ABSTRACT

In 2006 Thames Water Engineering carried out upgrading work at the Kintbury Sewage treatment works in order to improve the quality of the effluent discharged. The scheme involved the installation of a new storm tank, sludge holding tank, a chemical dosing pod, spill bund and associated pipe-work, all located within the existing site compound.

A field evaluation carried out in June 2006 established the presence of Mesolithic, early Bronze Age and Roman remains on the site. The Mesolithic finds consisted of a dense deposit of flintwork that was largely concentrated in the south-west corner of the compound, at the location where a chemical dosing pod was to be positioned. Following discussions with Thames Water an alternative and less archaeologically sensitive position was chosen for the dosing pod, thereby ensuring that the Mesolithic site was preserved in situ.

The small hand-excavated sample of the Mesolithic deposit excavated during the evaluation produced a large assemblage of 1404 worked flints, although very few tools were recovered. However, on the basis of its technological characteristics the assemblage seems likely to date from the seventh millennium BC.

A more comprehensive investigation of the early Bronze Age and Roman remains was carried by area excavation in the autumn of 2006. This was followed by a watching brief, which monitored ground-works undertaken in other parts of the treatment plant.

The area excavation revealed an episode of early Bronze Age activity represented by two pits containing fragments of collared urns, one of which was associated with a deposit of carbonised wheat. The carbonised grains were subsequently submitted for radiocarbon assay and produced a date range of 1746 to 1603 BC. Evidence for middle to late Bronze Age occupation was slight, consisting only of a few un-stratified sherds or residual finds in demonstrably later features.

A late Iron Age to early Roman field ditch was exposed during the area excavation, which had been replaced by a series of boundary features during the late Roman or post-Roman period. Most notable were two large pits, with well preserved post-pipes, which are likely to have marked the entrance to a compound. In addition three ovens or hearths were found, the fills of which produced detailed palaeo-environmental data. Charcoal from two of the ovens was submitted for radiocarbon assay and produced dates between the late fourth century AD and the first half of the sixth century AD.

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ARCHAEOLOGICAL INVESTIGATIONS AT THE THAMES WATER SEWAGE TREATMENT WORKS, NEAR KINTBURY, WEST BERKSHIRE

1 PROJECT BACKGROUND

1.1 Introduction

During 2006 Thames Water Engineering planned to undertake upgrading work at the Kintbury Sewage treatment works in order to improve the quality of the effluent discharged. The scheme involved the installation of a new storm tank, sludge holding tank, a chemical dosing pod, spill bund and associated pipe-work, all located within the existing site compound.

Since the Sewage treatment works at Kintbury was known to occupy land with a high archaeological potential, Thames Water were advised by the Archaeological Officer of West Berkshire Council that an archaeological evaluation should take place prior to the engineering ground-works in order to assess the impact of the development. That preliminary work was carried out in June 2006 and established the presence of Mesolithic, early Bronze Age and Roman remains on the site. The Mesolithic finds consisted of a dense deposit of flintwork that was largely concentrated in the south-west corner of the compound, at the location where a chemical dosing pod was to be positioned. Following discussions with Thames Water an alternative and less archaeologically sensitive position was chosen for the dosing pod, thereby ensuring that the Mesolithic site was preserved *in situ*.

The early Bronze Age and Roman remains were found in evaluation trenches located to the north-east of the Mesolithic site, where a new sludge holding tank was to be built. This area was under grass and had not been disturbed by previous construction work, which strongly suggested that further features were likely to survive across the area affected by the new tank ground-works. In consultation with Thames Water it was agreed that the appropriate mitigation strategy for that part of the site would be an area excavation carried out in advance of the ground-works.

The installation of the new storm tank and extensive trenching for associated pipe-work was confined to parts of the site which had been developed previously, and where the conditions for the survival of archaeological features were less favourable. The strategy agreed for these areas consisted of a single evaluation trench across the site of the new storm tank and a watching brief during the ground-works for the relocated dosing pod. That was followed by a watching brief which was maintained during the ground-works for the spill bund, the re-routing of the access road to accommodate the new storm tank and extensive trenching for new pipe-laying.

1.2 The Location and Physical Character of the Site

The Sewage treatment works is situated to the north-east of Kintbury at National Grid Reference SU 439450 167100 (Figure 1). The site occupies the foot-slope of a low plateau, where the land falls northwards from approximately 105 metres AOD (above Ordnance Datum) to some 90 metres AOD at the site itself. The valley slopes surrounding the works are dominated by arable farmland, while to the north the site is bounded by the Kennet and Avon Canal, which follows the margin of the River Kennet floodplain.

Across the entire site the geology is formed by Head deposits, a Pleistocene drift formation overlying the Upper Chalk. The deposits consist of weathered and broken-up material moved down-slope by solifluction to accumulate on the hill slope and valley bottom. On the higher ground at the southern end of the site the Head deposit is overlain by a bi-sequential accumulation of flinty colluvium, which in turn rests on a truncated and oxidised alluvial deposit. The full extent of the alluvium was seen most clearly in the area excavation, where it chiefly survived in shallow involutions, probably formed by dissolution of the underlying Head.

1.3 The Archaeological Setting

The sewage treatment works occupies a stretch of the Kennet Valley which is particularly rich in Mesolithic remains (Lobb and Rose 1996). Several clusters of late glacial and Mesolithic sites have been identified within a few kilometres of Kintbury, where they occupy the lower valley slopes, the edge of the floodplain terrace and the floodplain itself (Froom 2005, Figure 1.2). With the exception of Avington VI and Wawcott XV, the majority are located to the north of the Kennet & Avon Canal.

Archaeological remains were discovered at the sewage treatment works between 1949 and 1950 during the construction of the filter beds (Connah 1950 and Figure 1). Three hearths were uncovered by the workmen in the late summer of 1949 by one of the filter beds. Subsequent excavations alongside these features revealed one or more pits containing Roman pottery, coins, nails, animal bone and oyster shell (*ibid*.). In the early spring of 1950 large quantities of Mesolithic worked and burnt flint were recovered from a spoil heap, and the hearths were re-interpreted as evidence of a Mesolithic occupation site (*ibid*.).

Further work by Connah in a field adjoining the western side of the sewage treatment works revealed the substantial remains of a bath house at SU 439416 167155 (Figure 1). Excavations over a number of seasons uncovered the complete ground plan of a hypocaust, traces of decorated wall plaster and fragments of a mosaic (Connah 1950 and the Connah Archive). Finds from the excavations dated the building to the fourth century AD (SMR Event ID: EWB445).

Approximately 400 metres to the east of the Sewage treatment works, Connah's notes record the discovery of Roman pottery near Shepherd's Bridge in 1950 by

Mr. A. H. Collins (Connah Archive). There is no further information on the circumstances of this find, nor is there any discussion of its significance.

2 THE EVALUATION

2.1 Trench Layout

The first stage of the evaluation was carried out in June 2006 and consisted of four machine excavated trenches positioned across the area where the ground-works would have the maximum impact on any buried archaeological deposits (Figure 2, Trench 1 to Trench 4). The four original trenches were supplemented at a later stage by the excavation of a fifth trench situated on the site of the relocated dosing pod (Trench 6).

Some adjustment was made to the agreed trench layout to avoid earthen bunds and underground services; Trench 1 was moved three metres eastwards away from the line of an underground electric cable, while Trench 4 was shifted to a new location north and east of Trenches 2 and 3 to avoid a service located by a CAT scan (Figure 2). Trench 6 was added at a later stage (October 2006) to investigate the site for the relocated dosing pod (Figure 2).

2.2 The Evaluation Results

The earliest evidence revealed by the evaluation comprised a dense concentration of Mesolithic worked flint surviving in fresh condition within a layer of silt loam at the base of Trench 1 (Figure 2). There was no obvious vertical stratification in the distribution of the flint work within this sediment, suggesting that it had been disturbed. This early deposit appeared to seal a feature seemingly of natural origin, possibly a tree cast that also contained Mesolithic worked flint in fresh condition.

The deposit was less clearly defined in Trenches 2, 3 and 4, where it appeared to be more heavily truncated (Figure 2). The earliest feature in that part of the site was a truncated oval pit in Trench 4, which produced part of an early Bronze Age collared urn. A small undated ditch on an east to west alignment was identified in Trench 3, while a similar but very indistinct linear feature was exposed in Trench 2. A possible post hole was revealed close to the south-western edge of this feature. An oven with a single flue was fully exposed towards the centre of the Trench 2, and appeared to be cut into the fill of the indistinct linear feature, which was thought to be a continuation of the ditch in Trench 3. A second oven lay partly within the trench some 0.5 metres to the south-west, while a third possible example was identified to the north in Trench 4. The ovens were left intact so that they could be investigated more thoroughly at a later stage when a larger area was opened.

Trench 1

Trench 1 coincided with the original position for dosing pod, close to the entrance to the site compound (Figure 2). The trench was excavated to a

maximum depth of 1.2 metres at its western end and 1.03 metres at its eastern end. The topsoil was 0.21 metres in depth and was a dark greyish brown (10YR 4/2) silty clay loam containing 20% small to medium sub-rounded flint and hard core (Figure 3, Section 1, context 1/01). This was stratified above a layer of made ground composed of modern rubble that included crushed concrete and clinker (Figure 3, Section 1, context 1/02). This deposit varied in depth from 0.13 metres on the southern side of the trench to 0.43 metres along its northern baulk. Anecdotal evidence suggested that there may have been a former compound across the area encompassed by Trench 1, in which case context 1/02 is likely to represent part of the hard standing.

The made ground sealed a layer of colluvium (Figure 3, Section 1, context 1/03). The deposit was not present in the northern trench section, where it seems likely to have been removed by an earlier episode of topsoil stripping during previous development on the site. The colluvium was a dark brown (10YR 3/3) silty clay loam, some 0.12 metres in depth, containing 10% very small to small sub-rounded chalk. It appeared to have a relatively recent origin since it produced two fragments of a glazed wall tile likely to be of nineteenth to early twentieth century date. Residual finds included two fragments of Roman ceramic building material and a single fragment of opus signinum (Table 4, context 1/03).

Below context 1/03, a second colluvial deposit had accumulated to a depth of 0.53 metres (Figure 3, Section 1, context 1/04). This was the same colour and texture as the overlying deposit (context 1/03), but incorporated 15% small to medium sub-angular flint and rounded flint pebbles along with small chalk fragments.

The lower colluvium sealed a dark yellowish brown (10YR 3/4) silt loam that contained 5% small rounded flint pebbles, comminuted charcoal and Mesolithic worked flint (Figure 3, Section 1, context 1/05). This layer proved to be approximately 0.26 metres in depth and to be stratified directly above the natural (Figure 3, Section 1, context 1/08). There was no obvious vertical differentiation in the distribution of the worked flint which occurred throughout the horizon (Table 10). Moreover, the individual flakes were resting at various angles within the sediment, suggesting that the deposit had been reworked.

Context 1/05 was exposed by machine, and a sample reserved towards the eastern end of the trench for hand excavation (Figure 3). The southern half of this, measuring some 2.5 by 0.75 metres, was excavated in five 0.05 metre spits, leaving the northern half *in situ*. An assemblage of 121 pieces of Mesolithic worked flint (Table 9) and three fragments of burnt flint were recovered from the machined part of context 1/05. In contrast, the hand excavation produced 982 pieces of worked flint, 77 pieces of burnt worked flint (Table 10, context 1/05, Spits 1-5) and 15 pieces of burnt flint. Along with 11 complete cores, the flint assemblage includes two microliths; a piercer; two serrated blade; and seven scrapers.

A linear feature was revealed below context 1/05 cutting the natural (Figure 3, F1/07). This was 1.45 metres long, 1.28 metres wide and 0.34 metres deep

(Figure 3, Sections 1 and 2, F1/07). The feature was asymmetrical with an irregular ledge in the natural on the south-eastern side of the excavated section (Figure 3, F1/07), while several root channels ran along the north-western edge. The fill was a dark brown (10YR 4/2) silty clay loam containing 1% small sub-rounded flint, comminuted charcoal (Figure 3, Sections. 1 and 2, context 1/06) and 233 pieces of Mesolithic worked flint in fresh condition (Table 11). The character of this feature suggests that it is likely to have been a tree cast, although this was not entirely clear in the confines of the narrow working area.

The natural in Trench 1 was a dark brown (7.5YR 3/4) clay loam with a variable density of flint pebbles and larger nodules (Figure 3, Section. 1, context 1/08). The stonier patches were characterised by up to 40% small to medium sub-rounded flint.

Trench 2

Trench 2 was located across the site of a proposed sludge holding tank (Figure 2). The south-western end of the trench was excavated to a maximum depth of 0.655 metres, while the north-eastern end was shallower at 0.44 metres. The topsoil was 0.19 metres in depth and consisted of a brown (10YR 4/3) silty clay loam containing 1% small sub-angular flint (context 2/01). There were traces of a sorted horizon at the base of this layer.

The underlying sub-soil (context 2/02), which was almost certainly colluvial in origin, was 0.32 metres in depth and was also a brown silty clay loam, but of a slightly different hue (10YR 4/2). In contrast to the topsoil it contained 10% small to medium sub-rounded flint. The finds include eight sherds of abraded Roman pottery (Table 3), a small assemblage of 13 worked flints, a hand-made iron nail and a tooth, probably from a sheep or goat.

The sub-soil was stratified directly above the natural (context 2/11) and four features of archaeological origin, none of which were excavated (Figure 4, F2/04, F2/06, F2/08, F2/10). A linear feature crossing the trench on a north-west to south-east alignment (Figure 4, F2/08) was very indistinct, with ill-defined edges. In plan it was 1.0 metre wide in Trench 2 (Figure 4, F2/08) and the un-excavated upper fill comprised a brown (10YR 4/3) silty clay loam containing 1% small sub-angular flint (context 2/07).

An oven defined by an hour-glass shaped area of fire-reddened clay (Figure 4, F2/04) had been cut into the upper fill of the possible ditch (context 2/07). The feature was 1.3 metres long by 0.61 metres wide, and was filled with a very dark grey (10YR 3/1) silty clay loam containing charcoal flecks that concentrated towards its south-western end (context 2/03).

A second oven of similar character and dimensions lay some 0.5 metres to the south-west (Figure 4, F2/06) and was only partly within the trench. It was also filled with a very dark grey (10YR 3/1) silty clay loam containing charcoal flecks (context 2/05)

A small oval feature, 0.25 by 0.20 metres in plan, was identified close to the south-western edge of the ditch (Figure 4, F2/10). This was filled with a stone-

free brown (10YR 4/3) silty clay loam (context 2/09) and may have been a post hole.

The natural in Trench 2 (context 2/11) was variable in character and consisted of a flinty head deposit, interspersed with discontinuous stripes of dark brown (7.5YR 4/3) clay loam on a south-west to north-east alignment. This contained variable quantities of medium sub-rounded flint, which in places comprised up to 40% of the deposit.

