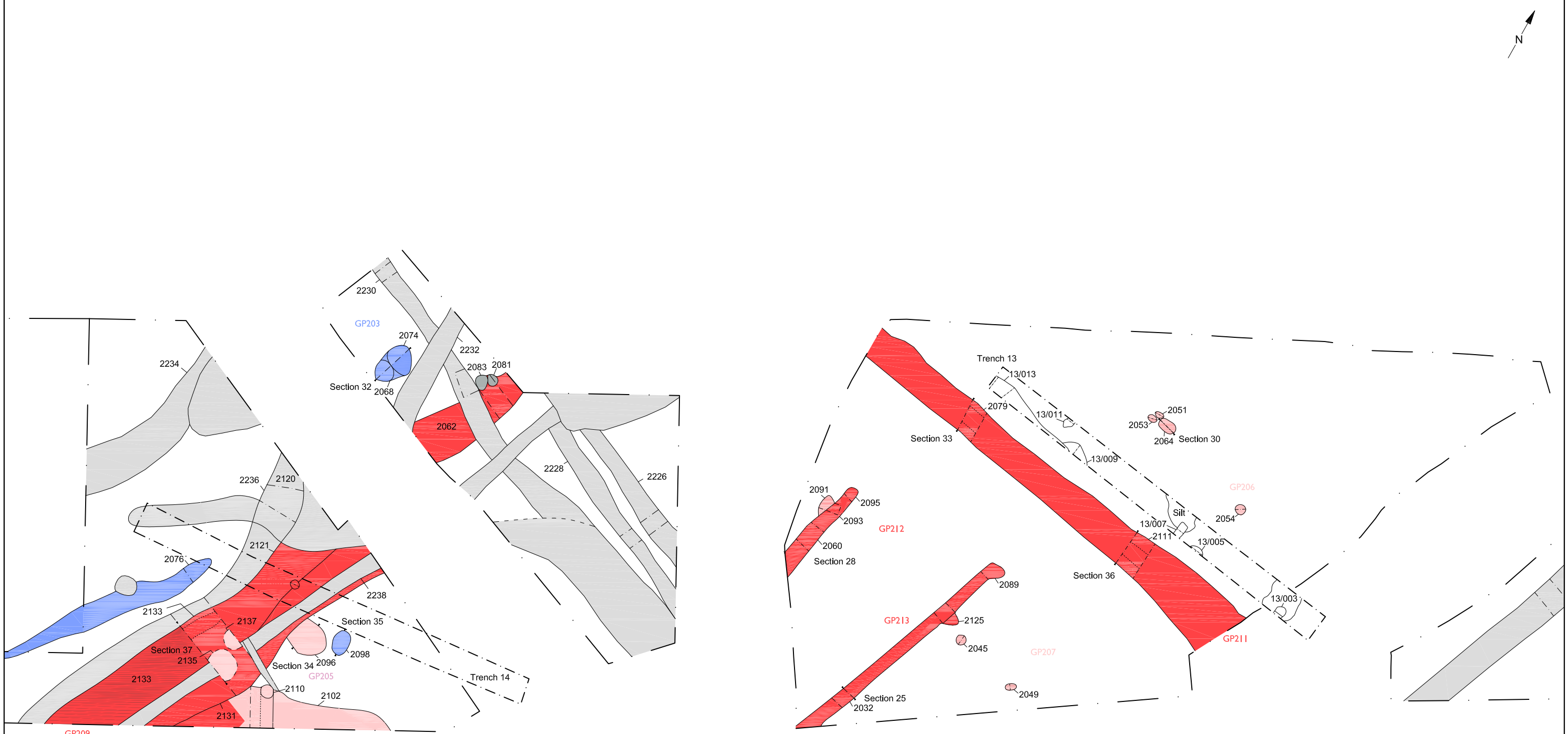
Period 4 Phase III	Late Bronze Age
Period 6 Phase I	1st-2nd Century AD
Period 6 Phase III	Late 3rd-Early 4th Century AD
Period 6 Phase IV	4th Century AD
Period 9 Phase II	17th Century
Undated	

0 20m

		Grain - Shorne Pipeline	Fig. 9
Project Ref: 3254	Sept 2009	Master plan of Area B2	
Report Ref: 2009031	Drawn by: HLF		

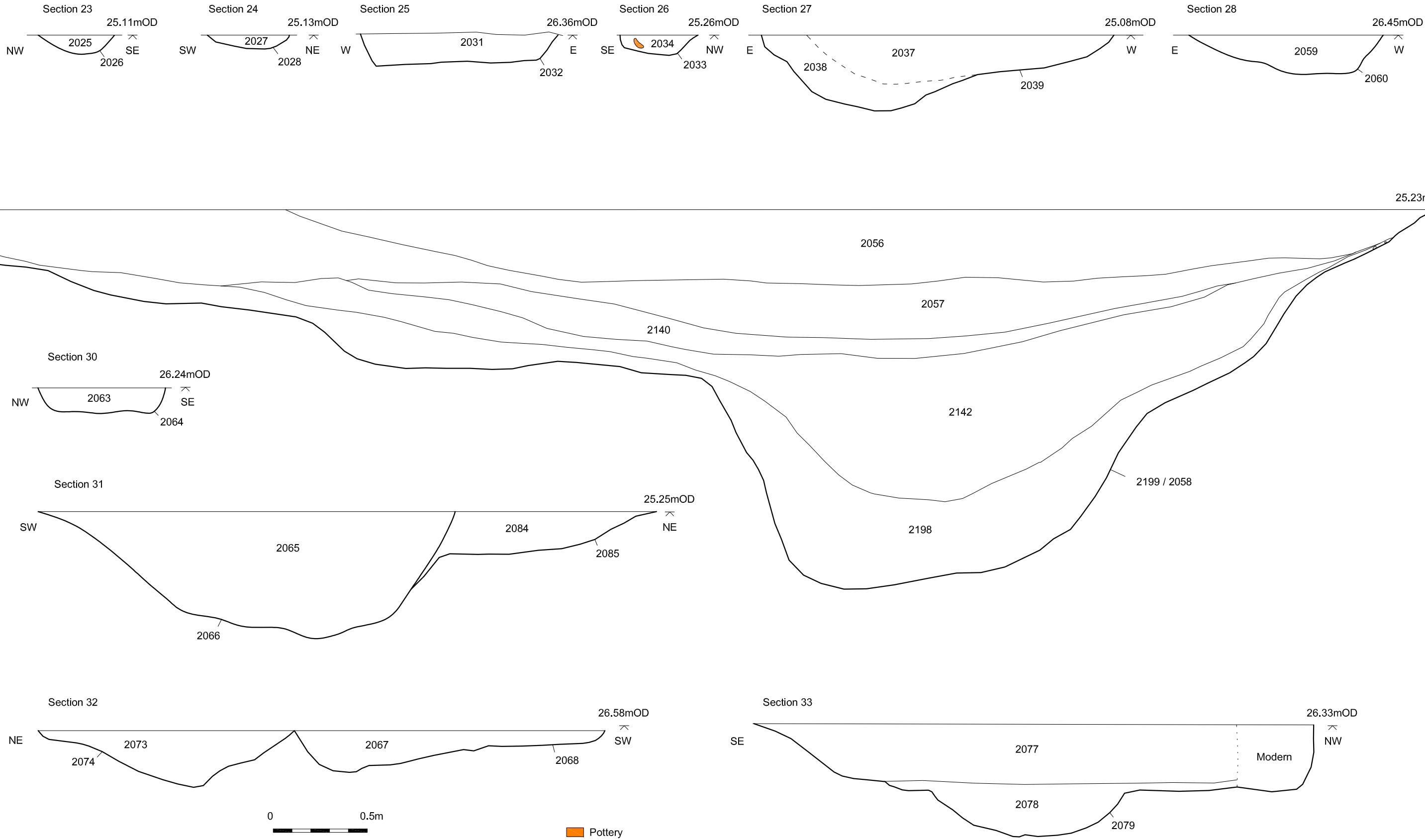


© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 10
Project Ref: 3254	Sept 2009	Area B	
Report Ref: 2009031	Drawn by: HLF		

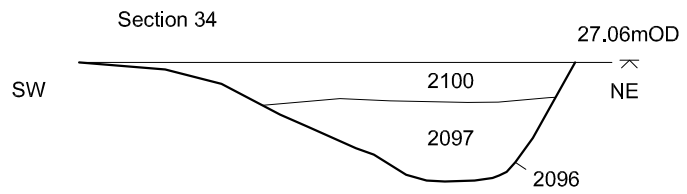


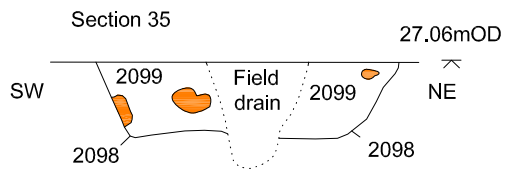
© Archaeology South-East		Grain - Shorne Pipeline	Fig. 11
Project Ref: 3254	Sept 2009	Area B	
Report Ref: 2009031	Drawn by: HLF		

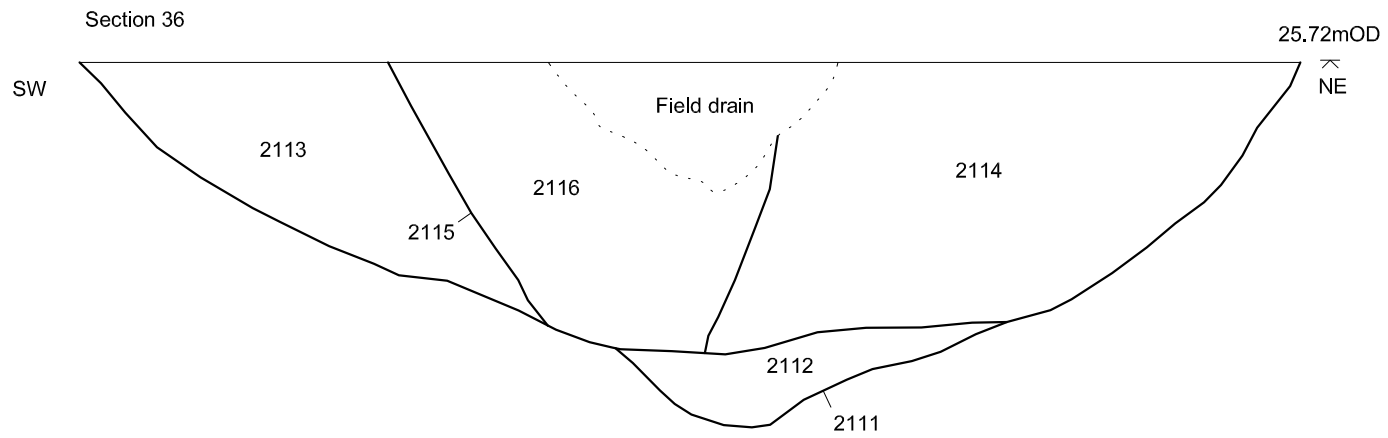
© Archaeology South-East		Grain - Shorne Pipeline	Fig. 12
Project Ref: 3254	Sept 2009	Area B	
Report Ref: 2009031	Drawn by: HLF		

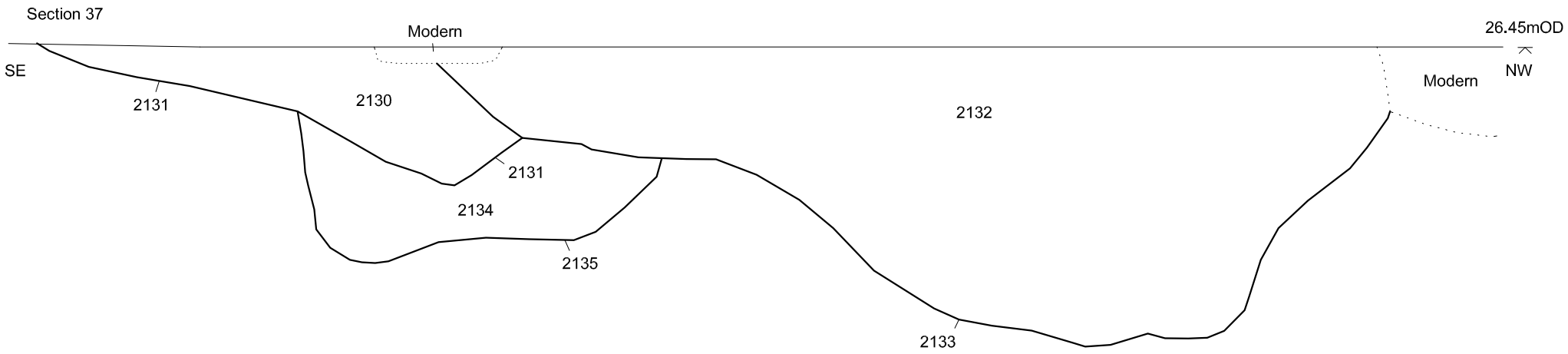


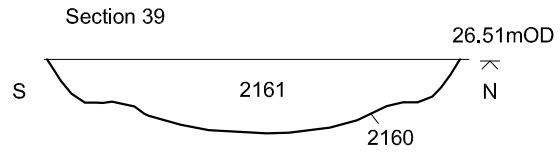
© Archaeology South-East		Isle of Grain Pipeline	Fig. 13
Project Ref: 3254	March 2009	Selected Sections from Area B2 @ 1:20	
Report Ref: 2009031	Drawn by: HF		

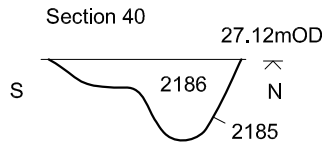


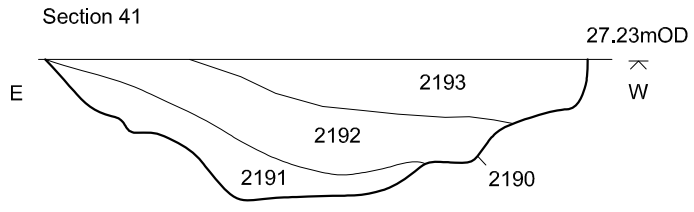


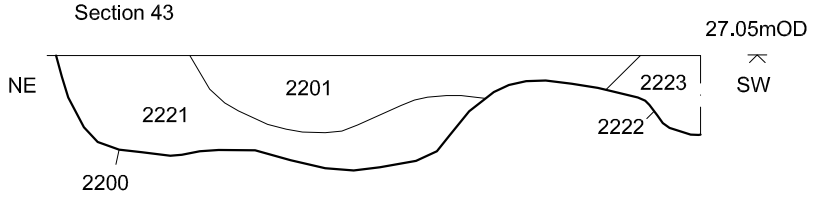


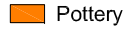












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Project Ref: 3254	March 2009	Selected Sections from Area B2 @ 1:20	
Report Ref: 2009031	Drawn by: HF		

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CT7

ET15

ET16

ET17

ET18

Area C3

Fig. 16

Period 4 Phase I — Mid Bronze Age
Period 4 Phase III — Late Bronze Age
Undated

0 20m

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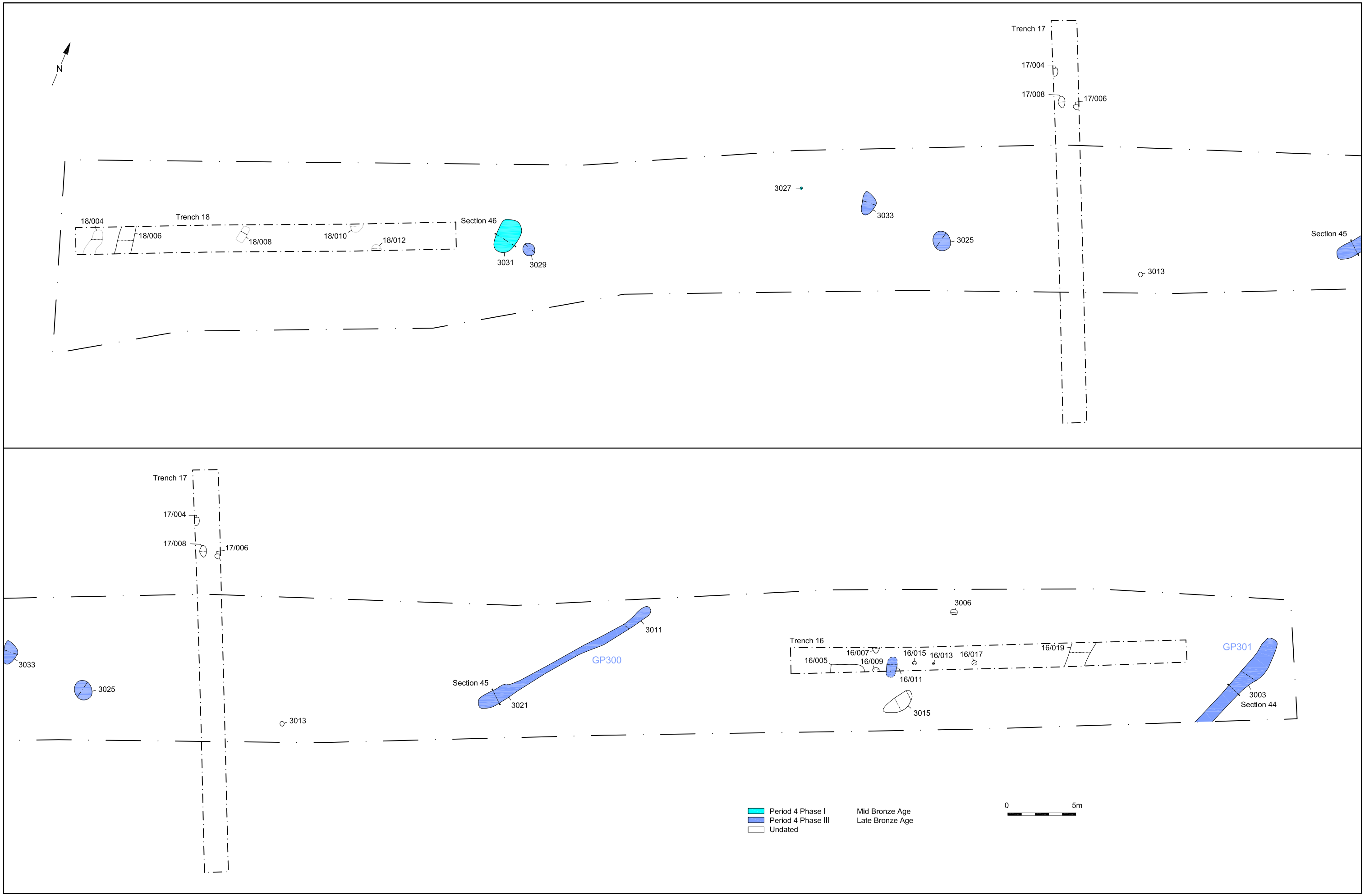
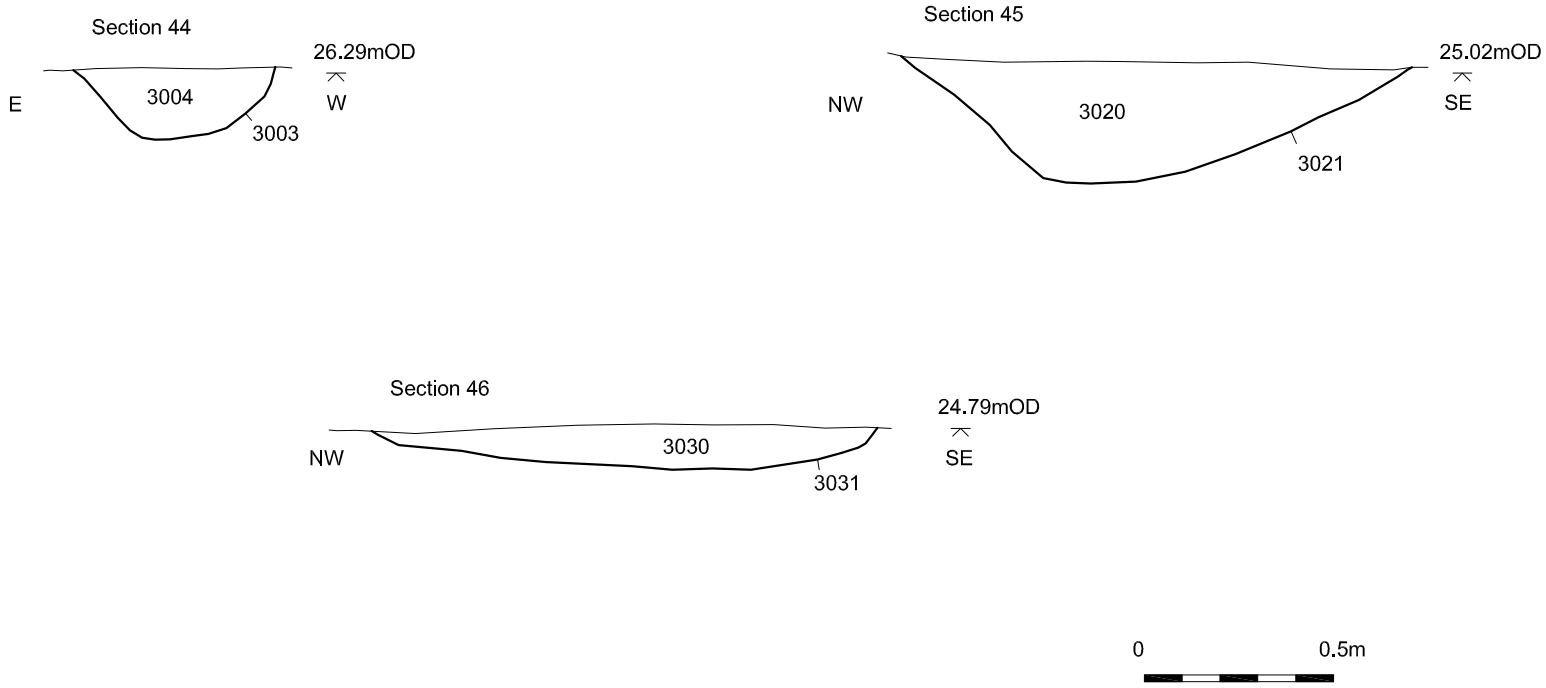
Project Ref: 3254	Sept 2009	Master plan of Area C3	
Report Ref: 2009031	Drawn by: HLF		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 16
Project Ref: 3254	Sept 2009	Area C3	
Report Ref: 2009031	Drawn by: HF/JR		



