ARCHAEOLOGICAL EXCAVATION

Church Road, Otham, Maidstone, Kent ME15 8TL

Planning Reference: 19/506182/FULL

Site Code: KCRO21

JAC27441
April 2022

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FIGURES

PLATES

1 ABSTRACT

1.1 This report details the results of an archaeological excavation undertaken by Pre-Construct Archaeology Ltd (PCA) on Land at Church Road, Otham, Maidstone, Kent between 12th July 2021 and 10th September 2021. The central grid reference for the site was TQ 78712 53934 (Figure 1) .

1.2 This work was commissioned by RPS Consulting on behalf of Bellway Homes Ltd as a result of significant archaeological features being identified in a previous evaluation undertaken by Archaeology South-East in 2021 (Stevens 2021).

1.3 The earliest deposits encountered were the natural sandstone and limestone deposits, the top of which sloped from a maximum level of 73.24m OD (Area 4) in the south to a minimum level of 60.28m OD (Area 1) in the north.

1.4 As a result of the evaluation four areas of potential archaeological interest were identified as requiring further investigation (Figure 2). Archaeological features excavated in Areas 1–4 revealed a range of enclosure ditches (Ditches 1–11) , pits and postholes dating from the later Bronze Age/earliest/Early to Mid Iron Age, Mid to Late Iron Age and Late Iron Age to early Roman (Romano-British) periods (Figures 3a, 3b-6). The majority of features date from the Late Iron Age to early Roman period and were found across the site in all four areas. Of particular interest were earliest Iron Age/Early to Middle Iron Age features (Ditch 1 and pits) in Areas 1 and 3 and Middle to Late Iron Age features (Ditch 2, pits and postholes) in Area 1. All of the features in Area 2 were considered to be Late Iron Age to early Roman (Romano-British). A single Ditch in Area 4 was dated as Late Iron Age to early Roman by its continuation from the evaluation but all other features in this area remain undated.

1.5 The earliest activity on the site appears as a significant assemblage of Neolithic-Mesolithic flint micro-debitage recovered from a Late Iron Age/early Roman pit which appeared to have truncated an earlier surface.

1.6 The earliest Iron Age/Early to Middle Iron Age activity was defined by pottery, copper-alloy waste and a stone mould recovered from two particular pit assemblages in Area 1 and two pits in Area 3. A linear ditch and two pits were also defined as of the same date. The pottery condition is indicative of routine rubbish disposal and the mixed assemblages of earliest and early Iron Age pottery could indicate that the site was used over an extended period of time. The combination of domestic and industrial waste from the earliest/Early-Middle Iron Age hints at the possibility of domestic and small-scale industrial processes being carried out in this area.

1.7 Area 1 provided the only evidence of activity during the Middle to Late Iron Age in the north of the area where two pits produced as significant pottery assemblages (including wasters indicative of local pottery production), fragments of a possible fired clay oven structure and hearth furniture. Almost all of the Mid to Late Iron Age pottery (400-200BC) is associated with Pit [291].

1.8 A short section of truncated ditch (Ditch 2) was also dated to the Mid to Late Iron Age period and was likely a part of an early enclosure ditch. A collection of postholes located in the southeast part of Area 1 were dated to this period but were of unknown function.

1.9 Continuing on from the results of the evaluation (Stevens 2021) this site has proved significant is producing some specific evidence of the earliest to Early Iron Age features with associated pottery assemblages (800–400BC), fired clay hearth/furnace lining and copper-alloy slag/waste as well as Mid to Late Iron Age (400-200BC) features which contain domestic and industrial pottery wasters, fragments of fired clay oven structures, triangular perforated bricks and copper-alloy waste. Environmental evidence has also indicated the possibility of the additional cultivation of some grasses cultivated for hay to be used as animal feed, suggesting animal husbandry practises in a Mid -Late Iron Age sample may be represented. These specific pieces of archaeological evidence represent rarely found Early and Middle Iron Age activity in the Weald and are therefore considered to be very significant as indicated by the South East Research Framework (KCC 2019).

1.10 The majority of the archaeological enclosure ditches have been dated as from the Late Iron Age to early Roman period together with domestic pits and some groups of randomly scattered postholes. Similar ditches across the site and the presence of a potential Iron Age post-built structure identified in the evaluation (Steven 2021, Figure 8) indicate that a more settled pattern of occupation was associated with wet pasture and meadow across the site in this later Roman-British period.

1.11 There was no further archaeological evidence of occupation after the early Roman period.

2 INTRODUCTION

2.1 This report details the results and working methods of an archaeological excavation undertaken by Pre-Construct Archaeology Ltd (PCA) between 12th July 2021 and 10th September 2021 on land at Land at Church Road, Otham, Maidstone, Kent (Figure 1). These works took place in advance of a proposed development of the site comprising residential development for 421 dwellings with associated access, infrastructure, drainage, open space, and landscaping. The archaeological work was commissioned by RPS Consulting on behalf of Bellway Homes Limited.

2.2 The site comprised a large agricultural field (c.16ha) lying between Otham and Willington, to the south-east of Maidstone (Figure 1) . It is bounded to the north by residential development and the churchyard of St Nicholas Church, to the south by the grounds of the former rectory and further residential plots, to the east by Church Road and to the west by the rear gardens of houses fronting Chapman Avenue. The site is centred on National Grid Reference NGR 578758 153949.

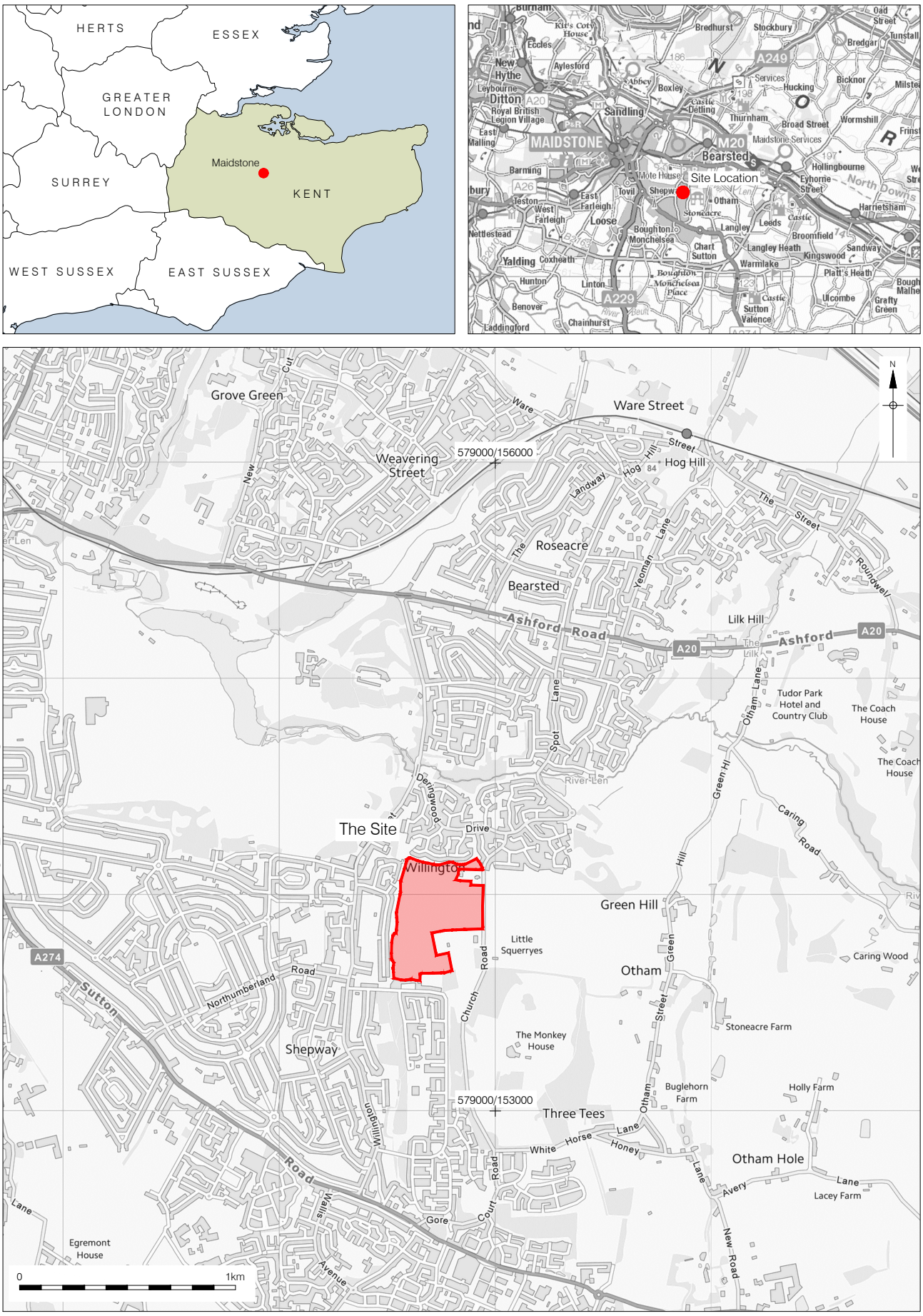
2.3 A desk-based assessment for the site, undertaken by CgMs (2018), details the archaeological potential of the site, which was defined as low. This was followed by a geophysical survey undertaken by SUMO in 2019 (CgMs 2019) which contained no definite archaeological anomalies.

2.4 A trial trench evaluation comprising 133 30m by 2m trenches has recently been completed by ASE in 2021 (Stevens 2021). Significant archaeological remains were limited to localised clusters in the north-east, west, and extreme south of the site. These included mainly undated ditches and postholes to the south of the church. In the central western part of the site a loose scatter of late prehistoric and early Roman features was recorded; a similar group was present in the southern part of the site. In addition to these earlier features, a group of probable early 20th century rag stone quarry pits was present in the central eastern part of the site.

2.5 The investigation was conducted by PCA under the supervision of Tanya Jones and the project manager Helen Hawkins. It was monitored by Wendy Rogers of Kent County Council on behalf of the Maidstone Borough Council.

2.6 A site-specific Written Scheme of Investigation (ASE 2021) detailing the methodology and work programme for the archaeological excavation was prepared prior to the fieldwork and approved by Wendy Rogers for Kent County Council on behalf of Maidstone Borough Council.

2.7 The site has been given the unique side code KCRO21. It is intended that the completed archive comprising written, drawn, and photographic records will, upon completion of the project, be curated at PCA until a suitable local repository (such as Maidstone Museum) becomes available. Maidstone Museum is currently not accepting archaeological archives.



01/04/22 DV

Figure 1
Site Location
1:2,000,000, 1:250,000, 1:25,000 at A4

P:\PROJECT DATA\Out of London\Kent\Church Road Otham Kent\CAD\EXCAV\Fig 02_DSL.dwg

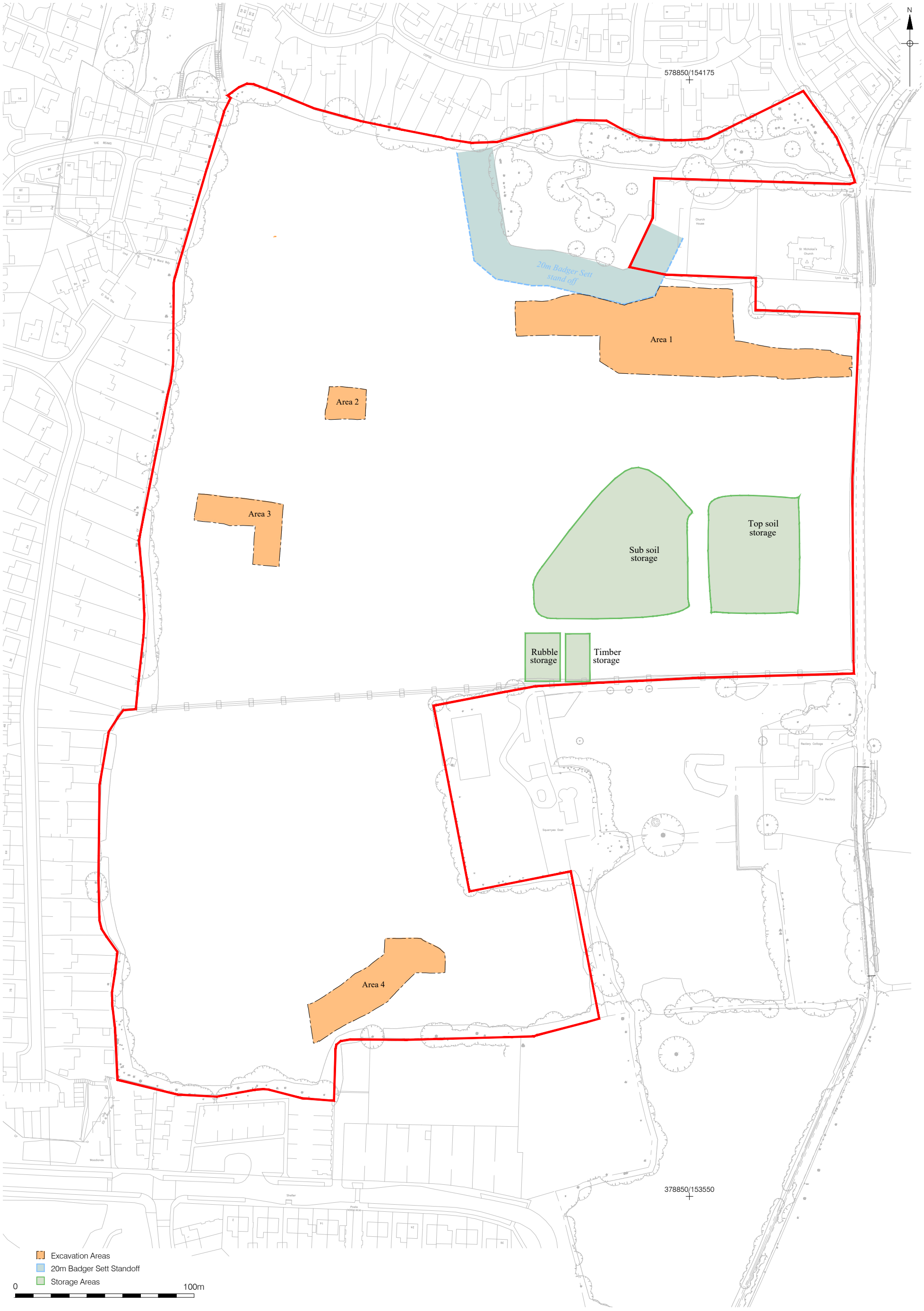


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Figure 2
Detailed Site Location
1:2,000 at A3

3 PLANNING BACKGROUND

3.1 National Guidance: National Planning Policy Framework

3.1.1 The National Planning Policy Framework (NPPF) was adopted in 2012 and updated in 2018 and 2019. The NPPF constitutes guidance for local planning authorities and decision-takers both in drawing up plans and as a material consideration in determining applications. Chapter 16 of the NPPF 2019 concerns the conservation and enhancement of the historic environment.

3.1.2 In considering any proposal for development, including allocations in emerging development plans, the local planning authority will be mindful of the policy framework set by government guidance, existing development plan policy and of other material considerations.

3.2 Maidstone Borough: Local Plan

3.2.1 Land West of Church Road has been identified by Maidstone Borough Council as a strategic location for development, as referred to in The Maidstone Borough Local Plan, adopted October 2017. Policy H1(8) refers specifically to certain criteria as set out in the DBA (CgMs 2018).

3.2.2 The Maidstone Borough Council Local Plan (2017) contains development management policy relevant to this site in Policy SP18: The Historic Environment as set out in the DBA (CgMs 2018).

3.3 Site Specific Planning Background

3.4 Planning permission was applied for in advance of a proposed development of the site comprising residential development for 421 dwellings with associated access, infrastructure, drainage, open space, and landscaping. The archaeological work was commissioned by RPS on behalf of Bellway Homes Limited. The site has a somewhat complex planning history, culminating in the granting of planning permission for the residential development by The Planning Inspectorate after two appeals (references APP/U2235/W/20/3254134 and APP/U2235/W/20/3256952).

3.4.1 Initial archaeological work consisted of the preparation of an archaeological Desk-Based Assessment (DBA) for the scheme (CgMs 2018) followed by a geophysical survey (CgMs 2019), both in support of planning applications. Following consultation between Maidstone Borough Council and Kent County Council Heritage Conservation (Maidstone Borough Council's advisers on archaeological issues) conditions were attached to appeal judgements (Nos. 16 and 17 respectively) requiring that:

> *'No development shall take place until a Written Scheme of Archaeological Investigation has been submitted to and approved in writing by the local planning authority. The scheme shall include:*
>
> *a) Archaeological field evaluation works in accordance with specification and written timetable for undertaking site investigation work.*
>
> *b) The programme and methodology of site investigation and recording.*
>
> *c) The programme for post investigation assessment and evaluation.*

d) Any safeguarding measures to ensure preservation in situ of important archaeological remains and/or further archaeological investigation and recording in accordance with a specification and timetable which has been submitted to and approved by the local planning authority.'

and

'No Development in any phase shall take place until a Written Scheme of Archaeological Investigation has been submitted to an approved in writing by the local planning authority. The scheme shall include

a) archaeological field evaluation works in accordance with a specification and written timetable for each phase of development; and

b) following on from the evaluation, any safeguarding measures to ensure preservation in situ of important archaeological remains and/or further archaeological investigation and recording in accordance with a specification and timetable which has been submitted to and approved by the local planning authority.

4 GEOLOGY AND TOPOGRAPHY

4.1 According to the latest data available from the British Geological Survey (BGS), the underlying geology at the site consists of the sandstones and limestones of the Hythe Formation. There are recorded deposits of Atherfield Clay immediately to the east. The natural (sandstone and silty clay) was identified in Area 1 at 60.28m OD and Area 4 at 73.24m OD.

4.2 The site slopes from c.64mOD in the east to c.61moD in the west and from c.73mOD in the south to c.56m OD in the north. At the time of the excavation the field was given over to arable agriculture.

4.3 The c.16ha site is bounded by Church Road to the east, to the west and south-west by gardens of properties fronting onto Chapman Avenue and The Beam, and to the south-east by the grounds of Squerryes Oast and The Rectory. To the north there are gardens of properties fronting onto Longham Copse, and to the north-west St. Nicholas Church, and the ground of Church House. There are extensive views to the high ground to the north.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 The archaeological and historical background for the site has been laid out in full in the desk-based assessment (CgMs 2018). Unless referenced otherwise, the following is taken from that report.

5.2 **Prehistoric**

5.2.1 There are no records on the HER securely dating to the Palaeolithic, Mesolithic, Neolithic, and Bronze Age periods within the study area.

5.2.2 The findspot of a tranchet axe or adze (presumably of prehistoric date, although no further information was available) is recorded c.600m west from the study site.

5.2.3 This represents a level of general background activity lower than which would be expected across a large area. The archaeological potential for all the prehistoric periods at the site was therefore considered low.

5.3 **Iron Age and Romano-British**

5.3.1 A sestertius of Lucilla was found c.600m west from the study site, within close proximity of the aforementioned tranchet axe. There are no further Iron Age or Roman finds, or features recorded within the study area.

5.3.2 Iron Age and Roman settlement is known from c.3km to the south-west of the study site where roundhouses and a villa site indicate a continuation of settlement in the Boughton Monchelsea area from 100BC to around the 2nd century AD.

5.3.3 Located away from the known settlement and later villa buildings at Boughton Monchelsea, it is likely the site was either farmland or woodland at this time. A low archaeological potential for the Iron Age/Roman period was muted.

5.4 **Anglo-Saxon and Medieval**

5.4.1 During these periods, it appears that the site lay within a relatively remote agricultural landscape and was comprised of woodland. No finds or features dating to the Anglo-Saxon and medieval periods are recorded within the wider study area.

5.4.2 The Domesday Book of 1086 records a church in Otham, and the listing entry (Historic England) mentions a 12th century date for the church. The parish of Otham was given by William the Conqueror to his half-brother, Odo, Bishop of Bayeux.

5.4.3 Overall, the archaeological potential of the study site for this period was defined as low. It was thought likely that the study site remained wooded at this time, though evidence for land division and agricultural activity might be represented.

5.5 Late Medieval, Post-Medieval and Modern

5.5.1 Gore Court is located c.300m South-east of the site boundary, a late 15th century or early 16th century structure with later alterations, which originally started life as a house, was altered to a

school, before returning to a house. The building is Grade II* Listed. Both the gardens and a 19th century laundry building to the south are also recorded on the HER. The garden is locally designated as a Historic Park and Garden.

5.5.2 Moat Park located c.230m north-west of the site is recorded as a Registered Park and Garden. This 18th and 19th century landscape park was created from an earlier deer park and surrounds a 1790s country house with informal, mid-19th century pleasure grounds. The earthworks remains of an earlier formal garden of the early to mid-18th century, related to the site of the former mansion, lie within the park.

5.5.3 The 1797 Ordnance Survey drawing identifies the site as agricultural land with St. Nicholas Church (*'Otham Church')* shown immediately to the north and the Parsonage immediately to the south-east.

5.5.4 The 1838 Otham Tithe Map shows the site in some detail. The northern half is shown as *'Court Field – arable'*, with the two northernmost small plots detailed as pasture. The southern half is shown as *'Court Shaw - wood', 'Parsons field – arable', 'Long meadow – meadow,* with *'Parsons Field Shaw – wood'* forming the southern boundary. St Nicholas Church, the Church House (formally cottages), the rectory (*'Parsonage')* and Church Road are also shown

5.5.5 This layout and use of the site was maintained largely unchanged and into the present. One notable change is the removal of the boundary between the larger northern part of the study site and the smaller southern part between the larger northern part of the study site and the smaller southern part between 1962 and 1990. The archaeological potential for the period was considered as low, with evidence of former field boundaries though likely to be present.

5.6 Geophysical Survey

5.6.1 The site was surveyed by magnetometry in 2019. The results were summarised as follows (CgMs 2019):

> *'No definite archaeological anomalies have been identified. A couple of linear trends are of uncertain origin. Two old field boundaries have been mapped, one of which is commensurate with a former boundary on historic maps. Sinuous bands attributed to natural magnetic variations are present across the site.'*

6 METHODOLOGY

6.1 The works were undertaken in accordance with the approved Written Schemes of Investigation (ASE 2021).

6.2 Four areas of Strip, Map and Sample excavation was undertaken comprising a total area of 0.925ha. Stripping extended to the archaeological horizon with the identified archaeological features being investigated and recorded.

6.3 In each area, using the Geomax, a TBM was created as tabled below:

Area	TBM (m OD)
1	61.71
2	61.20
3	63.84
4	72.50

6.4 Each of the areas were located with the use of a Geomax.

6.5 The modern overburden was removed by a mechanical 360° excavator fitted with a ditching bucket, under archaeological supervision in spits of 100mm until archaeological deposits, features or structures were encountered. The archaeological deposits were excavated by PCA staff using hand tools, i.e., trowels, shovels, and mattocks.

6.6 Single context recording method, on *pro forma* context and planning sheets or GPS as appropriate. Plans and sections were drawn at a scale of 1:20 or 1:10 as appropriate. Digital photographs were taken.

6.7 In this report all context numbers (cuts, layers, and fills) are written in squared brackets [ ], small finds are denoted by the prefix (SF) and environmental sample numbers are presented in < > brackets.

7 PHASED ARCHAEOLOGICAL SEQUENCE

7.1 Phase 1: Natural

7.1.1 The earliest deposit encountered on the site was a horizon of interbedded sandstone and limestone. As suggested by the British Geological Survey, the sedimentary bedrock was formed in the Cretaceous Period (*c.* 113 million to 126 million BP) as the local environment was previously dominated by shallow seas. The top of which sloped from a maximum level of 73.24m OD (Area 4) in the south to a minimum level of 60.28m OD (Area 1) in the north

7.2 Phase 2: Earliest/Early to Mid-Iron Age

Area 1

Ditch 1

7.2.1 A 140.50m long by 0.79m wide linear (Ditch 1, Figure 3a and 3b) was encountered at a height of between 59.61m OD and 61.48m OD and ran along the southern edge of Area 1 on an east -west alignment. Fourteen 1m slots [106] (Plate 1), [161], [202], [204], [206], [222], [225], [227], [229], [241], [247], [253] (Plate 2), [263], [274] (Plate 8) were excavated through the feature, which was also encountered and investigated in Evaluation Trench 30 and 34 (Stevens 2021, figures 13 & 15). Ditch 1 was very shallow in depth and likely to have been a boundary ditch (Figure 8 section 102 (E), section 138 (centre) and section 146 (west end) . No dating evidence was produced from the feature (in either evaluation or excavation) although it was located in close proximity to features which were dated to the Early to Mid-Iron Age.

Pits [220], [235] and postholes [135], [137]

7.2.2 Two significant pits ([220] and [235]) were located to the south of Ditch 1; a large Pit [220] (Figure 3a, Plate 21, Plate 22) measured 2.35m x 1.68m x 0.46m deep and was encountered at a height of 61.18m OD. The cut of the pit was directly into a solid formation of ragstone and then backfilled in two events (Figure 7 sections 126 and 127) . The primary fill [223] contained a pottery assemblage (79 sherds) of mostly earliest-Early/Middle Iron Age sherds dated 800-400 BC (Appendix 2), copper-alloy slag possibly 'casting waste' (Appendix 7), a drilled stone mould possibly used for casting (Appendix 7) and animal bone (Appendix 8). The secondary fill [219] contained a larger pottery assemblage (356 sherds) dated 800-400 BC which is more typical of an earliest and earlier Iron Age phase and 2 sherds dated 100BC-1st century AD which are presumed to be intrusive (Appendix 2), a struck flint assemblage which was 'best placed within Middle Bronze Age through to Iron Age assemblages' (Appendix 6). There was also burnt stone, copper-alloy slag (possible casting waste) (Appendix 7), animal bone and an environmental sample producing a seed species component, with additional grass grain, indicative of rough wet ground, perhaps wet meadow or pasture (Appendix 9, sample <111>).

7.2.3 Both fills of Pit [220] produced fragments of fired clay from a hearth base or furnace- lining and part of a pedestal. Pedestals could transform a hearth into a semi-enclosed structure and separate food, or other materials requiring heat or firing, from direct heat (Appendix 10).

7.2.4 To the west of Pit [220] a second Pit [235] (Figure 3a, Plate 24) measured 1.46m x 1.12m x 0.18m deep and was encountered at 60.95m OD. The silty clay back fill contained earliest-Early/Middle Iron Age pottery (28 sherds) dated to 800-500 BC (Appendix 2).

7.2.5 Both pits appear likely to have been used as rubbish pit for the disposal of domestic waste.

7.2.6 Two postholes [135] and [137] (Table 1) yielded no dateable finds but due to their close proximity to Ditch 1 and their alignment with Pits [220] and [235] were believed to be of a similar date.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height
135	134	0.34	0.29	0.03	61.33
137	136	0.22	0.15	0.07	61.35

Table 1: Context details

Area 3

Pit [407], [421], [425]

7.2.7 Pit [421] (Figure 5, Plate 36), located in the south of Area 3, measured 1.38m x 0.64m x 0.38m deep, and was encountered at 63.83m OD (Figure 11 section 197). Its full extent could not be confirmed as it was against the western limit of excavation. The silty clay fill contained pottery dated 800-500BC (Appendix 2), struck flint, animal bone and a few small non-diagnostic fragments of fired clay (Appendix 10). This feature was most likely a deliberately backfilled domestic rubbish pit.

7.2.8 In the southern part of Area 3, Pit [425] (Figure 5, Plate 35) measuring 1.07m x 0.70m x 0.41m deep was recorded at a height of 63.87m OD (Figure 11 section 198). It was an archaeologically sterile pit, which had been truncated by Pit [407] (Plate 35), measuring 1.32m x 0.90m x 0.17m deep, at a height of 63.86m OD which contained pottery dated 800-500BC (Appendix 2) and animal bone (Appendix 8).

7.3 **Phase 3: Mid to Late Iron Age**

Area 1

Posthole Group 1

7.3.1 At the eastern end of Area 1 and between Ditch 1 and Ditch 3 a group of 16 randomly placed postholes (Posthole Group 1, Figure 3a, Table 2) were of an unclear function. Pottery collected from posthole [169] was given an indeterminate prehistoric date (Appendix 2) and with its proximity to Ditch 1 would suggest a Mid to Late Iron Age date, rather than Late Iron Age to Romano-British date.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
139	138	0.36	0.26	0.07	61.12	
143	142	0.40	0.30	0.14	61.16	
145	144	0.22	0.16	0.05	61.15	
149	148	0.44	0.40	0.14	61.17	
151	150	0.34	0.30	0.09	61.15	
153	152	0.26	0.20	0.05	61.17	
155	154	0.24	0.20	0.13	61.14	
157	156	0.20	0.20	0.11	61.15	
159	158	0.20	0.20	0.15	61.11	

163	162	0.22	0.22	0.07	61.13	
165	164	0.26	0.24	0.05	61.12	
169	168	0.36	0.22	0.20	61.16	Iron Age
177	176	0.24	0.20	0.09	61.11	
179	178	0.22	0.20	0.24	61.10	
181	180	0.28	0.22	0.12	61.10	
194	193	0.30	0.30	0.16	61.12	

Table 2: Context details and dating

Ditch 2

7.3.2 Running through the centre of the site was a linear Ditch 2 measuring 11.45m x 1m, encountered at a height of between 60.58m OD and 60.55m OD (Figure 3a) . This was investigated with two 1m slots [278] (Figure 9 section 147) and [303] (Plate 3). Fill [277] contained a small fragment of pottery of an indeterminate Iron Age date (Appendix 2) and animal bone.

Pit [233]

7.3.3 To the north of Ditch 2 and in the eastern end of Area 1, Pit [233] measured 0.90m x 0.80m x 0.15m deep, at a height of 60.65m OD. This was half sectioned and contained examples of copper-alloy slag (Appendix 7) and animal bone. Eighty sherds of pottery were retrieved from the environmental sample of a mixed Iron Age date (Appendix 2) as well as a small sample of carbonised weed and grass (Appendix 9, sample <114>).

Pits [289], [291], [297], [307] and Postholes [316], [336]

7.3.4 In the north of the site there were four pits (cuts [289], [291], [297], [307]; Table 3), which due to their proximity was believed to be of a similar date (Figure 3a). Two of the pits [291] (Figure 7 section 151) and [297] (Plate 27-30) provided significant pottery assemblages dated predominantly to the Middle Iron Age, including some which is poorly made and damaged during firing and were possible wasters (Appendix 2). Also animal bone (Appendix 8) and environment samples which provided significant evidence of a carbonised deposit/possible hearth (Appendix 9, pit [291] samples <118> and <120>). The combination of results from these two samples suggests the deposit was probably domestic hearth waste, as opposed to food or cereal processing waste – due to the higher ratio of weeds and grasses (subsuming Brome) to cereal (along with the absence of chaff). Perhaps, floor sweepings utilised as a bulker for the fuel which provided this carbonised deposit (Appendix 9).