Trench 3

Trench 3 (Figure 2) was excavated to a maximum depth of 0.9 metres at its northern end, with the southern end shelving upwards to 0.69 metres. The topsoil (Figure 4, Section 4, context 3/01) was 0.19 metres in depth and was identical in character to the equivalent layer in Trench 2 (context 2/01), but without the sorted horizon. In this instance the topsoil had been re-deposited since it lay directly above a concrete surface which was 0.12 metres thick (Figure 4, Section 3, context 3/06).

The underlying sub-soil was 0.51 metres deep (Figure 4, Section 3, context 3/02), produced a small assemblage of worked flint (10 pieces) and was indistinguishable from the equivalent horizon in Trench 2 (context 2/02). It was stratified directly above a shallow ditch (Figure 3, Section 4, F3/04) and the natural (context 3/05), which again was of the same character as that in Trench 2 (context 2/11).

A section was excavated across the ditch (Figure 4, F3/04) which proved to be 0.88 metres wide and 0.22 metres deep with a broad U-shaped profile (Figure 4, Section 3, F3/04). It was filled with a yellowish brown (10YR 3/4) clay loam that contained 2% small flint pebbles (Figure 4, Section 3, context 3/03). No finds were recovered from the ditch fill.

Trench 4

Trench 4 was positioned so as to sample the location for a series of proposed services passing to the north of Trenches 2 and 3 (Figure 2). There was relatively little variation in the surface ground level which ranged from 91.47 metres AOD (Above Ordnance Datum) at the western end of the trench to 91.23 metres at its eastern end.

The trench was excavated to a maximum depth of 0.59 metres at its western end and 0.47 metres at its eastern end. The topsoil (context 4/01), sub-soil (context 4/02) and natural (context 4/07) were identical in character to the equivalent horizons in Trench 2 (contexts 2/01, 2/02 and 2/11). The sub-soil (context 4/02) produced a single heavily abraded fragment of Roman ceramic building material (Table 4) and three worked flints.

The sub-soil (context 4/02) was stratified directly above the natural (context 4/07) and two features of archaeological origin (Figure 4, F4/04 and F4/06). One proved to be a shallow oval pit of early Bronze Age date (Figure 4, F4/04). The feature was half-sectioned and the contents retained for sieving. The pit was 0.88 metres long, 0.60 metres wide and 0.09 metres deep (Figure 4, Section

4, F4/04). It was filled with a very dark grey (10YR 3/1) silty clay loam containing 5% small to medium sub-angular flint and comminuted charcoal (Figure 4, Section 4, context 4/03). This layer incorporated 28 sherds from an early Bronze Age collared urn; 13 fragments of fired clay (Table 5); an assemblage of burnt and un-burnt animal bone; and three fragments from a sandstone rubber.

The second feature mostly extended beyond the edge of Trench 4 (Figure 4, F4/06), and for that reason it was not excavated. The upper fill was composed of a charcoal rich, very dark greyish brown (10YR 2/2) silty clay loam that contained 1% small sub-angular flint (context 4/05).

Trench 6

The trench was positioned across the site of the relocated dosing pod (Figure 2). The eastern end of the trench was excavated to a depth 0.64 metres and the western end to a depth of 0.52 metres. The topmost layer consisted of made ground comprising mixed gravel in a dark grey silty clay matrix (Figure 5, Section 5, context 6/01). The layer was 0.06 metres deep and lay above a dark brown (10YR 3/3) silty clay loam (0.32 metres deep) that incorporated 15% small to medium sub-angular flint and rounded flint pebbles, along with small chalk fragments (Figure 5, *ibid*., context 6/03). In its physical characteristics, this layer closely resembled the lower colluvial deposit recorded in Trench 1 (context 1/04), and almost certainly was of the same date. Like its counterpart in Trench 1, the colluvium was stratified above 0.35 metres of dark yellowish brown (10YR 3/4) silt loam (Figure 5, Section 5, context 6/02). This contained less than 1% small, rolled chalk and 2.5 % small to medium sub-rounded flint and was interpreted as reworked alluvium.

A narrow, undated ditch on a north to south alignment was cut through the alluvial sediment (Figure 5, Section 5, F6/05) and was sealed by the colluvial deposit (Figure 5, context 6/03). The ditch was 0.43 metres deep with a maximum width of 0.90 metres. It contained a single fill (Section 5, context 6/04) composed of a dark yellowish brown (10YR 3/4) silt loam incorporating 10% small to medium sub-rounded flint.

The colluvium, context 6/03, produced a small assemblage of finds which consisted of a single fragment of Roman ceramic building material (Table 4); 24 pieces of worked flint; and a fragment of worked stone, probably a hone stone. The ditch fill (context 6/04) produced 19 pieces of worked flint and a single piece of burnt flint.

3 THE AREA EXCAVATION

3.1 Introduction

The area excavation was carried out jointly by Berkshire Archaeological Services and John Moore Heritage Services between the 4th and the 18th of October 2006. The work involved the machine stripping of some 306 square metres around the site for the new sludge holding tank (Figure 2, TR5). All finds recovered during the machining were assigned a topsoil or sub-soil context number (5/01 or 5/02 respectively). At intervals the spoil heap was searched for any finds missed during the machining. In addition, a metal detector was used to locate any metal artefacts.

The topsoil and sub-soil lay directly above the solid chalk geology across much of the eastern part of the site, whereas to the west and south the soil horizons had formed over a deposit of alluvial origin. No features were observed cutting into the deposit along the western edge of the trench, and for that reason the deposit was removed by machine to expose any earlier features cut into the underlying chalk.

3.2 The Features

Early Bronze Age Pits

Two closely spaced pits were excavated close to the northern trench edge. Both had been first identified during the evaluation in Trench 4 (Figure 4, F4/06 and F4/04), and were assigned new feature numbers consistent with the sequence used for the area excavation (Figure 6, F1 and F2 respectively).

Pit F1 measured 0.93 metres in length, 0.59 metres in width and had a depth of 0.31 metres (Figure 7, Section 6). The pit was rather truncated and was sealed below the colluvial sub-soil (Figure 7., Section 6, context 5/02). The upper fill (context 5/06) was a black silty loam (10YR 2/1) containing 5% small flint; charcoal; 84 sherds from an early Bronze Age collared urn; fired and raw clay (Table 5); 56 pieces of worked and 20 pieces of burnt flint; and a small assemblage of animal bone. The basal pit fill (context 5/07) was a dark yellowish brown silty loam (10YR 4/4), which contained four sherds from the same collared urn present in context 5/06; animal bone; and two pieces of worked flint.

The second pit (F2) was half sectioned during the evaluation to reveal a very truncated profile (Figure 4, Section 4). Like F1, the pit was oval in plan and measured 0.88 metres in length, 0.60 metres in width and had a depth of 0.09 metres. The single fill (context 4/03) consisted of a very dark grey silty clay loam (10YR 3/1) containing 5% small to medium sub-angular flint. It produced 28 sherds from an early Bronze Age collared urn; 13 fragments of fired clay (Table 5); burnt and un-burnt animal bone; and fragments from a sandstone rubber. The small worked flint assemblage consisted of just two pieces, one of which was burnt.

Contexts 5/06 and 4/03 (F1 and F2) were fully retained for bulk sieving and the residues and flots subsequently submitted for archaeo-botanical analysis (Tables 12 and 13). A small quantity of carbonised *Triticum* grains recovered from the sieve flot of context 5/06 (pit F1) were submitted for radiocarbon assay (Table 1).

Boundary Features

These comprise a shallow ditch (Figure 6, F9 associated with a broadly linear arrangement of pits and post holes (*ibid.* F3, F4, F5, F6, F7, F8 and F11). The ditch (F9) followed a north-east to south-west alignment and terminated against a tree root cast (Figure 6, F18). Sections of the ditch were recorded at three locations, where it was shown to be a shallow and irregular feature with a maximum width of 0.99 metres and a maximum depth of 0.33 metres at the baulk section (Figure 7, Section 7, F9). The single fill (context 5/52; equivalent to context 5/14 in Figures 8 and 9, Sections 8, 9 and 10) consisted of a brown silty clay loam (10YR 4/3) containing 20% small angular flint and chalk. The only finds recovered from the fill comprise three sherds of late Iron Age to early Roman pottery in the date range 50 BC to AD 60/70 (see Section 5.1).

Two truncated pits or post holes were recorded in association with the ditch (Figure 6, F6 and F7). The first of these (F6) was 0.42 metres in diameter and 0.15 metres deep (Figure 9, Section 11); the second was 0.55 metres in diameter and 0.13 metres deep (Figure 9, Section 10). F6 was not recognised as a separate feature during excavation, and indeed it was thought to be no more than a variation in the rather irregular profile of the ditch F9. However, in retrospect it seems likely that F6 was a heavily truncated pit or post hole cut through the ditch (F9).

Though similarly slight, F7 appeared in section as a quite separate feature cutting through the ditch F9 (Figure 9, Section 10). The single fill of F7 (Figure 9, Sections 10 and 11, context 5/12) was a yellowish brown silty clay loam (10YR 5/4) with 10% small sub-angular chalk. Pit F6 was entirely devoid of finds, but the fill of F7 produced three abraded Roman sherds with a date range of AD 270 to AD 400 (Table 3), all of which are likely to be residual.

The most notable features adjoining the ditch F9 were the two substantial pits, F4 and F5 (Figure 6). F4 measured 1.35 metres in diameter and had a depth of 0.67 metres (Figure 8, Section 9). The section shows that the pit had held a massive post which appears to have rotted *in situ*, leaving a central post pipe (Figure 8, Section 9) filled with a dark greyish brown (10YR 4/2) silty clay (context 5/08). Either side of the post pipe, the pit fill consisted of compacted chalk rubble and large flint nodules, which had been used as packing to secure the post (Figure 8, Section 9, contexts 5/25 and 5/47). Two limestone roof tiles had been placed at the base of the post pipe, presumably to prevent the post from slipping as it was being levered into an upright position. Aside from the limestone roof tile fragments the only other finds from F4 consist of a single tegula fragment (Table 4, context 5/08); a small assemblage of animal bone from context 5/08; and a large block of sarsen from the post packing, context 5/47.

The second of the large pits (F5) measured 1.40 by 2.00 metres in plan and had a depth of 0.86 metres. The upper fill was composed of chalk and flint rubble (Figure 8, Section 8, context 5/10) in a yellowish brown (10YR 5/4) silty clay matrix. This lay above the remnant of a post pipe filled with a brown silty clay (Figure 8, Section 8, context 5/45, 10YR 5/3), and was similar in diameter to that in F4. Like its counterpart in F4, the remaining portion of the post pipe was surrounded by chalk and flint packing (Figure 8, Section 8, contexts 5/04 and 5/44).

The section of F5 (Figure 8, Section 8) shows that the pit cuts through the ditch F9 and is therefore the later feature. However, direct evidence for the dating of the pit is far from reliable, depending on a small assemblage of pottery recovered from the upper fill (context 5/10) and the post packing (context 5/44). For the most part the assemblage consists of seven abraded sherds with dates spanning the late Iron Age to the end of the Roman period (1st century BC to AD 400), and is likely to include a strong residual element (Section 5.1 and Table 3). The other finds comprise a small assemblage of animal bone; six fragments of CBM (Table 4); an iron nail and iron cleat; and a single piece of burnt flint, all of which were recovered from the upper fill (context 5/10). The truncated post packing (context 5/44) produced a single fragment of CBM (tile) bearing an indistinct signature mark (Table 4).

Three small pits were excavated along the alignment of the ditch F9. The most northerly was F3 (Figure 6), which measured 0.57 metres in diameter and 0.23 metres in depth (Figure 8, Section 12). The fill consisted of a single layer (context 5/16) of greyish brown silty loam (10YR 5/2) incorporating 5% small to medium sub-angular chalk and flint. No finds were recovered from the pit.

The other two pits were in close proximity to the large post pit F5 (Figure 6, F8 and F11). The excavation of F8 revealed a shallow flat-bottomed feature measuring 0.64 metres in diameter and 0.26 metres in depth (Figure 8, Section 13). It was filled by a single layer (context 5/36) consisting of a dark greyish brown silty clay (10YR 4/2) incorporating 25% medium sub-rounded chalk and flint. No finds were recovered from the pit.

F11 was situated to the south of the large post pit F5 and measured 0.67 metres in diameter and 0.32 metres in depth (Figure 8, Section 14). The single fill (context 5/34) was a dark brown silty clay loam (10YR 4/2) with 1% medium sub-rounded flint and 5% very small to small sub-rounded chalk. A single sherd of pottery was recovered from the fill, but it can only be dated broadly to the Roman period, between AD 43 and AD 400 (Table 3).

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The Ovens and Associated Post holes

Of the three ovens (Figure 6), two had been identified in Trench 2 during the evaluation and were recorded as F2/04 and F2/06 (Figure 4). Following the area stripping, both of the previously recorded ovens were renumbered (Figure 6, Oven 1 & Oven 2 respectively). A third oven was found a short distance to the south-east of the former evaluation trench and was recorded as Oven 3 (Figure 6). Hand cleaning of the exposed surface around the group of ovens revealed a cluster of post holes which were recorded as PH1 to PH9 (Figure 6).

The group of ovens and their associated post holes were cut through the alluvial sub-soil (Figure 6, context 24) into the underlying chalk. All three ovens shared a common north-east to south-west alignment, with their flues at the north-eastern end, but in other respects they were markedly different.

Oven 1 measured 1.17 metres in length and had a maximum width and depth of 0.80 metres and 0.24 metres respectively. The flue was bisected by a small ridge of chalk and opened into a sub-circular chamber with a bowl-shaped profile (Figure 12). The sides of the flue and chamber had been cut through the alluvial sub-soil (context 24) and were reddened by intense heat. This extended across the base of flue and chamber, except where the underlying chalk had been exposed (Figure 10, Section 15).

The single fill of the feature (Figure 10, Section 15, context 5/30) consisted of a very dark brown silty clay loam (10YR 3/1). This produced a single sherd of late Iron Age to early Roman pottery (Section 5.1) and 31 sherds ranging in date between AD 70 and AD 400 (Table 3). The other finds consisted of animal bone fragments; a single fragment of Roman CBM (Table 4); 47 pieces of worked and burnt flint; a single fragment of Roman glass and a worked stone fragment, possibly from a rotary quern. Flot and sieve residues from context 5/30 were submitted for archaeo-botanical analysis (Table 7).

Oven 2 had a distinctive dumb-bell shape in plan (Figure 12) and measured 1.80 metres in length. It had a separate fire hole (0.75 and 0.52 metres in width and length) connected to a narrow flue, which opened into a rounded chamber with a maximum diameter of 0.72 metres. The flue sloped downwards from the fire hole, which was 0.17 metres deep, to the chamber which had a maximum depth of 0.25 metres (Figure 10, Section 16).

The most distinctive structural feature of Oven 2 was the compact mass of fired clay forming the uppermost layer of the fill (Figure 10, Section 16, context 5/41). This material appeared to have been derived from the collapse of a clay superstructure. It lay directly above context 5/42, a black silty clay loam charged with charcoal (2.5YR 2.5/0), which was spread throughout the entire length of the feature (Figure 10, Section 16). Context 5/42 lay above context 5/43 (Figure 10, Section 16), which consisted of a thin layer of dark greyish brown silty clay loam (10YR 4/2).