© Archaeology South-East		Isle of Grain Pipeline	Fig. 17
Project Ref: 3254	March 2009	Selected Sections from Area C3 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

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Area D4

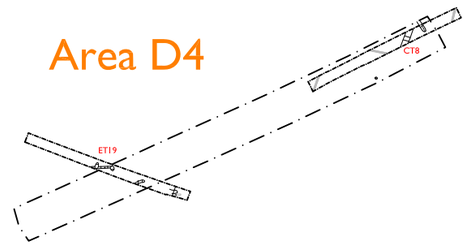


Fig. 18

Undated

0 20m

© Archaeology South-East		Grain - Shorne Pipeline	Fig. 18
Project Ref: 3254	Sept 2009	Master plan of Area D4	
Report Ref: 2009031	Drawn by: HLF		

N

Contingency trench 8

CT8/007

CT8/004

Trench 19

19/008

19/010

19/006

19/004

19/012

19/014

Undated

0 5m

© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 19
Project Ref: 3254	Sept 2009	Area D4	
Report Ref: 2009031	Drawn by: HLF		

N

Area E5

Fig. 21

Fig. 22

85

CTI4

Fig. 23

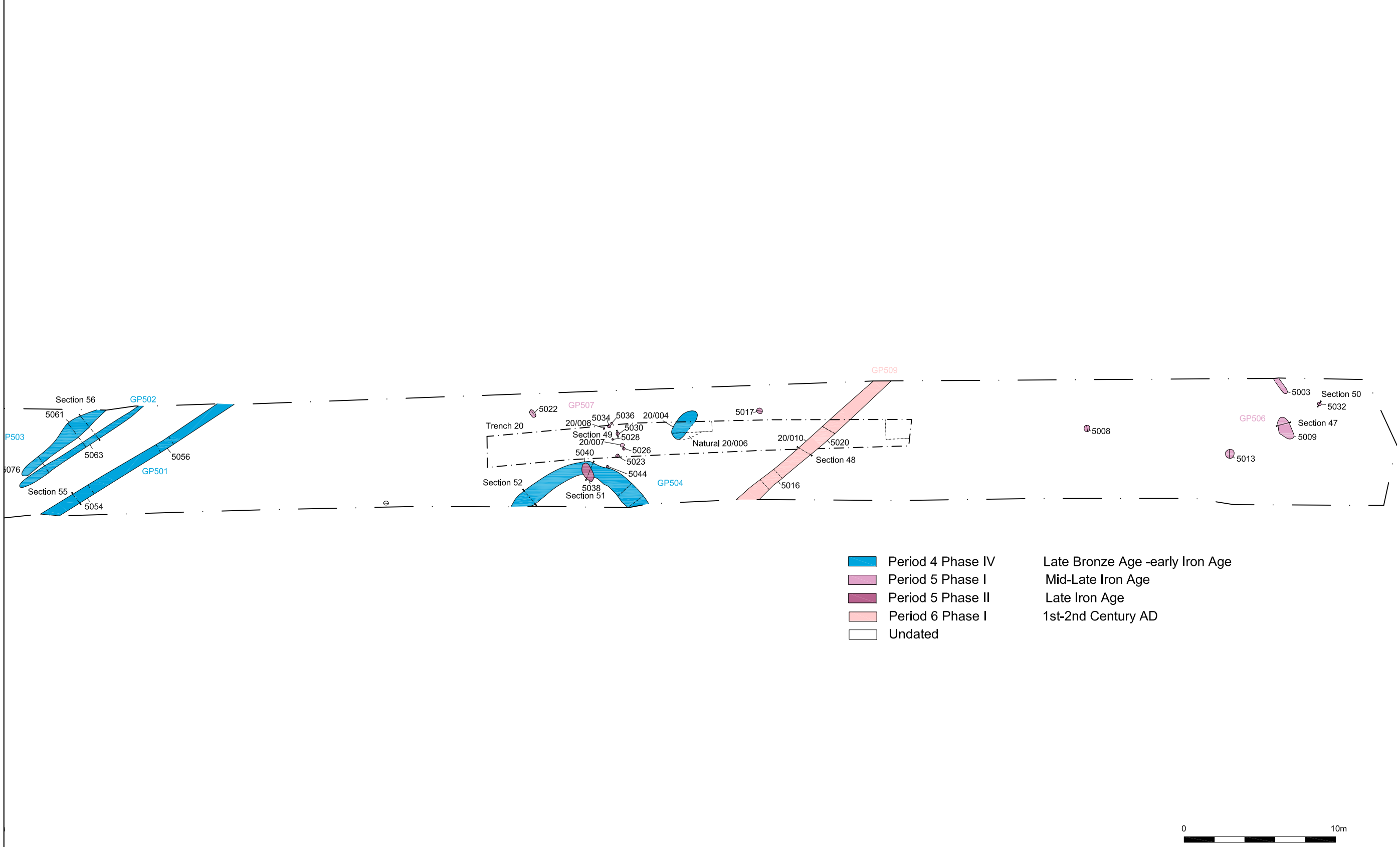
CTI1

Fig. 55

Period 4 Phase IV i — Late Bronze Age -early Iron Age
Period 5 Phase I — Mid-Late Iron Age
Period 5 Phase II — Mid-Late Iron Age
Period 6 Phase I — 1st-2nd Century AD
Undated

0 50m

Project Ref: 3254	Sept 2009	Grain - Shorne Pipeline	Fig. 20
Report Ref: 2009031	Drawn by: HLF	Master plan of Area E5	



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 21
Project Ref: 3254	Sept 2009	Area E5	
Report Ref: 2009031	Drawn by: HLF		

N

Trench 22

22/003

22/005

5082

22/007

22/009

GP505

5080

5080

5069

Section 58

Trench 21

21/004

GP508

Section 54

5052

5068

GP500

5047

GP510

Section 53

5050

Section 57

5066

20/004

Section 56

5061

GP503

5063

5076

Section 55

5054

5084

GP502

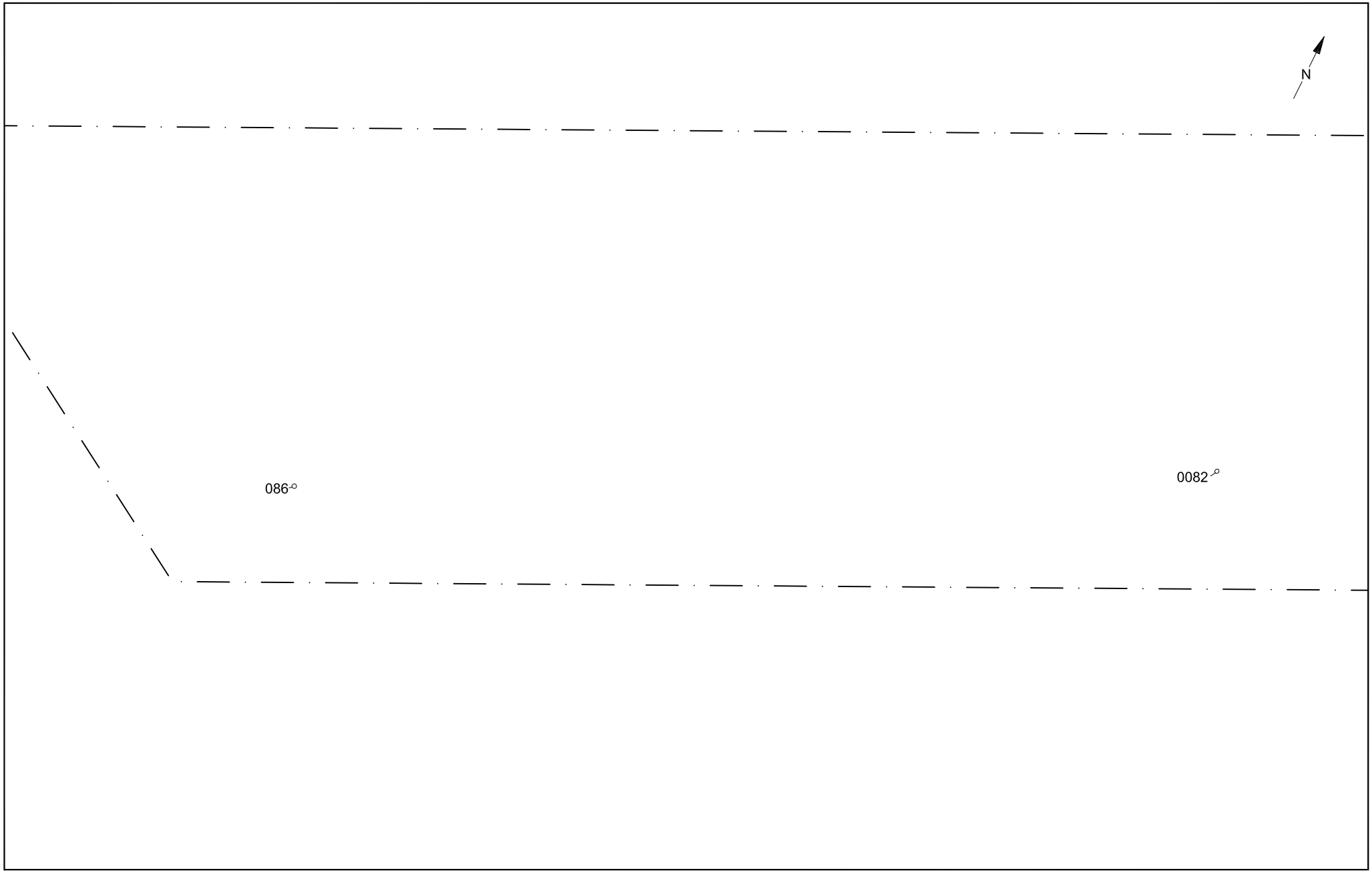
5078

20/004

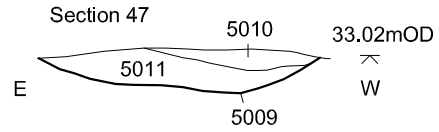
Period 4 Phase IV	Late Bronze Age -early Iron Age
Period 5 Phase I	Mid-Late Iron Age
Period 5 Phase II	Late Iron Age
Period 6 Phase I	1st-2nd Century AD
Undated	

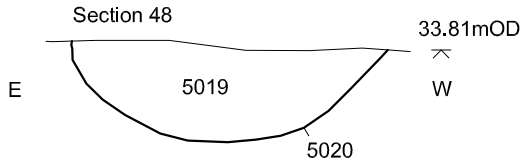
0 10m

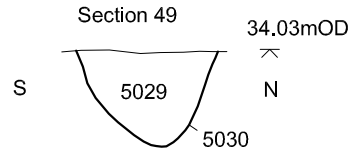
Project Ref: 3254	Sept 2009	Grain - Shorne Pipeline	Fig. 22
Report Ref: 2009031	Drawn by: HLF	Area E5	

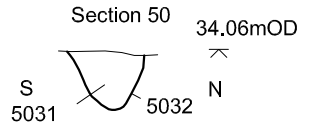


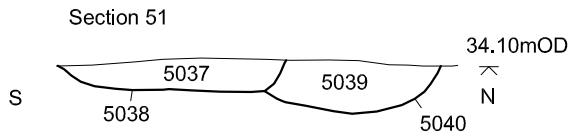
© Archaeology South-East		Grain - Shorne Pipeline	Fig. 23
Project Ref: 3254	Sept 2009	Area E5	
Report Ref: 2009031	Drawn by: HLF		

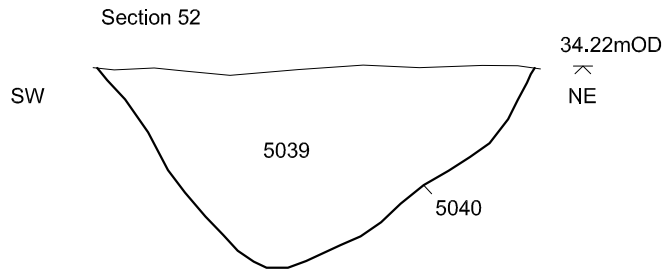


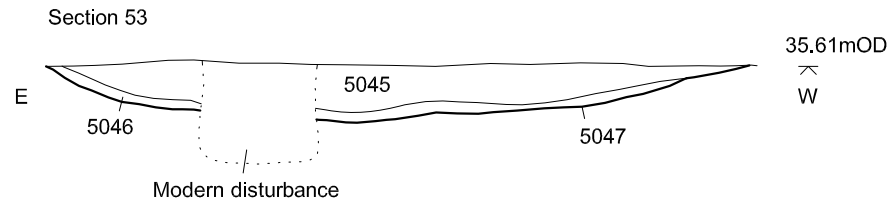


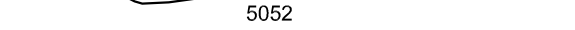


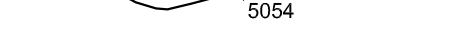


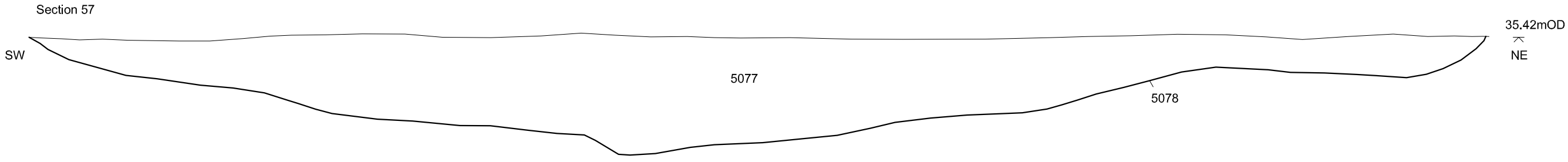


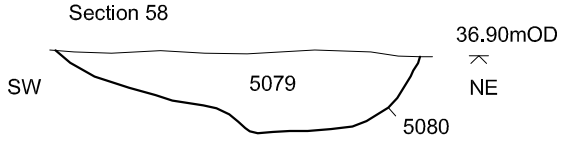












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Project Ref: 3254	March 2009	Selected Sections from Area E5 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

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Area F6

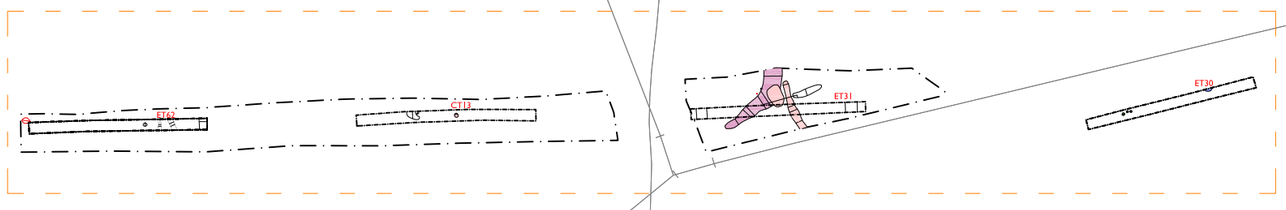


Fig. 26

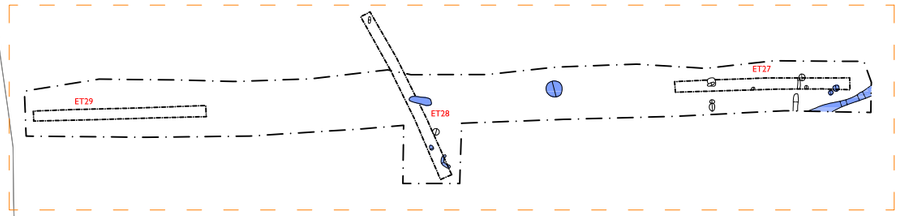
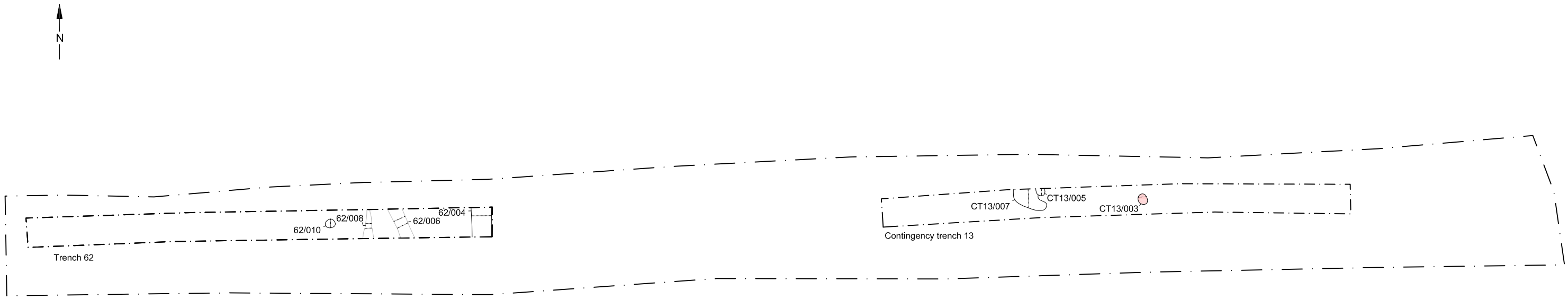