7.3.5 Pit [291] recovered a relatively small but diagnostic group of fired clay, the majority of which appear to be from a curving clay superstructure, with the impressions of structural withies. There are also a couple of large fragments with a bullnose edge that may represent part of a stokehole arch and suggest the clay may originate from an oven structure. One of these has a perforation through the wall, perhaps for the securement of a suspended floor formed of wattles clay (Poole 2015, 310). Other forms of portable furniture, possibly including a firebar and plate, may be present amongst the fired clay assemblage, but these have only been tentatively identified due to the degree of fragmentation (Appendix 10).

7.3.6 Pit [297] also produced examples of triangular perforated bricks (Plate 31) including two

complete and near complete examples from the base of the feature (SF5 and 6). The latter have two flat faces, three rectangular sides and are perforated laterally at all three apexes. These examples also have pre-firing grooves to each apex. Triangular forms are typically Iron Age in date (Foster 1986; Greenwood 1997; Grimes and Close-Brooks 1993; Parfitt 1984; Poole 1984; Rayner 2002), most commonly associated with Middle and Late Iron Age settlements but remained in use into the early Roman period (Greenwood 1997; Grimes and Close-Brooks 1993; O'Connell & Bird 1994, 130; Poole 2011b, 321). Measuring 52 to 63mm in thickness with sides of between 150 and 160mm in length, the examples from pit [297] are more in keeping with examples of an Iron Age date (Poole 2015, 304) (Appendix 10).

7.3.7 To the side of pot [291] and further west were two postholes ([316], [336]; Table 3) each of which contained a packing layer. Although they were not able to provide dating, they were seen to be of a similar date to the pits due their location on the site.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
289	288	1.88	1.50	0.38	60.24	
291	290	1.04	1.02	0.34	59.77	Earlier-middle/late Iron Age
297	296	1.10	1.0	0.56	59.94	Middle Iron Age
307	306	1.30	1.05	0.15	59.94	
316	314, 315	0.40	0.40	0.27	59.76	
336	334, 335	0.91	0.86	0.30	59.49	

Table 3: Context details and dating

7.4 Phase 4: Late Iron Age to early Roman

Area 1

Ditch 3

7.4.1 Ditch 3 was a long linear feature measuring 140m x 1.56m (Figure 3a and 3b), recorded at a height of between 61.41m OD and 59.65m OD, running on an east west alignment through the central area of Area 1 (Figure 8 section 146 (west end), section 133 (centre), section 145 (centre), section 114 (east end). This feature was also identified in Evaluation Trenches 30, 31 and 34 (Stevens 2021, figure 13, 14 & 15) where investigation suggested a Romano-British date (Stevens 2021). Seven 1m slots [110] (Plate 4 and 5), [209] (Plate 6), [216], [257], [265], [270] (Plate 7), [272] (Plate 8) were excavated along the feature. Four of these slots [110], [209], [257], [270] provided pottery dated 100BC to 1st century AD (Appendix 2), slag, a heavily corroded near-complete iron nail and animal bone.

7.4.2 Slot [110] contained some structural clay/daub, although the fragments are too small to determine what type of structure they originate from (Appendix 10). An environmental sample provided 'negligible quantities of archaeobotanical material' (Appendix 9, sample <101>). The form of this feature suggests there it was a boundary ditch which may have been a later replacement to Ditch 1.

Ditch 4

7.4.3 Ditch 4, encountered at a height of between 57.90m OD and 60.50m OD measured 102.83m long on an east-west alignment with a return to the north at both the east and west ends

(Figures 3a and 3b). The return at the eastern end measured 30.58m and 14.32m at the western end. Four 1m slots [251], [258] (Plate 10), [292], [305] (Plate 9, Figure 8 section 178) were excavated along the feature with one of these slots providing pottery dated 100 BC to 1st century AD (Appendix 2).

Ditch 5

7.4.4 Ditch 5 appeared to be a recut of Ditch 4, of similar size and alignment (Figures 3 and 3b, Figure 8 sections 178 and 179). This feature was also identified in Evaluation Trenches 19, 25, 26 and 31 (Stevens 2021, figures 9, 10, 11 & 14). Nine 1m slots [276], [245] (Plate 9), [249], [260] (Plate 10), [282] (Plate 11), [331], [294], [299], [326] (Plate 12) were excavated through the feature. The ditch contained a fill which consisted almost entirely of rag stone and sandstone, which was difficult to interpret as either a deliberate backfill or naturally occurring.

Ditch 9

7.4.5 Cutting through the eastern return of Ditch 5 was linear Ditch 9 which measured 17.44m on an east-west alignment with a return to the north at its western end measuring 5.36m (Figure 3a). Two 1m slots [280] (Plate 11, Figure 8 section 163, Figure 9 section 162) and [320] (Plate 18) were excavated through the feature, providing pottery dating of AD50/70-100 (Appendix 3).

Posthole Group 2

7.4.6 To the north of Ditch 3 in Area 1 a group of 18 randomly placed postholes were of unknown function (Figure 3a, Figure 7 section 111, Table 4). Postholes [129] was dated by pottery of 100BC to 1st century AD and posthole [131] by Late Iron Age pottery (Appendix 2) with other evidence including slag and animal bone. An environmental sample collected from [167] provided abundant charcoal particles and occasional carbonised seeds (Appendix 9, sample <103>).

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
102	101	0.96	0.94	0.26	60.93	
104	103	1.35	0.96	0.25	60.86	
108	107	0.52	0.30	0.11	61.18	
114	115	0.30	0.30	0.14	61.12	
117	116	0.30	0.30	0.10	61.16	
119	118	0.48	0.32	0.20	61.18	
121	120	0.22	0.20	0.07	61.14	
123	122	0.40	0.38	0.07	61.18	
125	124	0.32	0.30	0.12	61.18	
127	126	1.36	0.74	0.09	61.15	
129	128	0.44	0.28	0.08	61.15	100BC-1st Century AD
131	130	0.38	0.34	0.15	61.15	Late Iron Age
133	132	0.36	0.28	0.10	61.16	
141	140	0.44	0.36	0.14	61.32	
147	146	0.14	0.12	0.14	61.32	
167	166	1.56	1.34	0.50	61.29	
171	170	0.18	0.12		61.20	
173	172	0.30	0.22		61.17	

Table 4: Context details and dating

Pit [183], [211], [213]

7.4.7 Three large intercutting pits were investigated at the eastern end of Area 1 (Figure 3a, Plate 25 and 26, Table 5). These appeared to be from one pit [183] which had been recut and reused being filled with a number of waste deposits (Figure 7 sections 134 and 135). Its original function was unclear unless just for domestic rubbish disposal. Pit [183] produced a flat hone or sharpening stone of fine calcareous sandstone (SF1) and a small fragment of an antler comb (SF10) which 'reflects the introduction of the composite double-sided comb with the Roman period' (Appendix 7). Also recovered were fired clay fragments with vitrified internal faces, perhaps suggesting they originate from a smithing hearth base or furnace (Appendix 10).

7.4.8 Environmental samples collected from each of the fills of pit [183] provided from rare to occasional examples of archaeobotanical material with a small dominance in charcoal fragments which were of a 'sufficient quantity to provide a cumulative comparison of species representation' (Appendix 9, samples <104>, <105>, <106>, <107> and <108>).

7.4.9 A primary fill [197] of very loose dark black silty clay with charcoal was sampled and produced pottery of Later Iron Age date (Appendix 2). Each of the fills in [183] provided animal bones with the majority collected from [197]. This included '35 sheep bones comprising 7 metacarpals, 9 metatarsals, 15x 1st and 3x 2nd phalanges. A further two 2nd phalanges were found in the sample. Each of these bones was complete or nearly so. 'It is conceivable that they represent butchers waste or perhaps a small concentration of skinning (tawing) waste, here representing at least 5 individuals' (Appendix 8).

7.4.10 Fill [210] of pit [211] was also sampled producing a fairly frequent quantity of cereal grains (indeterminate) which were poorly preserved, being heavily pitted, coaled and vitrified. There were also 'fairly frequent fragments' *Corylus avellana* (Hazel) nutshells and charcoal particles present (Appendix 9, sample <109>).

Context	Fills	Length (m)	Width (m)	Depth (m)	OD Height	Dating
183	(182) (184) (192) (197)	3.50	3.40	1.40	60.70	Later Iron Age
211	(210) (212)	1.80	1.40	1.19	60.70	
213	(200)	1.40	0.95	1.07	66.85	

Table 5: Context details and dating

Pits [218], [239]

7.4.11 Truncated by Ditch 3, pit [218] (Figure 3a), measuring 2.34m x 1.34m and recorded at a height of 61.13m OD contained pottery of 100BC-1st century AD (Appendix 2) as well as fragments of possible oven or hearth lining (Appendix 10).

7.4.12 On the northern edge of Ditch 3 a second pit [239], measuring 1.36m x 6m and encountered at a height of 60.86m OD, was truncated on its southern edge by Ditch 3 (Figure 3a). An environmental sample collected pottery which was dated as Late Iron Age to early Roman (Appendix 2) and provided 'little archaeobotanical material' (Appendix 9, sample <115>).

Pit [255], [268], [287], [328]

7.4.13 In the centre of Area 1, four pits ([255], [268], [287], [328]; Figure 3a, Table 6) were dated by

Late Iron Age/ early Roman pottery from the sampled fill [285] of pit [287] (Appendix 2). Also in this environmental sample was the greatest quantity of cereal-type grains found in the archaeobotanical assemblages for this site (Appendix 9, sample <116>).

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
255	254	1.12	1.10	0.47	60.62	
268	266, 267	1.06	0.86	0.26	60.68	
287	285, 286, 313	1.34	1.28	0.85	60.35	Late Iron Age/ Early Roman
328	327	1.14	0.86	0.19	60.59	

Table 6: Context details and dating

Pits [310], [312]

7.4.14 At the western end of Ditch 5 were a number of intercutting pits [312] and [310] (Figure 3b). Pit [312] measured 1.28m x 1.22m x 0.39m deep was recorded at 58.50m OD. Pit [312] was truncated by Pit [310] measuring 2.62m x 2.40m x 0.84m deep and recorded at a height of 58.45m OD cut into the southwestern end of Ditch 4 (Figure 9 section 165). The function of these features was unclear, but a sherd of Iron Age pottery (Appendix 2) was recovered from Pit [310].

Pit [323]

7.4.15 In central area of site to the north of Ditch 4 and 5, a pit [323] measuring 0.7m x 0.57m was recorded at 60.46m OD (Figure 3a). The single fill [322] contained grog-tempered pottery of 100BC-1st century AD (Appendix 2) and a significant assemblage of flint micro debitage which provided a Mesolithic or Early/ Middle Neolithic date (Appendix 6). Although it is likely that this material was residual, the pit is likely to have cut through a much older knapping surface scatter (Appendix 6). The environmental sample 'provided a negligible amount of archaeobotanical material' (Appendix 9, sample <121>). This pit was likely to have been used as a rubbish pit.

Pit [333]

7.4.16 At the southwestern corner of Area 1 pit [333], measuring 1m x 0.62m at a height of 58.04m OD, was truncated by Ditch 4. A clear function for the pit could not be determined due to the truncated nature of the pit and lack of dating evidence.

Pit [376], [379], [381]

7.4.17 Near to the eastern limit of excavation in Area 1 and to the east of Ditches 4/5 were a series of intercutting pits (Table 7) which appear to have been used as rubbish pits (Figure 3a, Plate 33). The earliest pit [379] was truncated by [381] which was then truncated by [376] (Figure 7 section 181). Pottery recovered from pit [376] provided a date of AD40-400 (Appendix 3).

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
376	375	1.30	1.10	0.45	60.26	AD40-400
379	377	2.90	1.40	0.69	60.26	
381	380	2.30	1.30	0.25	60.27	

Table 7: Context details and dating

Posthole [112]

7.4.18 On the very eastern end of Ditch 3 there was a posthole [112], measuring 0.48m x 0.40m x 0.13m deep, encountered at a height of 61.23m OD. It produced animal bone but no dating evidence. The posthole cut into Ditch 3 and is located near to Posthole Group 2 (Figure 3a) and could be part of the same group though this is unclear.

Postholes [191], [199], [231], [237], [243]

7.4.19 Four postholes [191], [231], [237], [243] (Table 8) of unclear function were found to truncate the edge of Pit [218] (Figure 3a). The fill of posthole [191] did provide dating from an abraded sherd of flint-tempered pottery of indeterminate prehistoric date. The abraded sherd of 1g appears to be residual (Appendix 2).

7.4.20 Cut into the south edge of Ditch 3 and just to the east of Pit [218] a further posthole [199] (Table 8) which was likely related to the those on the edge of Pit [218] (Figure 3a). The function of these postholes was not determined.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height	Dating
191	190	0.40	0.32	0.18	61.10	Prehistoric
199	198	0.38	0.28	0.17	61.15	
231	230	0.40	0.30	0.27	61.10	
237	236	0.38	0.36	0.21	61.11	
243	242	0.40	0.36	0.12	61.16	

Table 8: Context details and dating

Area 2

Ditch 6

7.4.21 Running north-south through the centre of Area 2 was linear Ditch 6 (Figure 4) measuring 16.07m x 1m, which was also seen in evaluation Trench 37 (Stevens 2021, figure 16). In excavation this was further investigated in four 1m slots [338] (Plate 13, Figure 10 section 176), [340], [342], [359] (Plate 14, Figure 10 section 171) and produced pottery dating predominantly from 100BC to 1st century AD (Appendix 2). This was likely to be a boundary ditch although this was unclear. This linear feature truncated pits [345] and [361].

Pits [345], [361]

7.4.22 Truncating the north end of Ditch 6 were two intercutting pits ([345] and [361]) of unclear function (Figure 4). The earliest [361] measured 1.09m x 0.60m x 0.15m deep, at a height of 60.28m OD was truncated by [345] measuring 0.94m x 0.88m x 0.33m deep and at a height of 60.28m OD. Their function was unclear although pit [345] produced pottery dating 100BC to 1st Century AD (Appendix 2).

Pit [349]

7.4.23 To the north-west of Ditch 6 was pit [349] measuring 1.22m x 1.01m x 0.37m deep, encountered at a height of 60.28m OD (Figure 4) . This was likely used as a domestic rubbish pit due to the fill containing burnt clay fragments, charcoal flecks and pottery dating AD40-400 (Appendix 3).

Pits [358], [391]

7.4.24 In the northwest corner of Area 2 were two larger intercutting pits (Figure 4, Plate 34, Figure 10 section 186). The earlier pit [358] measured 1.85m x 1.80m x 0.56m deep, at a height of 60.32m OD. This was truncated by [391] measuring 1.20m x 1.15m x 0.70m deep, at a height of 60.33m OD. Their function was unclear although both produced pottery sherds dating 100BC – 1st century AD (Appendix 2). Pit [358] also produced fired clay fragments from a possible oven or hearth lining which were heavily burnt and with vitrified internal faces, perhaps suggesting they originate from a smithing hearth base or furnace. The fragment is heavily vitrified to the internal face and also on one edge, possibly representing an opening (Appendix 10).

Pit [374]

7.4.25 To the eastern side of Ditch 6 in the south of Area 2 was a pit [374] measuring 1.12m x 0.86m x 0.30m deep, recorded at a height of 60.54m OD (Figure 4, Figure 10 section 180). This appeared to be a rubbish pit which had been used at least twice; latest fill yielded very occasional flecks of daub, charcoal and pottery dating to 50-100AD (Appendix 3).

Posthole [347]

7.4.26 On the east side of Ditch 6 was a posthole [347] (Figure 4, Plate 32) measuring 0.55m x 0.48m x 0.10m deep, recorded at 60.36m OD. Although no dating was found the proximity to Ditch 6 would suggest a related function although this was unclear.

Area 3

Ditch 7

7.4.27 Running on an east-west alignment in Area 3 linear Ditch 7 (Figure 5), measuring 42.62m x 1.65m, was also encountered in evaluation Trench 55 as of Late Iron Age/early Roman date (Stevens 2021, figure 19). This was further investigated with three 1m slots [363] (Plate 15, Figure 11 section 168), [387] at the western terminus (Plate 16, Figure 11 section 184) and [403] (Figure 11 section 194) each of which produced pottery of 100BC to 1st century AD (Appendix 2). Ditch slot [403] produced a fine copper-alloy buckle with a thin hammered frame (SF8; Appendix 7).

Ditch [383], [419]

7.4.28 A possible L-shaped linear measuring 7.10m x 0.65m, recorded at a height of between 62.31m OD and 63.23m OD was investigated in the south-west corner of Area 3 (Figure 5). Two slots [383], [419] were excavated to investigate a possible return to the south at the western end though this could not be fully confirmed. Although no dating was found the proximity to the features of a Late Iron Age to Roman date suggested this was of a similar date.

Ditch [427]

7.4.29 In the south of Area 3 was a possible linear [427] measuring a least 5m x 1.16m, encountered at a height of 63.95m OD and 63.91m OD (Figure **). This was investigated with a 1m slot, it was unclear as to the nature of this feature and there was a possibility it was a variation in the natural deposits.

Pits [351], [353], [393], [397], [405], [409], [415], [417]

7.4.30 Across Area 3 eight rubbish pits which were investigated (Table 9), along with two which had been found previously in evaluation Trench 65 (Stevens 2021) (Figure 5). Pits [405] (Plate 35, Figure 11 section 198) and [409] produced mixed Iron Age pottery assemblages (Appendix 2) and Pit [393] produced fragments from another possible fired clay pedestal with a more circular section and a flat base (Appendix 10). Pit [397] produced abundant (n=~160) fragments of charcoal >4mm having the potential to produce statistically adequate data to assess species diversity (Appendix 9, sample <123>).

Context	Fills	Length (m)	Width (m)	Depth (m)	OD Height	Dating
351	350	0.83	0.70	0.23	63.35	
353	352	1.36	0.70	0.08	63.88	
393	392	0.66	0.58	0.20	63.44	
397	396	0.54	0.52	0.10	63.44	
405	404/410	2.0	1.96	0.46	63.98	LIA/Roman
409	408	0.84	0.68	0.24	63.85	LIA/Roman
415	414	2.24	1.72	0.30	63.40	
417	416	5.41	0.97	0.27	63.46	

Table 9: Context details and dating

Postholes [385], [389], [393], [395], [397], [399], [401], [412]

7.4.31 Across Area 3 eight postholes of indeterminate function were investigated but not able to be dated (Figure 5). Due to their proximity of the Late Iron Age/ early Roman features it was determined that these were most likely of the same date.

Context	Fills	Length (m)	Width (m)	Depth (m)	OD Height
385	384	0.48	0.30	0.23	63.69
389	388	0.54	0.33	0.25	63.72
393	392	0.66	0.58	0.20	63.44
395	394	0.30	0.30	0.06	63.43
397	396	0.54	0.52	0.10	63.40
399	398	0.52	0.46	0.21	63.30
401	400	0.20	0.20	0.06	63.47
412	411	0.40	0.36	0.12	62.92

Table 10: Context details

Area 4

Ditch 8

7.4.32 An east-west aligned curved linear Ditch 8, measuring 37.87m x 1.05m, was investigated previously in evaluation Trench 120 where two 1m metre slots provided a Late Iron Age/ early Roman date for this feature (Stevens 2021, figure 30). A further 1m slot [449] was excavated in the western terminus (Plate 17, Figure 11 section 211). Although this feature appeared to be a boundary ditch the full form and function could not be determined.

7.5 Phase 5: Undated

Area 1

Ditch 10

7.5.1 At the very western limit of Area 1 a north-south linear Ditch 10, measuring 19.29m x 0.93m, was investigated with a 1m slot [301] (Figure 3b, Plate 19). It appeared to be a very shallow ditch (Figure 9 section 156) which had likely silted up over time and provided no dating evidence although its alignment and possible association running parallel with Ditches 4/5 was noted.

Ditch 11 [318]

7.5.2 To the east of Ditch 10 was a short section of a possible linear Ditch 11 measuring 2.64m x 0.50m (Figure 3b). This ran beyond the limit of excavation leaving a very short section including a possible terminus as visible. A function for this feature could not be determined.

Area 4

Ditch [431], [433]

7.5.3 In the south of the area (Figure 6) a short linear, measuring 5.10m x 0.6m x 0.25m deep at each end, was excavated although no dating or function could be determined.

Ditch [444]

7.5.4 Against the north-western edge of the area the terminus of a possible linear, measuring 1.72m x 0.92m x 0.21m deep, was excavated in a slot (Figure 6). No conclusive dating or function could be determined.

Tree Throw [435], [441]

7.5.5 Two pit-like features (Table 11) were investigated but concluded to be tree throws due to their irregular form.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height
435	434	1.54	0.85	0.27	72.91
441	440	1.21	0.94	0.24	73.21

Table 11: Context details

Pit [429], [446], [451]

7.5.6 Across the area there were three possible pits (Figure 6, Table 12) which were investigated by half sectioning, but no dating or function could be confirmed.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height
429	428	1.10	1.0	0.30	71.78
446	445	1.30	0.60	0.26	72.69
451	450	1.70	1.30	0.23	71.61

Table 12: Context details

Postholes [423], [437], [439]

7.5.7 On the western side of the area, there were three possible posthole (Table 13) which were investigate by half sectioning, but no dating or function could be confirmed.

Context	Fill	Length (m)	Width (m)	Depth (m)	OD Height
423	422	0.42	0.34	0.30	73.22
437	436	0.42	0.31	0.29	73.28
439	438	0.49	0.36	0.30	73.24

Table 13: Context details

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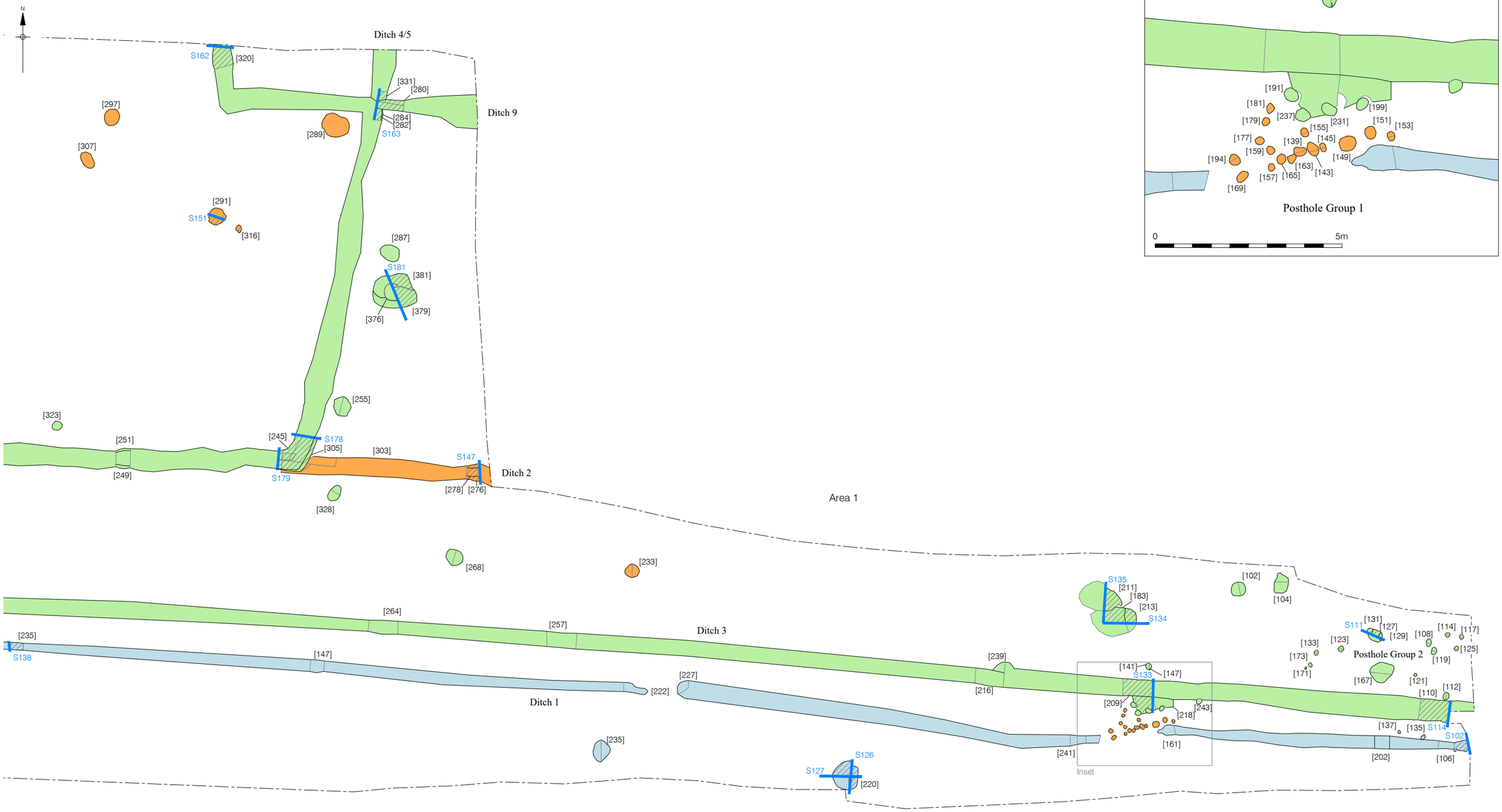
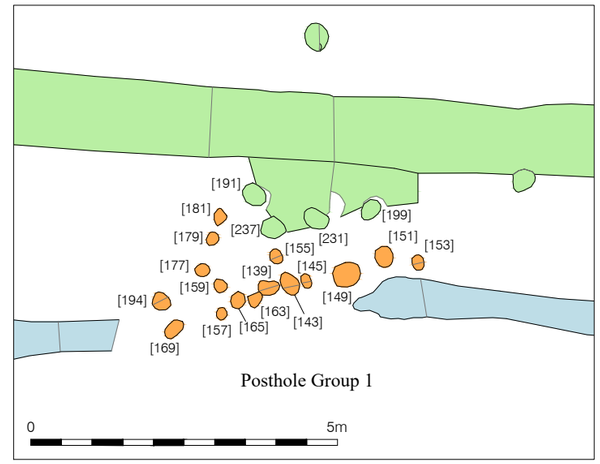




Phase 2 - Early Iron Age to Middle Iron Age
Phase 3 - Middle Iron Age to Late Iron Age
Phase 4 - Late Iron Age to Early Roman
Excavated Slot

0 10m

07/04/2022 DV

Figure 3a
Area 1, All Features Phased
Plan at 1:250 and Inset at 1:100 at A3

P:\PROJECT DATA\Out of London\Kent\Church Road Otham Kent\CAD\EXCAV\Fig 03B_Area 1 West.dwg

N

Ditch 4/5

[299]

[297]

[307]

[336]

S167

[301]

S156

S165

[326]

[333]

[294]

[310]

[312]

[318]

[260]

[323]

[251]

[258]

[249]

Ditch 10

Ditch 11

Area 1

[272]

Ditch 3

S145

[274]

Ditch 1

[270]

S146

[263]

[235]

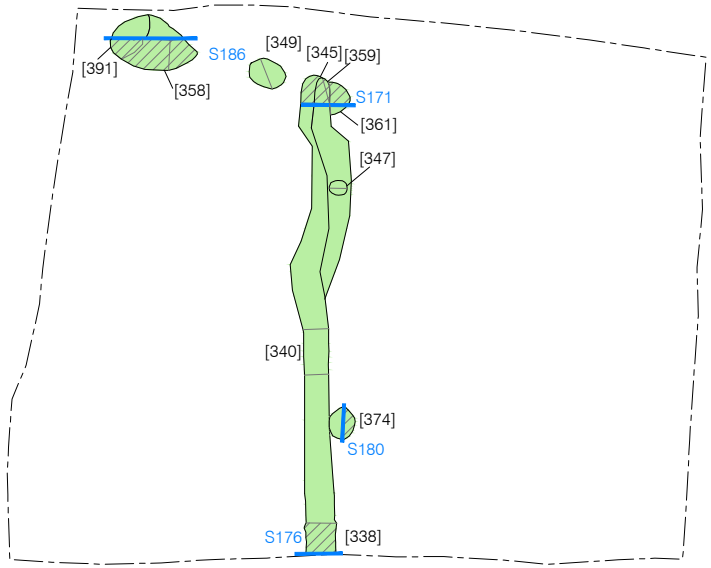
S138

Phase 2 - Early Iron Age to Middle Iron Age
Phase 3 - Middle Iron Age to Late Iron Age
Phase 4 - Late Iron Age - Early Roman
Phase 5 - Undated
Excavated Slot

0 10m

01/04/2022 DV

Figure 3b
Area 1, All Features Phased
1:250 at A3



04/04/2022 DV

Figure 4
Area 2, All Features Phased
1:250 at A4

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04/04/2022 DV

Figure 5
Area 3, All Features Phased
1:250 at A4

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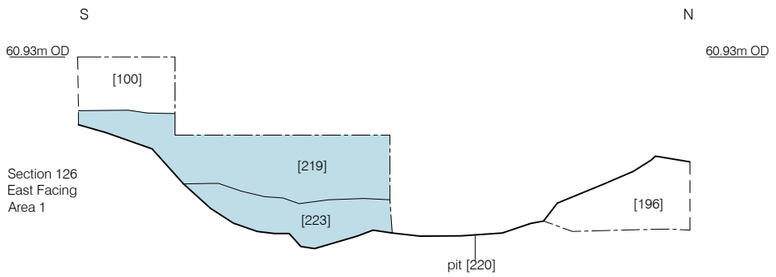
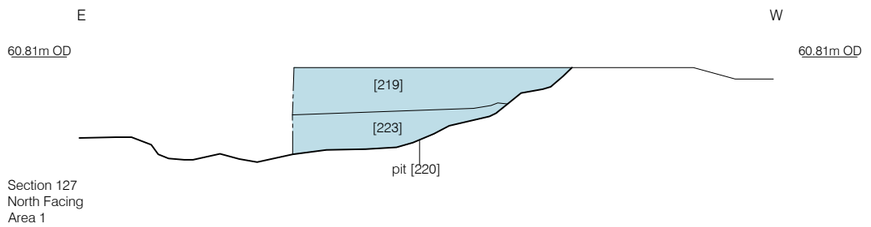
Phase 4 - Late Iron Age - Early Roman
Phase 5 - Undated
Excavated Slot

