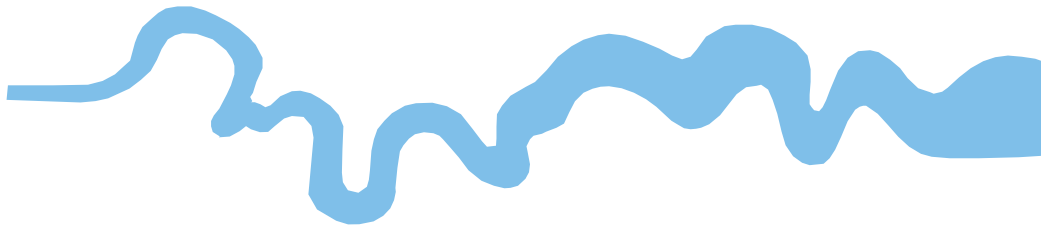


T V A S



SOUTH

**Land at Orchard Farm,
Iwade, Kent**

Phase 1 and 1a

Archaeological Recording Action

by Graham Hull

Site Code: OFI 15/160

(SU 8830 6720)

Land at Orchard Farm, Iwade, Kent

**An Archaeological Recording Action
(Phase 1 and 1a extraction, Lagoon and Access)
For Wienerberger Limited**

by Graham Hull
Thames Valley Archaeological Services Ltd

Site Code OFI 15/160

December 2017

Summary

Site name: Land at Orchard Farm, Iwade, Kent

Grid reference: Lagoon = TQ 8844 6708

Phase 1 = TQ 8831 6719

Phase 1a = TQ 8823 6729

Site activity: Archaeological Recording Action

Date and duration of project: 12th February to 9th June 2016

Project manager: Steve Ford

Site supervisor: Luis Esteves, Danielle Milbank, Graham Hull and Kyle Beaverstock

Site code: OFI 15/160

Area of site: Lagoon = c.0.6ha; Phase 1 extraction = 1.68ha; Phase 1a extraction, including new access = 1.56ha

Summary of results: The observations over four distinct areas (new access road and compound, Lagoon site, Phase 1 and Phase 1a extraction sites) have uncovered features of archaeological origin. The earliest features comprise two small clusters of Middle Bronze Age pits containing pottery and burnt flint. Late Iron Age features were also revealed in two areas, one probably the edge of a settlement, accompanied by a small cremation cemetery, and the other an extensive field system.

Location and reference of archive: The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited when a suitable depository becomes available.

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www.tvas.co.uk/reports/reports.asp.*

Report edited/checked by: Steve Ford ✓ 06.12.17 Steve Preston ✓ 06.12.17

Land at Orchard Farm, Iwade, Kent An Archaeological Recording Action

by Graham Hull

with contributions by Will Attard, Steve Crabb, Ceri Falys, Lizzie Lewins, Malcolm Lyne, Danielle Milbank and Steve Preston

Report 15/160

Introduction

This report documents the results of an archaeological recording action carried out on land at Orchard Farm, Iwade, Kent, ME9 8QG (TQ 8834 6717) (Fig. 1). The work was commissioned by Mr Andrew Josephs of Andrew Josephs Associates, 16 South Terrace, Sowerby, Thirsk, YO7 1RH. This primary work was in relation to the first (enabling) stages of a large quarry complex, which included a strip for a new access road to the extraction area from School Lane, and a new lagoon in the south-east of the proposed extraction area. This then led to archaeological observation of soil stripping over the extraction areas for Phase 1 and 1a covering a total of *c.* 3.25ha.

Condition 16 of planning permission (SW/15/502632) granted by Kent County Council for the extraction of brickearth at Orchard Farm requires a programme of archaeological monitoring and recording in advance of extraction. This is in accordance with the Kent Minerals Local Plan (KCC 2014). As a result of the complete loss of heritage assets that can occur for quarry workings, a formal programme of archaeological monitoring has been carried out to a specification approved by Mr Simon Mason, Principal Archaeological Officer of Kent County Council.

The field investigation was supervised by various personnel during the works. The strip for the new access and compound was observed by Luis Esteves between 12th and 17th February 2016; the strip for the lagoon was observed by Danielle Milbank and Kyle Beaverstock between 4th and 13th May 2016; the remaining observations of the Phase 1 and 1a extraction areas were undertaken from 16th May 2016 and supervised by Graham Hull and Kyle Beaverstock. The excavation of uncovered features extended until 9th June 2016. The fieldwork team included Will Attard, Rebecca Constable, Cosmo Bacon, Jon Tierney, Jesse Coxey, David Platt, and Benedikt Tebbit. Andy Mordin did the illustrations. The site code is OFI15/160.

The archive is presently held at Thames Valley Archaeological Services, Reading and will be deposited when a suitable approved museum becomes available.

Location, topography and geology

The site is located *c.*2km west-south-west of the village of Iwade which is located in the Swale Borough Council (Fig.1). The site lies north-east and south-east of Orchard Farm on gently sloping ground, with the entire four phases of

extraction covering 14.70ha within an irregular parcel of land bounded to the west and north by School Lane. Agricultural fields and farm buildings form the boundaries to the south and east, with orchards both within the site and to the east. The site slopes down from the north-west to the south-east with elevations varying from 27.3m above Ordnance Datum (aOD) in the north-western corner down to 21.80m aOD in the south-eastern corner. The land prior to topsoil stripping served as a commercial orchard.

The underlying geology is London Clay, with Head brickearth deposits to the west and east (BGS Geoindex Onshore; BGS 1974). The observed natural horizon on the site was a mottled grey and reddish yellow clay (Pl. 1).

Archaeological background

The archaeological potential of the quarry area has been covered in detail by a cultural heritage assessment (AJA 2015). In summary, relatively few heritage sites and finds are recorded in the Kent Historic Environment Record (HER) within 2km from the quarry. Scheduled Monuments relating to a World War II anti-aircraft gun position and listed buildings associated with Post-Medieval farms of 17th- and 18th-century date are recorded, but none of their settings is directly affected by the works (AJA 2015). What seems to be of most significance is the presence of a moated site (formerly Moat Farm), which appears on mapping at least to the early 19th century, and lies just beyond the north-eastern boundary of the Phase 4 extraction area (Fig. 1).

Further afield from the extraction area, recent housing development in Iwade has allowed investigations that provide a growing understanding of the village as a transport point crossing the marsh land between the main land and the Isle of Sheppey since the Mesolithic period (Bishop and Bagwell 2005; Wilkinson 2013). Settlement and land management features have been uncovered particularly from the Bronze Age and Iron Age periods, monumental landscape use in the Neolithic period and landscape navigation and division in the Saxon and Medieval periods.

Objectives and methodology

The purpose of the recording action was to determine the presence/absence, extent, condition, character, quality and date of any archaeological deposits which could be affected by the area of development.

The general objectives of the project overall are to:

Excavate and record all archaeological deposits and features within the areas affected by the proposed development.

Produce relative and absolute dating and phasing for deposits and features recorded on the site.

Establish the character of these deposits in attempt to define functional areas on the site such as industrial, domestic, etc.

Produce information on the economy and local environment and compare and contrast this with the results of other excavations in the region.

Specific research questions the project hoped to address were:

What is the nature of the human activity on the site and what is its date and extent?

Are any structural remains on the site representing occupation and if so are they enclosed or unenclosed?

How do they relate temporally and spatially to any land division features?

What use was made of floral and faunal resources and can these be identified and assessed from a programme of environmental sampling?

What is the palaeoenvironmental setting of the various episodes of activity on the site?

Is there any evidence related to the medieval moated site?

The overburden stripping covered an area of approximately 3.25ha (Fig. 2). Topsoil and overburden were removed by a 360° mechanical excavator fitted with a toothless bucket to expose the uppermost surface of archaeological deposits. All archaeological deposits were cleaned and excavated by hand. All discrete features were half sectioned as a minimum, postholes being fully excavated. All termini and intersections were examined. Sampling of linear features such as ditches and gullies relating to settlement activity (ie rich deposits) were to a minimum of 15%. Other linear features such as field boundaries were sampled at a minimum of 10%.

The topsoil across the site was loosely compacted dark brown silty clay that was between 0.20m and 0.40m thick. Little subsoil remained. The tree throw holes are not shown on plans, to reduce clutter.

Results

The excavation revealed ten ditches, eight gullies, three postholes, a possible hearth, four cremation deposits, 58 pits, three modern animal burials and evidence of innumerable modern fruit trees. The feature fills were typically derived from the natural geology and were brickearth-based with varying amounts of flint, pottery and charcoal inclusions. The human cremations were excavated under licence from the Ministry of Justice (Licence No. 16-0111). Most of the features dug produced dating evidence (pottery) and two principal phases were represented: Middle Bronze Age (MBA) and Late Iron Age (LIA). Some of the pottery may span the Middle/Later Bronze Age (M/LBA) divide, but a large proportion of this is in clearly later features; some of the Iron Age pottery may be more in the Middle Iron Age tradition than Late but the two probably co-exist; and a small amount of certainly Roman pottery is present, suggesting that the Late Iron Age use of the site continued up to the conquest period before abandonment. It is possible that the small struck flint collection includes items of Neolithic date, but it is of an indifferent quality and range of types and could easily belong to the Bronze Age use of the site.

Middle Bronze Age

The Middle Bronze Age phase is represented by six pits and residual finds in a LIA ditch. The most clearly dated are three pits that are present in isolation, or in areas surrounded by LIA features. One of these features (pit 124) has been radiocarbon dated.

Pit 37 was the only feature of this period within the main extraction area, located within a tight cluster of LIA gullies and other features (Fig. 3). It was sub-circular in plan measuring 1.81m by 1.12m and was 0.20m deep with a single fill (Fig. 6). It contained a substantial portion of a bucket urn, a flint flake and burnt flint, but no cremated bone.

Pit 137 was also located in the central part of the lagoon area, again within an area of LIA pits and postholes (Fig. 4). It was only 0.18m across and 0.03m deep with a single fill. It contained 12 sherds of MBA urn and a little burnt flint but no cremated bone.

Pits 121-4 form a small loose cluster (about 12m by 6m) some 36m north of pit 137 (Fig. 4). Pit 121 was 0.43m across and 0.23m deep with a single fill. It contained 3 sherds of M/LBA pottery and a little burnt flint. Pit 122 was 0.40m across and 0.20m deep with a single fill. It contained a single sherd of M/LBA pottery and a little burnt flint. Pit 123 was 0.7m across and 0.30m deep with a single fill. It contained 6 sherds of M/LBA pottery, a flint flake and a little burnt flint. Pit 124 (Pl. 2) was sub-rectangular in plan and measured 1.33 by 0.77m and was 0.10m deep. The fill was a dark greyish brown matrix of silty clay that included 50 % burnt flint and 25% charcoal. It also contained a large part of a Middle Bronze Age bucket urn. Charcoal from the fill has been radiocarbon dated to (most probably) 1465–1384 cal BC (UBA36362), as expected, towards the end of the Middle Bronze Age.

Ditch 236 appears to be an integral part of the LIA field system yet the only pottery recovered from it were 17 sherds of MBA pottery. Despite the absence of later material from this ditch it is considered unlikely to be Bronze Age and these sherds are considered to be residual. Presumably the ditch had originally been cut through more pits similar to those to its south.

Late Iron Age

This phase of site activity can be broadly summarized as comprising an area of settlement, with pits/postholes and part of a field system; a small dense cluster of gullies, including a roundhouse gully along with a loose grouping of cremation burials; and a low density spread of isolated features across most of the stripped area.

Cluster 1 (Figs 3 and 6)

Three short ditches (228, 229 and 230) formed the nucleus of cluster 1 which lay adjacent to the south-west baulk and continued for an unknown extent beyond. Ditch 228 was recorded for 6.7m and was aligned from north to south and was typically 1m wide and had a maximum depth of 0.32m (Fig. 6). Parallel to and 4m to the east of Ditch 228 was

Ditch 229. Ditch 229 was 3.60m long and typically 0.95m wide and had a maximum depth of 0.36m. Ditch 229 may also be interpreted as an elongated pit. Perpendicular to and 0.75m to the west of Ditch 228 was Ditch 230. Ditch 230 was recorded for a length of 6.50m and had a maximum depth of 1.69m and a maximum depth of 0.13m. The ditch petered out to the west.

Three nearby gullies (231, 232, 104) produced no dating evidence but appear to be related to the ditches. Gully 104 was aligned south-east to north-west and was 2.8m long, 0.31m wide and 0.03m deep. Gullies 109 and 232 were also aligned south-east to north-west and may well represent a single truncated feature. Gully 109 was 1.8m long, 0.32m wide but only 0.03m deep. Gully 232 (Fig. 6) was 4.4m long and had maximum width of 0.47m and depth of 0.16m.

The possible ring gully 231 was only 2.4m long and would have formed about 25% of a 5m diameter circular structure. It was 0.23m wide and 0.03m deep. Given its poor survival it is impossible to tell if it was a foundation or an eavesdrip, but in either case it is taken to represent a house site.

The cluster included two pits (29/30) and a posthole (31) (besides an unrelated MBA pit). Pits 29 and 30 conjoined but it was not possible to establish the relationship between the two features or to have complete confidence that there were indeed two features. Pit 29 (Fig. 7) was approximately 1.10m long and 0.83m wide and was 0.21m deep. Pit 30 (Fig. 7) was 1.50m in each direction and was 0.20m deep. Together pits 29 and 30 formed a 'keyhole' shape that might indicate a cereal drying kiln but the fills were not charcoal rich and there was no evidence of in situ burning.

A potential hearth, 26, was recorded approximately 9.80m to the south-west of the possible truncated roundhouse. The feature had a diameter of 0.78m and was 0.14m deep. The fill (78) was heat oxidised reddish grey silty clay with approximately 20% charcoal content.