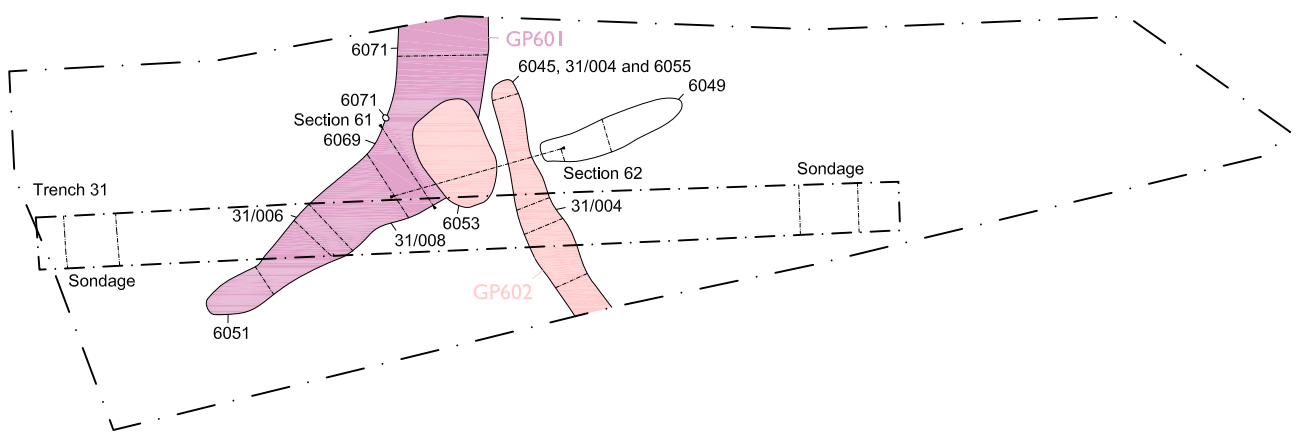
Fig. 27

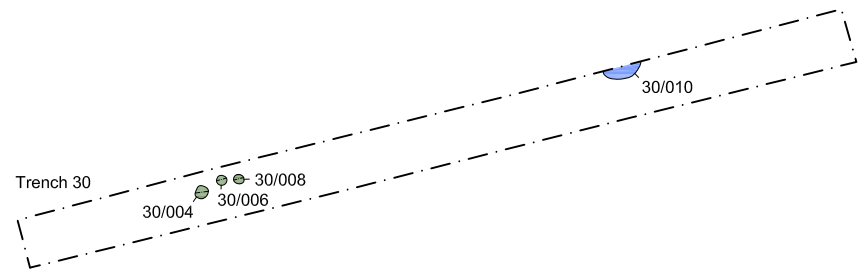
Period 3 /Period 4	Neolithic/Bronze Age
Period 4 Phase III	Late Bronze Age
Period 5 Phase I	Iron Age
Period 6 Phase I	1st-2nd Century AD
Undated	

0 20m

© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 25
Project Ref: 3254	Sept 2009	Master plan of Area F6	
Report Ref: 2009031	Drawn by: HLF		





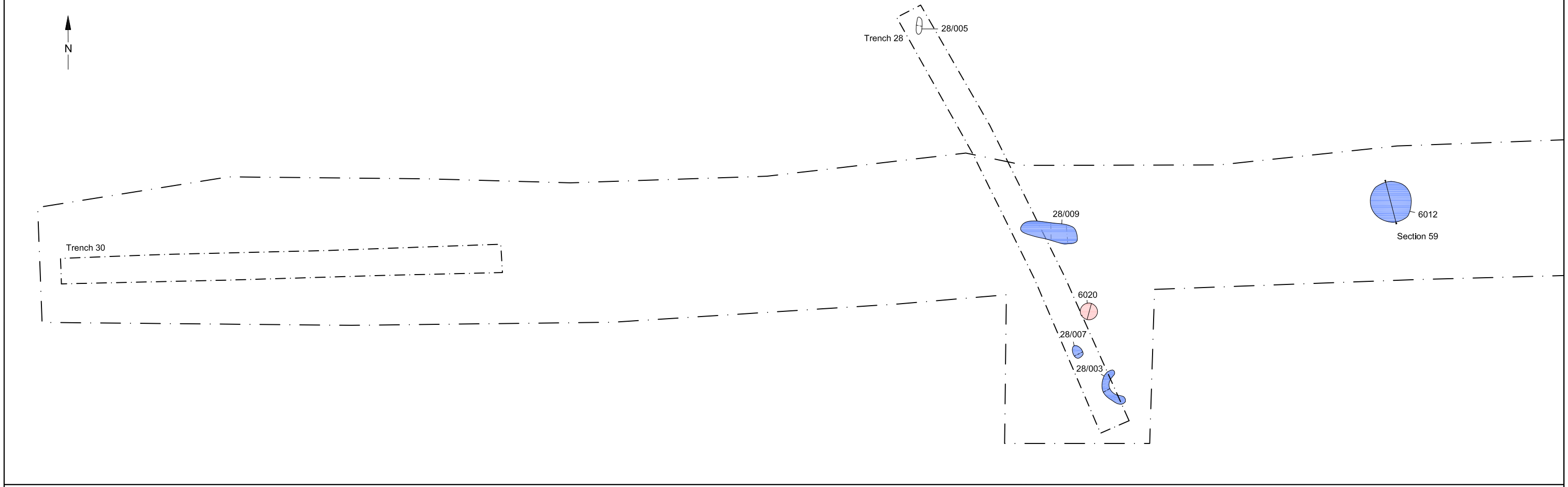


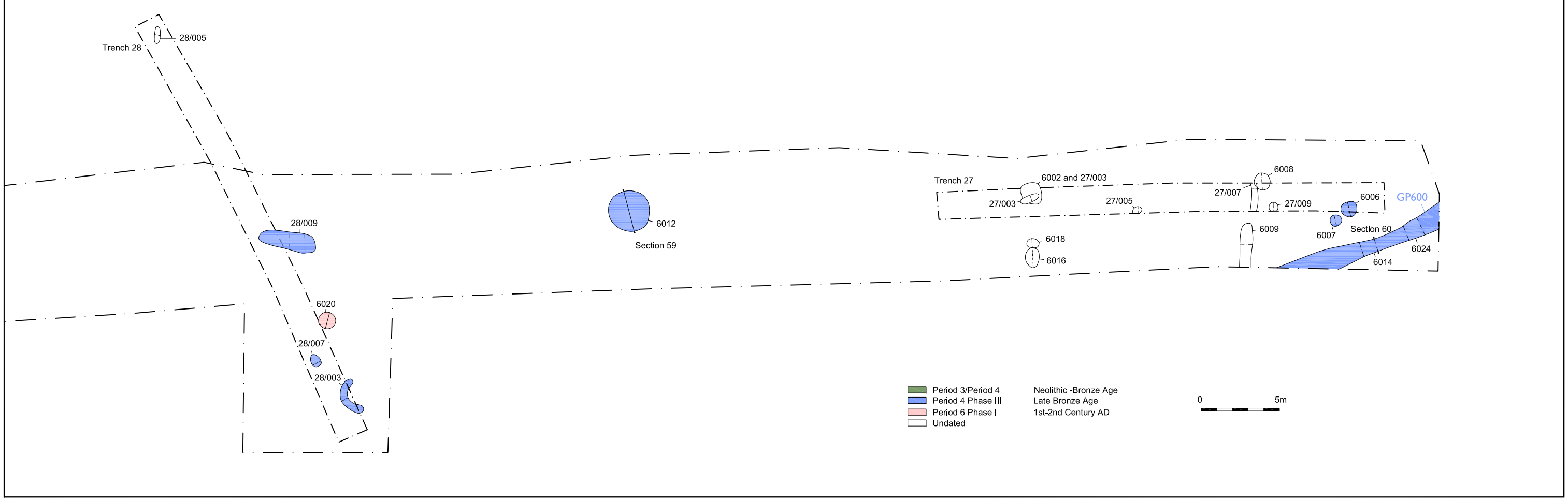
Period 3 /Period 4	Neolithic/Bronze Age
Period 4 Phase III	Late Bronze Age
Period 5 Phase I	Iron Age
Period 6 Phase I	1st-2nd Century AD
Undated	

0 5m

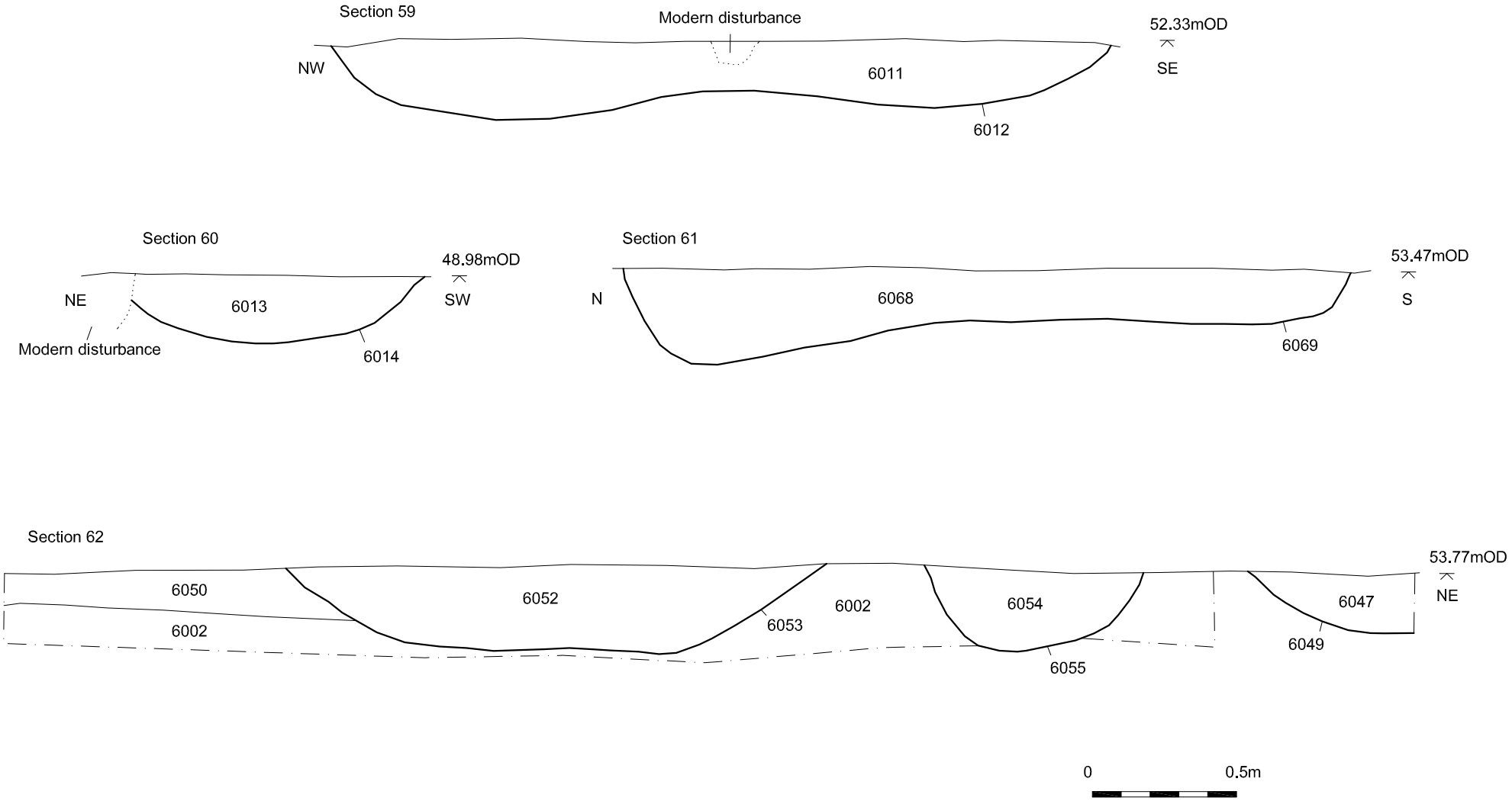
Project Ref: 3254	Sept 2009	Grain - Shorne Pipeline
Report Ref: 2009031	Drawn by: HF/JR	Area F6

Fig. 26





© Archaeology South-East		Grain - Shorne Pipeline	Fig. 27
Project Ref: 3254	Sept 2009	Area F6	
Report Ref: 2009031	Drawn by: HF/JR		



© Archaeology South-East		Isle of Grain Pipeline	Fig. 28
Project Ref: 3254	March 2009	Selected Sections from Area F6 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

N

CT26

Area G7

CT63

Fig. 30

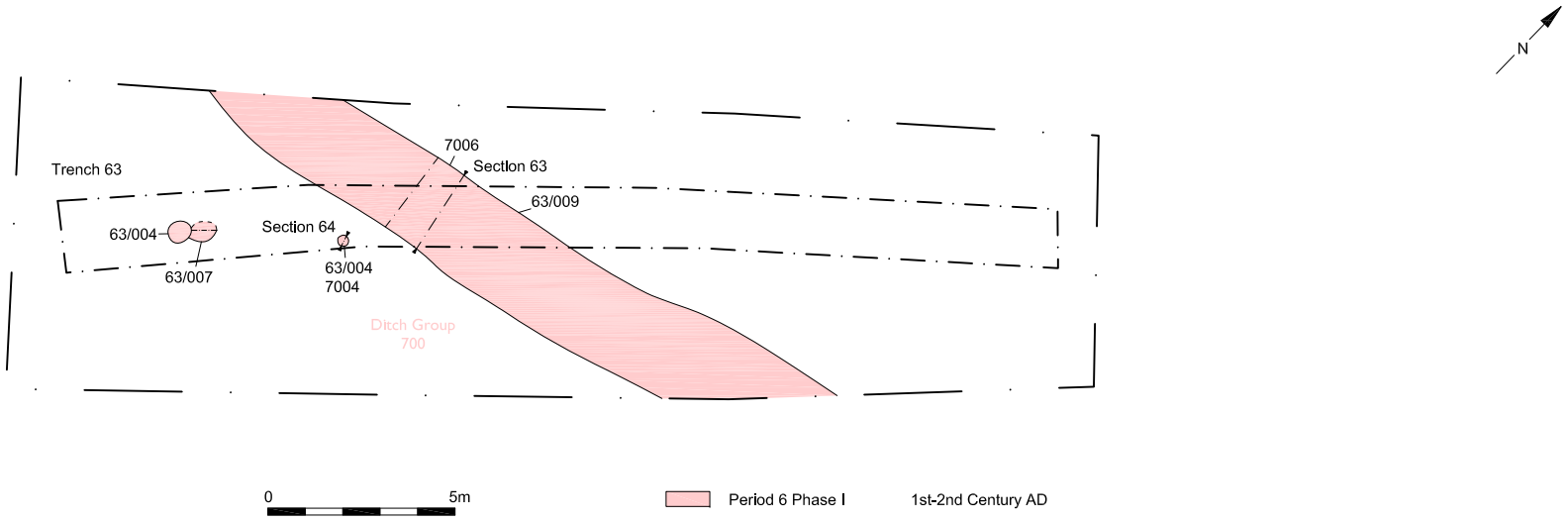
ET64

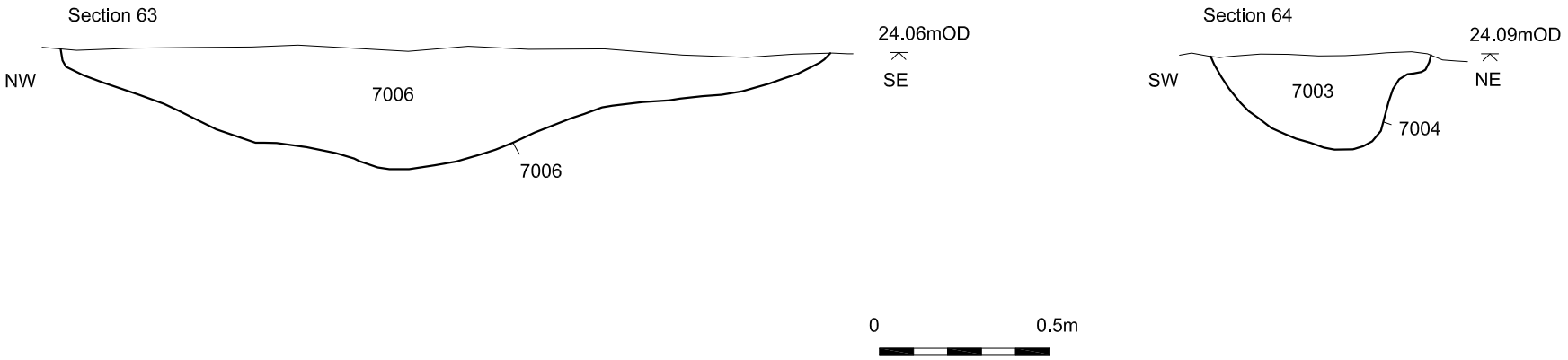
CT27

Period 6 Phase I 1st-2nd Century AD

0 20m

© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 29
Project Ref: 3254	Sept 2009	Master plan of Area G7	
Report Ref: 2009031	Drawn by: HLF		





© Archaeology South-East		Graine - Shorne Pipeline	Fig. 30
Project Ref: 3254	Sept 2009	Selected plan and sections of Area G7	
Report Ref: 2009031	Drawn by: HLF		

N

Area H8

ET32

Fig. 32

Fig. 33

Fig. 34

ET36

ET58

Period 3 Phase III — Neolithic -Bronze Age
Period 4 Phase IV i — Late Bronze Age -Early Iron Age
Period 4 Phase IV ii — Late Bronze Age -Early Iron Age
Period 4 Phase IV iii — Late Bronze Age -Early Iron Age
Period 6 Phase I — 1st-2nd Century AD
Undated

0 20m

© Archaeology South-East		Grain - Shorne Pipeline	Fig. 31
Project Ref: 3254	Sept 2009	Master plan of Area H6	
Report Ref: 2009031	Drawn by: HLF		

N

Section 66
GP815
Section 83
8148
8146
8181
8150
33/023
8021
Section 86
8185
8183
8187
33/916
33/004
33/006
33/008
33/018
33/010
GP827
Trench 33
8024
33/012
33/014
33/020