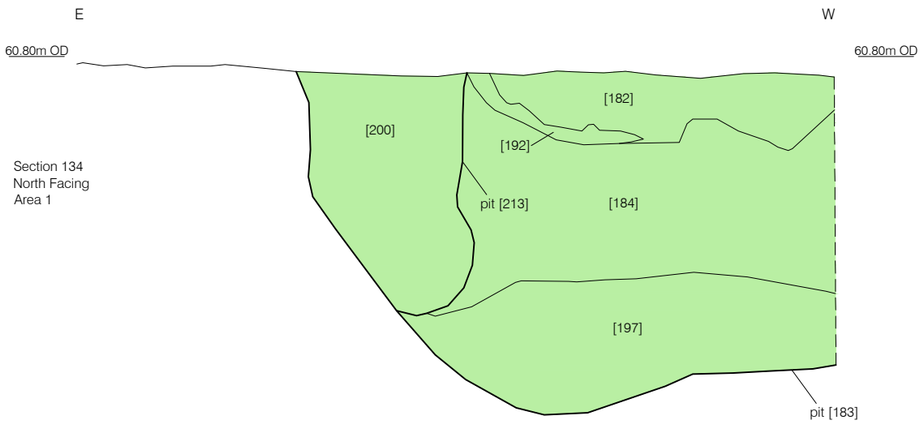
0 10m

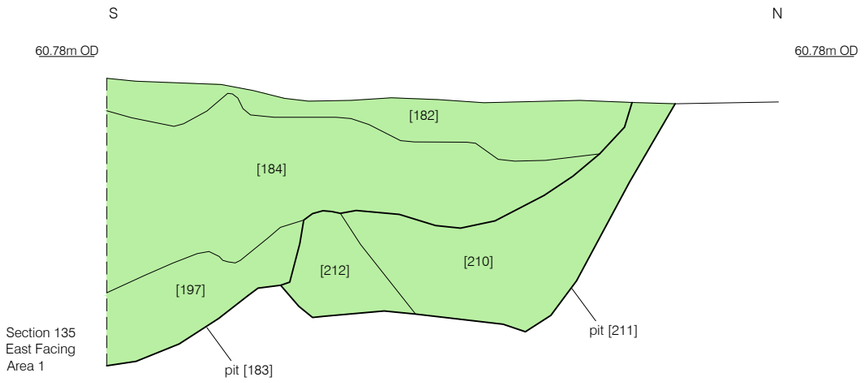
07/04/2022 DV

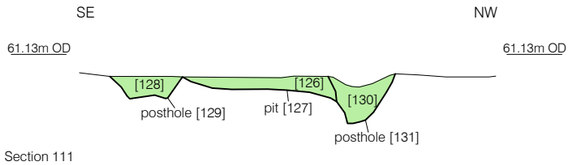
Figure 6
Area 4, All Features Phased
1:250 at A3

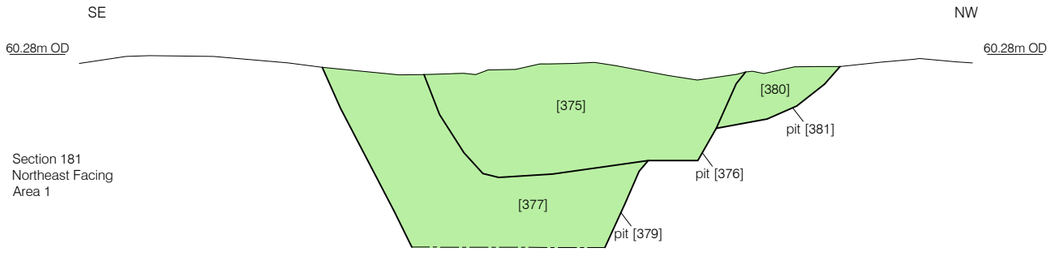


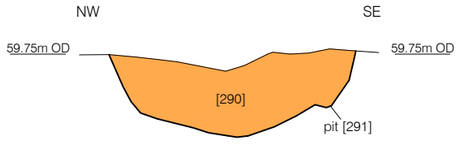






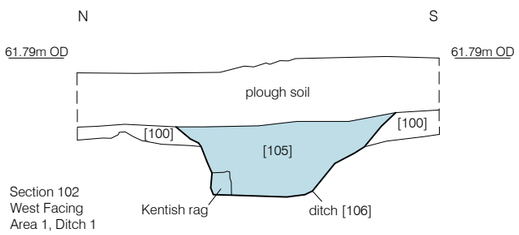




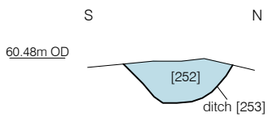


07/04/2022 DV

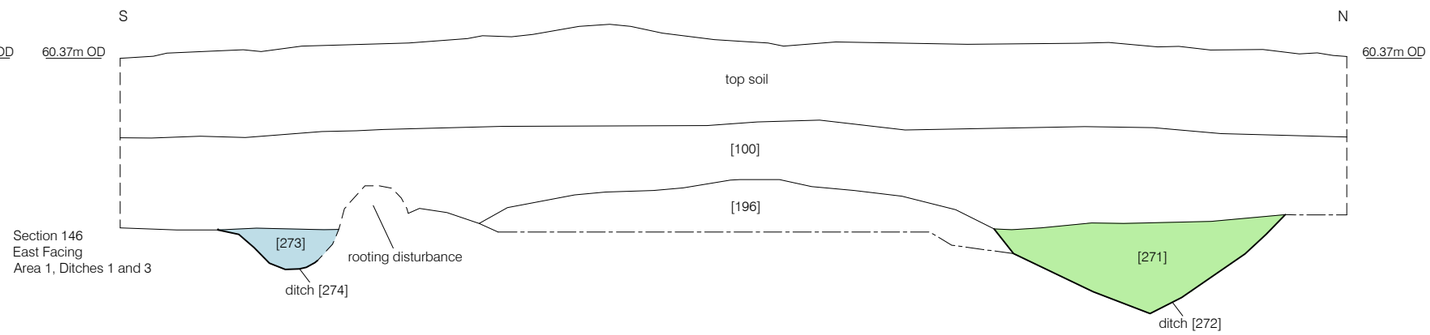
Figure 7
Sections, Area 1
1:25 at A3



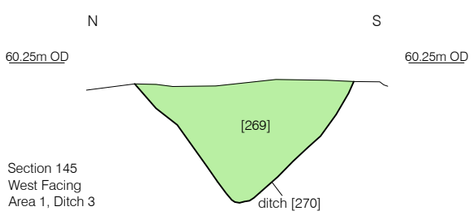
Section 102
West Facing
Area 1, Ditch 1



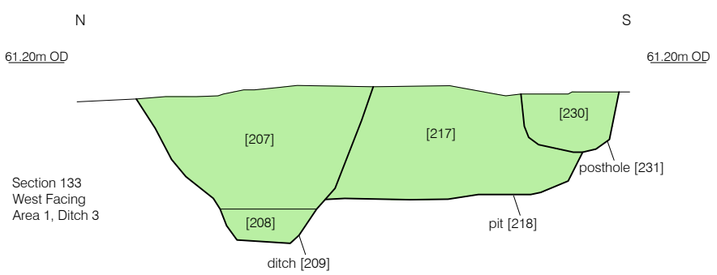
Section 138
East Facing
Area 1, Ditch 1



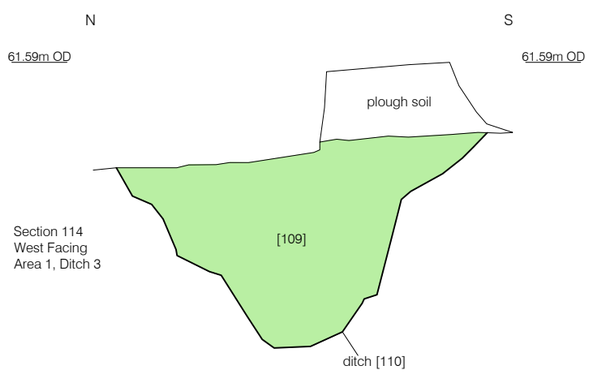
Section 146
East Facing
Area 1, Ditches 1 and 3



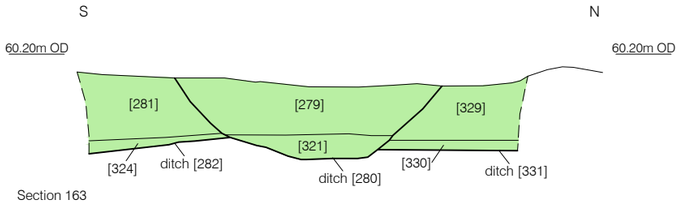
Section 145
West Facing
Area 1, Ditch 3



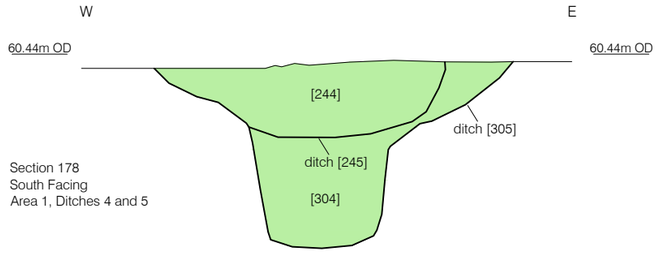
Section 133
West Facing
Area 1, Ditch 3



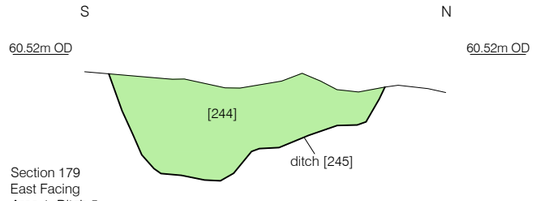
Section 114
West Facing
Area 1, Ditch 3



Section 163
East Facing
Area 1, Ditches 5 and 9



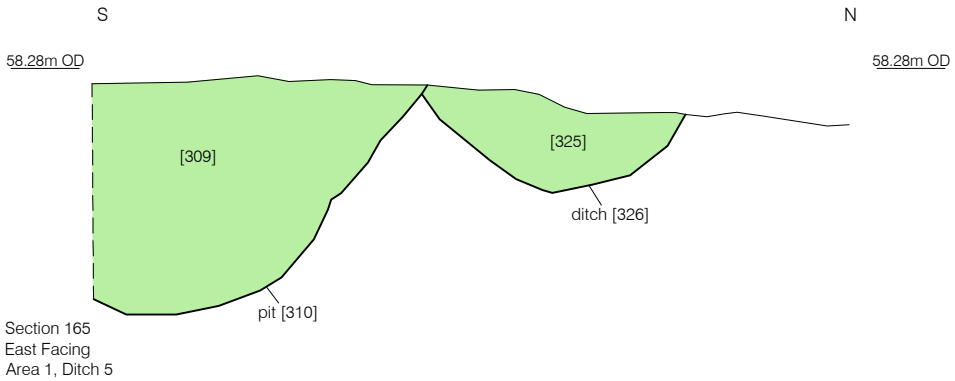
Section 178
South Facing
Area 1, Ditches 4 and 5

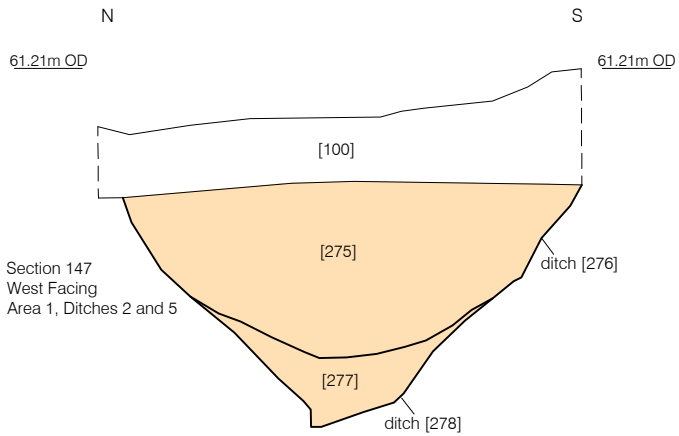


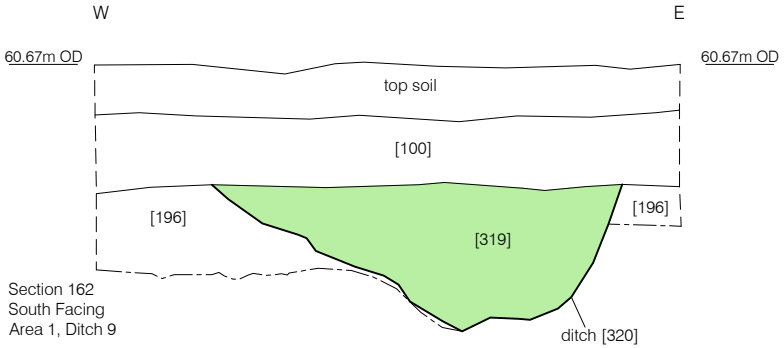
Section 179
East Facing
Area 1, Ditch 5

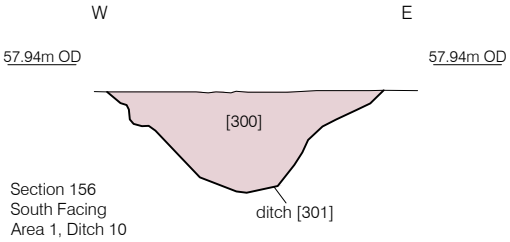
07/04/2022 DV

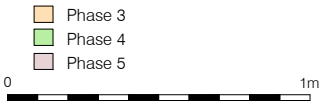
Figure 8
Sections, Area 1
1:25 at A3





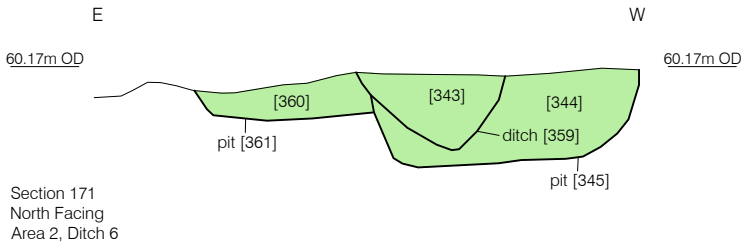




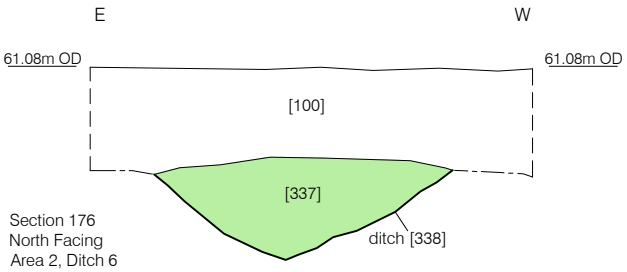


07/04/2022 DV

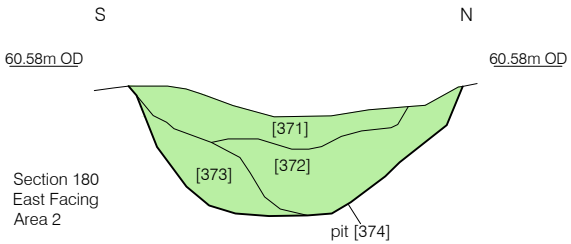
Figure 9
Sections, Area 1
1:25 at A4



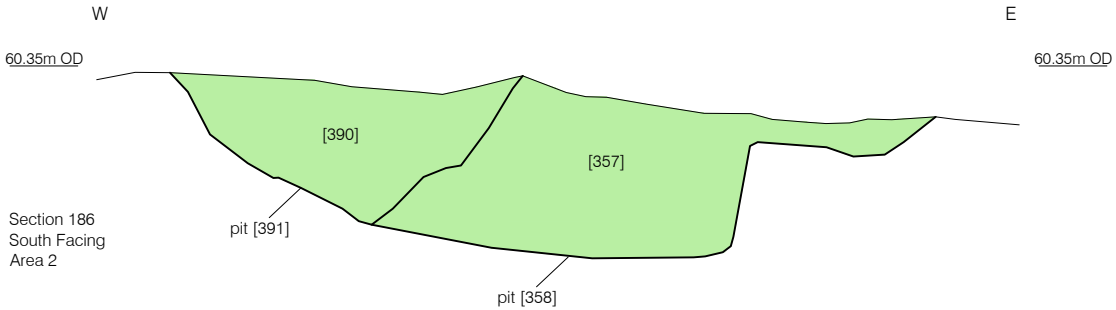
Section 171
North Facing
Area 2, Ditch 6



Section 176
North Facing
Area 2, Ditch 6



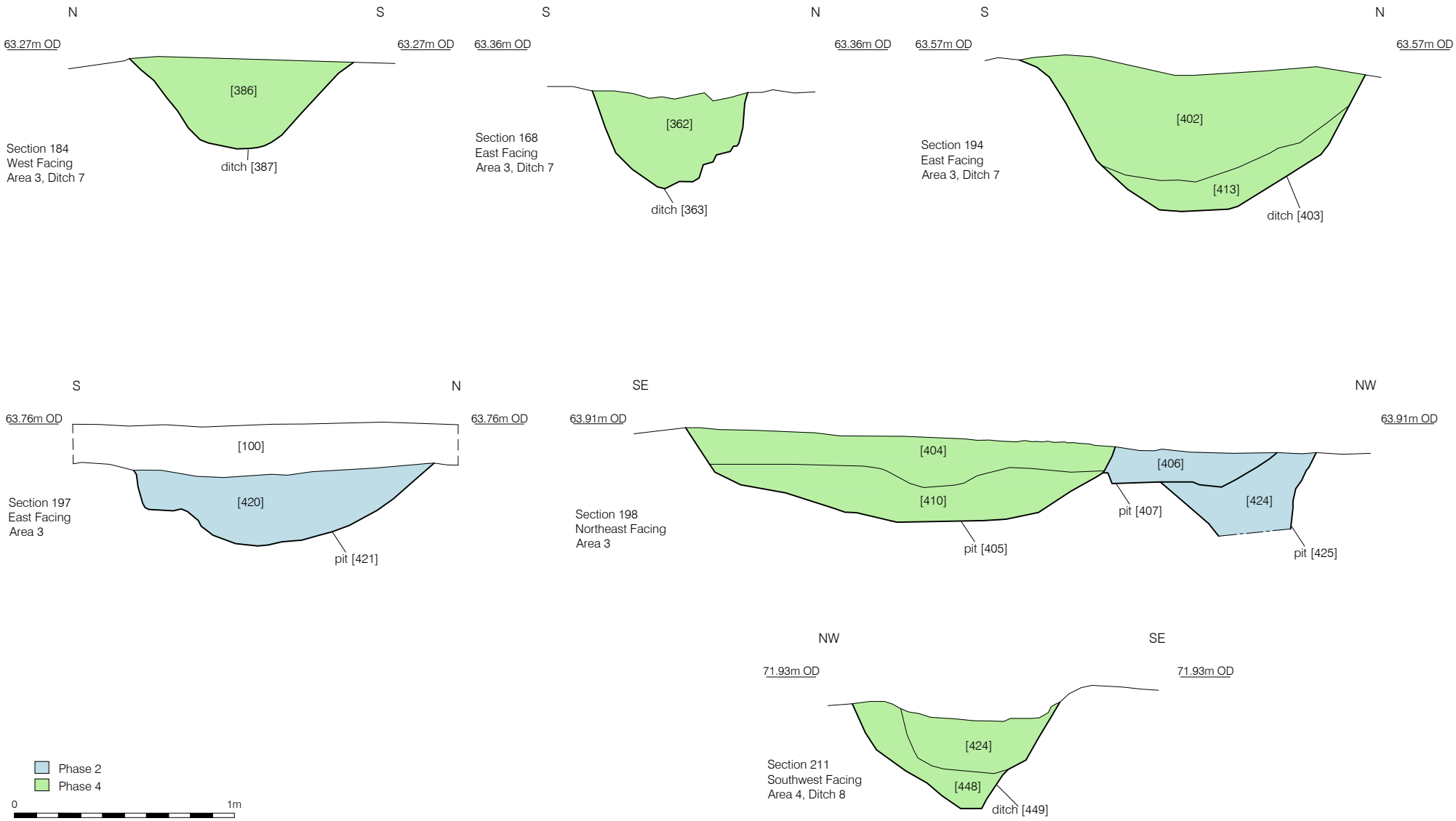
Section 180
East Facing
Area 2



Section 186
South Facing
Area 2

06/04/2022 DV

Figure 10
Sections, Area 2
1:25 at A4



07/04/2022 DV

Figure 11
Sections, Areas 3 and 4
1:25 at A4

PLATES

Plate 1: Ditch 1 [106], section 102, east facing (0.5m scale)

Plate 2: Ditch 1 [253], section 138, west facing (0.5m scale)

Plate 3: Ditch 2 [278] and Ditch 5 [276], section 147, east facing, (1m scale)

Plate 4: Ditch 3 [110], section 114, east facing (0.5m scale)

Plate 5: Ditch 3 [110], southeast facing

Plate 6: Ditch 3 [209] and Pit [218], Section 133, east facing (1m scale)

Plate 7: Ditch 3 [270], section 145, east facing (1m scale)

Plate 8: Ditch 1 [274] (left), Ditch 3 [272] (right), section 146, west facing (1m scale)

Plate 9: Ditch 4 [305], Ditch 5 [245], section 178, north facing (1m scale)

Plate 10: Ditch 4 [258], Ditch 5 [260], west facing

Plate 11: Ditch 5 [282], [331], Ditch 9 [280], section 163, west facing (1m scale)

Plate 12: Pit [310] and Ditch 5 [326], section 165, west facing (1m scale)

Plate 13 Ditch 6 [338], section 176, south facing (1m scale)

Plate 14: Ditch 6 [359], Pit [345], Pit [361], section 171, south facing (1m scale)

Plate 15:Ditch 7 [363], section 194, west facing (1m scale)

Plate 16: Ditch 7 [387], section 184, east facing (1m scale)

Plate 17: Ditch 8 [449], section 211, east facing (0.5m scale)

Plate 18: Ditch 9 [320], section 162, north facing (1m scale)

Plate 19: Ditch 10 [301], section 156, north facing (0.5m scale)

Plate 20: Pit [127], Postholes [129], [131], section 111, north facing (0.5m scale)

Plate 21: Pit [220], section 126, west facing (0.5m scale)

Plate 22: Pit [220], section 127, south facing (0.5m scale)

Plate 23: Pit [220] (fully excavated), south facing (0.5m scale)

Plate 24: Pit [235], east facing (0.5m scale)

Plate 25: Intercutting pits [183], [211] and [213], section 134, south facing (0.5m scale)

Plate 26: Intercutting Pits [183], [211], [213], section 135, west facing (0.5m scale)

Plate 27: Pit [291], section 151, north facing (1m scale)

Plate 28: Pit [291] (fully excavated), north facing (0.5m scale)

Plate 29: Pit [297], section 169, north facing (1m scale)

Plate 30: Pit [297] (fully excavated), east facing (1m and 0.3m scale)

Plate 31: Triangular perforated bricks found in Pit [297] (0.3m scale)

Plate 32: Pit [347], section 180, east facing (1m scale)

Plate 33: Pit [379], [381], [376], section 181, west facing (1m scale)

Plate 34: Pits [358], [391], section 186, north facing (1m scale)

Plate 35:Pit [405], [407], [425], section 198, southwest facing (1m scale)

Plate 36: Pit 421, section 197, southwest facing (1m scale)

8 ARCHAEOLOGICAL PHASE DISCUSSION

8.1 Phase 1: Natural

8.1.1 Natural sandstone and limestone of the Hythe Formation was found at the base of the sequence across the site, the top of which sloped from a maximum level of 73.24m OD (Area 4) in the south to a minimum level of 60.28m OD (Area 1) in the north.

8.2 Phase 2: Early/Mid Iron Age

8.2.1 Evidence for Early to Mid-Iron Age activity appeared to come from the occupation of the site with a probable boundary ditch, Ditch 1 (also investigated in Evaluation Trenches 30 and 34 (Stevens 2021, figures 13 & 15) and rubbish pits in Areas 1 and 3 of the excavation (Figures 3a, 3b and 5). The rubbish pits contained a larger amount of domestic waste including pottery of the earliest to Early/Middle Iron Age date (800-400BC, Appendix 2) and possible industrial waste including copper-alloy slag (possible casting waste), a stone mould (SF9, Appendix 7) and fired clay fragments including a pedestal and fragments of hearth base/furnace lining which has been interpreted as furnace structure or smithing hearth lining elsewhere in Kent (Poole 2011 a & b (Appendix 10). The pottery dating would suggest that the area was occupied from the earliest point of the Iron Age in 800BC and possibly earlier as there was a small amount of residual prehistoric pottery (Appendix 2) and worked flints (Appendix 6).

8.3 Phase 3: Mid/Late Iron Age

8.3.1 The site appears to continue in occupation all the way through the Iron Age with a sequence of boundary ditches, pits and a group of postholes found only in Area 1. Ditch 2 appears to be at least part of a boundary ditch and has been assigned to the Mid/Late Iron Age period as it was truncated by later Iron Age ditches (Figure 3a). Two large Middle Iron Age pottery assemblages from pits [291] and [297], in the north of Area 1 (Figure 3a), suggest that the site was occupied at this time. A small group of postholes were excavated in Area 1 but with no discernible structural pattern and 'indeterminate prehistoric pottery' produced from one posthole, these have not been interpreted as from any particular structure.

8.3.2 The pottery collected from pits [291] and [297] provided possible evidence of pottery production on-site. In pit [291] several pottery sherds exhibit problems relating to firing, for example vitrification and warping, with further evidence suggesting the sherds were wasters (Appendix 2). There was also evidence of diagnostic fired clay fragments with impressions of structural withies from a curved clay superstructure/possible stakehole arch, suggesting an oven structure (Appendix 10).

8.3.3 Pit [297] produced three triangular perforated bricks (SF5 and 6) which have traditionally been referred to as loom weights, but an increasing association with burnt debris is now suggesting that they were used as oven or kiln furniture' (Swan 1984, Poole 1995,

Appendix 10).

8.4 Phase 4: Late Iron Age/early Roman

8.4.1 A large majority of the activity on this site in the form of ditches, pits and a small number of postholes was able to be identified with the Late Iron Age and into the early Roman period. In the north part of the site three probably enclosure/boundary ditches (Ditches 3, 4 & 5) dated to this period. Ditch 3, a likely boundary ditch, was also encountered in evaluation Trenches 30, 31 and 34 of Roman-British date (Stevens 2021, figures 13, 14 & 15). The most northern ditch (Ditch 4) has been interpreted as an enclosure boundary ditch which extended to the north of the site outside of the limit of excavation. Pottery from this feature dated from 100BC to 1st century AD. This boundary ditch appeared to have been recut (Ditch 5) and also encountered in evaluation Trenches 19, 25, 26 and 31 (Stevens 2021, figures 9, 10, 11 & 14).

8.4.2 The principal features in Areas 2 and 3 were the probable boundary ditches (Ditches 6 & 7) with surrounding associated features which provided evidence of the occupation of the site throughout the Iron Age and into the early Roman Period. Ditch 6 was also encountered in Evaluation Trench 37 (Stevens 2021, figure 16) and Ditch 7 was encountered in Evaluation Trench 55 (Stevens 2021, figure 19).

8.4.3 Activity within the enclosure areas is represented by waste of both a domestic and industrial nature found in various pits. For example, in Area 1 the primary fill of Pit [183] included a small later Iron Age pottery assemblage and a significant assemblage of sheep bones which may represent butchers waste or sheepskin processing (tawing) waste (Appendix 8). Also in this pit were further examples of fired clay with heavily burnt vitrified internal faces, perhaps originating from a smithing heath base or furnace (Appendix 10). In the upper fills were domestic small finds including a flat sandstone hone (SF1) and double-sided antler comb (SF10) possibly indicative of an early Roman influence on the site (Appendix 7).

8.4.4 Further examples of small-scale domestic and industrial practises are represented by vitrified fired clay fragments from pits in Areas 1, 2 and 3 (pits [183], [218] and [358]). These are likely fragments of oven or hearth structures though the more heavily burnt pieces with vitrified internal faces (in pits [183] and [358]) potentially originate from a smithing hearth base or furnace. Furter elements of structural industrial features were a fragment of possible pedestal and a flat base in Pit [393] (Appendix 10).

8.4.5 Although various groups of postholes were identified in the eastern part of Area 1 no domestic structures were identified in the excavation. The only indication of a domestic later Iron Age-early Roman roundhouse at this site was indicated by the remains of a 'post-built structure' in evaluation Trench 18 (Stevens 2021, figure 8). This lay to the north of excavation area 1 and within a restricted area protecting a badger sett and so could not be investigated further. 'Small sherds of Romano-British Pottery and modern glass were

recovered from samples' associated with this structure (Stevens 2021), although the modern glass is likely to be intrusive rather than the pottery residual, based on the further works that have taken place.

8.4.6 The significant assemblage of flint micro debitage, dated to the Mesolithic or Early/Middle Neolithic period, found in pit [323] (Area 1) was associated with Late Iron Age-early Roman pottery. The lithic assemblage is likely to be residual and produced from an earlier surface scattering which was disturbed and cut through by pit [323] (Appendix 6).

8.5 **Phase 5: Undated**

8.5.1 At the western end of Area 1 there were two possible linear features [301], [318]. Although these were in alignment with Ditch 4 & 5 there was no clear dating or function that they could be associated with.

8.5.2 In Area 4 to the south of the site there were eleven possible features, three linears, three pits, three postholes and two tree throws which were dug and investigated but provided no dating and formed no clear function. Although there were other undated features on the site these could often be associated with datable activity.

9 ORIGINAL RESEARCH AIMS AND OBJECTIVES AND REVISED RESEARCH OBJECTIVES

9.1 Original research aims

9.1.1 With reference to the Kent County Council South-East Research Framework (2019), the archaeological works have the potential to address the following research priorities:

- *There is frequently little evidence of Early and Middle Iron Age occupation in both Kent and Surrey. Why does this hiatus appear in the record, and what happened to the Late Bronze Age field systems when they went out of use?*

9.1.2 There are no obvious Bronze Age field systems evident at this site but occupation does appear to have been present and possibly continuous from the earliest/Early Iron Age (800-500BC) through to the Late Iron Age-early Roman period (100BC – 1st century AD), with a very small amount of evidence that the site may have seen some earlier activity represented by Neolithic/Mesolithic flint scatter and residual possible prehistoric pottery.

9.1.3 There are only a few features which date from the - Iron Age to the Middle Iron Age period although these features were found to have a very dense concentrations of pottery in limited number of pits and possible evidence of metal working.

9.1.4 During the Middle to Late Iron Age, evidence from the pottery, fired clay and triangular perforated bricks suggests occupation and possible hearth or oven structures for domestic use or kiln furniture and possible pottery production.

9.1.5 It appears during the Late Iron Age/ early Roman period the site was very active and possibly removing the archaeological evidence of the earlier Iron Age occupation. The presence of the post-built structure/potential roundhouse identified in the evaluation and lying to the north of excavation Area 1 suggests that the site was occupied beyond the current boundary to the north.