A small cluster of pottery (160) lay in no discernible cut but contained 44 sherds of pottery in six different fabrics

Cremation deposits (Fig. 3)

Just to the north of cluster 1 were three features or deposits (105, 111, 115) that contained cremated bone (Figs 3 and 6). Feature 105 represented the heavily truncated remnants of an urned cremation burial within an area approximately 0.50m across (Pl. 3). Although highly fragmented, the jar in 'Belgic' grog-tempererd fabric B3 contained all of the bone from this feature. Urned cremated bone was recorded approximately 1.30m to the west (111) (Fig. 6) (Pl. 4) and 8.90m to the south-west (115). Both deposits were ill-defined in plan, were not associated with pottery and were no more than 0.30m across. They may represent disturbance of the cremation burial 105, although separate burials of tiny amounts of cremated remains are not uncommon in the period, and in fact deposit 170 in cut 111 contained much more bone than urned burial 105. Charcoal from spit 5 in cremation pit 111 has been radiocarbon dated to (most probably)

234–85 cal BC, and archaeologically a date towards the end of this range is preferred. Statistically there is a significant chance (27.6%) for the radiocarbon date to be considerably earlier (356–285 cal BC) but this is unlikely on the basis of the rite and the apparent association of the three burials.

Cluster 2 (Fig. 4)

This cluster occupied most of the lagoon area of the site. It was dominated by several ditches forming part of an enclosure/field system along with isolated pits and postholes and a more dense area perhaps reflecting an occupation complex.

Seven ditches (235-241) were recorded in the southern area (Figs 4 and 7). The ditch alignments and stratigraphic relationships indicate two phases of field system.

The earliest phase of field system was represented by Ditches 235 and 236. These ditches were perpendicular to each other and aligned from south-east to north-west and from south-west to north-east respectively. Ditch 241 was also aligned from south-east to north-west and although not quite on line is probably a continuation of ditch 235, perhaps with an inturned entrance. Ditch 235 (Fig. 8) was recorded for a length of 82m and was typically 0.80m wide and 0.30m deep. Stratigraphically earlier but undoubtedly practically contemporary was Ditch 236. This ditch was recorded for a length of 38.5m and ranged in width between 1.16m and 3.20m and in depth between 0.22m and 0.30m. In some places Ditch 236 was nearly imperceptible as the fill was essentially the same as the natural brickearth geology. Ditch 241 was recorded for a length of 24.7m and ranged in width between 0.50 and 0.74m and in depth between 0.32m and 0.65m. The 6m gap between it and ditch 235 may have been intentional, as 235 appeared to terminate (though it was also petering out) but the presence of a northern termination of 241 was uncertain.

The later phase of field system was represented by Ditches 237-240. The later field system seems to add to, rather than replace, the earlier, creating subdivisions in the south and extending the area bounded to the north-east while retaining the general layout set by ditches 235 and 236. The second phase ditches were broadly aligned WNW to ESE or (in the case of Ditch 237) SSW to NNE. Stratigraphically, Ditch 237 was seen to cut Ditch 235. Ditch 237 (Fig. 8) was 24.00m long and ranged in width between 1.17m and 1.25m and in depth between 0.52m and 0.80m. Ditch 238 (Fig. 8) had an observed length of 45.00m and ranged in width from 1.12m to 1.51m and in depth from 0.52m to 0.71m. It had a clear terminus in the gap between ditches 241 and 235, which reinforces the impression that this was an entrance way, and still in use or at least still visible. Immediately adjacent to and parallel on the southern side was an earlier iteration of Ditch 238. Ditch 239 (Fig. 8) was only observed in section in slots 202 and 223 and could not be seen in plan but its presence in section reinforces the impression that this second phase of field system built upon, rather than replaced, the earlier. Ditch 239 was 1.12 m wide and ranged in depth from 0.43m to 0.50m. The ditch fill was very

similar to the alluvial natural geology. Ditch 240 (Fig. 8) was observed for a length of 16m and ranged in width from 0.36m to 0.42m and in depth from 0.12m to 0.15m.

Gullies; possible hearth and post holes

Four linear gullies (203, 242-244) and two postholes (132 and 206) were observed in close proximity to each other (Fig. 4). All four gullies were aligned from the south-west to north-east quadrants and were parallel to nearby ditch 237 and must be related to it. Gully 203 was likely an extension of Ditch 237 but the relationship between these two features could not be discerned. Gully 203 (Fig. 8) had an observed length of 2.2m and was 0.45m wide and 0.15m deep. Gully 242 was 20m long, 0.30m wide and had a maximum depth of 0.30m.

Posthole 132 was recorded in the north-east end of Gully 242 but the relationship between the two features was not evident. The posthole had a diameter of 0.34m and was 0.56m deep. Approximately 2.00m to the north-east was similarly sized Posthole 206 (Fig. 9). This posthole was cut by Ditch 235 and had a diameter of 0.57m and was 0.58m deep. Gullies 243 and 244 were in close proximity to each other, parallel and seemingly respected Ditch 235. Gully 243 (Fig. 8) was 7.40m long, typically 0.50m wide and 0.30m deep. Small offshoot gullies (or root activity) were noted on the southern side of the gully. Gully 244 (Fig. 8) was 1.97m long, 0.35m wide and 0.30m deep. Posthole 13 was seen to cut Ditch 235 and had a diameter of 0.33m and was 0.35m deep.

Although there is a clear concentration of postholes within the triangular area bounded by ditches 235, 238 and 237, they make no clear structure, though there is possibly an 8-post rectangle (138, 139 and 142-7); this is a little spoilt by irregular spacing and by three of the east-side posts being markedly smaller than those to the west.

Pits

Fifty-two pits of varying size and complexity were recorded and excavated across the site. The pits were located, in the main, at the north-east edge and south-west part (Fig. 3) of the northern area and at the northern and central part (Fig. 4) of the southern area. This distribution may be a genuine reflection of the absence of archaeology in other areas - particularly at the extreme south of the southern area due to river flooding. The relative absence of archaeology in the majority of the slightly higher and drier northern area may be indicative of truncation by modern agricultural activity.

The majority of the pits were simple in form and offer little evidence of function. The high charcoal content in some of the pits suggests that a so far undiscovered habitation site is very likely to be nearby.

Four other pits (49, 100, 102, 208, 245) that merit more detailed description were excavated.

Pit 49 was located in the north-eastern part of the southern area and was oval in plan and measured 1.66m by 0.97m and was 0.16m deep. Pit 100 lay approximately 1.40m to the north-east of Pit 49 and was oval in plan and measured 1.62m by 1.43m and was 0.21m deep. Pit 102

Pit 102 was located at the central part of the southern area and was circular in plan and had a diameter of 1.00m and was 0.60m deep. The pit had vertical sides that became slightly undercut towards the concave base and in essence was 'bell-shaped'. There were four fills none of which showed visible charcoal.

Pit 208, located near at the central part of the southern area was oval in plan and measured 1.96m by 0.76m and was 0.31m deep.

Pit 245 was located towards the southern part of the southern area (and measured 30.70m long by 4.80m wide and had a maximum depth of 0.70m. The pit was orientated from south-east to north-west and possibly functioned as a pond or water management feature on the lower part of the site near a stream that likely flooded before assumed relatively recent canalization. It is possible that it was a quarry although it would have had to be exploited only in high summer. Slots 225 and 227 contained substantial pottery assemblages dating this feature to the very end of this period, although it may be suspected that a single small greyware sherd presumed to be early Roman may be intrusive.

Modern features

Three modern farm animal burials were encountered (39, 42 and 246). All were articulated and some contained plastic and other modern material. Tree throw holes were encountered across much of the site. These were in the size range of 0.50m to 1.00m and characteristically exhibited chalk pieces and plastic inclusions. These trees were commercially grown pear trees planted in regularly spaced rows. They have not been shown on the plans in this report.

Finds

Pottery by Malcolm Lyne

The excavation produced 1949 sherds (17,913g) of pottery from 81 contexts: a further 476 sherds (1926g) of pottery were retrieved from 35 environmental samples (Appendix 2). This pottery ranges in date from Middle and Late Bronze Age, through two phases of Late Iron Age occupation to pre-Flavian Roman.

All of the pottery assemblages were quantified by numbers of sherds and their weights per fabric. These fabrics were identified using a x8 magnification lens with built in metric graticule in order to identify the natures, forms, sizes and frequencies of filler inclusions added to the fabric and those naturally-present in the potting clay. Five numbered fabric series were drawn up with the prefixes BA, IA, B, BER and R for Bronze Age, Iron Age, 'Belgic' Late Iron Age, 'Belgic'/Early Roman transition and Roman respectively. The first two fabric series were created by the author: the last three were created by the Canterbury Archaeological Trust (Macpherson-Grant *et al.* 1995).

None of the pottery assemblages are large enough for additional quantification by Estimated Vessel Equivalents (EVEs) based on rim sherds (Orton 1975)

The Assemblages

Middle and Late Bronze Age.

Ditches 235 and 236 in the Lagoon area produced very little pottery, with most of the cuts across Ditch 235 having none. Cuts 116 and 117 across Ditch 236 did, however, yield 17 urn fragments between them. Pits 121, 123 and 124 in the same area also yielded urn fragments, with Pit 124 producing the greater part of a bucket urn.

The pottery assemblage from Pit 14 appears to be Late Bronze Age-to-Early Iron Age in date with the 83 sherds (537g) pottery assemblage from it comprising fragments from four post-Deverel Rimbury convex-sided hole-mouthed jars (*c.* 1000–500BC) and a shouldered jar (*c.* 800–500BC)

Late Iron Age 1. (*c.* 100BC–AD25)

The features belonging to this phase are all concentrated in the Lagoon area and comprise Gullies 242, 243 and 244, as well as pits 127, 130, 131, 141, 143, 146 and 200, and posthole 132. The associated pottery is largely calcined-flint tempered but also includes significant amounts of glauconitic ware (*c.* 100BC–AD25) from the Maidstone area.

Late Iron Age 2. (*c.* AD1–43)

Ditches 237, 238, 240, 241 and pit 245 in the Lagoon area belong to this phase, as do ditches 228, 229, 230, 231 and 232 to the north-west and associated cremation 105. The pottery associated with these features still includes significant numbers of fresh calcined-flint tempered sherds, indicating that such wares were still being produced: it is debatable, however, as to whether such wares survived in use at Iwade until the Roman Conquest

Much of the pottery in use during this period has grog and grog-and-calcined flint filler (*c.* 25BC–AD70 and 75BC–AD50 respectively) and was used for neck-cordoned bowls, barrel beakers, bead-rim jars and other forms. A few sherds in glauconitic ware indicate that limited supply may have carried on until *c.* AD25: this is in contrast to the situation in the Maidstone area close to the source of such wares, where significant quantities were supplied until *c.* AD60. It would appear that glauconitic wares were squeezed out of their share of the Iwade area market by the arrival of 'Belgic' grog-tempered wares around 25BC.

It is uncertain whether any pre-Conquest Gallo-Belgic imports are present at Iwade but an unusual *terra rubra* CAM75/78 cup from Ditch 238 (*c.* AD10–50) may have arrived before AD.43.

Early Roman

Occupation on the site lingered on for a few years after the Roman Conquest. The pottery from the fills of Late Iron Age 2 ditches 238 includes a few fragments from biconical beakers in North Kent Fineware (*c.* AD43–130), a *Verulamium* Region Whiteware flagon (*c.* AD50–150), a Lyon roughcast beaker (*c.* AD43–70) and a bead-rim jar and other forms in Thameside greyware. None of the Roman sherds need be later than AD70.

Struck flint by Will Attard

A modest assemblage of worked flint was recovered from the site at Orchard Farm. In total, 37 flints were recovered, including 9 pieces from surface topsoil contexts. The assemblage is dominated by small, unretouched flakes struck from poor quality flint, with the pieces being generally in good, fresh condition. No formal lithic implements were recovered, though two flakes show distinctive and intentional bevelling along one or more edges.

The raw material used to create this assemblage is variable in colour and interior character. It ranges from pale grey with coarse inclusions through to a dark reddish brown. With the exception of a single surface find (a narrow flake displaying a pale blue-grey patina) the flakes are relatively free from patination. A number of dark or black flakes were recovered, all with thick chalky cortex. The geology at the site does not naturally include flint of a size and type suitable for knapping, and thus the presence of worked flint at the site is considered the result of anthropogenic processes. In recent times the site functioned as cultivated fields and an orchard. Large chunks and nodules of chalk-sourced flint were observed across the breadth of the site and are likely a by-product of agricultural liming procedures. As such, surface finds of struck flint where said flint appears to be from a chalk source are overwhelmingly likely to be the result of modern plough and machine damage rather than genuine lithic artefacts. Where flints of this type are recovered from within archaeological deposits (as ditch terminus 44 and pit 37) it is noted that these may be intrusive material from modern agricultural activity.

Notable finds

Two flakes were recovered showing a distinctive bevelling or very fine abrupt retouch along one edge. The first is a broken flake struck from translucent mid-grey flint. The flake appears to have been broken post-retouching, as the break truncates retouch scars. It is possible this break occurred during utilization. The second flake is complete, struck from a very translucent flint stained brown-orange and more opaque at the proximal end. Bevelling extends from the proximal end approximately halfway along the right hand edge (viewed ventrally). On the opposite edge a polish is visible, likely utilization damage, and particularly associated with processing of plant material.

One flake is struck from translucent mid-grey flint, and appears to originally have been part of a larger flake, perhaps broken during use. The second flake is made from near-transparent flint, stained brown-orange at the proximal end. An area of polish is visible (with a magnifying glass) along one edge, and associated with utilisation, particularly relating to processing plant matter.

Burnt Human Bone by Ceri Falys

A total of three contexts containing burnt human bone were recovered from the investigated area (cuts 105, 111, and 115) (Appendix 3). Although heavily truncated and damaged, 105 (350) contained the remains of an urn surrounding

the burnt bone. The other two cremation-related deposits, 111 (170) and 115 (171), were not found in association with pottery. All deposits of burnt bone were whole-earth recovered on site in series of spits, measuring between 10mm (115) and 40mm (spit 1 of 111) in thickness. The majority of spits were 20mm in depth. During post-excavation processing, the surrounding soil and bone were subsequently floated and wet-sieved to a 1mm mesh size, with all burnt bone collected and other associated residues present were separated for further analysis.