8103
GP810
8080
8157
8027
Section 74 and 75
8154
Section 68
GP822
8055
Section 78
8173
8059
8045
8084
GP826
Section 71
8229
8057
8078
Section 81
8239
8140
GP804
Section 67
34/005
34/010
Trench 34
34/008
8175
8165
GP809
GP825
8226
8245
8191
8140
8237
8247
8171
8169
GP824

Period 3 Phase III — Neolithic -Bronze Age
Period 4 Phase IV i — Late Bronze Age -Early Iron Age
Period 4 Phase IV ii — Late Bronze Age -Early Iron Age
Period 4 Phase IV iii — Late Bronze Age -Early Iron Age
Period 6 Phase I — 1st-2nd Century AD
Undated

0 10m

Project Ref: 3254	Sept 2009	Grain - Shorne Pipeline	Fig. 32
Report Ref: 2009031	Drawn by: HLF	Area H8	

N

Trench 35
GP819
GP807
GP800
GP817
8082
8047
8063 Section 70
35/008
Section 73
GP814
8013
8033
8019
8220
8218
8031
35/003
8090
8128
8067
8069
Section 69
8073
8071
8112
8035
8011
GP805
8049
8051
Section 65
8005
8102
8129
8015
8007
8009
GP801
8093
GP811
8098
8259
GP802
8272
8266
8277
8243
8138
8123
Section 82
8253
8251
8249
GP813
8268
35/006
8167
GP806
8177
8193
Section 79
8197
8199
8201
8195
Section 87
8189
8214
8179
GP808
Section 80
8222
8235
GP803
GP823
Hearth
8087
Section 72
8059
8078
Section 67
34/010
34/005
34/008
Trench 34
8175
8165
GP809
8191
8140
8237
8171
8169
GP824

Period 3 Phase III	Neolithic -Bronze Age
Period 4 Phase IV i	Late Bronze Age -Early Iron Age
Period 4 Phase IV ii	Late Bronze Age -Early Iron Age
Period 4 Phase IV iii	Late Bronze Age -Early Iron Age
Period 6 Phase I	1st-2nd Century AD
Undated	

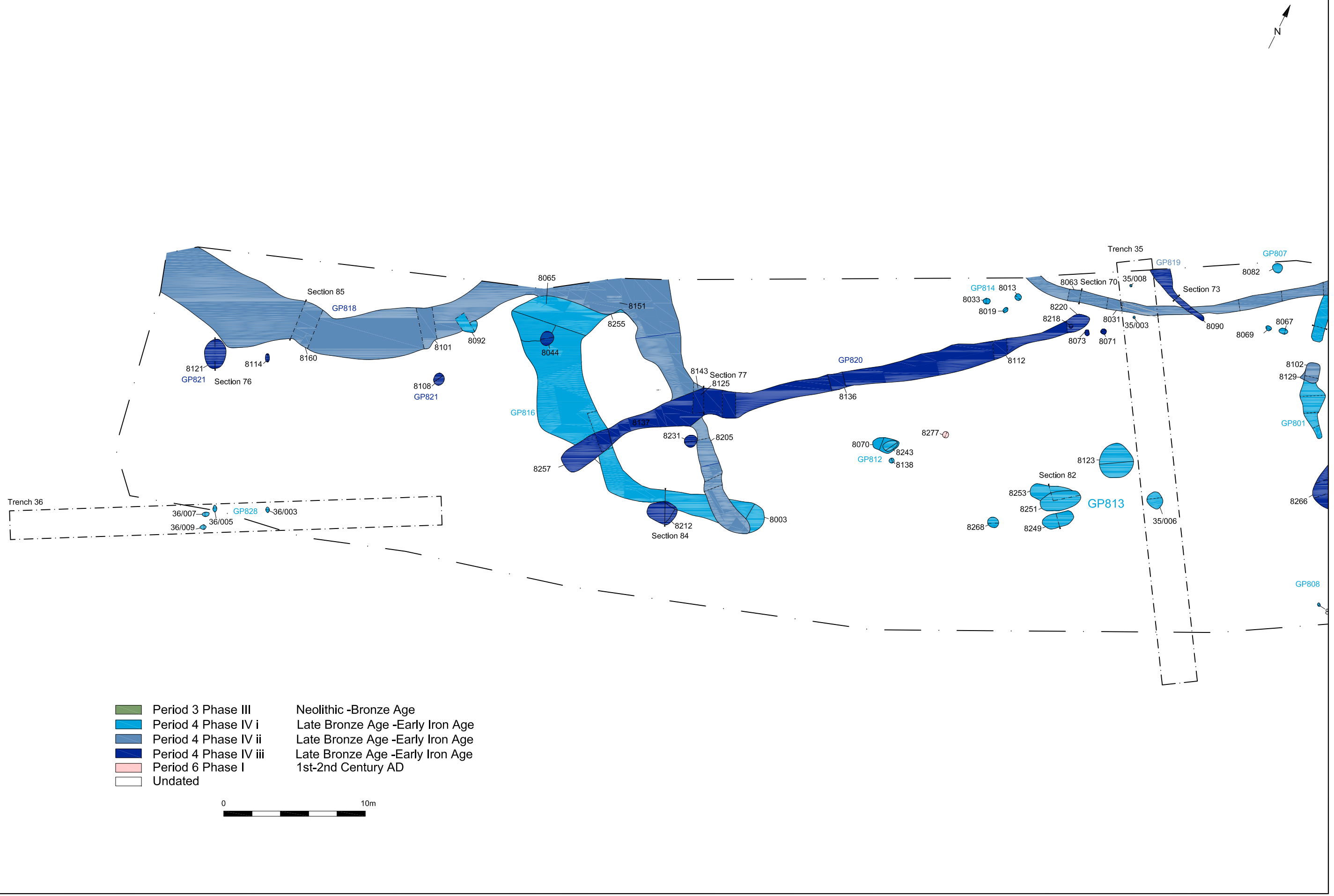
0 10m

Project Ref: 3254	Sept 2009
Report Ref: 2009031	Drawn by: HLF

Grain - Shorne Pipeline

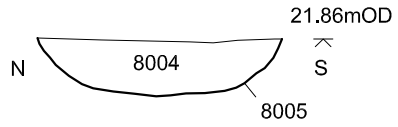
Area H8

Fig. 33



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 34
Project Ref: 3254	Sept 2009	Area H8	
Report Ref: 2009031	Drawn by: HLF		

Section 65



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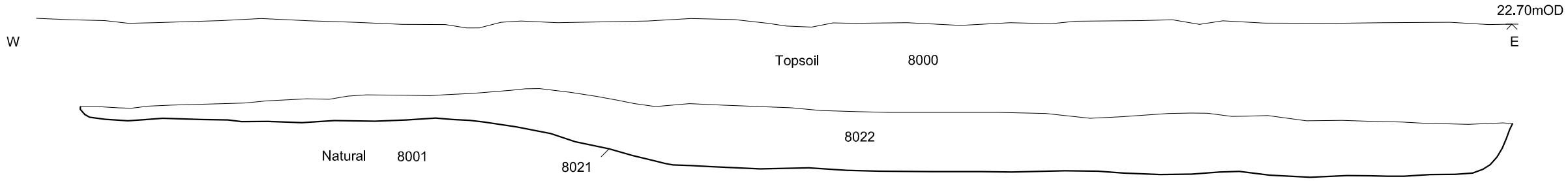

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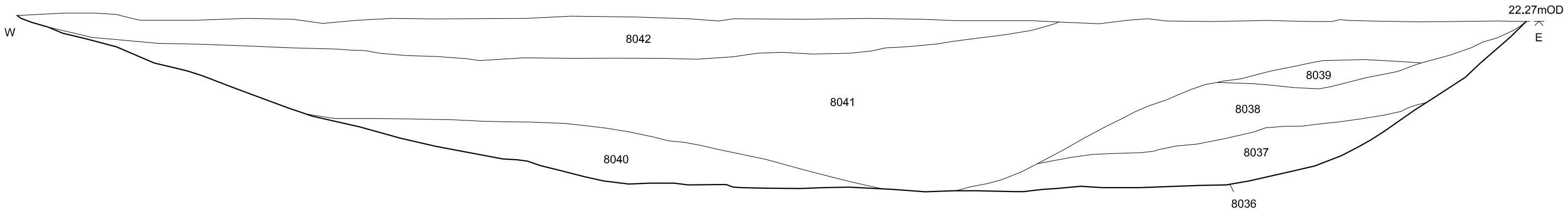

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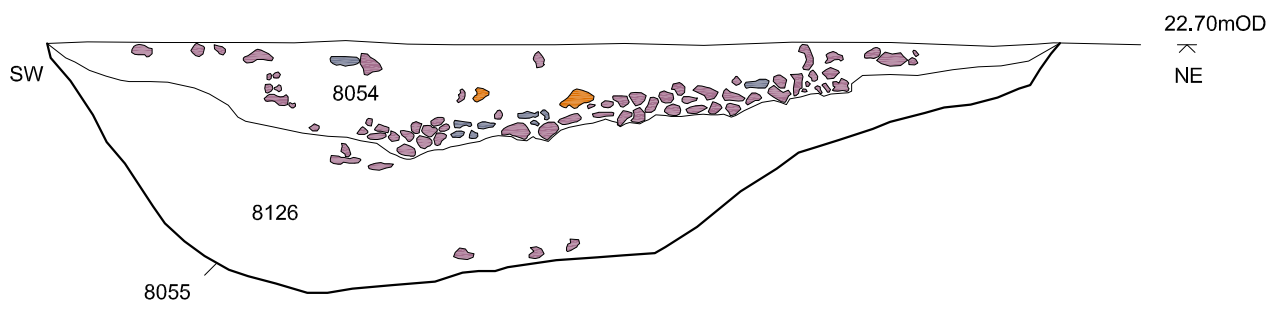

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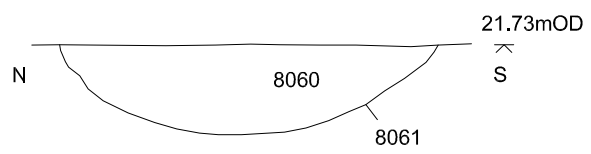

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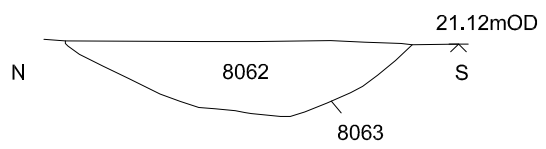

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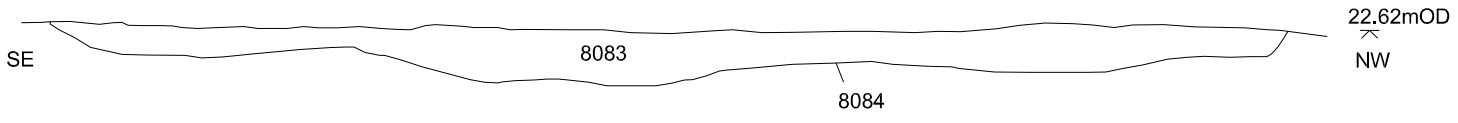

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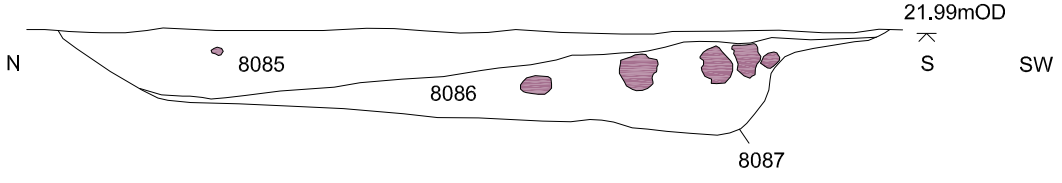

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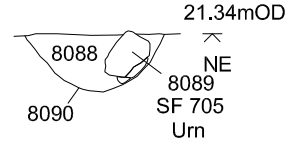
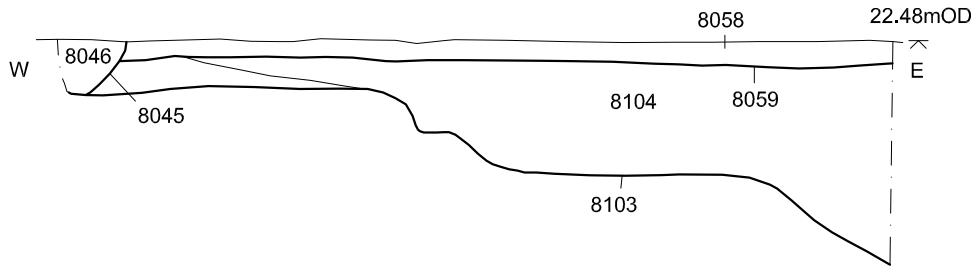


0 0.5m

Burnt Flint
Pottery
CBM

© Archaeology South-East		Isle of Grain Pipeline	Fig. 35
Project Ref: 3254	March 2009	Selected Sections from Area H8 @ 1:20	
Report Ref: 2009031	Drawn by: RC		

Section 74



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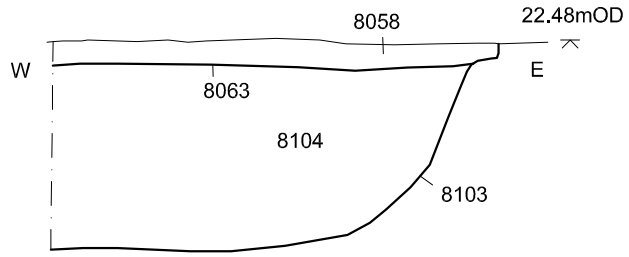

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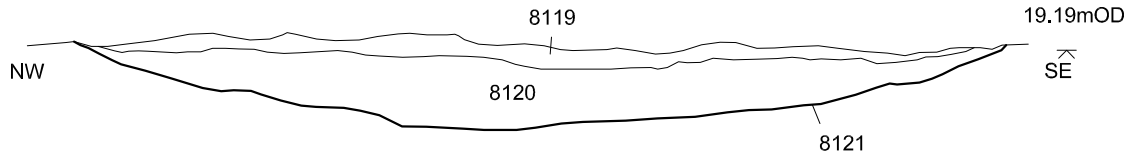

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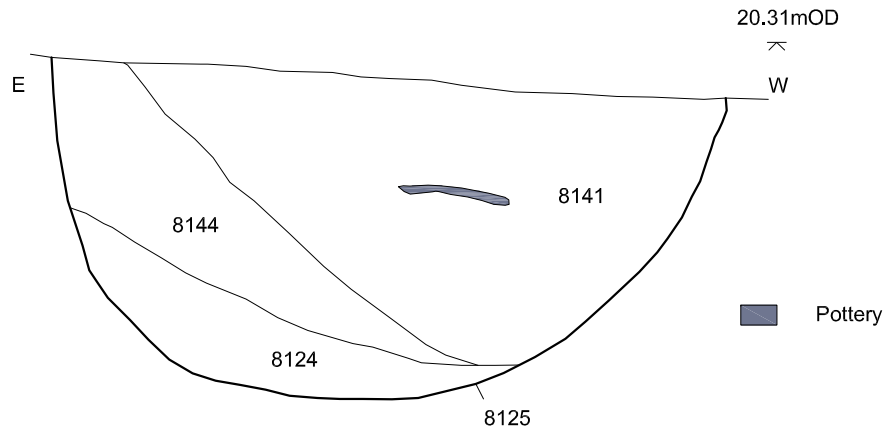

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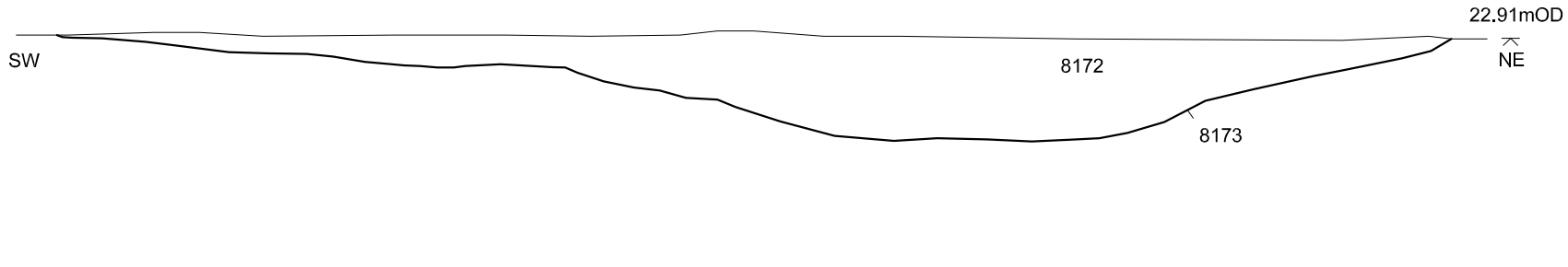

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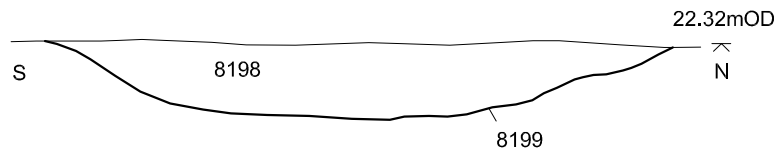
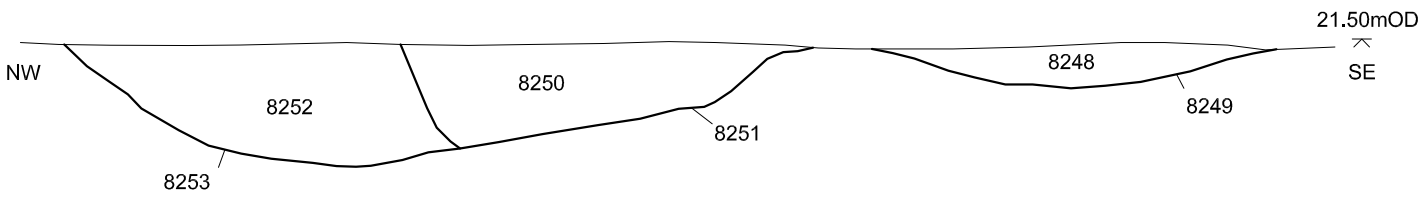


Section 80

Section 81

Section 82



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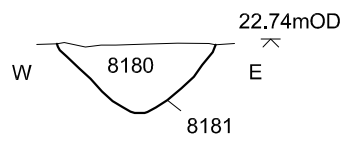

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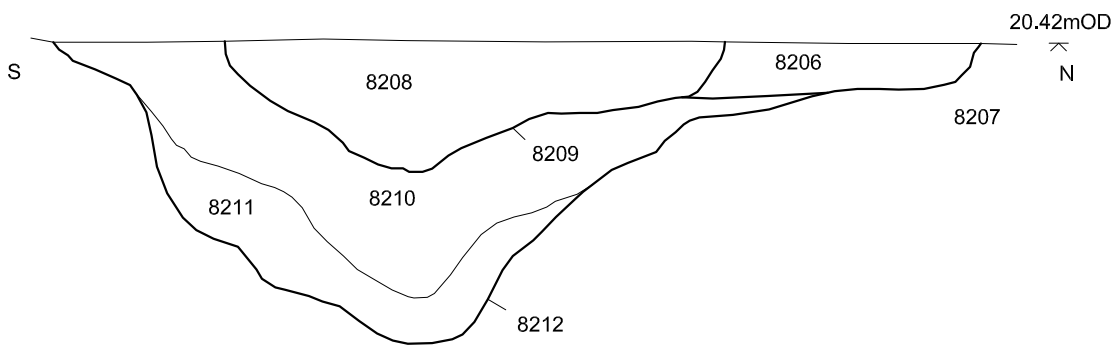