The small artefact assemblages recovered from Oven 2 comprised single sherds of late Iron Age pottery (50 BC to AD 60/70) and a Roman sherd in an undated fabric (Section 5.1 and Table 3); burnt and un-burnt animal bone; and 23 pieces of worked and burnt flint, all of which came from context 5/42. In addition context 5/43 produced small numbers of burnt and un-burnt animal bones and 52 pieces of worked and burnt flint. Sieve samples taken from contexts 5/28, 5/42 and 5/43 were sent for archaeo-botanical analysis (Table 12). A single sample of charcoal from context 5/42 was submitted for radiocarbon assay (Table 1, UBA 8269).

Oven 3 had a total length of 1.25 metres (Figure 12). It consisted of a narrow flue leading to a sub-rounded chamber with a maximum diameter of 0.67

metres and a depth of 0.18 metres. The uppermost fill consisted of lumps of raw and burnt clay (Figure 10, Section 17, context 5/54). Fragments of burnt clay were also present in the underlying layer (Figure 10, Section 17, context 5/26), which consisted of a black to very dark brown clay silt (2.5YR/1 to 2.5YR/2). In the flue this lay above context 5/55 (Figure 10, Section 17), a dark brown to very dark brown clayey silt loam (7.5YR/3/2 to 10YR 2/2). Aside from traces of scorching where the flue joined the chamber, there was very little sign of the intense heat associated with the use of the other ovens. However, the feature was mostly cut into the chalk, and this may account for the absence of the reddening which was largely confined to the burnt sub-soil around the other ovens.

The finds from Oven 3 comprise fired clay from contexts 5/54 and 5/26 (Table 5); animal bone from context 5/26; 34 pieces of worked and burnt flint from contexts 5/54 and 5/26; and a single sherd of Roman pottery with a date range of AD 43 to AD 150 from context 5/26 (Table 3).

A bulk sieve sample taken from context 5/26 was sent for archaeo-botanical analysis (Table 12). A sample of the charcoal recovered from context 5/26 was submitted for radiocarbon assay (Table 1, UBA 8270).

A cluster of nine post holes was associated with the ovens (Figures 6 and 12, PH1 to PH9). These had depths that varied between 0.04 metres and 0.23 metres (Figure 11, PH3 and PH8 respectively). Though none of the fills produced finds, the clear arrangement in two groups of four suggests that they were integrated with the ovens and may have held supports for drying racks, or screens. PH1, 2, 3 and 6 surround Oven 1, while post holes PH4, 5, 7 and 9 form a second rectangular arrangement, which is offset from Oven 3 (Figure 12). Post hole PH8 does not appear to form part of this pattern, although it is almost certainly a contemporary element. Oven 2 appeared to lack a similar four-post group, possibly indicating that it had a different function, as its rather distinctive forms suggests.

Other Features

Amongst the remaining features (Figure 6, F10, F12, F13, F14, F15, F16, F17 and F18) only F10 and F14 were of undoubted archaeological origin. The first of these was a small pit in the north-eastern corner of the site. The excavation revealed this to be a shallow oval feature containing a tightly packed mass of animal bone, which was subsequently identified as the near complete skeleton of a female sheep. The pit itself measured 0.64 by 0.48 metres in plan and had a depth of 0.11 metres (Figure 10, profiles 18a and 18b). The fill (context 5/18) was a dark greyish brown silty clay loam (10YR 4/2), which produced three pottery sherds with an overall date range of AD 120 to AD 400 (Table 3).

The linear feature F14 (Figure 6) was interpreted as a sunken track and was traced for a distance of some 4.10 metres. It was approximately 1.30 metres wide and 0.08 metres deep with traces of a slight ridge at the south-eastern end, which was off-set from the centre (Figure 11, Section 19). The single fill (context 5/20) consisted of a brown silty clay loam (10 YR 4/3) containing 10% small flint pebbles. The pottery finds from the layer consist of two Late Bronze

Age to Late Iron Age sherds; a single sherd dated between the Late Iron Age and AD 60/70 (Section 5.1); and three sherds with dates ranging between AD 43 and AD 200 (Table 3). In addition, context 5/20 produced a small assemblage comprising 18 pieces of worked and un-worked burnt flint.

Two of the remaining features (Figure 6, F15 and F17) are of uncertain origin and although both had fairly regular outlines, the chalk edges were penetrated by numerous channels, suggesting that that they were tree root casts rather than archaeological features. There was no artefact dating evidence from either feature, but both were stratigraphically earlier than the alluvial deposit context 5/03 (Figure 7, Section 20) and its equivalent context 5/24. The only finds from the two features came from the fill of F15 (Figures 7 and 11, Sections 20 and 24, context 5/22) and comprised a small assemblage of burnt and worked flint (19 pieces).

F12, F16 and F18 were also interpreted as tree root casts (Figure 7, Section 21; Figure 9, Sections 22 and 23), but of the three only F18 produced finds. These comprised a single sherd of middle to late Bronze Age pottery, and two sherds ranging in date between the late Bronze Age and late Iron Age (Section 5.1).

The final feature under this heading was an irregular series of involutions in the chalk, extending from F18 to the trench edge and beyond (Figure 6, F13). The baulk section (Figure 7, Section 25) shows the involutions filled with frequent sub-rounded chalk fragments in a silty clay matrix (context 5/53). Taken together, the structural form of the feature, the absence of finds, and alignment with the sloping ground, suggests that F13 was probably the product of rill erosion following a fissure in the underlying chalk. The apparent alignment with the shallow ditch F9 (Figure 6) terminating against the tree root cast (F18) is entirely fortuitous.

4 THE RADIOCARBON DATES

4.1 Samples and Results

Three samples were submitted to the ^{14}CHRONO Centre at Queens University, Belfast (Table 1). Each sample was chosen on the basis of its stratigraphic integrity, lack of contamination and potential to provide a more refined chronological framework for the early Bronze Age pits and the cluster of ovens.

UB Number	Sampled Context	Sampled Feature	^{14}C Age	±	• ^{13}C	%Modern	±
UBA-8268	5/06	Pit	3368	38	-29.6	65.7530	0.3130
UBA-8269	5/42	Oven 2	1625	35	-30.1	81.6850	0.3570
UBA-8270	5/26	Oven 3	1605	35	-30.0	81.8850	0.3620

Table 1: radiocarbon determinations

Sample UBA-8268 consisted of carbonised *Triticum* grains (weighing 1 gram) recovered from the early Bronze Age pit (F1, context 5/06); samples UB-8269 and 8270 consisted of charcoal extracted from the lower fills in Ovens 2 and 3

(contexts 5/42 and 5/26). The two latter samples weighed 18 and 8 grams respectively. The sample from Pit F1 was selected in order to provide a more precise date for the collared urn sherds and confirm the contemporaneity of the carbonised cereal grains. The two oven samples were intended to provide a chronology for features that otherwise lacked reliable or adequate dating evidence.

The most likely date range for each sample is that which corresponds to the highest value for the relative area under the probability distribution (Table 2). However, without a stratified sequence of dates the lower probability ranges cannot be discounted entirely.

UBA-8268: Context 5/06		
Radiocarbon Age BP: 3368 +/- 38		
% Area Enclosed	**Cal Age Ranges**	**Relative Area Under Probability Distribution**
68.3 (1sigma)	BC 1733-1716	0.146
68.3 (1sigma)	BC 1693-1617	0.854
95.4 (2 sigma)	BC 1746-1603	0.879
95.4 (2 sigma)	BC 1590-1533	0.121
UBA-8269: Context 5/42		
Radiocarbon Age BP: 1625 +/- 35		
% Area Enclosed	**Cal Age Ranges**	**Relative Area Under Probability Distribution**
68.3 (1sigma)	AD 389-440	0.593
68.3 (1sigma)	AD 485-532	0.407
95.4 (2 sigma)	AD 346-371	0.055
95.4 (2 sigma)	AD 377-538	0.945
UBA-8270: Context 5/26		
Radiocarbon Age BP: 1605 +/- 35		
% Area Enclosed	**Cal Age Ranges**	**Relative Area Under Probability Distribution**
68.3 (1sigma)	AD 414-443	0.327
68.3 (1sigma)	AD 449-532	0.118
68.3 (1sigma)	AD 346-533	0.555
95.4 (2 sigma)	AD 388-544	1.000

Table 2: the calibrated age ranges and probability distributions

5 THE FINDS

A detailed record of the finds in digital form will be deposited with the project archive. It will include the prehistoric pottery database; the Roman pottery fabric series and the metrical data for the flint and animal bone assemblages.

5.1 **The Prehistoric Pottery** by Frances Raymond

Introduction

A small prehistoric assemblage of 153 sherds (weighing 1.014 kilograms) was recovered from the site. The bulk of this material (76% by sherd count and 79% by weight) is of early Bronze Age date and represents fragments from two collared urns deposited in adjacent pits (Figure 6, F1 and F2). Apart from a few sherds of possible middle to late Bronze Age pottery from the sunken

trackway and a tree root cast excavated in Trench 5 (Figure 6, F14 and F18), the rest of the assemblage is of late Iron Age date and is largely derived from the topsoil, sub-soil or later features.

Methodology

The pottery was analysed according to the guidelines of the Prehistoric Ceramics Research Group (PCRG 1997) and the sorting by fabric was carried out with the aid of a binocular microscope set at a magnification of X20. The recorded traits included fabric, form, decoration, surface treatment, colour, wall thickness, abrasion and sherd size. The material was quantified by context according to these categories and the results entered on a database, which is available as part of the project archive. This also includes detailed descriptions of the late Iron Age wares.

The Early Bronze Age Collared Urns

The two collared urns are represented by 116 sherds (weighing 807 grams). The largest assemblage, composed of 88 fragments (weighing 720 grams), came from F1 (Figure 6). The sherds are derived from a single late style vessel (cf. Burgess 1986) decorated with twisted cord impressions (Figure 13, P1). The design is confined to the collar and is composed of filled triangles arranged above a single horizontal line.

The exterior surface is predominantly brown (7.5YR4/2, 7.5YR5/2, 7.5YR5/3, 7.5YR6/3 and 7.5YR6/4), while the base is reddish brown (2.5YR4/4). The vessel is coil built and is made from a soft fabric tempered with very common quantities of grog (1 to 5 mm.), which also includes sparse, rounded medium-sized grains of quartz sand and glauconite.

The occurrence of multiple fragments from a single vessel in the same feature strongly suggests that this material was chosen deliberately for deposition. The sherds were found scattered mainly throughout the upper pit fill (Figure 7, Section 6, context 5/06), apart from four small base fragments (weighing 14 grams) that came from the underlying horizon (Figure 7, Section 6, context 5/07). This demonstrates unequivocally that the vessel was broken before it was deposited in the pit. In fact, this may partly have occurred sometime prior to burial since some of the refitting fractures are very worn as if they had been exposed to a period of weathering. Others are in fresh condition, while traces of charred food residue adhere to the interior of a few of the sherds. A significant portion of the urn is missing and this too may have been deliberate, although the possibility that some vessel fragments could have been removed from the feature by later cultivation cannot be ruled out. Approximately half of the sherds (37 sherds, weighing 428 grams) are from the rim and collar, representing 60% of the rim circumference. A considerably smaller group are from the base and lower walls (eight sherds, weighing 138 grams), while the remainder comprise undecorated wall sherds from below the collar.

The second collared urn is represented by 28 sherds (weighing 87 grams) from F2 (Figure 4, Section 4, context 4/03). This is too incomplete to determine whether it is an early or late form. However, similarities between this and the urn from F1 increase the likelihood that both were made within a relatively

short time span. The fabric of both vessels is identical, as is the surface colour (7.5YR4/2 and 7.5YR6/4), indicating the use of clay from the same source, prepared in the same way. The collar decoration also appears to have been similar, although the motifs on the sherds from F2 are very incomplete. One small rim fragment does carry the apex of a triangle (Figure 13, P3), while the twisted cord impressions on another indicate that the design was in-filled (Figure 13, P2). Contrasts are also evident, principally in the application of two lines of twisted cord along the rim bevel (Figure 13, P2 to 3). In this particular case rim and decorated sherds are in the minority (five sherds, weighing 24 grams), but given the shallow nature of the pit much of the deposit is likely to have been lost as a result of truncation, providing little information about its original character.

The Later Prehistoric Sherds

A single moderately abraded wall sherd (weighing six grams) of likely middle to late Bronze Age date was recovered from the fill of a tree throw (Figure 6, F18 and Figure 9, Section 23, context 5/51). The fabric is oxidised and tempered with moderate quantities of crushed burnt flint (0.3 to 4.0 mm.). Sparse grains of glauconite (0.1 to 0.5 mm.) and angular quartzite (0.25 to 0.5 mm.) are also present. Two other small wall sherds (weighing four grams) in a similar condition from F18 are made from a ware with a long history of use between the late Bronze Age and the late Iron Age. This is also oxidised and contains moderate quantities of burnt flint (0.5 to 4.0 mm.) and abundant, sub-rounded quartz sand (<0.1 to 0.5 mm.). Two residual wall sherds in the same fabric (weighing 11 grams) were recovered from the fill of F14 (Figure 6 and Figure 11, Section 19, context 5/20); from the topsoil (5/01) in the area excavation (three sherds, weighing five grams); and from the spill bund watching brief (Figure 2; one sherd, weighing two grams).

The Late Iron Age Pottery

The remaining 28 sherds (weighing 179 grams) are in 'native' wares of late Iron Age to early post-Conquest date and are derived from at least 13 different vessels. Those with the earliest origins, potentially dating back to approximately 50 BC, are made from flint tempered and sandy wares (18 sherds, weighing 114 grams). Fabrics containing common frequencies of both burnt flint (up to 2.5 mm.) and rounded quartz sand (0.1 to 0.5 mm.) are in the majority (12 sherds, weighing 88 grams). The remaining sherds are made from wares tempered with moderate to common amounts of burnt flint (up to 2.5 mm.), but no sand (four sherds, weighing 16 grams); or are in sandy fabrics one of which incorporates very common glauconite (<0.06 to 0.5 mm.). Sherds made from these wares are both smoothed and burnished, have un-oxidised dark grey (5YR4/1 and 10YR4/1) to black surfaces (5YR2.5/1) and include one bead rim.

Most of this pottery is from the machined topsoil or sub-soil in the area excavation (Trench 5, contexts 5/01 and 5/02; 11 sherds, weighing 87 grams), or the spill bund watching brief (Figure 2; two sherds, weighing six grams). Three sherds (weighing 10 grams) exhibiting signs of light to heavy abrasion also came from the shallow ditch (Figure 6, F9 and Figure 8, Section 9, context 5/14), while two of the ovens produced single residual fragments (Figure 6,

Oven 1 and Oven 2). These sherds were recovered from contexts 5/30 and 5/42 (Figure 10, Sections 15 and 16).