Prior to osteological analysis the bone from each context has been sorted using a sieve stack comprising 10mm, 5mm, and 2mm mesh sizes and weighed. The relative weights from each of the sieves has been recorded, along with information regarding the colour(s) of the burnt bone for each deposit, and the maximum post-excavation fragment sizes of both cranial and post-cranial elements (Tables A3.1 and A3.2). As Table A3.2 summarizes, a combination of poor preservation and truncation produced significant fragmentation of the remains recovered from deposits (350) and (171), resulting with the majority of bone measuring less than 10mm in size. The bone retrieved from (170) was better preserved and displayed a larger average post-excavation fragment size (Table A3.1). Maximum measurements of cranial fragments are 23.4mm (171) and 35.1mm (170). Pieces of cranium are not present in (350). Long bone shaft fragments display larger fragment sizes, with values ranging between 35.2mm (171) and 72.5mm (170), which have both been recorded for midshaft fragments of humeri.

The preservation of the bone varies between contexts, with the fragments recovered from (350) and (171) generally small in size, with rounded and weathered appearances. In contrast, bone from deposit (170) demonstrate an overall dense textures, with well preserved cortical bone surfaces. In all contexts, the majority of pieces are uniformly white in colour. Few fragments are grey-white. Variations in colour of burnt bone reflects the degree of oxidation of the organic components within the bone. The level of oxidation of bone relies on factors such as the quantity of fuel used to build the pyre, the temperate attained in various parts of the pyre, length of time over which the cremation was undertaken and the oxidising/reducing conditions in various parts of the pyre (McKinley 2004:11). Holden *et al.* (1995a and b) suggest that temperatures above 600 degrees Celsius are required to fully oxidize the organic components and produce white bone, as predominately observed in these contexts.

Osteological Analysis

All pieces of bone have been subjected to osteological analysis following the procedures suggested by McKinley (2000) and Brickley and McKinley (2004). Initial osteological analysis divides fragments into five main areas of the body: cranial, axial, upper limb, lower limb and non-descript long bone (unidentifiable to specific limb). A more detailed identification of fragments to specific skeletal element and side has also been undertaken, where possible. The most frequently preserved fragments in the deposits are midshaft portions of the elements of the upper and lower limbs.

Pieces of cranial vault are present in deposits 170 and 171. The lack of element duplication or differing skeletal developmental stages suggest the presence of only one individual within the cremation deposit.

The amount of bone recovered from each deposit varies, with values ranging between 175g (171) and 735g (170). As noted during excavation, the deposits have been truncated, so it is not possible to suggest whether each deposit had originally contained the all or just some of remains from a cremation. No observable pattern is present with regards to the placement of skeletal elements within the vertical stratigraphy (ie spits) of each deposit.

105 (350)

The cremated human remains recovered from the remnants of a heavily truncated urn in feature 105 are of an individual of indeterminate age and sex. The less-than-ideal preservation of the bone has limited the amount of retrievable information. Just 183g of white coloured burnt bone is present, with a maximum post-excavation long bone fragment size of 35.8mm (radius shaft fragment). The majority of fragments measuring less than 10mm in size. All of the identified fragments are from the arms (portions of humerus, radius and ulna shafts, phalanges) and the femora. No pieces of cranial or dental origin are present. The majority of pieces present are non-descript sections of long bone shafts, which are not easily attributed to specific elements. From the identified fragments, the age at death and the sex of the individual cannot be suggested and no pathological alterations have been observed.

111 (170)

Of the three excavated cremation-related deposits, (170) contains the greatest quantity of bone. A total of 735g of white coloured burnt bone has been analysed, of which 60.7% measuring larger than 10mm in size. A section of humerus shaft produced the maximum post-excavation postcranial fragment size of 72.5mm, while the cranial fragments had a maximum diameter of 35.1mm (occipital bone). Identified skeletal elements include pieces of cranial vault, a large portion of the right side of the mandible, three cervical vertebral bodies, fragments of scapula, ilium, and many long bone shaft fragments of the upper limb (humerus, radius, ulna, and metacarpal 2), and lower limb (femur and tibia).

A large portion of the right side of the mandible is present in spit 3. The mandible is edentulous (has lost all of the molars and premolar a significant amount of time before the person died), and has much alveolar resorption where the teeth once were. Mays (2014) has found a link between such a decrease in the mandibular corpus height following antemortem loss of the molars, and old age. This finding suggests the individual was of advanced age (ie 46+ years) at the time of death. It is not possible to put a more specific age range to these remains. The sex of the individual is tentatively estimated as possible male, based on the size of a mastoid process in spit 3, the overall thickness of the bones of the cranial vault (Gejvall 1969, area 1a), and the general robustness of the long bone shafts. With the exception of significant antemortem tooth loss, no pathological conditions have been observed.

115 (171)

Just 175g of white coloured burnt bone has been recovered from (171). The high degree of fragmentation (38.9% of bone measures less than 5mm in size) has limited that amount of retrievable information. The pieces of bone are generally small and non-descript. Identified fragments include cranial vault, a single tooth root (possibly a premolar), midshaft pieces of the humerus and radius, as well as the femur and tibia. A single intermediate manal phalanx is present in spit 7. No indications of age, sex and pathology have been observed (indeterminate age and sex).

In summary, a single urned (105, 350) and two unurned (111, 170 and 115, 171) human cremation burials have been recovered from the excavated area. Due to poor preservation and heavy truncation of the features, little information has been able to be retrieved from deposits 350 and 171. A possible male individual aged 46+ years has been identified from the skeletal remains recovered from unurned burial 170.

Animal Bone by Lizzi Lewins

Apart from the clearly modern animal burials, not discussed here, a small assemblage of animal bone (194 fragments), weighing a total of 368g was recovered during the course of the investigation. The bone was highly fragmentary, hindering analysis, with only teeth in general being closely identifiable. The bone was classified according to size (large mammal - cattle, horse) and where possible to species. A summary can be found in Appendix 4, only the identified bone will be noted here.

Pit 102 (156) contained a single cattle molar. Pit 139 (197) contained 26 fragments of large mammal tooth fragments. Pit 144 (252) contained 4 fragments of cattle m3 tooth fragments. Ditch 201 (260) contained an m3 tooth classified as cattle.

Ditch 215 (276) contained a partial sheep/goat tooth and a partial tooth classified as cattle, along with unidentifiable tooth fragments.

Ditch 225 (292) contained a partial cattle tooth.

Ditch terminus 227 (297) contained a partial astragalus classified as cattle, two fragments of horse tooth and 26 fragments of tooth classified as large mammal.

Minimum number of individuals was not calculated given the small amount of material and the preservation bias towards teeth compared to bone fragments. A quantity of burnt bone was recovered and suggests that some processing of carcasses connected with food preparation may be taking place on the site. No further analysis was possible.

Metalwork by Steven Crabb

A single ferrous nail head was recovered from ditch 235, slot 205.

Slag and Industrial Debris by Steven Crabb

A small volume of slag was recovered from this site. None of the fragments recovered are identifiable to a particular process. Posthole 132 contained a single non-diagnostic fragment of ferrous slag weighing 41g. Ditch 225 contained a two fragments weighing 226g. Both of these are dense with infrequent moderate sized porosity with fractured surfaces on all sides making identification impossible. Given the small scale of the assemblage it would appear that some iron working took place at this site rather than iron production but even this conclusion is not certain.

Fired Clay by Danielle Milbank

A total of 2229g of fired clay (380 fragments) was recovered from 37 deposits in 33 features, almost all dated to the late Iron Age (Appendix 5). The material was found typically in small quantities and highly fragmented.

The fabric is typically medium to soft, with a few examples of harder material, and is typically fine clay with sparse sand inclusions. It is typically unevenly fired, and the colour ranges from orange red to pale grey, with occasional dark grey fragments.

Pieces representing daub were recovered from pit 118 (174) which have impressions of the wooden wattles, and several pieces with similar characteristics from this context and others are also likely to represent fragmented daub.

From pit 125 (181), an incomplete clay object was recovered. This is 72mm high, and 50mm wide at the base, with a smooth curved surface. A hole of 8mm diameter is present, piercing from one side through to the flat base. It is likely to represent a weight of a cylindrical shape, a form typically of Iron Age date, and with a function related either to weaving or to weighing down roof thatch.

Environmental remains

Bulk soil samples for the flotation of palaeoenvironmental remains and to enhance small finds recovery were taken from most features excavated (Appendix 6). Most of these produced at least a little charcoal. Charred plant remains other than charcoal, however, were exceptionally rare, present in just seven samples, mostly as single items and none were cereal grains - most are probably weeds. Further analysis will be undertaken on selected charcoal but there is unlikely to be any information gain from the seeds.

Radiocarbon dating

Two samples of wood charcoal were submitted to the Chrono radiocarbon dating laboratory at the Queen's University of Belfast for AMS dating. Details of methodology are in the archive: in summary the lab considered the results reliable. The results detailed in Appendix 7 were calibrated using Calib rev 7.0 with data from INTCAL 13 (Reimer *et al.* 2013) with the probability expressed as relative area under the curve at 2-sigma (95.4% probability).

Conclusion by Steve Preston

The fieldwork has revealed archaeological deposits considered to represent occupation, principally in the Late Iron Age, but also in the Middle Bronze Age.

Middle Bronze Age occupation sites which are unenclosed and represented by small clusters of features, with or without recognizable houses, are a recurrent site type in much of southern Britain, such as the Middle Thames Valley or Sussex coastal plain and even the Weald (Ford 2003; Taylor *et al.* 2014, fig 68; Wallis 2016; Sanchez 2017). Middle Bronze Age occupation sites comprising more than isolated pits are generally rare and it is considered that much settlement at this time is comparable to earlier Bronze Age and Neolithic settlement, which left few below-ground traces. The small cluster of pits in the southern part of the site, and the single isolated pit in the central area probably represent two separate 'sites' of this period. The confirmation of the chronology by radiocarbon dating to the 15th/14th century cal BC is a useful addition to the range of dates for the ceramics of the area.

The more substantial body of evidence relates again to two separate foci, this time in use in the Late Iron Age (the last century BC or beginning of the 1st AD). In the main extraction area, and probably extending south-west out of it, is a very small cluster of features which appears to represent the edge of a settlement, with a very tentatively identified small roundhouse structure, and an associated group of deposits that can be considered a small cremation cemetery. The tiny amount of cremated bone present leaves open the possibility that all three deposits derive from a single urned burial, but the presence of the largest amount of bone in one of the unurned deposits suggests this is not the case and the case for three separate burials seems more likely. The absence of charcoal from the urned burial in cut 105 also suggests it was not part of the same event as the others (and indeed implies careful separation of bone from the pyre debris, even if only a small fraction of it was deposited). Cremation burial, accompanied or not by grave goods, is one of the defining characteristics of the late Iron Age period in south-eastern England, along with wheel-thrown, grog tempered 'Belgic' pottery, as here, and usually, but not always accompanied by the appearance of at least some continental imports, here lacking. Deposition of only part of the remains is a recurrent observation for Late Iron Age (and indeed, earlier prehistoric) cremations and the complexity of the rites preceding the arrival of bone in the ground has recently been highlighted (McKinley *et al.* 2014; Harding 2014; Atkinson and Preston 2015). Unfortunately the remains here add little to a broader understanding of the rite or of the population. Analysis of the charcoal used as fuel will be undertaken and may shed light on this aspect. Radiocarbon dating for unurned cremation 111, albeit with a relatively wide range once calibrated, and certainly less closely datable than if it had had pottery, confirms both that it belongs to the same chronological range as expected from the rite, and that the little cluster of cremation burials can be considered broadly contemporary in the 1st century BC.

The second area of late Iron Age occupation is towards the south of the site, where a large field system was laid out over an area of at least 220m by 80m and probably extending further. This was later subdivided, though it seems most likely that the original layout survived. Within and around these fields numerous pits and post holes clearly indicate occupation, albeit characteristic structures are lacking. While it is clear that animals were being consumed on the site, preservation of bone was too poor to permit any detailed analysis of diet or husbandry regimes. None of the samples contained any charred cereal grain to indicate the arable base, but this absence need not necessarily indicate a livestock bias to the economy.

The occupation may have extended just beyond the Roman conquest, but not long enough for any marked ‘Romanization’ of pottery or lifestyle, and there is then no further evidence for the use of the site before its plantation as an orchard.

As further fieldwork is expected as the quarrying progresses, the results from this phase can only be regarded as interim and can be expected to be modified with further evidence. Both of the Iron Age occupation clusters appear likely to extend to the south-west, where it may be possible to clarify their nature.