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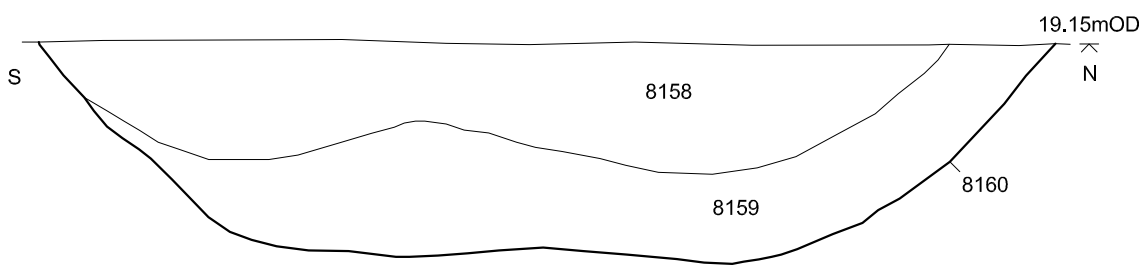

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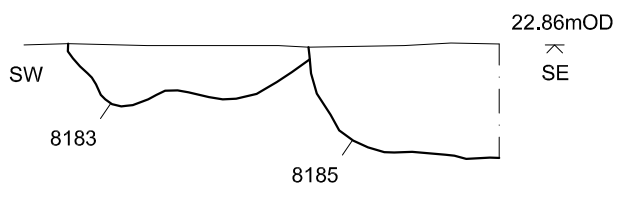

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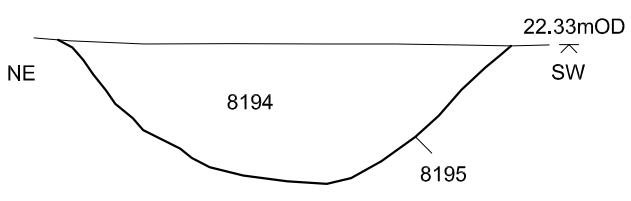


© Archaeology South-East		Isle of Grain Pipeline	Fig. 36
Project Ref: 3254	March 2009	Selected Sections from Area H8 @ 1:20	
Report Ref: 2009031	Drawn by: RC		

N

Area 19

CT21

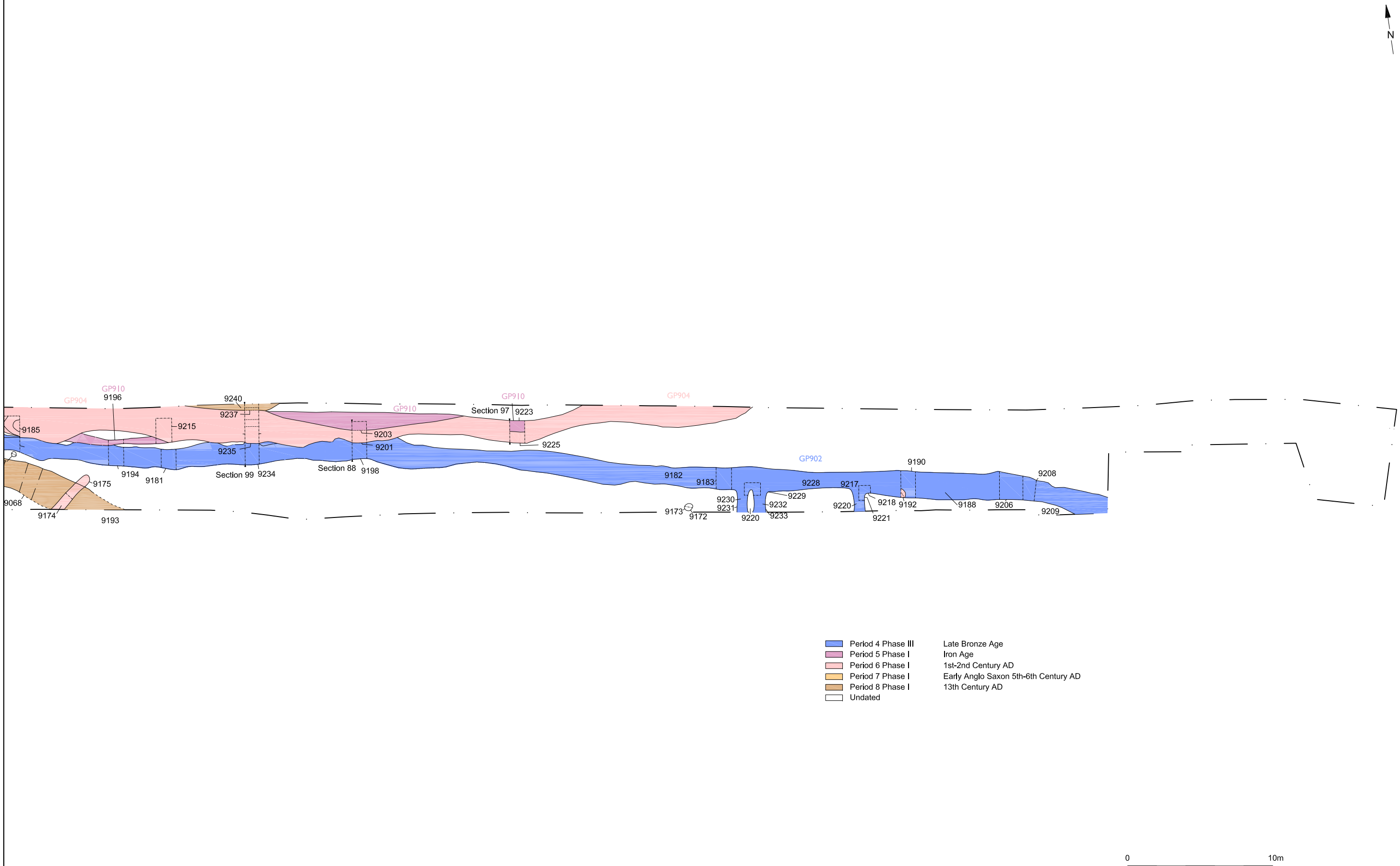
Fig. 39

Fig. 38

Period 4 Phase I	Middle Bronze Age
Period 4 Phase III	Late Bronze Age
Period 5 Phase I	Mid-Late Iron Age
Period 6 Phase I	1st-2nd Century AD
Period 7 Phase I	Early Anglo Saxon 5th-6th Century AD
Period 8 Phase I	13th Century AD
Undated	

0 20m

		Grain - Shorne Pipeline	Fig. 37
Project Ref: 3254	Sept 2009	Master plan of Area I9	
Report Ref: 2009031	Drawn by: HLF		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 38
Project Ref: 3254	Sept 2009	Area I9	
Report Ref: 2009031	Drawn by: HLF		

N

See inset for detail

GP908

Firepit 9143/9067

39/003

39/004

39/005

39/005

GP906

39/004

Section 96

9055

39/007

9051

39/008

Trench 39

9043

9045

Section 94

GP903

9049

9053

Section 95

9031

9028

9039

Section 93

GP908

9119

9117

9099

9091

9113

9111

9093

9101

9115

9069

9103

9089

9109

9071

9137

9095

9129

9131

9073

9087

9105

9121

9085

9075

9139

9107

9123

9077

9097

9125

9133

9127

9079

9083

9135

Firepit 9143/9067

9067

9081

0 1m

GP905: Corn-dryer and later pits

9247

9249

9149

9245

9037

9251

9243

9253

9169

9161

9159

9271

9255

9269

9257

9267

9265

9259

9017

9037

9261

9063

9141

9163

Section 98

9148

0 1m

GP906

9046

Section 100

See Inset for detail

CT20/017

GP902

9025

CT20/004

Section 90

CT20/003

CT20/010

CT20/005

9033

9011

9013

9015

CT20/008

9007

CT20/006

Section 92

9041

9009

9020

9005

GP901

GP907

9022

9154

GP900

Section 91

Section 89

GP910

GP904

9196

9209

9179

9215

9208

9185

9212

9177

9194

9181

9175

9068

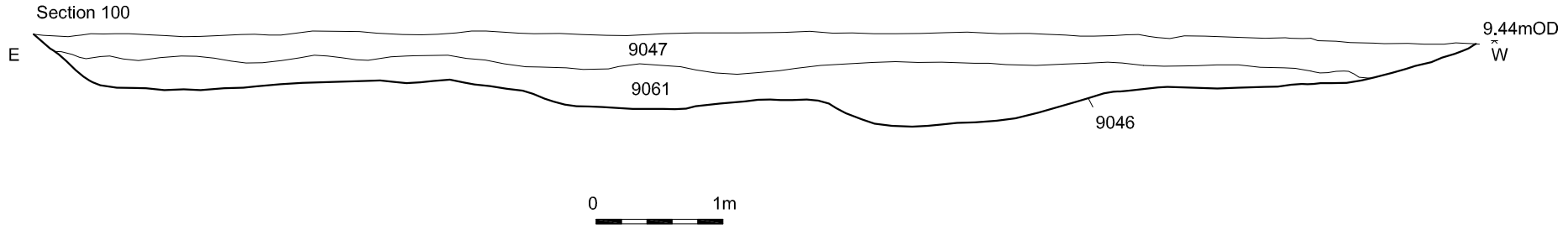
9174

9193

0 10m

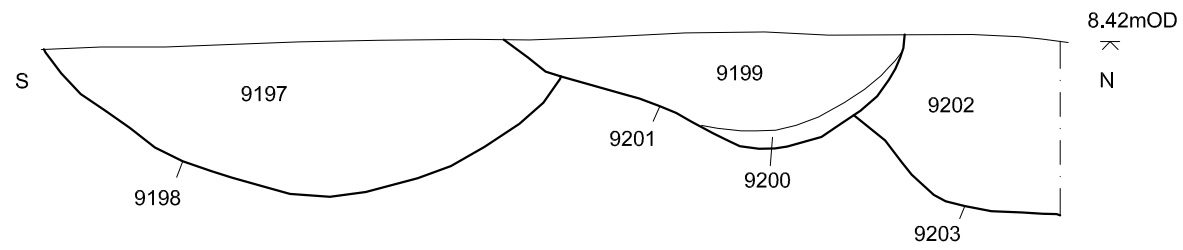
Period 4 Phase I — Middle Bronze Age
Period 4 Phase III — Late Bronze Age
Period 5 Phase I — Iron Age
Period 6 Phase I — 1st-2nd Century AD
Period 7 Phase I — Early Anglo Saxon 5th-6th Century AD
Period 8 Phase I — 13th Century AD
Undated

© Archaeology South-East		Grain - Shorne Pipeline	Fig. 39
Project Ref: 3254	Sept 2009	Area I9	
Report Ref: 2009031	Drawn by: HLF		



© Archaeology South-East		Isle of Grain Pipeline	Fig. 40
Project Ref: 3254	March 2009	Selected Section from Area I9 @ 1:50	
Report Ref: 2009031	Drawn by: FEG		

Section 88



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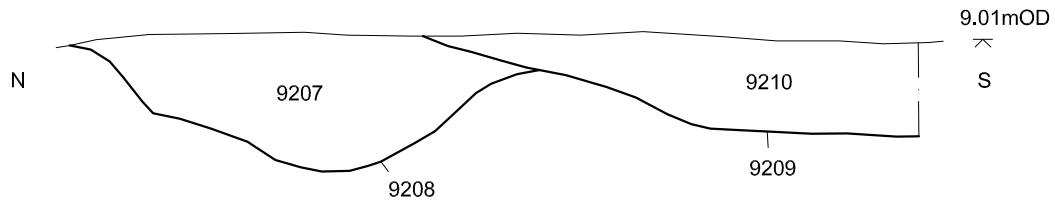
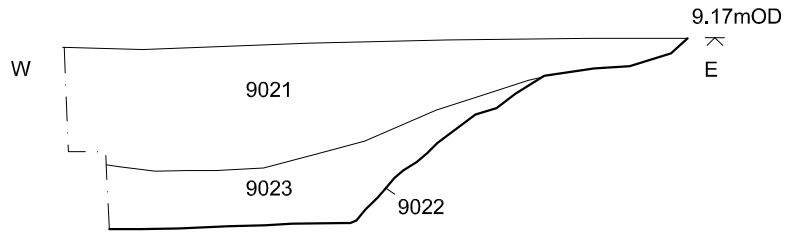


Section 90

Section 91



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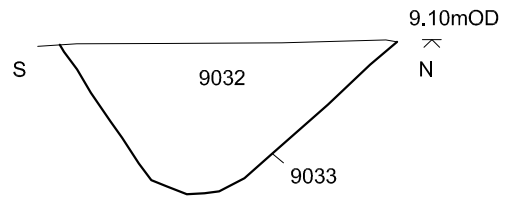

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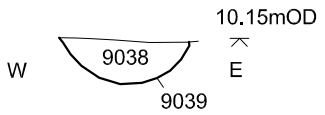

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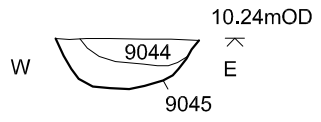
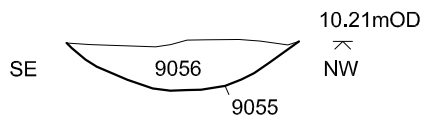


Section 95

Section 96



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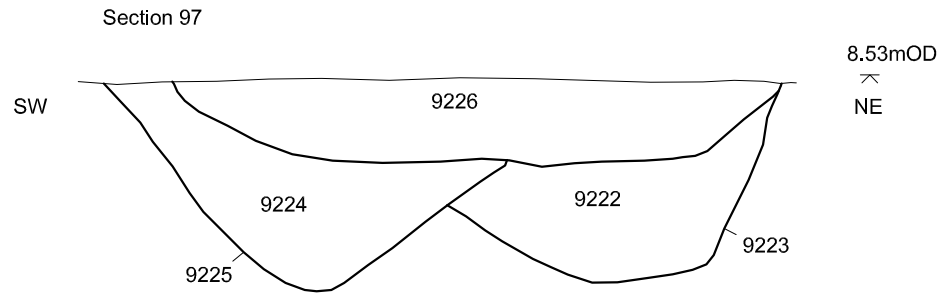

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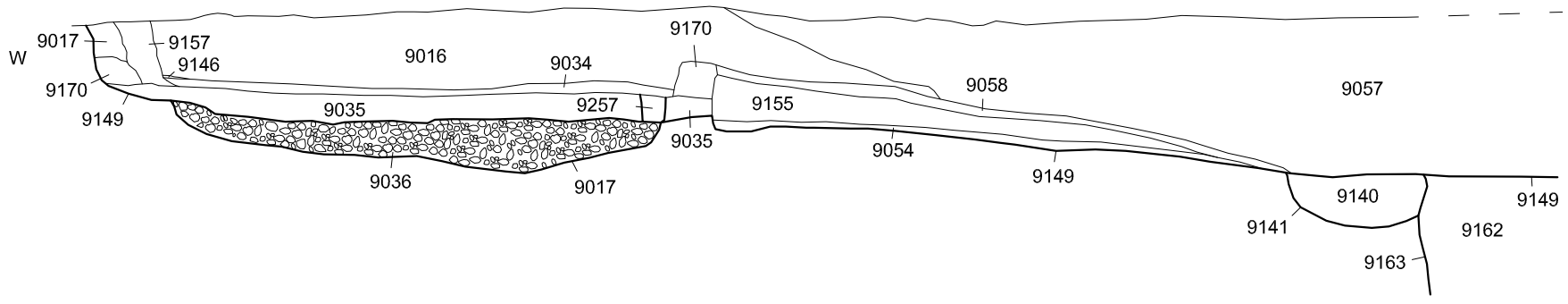

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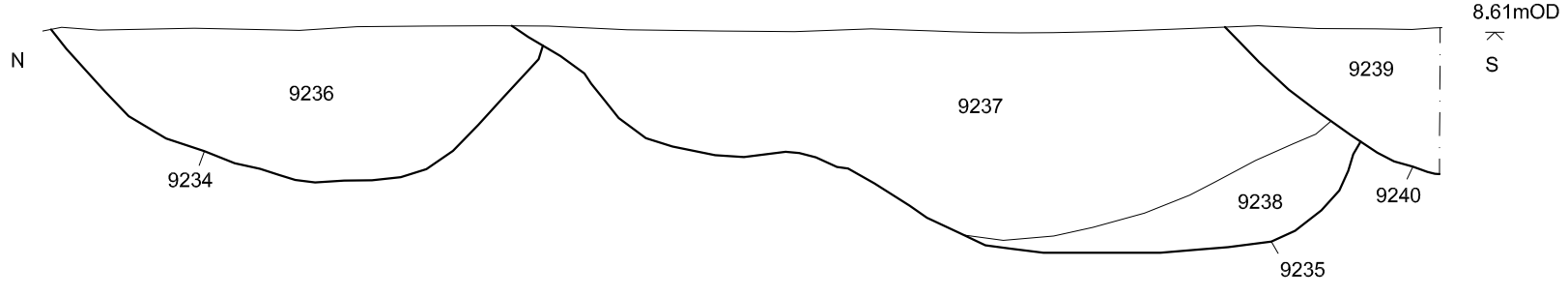


© Archaeology South-East		Isle of Grain Pipeline	Fig. 41
Project Ref: 3254	March 2009	Selected Sections from Area I9 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

N

Area J10

ET41

Fig. 43

Fig. 44

Fig. 45

Period 2 Phase I — Mesolithic
Period 3 Phase II — Late Neolithic-Early Bronze Age
Period 5 Phase II — Late Iron Age
Period 5 Phase III — Late Iron Age-Early Roman
Period 6 Phase III — Late 3rd-Early 4th Century AD
Period 8 Phase II — Late Medieval-Post Medieval
Undated

0 20m

© Archaeology South-East		Grain - Shorne Pipeline	Fig. 42
Project Ref: 3254	Sept 2009	Master plan of Area J10	
Report Ref: 2009031	Drawn by: HLF		