The rest of the late Iron Age pottery is made from various wares incorporating grog, which are likely to have been introduced towards the end of the first century BC (10 sherds, weighing 65 grams). In some the grog is common to very common and this can either occur alongside similar frequencies of sand (two sherds, weighing 19 grams), or with sparse quantities of burnt flint and/or quartz sand (four sherds, weighing 36 grams). In others the grog is sparse and sand is the predominant inclusion type (four sherds, weighing 10 grams). The sherds in this group include four bead rims and can be oxidised or un-oxidised. Again the majority are from the topsoil and sub-soil (contexts 5/01 and 5/02) in the area excavation (four sherds, weighing 30 grams) or watching brief (three sherds, weighing 15 grams). The latter were recovered from the spill bund and find spot B (Figure 2). Single residual sherds were also recovered from three of the features in the area excavation (Figure 6, F5, F14 and Oven 2). The sherds from these features were found in contexts 5/10, 5/20 and 5/42 (Figure 8, Section 8, context 5/10; Figure 11, Section 19, context 5/20; and Figure 10, Section 16, context 5/42).

Discussion

The collared urns are the most significant component of the prehistoric assemblage partly because they are demonstrably *in situ* and partly because of the character of the deposits. Collared urns are predominantly known from funerary contexts, where they were generally placed in complete or near complete condition either to accompany the dead or to serve as containers for cremations (cf. Longworth 1984, 47-49). Less common practices surrounding their deposition are also recorded and these do include fragmentation as, for example, at Collingbourne Kingston where cremated bone had been positioned above the deliberately broken sherds of a single vessel (Longworth 1984, 48). Even this is at odds with the Kintbury evidence since the urn fragments at Collingbourne were kept together rather than being scattered throughout the pit fill. Such contrasting deposits clearly reflect different practices. Here the most obvious distinction is raised by the absence of human bone from the Kintbury pits. Certainly in the case of F1, which was well preserved, this demonstrates that the collared urn was not part of a burial. While it is conceivable that its deposition may have occurred during a funerary ritual, it is equally possible and perhaps more likely that this and the vessel in F2 signify a somewhat different range of meanings in a domestic setting.

If this is the case, it is a relatively rare context for collared urns, as is indicated by the low percentage of entries in Longworth's 1984 corpus thought to be associated with occupation (3.5%; Longworth 1984, 76-78), many of which were dismissed by Burgess who suggested that less than half were potentially domestic (Burgess 1986, 341). Additional examples have been excavated more recently (Healy 1995; Woodward 2001, 85-87), but collared urns outside of funerary settings remain very much in the minority, a trend which has led to the suggestion that they may represent a class of vessel largely reserved for such rites of passage (Burgess 1986, 341). While there is little doubt that collared urns seem to have been preferred for funerals, the alternative view suggests that

they were being selected from the range of ceramics in 'everyday' use. The bias towards burial contexts is seen as a product of the ephemeral character and short duration of early Bronze Age occupation (Healy 1995, 180-183). Such sites leave relatively few sub-surface traces, reducing their visibility and limiting the range of protected horizons where pottery will survive (*ibid*.).

There is nothing unusual in the character of the two vessels. The selection of a predominantly grog tempered fabric is typical, as is the use of twisted cord to produce the decorative design. The motifs are relatively common and have a widespread distribution across Britain. Recorded middle to late style examples from the surrounding region with filled triangles on the collar include vessels from several Wiltshire sites at Amesbury 72 and 78 (Longworth 1984, 1629 and Plate 155a), Avebury 55 (*ibid*., 1647) and Winterslow 21 (*ibid*., Plate 155b); while urns combining filled triangles with twisted cord lines on the bevel are noted from Oxfordshire at the Rollright Stones (Darvill 1988), from north Hampshire at Preston Candover (Longworth 1984, Plate 210a) and Stockbridge (*ibid*., Plate 209b), and from Wiltshire at Collingbourne Kingston 8 (*ibid*., Plate 186c), Warminster 5 (*ibid*., Plate 154d) and Winterbourne Stoke 32 (*ibid*., 1734).

Absolute dating provides a time span for the collared urn series which focuses on the years between approximately 2000 and 1450 cal BC. It has been suggested that this can be narrowed to the period between 1850 and 1500 cal BC (Zienkiewicz and Hamilton 1999). The radiocarbon date of 1746 to 1603 cal BC (3368 ± 38 BP) associated with the collared urn from F1 falls in the centre of this range. This is consistent with the suggested currency of middle to late style urns (Burgess 1986, 350) and with the uncalibrated date of 1370 ± 90 bc for the similarly decorated vessel from the Rollright Stones (Darvill 1988).

5.2 **The Latest Iron Age and Roman Pottery** by Malcolm Lyne

The Assemblages

The site excavation yielded 73 sherds (542gm) of pottery from 13 contexts, all of which is of latest Iron Age and Roman date. A further 33 sherds (362 grams) of pottery were unstratified and four more sherds were recovered during the watching brief. Precise dating of features is difficult due to the small amounts of pottery and a lack of diagnostic sherds. Moreover, none of the assemblages are large enough for any form of meaningful quantification. A full list of the pottery finds is provided in Table 3.

Methodology

All of the assemblages were quantified by numbers of sherds and their weights per fabric. The fabrics were identified using a x8 magnification lens with built in metric graticule to determine the nature, size, forms and frequencies of added inclusions, which form the basis of a numbered fabric series.

Context	Fabric	Form	Date-range	No. of sherds	Sherd Wt. (gms)	Comments
Spoil heap	4 11B	Dish C51 bowl	c.270-400 c.240-400	1 1	10 13	Abraded Burnt
Total				**2**	**23**	
2/02	8 9 12	Everted rim jar Closed Jar	c.60-150 c.70-150	5 2 1	35 11 4	One pot Abraded Abraded
Total			c.60-150	**8**	**50**	**Sub-soil**
5/01	2B 3 5C 11A 11B 11C 12 -	Bead-rim jar Storage jar Jars R24 jar Bowl Closed Str-sided dish Misc	c.43-80 c.270-400 c.43-150 c.70-400 c.240-400 c.50/250-300 c.270-400	4 11 6 1 1 1 2 5	25 146 78 7 22 14 16 31	
Total				**31**	**339**	**Topsoil**
5/02	1 2A 5A 6 12	Jars Bead-rim jar Jar Flanged dish Bead-rim jar	L.I.A.-50 L.I.A.-80 c.43-150 c.120-200 c.50-80	2 1 2 2 5	20 10 24 34 26	Abraded Abraded Fresh
Total			L.I.A.-200	**12**	**114**	**Sub-soil**
5/10	3 5C 10 12	Storage jar Jar Jar Jar	c.270-400 c.43-150 c.120-400	1 2 1 2	22 59 9 4	Abraded Abraded Abraded
Total			c.270-400	**6**	**94**	**Upper fill of post hole F5**
5/12	3	Storage jar	c.270-400	3	35	Abraded
Total			?Residual	**3**	**35**	**Fill of truncated pit F7**
5/18	3 10	Storage jar Jar	c.270-400 c.120-400	2 1	47 1	
Total			c.270-400	**3**	**48**	**Fill of shallow pit F10**
5/20	2B 12	Jar	c.43-100 c.50-200	1 2	8 15	Abraded
Total			c.50-200	**3**	**23**	**Fill of Holloway F14**
5/24	5B		c.43-150	2	11	Layer of ?reworked alluvium
5/26	5B	Jar	c.43-150	1	2	Basal fill of Oven 3
5/28	3	Storage jar	c.270-400	1	3	Upper fill of Oven 2
5/30	7 10 11A 11D 12	Small jar Obtuse latticed jar Jars Jar Jar	c.200-280 c.70-400 c.240-400	1 9 17 2 2	7 43 69 5 25	Abraded Fresh 1 pot Fresh Fresh
Total			c.240-280	**31**	**149**	**Fill of Oven 1**
5/34	12	Jar		1	2g	Fill of post hole F11
5/42	7	Jar		1	10	Fill of Oven 2 flue
5/44	12	Jar		1	1	Fresh. Lower fill of F5
WB (B)	12	Jar		1	7	
WB (F)	5A	Jar	c.43-150	1	55	Fresh
WB Dosing Pod	5C 10	Jar Jar	c.43-70 c.120-160	1 1	24 7	Fresh
Total				**2**	**31**	

WB = watching brief pottery (see Figure 2 for find spots)

Table 3: catalogue of latest Iron Age and Roman pottery

Late Iron Age to Early Roman (circa AD 0 to AD 200)
Most of the pottery comprising this phase comes from the sub-soil layers 2/02 and 5/02 in the evaluation and area excavation (Trenches 2 and 5, 20 sherds weighing 164 grams) and is derived from activity further up the hill slope to the south. The sherds include fragments from a vessel of uncertain type in fine 'Belgic' grog-tempered ware (late Iron Age to AD 50), a coarse-grog tempered bead-rim jar (late Iron Age to AD 80), two sherds from jars in Savernake kilns Fabric 5A (Swan 1975, Fabric 1, *circa* AD 43 to AD 150/200) and a bead-rim jar in very fine-sanded grey ware of uncertain origin (*circa* AD 50-80). The freshest sherd comes from a flanged dish in micaceous black Fabric 6, probably copying contemporary BB1 imports of the period *circa* AD 120-200. Two other early Roman sherds come from the fill of the sunken track (Figure 6, F14 and Figure 11, Section 19, context 5/20), but cannot be dated more closely than to *circa* AD 50-200. Their abraded nature suggests that they are residual in that context.

Late Roman (circa AD 200 to 400)
The largest assemblage from the site (31 sherds weighing 149 grams) is that from the fill of Oven 1 (Figures 6 and 10, Section 15, context 5/30). This includes nine sherds from a bulbous obtuse-latticed cooking-pot in Dorset BB1 fabric (*circa* AD 200-280), 17 sherds from jars of uncertain types in Oxfordshire Greyware Fabric 11A (*circa* AD 70-400) and two from a jar in Oxfordshire Burnt Whiteware Fabric 11D (*circa* AD 240-400). This assemblage suggests a mid third century date for the oven.

The ceramic dating for the other two ovens is poor. Oven 2 (Figure 6 and Figure 10, Section 16, contexts 5/28 and 5/42) yielded just two sherds, of which one comes from a large storage jar in handmade grog-tempered ware Fabric 3, fired soft pink-brown. This fabric is rather similar to that of late Roman grog-tempered ware storage jars with finger-impressed rims produced by the Hampshire grog-tempered ware industry (Lyne 1994, Industry 6A, Types 6A-31 and 32), but the abraded nature of the sherd and lack of diagnostic features suggests that it could equally well be a residual fragment from a locally produced first century storage vessel.

Oven 3 produced just one sherd from a jar in rough grey Fabric 5B with profuse black ferrous particles and sparse sub-angular white quartz inclusions (Figures 6 and 10, Section 17, context 5/26). This fabric is similar to that of second century Purton kiln products (Anderson 1979, 14), but could also be residual in its context.

The fills of F7, F5, F10 and F11 on the east side of the site (Figure 6) also yielded tiny pottery assemblages. The fill of pit F7 (Figure 9, Section 10, context 5/12) produced three abraded sherds from a handmade storage-jar in Fabric 3 (?*circa* AD 270-400). A further seven sherds came from the fills of post hole F5 (Figure 8, Section 8, contexts 5/10 and 5/44) and include a further storage-jar sherd in Fabric 3, as well as a fragment from a BB1 cooking-pot of probable third to fourth century AD date. These diagnostic sherds are, however, so abraded as to suggest that they are residual in their context.

The three sherds from the shallow pit F10 (Figure 6), were recovered from context 5/18 (not illustrated) and comprise two more sherds from a grog-tempered storage-jar in Fabric 3 (?*circa* AD 270-400) and one from a BB1 cooking-pot, suggesting a late Roman date for this feature. The single sherd from post hole F11 (Figure 8, Section 14, context 5/34) is in a sandy greyware and cannot be dated closely.

5.3 **The Roman Building Material** by Frances Raymond

A total of 45 fragments of Roman ceramic building material (weighing 3215 grams) and one piece of *opus signinum* were recovered from the site (Table 4). Most of the tile is heavily abraded; many of the fragments are split and other than thickness there is no evidence for the dimensions of any of the pieces. Only three of the largest tile fragments from the fill of F4 (Figure 8, Section 9, context 5/08) and the post packing of F5 (Figure 8, Section 8, context 5/44) are in fresh or lightly abraded condition.

Feature	Context	No.	Wt. (gms.)	Thickness (mm.)	Fabric	Comments
-	1/03	1	25	-	-	Opus signinum – one polished surface
-	1/03	2	17	-	1	Split CBM fragments
-	4/02	1	14	-	1	Split CBM fragment
-	5/US	1	194	23	1	Flanged tegula fragment – sanded exterior
-	5/01	1	13	26	1	Tile fragment
-	5/01	1	47	17 to 19	1	Tile fragment – sanded exterior
-	5/01	2	86	15 to 16	1	Tile fragments
-	5/01	8	94	-	1	Split CBM fragments
-	5/01	1	206	40	2	Tile fragment
-	5/01	2	134	16 to 18	2	Tile fragments
-	5/01	3	110	-	2	Split CBM fragments
-	5/02	2	57	15 & 21	2	Tile fragments
F4	5/08	1	298	21	1	Tegula fragment – concentric marks on one face – sanded edge and exterior
F5	5/10	1	64	22 to 24	1	Tegula fragment
F5	5/10	7	68	-	1	Split CBM fragments
F5	5/10	1	122	16	2	Tile fragment
F5	5/10	1	4	-	2	Split CBM fragment
F5	5/44	1	858	46 to 53	1	Tile fragment with signature mark – sanded exterior
F5	5/44	1	460	23 to 26	1	Tile fragment – sanded exterior
Oven 1	5/30	1	6	-	1	Split CBM fragment
-	6/03	1	18	-	1	Split CBM fragment
-	WB/US	1	254	40	1	Tile fragment
-	WB/US	4	82	-	1	Split CBM fragments
-	WB/US	1	4	-	2	Split CBM fragment
Totals		**46**	**3235**			

Table 4: catalogue of Roman building material

The material includes the remains of three tegulae and eight other fragments with thicknesses of 15 to 21 mm. that are also likely to be from roofing tiles, but are too small to determine whether they are tegulae or imbrices. The tegula fragment from F4 has concentric semi-circular grooves made with a blunt tool

on one face, which is the most common form of signature marking found on tegulae (Brodribb 1987). The two other examples have finger grooves along the inside of the flanges.

The thicker tiles are within the range that can be variously used in bonding or lacing courses, pilae or flooring. One of these fragments from F5 (Figures 6 and 8, Section 8, context 5/44) is stamped with the somewhat indistinct impression of what appears to be a stylised floral motif and may represent a signature of the tile works. This is associated with a possible incised tally mark that is somewhat confused by a series of impressions left by grass or straw.

All of the ceramic building material is made from clay containing common to very common rounded quartz sand (0.1 to 0.5 mm.). In the majority of pieces (36 pieces, weighing 2630 grams) this is accompanied by sparse quantities of crushed tile (0.5 to 4.0 mm.; Fabric 1); while common amounts of crushed tile are present in the remainder (Fabric 2; nine pieces, weighing 580 grams).