References

- AJA, 2015, ‘Orchard Farm, Iwade: Cultural Heritage Assessment’, Andrew Josephs Associates unpubl rep, Thirsk
- Atkinson, M and Preston, S, 2015, *Heybridge: A Late Iron Age and Roman Settlement: excavations at Elms Farm, 1993–5, volume 1*, E Anglian Archaeol **154**, Chelmsford
- Bishop, B and Bagwell, M, 2005, *Iwade: Occupation of a North Kent Village from the Mesolithic to the Medieval period*, Pre-Construct Archaeology Limited Monogr **3**, London
- BGS, 1974, *British Geological Survey*, 1:50 000, Sheet **272** (Chatham), Drift Edition, Keyworth
- Brickley, M and McKinley, J (eds), 2004, *Guidelines to the Standards for Recording Human Remains*, IFA Pap **7**, Reading
- Ford, S, 2003, ‘The Old Way Lane site: excavation of an early/middle Bronze Age ring ditch, late Bronze Age occupation, Roman enclosures and Neolithic and Bronze Age deposits’ in S Ford, R Entwistle and K Taylor, *Excavations at Cippenham, Slough, 1995–7*, TVAS Monogr **3**, Reading, 95–145
- Gejvall, N, 1969, ‘Cremations’, in D R Brothwell and E S Higgs (eds), *Science in Archaeology*, London, 468–79
- Hamilton, S and Seager Thomas, M, 2005, ‘Neolithic and Bronze Age Pottery’, in B Bishop and M Bagwell, *Iwade: Occupation of a North Kent village from the Mesolithic to the Medieval period*, PCA Monogr **3**, London, 20–38
- Harding, D W, 2016, *Death and Burial in Iron Age Britain*, Oxford
- Holden, J L, Phakley, P P and Clement, J G, 1995, ‘Scanning electron microscope observations of incinerated human femoral bone: a case study’, *Forensic Science International*, **74**, 17–28
- Holden, J L, Phakley, P P and Clement, J G, 1995, ‘Scanning electron microscope observations of heat-treated human bone’, *Forensic Science International*, **74**, 29–45
- KCC, 2014, *Kent Minerals and Waste Local Plan 2013-30*, Kent County Council Department of Environment and Transport, (Adopted July 2016), Maidstone
- Lyne, M, 2005a, ‘Late Iron Age Pottery’, in B Bishop and M Bagwell, *Iwade: Occupation of a North Kent village from the Mesolithic to the Medieval period*, PCA Monogr **3**, London, 71–9
- Lyne, M, 2005b, ‘Roman and Medieval Pottery’, in B Bishop and M Bagwell, *Iwade: Occupation of a North Kent village from the Mesolithic to the Medieval period*, PCA Monogr **3**, London, 99–101
- Macpherson Grant, N, Savage, A, Cotter, J, Davey, M and Riddler, I, 1995, *Canterbury Ceramics 2. The Processing and Study of Excavated Pottery*, Canterbury Archaeological Trust, Canterbury
- Mays, S, 2014, ‘Resorption of mandibular alveolar bone following loss of molar teeth and its relationship to age at death in a human skeletal population’, *American J Physical Anthropol*, **153**, 643–52
- McKinley, J I, 2000, ‘The Analysis of Cremated Bone’, in M Cox and S Mays (eds), *Human Osteology*, London, 403–21

- McKinley, J I, 2004, 'Compiling a skeletal inventory: cremated human bone', in M Brickley and J McKinley (eds) *Guidelines to the standards for recording human remains*, IFA pap 7, Reading, 9–13
- McKinley, J I, Leivers, M, Schuster, J, Marshall, P, Barclay, A J and Stoodley, N, 2014, *Cliffs End Farm, Isle of Thanet, Kent: a mortuary and ritual site of the Bronze Age, Iron Age and Anglo-Saxon period with evidence for long-distance maritime mobility*, Wessex Archaeol Rep 31, Salisbury
- Orton, C J, 1975, 'Quantitative Pottery Studies, Some Progress, Problems and Prospects', *Science and Archaeology*, 16, 30–5
- Reimer, P J, Bard, E, Bayliss, A, Beck, J W, Blackwell, P G, Bronk Ramsey, C, Buck, C E, Cheng H, Edwards, R L, Friedrich, M, Grootes, P M, Guilderson, T P, Halderson, H, Hajdas, I, Hatté, C, Heaton, T J, Hogg, A G, Hughen, K A, Kaiser, K F, Kromer, B, Manning, S W, Niu, M, Reimer, R W, Richards, D A, Scott, E M, Southon, J R, Turney, C S M and van der Plicht, J, 2013, 'IntCal13 and MARINE13 radiocarbon age calibration curves 0–50000 years cal BP', *Radiocarbon*, 55(4), 1869–87
- Sanchez, D, 2017, 'Middle Bronze Age occupation at Cripple Street, Maidstone, Kent', TVAS report 14/108, Reading
- Taylor, A, Weale, A and Ford S, 2014, *Bronze Age, Iron Age and Roman Landscapes of the Coastal Plain, and a Late Iron Age Warrior Burial at North Bersted, Bognor Regis, West Sussex*, TVAS Monogr 19, Reading
- Wallis, S, 2016, *Middle/Late Bronze Age occupation at Manor Road, Burgess Hill, West Sussex*, TVAS Occas Pap 9, Reading
- Wilkinson, P, 2013, 'Archaeological Excavations on land adjacent to Coleshill Farm, Iwade, Kent (Areas 1 and 2), 2011-12', Swale and Thames Archaeological Survey Company unpubl rep, Faversham

APPENDIX 1: Catalogue of all excavated features.

<i>Cut</i>	<i>Deposit</i>	<i>Group</i>	<i>Type</i>	<i>Date</i>	<i>Samples</i>	<i>Comment</i>
-	51	-	Natural	n/a	-	
-	50	-	Topsoil	n/a	-	
1	52	235	Ditch	LIA	1	
2	53	235	Ditch	LIA		
3	54	235	Ditch	LIA	2	
4	55	235	Ditch	LIA		
5	56	236	Ditch	LIA		By association (M/LBA pottery residual)
6	57	235	Ditch	LIA	3	
7	58	235	Ditch	LIA		
8	59	235	Ditch	LIA	4	
9	60	235	Ditch	LIA		
10	61-2	237	Ditch	LIA	5	
11	63	235	Ditch	LIA		
12	64	235	Ditch	LIA	6	
13	65	-	Posthole	-	-	
14	66	-	Pit	EIA	42	
15	67	-	Pit	IA	-	
16	68	-	Pit	-	-	
17	69	-	Pit	-	-	
18	70	-	Pit	BA/IA	-	
19	71	-	Pit	-	-	
20	72	-	Pit	-	-	
21	73	-	Pit	-	-	
22	74	-	Pit	-	-	
23	75	228	Ditch	LIA	7	
24	76	228	Ditch	LIA	8	
25	77	230	Ditch	LIA	9	
26	78	-	?Hearth	-	28	
27	79,	230	Ditch	LIA		
28	80	229		LIA		
29	81-2	-	Pit	LIA	-	
30	83	-	Pit	LIA	20	
31	84	-	Pit	IA	10	
32	85	230	Ditch	LIA		
33	<i>Void</i>	-	-	-	-	-
34	87	-	Pit	-	11	
35	88	229	Ditch	LIA	12	
36	89	232	Gully	LIA	13	
37	90	-	Pit	MBA	14	
38	91	-	Pit	-	-	
39	92	-	Pig burial	Modern	-	Plastic
40	93	-	Pit	-	19	
41	94	-	?Pit	-	-	
42	95	-	Animal burial	Modern	-	Plastic
43	96	-	Pit	-	-	
44	97	232	Gully	LIA	15	
45	290	-	Pit	-	-	
46	98, 99	-	Pit	-	17	
47	150	-	Pit	-	18	
48	151	-	Pit	-	16	
49	152	-	Pit	-	-	
100	153	-	Pit	-	-	
101	154	236	Ditch	LIA	34	By association (M/LBA pottery residual)
102	155-7, 159	-	Pit	LIA	20-24	
103	158	231	Gully	-	30	
104	161	-	Gully	LIA	25	
105	350	-	Cremation	LIA	-	
106	162	231	Gully	-	30	
107	163	228	Ditch	LIA	26	
108	165	229	Ditch	LIA	31	
109	164	-	Gully	LIA	29	
110	166	-	Pit	-	32	
111	170	-	Cremation	IA	-	
112	167	-	Pit	IA	-	
113	168	237	Ditch	LIA	33	
114	169	237	Ditch	LIA	-	
115	171	-	Cremation	-	-	
116	172	236	Ditch	LIA	34	By association (M/LBA pottery residual)

<i>Cut</i>	<i>Deposit</i>	<i>Group</i>	<i>Type</i>	<i>Date</i>	<i>Samples</i>	<i>Comment</i>
117	173	236	Ditch	LIA	-	By association (M/LBA pottery residual)
118	174	-	Pit	-	35	
119	175	-	Pit	LIA	36	
120	176	-	Pit	IA	37	
121	177	-	Pit	M/LBA	38	
122	178	-	Pit	M/LBA	-	
123	179	-	Pit	M/LBA	39	
124	180	-	Pit	MBA	41	Radiocarbon date, pottery
125	181	-	Pit	LIA	-	
126	182	-	Pit	-	-	
127	183-4	238	Ditch	LIA	45	
128	185-6	237	Ditch	LIA		
129	187	243	Gully	LIA		
130	188	-	Pit	LIA	-	
131	189	-	Pit	LIA	-	
132	190	-	Posthole	LIA	43	
133	191	242	Gully	LIA	-	
134	192	242	Gully	LIA	-	
135	193	-	Pit	-	-	
136	194	-	Pit	-	44	
137	195	-	Pit	MBA	-	
138	196	-	Pit	LIA	-	
139	197	-	Pit	-	-	
140	198	-	Pit	-	-	
141	199	-	Pit	LIA	-	
142	250	-	Pit	-	-	
143	251	-	Pit	LIA	-	
144	252	-	Pit	LIA	-	
145	253	-	Pit	LIA	-	
146	254	-	Pit	LIA	49	
147	255	-	Pit	-	48	
148	256-7	244	Gully	LIA	-	
149	258	243	Gully	LIA		
-	160	-	Pottery deposit	LIA	-	
200	259	-	Pit	LIA	-	
201	261	238	Ditch	LIA	45	
202	262	239	Ditch	LIA	46	
203	263	-	Gully	-	47	
204	264	243	Gully	LIA		
205	265	235	Ditch	LIA		
206	267	-	Posthole	IA	-	
207	268	243	Gully	LIA		
208	269	-	Pit	LIA	50	
209	270	-	Pit	LIA	51	
210	271	241	Ditch	LIA	52	
211	272	243	Gully	LIA		
212	273	244	Gully	LIA	-	
213	274	244	Gully	LIA	-	
214	275	241	Ditch	LIA	53	
215	276	238	Ditch	LIA-Roman	54	
216	277	-	<i>Ditch same as 225</i>		61	
217	278	240	Ditch	LIA	55	
218	279-81	-	Pit	LIA	56	
219	285	240	Ditch	LIA		
220	282-4	-	Pit	LIA	57	
221	286-7	-	Pit	LIA	58	
222	288	238	Ditch	LIA-Roman	59	
223	289	239	Ditch	LIA	60	
224	296	241	Ditch	LIA		
225	297	245	Pit	LIA	63	
226	295	238	Ditch	LIA		
227	298	245	Pit	LIA		
233	298	245	Pit			
234		243	Gully	LIA		
246	351	-	Animal burial	Modern		

APPENDIX 2: Catalogue of pottery

Fabrics

Bronze Age

BA1. Coarse lumpy black fabric with profuse projecting ill-sorted 0.50<5.00 mm calcined-flint filler

BA.2. Handmade lumpy fabric with sparse ill-sorted 050<5.00 mm calcined-flint filler

Iron Age

IA.1A. Handmade lumpy fabric with sparse-to-moderate 0.50 mm < 3.00 mm. protruding calcined flint filler

IA.1B. Handmade silty fabric with moderate-to-profuse <2.00 mm. calcined-flint filler

IA.2A. Handmade lumpy black fabric with profuse protruding <1.00 mm calcined-flint filler

IA.2B. Handmade polished silty black fabric with profuse <1.00 mm. Calcined-flint filler

IA.2C. Handmade silty black fabric with sparse <1.00mm calcined flint filler

IA.3A. Handmade black silty fabric with profuse <0.50 mm calcined-flint filler

IA.3B. Handmade black silty fabric with sparse <0.50 mm calcined-flint filler

IA.6. Handmade silty fabric

IA.8. Silty handmade fabric with sparse <2.00 mm calcined-flint and orange grog filler

IA.9. Handmade silty fabric with sparse to occasional <2.00 mm calcined-flint filler

IA.11. Handmade black fabric with grog and profuse protruding <3.00 mm. calcined flint filler

'Belgic' Late Iron Age

B1. Fine 'Belgic' grog-tempered ware

B2. Coarse 'Belgic' grog-tempered ware

B3. 'Belgic' grog-tempered ware fabric with additional sparse calcined flint

B5. 'Belgic' grog-tempered ware fabric with additional sand filler

B6. Handmade 'Belgic' shell-tempered ware

B8. Rough black fabric with profuse <0.50 mm multi-coloured quartz-sand filler

B9. Rough black handmade fabric with profuse <0.30 mm multi-coloured quartz-sand filler

B9.1. Black polished fabric with profuse <0.20 mm glauconitic sand filler

B9.2. Similar but with additional sparse calcined-flint

B15. TR2 fabric

B16. TR3 fabric

B17. Gallo-Belgic Whiteware

'Belgic' Late Iron Age/Early Roman

BER16. Silty 'Thanet Dry' fabric

Roman

R7. Grey fabric with profuse <0.10 mm. multi-coloured quartz-sand filler

R15. Verulamium Region Whiteware

R16. North Kent Fineware

R17. Hoo St Werbergh oxidised version with external white slip

R20. Lyon off-white silty fabric with external brown colour-coat on sand roughcasting

R73. Rough grey fabric with profuse <0.30 mm. multi-coloured quartz-sand filler

From excavated contexts

Group	Cut	Deposit	Fabric	Form	Date-range	No. sherds	Wt (g)	Comments
		Surface	BA1	Urn	1700–1150 BC	12	48	Fresh
		Surface	B9.1	Jar base		8	35	Fresh
			R73			1	1	fresh
		Surface	B2 OX		25BC–AD70	1	8	
			PMED	Handle	16th–17th century	1	48	
	121	INE	IA.1B			2	5	Sl abraded
			IA.9			4	9	abraded
235	8	59	IA.1B		1000BC–AD25	1	6	
237	10	61	IA.1B	Jar	1000BC–AD25	5	46	Fresh
			B1 B1	G5-1 Barrel bkr	1–50	3	22	fresh
			B2 B1	furrowed jar	25BC–AD50	1	14	fresh
			B9.1	slack prof jar	100–1BC	3	7	fresh
235	12	64	IA.1A	Jar	1000–1BC	1	5	Fresh
			B9.1	bead-rim store jar	100–1BC	3	70	fresh
			R7	beaker		1	1	sl abraded