N

10063

10061 Section 103

10067

10039

10048

GP1000

10054

GP1001 10064

10050 / 10057
Section 102

10029

10011

10036

10016

10027

10056

10043

10228

10034

10023

10026

10041

10018

10020

Section 101

10009

Trench 60

60/011

10014

60/004

10006

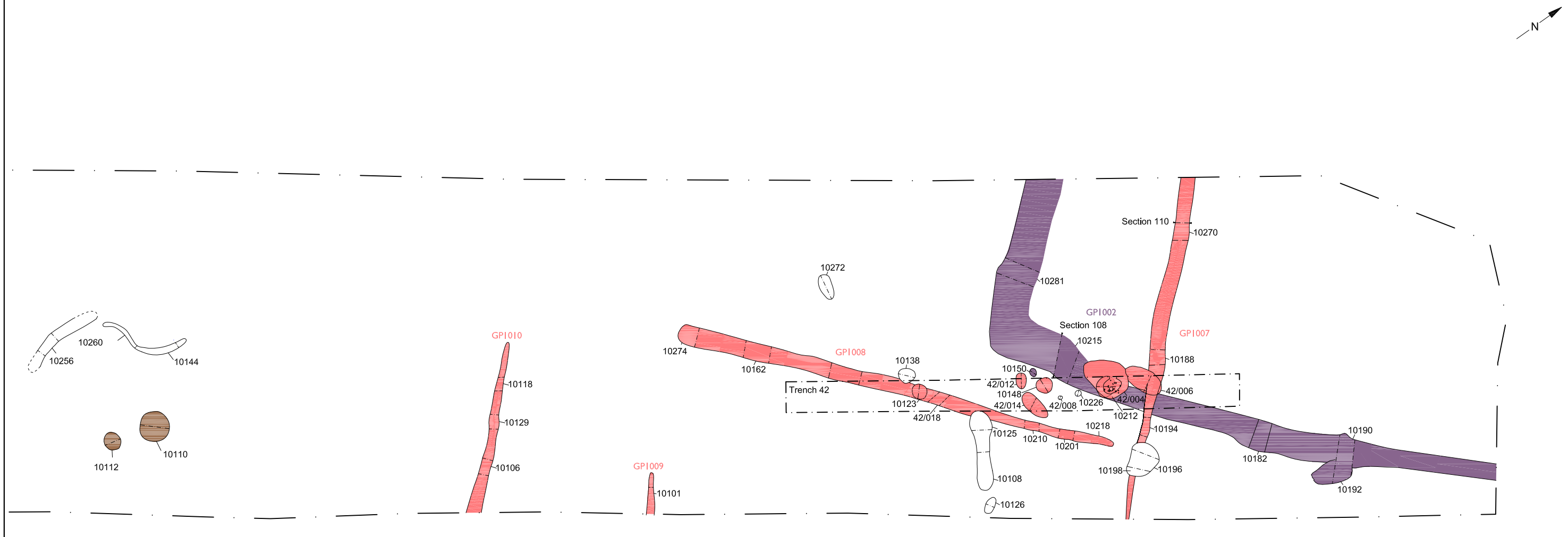
GP1006

Period 2
Period 3 Phase II
Period 5 Phase II
Period 5 Phase III
Period 8 Phase II
Undated

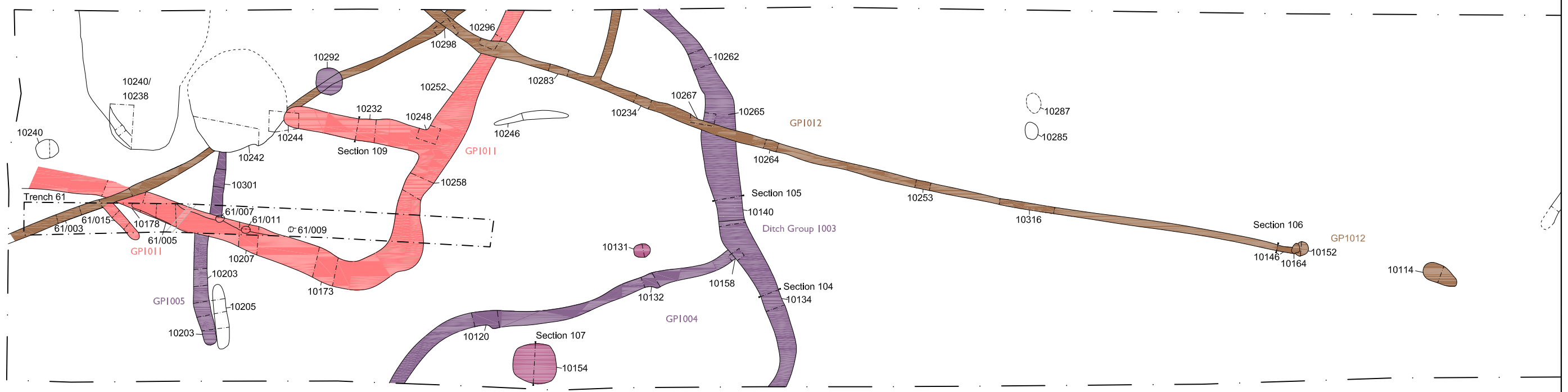
Mesolithic
Late Neolithic-Early Bronze Age
Late Iron Age
Late Iron Age-Early Roman
Late Medieval-Post Medieval

0 10m

		Grain - Shorne Pipeline	Fig. 43
Project Ref: 3254	Sept 2009	Area J10	
Report Ref: 2009031	Drawn by: HLF		



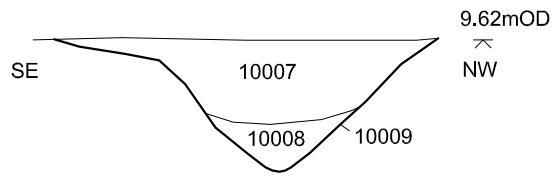
© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 44
Project Ref: 3254	Sept 2009	Area J10	
Report Ref: 2009031	Drawn by: HLF		



Period 5 Phase II	Late Iron Age
Period 5 Phase III	Late Iron Age-Early Roman
Period 6 Phase III	Late 3rd-Early 4th Century AD
Period 8 Phase II	Late Medieval-Post Medieval

© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 45
Project Ref: 3254	Sept 2009	Area J10	
Report Ref: 2009031	Drawn by: HLF		

Section 101



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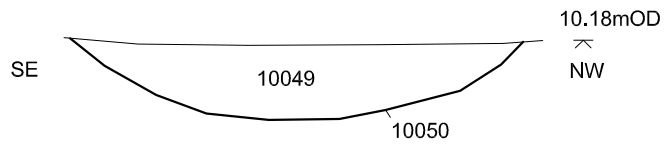

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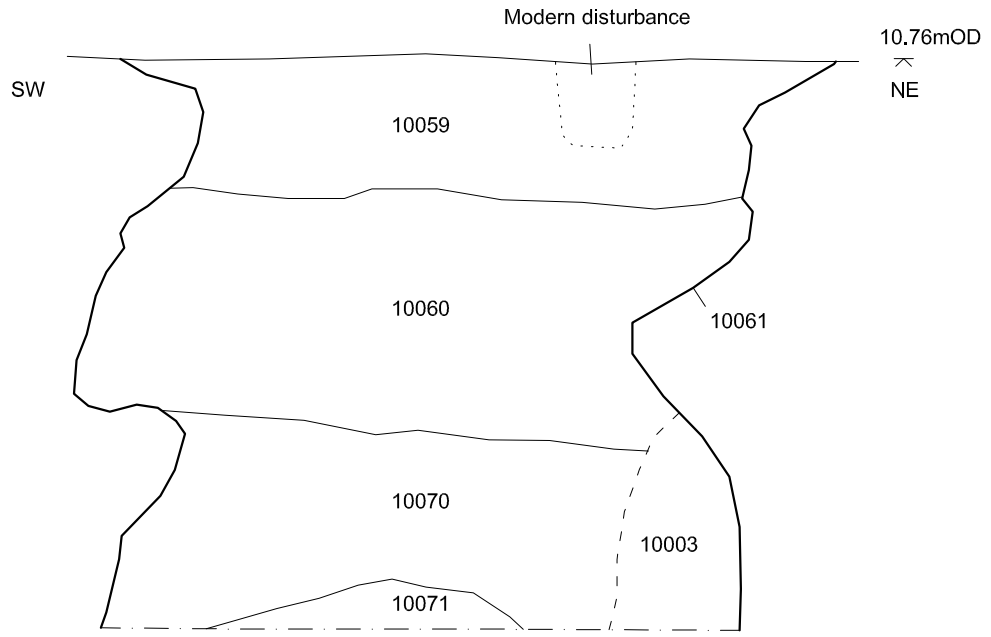

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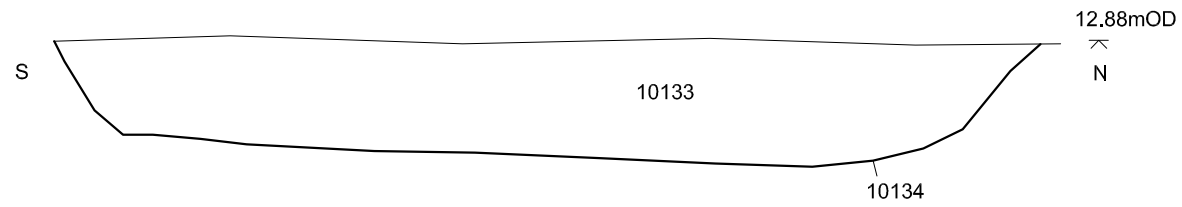

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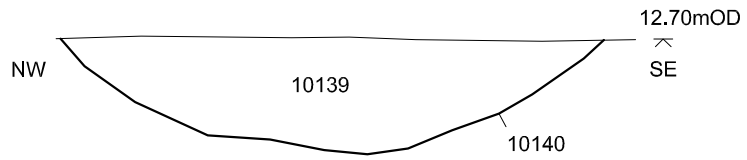

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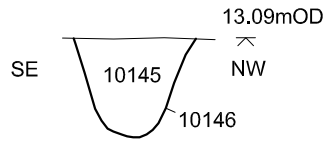

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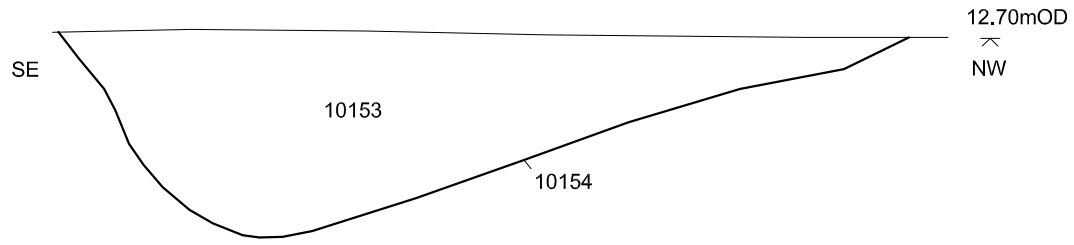

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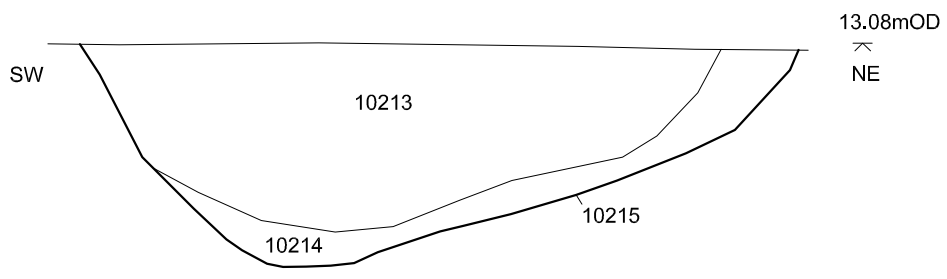

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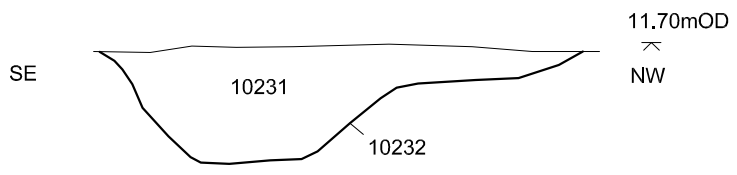

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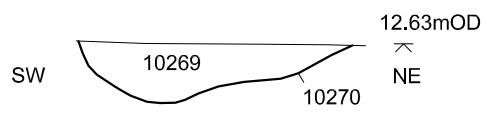


© Archaeology South-East		Isle of Grain Pipeline	Fig. 46
Project Ref: 3254	March 2009	Selected Sections from Area J10 @ 1:20	
Report Ref: 2009031	Drawn by: FEG		

N

Area K11

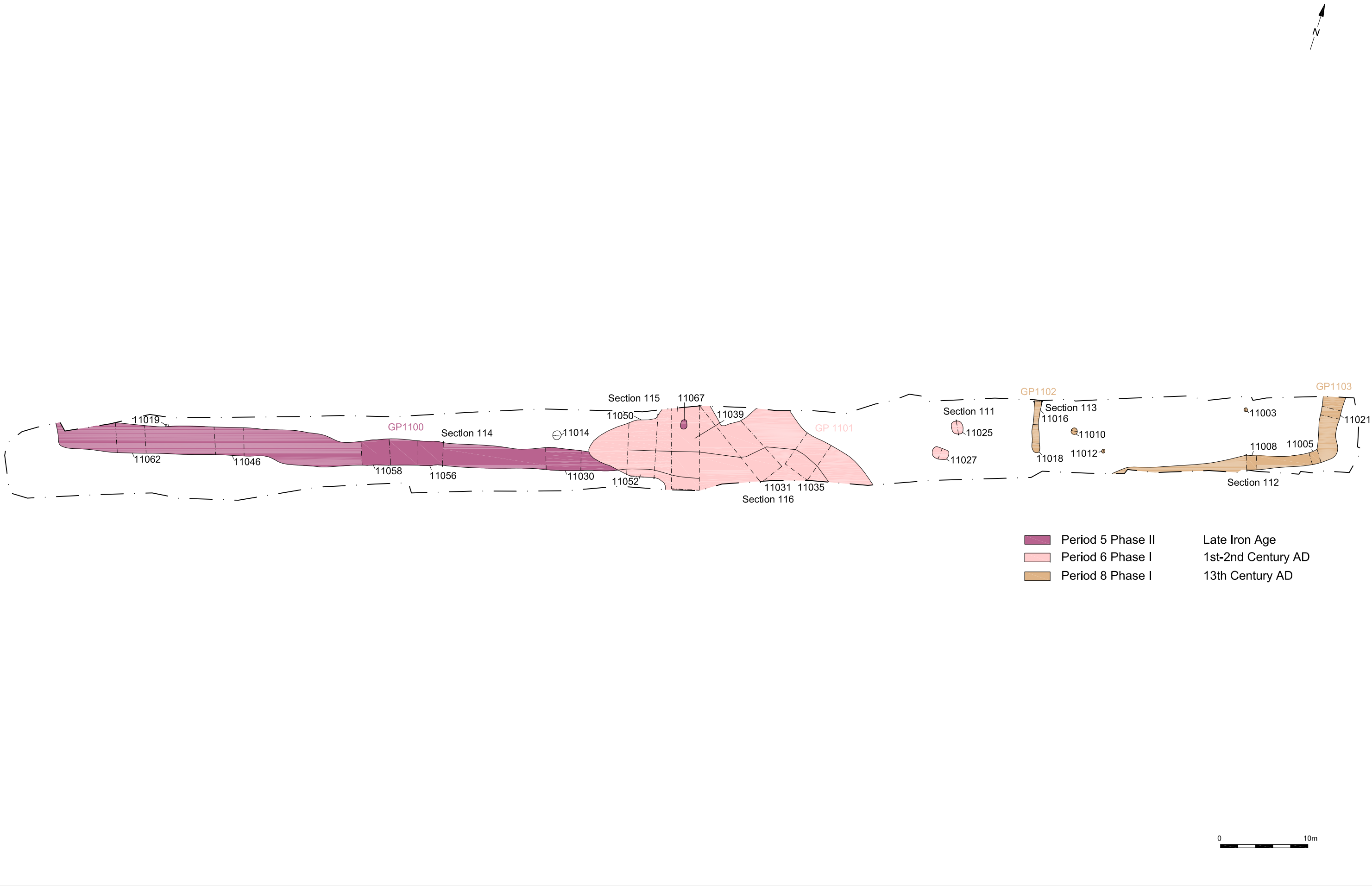
Ditch 117

Fig. 48

Period 5 Phase II — Late Iron Age
Period 6 Phase I — 1st-2nd Century AD
Period 8 Phase I — 13th Century AD

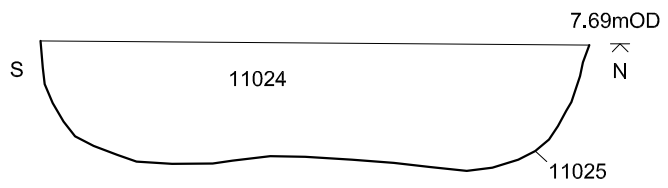
0 50m

© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 47
Project Ref: 3254	Sept 2009	Master plan of Area K11	
Report Ref: 2009031	Drawn by: HLF		



© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 48
Project Ref: 3254	Sept 2009	Area K11	
Report Ref: 2009031	Drawn by: HLF		

Section 111



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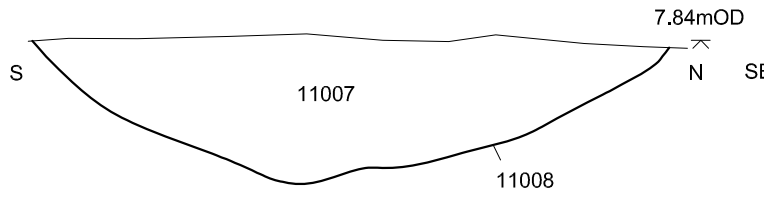

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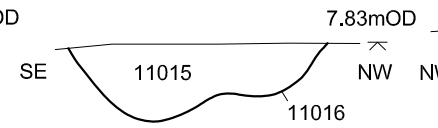

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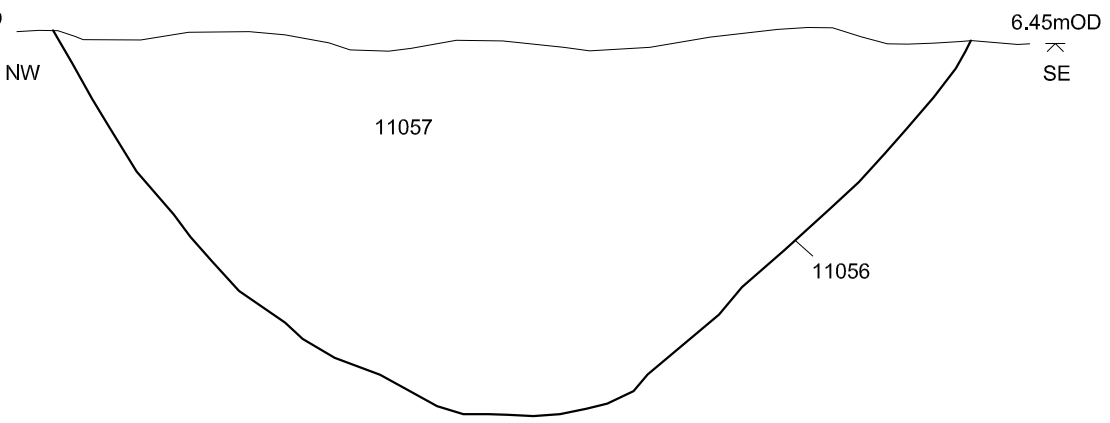