- *Non-villa Roman rural structures are hard to identify in the archaeological record of the south-east. What are the reasons for this apparent absence on site with other signs of settlement, such as enclosure ditches? Where found, these structures exhibit a wide vary of forms. What are the likely reasons for this diversity?*

9.1.6 The site produced no clear evidence of Roman structures but a series of enclosure ditches on site demonstrate the presence of agricultural activity and a potential rural settlement from the Late Iron Age into the early Roman period. There would appear that the land continued to function during the early Roman period before eventually falling out of use.

9.2 There was no archaeological evidence to meet the following research questions.

- *What is the chronological range of non-villa settlements, particularly in relation to any continuity from the Late Iron Age?*
- *Is there any critical distinction between enclosed and non-enclosed settlements? What*

are the different morphologies and rural settlements and what is their significance?

9.3 The following research questions could not be met as there is no medieval or post-medieval archaeological evidence of relevance to these questions.

- *The interaction between town and country*
- *Comparisons between urban and rural, coastal, and in-land communities*
- *Ritual and ceremony, which might be religious (including pilgrimage) and/or related to funerary or other rites of passage*
- *An understanding of the multifaceted landscape*
- *The development of the village in the post-medieval period.*

9.3.1 The investigation of the site found no archaeological evidence of the post-medieval development of the site after the early Roman period it appears to have had very little development, and until the currently planned development was an agricultural field

9.4 **Revised research objectives**

9.4.1 The South East Research Framework (KCC 2019) concludes that greater precision is needed to determine the chronology of Iron Age pottery in Kent. There are currently no sites that can show a good relationship between Early and Middle Iron Age pottery groups (Couldrey 2007). The Otham assemblage demonstrates continuity between the earliest Iron Age and Early Iron Age in certain forms and also has assemblages of Early to Middle Iron Age date. Further analysis of the fabrics and forms at this site has potential to contribute to chronology, characterisation, and dating of this assemblage (Appendix 2) .

9.4.2 Suitable samples of charcoal, carbonised seed and fragments of hazelnut shell are present in Pit [220] (Phase 2) and Pits [291] and [297] associated with the earliest/Early-Middle Iron Age pottery assemblages are recommended for C14 dating. Further research which would coordinate the results of C14 dating with the pottery assemblages will hopefully contribute to refining the Early to Middle Iron Age pottery chronology at this site and for this area of Kent.

9.4.3 The evidence for prehistoric pottery production in Kent is sparce. Further analysis of the pottery and fired clay in relation to the possible oven/kiln structures and hearth furniture may contribute to the understanding of pottery production particularly in these Iron Age assemblages. However if on refining of the pottery chronology the pottery wasters are determined as Middle Iron Age date the two assemblages may be unrelated as permanent kilns at this date would be unparalleled. Pottery production in the early Iron Age would expect to be associated with firing in pits or open bonfires.

9.4.4 An assessment of the pottery has highlighted some of the following research questions which may be discussed and addressed following full analysis of the pottery;

- What can this assemblage tell us about social organisation, depositional practises and the function and use of the ceramics? Are particular vessel forms and fabrics being

utilised within certain areas/features? How does this compare with other sites within the Maidstone area?

- What can the pottery tell us about ceramic production, trade, and exchange? Have local clays and tempers been used and is there any evidence for non-local pottery production?
- How does the site-specific form and fabric series compare to assemblages of comparative ceramics from other Kent sites and areas outside Kent, for example Sussex?
- Is there evidence for on-site pottery production?

9.4.5 Is there an association with the fired clay assemblage and craft or industrial production on this site? The fired clay assemblage has produced evidence for the presence of ovens and hearths/ furnaces in all phases of activity on site. Some of these could have been domestic in nature, but the level of vitrification on some elements indicates that a few relate to some form of craft or industrial production on site or in the near vicinity. Evidence for metalworking has been identified amongst the broader finds assemblage from site, Further work should look to determine the nature of activity taking place on site and if there is any slag or metalworking waste associated with the fragments of furnace lining. These may also benefit from portable XRF analysis, to determine what process may have been taking place.

10 IMPORTANCE OF THE RESULTS, FURTHER WORK AND PUBLICATION PROPOSALS

10.1 Importance of the results

10.1.1 A significant assemblage of flint micro debitage was recovered from pit [323] in Area 1 (Figure 3a) the implication of which was that this pit may have cut through a much older knapping surface scatter which may have been within the Mesolithic or Early/Middle Neolithic period. As this pit is dated by the Late Iron Age pottery assemblage the lithics are considered to be residual. However, the lithic assemblage in this pit is of intrinsic interest and importance as they are relatively rare in The Weald (Appendix 6).

Earliest/Early to Middle Iron Age (Phase 2)

10.1.2 The earliest/Early to Middle Iron Age is represented on this site by Pits [220] and [235] in Area 1 and Pits [407] and [421] in Area 3 all with substantial pottery assemblages. Other examples of Early Iron Age pottery were found residually in other features in Areas 1 and 3. Other features dated to this phase were Ditch 1 and Postholes [135] and [137] located in the southern part of Area 1. These produced no dating evidence but given the profile of Ditch 1 and their proximity to other features of a similar date these were considered to be of an Early to Middle Iron Age date.

10.1.3 Of great interest in Pit [220] is a significant later Bronze Age/earliest Iron Age pottery assemblage in which certain feature sherds demonstrate continuity between the Earliest Iron Age (800-400BC) and Early Iron Age (600-400BC) (Appendix 2). This has potential to contribute to refining the chronology of Early Iron Age pottery in Kent. 'The condition of the pottery is fairly abraded, and suggestive of domestic settlement debris, which has been open to erosion, weathering and trampling' (Appendix 2). There is also potential evidence of metal working from copper-alloy waste and a stone mould (Appendix 7) within this same feature.

10.1.4 The conclusion from the environmental samples for the Early Iron Age (taken from Pit [220]) is indicative of rough wet ground, perhaps wet meadow, or pasture (Appendix 9).

10.1.5 Given that little evidence of Early and Middle Iron Age occupation is found in Kent the substantial pottery assemblages of an earliest/Early Iron Age date (800-400BC) found in Areas 1 and 3 (Phase 2) are significant and warrant further research and publication. Together with examples of fired clay from hearth bases or furnace lining, and copper-alloy casting waste there is also potential to investigate further the evidence of small-scale industrial metal working at this site and to offer some characterisation of settlement activities during this Early-Middle Iron Age period.

Mid to Late Iron Age (Phase 3)

10.1.6 A concentration of Middle to Late Iron Age activity (Phase 3) was represented by several pits, Ditch 2, and Posthole group 1 in Area 1 of the site and warrant further research and

publication. They have produced evidence of pottery production (pottery wasters), fired clay fragments from structures/possible ovens, environmental samples which support the interpretation of hearths being present on the site and perforated triangular bricks usually associated with Middle and Late Iron Age ovens or kilns. These would appear to be a varied sample of indicators for Middle to Late Iron Age domestic settlement at this site with some associated industrial activities. The environmental evidence indicates a rough wet ground, perhaps wet meadow, or pasture, with evidence of cereal grains and barley.

10.1.7 The most significant features of this date are Pits [291] and [297]. The majority of the Middle to Late Iron Age pottery was found in Pit [291] which exhibits several problems relating to firing for example vitrification and warping (Appendix 2). Two sherds from a large-shouldered jar were folded and represent a firing accident suggesting the presence of onsite pottery production, as well as evidence of fragments of fired clay from a curving clay superstructure likely to be an oven but probably too early to be associated with pottery production. Other evidence for ovens or kilns were the triangular perforated bricks (SF5 and 6) found in the base of Pit [297] (Appendix 10).

10.1.8 In the pottery assemblages both fabrics and forms (coarse jars and s-shaped bowls) found at this site are indicative of Middle Iron Age forms and Middle to Late Iron Age fabrics (Appendix 2). Within this assemblage fabrics containing moderate-abundant quantities of glauconite, represent approximately 22% and could be indicative of the increased use of glauconitic sandy fabric vessels during the Middle Iron Age (Appendix 2). Some of the earliest Iron Age sherds have been made with glauconitic clays and can be paralleled with similar fabrics used to make the earliest Iron Age pottery at sites within the Maidstone area, for example Holborough Quarry (McNee 2010a) and Margetts Pitt (McNee 2020) (Appendix 2).

10.1.9 These significant Middle Iron age pottery assemblages including pottery wasters (400+ sherds, 11kg) warrant further research and publication as an aid to refining the chronology of rarely found Early/Mid Iron Age pottery assemblages in Kent. Barbara McNee comments that It is interesting to note that two relatively nearby Maidstone sites appear to be mostly occupied during the late Bronze Age where the hiatus of activity occurs during the early and middle Iron Age (Holborough Quarry McNee 2010a, and Margetts Pit McNee 2020). At Otham, the main focus of activity would appear to be from the early Iron Age onwards. Levels of archaeological significance are considered to be high at this particular site, and the assemblage is a significant addition to the study of ceramics of this period from Kent.

10.1.10 The conclusion from the environmental samples taken from Pit [291] and [297], and posthole [223] is indicative of rough wet ground, perhaps wet meadow, or pasture, with evidence of indeterminate cereal grains, barley and *Corylus avellana* (Hazel) nut shell (Appendix 9). An absence of chaff indicates domestic storage and utility as opposed to cereal processing, though this may have taken place off-site (Appendix 9). Of note is the

increased presence of *Bromus* sp. (Brome) seeds which may be an indicator of specific grasses being cultivated for the production of hay (Appendix 9). This particular sample (in Pit 219] was also interpreted as a possible indictor of hearth waste which coincides with where the pottery wasters were also found. Further investigation of this pit assemblage might establish if this is fuel waste associated with a pottery firing rather than domestic hearth waste.

Late Iron Age to early Roman (100BC-1st century AD)

10.1.11 The majority of the archaeological features at this site were of Late Iron Age to early Roman date; primarily enclosure ditches together with domestic pits and some randomly scattered postholes found across the site in each of the four excavation areas (1-4). Together with evidence from similar features investigated in the evaluation these features suggest a longer period of settled rural land management continuing from the Late Iron Age into the early Roman period at this site.

10.1.12 In Area 1 Ditches 3 and 4 contained a concentration of Late and later Iron Age pottery (100BC to 1st century AD). Ditch 6 in Area 2 and Ditch 7 in Area 3 produced similar pottery exclusively from the Late Iron Age/early Roman whereas Ditch 9 produced both Late Iron Age and early Roman pottery of AD50/70-100 indicating it was slighter later in the sequence and truncated Ditch 5. Ditch 8 in Area 4 produced no independent dating evidence but the same feature was dated as Late Iron Age/early Roman during the ASE Evaluation (Stevens 2021).

10.1.13 The domestic waste pits across the site produce little evidence of Late Iron Age/early Roman artefacts other than pottery and a copper-alloy buckle (SF8). The major collections of animal bone are from cattle and sheep with a significant assemblage in Pit [183] suggesting butchers or sheep-skin processing/skinning (tawing) waste. Other evidence for small-scale industrial practices in this period is seen in the fragments of fired clay from possible ovens or hearth lining recovered particularly from pits [183], [218] and [358]. The heavily burnt fragments with vitrified internal faces may have originated from smithing hearth bases or furnaces.

10.1.14 A post-built structures has been tentatively indicated as present to the north of excavation Area 1 in the evaluation (Steven 2021, Figure 8, Trench 18). The group of postholes excavated in Area 1 to the north of Ditch 3 (Posthole Group 2) could only be dated by one sherd of later Iron Age Pottery in one of the posthole [129]. No function or structure could be determined from within these randomly placed postholes of a probably later Iron Age/early Roman date. The potential post-built structure identified in the evaluation may indicate that a more settled pattern of occupation existed in the later Iron Age/early Roman period further to the north and beyond the limits of the excavation but further examples of similar structures were identified in the excavation.

10.1.15 Although the archaeobotanical material collected from the sampled features is limited,

there is a continuity to the species mosaic presented by the carbonised weed and grass components from Area 1 in respect of Phases 2, 3, and 4. This has established that there is an environmental constant of wet pasture and/or meadow, with the utilisation of cereal-types present from the Early/Middle Iron Age through to the early Roman period (Appendix 9).

10.1.16 There is little evidence of Roman occupation at this site with only a small assemblage of Roman pottery (20 sherds, 161g) from which the diagnostic sherds suggest an overall date of the second half of the 1st century AD date for the assemblage. The assemblage provides evidence for the continuity of activity on site post-dating the Roman Conquest, but shortly after the site appears to have gone out of continued use. Post-Conquest occupation appears to have found more favourable sites locations within the area such as the Iron Age and Roman settlement at Boughton Monchelsea (3km to the southwest) known to exist from 100BC to around the 2nd century AD.

10.1.17 In conclusion, there is clear evidence that this site was occupied throughout the Iron Age with residual evidence for some earlier activity. The highly significant Early and Mid-Late Iron Age features (Phases 2 and 3) with good pottery assemblages, potential evidence of copper-alloy casting waste and evidence for domestic/small scale industrial clay ovens/kiln structures and clay hearths are particularly important to Kent where there is little surviving evidence of occupation from this early to mid Iron Age period (KCC 2019).

10.2 **Further work**

10.2.1 The excavation expanded on the findings of the evaluation work and the results indicate that there was a prolonged period of occupation on the site. Further work is proposed to investigate and report on the significant earliest/early and middle Iron Age archaeology at this site which is of particular significance as rarely found in Kent. The majority of the archaeology appears to be from the Late Iron Age to early Roman period. Proposals for further work are summarise here.

Lithics

10.2.2 The assemblage from pit [323] represents Mesolithic or Early/Middle Neolithic flintworking waste that probably formed a surface scatter and was later redeposited into the pit. The assemblage has been catalogued and no further work is required for the purpose of archiving, but due to the relative rarity of Mesolithic and Neolithic evidence in the area this assemblage merits a short but more comprehensive description to be compiled for inclusion in any published accounts of the excavations. The remaining material is also of significance in that it represents evidence for late flint working industries that can be related to contemporary settlement evidence. This material should also be re-examined along with that recovered during the preceding evaluation with due regard to the dating and function of the features from which it was recovered. Following this, an account focussing the techniques employed and the social significance that flint working may have held for the

later prehistoric occupants should be compiled for inclusion in any published accounts of the excavations.

Prehistoric Pottery

Full analysis of the pottery is recommended using the methodology set out by the Prehistoric Ceramics Research Group (PCRG 1997). The assemblage is a significant addition to the study of ceramics of this period from Kent and publication is recommended. The tasks for further work are set out in Appendix 2 and illustration of approximately 30 vessels is recommended.

Roman Pottery

10.2.3 The small size and dispersed nature of the assemblage limits its interpretation beyond dating . The assemblage has been fully recorded and requires no further analysis. There is no need for a formal Roman pottery report in any publication, but reference should be made to the material in the relevant stratigraphic discussion.

Post-Roman Pottery

10.2.4 The post-Roman pottery was unstratified and therefore of no significance to further interpretation of this site. There are no recommendations for further work on the pottery which can be discarded.

Glass

10.2.5 The post-medieval glass is of little significance to this site and no recommendations for further work are suggested. The glass is recommended for discard.

Metal

10.2.6 Metal and small finds potentially provide key elements of domestic material culture and activities related to the investigated site. At Otham, the small Iron Age to early Roman assemblage appears to be dominated by material relating to metal working on or near the site. This is particularly reflected in the Iron Age phases, where finds include a possible stone mould and waste material that might indicate copper-alloy working. It is recommended they are included in publication of this site. For that purpose, some of the metal objects should be x-rayed to aid proper identification; the potential copper-alloy slag and other waste products should be analysed by a slag specialist and XRF analysis may be recommended.

Animal Bone

10.2.7 There are some aspects of this collection which will bear further scrutiny principally in relation to the Late Iron Age/early Roman transition assemblage. It should be noted that further analyses will be undoubtedly limited due to the fragmented nature of these bone collections, but comparisons should be sought with reference to other Iron Age and Iron

Age/Roman transition sites in this general neighbourhood, most notably Iwade and Stone Castle near Dartford (Appendix 8).

Environmental

10.2.8 The seed and grain components produced by the 24 x environmental samples from Areas 1 and 3, and across Phases 2, 3, and 4, have been maximised. Absolute counts of all specimens, along with identification where preservation allowed, have also been catalogued. However, as counts were generally low in terms of prevalence these data are not significant and no further work is recommended or proposed in respect of seed and grain macrofossil analysis.

10.2.9 Charcoal was common to all samples from Areas 1 and 3, and across all phases. However, suitable quantities and fragment quality (i.e., >4mm) to produce statistically relevant data were limited. Whilst the results subsection of this report flags up those samples with adequate quantities of suitable charcoal for analysis, the following samples have the potential to provide data as to species diversity as a local resource, and also to investigate wood-type selection in relation to utility. It is recommended that specialist charcoal analysis is conducted on 3 x sub-samples:

Area 1 – Phase 4 LIA/ER

- Samples <104> (Context 182), <105> (Context 184), <106> (Context 192), <107> and <108> (Context 197) from Pit [183] (∑ = 181) – to investigate differences in the species component of these waste deposits from intercutting pits. Are they mixed waste deposits, or representative of individual dump/s and associated process/es?
- Sample <109> (Context 210) from Pit [211] (n=35) – as this feature is associated with Pit [183] and the intercutting multiple pits – analysis of this charcoal sample-set would provide additional data to assess the waste deposits and process/es in relation to Samples <104>, <105>, <106>, <107> and <108> (see above).

Area 3 – Phase 4 LIA/ER

- Sample <123> (Context 396) from Pit [397] produced ~160 x fragments of charcoal >4mm suitable for species identification, cumulative assessment, and also non-taxon (dendrological) analysis, to explore the fuelwood composition and deliberate or non-deliberate selection of wood-types as this deposit differs from all others in the environmental assemblage. This may explain the absence of inclusive material (including seeds and cereals) and identify an alternative process or utility that produced this dump in, what is believed to be, a rubbish pit.

10.2.10 Suitable samples of charcoal, carbonised seed and fragments of hazelnut shell were also present in Pit [220] (Phase 2) and Pits [291] and [297] (Phase 3) associated with the earliest/Early-Middle Iron Age pottery assemblages and are therefore recommended for C14 dating.

Fired Clay

10.2.11 Although relatively small, the fired clay assemblage has produced evidence for the presence of ovens and hearths/ furnaces in all phases of activity on site. Some of these could have been domestic in nature, but the level of vitrification on some elements indicates that a few relate to some form of craft or industrial production on site or in the near vicinity. Evidence for metalworking has been identified amongst the broader finds assemblage from site, and it is of note that potential pottery wasters were recovered from the same pit that produced the oven superstructure and possible oven furniture. If the pottery wasters are of Middle Iron Age date, however, the two assemblages may be unrelated, as permanent kilns at this date would be unparalleled.

10.2.12 Further work should include a better understanding of distribution, in tandem with any associated finds assemblages, that may help to determine the nature of activity taking place on site, and how this developed over time. In particular, with regard to the latter, it will be important to see if there is any slag or metalworking waste associated with the fragments of furnace lining. These may also benefit from portable XRF analysis, to determine what process may have been taking place. A short publication report should be produced, accompanied by 5 illustrations.

Stone

10.2.13 The absence of any signal of being worked or used makes the dating of this material difficult, although it was compared with the prehistoric pottery. The volcanic types are not directly related with any function. They were identified from Early Iron Age to early Roman deposits, and found dispersed throughout all of the areas. However, due to the abraded nature of the pieces, there is little further work that can be recommended. A review of these materials by a stone specialist is highly recommended to determine and identify if this material is part of the erratics within the clay boulder or had been imported for any specific function.

10.3 Publication proposals

10.3.1 The excavation expanded on the findings of the evaluation work and the results indicate that there was a prolonged period of occupation represented on this site extending from the earliest/early Iron Age (800-400BC) through to the mid and late Iron Age/early Roman periods (100BC-1st century AD). The latest Roman activity on the site dates from the second half of the 1st century AD date.

10.3.2 Publication of the excavation results is recommended as a short article on the website of Kent Archaeological Society reporting on the entire sequence and associated artefacts found. Though the earliest/early-middle Iron Age archaeology is only represented in a small number of features these are highly significant for Kent where evidence of early and middle Iron Age occupation is rarely found. Further research and publication would attempt

to refine the Iron Age pottery chronology with C14 dating and present a significant addition to the study of ceramics for this period in Kent.

10.3.3 A short publication of the excavation results for all periods at this site with artefact illustration will disseminate these significant results.

10.3.4 A summary record of the results has been created on the OASIS database (Appendix 12). On approval of this report further dissemination will be through copies uploaded to ADS and supplied to the Kent HER.

11 CONTENTS OF THE ARCHIVE

11.1 Paper records

Context sheets 346 Sheets

Plans 132 Sheets

Sections 219 Sheets

11.2 The Finds

Material	No of boxes for archive	No of boxes for discard
Pre-historic pottery	7	
Roman Pottery	2	
Post-Roman Pottery	0.5	
Glass	0.5	
Burnt Clay	2	
Lithic	1	
Metal & small finds	0.5	
Animal Bone	2	
Environmental	2	

11.3 Digital archive

Photographs 610 jpeg

12 ACKNOWLEDGEMENTS

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APPENDIX 1: CONTEXT INDEX

Context	Type	Fill of	Equal to	Area	Baseline	Interpretation	Category	Length	Width	Depth	Levels high	Levels low	Phase	Land use	Land use no
101	Fill	102		1		Fill of post pit	Infilling	0.96	0.94	0.26	60.93		KCRO21-PH4	Post Group	2
102	Cut			1		Cut of post pit	Post-hole	0.96	0.94	0.26	60.93	60.68	KCRO21-PH4	Post Group	2
103	Fill	104		1		Fill of pit	Backfill	1.36	0.94	0.26	60.86		KCRO21-PH4	Post Group	2
104	Cut			1		Cut of pit	Pit	1.36	0.96	0.25	60.86	60.65	KCRO21-PH4	Post Group	2
105	Fill	106		1	1	Fill of linear	Backfill	0.96	0.8	0.3	61.48		KCRO21-PH2	Ditch	1
106	Cut			1	1	Cut of ditch	Ditch	0.96	0.8	0.3	61.48	61.2	KCRO21-PH2	Ditch	1
107	Fill	108		1		Fill of posthole	Backfill	0.52	0.3	0.11	61.18		KCRO21-PH4	Post Group	2
108	Cut			1		Cut of posthole	Post-hole	0.52	0.3	0.11	61.18	61	KCRO21-PH4	Post Group	2
109	Fill	110		1	2	Fill of Ditch	Backfill	2	1.56	0.85	61.41		KCRO21-PH4	Ditch	3
110	Cut			1	2	Cut of ditch	Ditch	2	1.56	0.85	61.41	60.58	KCRO21-PH4	Ditch	3
111	Fill	112		1		Fill of posthole	Backfill	0.4	0.33	0.1	61.23		KCRO21-PH4		
112	Cut			1		Posthole	Post-hole	0.48	0.4	0.13	61.23	61.16	KCRO21-PH4		
113	Fill	112		1		Backfill of posthole	Backfill	0.4	0.22	0.13	61.23		KCRO21-PH4		
114	Cut			1		Cut of posthole	Post-hole	0.3	0.3	0.14	61.12	60.98	KCRO21-PH4	Post Group	2
115	Fill	114		1		Fill of posthole	Backfill	0.3	0.3	0.14	61.12		KCRO21-PH4	Post Group	2
116	Fill	117		1		Fill of posthole	Backfill	0.3	0.3	0.1	61.16		KCRO21-PH4	Post Group	2
117	Cut			1		Cut of posthole	Post-hole	0.3	0.3	0.1	61.16	61.06	KCRO21-PH4	Post Group	2
118	Fill	119		1		Fill of posthole	Backfill	0.48	0.32	0.2	61.18		KCRO21-PH4	Post Group	2
119	Cut			1		Cut of posthole	Post-hole	0.48	0.32	0.2	61.18	60.98	KCRO21-PH4	Post Group	2
120	Fill	121		1		Fill of posthole	Backfill	0.22	0.2	0.07	61.14		KCRO21-PH4	Post Group	2

121	Cut			1		Cut of posthole	Post-hole	0.22	0.2	0.07	61.14	61.06	KCRO21-PH4	Post Group	2
122	Fill	123		1		Fill of posthole	Backfill	0.4	0.38	0.07	61.18		KCRO21-PH4	Post Group	2
123	Cut			1		Cut of posthole	Post-hole	0.4	0.38	0.07	61.18	61.1	KCRO21-PH4	Post Group	2
124	Fill	125		1		Fill of posthole	Backfill	0.32	0.3	0.12	61.18		KCRO21-PH4	Post Group	2
125	Cut			1		Cut of posthole	Post-hole	0.32	0.3	0.12	61.18	61.06	KCRO21-PH4	Post Group	2
126	Fill	127		1		Fill of posthole	Backfill	1.36	0.74	0.09	61.15		KCRO21-PH4	Pit Group	2
127	Cut			1		Cut of posthole	Post-hole	1.36	0.74	0.09	61.15	61.06	KCRO21-PH4	Post Group	2
128	Fill	129		1		Fill of posthole	Backfill	0.44	0.28	0.08	61.15		KCRO21-PH4	Post Group	2
129	Cut			1		Cut of posthole	Post-hole	0.44	0.28	0.08	61.15	61.07	KCRO21-PH4	Post Group	2
130	Fill	131		1		Fill of posthole	Backfill	0.38	0.34	0.15	61.15	61.11	KCRO21-PH4	Post Group	2
131	Cut			1		Cut of posthole	Post-hole	0.38	0.34	0.15	61.15	60.96	KCRO21-PH4	Post Group	2
132	Fill	133		1		Fill of posthole	Backfill	0.36	0.28	0.1	61.16		KCRO21-PH4	Post Group	2
133	Cut			1		Cut of posthole	Post-hole	0.36	0.28	0.1	61.16	61.07	KCRO21-PH4	Post Group	2
134	Fill	135		1		Fill of posthole	Backfill	0.34	0.29	0.03	61.33		KCRO21-PH2		
135	Cut			1		Cut of posthole	Post-hole	0.34	0.29	0.03	61.33	61.3	KCRO21-PH2		
136	Fill	137		1		Fill of posthole	Backfill	0.22	0.15	0.07	61.35		KCRO21-PH2		
137	Cut			1		Cut of posthole	Post-hole	0.22	0.15	0.07	61.35	61.28	KCRO21-PH2		
138	Fill	139		1	3	Fill of posthole	Backfill	0.36	0.26	0.07	61.12		KCRO21-PH3	Post Group	1
139				1	3	Cut of posthole	Post-hole	0.36	0.26	0.07	61.12	61.04	KCRO21-PH3	Post Group	1
140	Fill	141		1		Fill of pit	Backfill	0.44	0.36	0.14	61.32	61.29	KCRO21-PH4	Post Group	2
141	Cut			1		Cut of pit	Pit	0.44	0.36	0.14	61.32	61.17	KCRO21-PH4	Post Group	2
142	Fill	143		1	3	Fill of posthole	Backfill	0.4	0.3	0.14	61.16		KCRO21-PH3	Post Group	1
143	Cut			1	3	Cut of posthole	Post-hole	0.4	0.3	0.14	61.16	61.02	KCRO21-PH3	Post Group	1
144	Fill	145		1	3	Fill of posthole	Backfill	0.22	0.16	0.05	61.15		KCRO21-PH3	Post Group	1

145	Cut			1	3	Cut of posthole	Post-hole	0.22	0.16	0.05	61.15	61.1	KCRO21-PH3	Post Group	1
146	Fill	147		1		Fill of posthole	Backfill	0.12	0.1	0.14	61.32		KCRO21-PH4	Post Group	2
147	Cut			1		Cut of posthole	Post-hole	0.14	0.12	0.14	61.32	61.18	KCRO21-PH4	Post Group	2
148	Fill	149		1	3	Fill of posthole	Backfill	0.44	0.4	0.14	61.17		KCRO21-PH3	Post Group	1
149	Cut			1	3	Cut of posthole	Post-hole	0.44	0.4	0.14	61.17	60.93	KCRO21-PH3	Post Group	1
150	Fill	151		1	3	Fill of posthole	Backfill	0.34	0.3	0.09	61.15		KCRO21-PH3	Post Group	1
151	Cut			1	3	Cut of posthole	Post-hole	0.34	0.3	0.09	61.15	61.06	KCRO21-PH3	Post Group	1
152	Fill	153		1	3	Fill of posthole	Backfill	0.26	0.2	0.05	61.17		KCRO21-PH3	Post Group	1
153	Cut			1	2	Cut of posthole	Post-hole	0.26	0.2	0.05	61.17	61.12	KCRO21-PH3	Post Group	1
154	Fill	155		1	3	Fill of posthole	Backfill	0.24	0.2	0.13	61.14		KCRO21-PH3	Post Group	1
155	Cut			1	3	Cut of posthole	Post-hole	0.24	0.2	0.13	61.14	61.01	KCRO21-PH3	Post Group	1
156	Fill	157		1	3	Fill of posthole	Backfill	0.2	0.2	0.11	61.15		KCRO21-PH3	Post Group	1
157	Cut			1	3	Cut of posthole	Post-hole	0.2	0.2	0.11	61.15	61.04	KCRO21-PH3	Post Group	1
158	Fill	159		1	3	Fill of posthole	Backfill	0.2	0.2	0.15	61.11		KCRO21-PH3	Post Group	1
159	Cut			1	3	Cut of posthole	Post-hole	0.2	0.2	0.15	61.11	60.96	KCRO21-PH3	Post Group	1
160	Fill	161		1	3	Fill of ditch terminus	Backfill	1.16	0.7	0.09	61.18		KCRO21-PH2	Ditch	1
161	Cut			1	3	Cut of ditch terminus	Ditch	1.16	0.7	0.09	61.18	61.09	KCRO21-PH2	Ditch	1
162	Fill	163		1	3	Fill of posthole	Backfill	0.22	0.22	0.07	61.13		KCRO21-PH3	Post Group	1
163	Cut			1	3	Cut of posthole	Post-hole	0.22	0.22	0.07	61.13	61.06	KCRO21-PH3	Post Group	1
164	Fill	165		1	3	Fill of posthole	Backfill	0.26	0.24	0.05	61.12		KCRO21-PH3	Post Group	1
165	Cut			1	3	Cut of posthole	Post-hole	0.26	0.24	0.05	61.12	61.07	KCRO21-PH3	Post Group	1
166	Fill	167		1		Fill of pit	Backfill	1.56	0.34	0.5	61.29		KCRO21-PH4	Post Group	2
167	Cut			1		Cut of pit	Pit	1.56	1.34	0.5	61.29	60.78	KCRO21-PH4	Post Group	2
168	Fill	169		1	3	Fill of posthole	Backfill	0.36	0.22	0.2	61.16		KCRO21-PH3	Post Group	1