Group	Cut	Deposit	Fabric	Form	Date-range	No. sherds	Wt (g)	Comments
	14	66	IA.1B IA2A Fired clay	Hole-mouth jar hole-mouth jarx3 shouldered jar	1000-500BC 1000-500BC 800-500BC	20 63 5	194 343 23	Fresh fresh fresh
	15	67	IA.6 IA.9			2 3	2 10	Fresh
	18	70	IA1A	Jar or urn	1700-500BC	3	12	Fresh.
228	23	75	IA.1B B3 B8	Closed	1700BC-AD25 75/25BC-AD50 1-60	2 2 1	16 15 1	Fresh fresh abraded
228	24	76	IA.1B IA.3A B1 OX B3 B8	Necked-jar basal CAM 165 jug copy D2-4 bowl	50BC-AD25 10-60 1-60 1-60	14 1 4 7 5	68 15 76 70 17	Fresh abraded fresh fresh fresh
230	25	77	B1 Bl	Closed	25BC-AD60	1	3	Abraded
230	27	79	B1 OX	Jug	10-60	1	8	Abraded
229	28	80	IA1B		1700BC-AD25	1	4	Fresh
	29	81	B2	Jar	25BC-AD70	1	5	Fresh
	30	82	IA3A IA3B B2 Bl	Jar jar jar	100BC-AD25 100BC-AD25 25BC-AD70	1 1 2	4 7 18	Sl abraded fresh fresh
	30	83	IA1B B2 B9.1 MISC	C3 Bead-rim jar closed jar	25BC-AD25 25BC-AD70 100-1BC	12 1 4 39	237 2 40 54	Furrowed 1 jar fresh fresh
	31	84	IA1B		Residual	1	7	abraded
230	32	85	IA.1B IA.8 B2 Bl B2 Ox BER16	Jar jar closed closed closed	1700BC-AD25 100BC-AD25 25BC-AD70 25BC-AD70 1-70	1 2 5 1 1	11 35 52 22 4	Fresh fresh fresh sl abraded fresh
229	35	88	IA1B IAX	Storage jar jar	100BC-AD25 25BC-AD25	5 2	59 13	Fresh fresh
232	36	89	B1 Bl B3	B1-6 jar closed	1-50 75/25BC-AD50	4 4	40 20	Fresh joining fresh
	37	90	BA1	Bucket urn	1700-1150BC	169	840	
232	44	97	IA1B B1 bl B1 Ox B3 MISC	Closed	1000BC-AD25 25BC-AD70 25BC-AD70 75/25BC-AD50	11 4 2 5 5	40 7 3 21 3	Fresh fresh fresh fresh
	102	156	IA1B IA9 B1 Ox B2 Bl B2 Ox	Jar base combed jar body cordon jar	25BC-AD25 1-50 25BC-AD70 25BC-AD70	1 1 1 1 1	41 39 7 10 4	Fresh fresh fresh fresh fresh
	102	157	IA1B IA2B B2 Bl Fired clay	Ev rim jar jar	0-AD50	1 22 6 1	5 633 99 1	Abraded lump all one pot fresh
		160	IA1B IA2A B2 Bl B3 Bl B9.1 MISC	Jar C3 jar necked jar jar base body cordon	25BC-AD50 25BC-AD50 75/25BC-AD50 25BC-AD25	3 1 27 2 9 2	99 6 243 49 35 9	Fresh fresh fresh fresh fresh fresh
	104	122	LIA1B B2	C3 jar closed	50BC-AD25 25BC-AD70	2 1	19 11	Fresh joining abraded
	104	161	IA.11 B1 Bl B2	Ev.rim jar B1-1 jar jar	25BC-AD70 25BC-AD70	18 1 6	270 22 82	Fresh fresh fresh
228	107	163	BA1 IA1B IA3A B1 B2 B3 B8	Bead-rim jar C3 jars x3 C1-4 jarx2 B2-3 jar CAM 2 copy jug lid bead-rim jar jar ev rim jar	50BC-AD25 25BC-AD25 25BC-AD25 25BC-AD25 10BC-AD50 10-60 10BC-AD50 25BC-AD70 75/25BC-AD50 1-70	5 232 2 3 38 1	171 3909 60 14 299 22	

Group	Cut	Deposit	Fabric	Form	Date-range	No. sherds	Wt (g)	Comments
			B15	lid-seated jar	1-70	63	914	
			B16	beaker	1-65	1	4	
			BER6	beaker	10BC-AD60	1	4	
			BER16	butt beaker	1-70	3	5	
			RX	closed beaker	1-70	1	3	
						5	10	
						13	94	
			Fired clay			1	6	
229	108	165	IA1B		1000BC-AD25	7	26	
	109	164	B3	Jars	75/25BC-AD50	13	83	Fresh.
	111	170	IA1B	Jar	1000BC-AD25	1	3	Fresh.
	112	167	IA1B		1000BC-AD25	2	2	Fresh
			Fired clay			1	2	
237	113	168	IA1B	Crude bead-rim jarsx3				Fresh
				Necked jar	100BC-AD25			fresh
				sturage jar	100BC-AD25	8	199	fresh
				jar	100BC-AD25	2	32	abraded
			B2 B1		25BC-AD 50	4	20	fresh
237	114	169	IA1B	Combed store jar	50BC-AD25	1	61	Fresh
				jar		2	22	fresh
236	116	172	BA1		1700-1150BC	11	99	
236	117	173	BA1		1700-1150BC	6	6	
	121	177	BA1		1700-1150BC	3	15	Fresh.
	122	178	BA1		1700-1150BC	1	3	Abraded.
	123	179	BA1		1700-1150BC	5	7	Fresh
			IA1B		1000BC-AD25	1	5	sl abraded
	124	180	BA1	Bucket urn	1700-1150BC	70	1212	
	125	181	IA1B		1000BC-AD25	2	13	Abraded
			IA3A			4	16	fresh and abr
			IA6			8	10	fresh
			B3		75/25BC-AD50	1	16	abraded
238	127	183	LIA2A	Storage jar	100BC-AD25	1	9	SL abraded
			LIA2B		100BC-AD25	1	3	abraded
			B8	neck cordoned jx2	25BC-AD50	9	35	fresh
			B9.2	jar	100BC-AD25	1	8	sl abraded
			R16	closed	43+	8	41	fresh spalled
			Fired clay			2	3	
238	127	184	LIA1B		1000BC-AD25	2	10	Abraded
			B9.1		100-1BC	1	1	fresh
243	129	187	B1 B1	Cordoned beaker	1-50	4	14	Fresh
			B9	closed	25BC-AD50	2	5	fresh
	130	188	B9.1	Closed	100BC-AD25	1	4	Fresh.
	131	189	B9.1	Closed	100BC-AD25	6	36	Fresh and abraded.
	132	190	IA1B		1000BC-AD25	1	3	Abraded
			B1 B1		25BC-AD50	1	2	fresh
			B9.1		100BC-AD25	2	8	fresh and abr
	133	191	B9.1		100BC-AD25	1	2	Fresh
			fired clay			1	1	abraded
	134	192	IA2A			1	6	Fresh
			IA2C			1	1	abraded
			B9.1		100BC-AD25	2	8	fresh
	137	195	BA1	Urn	1750-1150 BC	12	52	
	138	196	IA2A		100BC-AD25	2	13	
	141	199	B9.1	Jar	100BC-AD25	7	40	
	143	251	IA2A	Jar		2	6	Fresh
			B9.1		100BC-AD25	3	6	fresh
	144	252	IA2A			2	13	Fresh
			B1 bl	G5-1 barrel beaker	1-50	7	16	fresh. 1 vessel
	145	253	B1 ox		25BC-AD50	2	3	Fresh.
244	148	256	IA1B	Jar		1	11	
244	148	257	B9.1	Jar base	100BC-AD.25	2	9	
243	149	258	B5			1	2	Abraded
			B9.1		100BC-AD25	3	6	fresh
	200	259	IA2C			1	2	Abraded
			IA6			1	1	v.abraded
			B9.1	Ev rim jar	100BC-AD25	3	11	fresh
238	201	260	IA1A			6	22	Fresh
			B9.1	B2-4 jar	25BC-AD25	5	36	fresh 1 pot
239		262	B3		75/25BC-AD50	1	2	Abraded.
		263	IA3B			5	7	Fresh
			B3		75/25BC-AD50	2	8	fresh and abr
243	204	264	IA1B			1	5	Fresh

Group	Cut	Deposit	Fabric	Form	Date-range	No. sherds	Wt (g)	Comments
			IA6 OX			1	1	v abraded
	206	267	IA2A	Closed		1	6	Fresh.
243	207	268	B9.1	Closed	100BC-AD25	2	3	
	208	269	IA1A			1	12	Fresh
			IA1B	Furrowed jar	100BC-AD25	3	29	fresh
			B3	C2-1 jar	1-50	1	50	fresh
			B6	jar		6	45	fresh
			B8	C1-4 jar	1-60	14	169	fresh
241	210	271	IA1B	Flat-rim jar	1-25	2	35	Fresh
			IA2C	jar		1	6	fresh
			B1 bl	ev rim jar	1-50	6	35	fresh
			B9	jar	1-60	1	8	fresh
243	212	273	B9.1	Closed	100BC-AD25	1	9	fresh
241	214	275	IA2B			2	10	Abraded
			B1 bl	Ev rim	25BC-AD50	1	2	sl abraded
			B2	jar	25BC-AD70	2	14	sl abraded
238	215	276	IA1B			6	31	Abraded
			B2 OX	Jar	25BC-AD70	3	10	fresh
			B3	lid	25BC-AD50			fresh
				flat rim jar	1-50	14	258	fresh
			B6	storage jar		11	132	fresh
			B9	WT neck-cordon j	1-50			fresh
				HM necked jar	1-50	32	433	fresh
			B17	butt beaker	30-70	4	17	fresh
			R7	closed		25	119	fresh
			R15	?Flagon	50-150	18	252	fresh 1 pot
			R16	biconical beaker	43-130	3	19	fresh
			R17	4C.1 bowl	43-70	60	636	fresh 1 pot
			R20	roughcast beaker	43-70	19	90	fresh 1 pot
			MISC			2	4	
240	217	278	B3 bl		75/25BC-AD50	1	3	Sl abraded
			fired clay			1	1	
240	219	285	IA1B	Jar base		1	14	
	220	284	B3		75/25BC-AD50	4	12	
	221	287	IA1B	Storage jar	50BC-AD25	1	25	Sl abraded
			B3		75/25BC-AD50	1	3	sl abraded
			B9	jar	1-60	1	3	sl abraded
			B9.1		100BC-AD25	1	1	fresh
			MISC			3	2	
238	222	288	IA1B	Bead-rim jar	1-50	11	68	Fresh
			IA6	bead-rim jar	1-50	5	21	
			B5	necked jars	1-70	51	510	fresh
			B9	bead-rim jar	1-60			
				neck-cordoned jar	1-60	20	64	fresh
			R16	biconical	43-130	24	237	fresh
			R73	3F bead-rim jar	40-150			fresh
				bead-rim jar	43-70			fresh
				4C1 bowl	43-70			fresh
				5E0.3 dish	30-70	52	333	fresh
			MISC			22	36	
			Fired clay			1	5	
239	223	289	IA1A			1	6	Fresh
			B2 OX	Storage jar	1-70	1	52	fresh
			Fired clay			1	2	
	224	296	IA1B	?Urn		1	4	Abraded
			IA2A			1	1	fresh
			IA6			2	2	abraded
245	225	292	IA1A	Combed bead-rim	25BC-AD25	194	813	Fresh 1 pot
			IA1B	C3 bead-rim	25BC-AD25			abraded
				C1-4 bead-rim	25BC-AD25	6	145	fresh
			IA2C	closed		3	8	fresh
			B2	jar	25BC-AD70	9	134	sl abraded
			B3	bead-rim jar	25BC-AD50	9	98	fresh and abraded
			MISC			4	3	
238	226	295	B1 ox	Closed	25BC-AD70	7	43	Fresh
			B2 ox	storage jar	25BC-AD70	1	25	abraded
			B3	storage jar	75/25BC-AD50	3	65	fresh
			B9	ev rim jar	1-60	1	4	abraded
			Fired clay			3	9	
245	227	292	LIA1B	Storage jar	25BC-AD25	11	161	Fresh and abraded
			B1 bl	neck cordon jar	25BC-AD70	2	9	fresh
			B2 bl	jar	25BC-AD70	13	66	fresh and abraded
			B2 ox	jarss	25BC-AD70	22	203	fresh and abraded

Group	Cut	Deposit	Fabric	Form	Date-range	No. sherds	Wt (g)	Comments
			B3	beaker	75/25BC-AD50	4	42	abraded
			RX		AD43-70	1	3	sl abraded
			MISC			8	19	abraded
			Fired clay			2	8	fresh

From Environmental samples

Group	Cut	Deposit	sample	Fabric	Form	Date range	No. sherds	Wt (g)	Comments
	1	52	1	IA1B		1000BC-AD25	2	4	Fresh and abr
				B2		25BC-AD70	1	2	abraded
	3	54	2	IA1B		1000BC-AD25	1	2	
	8	59	8	IA1A		1000BC-AD25	1	3	sl abraded
	14	66	42	IA1A	Situlate jar	1000BC-AD25	1	3	Fresh
				IA2A		700-200BC	78	127	fresh
228	24	76	8	B2	Bead-rim beaker	25BC-AD50	1	2	Abraded
				B3	jar base	75/25BC-AD50	3	67	fresh.
				fired clay			5	4	
230	25	77	9	B1 BL	Bead-rim beaker	1-50	4	38	Fresh
				B3	closed	75/25BC-AD50	1	8	fresh
	30	83	20	IA1B	Jar	1000BC-AD25	1	2	Fresh
				B2		25BC-AD50	1	4	sl abraded
				B3		furrowed jar	75/25BC-AD50	1	13
	34	87	11	B2		25BC-AD70	1	2	Abraded
				B3		75/25BC-AD50	1	2	abraded
232	44	97	15	IA11	Closed	100-1BC	1	4	
	46	98	17	Fired clay			1	1	Pit fill
	102	155	21	IA1B	Closed	100BC-AD25	4	10	Fresh
				B1 BL	closed	75/25-AD70	1	4	fresh
				B9	closed	1-60	1	3	fresh
				Fired clay			1	1	
	102	157	23	IA2A	Closed	300-0BC	1	9	Fresh
				IA2B		300-0BC	1	11	fresh
	102	159	24	B2		25BC-AD70	3	6	Abraded
				B3		75/25BC-AD50	1	1	abraded
				MISC			4	2	
	105	350 Spit 1	64	B1	Jar	25BC-AD70	1	1	Abraded
				B3		75/25BC-AD50	13	90	fresh
	105	350 Spit 2	64	B2	Jar	25BC-AD70	9	6	Fresh and abr
				B3		75/25BC-AD50	14	117	
	105	350	64	B3	Jar	75/25BC-AD50	8	15	
	105	surface		B3	Jar base	75/25BC-AD50	12	84	
228	107	163	26	IA1B	Closed	1000BC-AD25	53	271	Fresh
				IA3B		neck-cordon jar	25BC-AD25	3	13
				B1		25BC-AD70	4	12	fresh
				B2		25BC-AD70	7	45	fresh and abr
				B3	inc furrowed sherd	75/25BC-AD50	11	42	fresh
				MISC			17	14	
	109	164	29	IA2C		300-1BC	7	20	Ditch terminus
237	113	168	33	IA1B	Bead-rim jar	50BC-AD25	4	25	Abraded
				B2 OX	jar	25BC-AD70	3	25	fresh
	119	175	36	B9.1	Jar	100BC-AD25	3	13	Pit fill
	120	176	37	IA2			3	1	Comminuted
				IA3B			3	2	comminuted
				B3		Residual	1	1	V abraded.
		180	41	BA1	Bucket urnx2	1750-1150BC	88	268	
		190	43	B2 BL		25BC-AD70	1	3	Abraded
	146	254	49	B9.1	Jar	100BC-AD25	1	13	Fresh
238	201	260	45	IA2C		Residual	1	2	V abraded.
239	202	262	46	IA2C		300-0BC	2	1	Tiny chip.
	208	269	50	IA2C	Bead-rim jar	50BC-AD25	2	7	Fresh
				R73		43-370	1	1	abraded
				Fired clay			2	1	
	209	270	51	B2 BL		25BC-AD70	2	5	Abraded
				Fired clay			2	2	
238	215	276	54	IA1B	Storage jar CAM75/78 cup	1000BC-AD25	9	28	Fresh and abr
				B2		25BC-AD70	1	6	v.abraded
				B15		10-50	1	10	fresh
				BER16		1-70	1	3	fresh
				R16		43-300+	1	1	sl abraded
				Fired clay			2	1	
240	217	278	55	B2 BL		25BC-AD70	1	2	
	218	280	56	IA2B		300BC-AD25	1	2	Sl abraded.
	220	284	57	B3 BL		75/25BC-AD50	2	4	Fresh.