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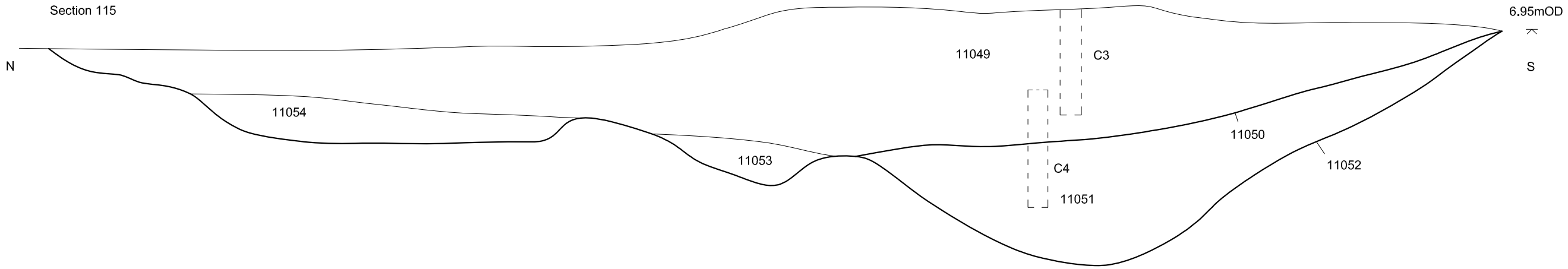


Section 116

© Archaeology South-East		Isle of Grain Pipeline	Fig. 49
Project Ref: 3254	March 2009	Selected Sections from Area K11	
Report Ref: 2009031	Drawn by: FEG		

Watching Brief Plot 0-13

N

Fig. 52

ET3

ET2

ET1

Fig. 51

Fig. 51

Modern ditch 122

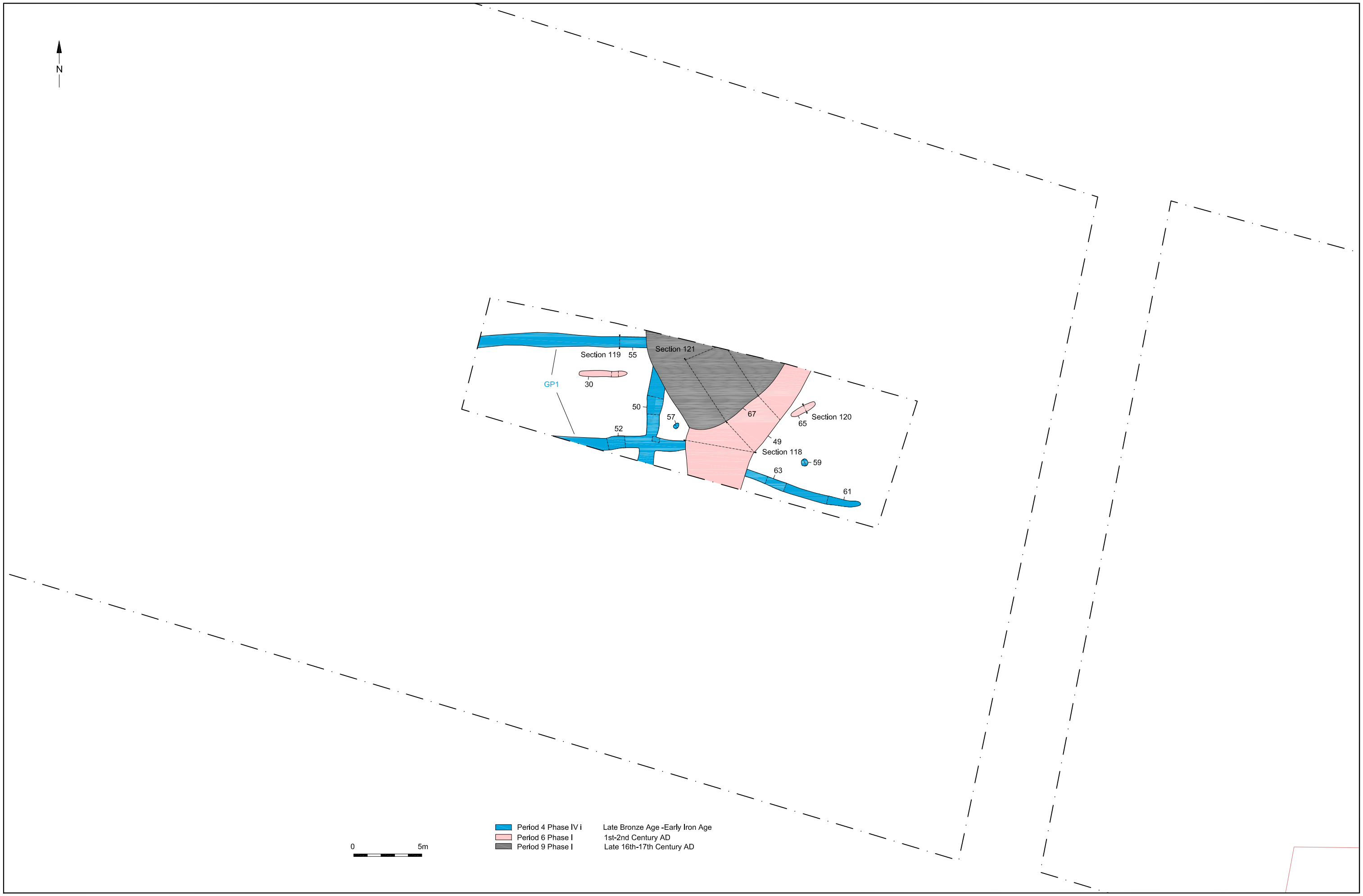
Modern ditch 122

Modern ditch 124

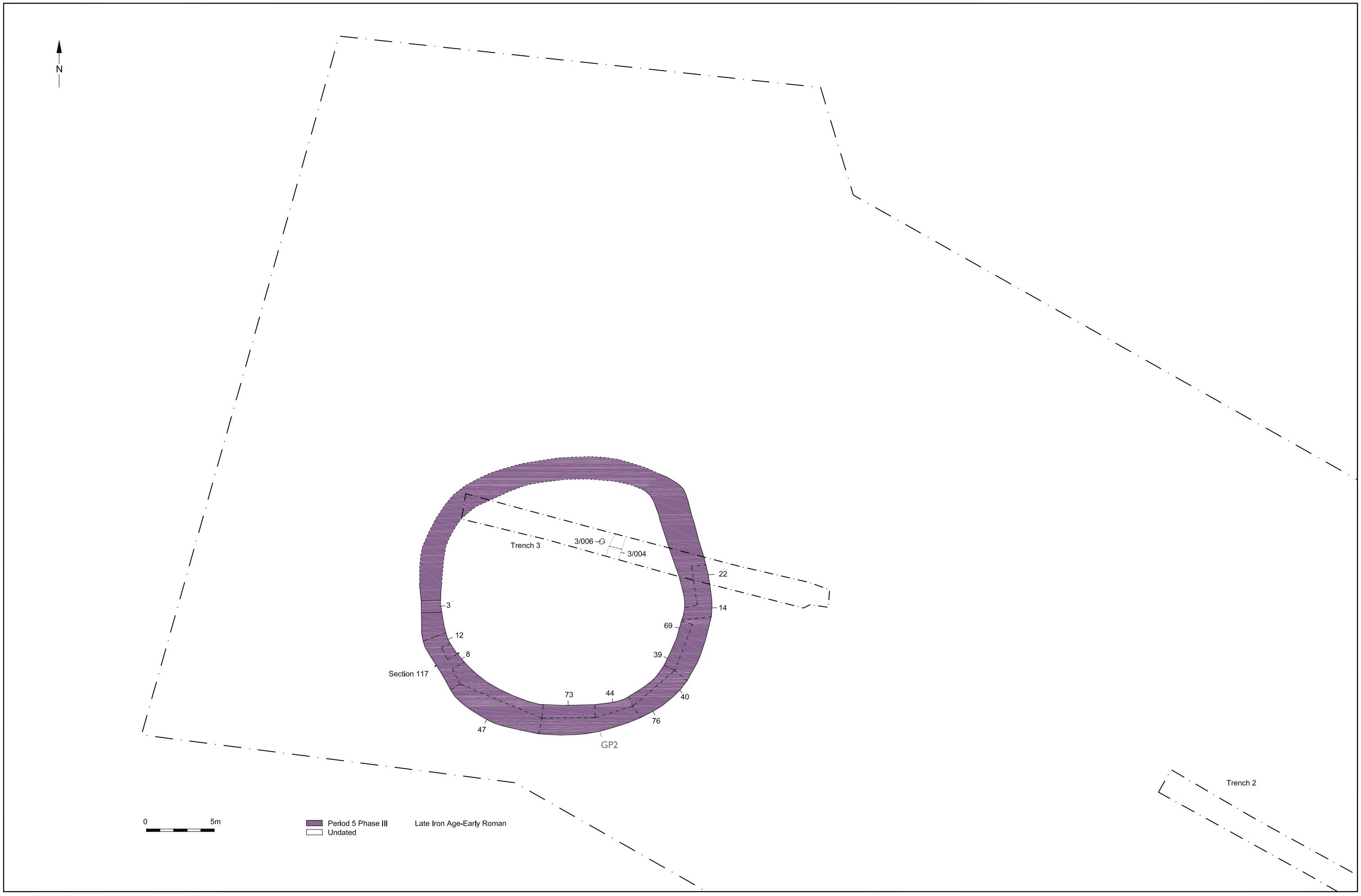
Period 4 Phase IV i	Late Bronze Age -Early Iron Age
Period 5 Phase III	Late Bronze Age -Early Iron Age
Period 6 Phase I	1st-2nd Century AD
Period 9 Phase I	Late 16th-17th Century AD

0 50m

Project Ref: 3254	Sept 2009	Grain - Shorne Pipeline	Fig. 50
Report Ref: 2009031	Drawn by: HLF	Master plan of Watching Brief Plot 0-13	

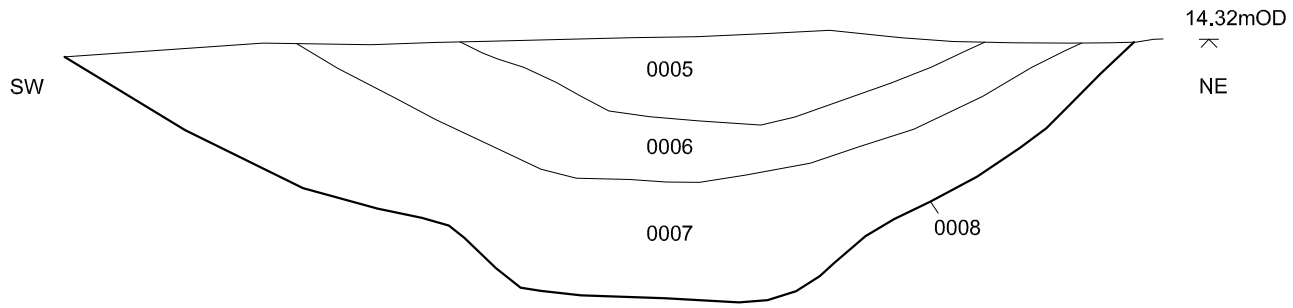


© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 51
Project Ref: 3254	Sept 2009	Watching Brief Plot 0-13	
Report Ref: 2009031	Drawn by: HF/JR		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 52
Project Ref: 3254	Sept 2009	Watching Brief Plot 0-13	
Report Ref: 2009031	Drawn by: HLF		

Section 117



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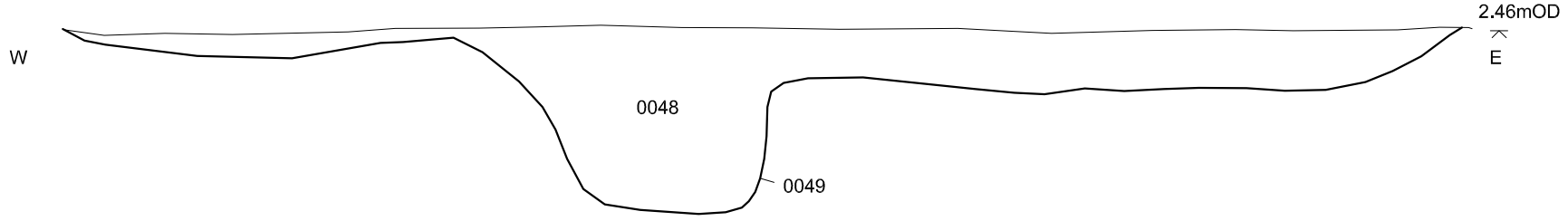

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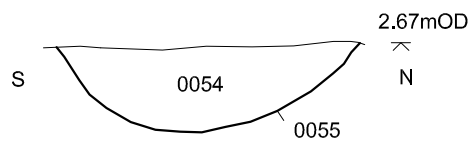

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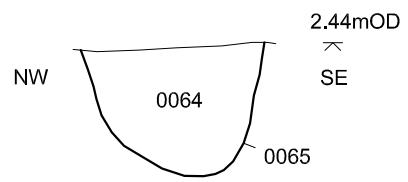

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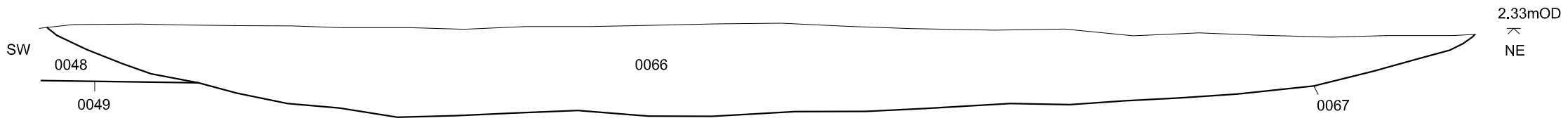
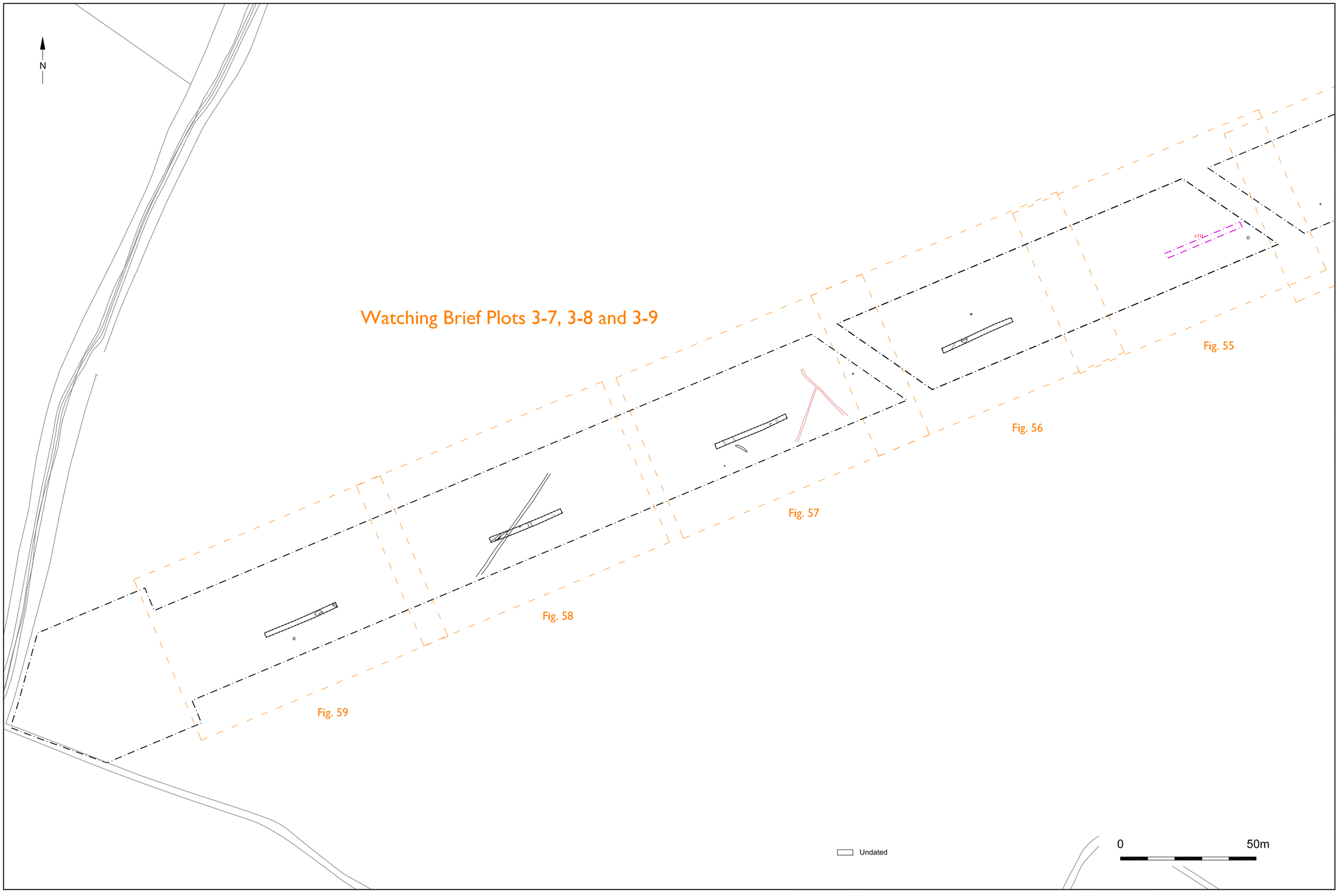


© **Archaeology South-East**		Isle of Grain Pipeline	Fig. 53
Project Ref: 3254	March 2009	Selected Sections from Watching Brief Area @ 1:20	
Report Ref: 2009031	Drawn by: FEG		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 54
Project Ref: 3254	Sept 2009	Master plan of Watching Brief Plots 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HLF		

N

0089

0106

Trench 23

23/004
078

Undated

0 5m

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Project Ref: 3254	Sept 2009	Plan of Watching Brief Plot 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HLF		