5.4 **The Fired and Raw Clay** by Frances Raymond

The fired clay includes fragments from an unidentifiable object from one of the early Bronze Age pits and samples from the collapsed superstructure of three of the ovens (Table 5). All of the fragments from the early Bronze Age pit are made from the same fabric and are almost certainly derived from a single object. The clay has been tempered with common quantities of very coarse sub-rounded chalk (up to 13 mm.) and also includes rare pieces of flint (up to 9 mm.).

Feature	Context	No.	Wt. (gms.)	Fabric	Description
F2	4/03	13	180	C/1	Rolled fragments from an unidentifiable fired clay object
Oven 1	5/30	18	184	S/2	?Fired natural
Oven 2	5/28	5	24	S/2	?Part of collapsed superstructure
Oven 3	5/54 & 5/26	13	191	CS/1	Part of collapsed superstructure
Totals		**49**	**579**		

Table 5: the quantities of fired clay

Ovens 1 and 2 (Figure 10, Sections 15 & 16, contexts 5/30 and 5/28) were both made from clay containing common quantities of rounded quartz (0.1 to 0.5 mm.) and rare flint (1.5 to 13 mm.). The sample from Oven 3 (Figure 10, Section 17, contexts 5/26 and 5/54) also incorporates rounded quartz in the same size range, but in moderate frequencies and accompanied by very common amounts of coarse sub-rounded chalk (1 to 10 mm.).

The upper fill of the early Bronze Age pit, F1 (Figure 7, Section 6, context 5/06) included a small amount of raw clay. This is un-tempered and the only visible inclusions are the voids left by rootlets.

5.5 The Medieval, Post-Medieval and Modern Ceramics by Frances Raymond

The later ceramic assemblage includes one medieval, two post-medieval and two modern fragments, all in heavily abraded condition. The medieval sherd (weighing five grams) was found during the watching brief in find spot B (Figure 2) and is made from a chalk tempered coarse fabric with a sandy matrix that belongs to the Newbury 'B' ware tradition (Vince et. al., 1997, 51). This is one of the Kennet Valley wares produced locally between the eleventh and fourteenth centuries AD (Mepham 2000).

The two post-medieval fragments (weighing 20 grams) are from the topsoil in the area excavation (Trench 5, context 5/01) and both are redware wall sherds, which can only be dated broadly to a period spanning the seventeenth to nineteenth centuries. The two modern fragments (weighing 10 grams) from the colluvium in Evaluation Trench 1 (Figure 3, Section 1, context 1/03) are from a single glazed wall tile in a refined whiteware.

5.6 The Worked Flint by Martin Tingle

Terminology

Throughout this report the term 'cortex' refers to the natural weathered exterior surface of a piece of flint while 'patination denotes the colouration of the flaked surfaces exposed by human or natural agency. Following Andrevsky (1998, 104) dorsal cortex is divided into four categories; the term primary flake refers to those with cortex covering 100% of the dorsal face, while secondary flakes have cortex on between 50% to 99% of the dorsal face. Tertiary flakes have cortex on 1% to 49% of the dorsal face, while flakes with no dorsal cortex are referred to as non cortical

A blade is defined as an elongated flake whose length is at least twice as great as its breadth. These usually have at least two parallel dorsal flake scars, a feature that can assist in the identification of broken blades that, by definition, have an indeterminate length to breadth ratio.

The Assemblage

The total flint assemblage is made up of three principal groups, comprising finds recovered from the watching brief, other unstratified and sub-soil contexts across the site and finds from evaluation Trenches 1 and 5. A digital version of worked flint database in Microsoft Excel format will be deposited with the site archive.

Within Trench 1, the machine stripping of superficial deposits was followed by the hand excavation of context 1/05 in a series of spits, each 5 centimetres in depth. Below context 1/05, the hand excavation of context 1/06, the fill of a tree root cast (Figure 3, F1/07) produced a further assemblage..

There is inevitably some degree of overlap in the division of finds between the machine stripping and the hand excavation of contexts 1/05 and 1/06. For that reason, the finds recovered by the machine stripping over context 1/05 have

been tabulated separately (Table 9), as have those from context 1/06 (Table 11), although both collections have been analysed together with the finds from the spit excavations.

Location	Cores	Core Frags	Flakes	Blades	Broken Flakes & Blades	Retouched	Burnt	Core trimming flakes
Spits	9	17	342	42	539	7	83	
1/05	3	7	72	5	25	-	9	
1/06	2	-	116	9	80	3	21	2
Unstratified	15	9	158	18	54	8	9	8
Excavated	-	4	117	15	77	1	49	2

Table 6: the composition of the assemblage by location (excluding spalls and chips)

A small assemblage comprising 102 chips and spalls was recovered during the sieving of bulk samples from the two early Bronze Age pits F1 and F2 (Figure 6). The worked flint assemblage from the site as a whole consists of 2038 pieces weighing 15,014 grams (Table 6).

Raw Materials

Although much of the flint lacks surviving dorsal cortex, where it does remain the flint carries a thin water rolled cortex, which is indicative of secondary sources rather than the nearby chalk itself. However, some chalk-derived flint may also be present in the assemblage. There are examples of both patinated and unpatinated flint: the former ranging through pale blue grey to mottled brown and the latter from blue/black to pale grey.

Froom's work at the nearby sites of Avington VI and Wawcott XXX demonstrates that there are ample local sources of flint in the soils capping the chalk, and even in Head deposits within the flood plain gravels (2005, 93-4). Given the likely subsistence activities and social interactions of the Mesolithic populations it might be expected that some flint from more distant locations would be imported to the Kintbury site, if only in the form of finished tools. There was limited evidence of the long distance importation of lithic materials at Wawcott III; chiefly the occurrence of a brown chert, thought to originate from the western end of the Vale of Pewsey and worked slate was found at Wawcott I, possibly from originating from North Devon. At the latter site an axe-like implement made from black chert was also recovered and was thought to derive from an outcrop near Shaftsbury (Froom, 1976, 14; Froom 1972, 23). Bullhead flint was recorded in the assemblages from Thatcham (Healy et. al., 1992, 48), however there were no obvious examples in the material recovered from Kintbury.

Unstratified and Sub-soil Finds

The unstratified and sub-soil finds derive from several locations across the site and probably represent a mixture of Mesolithic and later flintwork (Table 7). Blades make up 10% of the intact flake assemblage although only one of the 12 cores has been used for blade production.

The four end scrapers range from two examples which are made from invasively retouched thin flakes, to a minimally retouched tertiary flake and one

that has been re-sharpened and eventually broken. The two retouched pieces found in the sub-soil in Trenches 3 and 4 (contexts 3/02 and 4/02) are large, crudely made pieces probably dating from later prehistory.

Find	Number	Weight (grams)	Mean weight (grams)
Primary Flake	8	121	15.1
Secondary Flake	21	515	24.5
Tertiary Flake	70	923	13.1
Uncorticated Flake	59	450	7.6
Blade	18	59	3.2
Broken Blade	10	17	1.7
Broken Flake	44	187	4.2
Blade Core	4	244	61
Systematic Core	6	808	134
Unsystematic Core	5	590	118
Blade Core Fragment	1	25	25
Core Fragment	8	546	73.2
Core Trimming Flake	8	180	22.5
Scraper	4	67	16.7
Retouched	2	188	94
Keeled Flake (? Blank)	1	63	63
Notched Blade	1	2	2
Burnt Worked Flint	9	176	19.5
Totals	**279**	**5161**	

Table 7: the composition of the assemblage in unstratified and sub-soil deposits

Although no microburins were found within the assemblage as a whole, the single notched bladlet (Figure 14, h) from the spill bund watching brief could represent an unfinished attempt at microlith production, which was lost or discarded prior to snapping. Had this been the case, the resulting piece would have been significantly smaller than the obliquely blunted points found in Spit 3 of context 1/05.

The Assemblage from Excavated Features

Trench 5 (the area excavation) produced evidence for various forms of occupation at intervals during early Bronze Age, late Bronze Age, Iron Age and Roman periods. Some of the worked flint from the features and deposits dating to these periods may be contemporary elements. But it is equally likely, however, that a portion of the material is residual, especially since blades make up 11% of all of the intact flakes (Table 8).

The bulk sieve residues from the feature fills produced 102 spalls and chips; otherwise this assemblage is relatively small and lacks cores or retouched tools. Burnt worked flint makes up almost 13% of this assemblage (18% if the spalls are excluded) compared to 3% in the topsoil.

Find	Number	Weight (grams)	Mean Weight (grams)
Primary Flake	6	53	8.8
Secondary Flake	8	216	27
Tertiary Flake	34	334	9.8
Uncorticated Flake	69	295	4.2
Blade	15	34	2.2
Broken Blade	9	14	1.5
Broken Flake	68	143.5	2.1
Spall	102	7.5	0.07
Core Fragment	4	174	43.5
Core Trimming Flake	2	55	27.5
Notched Flake	1	7	7
Burnt Worked	47	624	13.2
Unworked Burnt Flint	2	13	6.5
Totals	**367**	**1970**	

Table 8: the composition of the assemblage in stratified deposits

The Assemblage from Context 1/05

Context 1/05 was overlain by contexts 1/01 to 1/04 which did not produce any finds of worked flint. However, the machine stripping of context 1/05 produced a small assemblage which was of similar composition to Spit 1, being predominantly composed of debitage and lacking retouched tools (Table 9).

Find	Number	Weight (grams)
Primary Flake	3	59
Secondary Flake	8	442
Tertiary Flake	31	402
Uncorticated Flake	30	234
Blade	5	10
Blade core	1	45
Blade core fragment	3	142
Broken Flake	25	100
Burnt Worked	9	49
Core	2	172
Core Fragment	4	310
Totals	**121**	**1965**

Table 9: the composition of the assemblage from the machine stripping of context 1/05

The Excavated Spits

In Trench 1, a sample of context 1/05 measuring 2.5 x 0.75 metres was excavated in five spits (each 0.05 metres deep), which produced a total of 1050 pieces of worked flint weighing 4738 grams. As Table 10 shows, the composition of these spits varied, with an apparent decline in the density of finds through Spits 2 and 3, a trend which was reversed in Spits 4 and 5. This contrasts to the vertical distribution of three dimensionally recorded finds at Thatcham, where the flint tended to cluster in the upper horizon and was interpreted as indicative of an *in-situ* deposit (Healy et. al., 1992, 48). The density of the material from Kintbury is remarkable given the size of the

excavated area, and suggests parallels with Wawcott III, where the excavations of two inch (0.05 metres) deep spits in one yard squares (0.91 metres) could produce over 300 pieces of worked flint (Froom, 1976, 13).

The debitage from the excavated spits reveals a paucity of primary and secondary flakes, possibly indicating that raw material testing and core preparation were taking place elsewhere on the site. Blades make up 12% of the intact flake assemblage while six of the nine cores recovered were blade cores. The majority of intact flakes have a length to breadth ratio in excess of 1:1 and a significant number exceed a ratio of 2:1 (Figure 15).

The most striking characteristic of the assemblage is the predominance of broken flakes and blades, which make up 52% of the whole compared to 34% in underlying context 1/06. It is possible that this points to a significant difference in the dynamics of the formation processes responsible for the formation of the two deposits.

Nine cores were recovered from the spit excavations; three bipolar blade cores, one single platform blade core, one multi-platform blade core, two bipolar flake cores and two single platform flake cores. The mean weight at which the blade cores ceased to be worked was 52.4 grams, while for the flake cores it was 76.7 grams, which suggests a tendency towards the more intensive production of blades. The spit excavation did not recover any unmodified blade core trimming flakes (see below), although two were found in the fill of the tree root cast (context 1/06).

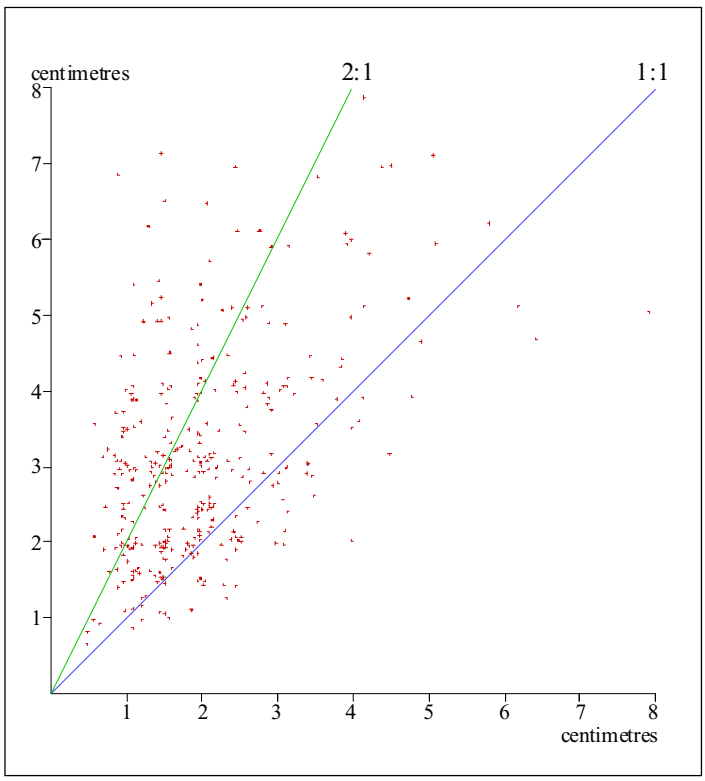


Figure 15: length to breadth ratios of intact flakes and blades from the spit excavations

The five end scrapers were recovered from Spits 1, 3 and 5 (Figure 14, a-e). One of these may have been made from a broken blade core trimming flake. The two microliths (Figure 14, f & g) from Spit 3 are simple, obliquely blunted points of the type described by Froom as Class A, form A1a (1976, 111).

Find	Spit 1		Spit 2		Spit 3		Spit 4		Spit 5	
	No.	Wt. (gms)	No.	Wt. (gms)	No.	Wt. (gms)	No.	Wt. (gms)	No.	Wt. (gms)
Primary Flake	4	52	3	10	-	-	4	6	2	4
Secondary Flake	5	76	5	28	3	4	5	78	6	94
Tertiary Flake	23	188	19	122	15	72	23	124	23	270
Uncorticated Flake	62	212	20	72	26	48	62	128	42	144
Broken Flake	135	196	55	22	48	34	135	98	119	114
Blade	8	11	7	12	14	16	8	20	5	10
Broken Blade	14	15	4	12	7	12	14	10	8	12
Microlith	-	-	-	-	2	2	-	-	-	-
Serrated Blade	1	2	-	-	-	-	-	-	-	-
Scraper	2	12	-	-	2	30	-	-	1	4
Piercer	-	-	-	-	-	-	-	-	1	2
Blade Core	2	114	-	-	1	22	2	101	1	48
Core	1	26	-	-	1	94	1	184	-	-
Core Fragment	2	50	3	114	5	366	2	106	5	154
Burnt Worked Flint	23	159	7	78	6	88	23	216	24	444
Totals	**282**	**1113**	**120**	**470**	**130**	**788**	**279**	**1071**	**236**	**1296**

Table 10: the composition of the hand excavated spits

The Assemblage from Context 1/06

The assemblage from this context differs from that of context 1/05 insofar as it has fewer broken pieces (see above) and fewer blades (7% compared to 12%). Retouched tools include two end scrapers and a retouched point, which could be a broken microlith but, in section, more closely resembles the piercer found in Spit 5 of context 1/05

Find	Number	Weight (grams)
Secondary Flake	10	180
Tertiary Flake	27	232
Uncorticated Flake	79	298
Broken Flake	80	98
Blade	9	12
Blade core	1	116
Blade Core Trimming Flake	2	24
Unsystematic Core	1	142
Scraper	2	25 (14 & 11)
Piercer/ ? Broken Microlith	1	2
Burnt Worked	21	64
Totals	**233**	**1193**

Table 11: the composition of the assemblage in context 1/06

Refitting

The refitting undertaken at Kennet Valley sites such as Alvington VI has provided some exceptionally detailed reconstruction of the reduction sequence of 18 major groups of flakes. The study highlighted the potential for the vertical and horizontal displacement of refitting pieces, and it was found that vertical displacement could be as much as 50 cms, probably brought about by the action of countless burrowing animals over several millennia (Froom 2005, 39). Bearing this in mind, and the field observations suggesting that context 1/05 might be a reworked alluvial deposit, re-fitting work on the Kintbury assemblage was limited to a provisional assessment.