169	Cut			1	3	Cut of posthole	Post-hole	0.36	0.22	0.2	61.16	60.96	KCRO21-PH3	Post Group	1
170	Fill	171		1	4	Fill of posthole	Backfill	0.18	0.12		61.2		KCRO21-PH4	Post Group	2
171	Cut			1	4	Cut of posthole	Post-hole	0.18	0.12		61.2		KCRO21-PH4	Post Group	2
172	Fill	173		1	4	Fill of posthole	Backfill	0.3	0.22		61.17		KCRO21-PH4	Post Group	2
173	Cut			1	4	Cut of posthole	Post-hole	0.3	0.22		61.17		KCRO21-PH4	Post Group	2
174	Void														
175	Void														
176	Fill	177		1	3	Fill of posthole	Backfill	0.2	0.24	0.09	61.11		KCRO21-PH3	Post Group	1
177	Cut			1	3	Cut of posthole	Post-hole	0.2	0.24	0.09	61.11	61.02	KCRO21-PH3	Post Group	1
178	Fill	179		1	3	Fill of posthole	Backfill	0.22	0.2	0.24	61.1		KCRO21-PH3	Post Group	1
179	Cut			1	3	Cut of posthole	Post-hole	0.22	0.2	0.24	61.1	60.86	KCRO21-PH3	Post Group	1
180	Fill	181		1	3	Fill of posthole	Backfill	0.28	0.22	0.12	61.1		KCRO21-PH3	Post Group	1
181	Cut			1	3	Cut of posthole	Post-hole	0.28	0.22	0.12	61.1	60.98	KCRO21-PH3	Post Group	1
182	Fill	183		1	5	Fill of pit	Backfill	3	3.5	0.32	60.84	60.7	KCRO21-PH4		
183	Cut			1	5	Cut of large pit	Pit	3.4	3.5	1.4	60.7	59.42	KCRO21-PH4		
184	Fill	183		1	5	Fill of pit	Backfill	3.4	3.5	0.9	60.8	60.79	KCRO21-PH4		
185	Void														
186	Void														
187	Void														
188	Void														
189	Void														
190	Fill	191		1	3	Fill of posthole	Backfill	0.4	0.32	0.18	61.1		KCRO21-PH4		
191	Cut			1	3	Cut of posthole	Post-hole	0.4	0.32	0.18	61.1	60.92	KCRO21-PH4		
192	Fill	183		1	5	Fill of pit	Backfill	0.9	0.75	0.15	60.8	60.79	KCRO21-PH4		
193	Fill	194		1	3	Fill of posthole	Backfill	0.3	0.3	0.16	61.12	61.07	KCRO21-PH3	Post Group	3
194	Cut			1	3	Cut of posthole	Post-hole	0.3	0.3	0.16	61.12	60.98	KCRO21-PH3	Post Group	1

195	Natural			1		Natural sandstone and Kentish rag mixed with sandy clay	Natural						KCRO21-PH1		
196	Natural			1		Sandy clay	Natural						KCRO21-PH1		
197	Fill	183		1	5	Fill of pit	Backfill	1.8	1.2	0.45	60	59.98	KCRO21-PH4		
198	Fill	199		1	3	Fill of posthole	Backfill	0.38	0.28	0.17	61.15		KCRO21-PH4		
199	Cut			1	3	Cut of posthole	Post-hole	0.38	0.28	0.17	61.15	60.98	KCRO21-PH4		
200	Fill	213		1	5	Fill of pit	Backfill	1.4	0.95	1.07	60.85	60.72	KCRO21-PH4		
201	Fill	202	105	1		Fill of linear	Backfill	1	0.76	0.24	61.4	61.37	KCRO21-PH2	Ditch	1
202	Cut		106	1		Cut of linear	Ditch	1	0.76	0.24	61.4	61.12	KCRO21-PH2	Ditch	1
203	Fill	204	205	1		Fill of linear	Backfill	0.85	0.76	0.07	61.07		KCRO21-PH2	Ditch	1
204	Cut		206	1		Cut of linear	Gully	0.85	0.76	0.07	61.07	60.96	KCRO21-PH2	Ditch	1
205	Fill	206	203	1		Fill of linear	Backfill	0.52	0.46	0.05	61.02		KCRO21-PH2	Ditch	1
206	Cut		204	1		Cut of linear	Gully	0.52	0.46	0.05	61.02	60.95	KCRO21-PH2	Ditch	1
207	Fill	209		1	7	Fill of ditch	Backfill	2	1.1	0.5	61.1		KCRO21-PH4	Ditch	3
208	Fill	209		1	7	Fill of ditch	Backfill	2	0.38	0.14	60.6		KCRO21-PH4	Ditch	3
209	Cut			1	7	Cut of linear	Ditch	2	1.1	0.64	61.1	60.44	KCRO21-PH4	Ditch	3
210	Fill	211		1		Fill of pit	Backfill	1.8	1.4	0.45	59.97	59.95	KCRO21-PH4		
211	Cut			1		Cut of pit	Pit	1.8	1.4	1.19	60.7	59.73	KCRO21-PH4		
212	Fill	211				Fill of pit	Backfill	1.8	1.4	0.45	60.76	59.73	KCRO21-PH4		
213	Cut			1	5	Cut of pit	Pit	1.4	0.95	1.07	60.85	59.83	KCRO21-PH4		
214	Fill	216		1	7	Fill of ditch	Backfill	1.96	1.12	0.76	60.84		KCRO21-PH4	Ditch	3
215	Fill	216		1		Fill of ditch	Backfill	1.96	0.86	0.34	60.49		KCRO21-PH4	Ditch	3
216	Cut			1	7	Cut of linear	Ditch	1.96	1.12	1.1	60.84	60.33	KCRO21-PH4	Ditch	3
217	Fill	218		1	7	Fill of pit	Backfill	2.34	1.34	0.41	61.09		KCRO21-PH4		
218	Cut			1	7	Cut of pit	Pit	2.34	1.34	0.41	61.13	60.69	KCRO21-PH4		
219	Fill	220		1		Fill of pit	Backfill	2.35	1.03	0.28	61.14		KCRO21-PH2		
220	Cut			1		Cut of pit	Pit	2.35	1.68	0.46	61.18	60.82	KCRO21-PH2		
221	Fill	222		1		Fill of linear	Backfill	1.69	0.38	0.06	60.89	60.77	KCRO21-PH2	Ditch	1
222	Cut			1		Cut of linear	Ditch	1.69	0.38	0.06	60.89	60.77	KCRO21-PH2	Ditch	1

223	Fill	220		1		Fill of pit	Backfill	1.68	1.48	0.18	61.06	60.93	KCRO21-PH2		
224	Fill	225	228	1	8	Fill of linear	Backfill	1.08	0.8	0.13			KCRO21-PH2	Ditch	1
225	Cut		229	1	8	Cut of linear	Gully	1.08	0.8	0.13	60.88	60.72	KCRO21-PH2	Ditch	1
226	Fill	227		1		Fill of ditch terminus	Backfill	0.82	0.68	0.1	60.78		KCRO21-PH2	Ditch	1
227	Cut			1	8	Cut of ditch terminus	Ditch	0.82	0.68	0.1	60.78	60.69	KCRO21-PH2	Ditch	1
228	Fill	229	224	1	8	Fil of linear	Backfill	0.96	0.68	0.16	60.78		KCRO21-PH2	Ditch	1
229	Cut		225	1	8	Cut of linear	Ditch	0.96	0.68	0.16	60.75	60.57	KCRO21-PH2	Ditch	1
230	Fill	231		1	3	Fill of posthole	Backfill	0.4	0.3	0.27	61.1		KCRO21-PH4		
231	Cut			1	3	Cut of posthole	Post-hole	0.4	0.3	0.27	61.1	60.83	KCRO21-PH4		
232	Fill	233		1		Fill of pit	Backfill	0.9	0.8	0.15	60.65		KCRO21-PH3		
233	Cut			1		Cut of pit	Pit	0.9	0.8	0.15	60.65	60.59	KCRO21-PH3		
234	Fill	235		1		Fill of pit	Backfill	1.46	1.12	0.18	60.95	60.88	KCRO21-PH2		
235	Cut			1		Cut of pit	Pit	1.46	1.12	0.18	60.95	60.73	KCRO21-PH2		
236	Fill	237		1	3	Fill of posthole	Backfill	0.38	0.36	0.21	61.11		KCRO21-PH4		
237	Cut			1	3	Cut of posthole	Post-hole	0.38	0.36	0.21	61.11	60.9	KCRO21-PH4		
238	Fill	239		1	7	Fill of pit	Backfill	1.36	0.56	0.3	60.86		KCRO21-PH4		
239	Cut			1	7	Cut of pit	Pit	1.36	0.56	0.3	60.86	60.72	KCRO21-PH4		
240	Fill	241		1	3	Fill of linear	Backfill	1	0.6	0.12	61.12	61.11	KCRO21-PH2		
241	Cut			1	3	Cut of linear	Ditch	1	0.6	0.12	61.12	60.97	KCRO21-PH2		
242	Fill	243		1	7	Fill of posthole	Backfill	0.4	0.36	0.12	61.16		KCRO21-PH4		
243	Cut			1	7	Cut of posthole	Post-hole	0.4	0.36	0.12	61.16	61.04	KCRO21-PH4		
244	Fill	245		1	24	Fill of linear	Backfill	2.3	1.5	0.42	60.5		KCRO21-PH4	Ditch	5
245	Cut			1	24	Cut of Ditch	Ditch	2.3	1.5	0.42	60.5	60.07	KCRO21-PH4	Ditch	5
246	Fill	247	252, 273	1	9	Fill of ditch	Natural Silting	1	0.88	0.13	60.8	60.76	KCRO21-PH2	Ditch	1
247	Cut		253, 274	1	9	Cut of ditch	Ditch	1	0.88	0.13	60.8	60.56	KCRO21-PH2	Ditch	1
248	Fill	249		1		Fill of ditch	Backfill	1.25	1	0.25	60.44	60.41	KCRO21-PH4	Ditch	5
249	Cut			1	10	Cut of ditch	Ditch	1.25	1	0.25	60.44	60.13	KCRO21-PH4	Ditch	5
250	Fill	251		1		Fill of ditch	Backfill	1.35	1	0.3	60.44	60.14	KCRO21-PH4	Ditch	4

251	Cut			1	10	Cut of ditch	Ditch	1.35	1	0.3	60.44	60.1	KCRO21-PH4	Ditch	4
252	Fill	253	246, 273	1	9	Fill of linear	Backfill	1	0.54	0.18	60.58	60.55	KCRO21-PH2	Ditch	1
253	Cut		247, 274	1	9	Cut of ditch	Ditch	1	0.54	0.18	60.58	60.34	KCRO21-PH2	Ditch	1
254	Fill	255		1		Fill of pit	Backfill	1.12	1.1	0.47	60.62	60.08	KCRO21-PH4		
255	Cut			1		Cut of pit	Pit	1.12	1.1	0.47	60.62	60.08	KCRO21-PH4		
256	Fill	257		1		Fill of ditch	Backfill	2	1.02	0.49	60.85	60.78	KCRO21-PH4	Ditch	3
257	Cut			1	11	Cut of ditch	Ditch	2	1.02	0.49	60.85	60.36	KCRO21-PH4	Ditch	3
258	Cut			1	10	Cut of ditch	Ditch	1.3	1.2	0.45	59.8	59.29	KCRO21-PH4	Ditch	4
259	Fill	258		1	10	Fill of ditch	Backfill	1.3	1	0.45	59.8		KCRO21-PH4	Ditch	4
260	Cut			1	10	Re-cut of ditch	Ditch	1.5	0.75	0.33	59.75	59.36	KCRO21-PH4	Ditch	5
261	Fill	260		1	10	Fill of ditch	Backfill	1.5	0.75	0.33	59.75	59.36	KCRO21-PH4	Ditch	5
262	Fill	263		1	9	Fill of ditch	Backfill	1.06	0.42	0.14	60.28	59.98	KCRO21-PH2	Ditch	1
263	Cut			1	9	Cut of ditch	Ditch	1.06	0.42	0.14	60.28	59.98	KCRO21-PH2	Ditch	1
264	Fill	265		1	11	Fill of ditch	Backfill	2	0.9	0.58	60.68	60.61	KCRO21-PH4	Ditch	3
265	Cut			1	11	Cut of ditch	Ditch	2	0.9	0.58	60.68	60.07	KCRO21-PH4	Ditch	3
266	Fill	268		1		Fill of pit	Backfill	0.4	0.2	0.26	60.6		KCRO21-PH4		
267	Fill	268		1		Fill of pit	Backfill	1.06	0.86	0.26	60.68		KCRO21-PH4		
268	Cut			1		Cut of pit	Pit	1.06	1.06	0.26	60.73	60.46	KCRO21-PH4		
269	Fill	270		1	9	Fill of ditch	Backfill	0.92	0.89	0.5	60.3		KCRO21-PH4	Ditch	3
270	Cut			1	9	Cut of ditch	Ditch	0.92	0.89	0.5	60.3	59.8	KCRO21-PH4	Ditch	3
271	Fill	272		1		Fill of ditch	Backfill	1.14	1	0.4	59.65	59.59	KCRO21-PH4	Ditch	3
272	Cut			1		Cut of ditch	Ditch	1.14	1	0.4	59.65	59.59	KCRO21-PH4	Ditch	3
273	Fill	274	252, 246	1	9	Fill of linear	Backfill	1	0.55	0.16	59.61		KCRO21-PH2	Ditch	1
274	Cut		253, 247	1	9	Cut of ditch	Ditch	1	0.55	0.16	59.61	59.47	KCRO21-PH2	Ditch	1
275	Fill	276		1		Fill of linear	Backfill	1.53	1	0.59	60.97		KCRO21-PH4	Ditch	5
276	Cut			1		Cut of ditch	Ditch	1.53	1	0.59	60.95	60.91	KCRO21-PH4	Ditch	5
277	Fill	278		1		Fill of ditch	Backfill	1	1	0.22	60.58		KCRO21-PH3	Ditch	2
278	Cut			1		Cut of ditch	Ditch	1	1	0.42	60.58		KCRO21-PH3	Ditch	2

281	Fill	282		1	12	Fill of ditch	Backfill	0.9	0.6	0.27	60.13		KCRO21-PH4	Ditch	5
282	Cut			1	12	Cut of ditch	Ditch	1	0.9	0.28	60.18	59.8	KCRO21-PH4	Ditch	5
283	Void														
284	Void														
285	Fill	287		1		Fill of pit	Backfill	1.34	1.28	0.5	60.35	59.77	KCRO21-PH4		
286	Fill	287		1		Fill of pit	Backfill	1.34	1.28	0.8	60.35	59.54	KCRO21-PH4		
287	Cut			1		Cut of pit	Pit	1.34	1.28	0.85	60.35	59.54	KCRO21-PH4		
288	Fill	289		1		Fill of pit	Backfill	1.88	1.5	0.38	60.24	59.87	KCRO21-PH3		
289	Cut			1		Cut of Pit	Pit	1.88	1.5	0.38	60.24	60.13	KCRO21-PH3		
290	Fill	291		1	14	Fill of pit	Backfill	1.04	1.02	0.34	59.77		KCRO21-PH3		
291	Cut			1	14	Cut of pit	Pit	1.04	1.02	0.34	59.77	59.47	KCRO21-PH3		
292	Cut			1		Cut of ditch	Ditch	1.64	0.8	0.22	57.9	57.79	KCRO21-PH4	Ditch	4
293	Fill	292		1		Fill of ditch	Backfill	1.64	0.8	0.22	58.08	57.79	KCRO21-PH4	Ditch	4
294	Cut		320	1	17	Recut of ditch	Ditch	2	0.8	0.34	58.08		KCRO21-PH4	Ditch	5
295	Fill	294		1	17	Fill of ditch	Backfill	2	0.8	0.34	58.08		KCRO21-PH4	Ditch	5
296	Fill	297		1		Fill of pit	Backfill	1.1	1	0.56	59.94	59.9	KCRO21-PH3		
297	Cut			1		Cut of pit	Pit	1.1	1	0.56	59.94	59.39	KCRO21-PH3		
298	Fill	299		1	16	Fill of ditch	Backfill	1.33	1.7	0.91	57.98		KCRO21-PH4	Ditch	5
299	Cut			1	16	Cut of ditch		1.33	1.7	0.91	57.98	57.47	KCRO21-PH4	Ditch	5
302	Fill	303		1	24	Fill of ditch	Backfill	2.57	1.1	0.3	60.55		KCRO21-PH3	Ditch	2
303	Cut			1	24	Cut of ditch	Ditch	2.57	1.1	0.3	60.55	60.07	KCRO21-PH3	Ditch	2
304	Fill	305		1	24	Fill of ditch	Backfill	2.4	2.18	0.76	60.5		KCRO21-PH4	Ditch	4
305	Cut			1	24	Cut of ditch	Ditch	2.4	2.18	0.76	60.5	59.63	KCRO21-PH4	Ditch	4
306	Fill	307		1		Fill of pit	Backfill	1.3	1.05	0.15	59.94	59.78	KCRO21-PH3		
307	Cut			1		Cut of pit	Pit	1.3	1.05	0.15	59.94	59.78	KCRO21-PH3		
308	Void														
309	Fill	310		1	17	Fill of pit	Backfill	2.62	2.43	0.84	58.45	58.35	KCRO21-PH4		
310	Cut			1	17	Cut of pit		2.62	2.4	0.84	58.45	57.61	KCRO21-PH4		
311	Fill	312		1	17	Fill of pit	Backfill	1.28	1.22	0.39	58.5	58.4	KCRO21-PH4		

312	Cut			1	17	Cut of pit	Pit	1.28	1.22	0.39	58.5	58.14	KCRO21-PH4		
313	Fill	287		1		Fill of pit 287	Backfill	0.6	0.15	0.25	60.35	60.06	KCRO21-PH4		
314	Fill	316		1		Fill of posthole	Backfill	0.4	0.4	0.12	59.76		KCRO21-PH3		
315	Fill	316		1		Fill of posthole	Backfill	0.4	0.4	0.15	59.63		KCRO21-PH3		
316	Cut			1		Cut of posthole	Post-hole	0.4	0.4	0.27	59.76	59.49	KCRO21-PH3		
322	Fill	323		1		Fill of pit	Backfill	0.7	0.57	0.14	60.46		KCRO21-PH4		
323	Cut			1		Cut of pit	Pit	0.7	0.57	0.14	60.46	60.31	KCRO21-PH4		
324	Fill	282		1	12	Fill of ditch	Backfill	0.6	0.3	0.05	59.88		KCRO21-PH4	Ditch	5
325	Fill	320		1	17	Fill of ditch	Backfill	1	1.25	0.33	58.35	58.25	KCRO21-PH4	Ditch	5
326	Cut			1	17	Cut of ditch	Ditch	1	1.25	0.33	58.35	57.98	KCRO21-PH4	Ditch	5
327	Fill	328		1		Fill of pit	Backfill	1.14	0.86	0.19	60.59	60.45	KCRO21-PH4		
328	Cut			1		Cut of pit	Pit	1.14	0.86	0.19	60.59	60.45	KCRO21-PH4		
329	Fill	331		1	12	Fill of ditch	Backfill	1.04	0.52	0.25	60.15		KCRO21-PH4	Ditch	5
330	Fill	331		1	12	Fill of ditch	Backfill	0.57	0.4	0.04	59.85		KCRO21-PH4	Ditch	5
331	Cut			1	12	Cut of ditch	Ditch	1.05	0.8	0.29	60.15	59.82	KCRO21-PH4	Ditch	5
332	Fill	333		1	17	Fill of pit	Backfill	1	0.62	0.2	58.04	57.85	KCRO21-PH4		
333	Cut			1	17	Cut of possible pit	Pit	1	0.62	0.2	58.04	57.85	KCRO21-PH4		
334	Fill	336		1	20	Fill of posthole	Backfill	0.48	0.48	0.24	59.49		KCRO21-PH3		
335	Fill	336		1	20	Post packing	Backfill	0.91	0.86	0.3	59.49	59.25	KCRO21-PH3		
336	Cut			1	20	Cut of posthole	Post-hole	0.91	0.86	0.3	59.49	59.19	KCRO21-PH3		
337	Fill	338		2		Fill of ditch	Backfill	1	1	0.34	60.77	60.72	KCRO21-PH4	Ditch	6
338	Cut			2		Cut of ditch	Ditch	1	1	0.34	60.77	60.43	KCRO21-PH4	Ditch	6
341	Fill	342		3		Fill of pit	Accumulation	1.8	0.8	0.24	60.56		KCRO21-PH4	Ditch	6
342	Cut			2		Cut of pit	Pit	1.8	0.8	0.24	60.56	60.33	KCRO21-PH4	Ditch	6
343	Fill	359		2		Fill of ditch	Backfill	0.84	0.49	0.26	60.28		KCRO21-PH4	Ditch	6
344	Fill	345		2	21	Fill of pit	Backfill	0.94	0.88	0.33	60.28		KCRO21-PH4		
345	Cut			2	21	Cut of pit	Pit	0.94	0.88	0.33	60.28	59.95	KCRO21-PH4		
346	Fill	347		2	21	Fill of posthole	Backfill	0.55	0.48	0.1	60.36	60.35	KCRO21-PH4		
347	Cut			2	21	Cut of pit	Pit	0.55	0.48	0.1	60.36	60.27	KCRO21-PH4		

350	Fill	351		3		Fill of pit	Backfill	0.83	0.7	0.23	63.35		KCRO21-PH4		
351	Cut			3		Cut of pit	Pit	0.83	0.7	0.23	63.35	63.14	KCRO21-PH4		
352	Fill	353		3	17	Fill of pit	Backfill	1.36	0.7	0.08	62.88		KCRO21-PH4		
353	Cut			3	17	Cut of pit	Pit	1.36	0.7	0.08	63.88	63.77	KCRO21-PH4		
354	Void														
355	Void														
356	Void														
357	Fill	358		2	21	Fill of pit	Backfill	1.85	1.8	0.6	60.32	60.27	KCRO21-PH4		
358	Cut			2	21	Cut of pit	Pit	1.85	1.8	0.56	60.32	59.76	KCRO21-PH4		
359	Cut			2	21	Cut of ditch	Ditch	0.84	0.49	0.26	60.28	60.02	KCRO21-PH4	Ditch	6
360	Fill	361		2	21	Fill of pit	Backfill	1.09	0.6	0.15	60.28		KCRO21-PH4		
361	Cut			2	21	Cut of pit	Pit	1.09	0.6	0.15	60.28	60.11	KCRO21-PH4		
362	Fill	363		3	23	Fill of ditch	Backfill	1	0.7	0.43	63.42	63.39	KCRO21-PH4	Ditch	7
363	Cut			3	23	Cut of ditch	Ditch	1	0.7	0.43	63.42	62.99	KCRO21-PH4	Ditch	7
364	Layer			1		Finds from cleaning	Other								
365	Void														
366	Void														
367	Void														
368	Void														
369	Void														
370	Natural			3		Natural silty clay	Natural	30	30		63.9	63.24	KCRO21-PH1		
371	Fill	374		2		Fill of pit	Backfill	0.98	0.86	0.15	60.54	60.39	KCRO21-PH4		
372	Fill	374		2		Fill of pit	Backfill	0.82		0.26	60.39	60.28	KCRO21-PH4		
373	Fill	374		2		Fill of pit	Backfill	0.24		0.3	60.54	60.28	KCRO21-PH4		
374	Cut			2		Cut of pit	Pit	1.12	0.86	0.3	60.54	60.28	KCRO21-PH4		
377	Fill	379		1		Fill of pit	Backfill	2.9	1.4	0.69	60.25		KCRO21-PH4		
378	Void														
379	Cut			1		Cut of pit	Pit	2.9	1.4	0.69	60.26	59.52	KCRO21-PH4		
380	Fill	381		1		Fill of pit	Backfill	2.3	1.3	0.25	60.27		KCRO21-PH4		

381	Cut			1		Cut of pit	Pit	2.3	1.3	0.25	60.27	60	KCRO21-PH4		
382	Fill	383		3		Fill of ditch	Backfill	2.23	1.42	0.28	63.23	63.21	KCRO21-PH4		
383	Cut			3		Cut of ditch	Ditch	2.23	1.42	0.28	63.23	62.91	KCRO21-PH4		
384	Fill	385		3		Fill of posthole	Backfill	0.48	0.3	0.23	63.69	63.48	KCRO21-PH4		
385	Cut			3		Cut of posthole	Post-hole	0.48	0.3	0.23	63.69	63.48	KCRO21-PH4		
386	Fill	387		3	23	Fill of ditch	Backfill	2.14	1.02	0.42	63.33	63.31	KCRO21-PH4	Ditch	7
387	Cut			3	23	Cut of ditch	Ditch	2.14	1.02	0.42	63.33	62.92	KCRO21-PH4	Ditch	7
388	Fill	389		3		Fill of posthole	Backfill	0.54	0.33	0.25	63.72	63.49	KCRO21-PH4		
389	Cut			3		Cut of posthole	Post-hole	0.54	0.33	0.25	63.72	63.49	KCRO21-PH4		
390	Fill	391		2	26	Fill of pit	Backfill	1.2	1.15	0.7	60.32	60.26	KCRO21-PH4		
391	Cut			2	26	Cut of pit	Pit	1.2	1.15	0.7	60.33	59.83	KCRO21-PH4		
392	Fill	393		3	27	Fill of pit	Backfill	0.66	0.58	0.2	63.44		KCRO21-PH4		
393	Cut			3	27	Cut of pit	Pit	0.66	0.58	0.2	63.44	63.26	KCRO21-PH4		
394	Fill	395		3		Fill of posthole	Backfill	0.3	0.3	0.06	63.43		KCRO21-PH4		
395	Cut			3		Cut of posthole	Post-hole	0.3	0.3	0.06	63.43	63.39	KCRO21-PH4		
396	Fill	397		3		Fill of pit	Backfill	0.54	0.52	0.1	63.4	63.39	KCRO21-PH4		
397	Cut			3		Cut of pit	Pit	0.54	0.52	0.1	63.4	63.39	KCRO21-PH4		
398	Fill	399		3	27	Fill of posthole	Backfill	0.52	0.46	0.21	63.3	63.29	KCRO21-PH4		
399	Cut			3	27	Cut of posthole	Post-hole	0.52	0.46	0.21	63.3	63.08	KCRO21-PH4		
400	Fill	401		3		Fill of posthole	Backfill	0.2	0.2	0.06	63.47		KCRO21-PH4		
401	Cut			3		Cut of posthole	Post-hole	0.2	0.2	0.06	63.47	63.43	KCRO21-PH4		
402	Fill	403		3		Fill of ditch	Backfill	1	1.65	0.56	63.59	63.55	KCRO21-PH4	Ditch	7
403	Cut			3		Cut of ditch	Ditch	1	1.65	0.7	62.94	62.89	KCRO21-PH4	Ditch	7
404	Fill	405		3		Fill of pit	Backfill	2	1.96	0.28	63.98		KCRO21-PH4		
405	Cut			3		Cut of pit	Pit	2	1.96	0.46	63.98	63.52	KCRO21-PH4		
406	Fill	407		3		Fill of pit	Backfill	1.32	0.9	0.17	63.86		KCRO21-PH2		
407	Cut			3		Cut of pit	Pit	1.32	0.9	0.17	63.86	63.64	KCRO21-PH2		
408	Fill	409		3		Fill of pit	Backfill	0.84	0.68	0.24	63.85	63.65	KCRO21-PH4		
409	Cut			3		Cut of pit	Pit	0.84	0.68	0.24	63.68	63.65	KCRO21-PH4		

410	Fill	405		3		Fill of pit	Backfill	1.78	0.55	0.27	62.82		KCRO21-PH4		
411	Fill	412		3		Fill of posthole	Backfill	0.4	0.36	0.12	62.92	62.85	KCRO21-PH4		
412	Cut			3		Cut of posthole	Post-hole	0.4	0.36	0.12	62.92	62.85	KCRO21-PH4		
413	Fill	403		3		Fill of ditch	Backfill	1.1	1	0.13	63.37	63.02	KCRO21-PH4	Ditch	7
414	Fill	415		3	27	Fill of pit	Backfill	2.42	1.72	0.3	63.4		KCRO21-PH4		
415	Cut			3	27	Cut of pit	Pit	2.42	1.72	0.3	63.4	63.11	KCRO21-PH4		
416	Fill	417		3	27	Fill of ditch	Backfill	5.41	0.97	0.27	63.46	63.11	KCRO21-PH4		
417	Cut			3	27	Cut of ditch	Ditch	5.41	0.97	0.27	63.46	63.11	KCRO21-PH4		
418	Fill	419		3		Fill of ditch	Backfill	7.1	0.65	0.24	62.31		KCRO21-PH4		
419	Cut			3		Cut of ditch	Ditch	7.1	0.65	0.24	62.31	62.07	KCRO21-PH4		
420	Fill	421		3		Fill of pit	Backfill	1.38	0.64	0.38	63.8	63.74	KCRO21-PH2		
421	Cut			3		Cut of pit	Pit	1.38	0.64	0.38	63.83	63.45	KCRO21-PH2		
424	Fill	425		3		Fill of pit	Backfill	1.07	0.7	0.41	63.87	63.46	KCRO21-PH2		
425	Cut			3		Cut of pit	Pit	1.07	0.7	0.41	63.87	63.46	KCRO21-PH2		
426	Fill	427		3	28	Fill of ditch	Backfill	1	1.16	0.24	63.95	63.91	KCRO21-PH4		
427	Cut			3	28	Cut of ditch	Ditch	1	1.16	0.24	63.95	63.71	KCRO21-PH4		
442	Natural					Area 4 Natural	Natural						KCRO21-PH1		
447	Fill	449		4		Fill of ditch	Backfill	0.94	0.72	0.3	71.91		KCRO21-PH4	Ditch	8
448	Fill	449		4		Fill of ditch	Backfill	0.74	0.69	0.47	71.95		KCRO21-PH4	Ditch	8
449	Cut			4		Cut of ditch	Ditch	1.05	0.94	0.55	72.05	71.51	KCRO21-PH4	Ditch	8

APPENDIX 2: PREHISTORIC POTTERY

Barbara McNee

Introduction

A total of 1436 pottery sherds weighing 22368 gms were recovered a number of features. The condition of the pottery is quite variable, ranging from large sherds which are in good condition, to several small body sherds displaying significant levels of abrasion on all surfaces. In addition, there are 291 sherds, weighing 2177 gms, which derived from environmental sampling. At this stage of the assessment, the spot dates suggest that the site was occupied from the earliest Iron Age, through to the Late Iron Age/early Roman, with a particular focus on the Early-Late Iron Age.