<i>Group</i>	<i>Cut</i>	<i>Deposit</i>	<i>sample</i>	<i>Fabric</i>	<i>Form</i>	<i>Date range</i>	<i>No. sherds</i>	<i>Wt (g)</i>	<i>Comments</i>
239	223	289	60	IA1B	Jar	1000BC-AD25	1	6	
		294	62	B2 B3	Jar basal lower part of jar	25BC-AD70 75/25BC-AD50	1 60	17 412	Sl abraded Fresh 1 pot
	300	360	100	B2 OX B9.2		25BC-AD70 100BC-AD25	6 1	7 1	Fresh and abr abraded

APPENDIX 3: Human bone

Table A3.1: Inventory of burnt bone. Key: I = indeterminate, ?M = possible male.

<i>Cut</i>	<i>Deposit</i>	<i>Spits</i>	<i>colour</i>	<i>Total wt (g)</i>	<i>Max frag size</i>	<i>Age</i>	<i>Sex</i>	<i>Fragments present</i>
105	350	3	white	183	35.8mm (long bone)	I	I	midshaft fragments of the upper and lower limbs, proximal ends of phalanges
111	170	7	white	735	72.5mm (long bone), 35.1mm (cranial)	older adult	?M	fragments of cranial vault, facial bones, mandible, cervical vertebral bodies, scapula, midshaft fragments of the upper and lower limbs, shaft of metacarpal 2
115	171	8	white	175	35.2mm (long bone), 23.4mm (cranial)	I	I	cranial vault fragments, a single tooth root (?premolar), intermediate manal phalanx, midshaft fragments of the upper and lower limbs

Table A3.2: Summary of burnt human bone post-excavation fragmentation.

<i>Cut</i>	<i>Deposit</i>	<i>Spit</i>	<i>10mm</i>		<i>5mm</i>		<i>2mm</i>		<i>Total wt (g)</i>
			<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	
105	350	cleaning	8	25.0	9	28.1	15	46.9	32
105	350	1	22	32.3	22	32.3	24	35.3	68
105	350	2	27	39.7	17	25.0	24	35.3	68
105	350	3	7	46.7	3	20.0	5	33.3	15
105	350	total	64	35.0	51	27.9	68	37.1	183
111	170	cleaning	79	53.4	36	24.3	33	22.3	148
111	170	1	33	89.2	2	5.4	2	5.4	37
111	170	2	24	60.0	6	15.0	10	25.0	40
111	170	3	81	63.8	19	15.0	27	21.2	127
111	170	4	96	57.1	35	20.8	37	22.0	168
111	170	5	106	72.6	17	11.6	23	15.8	146
111	170	6	23	37.7	19	31.1	19	31.1	61
111	170	7	4	50.0	2	25.0	2	25.0	8
111	170	total	446	60.7	136	18.5	153	20.8	735
115	171	1	9	34.6	7	26.9	10	38.5	26
115	171	2	19	50.0	5	13.2	14	36.8	38
115	171	3	12	40.0	8	26.7	10	33.3	30
115	171	4	13	39.4	7	21.2	13	39.4	33
115	171	5	15	46.9	5	15.6	12	37.5	32
115	171	6	1	18.2	0.5	9.1	4	72.7	5.5
115	171	7	3	37.5	2	25.0	3	37.5	8
115	171	8	0	0	0.5	20.0	2	80.0	2.5
115	171	total	72	41.1	35	20.0	68	38.9	175

APPENDIX 4: Catalogue of animal Bone

<i>Cut</i>	<i>Deposit</i>	<i>Sample .</i>	<i>Type</i>	<i>No. frags</i>	<i>Wt (g)</i>	<i>Horse</i>	<i>Cattle</i>	<i>Sheep/ Goat</i>	<i>Large Mammal</i>	<i>Unid.</i>	<i>Notes</i>
			Surface find	2	1	-	-	-	-	2	Eroded
12	64	-	Ditch	2	1	-	-	-	-	2t	frags
24	76		Ditch	1	1	-	-	-	-	1	Burnt
24	76	8	Ditch	12	8	-	-	-	-	12	Burnt
44	97	15	Ditch	1	1	-	-	-	-	1	Burnt
102	155	21	Pit	11	6	-	-	2	-	9	Burnt
102	156	-	Pit	1	16	-	1m	-	-	-	
107	163	-	Ditch	2	5	-	-	-	-	2	Burnt
107	163	26	Ditch	10	4	-	-	-	-	10	Burnt
113	168	33	Ditch terminus	3	3	-	-	-	-	3	Burnt
127	184	-	Ditch	4	5	-	-	-	-	4	Eroded
139	197	-	Pit	26	45	-	-	-	26t	-	
144	252	-	Pit	4	12	-	4	-	-	-	
200	259	-	Pit	1	2	-	-	-	-	1	Burnt
201	260	-	Ditch	27	83	-	1m	-	-	26	
208	269	-	Pit	1	1	-	-	-	-	1	
215	276	-	Ditch	11	1	-	1t	1t	-	9t	
221	287	-	Pit	29	9	-	-	-	-	29	
222	288	-	Ditch	12	23	-	-	-	-	12	
225	292	-	Ditch	5	24	-	1t	-	-	4	
227	297	-	Ditch terminus	29	117	2t	1	-	26t	-	
			Total	194	368						

m molar
t tooth

APPENDIX 5: Catalogue of fired clay

<i>Cut</i>	<i>Deposit</i>	<i>Group</i>	<i>Type</i>	<i>Date</i>	<i>No</i>	<i>Wt (g)</i>	
14	66		Pit	EIA	42	48	
15	67		Pit	IA	1	5	
17	69		Pit	-	1	1	
21	73		Pit	-	15	54	
25	77	230	Ditch	LIA	4	20	
30	82		Pit	LIA	3	9	
30	83		Pit	LIA	14	74	
31	84		Pit	LIA	12	8	
32	85	230	Gully	LIA	4	18	
44	97	232	Ditch terminus	LIA	3	5	
46	98		Pit	-	1	1	
47	150		Pit	-	3	12	
102	155		Pit	LIA	32	27	
102	156		Pit	LIA	49	38	
102	157		Pit	LIA	6	2	
102	159		Pit	LIA	10	7	
104	161		Ditch	LIA	3	13	
107	163	228	Ditch	LIA	13	50	
113	168	237	Ditch	LIA	7	59	
118	174		Pit	-	2	191	
119	175		Pit	LIA	10	100	
120	176		Pit	LIA	7	5	
124	180		Pit	MBA	4	27	
125	181		Pit	LIA	1	313	possible loomweight
125	181		Pit	LIA	46	593	
126	182		Pit	-	2	8	
127	184	238	Ditch	LIA	8	16	
131	189		Pit	LIA	10	36	
140	198		Post hole	-	3	10	
146	254		Pit	LIA	5	17	
149	258	243	Gully	LIA	1	1	
201	260	238	Ditch	LIA	3	46	
215	276	238	Ditch	LIA-Roman	30	149	
220	284		Pit	LIA	7	28	
222	288	238	Ditch	LIA-Roman	7	43	
225	292	245	Ditch	LIA	1	5	
227	297	245	Pit	LIA	9	118	
224	296	241	Gully terminus	LIA	1	72	
					380	2229	

APPENDIX 6: Catalogue of charcoal and charred plant remains

<i>Cut</i>	<i>Deposit</i>	<i>Group</i>	<i>Type</i>	<i>Sample</i>	<i>Date</i>	<i>Charcoal</i>	<i>Seed</i>
1	52	235	Ditch	1	LIA	-	-
3	54	235	Ditch	2	LIA	-	-
6	57	235	Ditch	3	LIA	X	-
8	59	235	Ditch	4	LIA	-	-
12	64	235	Ditch	6	LIA	X	-
14	66		Pit	42	EIA	-	-
23	75	228	Ditch terminus	7	LIA	X	-
24	76	228	Ditch	8	LIA	X	-
25	77	230	Ditch	9	LIA	X	-
26	78		Pit	28	-	X	-
30	83		Pit	20	LIA	X	-
31	84		Pit	10	LIA	XX	-
34	87		Pit	11	-	XX	-
35	88	229	Ditch terminus	12	LIA	X	-
36	89	232	Ditch terminus	13	LIA	-	Y
37	90		Pit	14	MBA	-	-
40	93		shallow pit	19	-	X	-
44	97	232	Ditch terminus	15	LIA	X	Y
46	98		Pit	17	-	XX	-
46	99		Pit	18	-	X	-
48	151		Pit	16	-	XX	-
102	155		Pit	21	LIA	X	-
102	156		Pit	22	LIA	-	-
102	157		Pit	23	LIA	X	-
102	159		Pit	24	LIA	-	-
103	158	231	Gully	30		-	-
104	161		Ditch	25	LIA	-	-
105	350		Cremation	surface	LIA	X	-
105	350		Cremation	64 (spit 1)	LIA	X	-
105	350		Cremation	64 (spit 2)	LIA	X	-
105	350		Cremation	64 (spit 3)	LIA	-	-
105	350		Cremation	64 (spit 4)	LIA	-	-
106	162	231	Gully	27		-	Y
107	163	228	Ditch	26	LIA	X	-
108	165	229	Ditch terminus	31	LIA	X	-
109	164		Ditch terminus	29	LIA	-	-
110	166		Shallow pit	32		X	-
111	170		Cremation	surface	?LIA	XX	-
111	170		Cremation	65 (Spit 1)	?LIA	X	-
111	170		Cremation	65 (Spit 2)	?LIA	XX	-
111	170		Cremation	65 (Spit 3)	?LIA	XX	-
111	170		Cremation	65 (Spit 4)	?LIA	XX	-
111	170		Cremation	65 (Spit 5)	?LIA	XX	-
111	170		Cremation	65 (Spit 6)	?LIA	XX	-
111	170		Cremation	65 (Spit 7)	?LIA	XX	-
111	170		Cremation	65 (Spit 8)	?LIA	XX	-
113	168	237	Ditch terminus	33	LIA	X	-
115	171		Cremation	66 (Spit 1)	?LIA	XX	-
115	171		Cremation	66 (Spit 2)	?LIA	XX	-
115	171		Cremation	66 (Spit 3)	?LIA	XX	-
115	171		Cremation	66 (Spit 4)	?LIA	XX	-
115	171		Cremation	66 (Spit 5)	?LIA	XX	-
115	171		Cremation	66 (Spit 6)	?LIA	X	-
115	171		Cremation	66 (Spit 7)	?LIA	X	-
115	171		Cremation	66 (Spit 8)	?LIA	X	-
116	172	236	Ditch	34	LIA	-	-
118	174		Pit	35	-	-	Y
119	175		Pit	36	LIA	-	-
120	176		Pit	37	LIA	X	-
121	177		Pit	38	M/LBA	X	-
123	179		Pit	39	M/LBA	-	-
124	180		Pit	41	M/LBA	X	-
130	188		Pit		LIA	X	-
132	190		Post hole	43	LIA	-	-
136	194		Pit	44	-	X	-
146	254		Pit	49	LIA	-	-

<i>Cut</i>	<i>Deposit</i>	<i>Group</i>	<i>Type</i>	<i>Sample</i>	<i>Date</i>	<i>Charcoal</i>	<i>Seed</i>
147	255		Pit	48	-	-	Y
200	259		Pit	45	LIA	X	-
202	262	239	Ditch	46	LIA	-	-
203	263		Ditch terminus	47	LIA	-	Y
208	269		Pit	50	LIA	X	-
209	270		Pit burnt charcoal	51	LIA	XX	-
211	272	243	Gully terminus	52	LIA	X	-
214	275	241	Ditch	53	LIA	X	-
215	276	238	Ditch	54	LIA/Roman?	-	-
217	278	240	Gully	55	LIA	-	-
218	280		Pit	56	LIA	X	-
220	284		Pit	57	LIA	-	Y
221	287		Pit	58	LIA	X	-
222	288	238	Ditch	59	LIA/Roman?	-	-
223	289	239	Ditch	60	LIA	-	-
227	297	245	Pit	63	LIA	X	-
300	360		Tree throw	100	-	-	-
302	362		Tree throw	101	-	-	-

-: No charcoal

X: some charcoal

XX: much charcoal

Y: weed seed(s)

APPENDIX 7: Radiocarbon dates

<i>Lab ID</i>	<i>Feature</i>	<i>Material</i>	<i>F14C</i>	<i>Radiocarbon Age (BP)</i>	<i>Calibrated date BC</i>	<i>Probability</i>
UBA36361	Unurned Cremation 111 (170) spit 5	Charcoal	0.7656 ±0.0033	2146 ± 35	356–285 252–250 234–85 80–55	27.6% 0.2% 68.4% 03.8%
UBA36362	Pit 124 (180)	Charcoal	0.6760± 0.0022	3145 ± 26	1496–1468 1465–1384 1339–1317	9.5% 82.6% 7.9%

Calibration used Calib rev 7.0 with data from INTCAL 13 (Reimer *et al.* 2013) and the probability is expressed as relative area under the curve at 2-sigma (95.4% confidence).