Initially the flint from each spit was sorted into its component parts within the reduction sequence (primary, secondary, tertiary flakes etc), after which each group was examined for re-fits. No re-fitting items were identified, but given the limited area of the excavation it is unclear whether this a significant trait with broader implications, or merely a function of sample size.

The Date of the Flintwork

The assemblage is characterised by a substantial element of blade production and the microliths suggest a date in the seventh millennium BC for the main assemblage from Trench 1, although flint working from other periods is likely to be present on other parts of the site. Early Bronze Age features were identified in the area excavation, Trench 5 (Figure 6, F1 and F2), while late Bronze Age and Iron Age activity is represented by less reliably stratified pottery assemblages. It would seem quite probable, therefore, that some of the flintwork was produced at intervals through to the Iron Age (Humphrey, 2003), and possibly even later.

Discussion

Several Kennet Valley Mesolithic assemblages offer parallels as well as contrasts to the Kintbury assemblage (or at least that part recovered from Trench 1). At the Thatcham sewage treatment works 320 square metres of a sandy loam were hand excavated producing 1328 pieces of worked flint (Healy et. al., 1992). In comparison the 1.875 square metres of context 1/05 at Kintbury produced 1050 pieces. This can be expanded to 1283 pieces if the finds from context 1/06 are included and to 1404 pieces if those from the machining are added. The composition of the two assemblages also differs, with that of Thatcham producing 28 microliths and 17 other retouched tools compared to two microliths and seven other retouched tools at Kintbury.

While the range of tools present at the Kintbury is comparable with other Kennet Valley Mesolithic assemblages, it is restricted in overall numbers and it is notable that no core tools, particularly axes or adzes, were found. There were also no microburins, but given that the ratio of microliths to microburins from the hand excavated element at Thatcham was 5.6:1 (Healy el al 1992, 48), this may simply reflect the fact that only two microliths were recovered from the Kintbury site. There are a substantial number of blades present in the assemblage as a whole, though they tend to measure less than 5 centimetres in length and thus the site does not form one of the Late Glacial long blade sites identified by Froom (2005).

Although it is less than a kilometre south of Wawcott III and with comparable densities of finds, Kintbury does not reveal variations in microlith type and blade characteristics in relation to their location within the deposit. It does not appear, therefore, that the Kintbury assemblage was formed in the same way as that from Wawcott III. However, any meaningful comparison based on quantification and functional characteristics is seriously hampered by the limited scale of the investigations undertaken at Kintbury. The full extent of the Mesolithic site remains uncertain, although the subsequent excavations and watching brief suggest that the occupation identified in Trench 1 may be fairly confined. That said the earlier work carried out by Connah (1950) during the construction of the sewage filter bed (Figure 1) demonstrates that that at least one other focus of activity lies within the boundary of the Sewage treatment works.

5.7 **Imported Stone** by John Allen, University of Reading (identification and sources)

Eight fragments of stone from sources beyond the immediate vicinity of the site were recovered during the evaluation and area excavation. Six pieces from contexts 4/03, 5/01, 5/02, 5/28, 5/30 and 6/03 were submitted for identification, along with a single representative sample of the two limestone roof tiles from context 5/08.

Context 4/03

The sample consists of three pieces (weighing 328 grams) from the early Bronze Age pit F2 (Figure 6 and Figure 4, Section 4). The rock is a dark, purplish brown, un-fossiliferous, porous, well-sorted, medium-coarse grained sandstone with a light cement of secondary quartz followed by a slight coating of iron compounds which give the colour. The edges and corners of the specimen are distinctly rounded, possibly indicating that it had been used as a rubber.

The lithology is not especially distinctive, but is known from the early Cretaceous sands exposed north of the Berkshire Downs and from the much closer Tertiary deposits (Bagshot Beds; Bracklesham Beds), outcropping within a few kilometres to the south of Kintbury and further away to the west.

Context 5/01

A single piece weighing 110 grams was recovered from the topsoil in the area excavation, Trench 5. The rock is a dark reddish-brown, unfossiliferous, slightly porous, massive, well-sorted, medium-grained, quartzitic quartz sandstone, with an early but incomplete cement of secondary quartz followed by iron compounds which give the colour. Some edges and corners are slightly rounded and the surfaces are locally polished.

Like the sample from context 4/03, the rock is not especially distinctive but the facies is known from the early Cretaceous sands exposed north of the Berkshire Downs and also from the much nearer early Tertiary deposits (Bagshot Beds, Bracklesham Beds) with outcrops to the west of Kintbury and within a few

kilometres to the south. There are too few iron compounds to have made the specimen a useable ore, although it could have been collected with that intention.

Context 5/02

The specimen from the sub-soil in the area excavation, Trench 5 (weighing 7 grams) is a very small limestone tile fragment, with slightly rounded edges and corners. The rock is a well-cemented, slightly quartzose, oolitic-pelloidal limestone with abundant small shell fragments.

The source is almost certainly a Jurassic outcrop and the facies most resembles one found in the very variable Portland-Purbeck sequences exposed in the Oxford and Devizes areas and in the Vale of Wardour. None of these occurrences is closer to Kintbury than some 30 kilometres.

Context 5/08

Two complete but fractured limestone tiles weighing 1384 grams were recovered from the post pipe in pit F4 (Figure 8, Section 9). The sample submitted for identification is a well-cemented, laminated, coarse-grained, bioclastic limestone composed of shell hash, quartz sand and occasional ooids/pelloids. No diagnostic macrofossils are evident.

The provenance is almost certainly in a Jurassic outcrop and the facies resembles sediments to be found in the Portland-Purbeck sequences in the Devizes area and the Vale of Wardour, some 40 to 50 kilometres from Kintbury.

Context 5/28

The single fragment from the upper fill of Oven 2 (Figure 10, Section 16) superficially resembles a ceramic tile, though it is actually akin to the samples from contexts 4/03 and 5/01. It is a hard, compact, purplish-brown, medium-coarse grained, quartzitic quartz sandstone with an early cement of secondary quartz followed by abundant iron compounds. The effect of high temperatures on the fragment has been to harden the material, oxidise most of the surface and blacken the remainder. The provenance is as for contexts 4/03 and 5/01.

Context 5/30

This sample is a single fragment weighing 506 grams from the topmost fill of Oven 1 (Figure 10, Section 15) and may be part of a rotary quern. The rock is a hard, well-cemented, medium-coarse grained quartz sandstone with occasional larger grains and granules (some of pink ?feldspar), abundant well-rounded particles of greenish-black to black glauconite and a little bioclastic debris. There is an abundant cement of coarsely crystalline calcite.

The facies most closely resembles the Lower Cretaceous Hythe Beds where they outcrop west of the Medway on the north-central and northwest rim of the Weald. The item is unlikely to have been sourced from a shorter distance than about 75 kilometres. There is no sign of chertification, which is a common feature of the Hythe Beds, but the glauconite content is too high to allow the rock to be assigned to the Portlandian sequence of inland Wessex.

Context 6/03
This specimen (weighing 326 grams) was recovered from the colluvial sub-soil in Trench 6 and may be a honestone (Figure 5, Section 5). It is of a hard, compact, purplish-brown, medium-very coarse rained quartz sandstone cemented by early secondary quartz (slight) and iron compounds (abundant). The larger grains are well-rounded and polished. A few slightly rounded granules of flint are present.

This material is probably of the same general provenance as the samples from contexts 4/03, 5/01 and 5/28. The presence of flint in this sample points convincingly, however, to an early Tertiary and not early Cretaceous source for this particular sample.

5.8 **The Animal Bone** by Jessica Grimm (Wessex Archaeology)

Material and Methods
Approximately 350 animal bone fragments from the excavation were analysed. With only 109 identifiable fragments, of which some are attributable to either the early Bronze Age or Roman period, the assemblage is too small for detailed analysis. According to Hambleton (1999, 39), the minimum sample size should comprise at least 300 identified fragments in equal proportions for cattle, sheep/goat and pig. Since the excavated sample did not meet these criteria, the finds were described by feature or context. For that same reason, comparisons with other sites were not made as it is unlikely that the recovered bone is representative of the site in its entirety.

Topsoil and Sub-soil
Most of the animal bones were found in the topsoil and sub-soil during the area excavation, (Trench 5, contexts 5/01 and 5/02) and exhibit marks left by root etching, which is consistent with the generally shallow depth of burial. Four bone fragments belong to cattle, two to sheep/goat and one to pig. The cattle bones are all from adult animals and comprise a tooth fragment, right fragment of a large humerus, left radius and left metacarpus (gnawed). The latter has a maximum length of 187 millimetres which gives a height at the withers of approximately 115 centimetres. The humerus fragment seems to have been butchered, with the shaft broken open for marrow extraction.

The sheep/goat bones include an upper tooth and a metatarsus fragment. A nearly complete pig tibia belongs to an animal between 24 months and 42 months of age (Habermehl 1975, 149-50). The fibula has fused with the distal tibia shaft, a common feature in pig tibiae.

The Early Bronze Age Pit, F1
The fill of this feature produced 71 bone fragments of which 13 could be identified to species level (Figure 7, Section 6, contexts 5/06 and 5/07). Of these, five and a possible sixth belong to cattle; three to sheep/goat (of which one is a definite sheep), while two belong to pig and one to carrion crow/rook. Fragments of a scorched juvenile cattle cranium and a scorched juvenile mandible make it likely that a complete head had originally been deposited in

the pit. Other cattle remains include an adult phalanx II and a possible shaft fragment of a femur.

The sheep/goat bones comprise milk premolars and a piece of rib, indicating at least one juvenile animal. A small pig tibia belongs to a juvenile animal of less than 24 months, while a small cranial fragment also belongs to a juvenile animal. A right proximal humerus of carrion crow/rook was also found. Although the latter species can often be separated using morphometrics (Tomek and Boche• ski 2000), the specimen from Kintbury is too fragmented. Corvids are commonly found in assemblages from all periods, and are likely to represent natural casualties amongst birds attracted by human waste.

The bulk of the bone remains from this feature comprises very small fragments of scorched/calcined or unburnt bone from medium and large mammals. Most fragments are poorly preserved and some root etching was observed.

The Early Bronze Age Pit F2

One hundred animal bone fragments were recovered from the second early Bronze Age pit (Figure 4, Section 4, context 4/03). Of these, five could be identified as cattle, two as sheep/goat and two as pig. The cattle remains comprise a fragmented left mandible from an animal well over three years of age, a calcined right talus, fragments of a scorched distal femur and a costa fragment. The left distal humerus of a sheep/goat was also calcined, while a costa fragment was not. In addition, a calcined pig radius fragment was found as well as an un-burnt cranium fragment.

Some bones in this feature were badly preserved, and the majority were burnt. Of the calcined bones, some had been burnt while still fresh, producing characteristic U-shaped fissures.

Pit F4

The fill and packing of the post pit (Figure 8, Section 9, context 5/08) produced three cattle bones and a sheep/goat costa fragment. Among the cattle bones were an upper tooth of a sub-adult animal, a right scapula fragment and a left radius fragment of an animal older than 12 to 15 months. The latter was split longitudinally. Some root etching was seen on the scapula fragment.

Pit F5

The five bones from context 5/10 (Figure 8, Section 8) comprise one and two more possible cattle bones and a fragment of a large mammal bone. A phalanx I of an adult cattle displays possible cut marks associated with skinning, while a possible cattle femur fragment shows signs of having been gnawed.

Pit F10

The fill of the pit (context 5/18, not illustrated) contained 68 bone fragments all belonging to sheep/goat. Most elements belonged to a more or less complete skeleton (mainly right side) of a female sheep aged over 42 months, but below 48-60 months, as the epiphyses of the vertebrae were in the process of fusing. The height at the withers of this animal was around 61 cm, a normal value for

the period. The skull has short horns. Again, many of the bones show extensive root etching.

The remains included a distal right tibia with articulating talus and calacaneus. Interestingly, apart from the left centrotarsal and metatarsal, the rest of the left leg is missing in the sheep skeleton, and it is possible that this was swapped for part of a left upper leg of another sheep/goat. Cut marks were found on the right femur and both right tali, suggesting that the animal may have been skinned.

Oven 1
The fill of this feature (Figure 10, Section 15, context 5/30) contained 54 bone fragments three of which comprised sheep/goat costa and a metapodial fragment. The latter was gnawed and root etched; the former scorched. The unidentified fragments were mainly calcined. Six bones of mouse/shrew/vole were also found and probably represent modern background fauna. The fact that most bones are burnt possibly indicates the use of bone fuel in the oven.

Oven 2
Thirty three animal bone fragments were recovered from this feature (Figure 10, Section 16, contexts 5/28, 5/42 and 5/43), some of which were burnt. The identifiable bones comprise a juvenile upper tooth of cattle, two bones of common frog, two mouse/shrew/vole bones and two juvenile pig teeth. Two bones possibly derive from birds of which one is probably a phalanx (foot).

Oven 3
The fill of this oven (Figure 10, Section 17, contexts 5/26 and 5/54) only contained eight bones, of which six belong to mouse/shrew/vole and two are medium mammal. One of the latter is scorched.

5.9 **The Archaeo-Botanic Remains** by Karen Wicks (University of Reading)

Summary
Archaeo-botanical analyses were undertaken on eight palaeo-environmental samples taken from five excavated features (Table 12). The results from charcoal and flot residue analyses indicate that locally available wood resources were being exploited for use as fuel during the early Bronze Age and Roman periods. During the early Bronze Age there is evidence for cultivation and crop processing at the site, whereas by the fourth century AD the evidence points to a downturn in farming that may have given rise to the spread of scrubby woodland, dominated by pioneer species that favour chalk grassland and wetland.

The Materials and Methods
Charcoal and associated flot material recovered from eight archaeological contexts were submitted for archaeo-botanical analysis. Analysis of the archaeo-botanical material involved observations at various magnifications between x6.3 to x100, using both a Leica S6E and Leica MZ12 stereo-binocular microscope. Critical charcoal identifications were determined by observation at

x250 magnification using a reflected-light metallurgical microscope. Wherever charcoal samples contained numerous identifiable fragments, representative fractions were obtained by coning and quartering. In these instances, a minimum of thirty charcoal fragments were identified per sample. Identification of the internal anatomical features of all charcoal fragments with at least one complete annual growth ring was attempted by standard observations of tangential, longitudinal and radial sections. Rigorous identification of all archaeo-botanical evidence contained within the flot samples was attempted wherever the state of preservation of the individual item permitted.