Methodology

The pottery was recorded using the methodology set out by the Prehistoric Ceramics Research Group (PCRG 1997). All sherds were examined and assigned to a broad fabric group after macroscopic examination and by using a binocular microscope (x10 power). A basic fabric series was established based on dominant inclusion types. All sherds were counted and weighed to the nearest whole gram and given a unique pottery record number for ease of reference. Characteristics noted include basic forms, decoration and use wear evidence. Parallels have been sought using published and unpublished material. Microsoft Excel has been used to analyse and summarise the data. The pottery has also been assessed in order to identify its potential for further analysis.

Quantification

A number of ceramic phases have been identified and a breakdown of the entire assemblage by ceramic phase (CP) is listed in (table 1). Some of the dating is tentative as the assemblage contained a number of worn featureless sherds, and close dating cannot be achieved with any degree of confidence when small body sherds alone are represented. The Prehistoric Ceramics Research Group also suggests that a minimum of 25 sherds should be present in a context in order for a reliable estimation of phase to be carried out (PCRG 1997: 21). Precise identification is also hampered by the use of certain fabrics which are long lived and can occur in several ceramic phases.

Table 1: quantification and breakdown of the assemblage by context

Context	Interpretation	Sherd count	Sherd weight (gms)	Comments
109	Ditch 3	2	12	2 x later Iron Age base sherds
109	Fill of ditch [110] Sample <101>	4	18	Late Iron Age sherds
128	Fill of posthole [129]	6	26	Later Iron Age body sherds
130	Fill of posthole [131] Sample <100>	3	4	Late Iron Age sherd
168	Fill of posthole [169]	6	16	Indeterminate prehistoric sherds
190	Fill of posthole [191]	1	1	Indeterminate prehistoric body sherd

197	Fill of pit [183] Sample's <107 and 108>	7	40	Later Iron Age sherds
207	Ditch 3 Fill of ditch [209]	12	59	Later Iron Age body sherds
208	Ditch 3 Fill of ditch [209] Sample <110>	3	7	Late Iron Age sherds
217 217	Fill of pit [218] Sample <113>	7 1	21 9	Mostly later Iron Age sherds Late Iron Age sherd
219 219	Fill of pit [220] Sample <111>	358 8	4545 69	Mostly earliest-early/middle Iron Age sherds Mixed, includes an earliest Iron Age base and later Iron Age sandy sherd
223	Fill of pit [220]	79	863	Mostly earliest-early/middle Iron Age sherds
232	Fill of pit [233] Sample <114>	80	715	Mixed Iron Age sherds
234	Fill of pit [235]	28	215	Earliest-early/middle Iron Age
238	Fill of pit [239] Sample <115>	11	166	Includes late Iron Age-early Roman body sherds
250	Fill of ditch [251]	1	11	Later Iron Age bead rim
256	Fill of ditch [257]	1	4	Later Iron Age bead rim
269	Ditch 3 Fill of ditch [270]	1	5	Iron Age body sherd
277	Ditch 2 Fill of ditch [278]	1	1	Iron Age body sherd
279	Ditch 9 Fill of ditch [280]	14	26	Indeterminate Iron Age body sherds
285	Fill of pit [287] sample <116>	1	12	Late Iron Age-early Roman body sherd
290 290	Fill of pit [291] Sample's <118 and 120>	350 67	10670 571	Earlier-middle/late Iron Age sherds Earlier-middle/late Iron Age body sherds
296	Fill of pit [297] sample <119>	13	63	Middle Iron Age sherds
309	Fill of pit [310]	1	4	Iron Age body sherd
322	Fill of pit [323]	12	86	Late Iron Age grog tempered sherds
337	Ditch 6 Fill of ditch [338]	14	133	Mostly later Iron Age sherds
343	Ditch 6 Fill of ditch [359]	22	149	Mixed context, mostly late Iron Age sherds
344	Fill of pit [345]	2	49	Late Iron Age sherds
348	Fill of [349]	112	1426	Late Iron Age sherds
357	Fill of pit [358]	11	68	Later Iron Age sherds
362	Ditch 7 Fill of ditch [363]	26	99	Mostly later Iron Age sherds
364	Finds from cleaning	11	6	Later Iron Age? Crumbs of pottery
371	Fill of pit [374]	3	34	Mixed context

386	Ditch 7 Fill of ditch [387]	8	39	Late Iron Age pottery
390	Fill of pit [391]	3	47	Late Iron Age pottery
402	Ditch 7 Fill of ditch [403]	94	1548	Late Iron Age pottery
404 404	Fill of pit [405] Sample <124>	76 32	755 194	Mixed context, Iron Age sherds Later Iron Age sherds
406	Fill of pit [407]	11	191	Earliest-early/middle Iron Age sherds
408	Fill of pit [409]	30	125	Mixed context? Mostly earlier Iron Age sherds
410	Fill of pit [405]	35	511	Earliest-early/middle Iron Age sherds
413	Ditch 7 Fill of ditch [403]	5	9	Later Iron Age sherds
420	Fill of pit [421]	86	588	Earliest-early/middle Iron Age sherds
+		7	26	Earliest-early/middle Iron Age sherds

Fabrics

Twenty-two basic fabric groups have been identified during preliminary examination. This has been classified based on dominant inclusions, and further subdivided based on clay matrix type (silt or sand).

Fabric Groups

Fabrics containing moderate > quantities of glauconitic inclusions

1: Q/1. Groundmass of abundant glauconite and quartz.

2: QF/1. Flint temper; clay matrix of very common amounts of glauconite and sparse quartz.

3: QF/2. Flint temper; clay matrix of common amounts of glauconite.

4: QF/3. Flint temper; clay matrix of abundant quantities of glauconite.

5: QFG/1. Flint temper; groundmass of common amounts of glauconite and medium sand sized quartz, some grog fragments.

6: QFO/1. Flint tempered (sparse); groundmass of common amounts of glauconite and linear voids (grass?).

7: QFO/2. Flint tempered, clay matrix of moderate amount of fine-medium sand sized quartz, moderate glauconite, can contain linear voids (grass?).

8: QFC/1. Flint and calcareous inclusions; ground mass of abundant glauconite and common quartz.

9: QO/3. Groundmass of abundant glauconite and quartz; some linear voids (organic material?).

Fabrics with a predominantly silty clay matrix

10: F/1. Flint temper; silty clay matrix.

11: F/2. Flint temper; silty clay matrix which can include sparse amounts of red and/or black naturally occurring iron ore.

12. F/3. Flint temper; silty clay matrix which can include a scattering of glauconite.

13: F/4. Flint temper; silty clay matrix which can include sparse fine quartz.

14: GF/1. Sparse grog and flint in a silty clay matrix.

15: GFO/1. Finely crushed grog, sparse flint, and organic matter; silty clay matrix which can also have sparse glauconite.

16: G/1. Finely crushed grog; silty clay matrix.

17: G/2. Very common quantities of grog, coarser than G/1; silty clay matrix.

18: S/1. Leached out voids, shell? Silty clay matrix.

Fabrics with a quartz sandy clay matrix

19: Q/2. Groundmass of coarse-very coarse quartz.

20: Q/3. Groundmass of fine-medium sand sized quartz.

21: QS/1. Clay matrix of coarse quartz, with the addition of sparse calcareous/shelly material.

22: QGO/1. Clay matrix of medium sand sized quartz; with the addition of sparse grog and organic matter.

Fabric discussion

Details of the geology surrounding the site have been obtained from British Geological Survey Map, Sheet No. 288, and includes Gault Clay, Head Brickearth, Hythe Beds, with Lower and Middle Chalk to the north of the site. The assemblage is characterised by a high number of broad fabric groups. This could be a chronological phenomenon, with the ceramic evidence suggesting extended periods of occupation for possibly at least seven hundred years, from the earliest Iron Age to the late Iron Age.

The fabrics used to make the Otham vessels are dominated by glauconitic rich fabrics, flint tempered fabrics, and grog tempered fabrics. Chalk would have provided flints, which when burnt and crushed provide suitable temper for pottery making. Many sherds have been made with clays containing abundant amounts of glauconite, and possible sources for this clay may derive from the Gault Clay, which contains highly glauconitic sandy clay (Dines et al 1954: 25). Some of the fabric groups contain a sparser density of glauconite. This suggests the utilisation of another clay source, possibly the Folkestone Beds, which also contains glauconite (ibid: 18).

The potter's also utilised silty and sandy clays, and these could have obtained from Atherfield Clays, and Sandgate Beds. A few sherds contain some sort of calcareous matter, and a possible source may be the Hythe Beds. These local geological resources could easily have provided all the necessary materials for pottery production.

In terms of chronology, flint tempered fabrics are used continuously, and the Otham fabrics contain varying quantities of flint. Fabrics containing moderate-abundant quantities of glauconite, represent approximately (22%) of the overall assemblage. This percentage may be higher, as glauconite can be difficult to see at x 10 power, particularly if the sherds are unoxidized. There appears to be a considerable increase in the use of glauconitic sandy fabric vessels during the middle Iron Age (Morris

2006a). Glauconite-rich fabrics continue into the late Iron Age and appear to have been abandoned in the early part of the first century A.D. (Pollard 1988: 31-3). A few glauconitic sherds (13 in total) have been phased to the late Iron Age/early Roman, and a pre-Conquest date is suggested. Analysis of a pottery assemblage from Leybourne Grange West Malling, provides evidence that the use of glauconite had virtually ceased after the Roman conquest (Biddulph 2017: 15). The actual date of the inception and cessation of these distinct pottery fabrics can be difficult to establish, and it would appear to be the case that the glauconite rich clay sources were exploited long before the appearance of later Iron Age forms (McNee 2020). This would appear to be the case at Otham, as some of the earliest Iron Age sherds have been made with glauconitic clays. Similar fabrics have been used to make earliest Iron Age pottery at sites within the Maidstone area, for example Holborough Quarry (McNee 2010a) and Margetts Pitt (McNee 2020).

Pure grog tempered fabrics represent (10.5%) of the assemblage. They specifically relate to late Iron Age pots. Grog was the temper in most widespread use for 'Belgic' forms both in Kent, and more generally throughout south-east Britain (Pollard 1988: 31), although flint tempered fabrics were also used for 'Belgic' style vessels (Couldrey and Thompson 2007: 176). The use of grog temper rapidly becomes the dominant fabric (Couldrey 2007: 181), and it is possible that some of the late Iron Age grog tempered fabrics are actually post-Conquest. The sherds do however appear to be handmade, and therefore a slightly earlier date is suggested. Pure sandy wares (4% of the overall count), with no additional temper, also belong to the late Iron Age.

Ceramic Phasing and vessel forms

Earliest Iron Age-early/middle Iron Age (800-400 BC)

Several sherds appear to be more consistent with an earliest or early Iron Age tradition, particularly from the fill of pits [220, 405, 407 and 421]. Generally speaking, the condition of the pottery is fairly abraded, and suggestive of domestic settlement debris, which has been open to erosion, weathering, and trampling. The featured sherds include a small round shouldered flint tempered cup/bowl (context 223), which is similar to earliest Iron Age vessels recovered from Monkton Court Farm (Macpherson-Grant 1994, figure 9/24), and Canterbury (McNee 2018). A rim sherd belonging to a long necked, slack shouldered jar was also recovered from the same context. This is a common, long-lived form, and is especially popular in the late Bronze Age and earliest Iron Age, for example at Ramsgate Harbour Approach Road (McNee 2019, figure 79/27). One slightly everted short-medium length rim, with a fingertip impressed 'pie-crust' finds similarities with earliest Iron Age pottery from Shelford Quarry (McNee 2010b), and slightly later at early Iron Age Manor Farm (Seager Thomas 2014, figure 9/37). A small slack shouldered jar (context [219]) is similar to vessels recovered from the earliest Iron Age phase at Little Stock Farm (Bryan 2006).

Early-middle Iron Age (600-400 BC)

The pottery derives from the fill of pits [220, 405 and 421], suggesting possibly continuous occupation from the earliest Iron Age into the early Iron Age. There are several worn body sherds, and a small number of featured sherds. One sherd (context 223) displays fine curvilinear tooling and is similar to a

fine bowl deriving from early-middle Iron Age Tutt Hill (Morris 2006b). A high round-shouldered vessel (context 219) can be paralleled at early Iron Age White Horse Stone (Morris 2006c) and Manor Farm (Seager Thomas 2014, figure 5/2). One large ovoid/convex type form is similar to a vessel from Highstead (Couldrey 2007, Period 3B, 500-400 BC, figure 93/400).

Middle Iron Age-middle/late Iron Age (400-200 BC).

The pottery almost entirely derives from the fill of pit [291), with the exception of one rim which was recovered from context (343). The latter is similar to middle Iron Age neckless ovoid type vessels from Beechbrook Wood (Jones 2006). Most of the pottery from context (290) consists of coarse jars, with the exception of a fine S-profile flint and grog tempered bowl. S-profile vessels are often associated with middle Iron Age assemblages, and the grog and flint tempered fabric can also be suggestive of a middle-late Iron Age date. Similar forms can be seen at Danebury (Brown 2000, cp 6-7, 310-50 BC) and Beechbrook Wood (Jones 2006). The latter site produced a radiocarbon date of 390-170 cal BC (*ibid*). More examples occur at Little Waltham (Drury 1978, form type F4, Period 11, mid-3rd to late 2nd centuries BC), and Rainham (Seager Thomas 2014, figure 8/21).

The rest of the pottery from this particular context consists of coarser jar forms, and at Thanet Earth, S-profile vessels with burnished surfaces are often found with coarser round-shouldered forms (Couldrey 2019). Large fragments belonging to two heavily wiped shouldered jars find similarities amongst middle Iron Age assemblages at Beechbrook (Jones 2006) and further afield at Lodge Farm, Essex (Lavender 2007, figure 52/95). Four sherds, possibly representing two vessels, belong to coarse jars, similar to pots recovered the middle Iron Age phase at Thanet Earth (Couldrey 2019), and Danebury (Brown 2000, cp 4-6, 360-270 BC). An additional coarse rim sherd has a shorter neck, and parallels can be seen at North Shoebury (Brown 1995, figure 66/103).

Later Iron Age-early Roman (200 BC-AD 43)

The later prehistoric pottery was recovered from the fill of pits, ditches, and postholes, particularly [220, 338, 349, 358, 359, 403 and 405]. It includes the fragmented remains of a late Iron Age jar (context 402), similar to Thompsons (1982) B form. Two thickened flint tempered rims (context 402) are quite similar to those recovered from Highstead (Couldrey 2007, Period 4, 100-50 BC, figure 103/30). Three rims (contexts 256 and 343) find parallels at Church Whitfield (Thompson 2014, figure's 84/34 and 89/103).

Surface Treatment and decoration

The occurrence of vessels which have been decorated is very low, some (48 sherds, 3.3% of the overall assemblage). This is in contrast to the percentage of vessels which display surface treatment (54% of the overall assemblage), and it suggested that vessel embellishment generally took place through surface treatments rather than decorative techniques. Burnishing is observed on a small number of vessels, and all over smoothing appears to be particularly popular during the late Iron Age. The Otham assemblage is somewhat characterised by the variety of wiped surface treatments, from lightly wiped surfaces, to heavily wiped, scored, thumb wiped, lightly combed, and rusticated. The latter refers specifically to a type of surface treatment which is peculiar to east Kent and the Continent in the early

to middle Iron Age (Macpherson-Grant 1991: 41-43), although it also occurs in other areas of Kent (McNee 2017). The end of the use of rustication appears to be placed at some time during the latter part of the middle Iron Age (Morris 2006a). Some of the vessels have a distinct wiped/scored surface, and areas of the pot could have been slightly scored with a comb. The technique is different to the combed surface treatment of the later Iron Age but could relate to the rusticated technique of the early/middle Iron Age, or a transitional middle-late Iron Age type of surface treatment.

Site Discussion

The majority of the pottery was recovered from the fills of pits and ditches, deriving from a total of (35) contexts. The mean sherd weight is slightly higher than average (15.6 gms). The mean sherd weight for many prehistoric assemblages is generally quite low, and frequently averages between 6-8gms (McNee 2012: 203). Some of the larger assemblages certainly have a high mean sherd, and are of particular interest, for example (context 290, fill of pit [291]). The pottery predominantly dates to around the middle Iron Age, and includes larger than average thick-walled sherds, which have been profusely wiped. Some of the vessels have been poorly made, as evidenced by rough coil and slab joins, which were not completely obscured. Several exhibit problems relating to firing, for example vitrification and warping. Two sherds representing a large shouldered jar appear to have been 'folded' whilst the clay was wet, and was subsequently fired. It almost has the appearance that something had fallen on top of it. It is clear from the surface treatment that time and effort has been spent producing this pot, and therefore it is possible that the damage represents a firing accident. This further suggests the presence of on-site pottery production, and it is possible that these sherds represent wasters. British prehistoric pottery was fired in pits or open bonfires, and the archaeological evidence is virtually non-existent (Gibson and Woods 1997). The evidence for prehistoric pottery production within Kent is sparse, with the exception of a few sites, for example Keynes, Kent University (McNee 2018). Further examination will aid the characterisation and dating of the assemblage, and the mode of deposition is also of intrinsic interest.

A reasonable assemblage of pottery (358 sherds), deriving from (context 219, fill of pit [220], is more typical of an earliest and earlier Iron Age phase. The sherds also exhibit significant abrasion, suggesting post-use history that included movement from the original point of breakage, and exposure to the elements. It is clear that the mode of site formation and processes of deposition at Otham are complex.

Summary, significance, and research potential

The site is important as an indicator of settlement or use within the Maidstone area during the later prehistoric period, commencing at some point during the later Bronze Age/earliest Iron Age, approximately 800 BC. The ceramics mostly derived from the fill of pits in Area 1 and 3 of the site. It is possible that occupation was continuous into the early Iron Age, and again, recovery of the ceramics was from pits within areas 1 and 3. The general condition of the pottery is quite poor, and suggestive of routine rubbish disposal. Pits [220 and 405] contain mixed assemblages of pottery (earliest and early Iron Age), which could indicate that this area of the site was used for extended periods of time.

The middle Iron Age component of the site was recovered from Area 1, and almost exclusively from pit [291]. The condition of the ceramics is good, with a higher-than-average mean sherd weight of (30 gms). Features containing significantly greater sherd counts and weights could have resulted from more formal sets of activities. The late Iron Age/early Romano-British pottery was recovered from several features across Area's 1, 2 and 3. The material is comparable to pottery of this date that has been recorded from other sites across Kent, for example West Malling (Jones 2009).

It is interesting to note that two relatively nearby Maidstone sites appear to be mostly occupied during the late Bronze Age, and that the hiatus of activity occurs during the early and middle Iron Age (Holborough Quarry McNee 2010a, and Margetts Pit McNee 2020). At Otham, the main focus of activity would appear to be from the early Iron Age onwards. Levels of archaeological significance are considered to be high at this particular site, and the assemblage is a significant addition to the study of ceramics of this period from Kent. It is recommended that further work should be carried out on the prehistoric pottery assemblage.

Full Analysis of the prehistoric assemblage

An assessment of the pottery has highlighted some of the following research questions which may be discussed and addressed following full analysis of the pottery. This would be carried out by using the methodology set out by the Prehistoric Ceramics Research Group (PCRG 1997).

- What can this assemblage tell us about social organisation, depositional practises and the function and use of the ceramics? Are particular vessel forms and fabrics being utilised within certain areas/features? How does this compare with other sites within the Maidstone area?
- What can the pottery tell us about ceramic production, trade, and exchange? Have local clays and tempers been used and is there any evidence for non-local pottery production?
- How does the site-specific form and fabric series compare to assemblages of comparative ceramics from other Kent sites and areas outside Kent, for example Sussex?
- Is there evidence for on-site pottery production?

Further work

Task 1

Catalogue sherds and record the following on an excel spreadsheet:

Count and weight (already done).

Develop a site specific fabric type series using a binocular microscope (x10).

Develop a site specific form type series.

Record decoration, visible usewear evidence, surface treatments, levels of abrasion and condition of each sherd (partly done).

Record vessel wall thickness.

Measure rim and base diameters where possible (partly done).

Select key sherds suitable for illustration and place in a separate box.

Refine the spot dating of each sherd.

Record any observable methods of technology including firing

Task 2

Detailed study of site stratigraphy. Consider spatial distribution and patterns of deposition. Consider other associated artifact types. Study the distribution of fabrics, forms and condition of sherds across the site.

Comparative study: compare with vessels from other sites within and outside the region.

Preparation of publication text.

Task 3

Illustrations. Approximately 30 sherds are suitable for illustration, including one vessel for reconstruction.

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APPENDIX 3: ROMAN POTTERY

Eniko Hudak

A small assemblage of Roman pottery was recovered from the archaeological investigations at Church Road, Otham, Maidstone, Kent (KCRO21) totalling 20 sherds weighing 161g and representing 0.18 Estimated Vessel Equivalents (EVEs). The pottery was fully quantified by the standard measures of sherd count, weight, and Estimated Vessel Equivalents (EVEs) and recorded in a relational database using MOLA fabric and form codes (PCRG, SGRP, MPRG 2016, MOLA 2014).

The pottery was recovered from six individually numbered contexts in three different excavation areas. Features with Roman pottery include a variety of pits and ditch sections belonging to site Phase 4 Late Iron Age/early Roman (Table 1). Individual context assemblages are all small: three comprise a single sherd each, two contexts had two fragments, and one with 13 sherds (Table 1). The condition of the pottery sherds is mixed ranging from heavily abraded to freshly broken with a low mean sherd weight 8.05g, which may suggest a degree of redeposition, but this is uncertain. No signs of use-wear or any post-firing modifications were recorded in this assemblage.

Area	Context	Fill of	Phase	Sherd Count	Weight (g)	EVEs	Context Considered Date
1	319	Ditch 9 [320]	4	1	22	0.06	AD50/70-100
1	375	Pit [376]	4	1	36		AD40-400+
2	339	Ditch 6 [340]	4	1	6		AD40-200
2	348	Pit [349]	4	2	17		AD40-400+
2	371	Pit [374]	4	13	69		AD50-100
3	402	Ditch 7 [403]	4	2	11	0.12	AD50-100
	TOTAL			20	161	0.18	

Table 1 – Distribution and dating of the Roman pottery assemblage per context.

A limited range of fabrics is present in this small assemblage. Most of the fabrics could not be assigned to a known production centre with confidence but are likely to be from one of the potteries of northern Kent active in the early Roman period. There is only one sourced sherd of Patchgrove Grog-tempered ware (PATCH) in context (339), a distinctive fabric made in west Kent dated to between the Conquest period and the 2nd century AD. There is also a single fragment of Samian ware (SAMSG), a small non-diagnostic body sherd, most likely of South Gaulish origin and dated to between AD40-100 from context (371).

The unsourced fabrics include reduced sand-tempered wares (SAND), grog-tempered wares (GROG), reduced fine wares (FINE), shell-tempered ware (SHEL, potentially from North Kent – NKSH), and several fragments of a flagon in an oxidised sandy fabric (BUFF). While most of these are broadly dated non-diagnostic body sherds, there are two rim fragment of a Gallo-Belgic copy moulded dish (5A) in SAND in context (402) dated to AD50-100, and the rim of a round-bodied out-turned rim SHEL jar (2B) in context (319), dated to AD50/70-100 (cf. Monaghan 1987: form 3B3). These and the SAMSG sherd imply an overall second half of the 1st century AD date for the assemblage.

Fabric	Sherd Count	Weight (g)	EVEs	Forms
BUFF	11	61		
FINE	2	17		
GROG	2	43		
PATCH	1	6		
SAMSG	1	1		
SAND	2	11	0.12	5B
SHEL	1	22	0.06	2B
TOTAL	20	161	0.18	

Table 2 – Quantification of the Roman pottery assemblage by sherd count, weight (g), and EVEs

The small size and dispersed nature of the assemblage limits its interpretation beyond dating; however, it provides evidence for the continuity of activity on site post-dating the Roman Conquest. It includes a variety of handmade grog-tempered, wheel-made sandy wares with Roman forms (GB platter and flagon) and imported Continental fine wares.

The assemblage was fully recorded and requires no further analysis at this stage. In any publication of the site there is no need for a formal Roman pottery report, but reference should be made to the material in the relevant sections.

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APPENDIX 4: POST-ROMAN POTTERY

Chris Jarrett

A total of two sherds (29g) of post-medieval pottery were collected by hand and both pieces were unstratified. The pottery consists of body sherds from a jug (24g) made in London stoneware (bi-toned with an iron slip) (fabric code: PM25), dated 1675–1825 and a non-diagnostic sherd (5g) of red earthenware with iron-streaked glaze, possibly from a High Halden source, dated 1800–1900 and the sherd has an internal and external glaze.

The pottery, because it is unstratified, has no significance. The only potential of the pottery is to indicates possible post-medieval domestic activity on or in the vicinity of the study area. There are no recommendations for further work on the pottery which can be discarded.

APPENDIX 5: GLASS ASSESSMENT

Chris Jarrett

A single small fragment (less than 1g) of post-medieval glass, without naturally weathered surfaces, was recovered from fill [390], pit [391], Area 2. The small fragment of olive-green glass was probably derived from a wine bottle of an 18th-19th-century date.

The glass, because it is of a very small size and with very little meaning, has no significance. The only potential of the glass is to broadly date the deposit the item was recovered from. There are no recommendations for further work on the glass fragment which can be discarded.

APPENDIX 6: LITHIC ASSESSMENT

Barry Bishop

Introduction

Archaeological investigations at the above site resulted in the recovery of 146 pieces of struck flint and a small quantity of unworked burnt flint. The assemblage has been comprehensively catalogued and this includes further descriptive details of the pieces (Catalogue L01). This report summarises the data in the catalogue; it quantifies and describes the material and presents a preliminary assessment and outline of its significance. The worked flint assemblage was recorded following standard technological and typological classifications and largely follows the methodology of Inizan *et al* (1999) with modifications and additions as indicated in the text by the author. Retouched tools were classified following standard British works such as Healy (1988) and Bamford (1985). Measurements were taken following the methodology of Saville (1980).

Quantification and Distribution

Area	Feature	Decortication flake	Chip <15mm	Flake	Blade-like flake	Blade: non-prismatic	Flake fragment <15mm	Flake fragment >15mm	Core: flake	Retouched	Unworked stone (no.)	Unworked stone (wt:g)	Unworked burnt stone (no.)	Unworked burnt stone (wt:g)
1	Pit 220	1		5			1			3	1	528	1	4
1	Pit 323	1	70	10			30	3		3				
1	Other contexts	1	5	2		1	2	2	1	1			24	160
3	All contexts		1	1				2						

Table L01: Quantification of Lithic Material from Church Road

A total of 146 pieces of struck flint were recovered from the investigations at the site, the majority of which came from Area 1 with Area 3 contributing four pieces (Table L01). The bulk of the stuck flint, amounting to 117 pieces, came from pit [323] with the next largest feature assemblage amounting to ten pieces from pit [220]. The remaining material was recovered in quantities of three pieces or fewer from eleven separate pits and ditches in Area 1 and from three pits in Area 3.

Small amounts of unworked burnt stone, all comprising small, heavily burnt flint fragments, were recovered from pits [213], [220], [235], [291], [297] and [376], all in Area 1.

Description

Pit [323]

By far the largest individual assemblage, amounting to 117 pieces, came from the single fill [322] of pit [323] in Area 1. It is in a good or only slightly chipped condition with the exception of one burnt chip. The raw materials used comprised cobbles of translucent to semi-opaque dark or light grey flint with a rough but weathered cortex. Occasional heavily recorticated thermal (frost fractured) surface scars are also present, and it is likely that the raw materials were gathered from Medway terrace gravels deposits, remnants of which can be found scattered along the valley sides of the river Len. The assemblage from the pit represents most stages in the reduction sequence, including the preparation of cores and the manufacture and discard of retouched implements. No refitting was attempted but similarities in the colour and texture of the flint and cortex indicates that the material represents the debris from the reduction of one or two cores, none of which was recovered. The bulk of the struck flint comprises micro-debitage (flakes and flake fragments less than 15mm in maximum dimension) which provided 100 pieces, or 77% of the total, many of which appear to be platform trimming chips. Three retouched implements are also present with the remainder comprising flakes of various shapes and sizes but including many thin and narrow pieces, often with carefully trimmed platform edges. No diagnostic pieces are present but the thinness of the flakes, the careful maintenance of striking platforms and presence of narrow and often blade-like pieces indicates a Mesolithic or Early/Middle Neolithic date for its production. As well as the working of flint, the three retouched implements, all of which show some evidence of wear, indicate tool using activities were occurring. They comprise a fragment from an end scraper, a well-made edge-trimmed flake, and a flake with a steeply retouched proximal end. None are closely dateable as similar pieces were produced through much of the Holocene, but they would certainly not be out-of-place within Mesolithic or Early/Middle Neolithic assemblages. The generally sharp condition of the assemblage and the presence of high proportions of micro-debitage indicate that the reduction of the cores took place close-by to the pit from which the material was recovered, although it is clear that the recovered assemblage only represents only a small proportion of what must have been generated. The pit has also produced Late Iron Age pottery and it is likely that it cut through a much older knapping surface scatter from which the material was redeposited.

Other features

Pit [220] in Area 1 was the only other feature to contain sizeable quantities of struck flint, this amounted to ten pieces. This assemblage comprised mostly rather thick and poorly detached flakes, some being comparable to Martingell's 'squat' flakes (1990; 2004), with three retouched pieces also present. These include a coarsely denticulated implement made on a poorly detached cortical flake, a thick, narrow flake with irregular, occasionally bifacial, edge-retouch and use-wear damage along both of its lateral margins, and a 'squat' flake with a retouched striking platform. No truly diagnostic pieces are present, but the technological traits of the assemblage would be most comparable to those employed by later prehistoric industries, particularly those dating to the later second and early first millennia BC (e.g., Herne 1991; Young and Humphrey 1999; Humphrey 2003). The assemblage could therefore be associated with the use of this pit which has been dated to the Early-Mid Iron Age. The retouched

implements are crudely produced, non-formal type that would be also best placed within Middle Bronze Age through to Iron Age assemblages. Also recovered from this pit was a large, angular, cherty sand- or limestone cobble weighing 528g. Although unworked, it is possible that the stone was deliberately selected for placement within the pit.

The pieces from the remaining features are mostly technologically comparable to those from pit [220] and are likely to belong the latter Bronze Age or Early Iron Age periods. They indicate that flint working, albeit on a limited scale, was a part of the activities conducted during the earlier phases of activity at the site as represented by the structural evidence.

Significance and Recommendations

The assemblage from pit [323] represents Mesolithic or Early/Middle Neolithic flint working waste that probably formed a surface scatter and was later redeposited into the pit. Such scatters often represent the only material traces of Mesolithic and Neolithic settlement sites and are relatively rarely encountered in the Weald, although the location of the site, within the valley of a major tributary of the River Medway, was perhaps more attractive to early mobile communities. Most of the remainder of the assemblage can be dated to the later second or first millennia BC and is probably associated with the settlement and agricultural activities recorded here.