N

Contingencey Trench 11

078

Undated

0 5m

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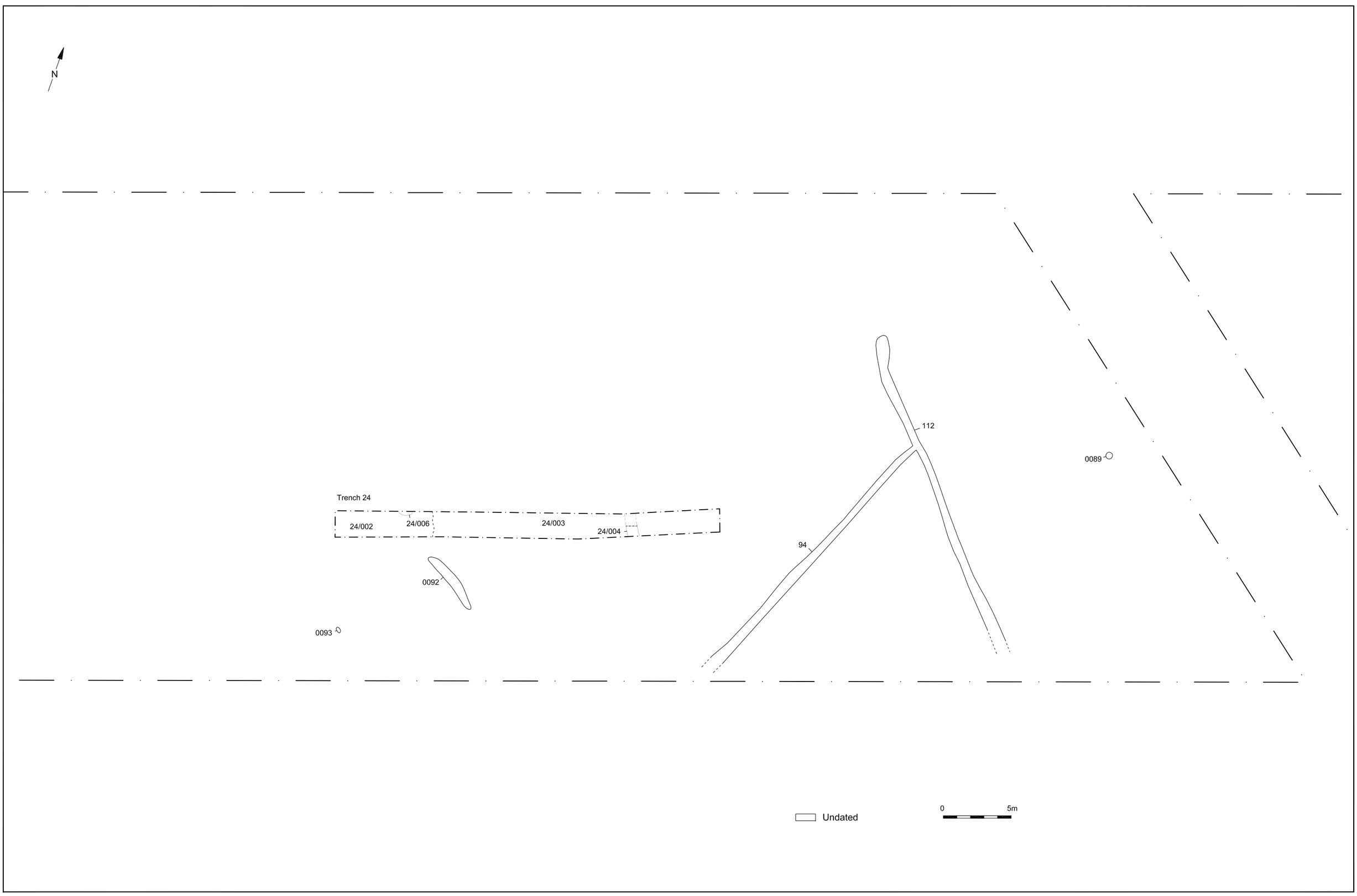
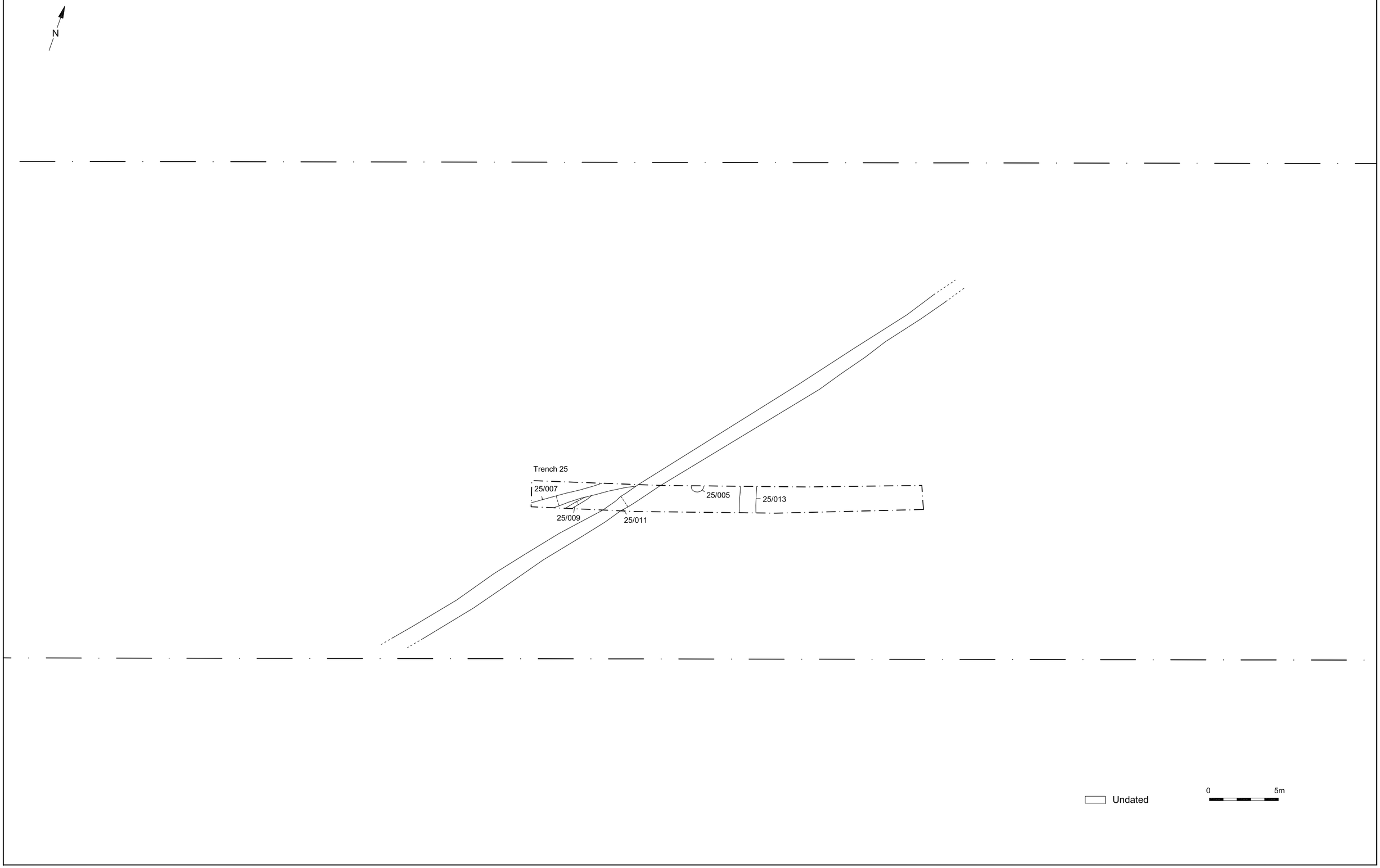
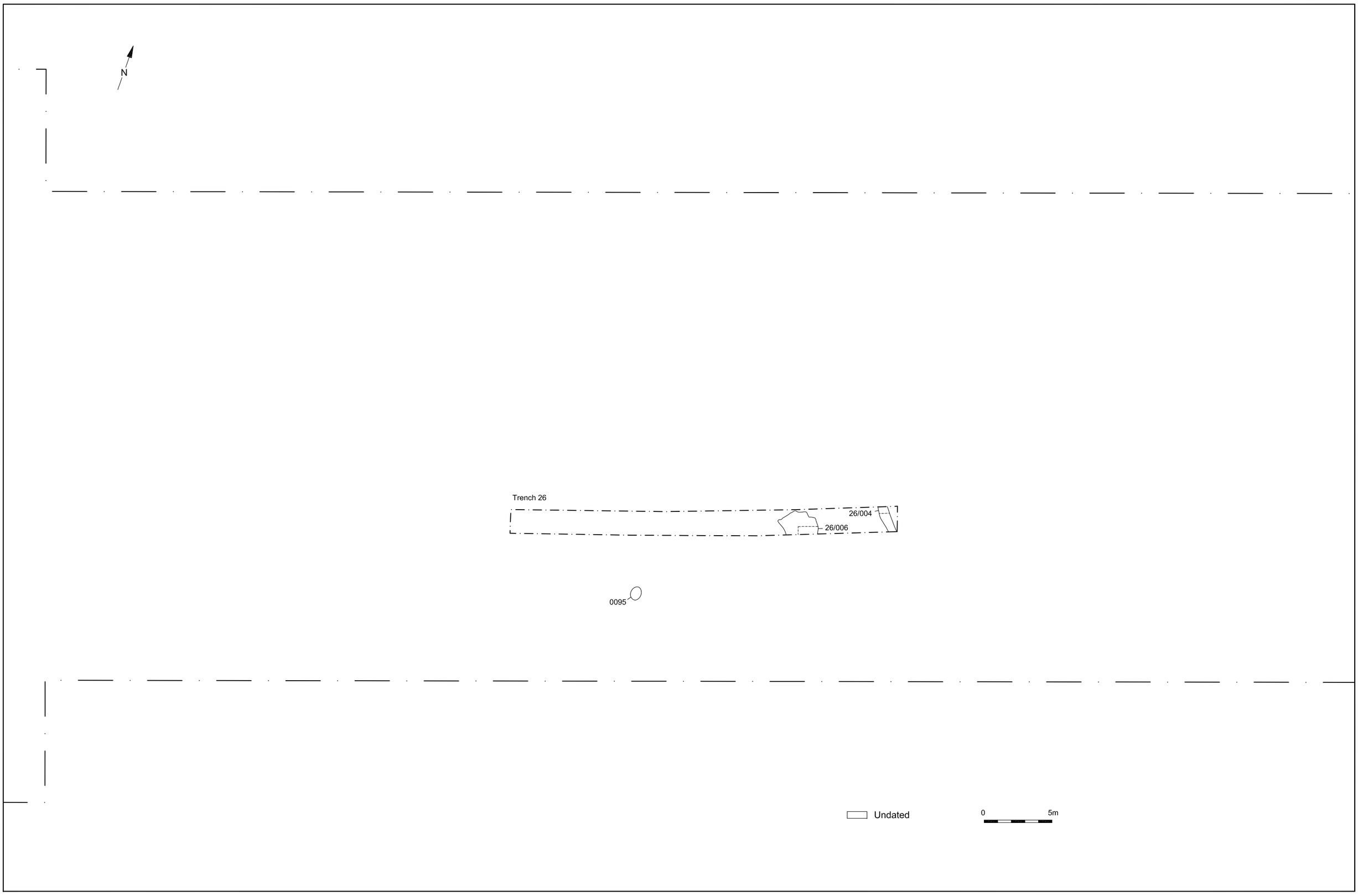
Project Ref: 3254	Sept 2009	Plan of Watching Brief Plot 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HLF		



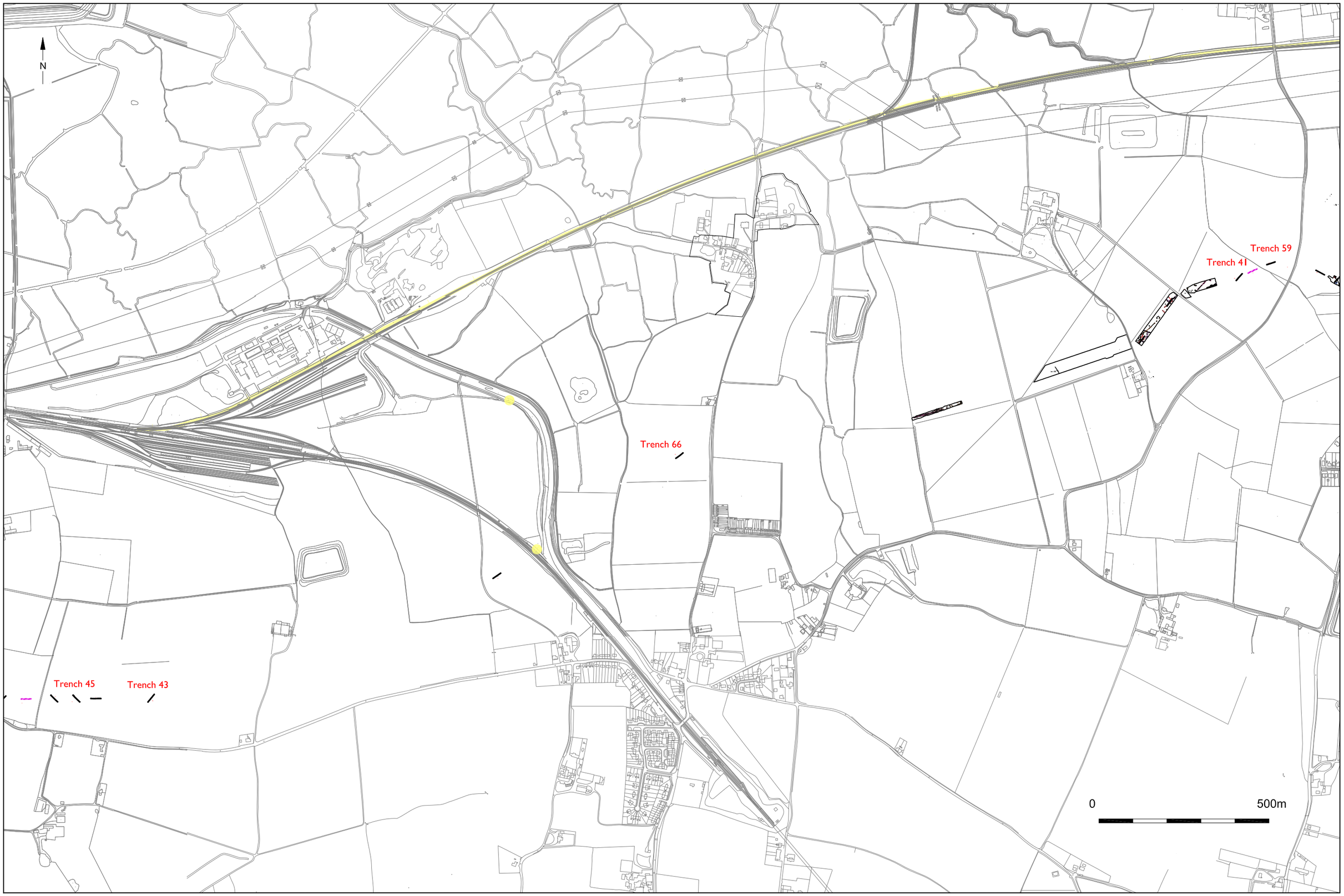
© Archaeology South-East		Grain - Shorne Pipeline	Fig. 57
Project Ref: 3254	Sept 2009	Plan of Watching Brief Plot 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HLF		



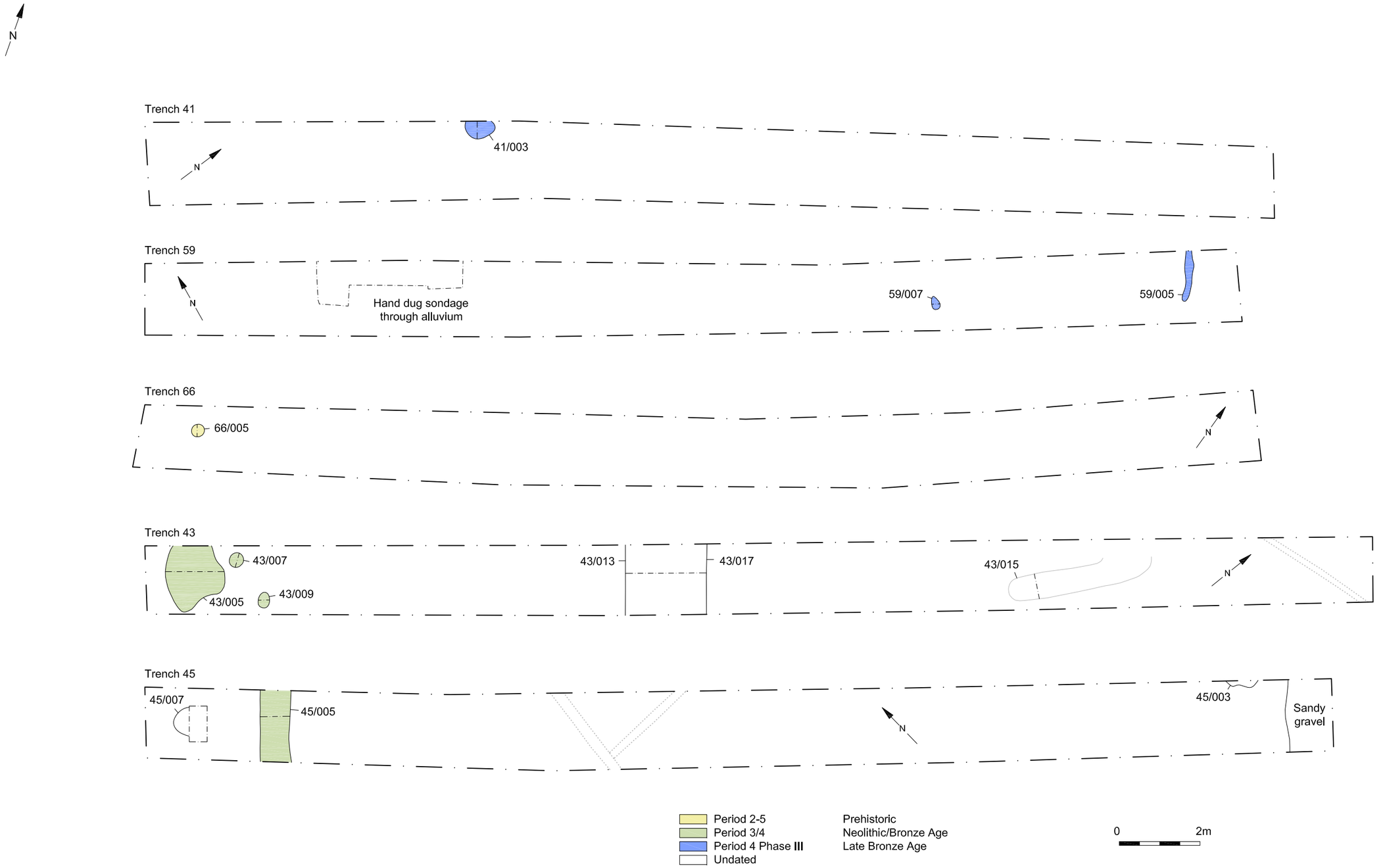
© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 58
Project Ref: 3254	Sept 2009	Plan of Watching Brief Plot 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HLF		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 59
Project Ref: 3254	Sept 2009	Plan of Watching Brief Plot 3-7, 3-8 and 3-9	
Report Ref: 2009031	Drawn by: HF/JR		



© Archaeology South-East		Grain - Shorne Pipeline	Fig. 60
Project Ref: 3254	Sept 2009	Location of Trenches 41, 59, 66, 43 and 45	
Report Ref: 2009031	Drawn by: JLR		



© **Archaeology South-East**		Grain - Shorne Pipeline	Fig. 61
Project Ref: 3254	Sept 2009	Plan of trenches 41, 59, 66, 43 and 45	
Report Ref: 2009031	Drawn by: HLF		

Fig. 62: Area A1 facing south-west

Fig. 63: Roman Quarry pit GP125 facing south-east

Fig. 64: Roman Multi-vessel Cremation pit 2200

Fig. 65: Late Roman Building facing south-west

Fig. 66: Roman / Early Anglo-Saxon Quarry pit GP906 facing south

Fig. 67: Roman Corn-drying Kiln facing north

Head Office
Units 1 & 2
2 Chapel Place
Portslade
East Sussex BN41 1DR
Tel: +44(0)1273 426830 Fax:+44(0)1273 420866
email: fau@ucl.ac.uk
Web: www.archaeologyse.co.uk

London Office
Centre for Applied Archaeology
Institute of Archaeology
University College London
31-34 Gordon Square, London, WC1 0PY
Tel: +44(0)20 7679 4778 Fax:+44(0)20 7383 2572
Web: www.ucl.ac.uk/caa

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