For charcoal identification, reference was made to Schweingruber (1990), whilst fruits and seeds were identified by reference to a digital seed atlas (Cappers et. al., 2006). All identified plant material was cross-referenced to an extensive botanical collection held at the University of Reading. Vascular plant nomenclature follows Stace (1997).

Sample	Feature	Context	Sample Vol. (ltrs)	Period	Charcoal Wt. (gms)	Flot Wt. (gms)
5/30	Oven 1	Fill of hearth & flue	99	LRB +	1.0	1.8
5/28	Oven 2	Upper fill of hearth	87	LRB +	52.6	13.0
5/42	Oven 2	Basal fill of hearth & flue	57	LRB +	27.8	4.5
5/43	Oven 2	Basal fill of hearth & flue	44	LRB +	1.4	2.8
5/54	Oven 3	Upper fill of hearth	4	LRB +	0.05	1.8
5/26	Oven 3	Basal fill of hearth	49	LRB +	20.7	6.1
5/06	F1	Pit fill	95	EBA	7.7	6.4
4/03	F2	Pit fill	22	EBA	0.05	1.8

Table 12: summary details of charcoal and environmental flot samples

The Results and Discussion

The quantity of charcoal available for identification varied considerably between samples, as can be seen in Table 12, which also provides contextual information, probable age ranges, bulk sample volumes and submitted sample weights for the charcoal samples and flots.

Only two of the eight charcoal samples submitted for analysis failed to yield a suitable size and quantity of charcoal for identification. These samples were from the fill of the hearth and flue in the Oven 1 (Figure 10, Section 15, context 5/30) and from the fill of the early Bronze Age pit, F2 (Figure 4, Section 4 context 4/03). Charcoal fragments from the upper fill of the Oven 3 (Figure 10, Section 17, context 5/54) were also of a size and quantity that only permitted tentative wood identifications. In all other samples, charcoal fragments were plentiful and of a size suitable for identification. The results of the charcoal and archaeo-botanical analyses are tabulated in Table 13.

	CONTEXT	5/30	5/28	5/42	5/43	5/54	5/26	5/06	4/03
CHARCOAL BULKS									
Scientific name	**Common name**								
Quercus	Oak		+			+	++		
Betula	Birch		+	++		+	+		
Alnus	Alder		++				+		
Corylus	Hazel		+				+		
Sorbus	Whitebeam		+++	+++	+++		+++	+	
Euonymus	Spindle		+	++			++		
Buxus	Box						+		
FLOT									
Plant Remains									
cf *Mecanopsis cambrica* fruit	Welsh Poppy		1						
Fumaria capreolata fruit	White Ramping Fumitory	1	5		1	1	1	2	1
Betula pendula fruit	Silver Birch						3		1
Betula pendula bract	Silver Birch		1						
Betula pubescens fruit	Downy Birch			1				2	
Atriplex patula fruit	Common Orache		1	1	4		2	14	5
Montia fontana fruit	Blinks			1					1
Persicaria minor fruit	Small Water-pepper		1					2	
Rumex sanguineous fruit	Wood Dock				1*				
Rubus fruticosus fruit	Brambles	1	12*	3	3		5		
Carex undiff. utricle	Sedge		1						
Festuca undiff. floret	Fescues				1				
Charcoal		++	+++	+	++	+++	+++	+	++
Cereals									
*Triticum**	Wheats	2		5				263	20
Spikelet indet.				1					
Rhachis segment indet.								1	
Microfaunal bones			+				+		+
Insect chitin			+			+	+		
Fly pupæ						+	+		

+ rare
++ abundant
+++ very abundant
* charred

Table 13: the archaeo-botanical data

A range of native British tree and shrub species are represented in the charcoal samples, including *Quercus, Betula, Alnus, Corylus, Sorbus, Euonymus* and *Buxus*. The wood charcoal of the subgenus *Quercus* cannot be distinguished from one another on the basis of their wood anatomy. However, in the British Isles, wood charcoal of *Quercus* is likely to represent one or both of the two native species *Quercus robur* L. (Common/Pendunculate oak) and *Quercus petraea* (Matt.) Liebl. (Sessile oak). Similarly, it is not possible to speciate wood charcoal of *Betula* based on wood anatomy alone. Charcoal identified as *Betula* is likely to represent one or both of the native British birch species, that of *Betula pendula* Roth (Silver Birch) and *Betula pubescens* Ehrh. (Downy Birch). Charcoal identified as *Alnus*, *Corylus*, *Euonymus* and *Buxus* are likely to represent the only native British species of these genera, that of *Alnus glutinosa* (L.) Gaertn. (Alder), *Corylus avellana* L. (Hazel), *Euonymus europaeus* L. (Spindle) and *Buxus sempervirens* L. (Box), respectively. The wood of *Sorbus* species, as with that of many of the trees of the Rosaceae family, is difficult to identify with any certainty, especially at species level. *Sorbus aria* agg. (Common Whitebeam) and *Sorbus aucuparia* L. (Rowan) are native species in southern Britain. However, on the chalk downlands of

southern England, the predominant *Sorbus* species is likely to be that of Common Whitebeam. Thus, on this phytogeographical basis, the *Sorbus* charcoal represented in the assemblage is likely to be dominated by Common Whitebeam, also with some Rowan represented.

The upper fill of the hearth of Oven 2 (Figure 10, Section 16, context 5/28) and the basal fill of the hearth of Oven 3 (Figure 10, Section 17, context 5/26) contained the widest diversity of wood types. Both layers are dominated by wood charcoal of *Sorbus*. Context 5/26 also contains *Euonymus* and *Quercus* in abundance, with lesser quantities of *Betula, Alnus, Corylus and Buxus.* Context 5/28 contains *Alnus* in abundance, with lesser quantities of *Quercus, Betula, Corylus* and *Euonymus.* Wood assemblages contained in the basal fill of the hearth and flue of Oven 2 (Figure 10, Section 16, contexts 5/42 and 5/43), and the fill of the early Bronze Age pit F1 (Figure 7, Section 6, context 5/06) are also dominated by *Sorbus*, whilst *Betula* and *Euonymus* are also abundant in the deposits of Oven 2. The upper fill of the hearth of Oven 3 (Figure 10, Section 17, context 5/54) contained few fragments of charcoal, tentatively identified as representing wood of *Quercus* and *Betula*.

Much of the charcoal in the assemblage is comprised of medium- to small-sized branches and twigs characteristic of wood fuel burnt on domestic bonfires and hearths, as opposed to combusted timber (heartwood) used in construction. The range of species represented is also relatively limited and appears to reflect the availability of wood in the area surrounding the site rather than the deliberate use of certain species; although the selection of *Alnus* wood for fuel, whilst occurring in damp places, may reflect either deliberate exploitation of a suitably combustible material (dry alder wood makes superb charcoal), or merely represent serendipitous fuel selection.

A variety of plant remains, cereals, artefactual evidence and other biological evidence was recorded in the flots. Of particular significance are the charred *Triticum* cereal grains recovered from the early Bronze Age pit fills (Figure 4, Section 4, context 4/03 and Figure 7, Section 6, 5/06) and the basal fill of the hearth and flue of Oven 2 (Figure 10, Section 16, context 5/42). The fruits of *Fumaria capreolata* L. (White Ramping-fumitory) and *Atriplex patula* L. (Common Orache) also register in these deposits. These are herbaceous annuals favouring arable and waste ground that may have been inadvertently harvested along with the cereal grains and thereby incorporated into the fills. The occurrence of such taxa is suggestive of cultivation and cereal processing within the environs of the Kintbury site during these periods.

Other significant environmental indicators registering in the samples include fruits from trees and herbaceous plants that favour wetter, habitats. Notably *Alnus, Betula pubescens, Montia fontana* L. (Blinks)*, Persicaria minor* (Huds.) Opiz (Small Water-pepper) and *Rumex sanguineous* L. (Wood Dock).

Fruits of *Betula pendula* and *Betula pubescens* indicate that birch trees were growing in close proximity to the site during the early Bronze Age and late Roman periods, as were fruits of *Rubus fruticosus* L. agg. (Brambles), some of

which were charred, as in the upper fill of the hearth of Oven 2 (Figure 10, Section 16, context 5/28).

As can be seen in Table 13, the wood assemblages described in this report are dominated by *Sorbus*, which is a pioneer species of chalk grassland, particularly where grazing has been relaxed. *Rubus fruticosus* also has a tendency to invade chalk grassland. Other shrubs and small trees that favour scrub and open woods on calcareous or base-rich soils are represented by *Euonymus* and *Buxus*. The presence of these taxa in the early Bronze Age and late Roman archaeo-botanical assemblages are indicative of a landscape characterised by patchy scrub woodland dominated by opportunistic colonizers such as *Sorbus* and *Betula*. The proximity of the river valley with its wetland resources is reflected by the presence of *Alnus* and other damp-loving taxa..

6 DISCUSSION

6.1 The Superficial Deposits

Across the eastern part of the site the machine stripping exposed archaeological features cut from the surface of the chalk, whereas to the west the features were cut through a yellowish to dark brown silty clay loam (Figure 6, context 24). The layer was confined mostly to a shallow depression in the chalk surface which extended southwards and eastwards beyond the trench. The deposit (Figure 6, context 24) almost certainly represented a continuation of the oxidised and probably reworked alluvium recorded in Trenches 1 and 6 (Figure 3, Section 1, context 1/05 and Figure 5, Section 5, context 6/02) where it was similarly stratified below flinty colluvial deposits (Figure 3, contexts 1/03 & 1/04 and Figure 5, context 6/03).

At the northern edge Trench 5 in the vicinity of the pit F1 (Figure 6) the alluvial sub-soil was barely discernable where it coincided with rise in the chalk surface. However, further to the east in the vicinity of pit F3 (Figure 6), alluvial sub-soil had accumulated in a shallow depression and was recorded as context 5/03 (Figure 6). In that location it was clearly cut by a narrow ditch (Figure 7, Section 10, F9), which produced a small assemblage of Late Iron Age pottery.

The colluvium (context 5/02) extended across most of the trench, although to the north and east the accumulation became progressively thinner. It consisted of a dark brown silty clay loam containing 15% small to medium sub-angular flint and 5% very small sub-rounded chalk pellets (Figure 7, Section 20, context 5/02). In the north-western corner of the trench, context 5/02 lay directly above a thin layer of fluvial gravel, which rested directly on the chalk (Figure 6).

6.2 The Mesolithic

The evaluation identified a focus of Mesolithic activity on the south-western side of the site centred on Trench 1 (Figure 2), where it was marked by a dense

concentration of flintwork. The assemblage is characterised by a narrow blade industry that begins to appear from the beginning of the seventh millennium BC. The bulk of the material was concentrated in an alluvial deposit stratified directly above the solid geology (Figure 3, Section 1, context 1/05), and extended into the other evaluation trenches and the area excavation (Figure 2). However, it was only in Trench 1 that the flintwork was sufficiently concentrated to suggest *in situ* activity. In the other trenches and watching brief assemblages, a narrow blade component occurred as a residual element alongside later flintwork in various features and deposits across the site. While these findings reinforce the impression that the area around Trench 1 was a major focus of activity, it is unlikely to be the only area of the Sewage treatment works where such remains survive. Connah's work during the construction of the filter bed (Figure 1) demonstrates that more than one occupation site existed, perhaps reflecting season visits over an extended period.

The taphonomy of the Mesolithic flintwork in Trench 1 that was recovered from contexts 1/05 and 1/06 (Figure 3) remains somewhat uncertain. The assemblages are dominated by pieces in fresh condition and in neither assemblage are there any diagnostic elements of later date. However, the flintwork was found to occur throughout the alluvial layer, with individual pieces resting at various angles and no obvious sign of a stratified concentration that might indicate a buried land surface. While the vertical distribution of the flints across the five excavated spits does show slightly higher numbers in the topmost spit, there is also a minor trend towards increased numbers at the base of the deposit (Table 10). This contrasts with the strong zonation of the flint at the Thatcham site, which was interpreted as evidence for an *in situ* deposit (Healy et. al., 1992, 48), and would suggest a degree of disturbance, possibly caused by later prehistoric and Roman cultivation. This interpretation is supported further by the high proportions of broken blades recovered from the spits, which contrasts with the lower numbers found in the protected fill of the tree root cast.

While no man-made features of secure Mesolithic date were discovered during the area excavations (Trench 5), the single feature interpreted as a tree root cast in the south-west corner of the trench (Figure 6, F15; Figure 7, Section 2) appeared to be stratified below the alluvium. However, the alluvium and the fill of the root cast both contained a small assemblage of flintwork incorporating Mesolithic as well as later flintwork. This contrasts with the tree root cast in Trench 1 (Figure 3, Sections 1 and 2, F1/07) which was also stratified below the alluvium, but produced a single period flint assemblage entirely consistent with a late Mesolithic date.

6.3 The Early Bronze Age Pits Phase (Figure 16)

The earliest of the securely dated features were the two pits located close to the northern trench edge (Figure 6, F1 and F2). Both produced sherds belonging to early Bronze Age collared urns along with burnt and worked flint, animal bone and charcoal. The smaller of the two pits (Figure 6, F2) was heavily truncated

and had been half-sectioned during the excavation of evaluation Trench 4 (Figure 4, Section 4). The other pit had been recorded in plan, but was not excavated since it mostly lay beyond the trench edge (Figure 4, F4/04). The radiocarbon determination on carbonised cereals from F1 produced a radiocarbon age of 3368±38 BP (Table 2, UBA-8268), which gives a calibrated date range of 1746 to 1603 BC at 2 sigma. This falls in the centre of the range suggested for the currency of the middle to late style urns (see Section 5.1).

Collared urns are most commonly linked to funerary rites and either accompany burials or are used to contain cremated human remains, and while there was no trace of cremated bone associated with either vessels it is possible that both had been deposited as part of a funerary ritual. What marks both pit deposits out as particularly unusual is the presence of carbonised wheat grains in conjunction with burnt and un-burnt animal bone. This is an extremely rare occurrence and although its significance is uncertain, it could be indicative of debris from feasting as a part of a funeral rite. The cereals are accompanied by the fruits of *Fumaria capreolata* L. (White Ramping-fumitory) and *Atriplex patula* L. (Common Orache), both of which are herbaceous annuals favouring arable and waste ground. These may have been gathered along with the cereals and may be indicative of cultivation and cereal processing within the environs of the site.

6.4 The Middle and Late Bronze Age to Iron Age

These periods are represented solely by a few sherds of unstratified pottery from the topsoil in the area excavation (Trench 5), from the fill of the sunken track and from a tree root cast (Figure 6, F14 and F18). While the presence of these finds denotes some form of activity on the site during phase (1400 BC to AD 43), most of the material is residual, and the assemblage too small to provide any indication of the nature or scale of the activity.