The assemblage has been catalogued and no further work is required for the purpose of archiving, but due to the relative rarity of Mesolithic and Neolithic evidence in the area the assemblage from pit [323] merits a short but more comprehensive description to be compiled for inclusion in any published accounts of the excavations. The remaining material is also of significance in that it represents evidence for late flint working industries that can be related to contemporary settlement evidence. This material should also be re-examined along with that recovered during the preceding evaluation with due regard to the dating and function of the features from which it was recovered. Following this, an account focussing the techniques employed and the social significance that flint working may have held for the later prehistoric occupants should be compiled for inclusion in any published accounts of the excavations.

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APPENDIX 7: METAL AND SMALL FINDS ASSESSMENT

Märit Gaimster

Eight metal and small finds were recovered from the excavations, along with thirteen lumps and pieces of slag and a further handful of Rhineland lava stone. The finds are all catalogued in the table below and will be discussed here by phase. A heavily worn and illegible copper-alloy coin is unstratified (SF 7); this is likely an early halfpenny minted for Queen Victoria.

Phase 2: Early to Middle iron Age

Two objects came from Phase 2 contexts together with two fragments of possible copper-alloy slag, all from fills of Pit [220]. The objects consist of a small fragment of possible copper-alloy casting waste and a large pebble of local sandstone with remains of a drilled depression of c 35mm in diameter. The depression has sloping sides and there are possible remains of residue at the bottom, suggesting the stone was intended as a mould, likely for metal. The stone has a parallel in a find from the Isle of Thanet, although here the hole was drilled transversely from the side; the item was unphased but thought potentially to be of Roman date (Shaffrey 2015, 147 and fig. 6.10 no. 12).

Phase 3: Middle to Late Iron Age

The only finds from this phase were four small greenish lumps and fragments of possible copper-alloy slag from the fill of Pit [233].

Phase 4: Late Iron Age to early Roman

This phase produced five metal and small finds. Eight lumps and pieces of slag were also collected, together with the remains of a rotary quern of Rhineland lava stone. Besides two iron nails, the finds included a flat hone or sharpening stone of fine calcareous sandstone (SF 1) and the possible remains of a fine copper-alloy buckle with a thin hammered frame (SF 8). The small fragment of an antler comb (SF 10) reflects the introduction of the composite double-sided comb with the Roman period.

Significance and recommendations for further work

Metal and small finds potentially provide key elements of domestic material culture and activities related to the investigated site. At Otham, the small Iron Age to early Roman assemblage appears to be dominated by material relating to metal working on or near the site. This is particularly reflected in the Iron Age phases, where finds include a possible stone mould and waste material that might indicate copper-alloy working. While no further work is required for the finds at this stage, it is recommended they are included in any wider publication of the site. For that purpose, some of the metal objects should be x-rayed to aid proper identification; the potential copper-alloy slag and other waste products should be analysed by a slag specialist.

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Dating Reports, Oxford Wessex Archaeology Monograph 8.

PHASE	CTX	SF NO	FEATURE	OBJECT NAME	No. items	POT DATE	RECOMMENDATIONS
n/a	0	7		copper-alloy coin; thin regular flan; heavily worn and corroded; illegible; diam. 27mm; likely early Victoria halfpenny	1	n/a	
PH 2	219	3	fill of Pit [220]	?copper-alloy slag; 15 x 20mm flat greenish fragment with bubbly vitrified texture	1	earliest to Middle Iron Age	further identify
PH 2	219	9	fill of Pit [220]	stone ?mould; large oval pebble of local Hythe formation sandstone; remains of drilled depression with sloping sides with stone split here in antiquity; depression diam. 35mm; depth 10mm; possible remains of residue at base	1	earliest to Middle Iron Age	analyse residue
PH 2	219	bulk	fill of Pit [220]	copper-alloy ?object; 5 x 10mm fragment only; possibly casting waste; from Sample <111>	1	earliest to Middle Iron Age	x-ray and further identify
PH 2	219	bulk	fill of Pit [220]	?lava stone or pumice; handful of very frail and crumbly lumps and pieces; from Sample <111>; weight 56 g	1	earliest to Middle Iron Age	further identify
PH 2	223	2	fill of Pit [220]	?copper-alloy slag; 15 x 20mm flat triangular greenish fragment with bubbly vitrified texture	1	earliest to Middle Iron Age	further identify
PH 3	232	bulk	fill of Pit [233]	?copper-alloy slag; four small greenish lumps and fragments with bubbly vitrified texture; from Sample <114>	4	n/a	
PH 4	109	bulk	fill of Ditch 3 [110]	slag; handful of lumps and pieces	5	Late Iron Age to Early Roman	if relevant further identify
PH 4	109	bulk	fill of Ditch 3 [110]	iron nail; near-complete but heavily corroded; L 22mm	1	Late Iron Age to Early Roman	x-ray
PH 4	130	bulk	fill of Posthole [131]	slag; small fragment only; from Sample <100>	1	n/a	if relevant further identify
PH 4	182	1	fill of Pit [183]	hone of fine calcareous sandstone; flat rectangular form with pronounced wear on one face and both sides; W 50mm; L 120mm; 12–15mm thick	1	n/a	
PH 4	184	bulk	fill of Pit [183]	slag; two small lumps only; from Sample <105>	2	n/a	if relevant further identify

PH 4	184	10	fill of Pit [183]	antler comb; fragment only of composite double-sided form; W probably c 30mm; from Sample <105>	1	n/a	
PH 4	295	bulk	fill of Ditch 5 [294]	Lava quern; four heavily worn and undiagnostic pieces; weight 195g	1	n/a	
PH 4	402	8	fill of ditch 7 [403]	copper-alloy ?buckle; thin and heavily degraded U-shaped fragment only; W 27mm; L 10mm+; gauge 2mm	1	n/a	
PH 4	404	bulk	fill of Pit [405]	iron ?nail; incomplete and heavily corroded; L 75mm+	1	Early Iron Age to Early Roman	x-ray

Table 1: Catalogue of Small finds

APPENDIX 8: ANIMAL BONE ASSESSMENT

Kevin Rielly

Introduction

The site lies just beyond the south-eastern perimeter of Maidstone within a field bordered by Chapman Avenue on the west and Church Road to the east. Excavations were divided into three open areas, the largest (Area 1) situated at the northern extremity of the field and then Areas 2 and 3 to the south. These revealed evidence for prehistoric activity, principally through the Iron Age era) extending into the Roman period (generally dating to the first two centuries AD) encompassing a series of ditches, pits, and postholes. Animal bones were recovered from all three areas, though in particular from Area 1, these revealed by a combination of hand recovery and bulk sampling. The few fish bones recovered where identified by Philip Armitage.

Methodology

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

A large proportion of the site features were sampled. Processing was undertaken using a modified Siraf tank and the resultant residues were hand sorted.

Description of faunal assemblage by phase

The site provided a total of 198 hand collected and 498 sieved bones. While generally in good condition, the bones featured a moderate to high level of fragmentation. Most of the bone collection has been placed within the stratigraphic sequence, as shown in Tables 1 and 2, here featuring collections dated to the Iron Age (Phases 2 and 3) and then within the transitional late Iron Age/early Roman (Phase 4).

Phase 2 (Early to Mid-Iron Age)

The great majority of the bone dating to this phase was taken from the Area 1 pit [220] and pit [233], the latter with a sieved collection only. Otherwise, a small quantity (just 3 hand collected bones) was also revealed by pits [407] and [421] in Area 3. A small number of identifiable bones included a few cattle, sheep, and equid pieces. One of the cattle bones, a horncore, taken from the posthole, represented by a midshaft fragment, is clearly from a relatively large horn, of a type not often seen in Iron Age deposits. It displayed a chop through the base no doubt signifying the method this part was removed from the rest of the skull, perhaps during the skinning process. Also, of interest is the major part of an equid mandibular toothrow, this from the Area 3 pit [421], the various heights of the teeth suggesting an age of about 5 years (after Levine 1982).

Phase 3 (Mid to Late Iron Age)

While appearing to be somewhat larger, this collection is mainly composed of rather small indeterminate sheep-size pieces taken from the various samples (see Table 2). All the bones were retrieved from Area 1, principally from pits [291] and [297]. Cattle and sheep again form the principal components of the identifiable assemblage, now including a few dog bones. This species is represented by a pair of adult mandibles, from pit [291], one of which is charred while the other is unburnt.

Phase 4 (Late Iron Age to early Roman)

This phase provided the largest part of the site collection, these bones, following the previous phases, mainly taken from pit fills (Table 1) and again with the major part of the assemblage from Area 1. Out of a total of 11 pits with bones, 7 are from Area 1 and then 2 each from Areas 2 and 3. A minor component was derived from the ditches, here including bones from Ditches 3, 5 and 9 (Area 1) and then Ditches 6 and 7 within Areas 2 and 3 respectively. However, the major collections were taken from pit [183] Area 1 with 58 hand collected and 83 sieved bones as well as pit [239] with 105 sieved bones. While invariably largely composed of cattle- and sheep-sized fragments, there is a reasonable number of cattle and sheep bones. There is notably a few chicken and potential goose fragments alongside a small quantity of pig bones, as well as a single small passer bone, possibly a small thrush, which may also represent food waste. In addition, there was a concentration of fish vertebrae, all from the same relatively large cod (slightly smaller than a reference specimen measuring 109cm in length) taken from the fill [238] of pit [239] Area 1. A few equid and dog bones complete the likely deliberately deposited bone waste items.

While much of the cattle and sheep collections feature a variety of skeletal parts, thus representing a mix of processing and food waste, there is one rather different collection. Pit [183] has already been mentioned. The bones were taken from 4 fills, the majority from fill [197] with 50 hand collected and 40 sieved bones. This included 35 sheep bones comprising 7 metacarpals, 9 metatarsals, 15x 1st and 3x 2nd phalanges. A further two 2nd phalanges were found in the sample. Each of these bones was complete or nearly so. It is conceivable that they represent butchers waste or perhaps a small concentration of skinning (tawing) waste, here representing at least 5 individuals.

Unphased

A single deposit [364] provided two hand collected bones, an equid tibia and part of a cervical vertebrae, most probably equid. These were in particularly good condition, certainly with respect to the rest of the site assemblage, perhaps suggesting a somewhat later date of deposition.

Conclusion and recommendations for further work

The general condition of the bones, referring to the level of fragmentation, has adversely affected the representation of ageable or measurable bones, thus limiting evidence relating to the methods of exploitation of the major domesticates as well as any comparative size analyses. Nevertheless, some information can still be gleaned from these collections, though principally in relation to the Late Iron Age/early Roman transition assemblage (Phase 4). Of note here is the concentration of sheep foot bones, the complete metapodials offering some potential for size comparison, while this bone composition may well suggest the presence of tawing activity i.e., perhaps on-site sheepskin

processing. Also of interest is the presence of chicken bones, these generally poorly represented or more likely absent at early Roman rural sites as well as the presence, from an earlier iron Age deposit (Phase 2) of a Medium or even large Horned individual (these classifications after Armitage and Clutton-Brock 1976). Such horncores are more commonly found in Roman deposits (after Baxter Loves Farm REF). Fish may also be recognised as 'unusual' in this setting and certainly if dated more to the Iron Age than the Roman period (after Rainsford and Roberts 2013). However, relatively few Roman rural sites provided more than a few fishbones (see Locker 2007).

In conclusion, there are some aspects of this collection which will bear further scrutiny, although it should be noted that further analyses will be undoubtedly limited due to the fragmented nature of these bone collections. Comparisons should be sought with reference to other Iron Age and Iron Age/Roman transition sites in this general neighbourhood, most notably Iwade (Armitage 2005) and Stone Castle near Dartford (Rielly in prep).

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Area:	1					2	3			Total
Phase:	2	3	4	UP	All	4	2	4	All	
Hand collected										
Ditch		1	9		10	5		51	51	66
Pit	19	10	82		111	11	3	4	7	129
Posthole			1		1					1
Layer				2	2					2
Total HC	19	11	92	2	124	16	3	55	58	198
Sieved										
Other				18						18
Pit	29	103	246		378			81	81	459

Posthole	20		1		21					21
Total SIV	49	103	247	18	399			81	81	498

Table 1. Distribution of hand collected (HC) and sieved (SIV) bones by Area, Phase and Context type.

Area:	1					2	3		
Phase:	2	3	4	UP	All	4	2	4	All
Hand collected									
Cattle	6	3	15		24	5		5	5
Equid			2	2	4		1		1
Cattle-size	8	1	23		32	9	2	49	51
Sheep/Goat	2	2	41		45	1		1	1
Pig			3		3				
Sheep-size	3	2	5		10	1			
Dog		3	1		4				
Goose-size			2		2				
Total HC	19	11	90	2	124	16	3	55	58
Sieved									
Cattle	3		7		10				
Cattle-size	6	9	62		77				
Sheep/Goat	3	1	7		11			3	3
Sheep-size	35	83	137	18	255			76	76
Small mammal	1	7	3		11				
Small rodent	1	3	6		10			2	2
Chicken			1		1				
Chicken-size			1		1				
Passer			1		1				
Uniden fish			19		36				
Amphibian			3		3				
Total SIV	49	103	247	18	399			81	81

Table 2. Distribution of hand collected (HC) and sieved (SIV) bones by Area, Phase and Species

APPENDIX 9: ENVIRONMENTAL POST EXCAVATION ASSESSMENT

Jane Wheeler

Introduction

This environmental report summarises the findings of the preliminary assessment of 24 x bulk samples collected during excavations conducted by PCA on land west of Church Road, Otham, Maidstone, Kent, between mid-July and mid-September 2021. This assessment: (i) provides an overview of the contents of the environmental samples; (ii) establishes their content (in respect of preservation and abundance); (iii) assesses the relevance of the results in our understanding of the environmental context of the site and its features and, (iv) determines whether further archaeobotanical analysis is necessary in respect of specific samples to support archaeological interpretations.

Methodology

The 24 bulk samples (of between 3 litres and 58 litres in volume) were processed using standard flotation methods. Material was collected using a 300µm mesh for the light fraction (flot) and a 1mm mesh for the heavy residue (retent). Then air-dried. The retent was also dried, then sieved using 1mm, 2, and 4mm mesh sizes, with the material sorted to extract archaeological artefacts and organic eco-facts. Both fractions of material were quantified using a stereo microscope UltraZomm-3 at 7x63x magnification. Abundance was recorded using a standard non-linear scale: (1) = occasional occurrence (1-10 items), 2 = fairly frequent occurrence (11-30 items), 3 = frequent presence (31-100 items, and (4) = an abundance of material (>100 items). Intrusive material was also recorded.

Macro-botanical identifications of seeds, grains/cereals, chaff etc., were undertaken using standard seed and non-woody references (Cappers and Neef 2012, Cappers et al. 2012, Jacomet et al. 2006). Nomenclature follows Stace (2014). Mollusc identification (land snails) follows keys in Cameron (2008). Charcoal fragments were quantified and sub-divided into three fractions (<2mm (particles), 2-4mm (small fragments unsuitable for analysis), and >4mm (fragments with the potential for subsequent analysis) (after Wheeler 2007).

Results

Preliminary abundance data (for flot and retent factions) are presented in relation to area and phase, environmental sample number, context, and feature number – see Table 1. Intrusive organic material is included in Table 1. However, unless pertinent to the respective sample, is not discussed.

AREA 1

<u>Phase 2: Early to Mid-Iron Age (EIA/MIA)</u>

Samples <111> and <112> Contexts [219] and [223] - Pit [220]

Both flot and retent residues from Sample <111> (Context [219]) produced carbonised seeds, i.e., Chenopodiaceae (Goose-foots), Indeterminate seeds (<25µm) (probably weed varieties), *Carex* sp. (Sedges) and *Juncus* sp. (Rushes). Poaceae (Grasses) (Undifferentiated) and cereal grains (Indeterminate), also in rare quantities, were also noted. The seed species component, with the

additional grass grain, being indicative of rough wet ground, perhaps wet meadow or pasture. The 4 x specimens of coaled/vitrified cereal grains simply demonstrate a small cereal presence. Charcoal from all fractions, and from both the light and heavy residue, was light. A fairly frequent quantity of fragments >4mm (n=30) were noted. This sample-set is adequate to provide data as to species, but otherwise cumulatively limited. Sample <112> (Context 223) provided only a light residue. Charcoal was negligible quantitatively across all three fractions. Only the particulate fraction <2mm) produced an abundance of material. Carbonised seeds were rare. Chenopodiaceae (Goose-foots) and Indeterminate seeds (<25µm) being noted (most probably weeds). *Carex* sp. (Sedges) were similarly rare. The only other material of note was 2 x small fragments of CBM.

Phase 3: Mid to Late Iron Age (MIA/LIA)

Sample <114> Context 232 – Posthole [233]

The flot produced a light quantitative component of carbonised seeds comprising Chenopodiaceae (Goose-foots), Indeterminate seeds (>25µm and <25µm – fairly frequent), and Poaceae (Grasses) grains. The identified weed seeds and grass family occasional in quantity. Charcoal, with the exception of the abundant <2mm particle fraction, was fairly frequent in the 2-4mm fraction, but rare for fragments >4mm.

Samples <118> and <120> Context 290 – Pit [291]

Samples <118> and <120> were collected from Context [290]. Sample <118> produced a heavy charcoal matrix from all three fractions. Whilst material from the two smaller <2mm and 2-4mm fractions was abundant, the >4mm fraction produced a frequent quantity of charcoal fragments (including stem wood) suitable for species, cumulative, and dendrological (non-taxon) analysis. The carbonised seed range from the flot residue produced occasional counts of Poaceae (Grasses) grains (Indeterminate), *Veronica hederifolia* (Ivy-leaved Speedwell), and *Carex* sp. (Sedges). This small species spectrum suggesting wet/damp disturbed or rough ground – wet meadow or pasture. The carbonised cereal component comprising similarly occasional counts of Indeterminate grains (due to poor preservations) and *Hordeum vulgare* sp. (Barley). The retent also contained 2 x specimens of Indeterminate cereal grain and a fragment of *Corylus avellana* (Hazel) nut shell. A number (n=8) of vitrified fragments of stem/rhizomatous matter (as opposed to chaff) were also noted.

Sample <120> was similarly weighted with an abundant charcoal particulate matrix from the <2m and 2-4mm fractions. Charcoal fragments >4mm were rare (n=~7). The carbonised seed spectrum was interesting. Whilst it contained a similar species range in comparison to Sample <118>, the influx of *Bromus* sp. (Brome) seeds was notable (the species producing fairly frequent counts from the retent residue). The seed component consisting of Chenopodiaceae (Goose-foots), Asteraceae (Daisies), Poaceae (Grasses), and *Bromus* sp. The latter may be a marker for animal feed (i.e., hay) if this grass species contributed to pasture, as opposed (as cereal grains counts are comparatively low) to its presence as a bulking component within a cereal crop (Jones 1984, O'Brien 2012).

The combination of results from these two samples suggests the deposit was probably domestic hearth waste, as opposed to food or cereal processing waste – due to the higher ratio of weeds and grasses

(subsuming Brome) to cereal (along with the absence of chaff). Perhaps, floor sweepings utilised as a bulker for the fuel which provided this carbonised deposit.

Sample <119> Context 296 – Pit [297]

Sample <119> produced an occasional range of carbonised seeds (*Carex* sp. (Sedges)) and Indeterminate seeds (<25µm), Poaceae (Grasses) grains, and low counts of cereal grains (Indeterminate). The charcoal component from this sample produced a prevalence of particles and small fragments from the <2mm and 2-4mm fractions. Larger charcoal fragments >4mm were frequent (n=40) and contained fragments of stem wood which provides an adequate sample-set for species analysis and also to assess cumulative (species diversity).

Phase 4: Late Iron Age to early Roman (LIA/ER)

Sample <100> Context 130 – Posthole [131]

Little archaeobotanical material was produced in both the retent and flot fractions. The flot providing occasional quantities of carbonised seeds comprising *Carex* sp. (Sedges) and Chenopodiaceae (Goose-foots). 2 x fragments of carbonised cereal grain were noted (i.e., 1 x *Hordeum vulgare* ssp. *Vulgare* (hulled Barley) and 1 x Indeterminate fragment). Charcoal from the flot residue comprised predominantly <2mm particles. The larger fractions (2-4mm and >4mm) producing fairly frequent and occasional (x 5) fragments, respectively. The retent provided a similar quantity of 2-4mm fraction charcoal, and fairly frequent charcoal fragments >4mm (x 15). The combination of the >4mm charcoal fraction from the flot and retent residue provide a reasonable sub-sample (n=20) of charcoal adequate for analysis in respect of identification to species. The retent did not produce any additional archaeobotanical matter.

Sample <101> Context 109 – Ditch 3 [110]

A negligible quantity of material was provided by both flot and retent residues. The flot producing occasional carbonised seeds (<25µm) categorised as Indeterminate (being reminiscent of weed varieties), and similarly occasional Poaceae (Grasses) (Undifferentiated) grains. The charcoal particle fraction (<2mm) was frequent in the flot residue, with occasional fragments 2-4mm noted. Only charcoal from the 2-4 mm (frequent) and the >4mm fractions (occasional) were produced by the flot. No other archaeobotanical material was present. The charcoal component is statistically low in this sample in respect of fragments >4mm suitable for analysis (n=5) (unless simple species identification is required). The carbonised seed component is similarly quantitatively negligible.

Sample <102> Context 140 – Pit [141]

Archaeobotanical material from Sample <102> was negligible. Carbonised seeds produced by the flot were minimal – comprising occasional Indeterminate seeds <25µm and grass grains (Undifferentiated). The former most probably representative of weed species. All other carbonised matter comprised frequent charcoal particles (from the flot <2mm particle fraction and 2-4mm fraction from the flot and retent), and occasional fragments >4mm provided by the light residue (n=5). The latter charcoal sub-

sample is statistically insignificant. However, if wood-type species identification is required – these 5 x sub-samples are suitable for analysis.

Sample <103> Context 166 – Pit [167]

The flot was dominated by abundant charcoal particles (<2mm), with frequent 2-4mm fragments, and an occasional (x 1) fragment >4mm. Carbonised seeds from the light residue comprised occasional seeds (<25µm) (Indeterminate – most probably weed varieties), along with 1 x cereal grain identified as *Triticum* sp. (Wheats). Preservation of this single cereal specimen was poor being coaled and pitted in texture, and also fragmented. The retent produced a sample-set (n=~50) of charcoal fragments (>4mm) which are suitable for species identification and quantitatively adequate for cumulative comparison to investigate species diversity.

Samples <104> (Context 182), <105> (Context 184), <106> (Context 192), <107> and <108> (Context 197) – Pit [183]

Both the flot and retent from Sample <104> (Context 182) produced occasional counts of seeds and grass/cereal grains, along with chaff (rachis nodes). The carbonised seed component comprising Poaceae (Grasses – Undifferentiated), along with weeds species – Chenopodiaceae (Goose-foots), *Veronica hederifolia* (Ivy-leaved Speedwell), along with Indeterminate seeds (most probably weed varieties). Cereals were also recorded, i.e., *Triticum aestivum* spp. *spelta* (Spelt Wheat), *Hordeum vulgare* sp. (Barley), and vitrified rachis nodes. The weed spectrum along with grasses, whilst limited in respect of species range, does indicate disturbed or cultivated rough/waste ground. The cereal component flagging up the presence of Spelt and Barley. The chaff is too small a count to make inferences in respect of cereal processing or storage/foodstuff, cultivation, or waste. Charcoal from the larger 2-4mm and >4mm fraction sizes is negligible. Whilst the larger fraction from both residues produced fragments suitable for analysis in respect of their ~4mm size. However, this small sample-set (n=11) along with small fragment size would limit data to species (if the internal anatomy was sufficient for keying to species).

Sample <105> (Context 184), combining the flot and the retent residues, produced little archaeobotanical material. All carbonised seeds were occasional in quantity, comprising *Veronica hederifolia* (Ivy-leafed Speedwell), seeds (<25µm) Indeterminate, and Poaceae (Grasses) grains. 1 x specimen of *Hordeum* sp. (Barley) was noted. The charcoal fraction was dominated by abundant particles <2mm from the flot. The 2-4mm fraction from both light and heavy residue was fairly frequent/frequent. The retent producing ~50 x fragments >4mm suitable for analysis, and in a sufficient quantity to provide a cumulative comparison of species representation.

The light residue from Sample <106> (Context 192) produced occasional specimens of carbonised Chenopodiaceae (Goosefoots) and Poaceae (Grasses) (Undifferentiated) seeds, along with similarly rare counts of *Hordeum* sp. (Barley) and cereal grains (Indeterminate). 1 x Indeterminate carbonised seed was noted in the heavy residue. With the exception of 1 x small fragment of ceramic building material (CBM) from the flot, all other archaeobotanical material comprised charcoal. Particulate charcoal being abundant in the light residue, along with frequent and abundant quantities of the 2-4mm

fraction from both residues, respectively. The retent produced frequent charcoal fragments >4mm (n=~50) suitable for analysis and in sufficient quantity for a cumulative assessment (species diversity) of wood-types.

Samples <107> and <108> (Context 197) were collected from the same context but their contents varied notably. Sample <107> produced carbonised seeds comprising occasional Chenopodiaceae (Goose-foots) from the flot and retent, with additional specimens of <25µm seeds (Indeterminate) from the flot. The latter most probably representative of weed varieties. Both residues also producing occasional quantities of *Triticum* sp. (Wheats) and Indeterminate cereal grains. Vitrified fragments of chaff (rachis nodes – Indeterminate) were noted in occasional quantities in the flot residue, with 2 x specimens of carbonised fragmented spikelet bases recorded from the retent residue. Charcoal from the light residue was dominated by abundant particulates (<2mm). The retent producing frequent counts of the 2-4mm charcoal fraction, and fairly frequent fragments >4mm (n=25). The >4mm charcoal fraction being suitable for identification to species. Sample <108> was weighted with abundant charcoal particles <2mm and from the 2-4mm fraction. The larger >4mm fragment was notably low in respect of actual fragment count in comparison to the smaller fractions weighting. The combined the flot and retent residue producing 45 x specimens >4mm suitable for identification and cumulative analysis. The carbonised seed component was rare with only occasional specimens of Indeterminate seeds (including specimens <25µm) being noted, along with 1 x fragmented grain of *Hordeum vulgare* sp. (Barley). Whilst no further analysis is recommended of the seed and cereal components from this combined deposit. The analysis of the >4mm charcoal fraction from both samples (<107> and <108>) may explain the difference in depositional charcoal concentration within the context, and in relation to the source process (due to the presence of cereal grains and chaff (spikelets and rachis nodes)), and wood-type used for fuel in relation to that process.

Sample <109> Context 210 – Pit [211]

The flot residue produced a fairly frequent quantity of cereal grains (Indeterminate) which were poorly preserved, being heavily pitted, coaled and vitrified. This was also noted in the occasional counts of Indeterminate cereal grains provided by the retent. 1 x vitrified rachis node also recorded from the heavy residue. Fairly frequent fragments of *Corylus avellana* (Hazel) nutshells were present in the retent. All other material comprising charcoal from both residues with abundant particles <2mm, fairly frequent/frequent quantities of the 2-4mm fraction, and a frequent tally of the >4mm fraction. The latter suitable for analysis due to reasonable fragment size. However, the sample-set (n=35) is quantitatively limited but has the potential to provide species data in respect of the process which may have contributed to the poor preservation of cereals in this deposit.

Sample <110> Context 208 – Ditch 3 [209]

Sample <110> produced negligible quantities of archaeobotanical material from both flot and retent residues. Carbonised seeds comprised occasional Indeterminate specimens (<25µm) (most probably weed varieties), similarly rare counts of *Carex* sp. (Sedges) and Cereal grains (recorded as Indeterminate due to degradation – coaling and pitting). Charcoal across all fractions from both the flot and retent were negligible. The mix of weeds and sedge seeds suggests a wet/damp environment rough

pasture or meadow. Other than simple presence, no further inference can be made in respect of the cereal presence (other than it being heat-affected). As charcoal fragments >4mm (n=4) are rare, no further analysis on this sample is proposed.

Sample <113> Context 217 – Pit [218]

Sample <113> produced negligible archaeobotanical material. Charcoal across all fractions was fairly frequent/frequent. 30 x fragments from the retent were noted. Whilst small they are suitable for species identification. Carbonised seeds comprised rare counts of Indeterminate seeds <25µm (most probably weed varieties), and 2 x fragments of *Corylus avellana* (Hazel) nut shell.

Sample <115> Context 238 – Pit [239]

The light and heavy residue provided little archaeobotanical material. Carbonised seeds and cereal grains were recorded in both residues, i.e., Chenopodiaceae (Goose-foots) and Indeterminate seeds, Poaceae (Undifferentiated) (Grasses) grains, Indeterminate cereal and *Hordeum vulgare* sp. (Barley). All in occasional quantities (<10). 2 x fragments of vitrified rachis nodes were produced by the flot. Charcoal was similarly light in presence. The smaller <2mm and 2-4mm fractions providing the majority of charcoal fragments. The combination of charcoal fragments >4mm from the flot and the retent residue (n=26) would be suitable for analysis to wood-type species.

Samples <116> Context 285 and <117> Context 286 – Pit [287]

Sample <116> (Context 285) was notable as it produced the greatest quantity (combined flot and retent residues) of cereal-type grains from the overall archaeobotanical assemblage for the site. Whilst the majority of cereal grains were categorised as Indeterminate due to poor preservation (due to coaling, pitting and fragmentation), varieties identified comprised *Hordeum vulgare* sp. (Barleys) (naked grains were noted) and *Triticum* sp. (Wheats). No chaff was recorded. Other carbonised seeds comprised Chenopodiaceae (Goose-foots) and Indeterminate seeds, along with Poaceae (Grasses) grains (Indeterminate). Charcoal from both residues and all fractions was light. The particulate <2mm fraction being abundant, with fairly frequent quantities of charcoal fragments from the 2-4mm fraction. Charcoal fragments >4mm (n=36) are suitable for analysis. The sample-set having the potential to provide additional data to species identification.

Sample <117> (Context 286) produced little archaeobotanical material from the flot and the retent residues. Carbonised seeds were occasional comprising Chenopodiaceae (Goose-foots) and Poaceae (Grasses) grains (Indeterminate). Cereal grains were similarly rare in quantity, comprising Indeterminate grains (resulting from poor preservation – particularly coaling and fragmentation) and *Hordeum vulgare* sp. (Barley). With the exception of the abundance of the <2mm particulate component of the charcoal component, charcoal presence was negligible. The occasional quantity of charcoal fragments >4mm is statistically negligible.