APPENDIX 8: Kent HER form

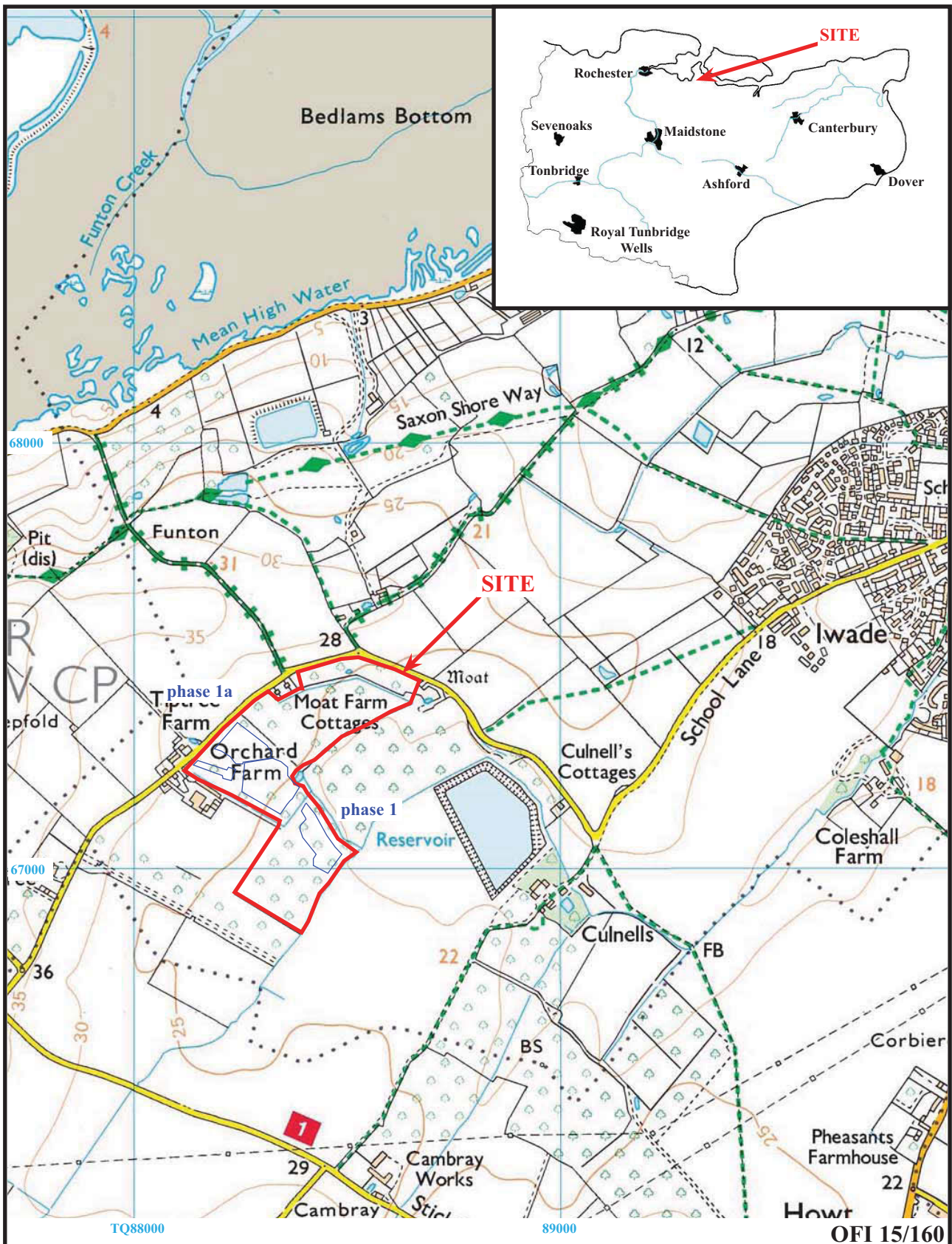
KENT COUNTY COUNCIL MANUAL OF SPECIFICATIONS PART B	
SECTION C - COMPLETION OF FIELDWORK	
Date Fieldwork Completed: 9th June 2016	Was fieldwork monitored by KCC/EH/Other? Y
Further Fieldwork Anticipated: Y	Who? KCC; Andy Josephs Associates
Map attached showing site location and extent of intervention? Y	
<p>Summary of results (Continue on separate sheet if necessary): The stripped site covers the first two areas of extraction (Phase 1 and 1a) of brick earth at the quarry. The fieldwork observed the removal of overburden to expose the top of archaeological deposits on the site. These comprise a mixture of Middle Bronze Age and Late Iron Age occupation</p>	
Agreed Reporting Stages and Program:	
Name: TVAS	
On behalf of: TVAS	
Signed:	Date: 6/12/17

KENT COUNTY COUNCIL MANUAL OF SPECIFICATIONS PART B

SECTION D - COMPLETION OF POST-EXCAVATION ANALYSIS & REPORTING

Reports Submitted (Titles)	Copies to: (Number)						
	KCC	LPA	Arch Soc	Client	EH	Other	Digital Copies
Land at Orchard Farm, Iwade, Kent: an archaeological recording action (Phase 1 and 1a and Lagoon)	1	1				1	Y

HER Data:							
Digital Mapping Data?	Y	Notes:					
Location and Destination of Archive: The archive is currently held with Thames Valley Archaeological Services, Reading and the archive will be deposited when a suitable depository becomes available.							
Name:	TVAS						
On behalf of:	TVAS						
Signed:		Date:	06/12/17				

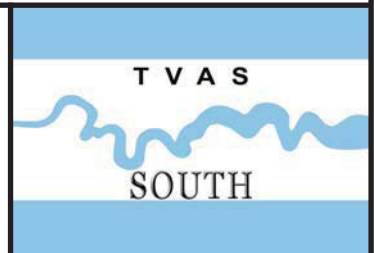


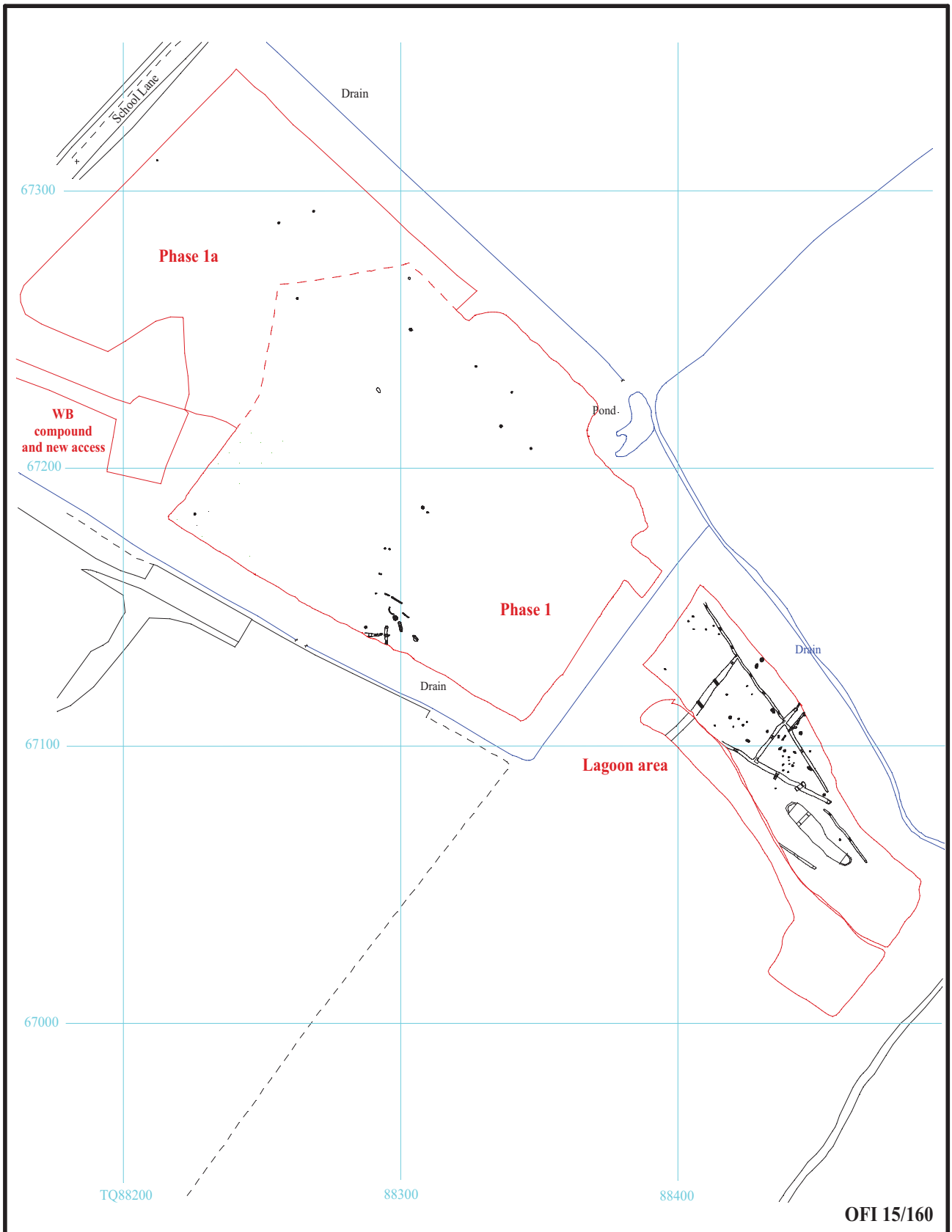
**Land at Orchard Farm,
Iwade, Kent, 2017**

Phase 1 and 1a extraction

Figure 1. Location of site in relation to Iwade and within Kent.

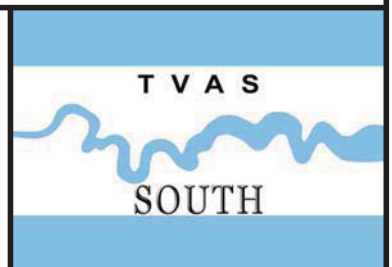
Reproduced under licence from Ordnance Survey Explorer Digital mapping at 1:12500
Crown Copyright reserved

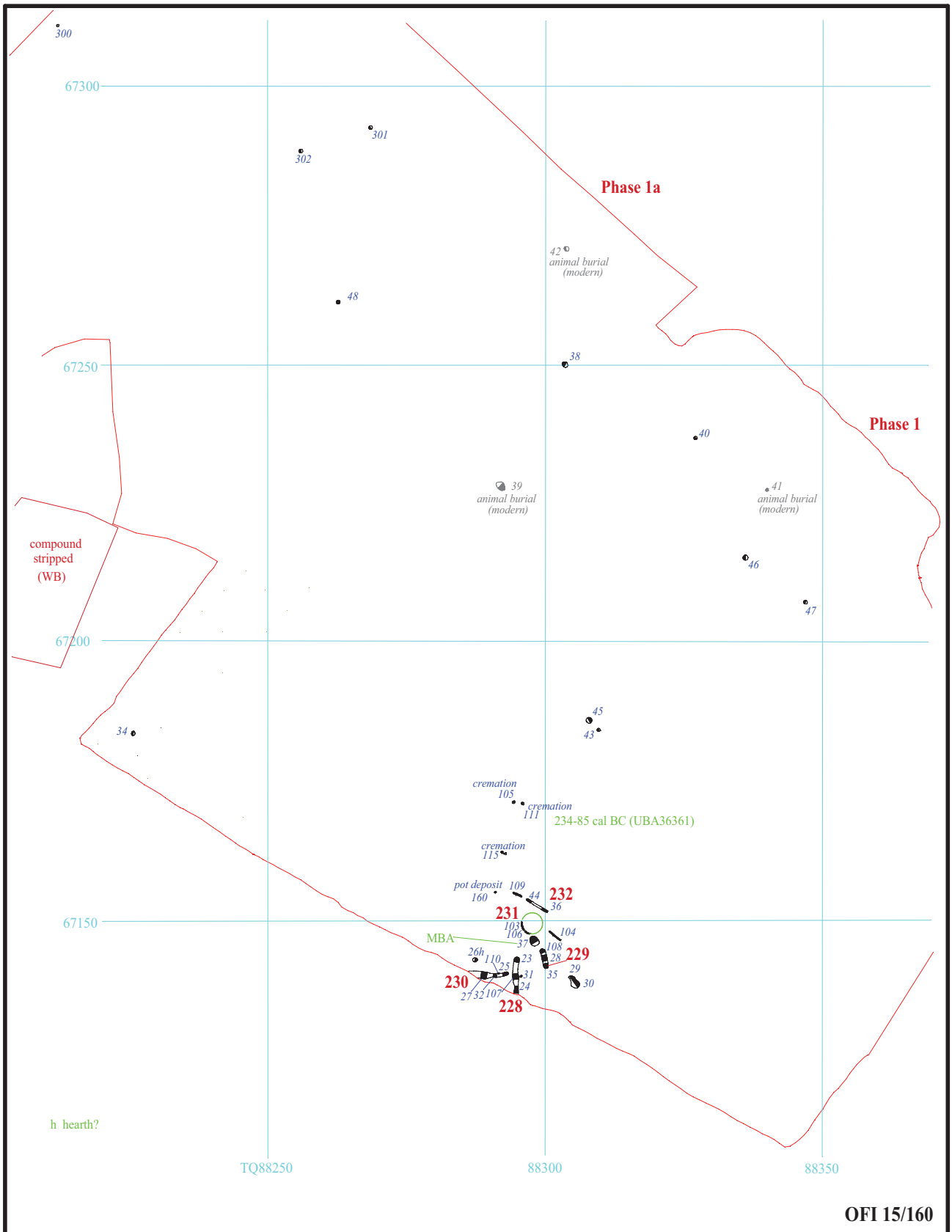




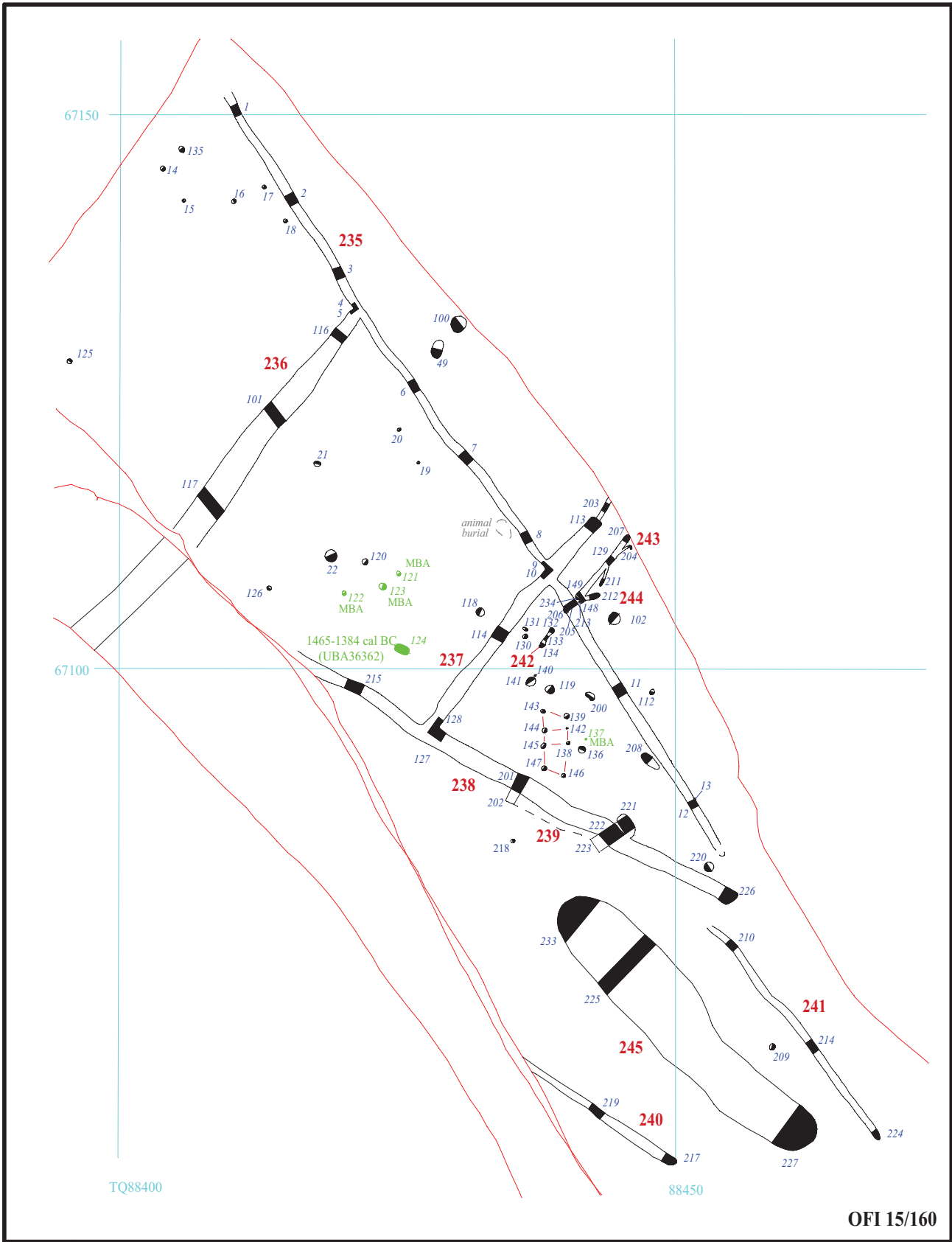
**Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction**

Figure 2. Site plan.





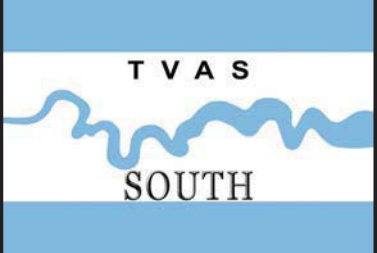
<p>N</p>	<p>Land at Orchard Farm, Iwade, Kent, 2016</p> <p>Phase 1 and 1a extraction</p> <p>Figure 3. Phase 1 plan.</p> <p style="text-align: center;">0 50m</p>	<p>TVAS</p> <p>SOUTH</p>
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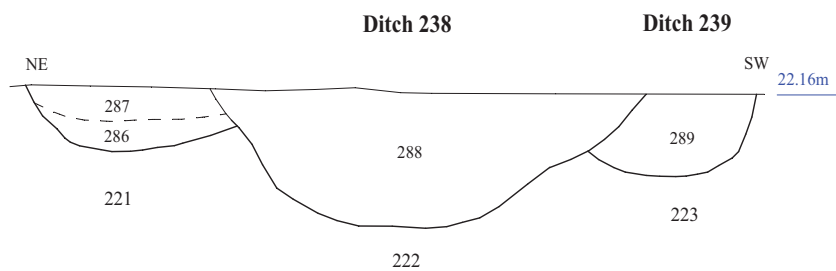
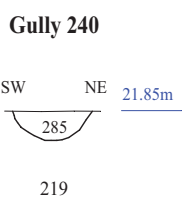
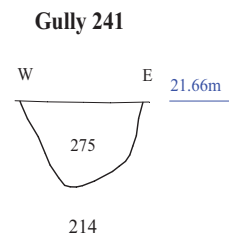
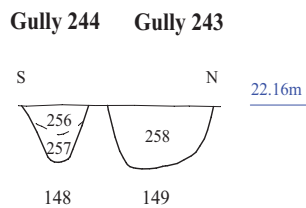
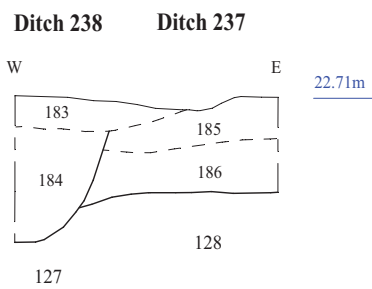
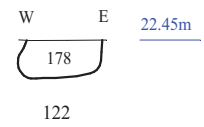
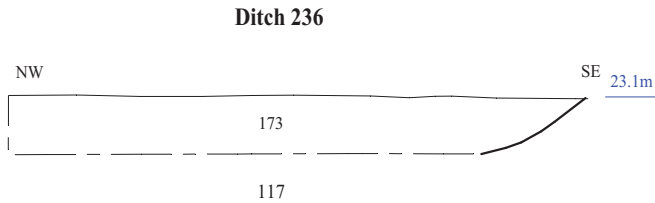
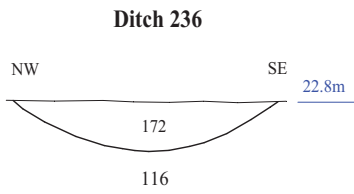
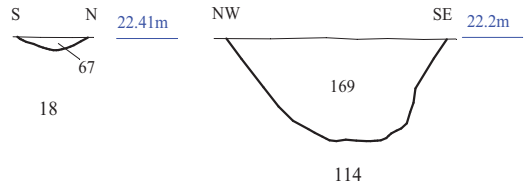
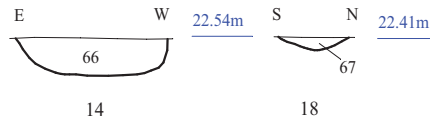
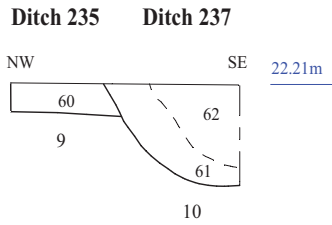
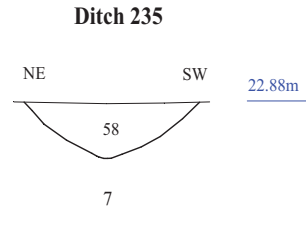
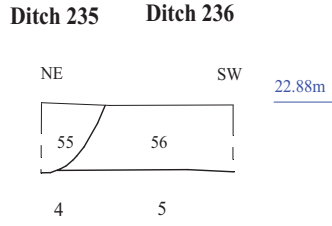
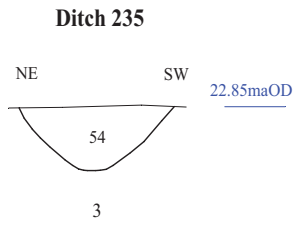


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**Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction**

Figure 4. Lagoon plan.

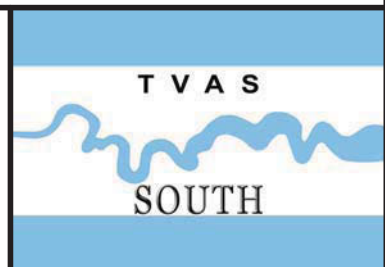




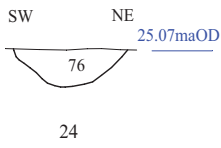
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Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction

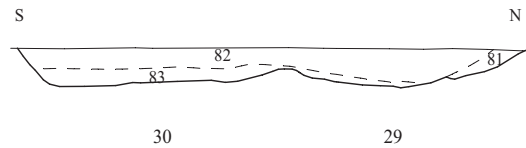
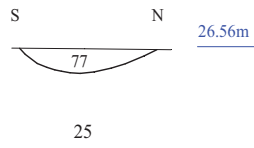
Figure 5. Lagoon - Sections.



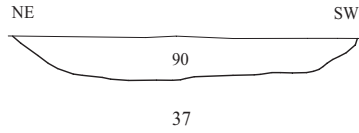
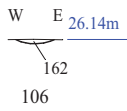
Gully 232



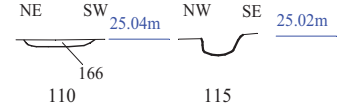
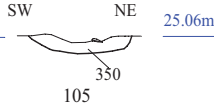
Gully 230



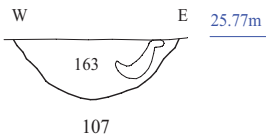
Curvi-linear 231



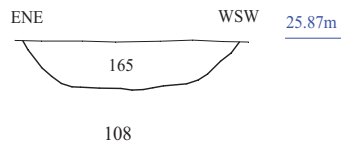
Cremations



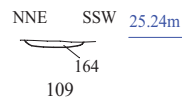
Gully 228



Gully 229



Gully 232



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**Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction**

Figure 6. Extraction phase - Sections.

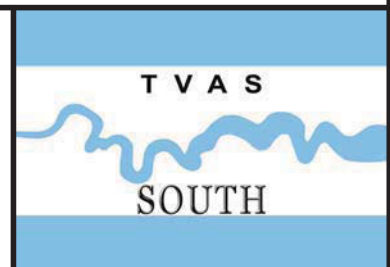




Plate 1. General view of site looking east, Scales: 1m and 2m.



Plate 2. Burnt flint pit 124, looking south west, Scale: 0.5m.

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**Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction
Plates 1 and 2.**

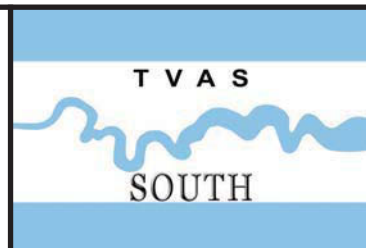




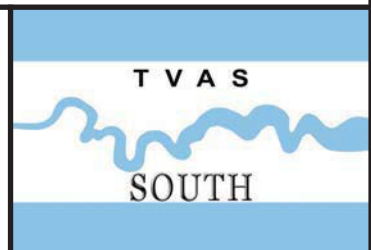
Plate 3. Cremation pot base 350 in 105, looking north, Scales: 0.5m and 0.3m.



Plate 4. Cremation 111, looking north west, Scales: 0.5m and 0.3m.

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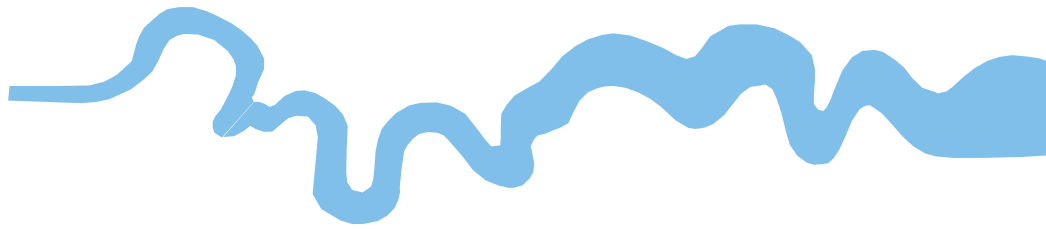
**Land at Orchard Farm,
Iwade, Kent, 2016
Phase 1 and 1a extraction
Plates 3 and 4.**



TIME CHART

	Calendar Years
Modern _____	AD 1901
Victorian _____	AD 1837
Post Medieval _____	AD 1500
Medieval _____	AD 1066
Saxon _____	AD 410
Roman _____	AD 43 AD 0 BC
Iron Age _____	750 BC
Bronze Age: Late _____	1300 BC
Bronze Age: Middle _____	1700 BC
Bronze Age: Early _____	2100 BC
Neolithic: Late	3300 BC
Neolithic: Early	4300 BC
Mesolithic: Late	6000 BC
Mesolithic: Early	10000 BC
Palaeolithic: Upper	30000 BC
Palaeolithic: Middle	70000 BC
Palaeolithic: Lower	2,000,000 BC





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Web: www.tvas.co.uk/south**

***Offices in:
Reading, Taunton, Stoke-on-Trent and Ennis (Ireland)***