Sample <121> Context 322 – Pit [323]

Sample <121> provided a negligible amount of archaeobotanical material. The charcoal components were light in particulate and fragment content and consequently undiagnostic. Carbonised seeds

comprised rare counts of Chenopodiaceae (Goose-foots) and Indeterminate seeds (<25µm). Occasional *Corylus avellana* (Hazel) nutshell fragments were recorded (n=7).

AREA 3

Phase 4: Late Iron Age to early Roman (LIA/ER)

Sample <123> Context 396 – Pit [397]

Sample <123> produced a rare count of Indeterminate carbonised seeds (<25µm) (n=10). Most probably weed varieties. What was notable was the quantitative absence of seeds in the charcoal bulk. The charcoal, across all fraction sizes, being clean in respect of seed and grain inclusions. Whilst the majority of charcoal from the flot and retent residues was dominated by the smaller fraction charcoal particles and fragments, there were also abundant (n=~160) fragments of charcoal >4mm suitable for analysis. This quantity of the larger charcoal fraction having the potential to produce statistically adequate data to assess species diversity and (due to the presence of stem wood fragments) dendrological markers. This deposit differs from all others in the environmental assemblage, e.g., by the absence of inclusive material – flagging up perhaps, an alternative process/utility.

Sample <124> Context 404 – Pit [405]

Charcoal from the smaller fractions (<2mm and 2-4mm) dominated this sample. The larger charcoal fraction (>4mm) was insignificant statistically. Similarly, the carbonised seed component was light – producing occasion Chenopodiaceae (Goose-foots), Indeterminate seeds (<25µm), and 1 x Indeterminate grains (>4mm).

Assessment of Preservation and Taphonomic Factors

Whilst carbonisation has preserved seeds and grains, along with wood in the form of charcoal, the process has had a detrimental impact on the structure of, particularly, larger seeds (>25µm) which includes grasses and cereals. This may be the result of initial carbonisation or even multiple burning events prior to final deposition. In turn, this degradation has affected identification to species – with the majority of such material categorised as Indeterminate to genus or category. However, identification to family and also species has been achieved. Whilst counts on the non-linear abundance scale range between occasional and fairly frequent/frequent (predominantly the former 1-10 scale in respect of non-charcoal matter) the range of weeds and grasses identified provides anthropogenic markers as to the contemporaneous condition of the local environment. Cereal grain varieties (predominantly Barley with a lesser abundance of Wheats (and the rare appearance of Spelt)) have been quantitatively and qualitatively limited statistically due degradation (coaling, pitting, grain fragmentation, vitrification and also worn surface structure) as a result of heat and contact with fire, and also within the burial environmental over time. Chaff (in the form of rachis nodes and spikelet bases (and also stem/rhizomatous matter)) was vitrified and notably small in respect of fragment size – which again prevented identification to crop variety or family. Low abundance attributed, in respect of this component, to the absence of such material in the archaeobotanical assemblage, as opposed to taphonomic degradation. Charcoal is quantitatively prevalent across the assemblage. Charcoal fragment size and sample-set fragment counts were generally small and statistically low, respectively

– which limits analysis to providing simple species presence data. However, samples with higher abundances of the >4mm fraction and those containing larger stem wood fragments have been identified as having the potential to provide additional cumulative species diversity data and dendrological markers in respect of wood-type selection, and the eventual process which produced the deposit.

Conclusions

There is continuity to the species mosaic presented by the carbonised weed and grass components from Area 1 in respect of Phases 2, 3, and 4. This indicates that the background signal remained constant through time, comprising rough wet meadow and pasture. The only raised marker (i.e., *Bromus* sp. (Brome) coupled with a corresponding rise in Poaceae (Grasses)) was noted in Sample <120> (Context 290) from Pit [291]. This observation may indicate a slight or temporary increase in the cultivation of Brome for hay, or the additional inclusion of this grass-type as a weed species or a crop bulker in this deposit. Environmental data from Area 3 (Phase 4) was statistically void in respect of seed and grain presence from this area of the site.

Cereals were absent (with the exception of 1 x Indeterminate grain) from Phase 2 deposits. Cereal varieties increased in Phase 3 and Phase 4 samples, i.e., predominantly Barley and Wheat, with a low quantitative representation of Spelt. However, the cumulative effect of a greater number of samples provided by the greater number of Phase 3 and Phase 4 environmental deposits collected may have influenced this result. Therefore, absence of evidence in respect of the Phase 2 environmental samples from Contexts (219) and (223) (Pit [220]) may not necessarily be evidence of absence. Chaff (subsuming vitrified stem matter) is rare across the assemblage and across all phases. This clean ratio of chaff-to-grain indicating domestic storage and utility as opposed to cereal processing within the catchment of Area 1. Processing, i.e., threshing and roasting/parching, may have taken place off-site in relation to occupation. Again, there is a continuity of cereal variety representation in Phase 3 and Phase 4 deposits from Area 1.

Whilst data is limited (with results being affected by poor preservation of the larger seeds, grains, and cereals), it has established the environmental constant of wet pasture and/or meadow, with the utilisation of cereal-types, both of which in their presence remained constant from the Middle Iron Age/Late Iron Age and into the Late Iron Age/early Roman period.

Recommendations for Further Work

The seed and grain components produced by the 24 x environmental samples from Areas 1 and 3, and across Phases 2, 3, and 4, have been maximised. Abundance data has been produced in Table 1. Absolute counts of all specimens, along with identification where preservation allowed, have also been made, catalogued, and archived. However, as counts were generally low in terms of prevalence these data are not significant in respect to improving or disproving the hypotheses presented above. Therefore, no further work is recommended or proposed in respect of seed and grain macrofossil analysis.

Charcoal was common to all samples from Areas 1 and 3, and across all phases. However, suitable quantities and fragment quality (i.e., >4mm) to produce statistically relevant data were limited. Whilst the results subsection of this report flags up those samples with adequate quantities of suitable charcoal for analysis, the following samples have the potential to provide data as to species diversity as a local resource, and also to investigate wood-type selection in relation to utility. It is recommended that specialist charcoal analysis is conducted on 3 x sub-samples:

Area 1 – Phase 4 LIA/ER

- Samples <104> (Context 182), <105> (Context 184), <106> (Context 192), <107> and <108> (Context 197) from Pit [183] (∑ = 181) – to investigate differences in the species component of these waste deposits from intercutting pits. Are they mixed waste deposits, or representative of individual dump/s and associated process/es?
- Sample <109> (Context 210) from Pit [211] (n=35) – as this feature is associated with Pit [183] and the intercutting multiple pits – analysis of this charcoal sample-set would provide additional data to assess the waste deposits and process/es in relation to Samples <104>, <105>, <106>, <107> and <108> (see above).

Area 3 – Phase 4 LIA/ER

- Sample <123> (Context 396) from Pit [397] produced ~160 x fragments of charcoal >4mm suitable for species identification, cumulative assessment, and also non-taxon (dendrological) analysis, to explore the fuelwood composition and deliberate or non-deliberate selection of wood-types as this deposit differs from all others in the environmental assemblage. This may explain the absence of inclusive material (including seeds and cereals) and identify an alternative process or utility that produced this dump in, what is believed to be, a rubbish pit.

No further work is proposed or recommended.

Table 1. Abundance data for Areas 1 and 3.

AREA		1																								3	
PHASE		2		3				4																		4	
Relative Date Range		EIA/MIA		MIA/LIA				LIA/ER																		LIA/ER	
Environmental Sample No.		<111>	<112>	<114>	<118>	<120>	<119>	<100>	<101>	<102>	<103>	<104>	<105>	<106>	<107>	<108>	<109>	<110>	<113>	<115>	<116>	<117>	<121>	<123>	<124>
Context No.		219	223	232	290		296	130	109	140	166	182	184	192	197		210	208	217	238	285	286	322	396	404
Feature		Pit [220]		Post Hole [233]	Pit [291]		Pit [297]	Post Hole [131]	Ditch [110]	Pit [141]	Pit [167]	Pit [183]					Pit [211]	Ditch [209]	Pit [218]	Pit [239]	Pit [287]		Pit [323]	Pit [397]	Pit [405]
Deposit Type		Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill	Fill
Bulk Volume (L)		35	31	32	31	3	58	14	32	8	32	31	31	31	32	28	30	30	33	32	33	30	18	8	32
Volume of Flot (ml)		3	9	8	30	31	18	4	2	0.5	16	7	5	5	4	100	11	3	2	12	10	3	20	200	20
Process Method		F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
FLOT																									
CHARCOAL																									
>4mm fraction			1	1	3	1	1	1			1	1		1	1	2	1		1	2	4	1	1	4	1
2-4mm fraction		1	2	2	4	3	3	2	1	1	3	1	2	3	1	4	2	1	1	3	2	1	2	4	1
<2mm fraction		4	4	4	4	4	4	4	3	3	4	4	4	4	4	4	4	2	3	4	1	4	4	4	4
CARBONISED SEEDS	**Common Name**																								
Indeterminate	Indeterminate	1	1	2	2	2	1		2	1	1	1	1			1		1	1	2	1	1	1	1	1
Bromus sp.	Brome					1																			
Carex sp.	Sedges	1	1		1		1	1												1					
Chenopodiaceae	Goose-foots	1	1	1		1		1				1		1	1						1	1	1		1
Juncus sp.	Rushes	1																							
Poaceae - Undifferentiated	Grasses			1	1		1		1			1		1							1	1			
Veronica hederifolia	Ivy-leaved Speedwell				1							1	1												
CARBONISED CEREAL GRAINS																									
Hordeum vulgare sp.	Barley				1	1				1				1						1					
Hordeum vulgare ssp. *vulgare*	Barley (hulled)							1																	
Triticum aestivum spp. *spelta*	Spelt Wheat											1													
Triticum sp.	Wheats				1						1				1										
Cereal-type - Indeterminate	Cereal-type - Indeterminate				1	1	1	1				1		1	1		2			1	1	1			
CARBONISED CHAFF																									
Rachis - Nodes (undifferentiated)												1			1					1					
Vitified stem/rhizomatous matter					1																				
INTRUSIVE MATTER																									
Plant Root Matter - Fibres		3	3	3	3	1	3	2	3	2	3	3	4	4	2			3	2	3	3	2	4	4	3
Plant Stem Matter - Fibres		2	3	2	2		2	1	1	1	2	2	3	3	2			2	1	3	2	1	3	3	2
Acer pseudoplatanus - Samara	Sycamore								1			1													
Betula pendula - Fruit	Silver Birch										1	1													1
Betula pubescens - Bract	Downy Birch																						1		
Carex sp.	Sedges - seed			1																					
Sambucus nigra	Elder			1													1				1	1			
Insect Body Segment	Indeterminate			1		1		1	1	1		1	1					1		1	1	1			
Insect Egg Case	Indeterminate	1	1	1	1	1	1	1		2	1	2	2	2	2			1	1	1	1	2	3	1	
ARCHAEOLOGICAL MATERIAL																									
Building Material																									
CBM			1											1											
RETENT																									
CHARCOAL																									
>4mm fraction		2	3	Void	1	1	3	2	1	1	3	2	3	3	2	2	3	1	2	1	3	1	1	3	2
2-4mm fraction		2	4	Void	2		3	2	3	3	3	4	3	4	3	2	3	1	3	2	2	2	2	4	1
<2mm fraction		1	4	Void	2		2	3				4	1	2	2	2	2		2	1	2	1	2	3	1
CARBONISED SEEDS	**Common Name**																								
Indeterminate	Indeterminate				1	1						1	1	1	1	1				1	3				
Asteraceae	Daisy Family				1																				
Bromus sp.	Brome				2																				
Carex sp.	Sedges	2																1							
Corylus avellana nut shell - fragments	Hazelnut				1										1		2		1				1		
Chenopodiaceae	Goose-foots	1										1			1										
Juncus sp.	Rushes																								
Poaceae - Indeterminate	Grasses	1				1	1						1							1	3	1			
Veronica hederifolia	Ivy-leaved Speedwell											1	1												
CARBONISED CEREAL GRAINS																									
Hordeum vulgare sp.	Barley (two-rowed or six-rowed)				1	1							1			1				1	2	1			
Triticum aestivum spp. *spelta*	Spelt Wheat																								
Triticum sp.	Wheats														1						2				
Cereal-type - Indeterminate	Cereal-type - Indeterminate	1			1	1	1					1			1		1	1		1	3	1			
CARBONISED CHAFF																									
Rachis - Nodes (undifferentiated)																	1								
Spikelet Base (undifferentiated)															1										
BONE																									
Large Mammal																	1								1
Small Mammal/Bird				1		2						1			1		1								
Fish/Amphibian																	1			3					
Burnt fragments					2		2	1																	
Fragments (non-carbonised)		4		2	2	3	3					2	2	2	3	4	2	1	2	4	4	2		1	2
SHELL																									
Marine Shell					1																	1			
Terrestial/Freshwater																1									
ARCHAEOLOGICAL MATERIAL																									
Building Material																									
CBM			1		4			1		1	2		4	4			1	3			3	4			2
Worked Stone					1				1														1		1
Daub						1	3					3				1				3					
Burnt Clay		4		1											3										
Finds																									
Pottery		4		4	4	1	2	1	1						1	1		1	1	2	1			3
Fe (iron)									1																
Cu (copper)		1		1																					
Glass		2								1								1		1	2				
Slag																	1								
Bone Comb Fragments													1												
Loom Weight Fragments													1												
Struck Flint		1		1	1									1				1	1				3		1
Burnt Flint					3		1																		
INTRUSIVE MATTER																									
Insect Body Segment	Indeterminate															1									
MOLLUSCS - TERRESTRIAL																									
Cepaea-type	Grove Snail															1									

Abundance: 1 = Occasional (1-10) 2 = Fairley Frequent (11-30) 3 = Frequent (31-100) 4 = Abundant (>100)

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APPENDIX 10: FIRED CLAY

Berni Sudds

Introduction

A small assemblage of burnt/ fired clay was recovered, amounting to 392 fragments, weighing just under 14.5kg. The assemblage was recovered from 28 contexts, within 24 features and from a single clearance layer. At total of 169 fragments were hand collected, weighing 7.9kg, with the remaining material recovered through wet sieving. Due to the high degree of fragmentation amongst the sampled material, not all was quantified by count (in excess of 6,000 fragments). The condition of the material is greatly variable, including small non-diagnostic pieces and large fresh fragments from complete or semi-complete objects and structures. The hand collected assemblage has an average fragment weight of just over 48g.

Fabric

Fabric Number	Description	Forms
1	Silty clay with occasional black iron ore and iron oxide/ iron-rich clay inclusions (mostly up to 0.5mm, but occasionally up to 5mm).	Oven/ kiln/ furnace superstructure; oven/ hearth lining/ base; non-diagnostic
1S	Silty clay with some lenses of moderate to abundant fine to medium quartz sand (mostly up to 0.5mm) with moderate fine black iron ore. Occasional iron oxide/ iron-rich clay and sparse calcareous inclusions (up to 5mm).	Triangular perforated brick; no-diagnostic
1V	As above with the addition of sparse to moderate organic inclusions (mostly voids).	Triangular perforated brick; clay object
2	Silty clay, slightly micaceous no visible inclusions.	Hearth base/ furnace lining; pedestal; daub; non-diagnostic
2V	As above with the addition of sparse to moderate organic inclusions (mostly voids).	Oven/ furnace lining; non-diagnostic

Table 1: Fired clay fabrics

Two broad fabric groups were identified amongst the fired clay assemblage, both with a fine silty clay matrix, but group 1 contains more iron ore/ iron-rich inclusions, and group 2 is more micaceous. As these are likely to be naturally occurring within the clay, different sources are implied (Table 1). Clay deposits are present both on and in the local vicinity of site. The various sub-divisions denote differences in the type and quantity of added temper (Table 1), principally sand and organics. The addition of the latter, helped to increase thermal resistance and prevent cracking during firing and/or use.

Phase discussion

A distribution of the fired clay by site phase appears below in Table 2. A distribution of the assemblage by context appears below in Appendix 1.

Phase	Total number	Total weight
Unphased	1	20
KCRO21-PH2	10	595
KCRO21-PH3	198	6760
KCRO21-PH4	183	7120

Table 2: Distribution of the fired clay by phase. Weight in grams.

Phase 2: Early to Mid-Iron Age

A small assemblage of fired clay was collected from two features dated to the Early to Mid-Iron Age. Pit

[421] contained a few small non-diagnostic fragments with no surfaces but the two fills of pit [220] produced a couple of fragments of hearth base or furnace lining and part of a pedestal. The lining is orangish-red and rough to the exterior and becomes darker and more vitrified towards the inner face, with an aerated margin and glassy surface. Similar material has been interpreted as furnace structure or smithing hearth lining elsewhere in Kent (Poole 2011 a & b). The possible pedestal has a square or rectangular section with rounded arises and a flat end. The full length is missing but it measures 88mm in diameter and may be tapering towards the top. Blocks of this type are interpreted as hearth or oven furniture, as supports for other structural elements or to support or stabilise other objects (Swan 1984, 53; Poole 2011b, 321; 2015, 302). Pedestals, along with other forms of portable oven furniture could transform a hearth into a semi-enclosed structure and separate food, or other materials requiring heating or firing, from direct heat (Poole 2015, 302).

Phase 3: Mid to Late Iron Age

The larger assemblage of fired clay from Phase 3 features was almost entirely recovered from the fill of two features, pits [291] and [297].

A relatively small but diagnostic group of fired clay was recovered from pit [291] (3.7kg). The majority of fragments appear to be from a curving clay superstructure, with the impressions of structural withies. There are also a couple of large fragments with a bullnose edge that may represent part of a stokehole arch and suggest the clay may originate from an oven structure. One of these has a perforation through the wall, perhaps for the securement of a suspended floor formed of wattles clay (Poole 2015, 310). Other forms of portable furniture, possibly including a firebar and plate, may be present amongst the assemblage, but these have only been tentatively identified due to the degree of fragmentation.

Pit [297] contained three triangular perforated bricks, including two complete or near complete examples from the base of the feature (SF5 and 6). The latter have two flat faces, three rectangular sides and are perforated laterally at all three apexes. The examples from site also have pre-firing grooves to each apex. Triangular forms are typically Iron Age in date (Foster 1986; Greenwood 1997; Grimes and Close-Brooks 1993; Parfitt 1984; Poole 1984; Rayner 2002), most commonly associated with Middle and Late Iron Age settlements but remained in use into the early Roman period (Greenwood 1997; Grimes and Close-Brooks 1993; O'Connell & Bird 1994, 130; Poole 2011b, 321). Measuring 52 to 63mm in thickness with sides of between 150 and 160mm in length, the examples from pit [297] are more in keeping with examples of Iron Age date (Poole 2015, 304).

The purpose of the form has been the subject of discussion since they were first identified. Given their association with large numbers of weaving combs and the presence of thread marks, they have most commonly been interpreted as loom weights, used to weight, and space the warp threads or the beam of an upright loom. Other functions have also been suggested, including door or thatch weights and, increasingly, through in-situ discoveries and associated forms/ burnt debris, as oven or kiln furniture (Swan 1984 53-4; Poole 1995, 285-6; 2010, 133; 2011a, 138-9; 2011b, 321-3; 2015, 304). It is likely the form had more than one function, and although there are few clues from their deposition as to likely function, it may be significant that other forms of portable hearth and oven furniture have been recovered from site, with possible oven structure from same phase.

Phase 4: Late Iron Age to early Roman

Phase 4 features produced numerous fragments of fired clay, but the majority of these are non-diagnostic. Ditch 3 [110] contained some structural clay/ daub, although the fragments are too small to determine what type of structure they originate from. Fragments of possible oven or hearth lining were recovered from pits [183], [218] and [358]. Those pieces from pit [183] and [358] are heavily burnt with vitrified internal faces, perhaps suggesting they originate from a smithing hearth base or furnace. The fragment from pit [358] is heavily vitrified to the internal face, but also one edge, possibly representing an opening. Finally, pit [393] produced fragments from another possible pedestal with a more circular section and a flat base.

Potential and recommendations

Although relatively small, the fired clay assemblage has produced evidence for the presence of ovens and hearths/ furnaces in all phases of activity on site. Some of these could have been domestic in nature, but the level of vitrification on some elements indicates that a few relate to some form of craft or industrial production on site or in the near vicinity. Evidence for metalworking has been identified amongst the broader finds assemblage from site, and it is of note that potential pottery wasters were recovered from the same pit that produced the oven superstructure and possible oven furniture. If the pottery wasters are of Middle Iron Age date, however, the two assemblages may be unrelated, as permanent kilns at this date would be unparalleled.

Further work should include a better understanding of distribution, in tandem with any associated finds assemblages, that may help to determine the nature of activity taking place on site, and how this developed over time. In particular, with regard to the latter, it will be important to see if there is any slag or metalworking waste associated with the fragments of furnace lining. These may also benefit from portable XRF analysis, to determine what process may have been taking place. A short publication report should be produced, accompanied by 5 illustrations.

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Appendix 1: Distribution of the fired clay by context

Context	Fill of	Form	Sample number	No	Weight
109	110	Daub	-	4	26
130	131	Non-diagnostic	100	2	5
166	167	Non-diagnostic	103	SMP	47
182	183	Non-diagnostic	-	15	195
182	183	Non-diagnostic	104	SMP	80
184	183	Non-diagnostic	105	SMP	53
184	183	Uncertain	105	7	284
192	183	Non-diagnostic	106	SMP	4602
197	183	Lining?	-	2	22
197	183	Non-diagnostic	107	SMP	104
197	183	Non-diagnostic	108	SMP	23
197	183	Non-diagnostic	-	9	150
210	211	Non-diagnostic	109	3	6
217	218	Lining?	-	16	192
217	218	Non-diagnostic	113	28	73

219	220	Lining	-	2	39
219	220	Non-diagnostic	111	SMP	140
223	220	Non-diagnostic	-	4	8
223	220	Pedestal?	-	1	395
232	233	Non-diagnostic	114	30	67
238	239	Non-diagnostic	115	SMP	39
264	265	Non-diagnostic	-	1	4
269	270	Non-diagnostic	-	1	9
279	280	Non-diagnostic	-	11	42
286	287	Non-diagnostic	116	31	103
286	287	Non-diagnostic	117	SMP	150
290	291	Oven/ kiln/ furnace superstructure	-	23	3085
290	291	Oven/ kiln/ furnace superstructure	118	115	620
296	297	Clay object	-	1	44
296	297	Non-diagnostic	119	SMP	155
296	297	Perforated triangular brick	-	13	1637
296	297	Perforated triangular brick	-	13	1109
296	297	Perforated triangular brick?	-	1	39
334	336	Non-diagnostic	-	2	4
337	338	Non-diagnostic	-	4	70
355		Non-diagnostic	122	SMP	19
357	358	Lining	-	2	124
362	363	Non-diagnostic	-	1	57
364		Non-diagnostic	-	1	1
375	376	Non-diagnostic	-	9	42
375	376	Tegula	-	1	359
386	387	Non-diagnostic	-	3	8
392	393	Pedestal?	-	27	597
404	405	Non-diagnostic	124	7	13
420	421	Non-diagnostic	-	3	13

Table 4: Distribution of the fired clay by context. No = number of fragments. Weight in grams. SMP = Sample/ multiple small fragments/crumbs.

APPENDIX 11: STONE

Amparo Valcarcel

Introduction and methodology

The stone was examined using the London system of classification (Betts, 1995 update). Examples of the fabrics can be found in the reference collection of the Museum of London Archaeology Service. A fabric number was allocated to each object which specifies its composition, form, and approximate date range. A consultation of the relevant 1:50000 geological maps for this area (http://mapapps.bgs.ac.uk/geologyofbritain/home.html?location=IP9%203DG) provided the local geological background.

The application of a 1kg masons hammer and sharp chisel to each example ensured that a small fresh fabric surface was exposed. The fabric was examined at x20 magnification using a long arm stereomicroscope or hand lens (Gowland x10).

The material collected from this site amounts to 120 fragments weighting 13872g. The assemblage recovered from fills of different features dates Early Iron Age to early Roman. Most of the stones are too small to identify a form, but probably they are natural erratic material.

Stone (221 fragments, 8.505g)

The stone assemblage is mainly comprised of natural fragments, with no attached mortar observed and no worked stone was identified. Four different lithotypes were identified:

- -Hassock stone (fabric 3106) (25 fragments, 555g): is a hard grey limestone in Kent, England, drawn from the geological formation known as the Hythe Beds of the Lower Greensand. All the fragments are very small, unworked, and no mortar has been attached, suggesting that the fragments are natural.
- -Volcanic stone (fabric 3120a) (50 fragments, 1662g): Rhyolitic stone, a fine-grained igneous rock consisting of quartz, feldspars, and mica or amphibole. In the absence of any definable form and surface, it is not possible to determine their function.
- -Volcanic stone (fabric 3120b) (19 fragments, 1352g): Rhyolitic stone, a fine-grained igneous rock consisting of quartz, feldspars, and mica or amphibole, with red iron oxide inclusions. In the absence of any definable form and surface, it is not possible to determine their function.
- -Quartzite (fabric 3137) (1 fragment, 251g) is a common stone easily found within the clay bulk as erratic stones. The fragment recovered had been clearly burnt.

Distribution

Context	Fabric	Type	Quantity	Weight	Spot dates
200	3106	Hassock stone fragments	1	13	BC100-AD100
207	3106	Hassock stone fragments	3	39	BC100-AD100
219	3106;3120a	Hassock stone fragments; Volcanic stone	26	188	BC600-100

223	3106; 3120a; 3120b; 3137	Hassock stone fragments, Volcanic stone, Burnt quartzite	26	824	BC500-350BC
290	3106	Hassock stone fragments	1	5	BC350-BC200
322	3106	Hassock stone fragments	2	12	BC100-AD100
337	3106	Hassock stone fragments	1	16	BC100-AD100
343	3106	Hassock stone fragments	5	28	BC100-AD100
355	3106	Hassock stone fragments	1	39	BC100-AD100
362	3106	Hassock stone fragments	2	5	BC100-AD100
404	3106; 3120a; 3120b; 3137	Hassock stone fragments; Volcanic stone	25	239	BC100-AD100
410	3120b	Volcanic stone	18	1275	BC500-350BC

Area 1

Early Iron Age/Middle Iron Age

A small quantity of material was found in this area, totalling 59 fragments weighting 1480g. Most of the material was recovered from fills of pits. The fills dating Early/Middle Iron Age consisted in fifty-three fragments weighting 1416g of Hassock stone, abraded volcanic stones (3120a/b) and a fragment of burnt quartzite recovered from fill [223]. Hassock stone was found in contexts [219], [223] and [290] and represents natural stone. Both types of volcanic types were collected from fills [219] and [223]. The absence of mortar adhering to the fragments, or any visible surfaces makes it impossible to determine if their presence is from a building/structure/object or from the geological substrate. The volcanic stones are to smooth to have been used as querns (Marit Gaimster, personal communication).

All the material collected in fills of Late Iron Age/early Roman consisted in natural fragments of Hassock stone (6 fragments, 64g).

Area 2

The material found in Late Iron age/early Roman fills [337] and [343] (ditches) comprised in natural Hassock stone fragments (6 fragment, 28g).

Area 3

The material recovered from this area is in greater density comparing to the other areas (44 fragments, 2309g). The assemblage was collected mainly from fills of pits and ditch dating Early/Middle Iron Age.

Hassock stone was present with ten fragments, weighting 244g, and represented natural stone in fills [362] and [404]. Volcanic types (3102a, 16 fragments, 790g) (3120b, 18 fragments, 1275g) were found in fills [404] and [410]. Unfortunately, without associated assemblages it can be difficult to determine which function was represented.

Recommendation

The stone recovered from the excavation shows that the features uncovered dates to Early Iron Age to early Roman. The absence of any signal of being worked or used makes the dating of this material difficult, although it was compared with the prehistoric pottery. The volcanic types are not directly related with any function. They were identified from Early Iron Age to early Roman deposits, and they were found disperse throughout all the areas. However, the condition of the assemblage, with multiple fragments from the same objects, would also suggest the material is unlikely to be re-deposited. Unfortunately, without associated assemblages it can be difficult to determine which function is represented. Due to the abraded nature of the pieces, there is little further work that can be done.

In case of publication, I highly recommended the review of these material by a stone specialist to determine and identify if this material is part of the erratics within the clay boulder or had been imported for any specific function.

APPENDIX 12: OASIS FORM

Summary for preconst1-505502

OASIS ID (UID)	preconst1-505502
Project Name	Strip Map And Sample at Land at Church Road, Otham
Sitename	
Activity type	Strip Map And Sample
Project Identifier(s)	Land at Church Road, Otham
Planning Id	
Reason For Investigation	Planning: Post determination
Organisation Responsible for work	Pre-Construct Archaeology Ltd
Project Dates	12-Jul-2021 - 10-Sep-2021
Location	Land at Church Road, Otham NGR : TQ 78712 53934 LL : 51.2565601189469, 0.559732979260598 12 Fig : 578712,153934
Administrative Areas	Country : England County : Kent District : Maidstone Parish : Otham
Project Methodology	Four areas of Strip, Map and Sample excavation was undertaken comprising a total area of 0.925ha. Stripping extended to the archaeological horizon with the identified archaeological features being investigated and recorded.
Project Results	The earliest deposits encountered were the natural sandstone and limestone deposits, the top of which sloped from a maximum level of 73.24m OD (Area 4) in the south to a minimum level of 60.28m OD (Area 1) in the north. The earliest activity on the site appears as a significant assemblage of flint micro debitage recovered from a late Iron Age/Early Roman pit. Early to Middle Iron activity was defined by pottery, copper alloy waste and a stone mould recovered from two pits in Area 1 and two pits in Area 3. The finds suggesting that the site was being occupied and industrial works were being carried out. Area 1 provided the only evidence of activity during the Middle to Late Iron Age in the north of the area provided two pits which recovered pottery (including wasters) and hearth furniture suggesting there was pottery production. A short section of a later truncated ditch was also encountered and dated to the Middle to Late Iron Age period. Much of the site was dated to the Late Iron Age/Early Roman period, with each area providing evidence of enclosure ditches as well as pits and postholes which provided dating and evidence of occupation on the site until the Early Roman period.

Keywords	Boundary Ditch - EARLY IRON AGE - FISH Thesaurus of Monument Types Boundary Ditch - MIDDLE IRON AGE - FISH Thesaurus of Monument Types Boundary Ditch - LATE IRON AGE - FISH Thesaurus of Monument Types Kiln - LATE IRON AGE - FISH Thesaurus of Monument Types Kiln Furniture - LATE IRON AGE - FISH Archaeological Objects Thesaurus Mouldstone - EARLY IRON AGE - FISH Archaeological Objects Thesaurus
Funder	
HER	Kent HER - unRev - STANDARD
Person Responsible for work	
HER Identifiers	
Archives	

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