6.5 The Late Iron Age and Early Roman Phase (Figure 16)

The only feature that can be reliably dated to this phase (50 BC to AD 200) is the boundary ditch F9 (Figure 6). The scale of the ditch suggests that it was probably a 'Celtic' field ditch defining the edge of a cultivated plot. Together with the undated ditches in evaluation Trenches 2, 3 and 6 (Figure 4, F2/08, F3/04 and Figure 5, F6/05) it may have been part of a poorly preserved layout of fields. The presence of cultivation is attested by colluvial deposits identified in the evaluation trenches and in the area excavation and it is entirely possible that this had its origin in the Iron Age and continued into the early Roman period.

6.6 The Late Roman and Post-Roman Phase (Figure 16)

There is evidence for a significant change in the use of the land coinciding with the area excavation during this period (AD 200 to AD 400). The line of the field, or boundary, ditch F9 was re-emphasised by the construction of a massive

post setting (Figure 6, F4 and F5), which seems likely to have formed an imposing entrance to a compound flanked by large timber posts. Both post-pits are associated with smaller pits (Figure 6, F3, F7, F8 and F11), probably dug to set the bracing timbers used to support the upright posts.

The dating evidence for the structure is tenuous, relying on small assemblages of abraded sherds. However, the sizeable post setting seems likely to have formed an entrance in a boundary that followed the line of the earlier ditch, which in turn formed one side of a compound. No evidence for a hedge or fence was found, but given the eroded character of the chalk natural it is unlikely that insubstantial features such as stake holes or shallow root channels would survive.

The group of three ovens and the cluster of post holes (Figure 6, Ovens 1 to 3 and PH1 to PH9) immediately to the west of the post setting, suggests that the area may have had a domestic use. All three of the ovens had single firing chambers with a flue to the north-east, and two (Figure 10, Ovens 2 and 3) contained the remains of collapsed clay super-structures. The function of these features is elusive, but given the paucity of carbonised cereal remains they are unlikely to have been used as corn driers. Though it is impossible to be certain, the more likely explanation is that they were bread ovens.

The three 'hearths' identified in 1949 (Connah 1950) are quite likely to have been similar features. These were observed near the filter bed to the north of the area excavation (Figure 1), while the Roman pit, or pits, recorded in the same location were probably contemporary features. Together these add further support to the interpretation of the site as a working area, which no doubt belonged with the nearby Roman bath house excavated by Connah in the 1950's (Figure 17).

The radiocarbon date range for the ovens spans the late fourth century AD and the earlier part of the sixth century. The latter part of this range introduces the possibility that the ovens were in use during the post-Roman period. Like those from the large post pits, the small Roman pottery assemblages from the ovens consisted of small abraded sherds, and almost certainly represent residual material incorporated into later features. It is interesting to note in this context that finds from the bath house excavated by Connah (SMR Event ID: EWB445) suggest a broadly fourth century AD date for the building, and that there appear to have been traces of post-abandonment occupation. While there is no dating evidence for that phase, it is tempting to draw parallels with the potentially late dates for the ovens and boundary features, which would indicate that settlement in some form continued into the early sixth century AD.

The archaeo-botanic data derived from the oven fills indicate that the landscape during the late Roman and post-Roman periods was characterised by patchy scrub woodland dominated by Birch, Whitebeam and brambles. This strongly suggests a contraction in the extent of cultivated land, with colonising species encroaching onto abandoned fields. Together with the late phase of activity noted by Connah, and recorded on the present site, this hints at a radical change

in the structure and subsistence productivity of the settlement before it was finally abandoned.

7 CONCLUSIONS

A decision was taken to preserve the Mesolithic site *in situ*, and for that reason it was not fully investigated and is known only from the very small sample excavated during the evaluation. That said, the evaluation has demonstrated that the Mesolithic activity revealed during Connah's rescue excavations is more extensive than previously recognised, and is likely to be just one of several discrete occupation sites within the Sewage treatment works. The northern part of the sewage works where Connah carried out his excavations is now largely built over, while those areas that remain under grass are crossed by numerous services, or have been landscaped. However, the area to the south of evaluation Trench 1 is largely undisturbed, as is the area to the east, and in both locations there is a high potential for the survival of further Mesolithic remains.

The early Bronze Age pit deposits are of particular interest. Although the urns themselves are not unusual, it is rare to find carbonised wheat in deposits of that period. Without evidence for features that might indicate settlement, it is not possible to determine whether the pits were funerary or domestic in origin. This is likely to be a moot point, however, since contemporary distinctions may have been blurred, with collared urns moving seamlessly between the two social contexts.

The findings of the present excavations combined with the earlier discoveries suggest that by the Roman period a working area or yard, with pits, ovens and probably storage facilities occupied the site of the sewage treatment works. This was probably bounded by a hedge or fence, although the only tangible evidence for a boundary is the major post setting on the eastern side, which is interpreted as the entrance to the compound. Between the late fourth and early sixth century the site entered its final phase, which can be linked with Connah's findings. The pits uncovered at the sewage treatment works in 1949 contained pottery and coins which for the most part span the latter part of the fourth century AD; and though the evidence is of variable quality, the bath house seems to be broadly of that same date. The full extent of the bath house settlement has never been established, but with its mosaic and painted wall plaster it must have been an integral part of a much larger range of building at the centre of a prosperous rural settlement. Following the abandonment of the building there was some evidence for continuing occupation, and this can be linked tentatively to the late radiocarbon dates for the excavated ovens.

In a number of respects the excavations at the sewage treatment works have complemented and extended the work carried out by Connah, and by doing so the work has re-emphasised the site and its environs. Even though the results have inevitably posed new questions, which remain unanswered, they have gone some way towards providing a more secure context and chronology for the earlier findings.

8 THE ARCHIVE

The project archive is currently is currently held by Berkshire Archaeological Services pending transfer to West Berkshire Museum, Newbury under Accession Number: NEBYM: 2006.33. Deposition of archival material will be subject to consent obtained in writing from Thames Water Utilities Ltd.

Preparation of the archive will comply with the *Guidelines for the Preparation of Excavation Archives for Long-Term Storage* (Walker 1990); *Standards in the Museum Care of Archaeological Collections* (Museum and Galleries Commission 1992); and *Procedures for the Transfer of Archaeological Archives* (Reading Museum Service and Newbury District Museum 1997).

The project archive will consist of all field records, finds, environmental samples and photographs, along with copies of any specialist reports and a copy of the finished project report.

9 REFERENCES

Anderson, A. S., 1979, *The Roman Pottery Industry in North Wiltshire*, Swindon Archaeological Society Report, **No 2**

Andrefsky, W., 1998, *Lithics. Macroscopic Approaches to Analysis*, Cambridge University Press

Brodribb, G., 1987, *Roman Brick and Tile*, Alan Sutton, Gloucester Burgess 1986

Burgess, C., 1986, "Urns of no small variety': collared urns reviewed", *Proceedings of the Prehistoric Society*, **52**, 339-351

Connah Archive, Newbury Museum, Accession Number - NEBYM: 1980.107

Connah, D. B., 1950, "no title", *The Newburian*, **144**, 109-10

Cappers, R. T., J., Bekker, R., M. & Jans, J. E. A, 2006, *Digital Seed Atlas of the Netherlands,* Barkhuis Publishing & Groningen University Library, Groningen

Darvill, T., 1988, 'The Neolithic and Bronze Age pottery', in G. Lambrick, *The Rollright Stones: Megaliths, Monuments and Settlement in the Prehistoric Landscape*, English Heritage Archaeological Report **6**, 90-93

Froom, F. R., 1972a, "Some Mesolithic sites in south-west Berkshire", *Berkshire Archaeological Journal*, **66**, 11-22

Froom, F. R., 1976, *Wawcott III: A Stratified Mesolithic Succession*, BAR, British Series, **27**

Froom, R., 2005, *Late Glacial Long Blade Sites in the Kennet Valley: Excavations and Fieldwork at Avington VI, Wawcott XII & Crown Acres* (ed, J. Cook), British Museum Research Publication, **153**, London.

Hambleton, E., 1999, *Animal Husbandry Regimes in Iron Age Britain*, BAR, **282,** Oxford:

Habermehl, K. H., 1975, *Die Altersbestimmung bei Haus- und Labortieren 2. vollständig neubearbeitete Auflage*, Berlin and Hamburg, Paul Parey

Healy, F., 1995, "Pots, pits and peat: ceramics and settlement in East Anglia", in I. Kinnes and G. Varndell (eds), *Unbaked Urns of Rudely Shape: Essays on British and Irish Pottery for Ian Longworth*, Oxbow Monograph, **55**, 173-184

Healy, F., Heaton, M., and Lobb S. J., 1992, "Excavations of a Mesolithic site at Thatcham, Berkshire", *Proceedings of the Prehistoric Society*, **58**, 41-76

Humphrey, J., 2003, "The use of flint in the British Iron Age", in J. Humphry (ed), *Researching the Iron Age: Selected Papers from the Proceedings of the Iron Age Research Seminars, 1999-2000*, Leicester Archaeological Monographs **11**

Lobb, S. J. and Rose, P. G., 1996, *Archaeological Survey of the Lower Kennet Valley*, Wessex Archaeological Report, **9**

Longworth, I., 1984, *Collared Urns of the Bronze Age in Great Britain and Ireland*, Cambridge University Press

Lyne, M. A. B., 1994, *Late Roman Handmade Wares in South-East Britain*, unpublished PhD thesis, University of Reading

Mepham, L., 2000, 'Enborne Street and Wheatlands Lane: medieval pottery' in M. J. Allen et. al.,. (technical reports supporting V. Birbeck, *Archaeological Investigations on the A34 Newbury Bypass, Berkshire/Hampshire, 1991-7)*, Wessex Archaeology, 52-66

PCRG, 1997, *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Occasional Papers **1** and **2** (revised version)

Swan, V., 1975, 'Oare reconsidered and the origins of Savernake Ware in Wiltshire', *Britannia,* **6**, 36-61

Schweingruber, F. H., 1990, *Microscopic Wood Anatomy*, third edition, Swiss Federal Institute for Forest, Snow and Landscape Research, Birmensdorf

Stace, C., 1997, *New Flora of the British Isles*, Cambridge University Press, Cambridge

Tomek, T., and Boche• ski, Z. M., 2000, *The Comparative Osteology of European Corvids (Aves: Corvidae), With a Key to the Identification of their Skeletal Elements*, Polish Academy of Sciences, Kraków

Vince, A. G., 1997, 'Excavations at Nos. 143-5 Bartholomew Street, 1979' in A. G. Vince, S. J. Lobb, J. C. Richards, and L. Mepham, *Excavations in Newbury 1979-1990*, Wessex Archaeological Report, **13**, 7-85

Woodward, A., 2001, 'Prehistoric pottery', in N. Holbrook, "The Anglo-Saxon cemetery at Lower Farm, Bishop's Cleeve: excavations directed by Kenneth Brown 1969", *Transactions of the Bristol and Gloucestershire Archaeological Society*, **118**, 2000, 61-92

Zienkiewicz, L., and Hamilton, M., 1999, "Pottery", in A. Whittle, J. Pollard and C. Grigson, *The Harmony of Symbols: The Windmill Hill Causewayed Enclosure*, Oxbow Books, Oxford, 257-317

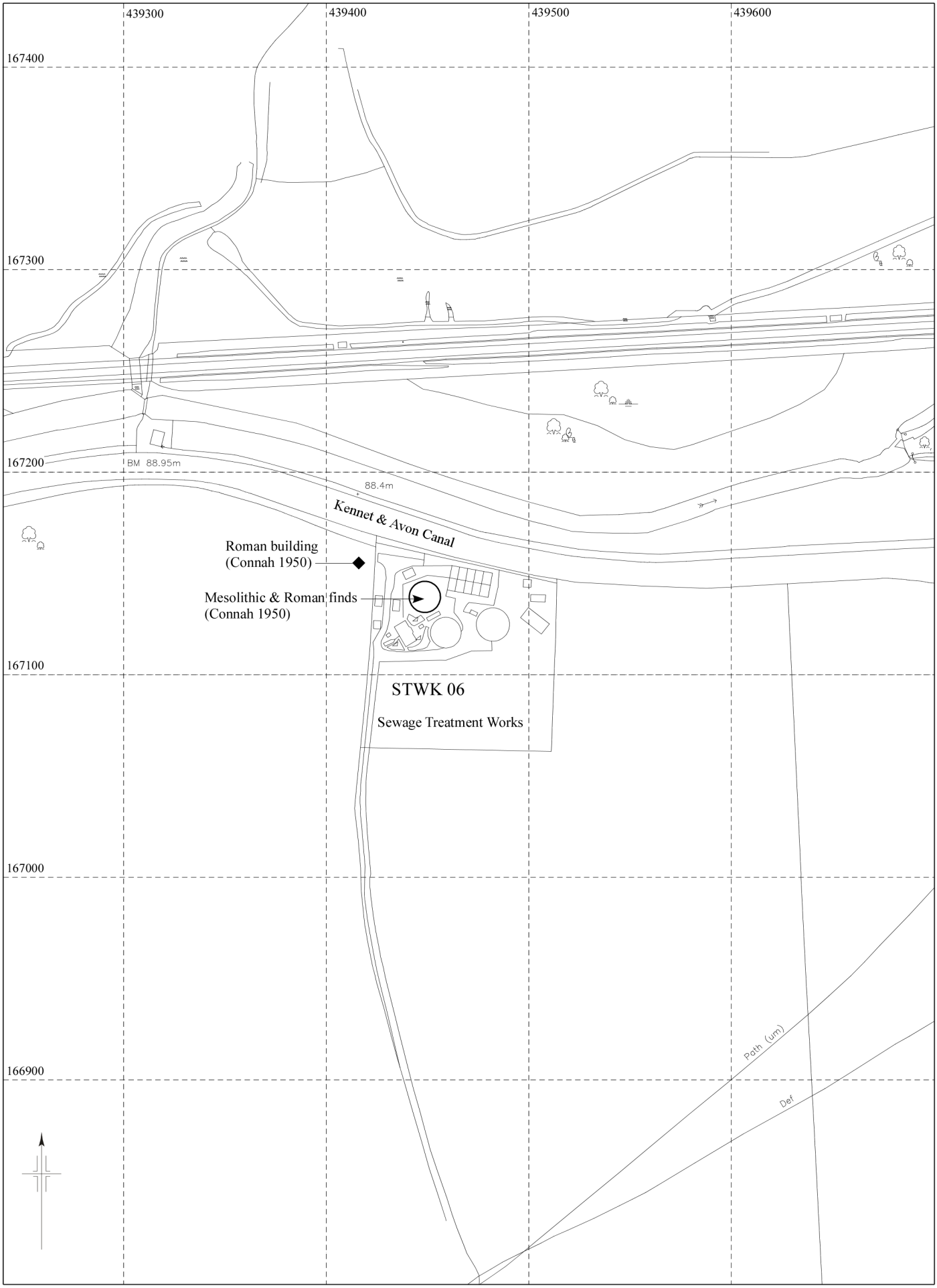


Figure 1: site location map (scale at 1 to 2500)

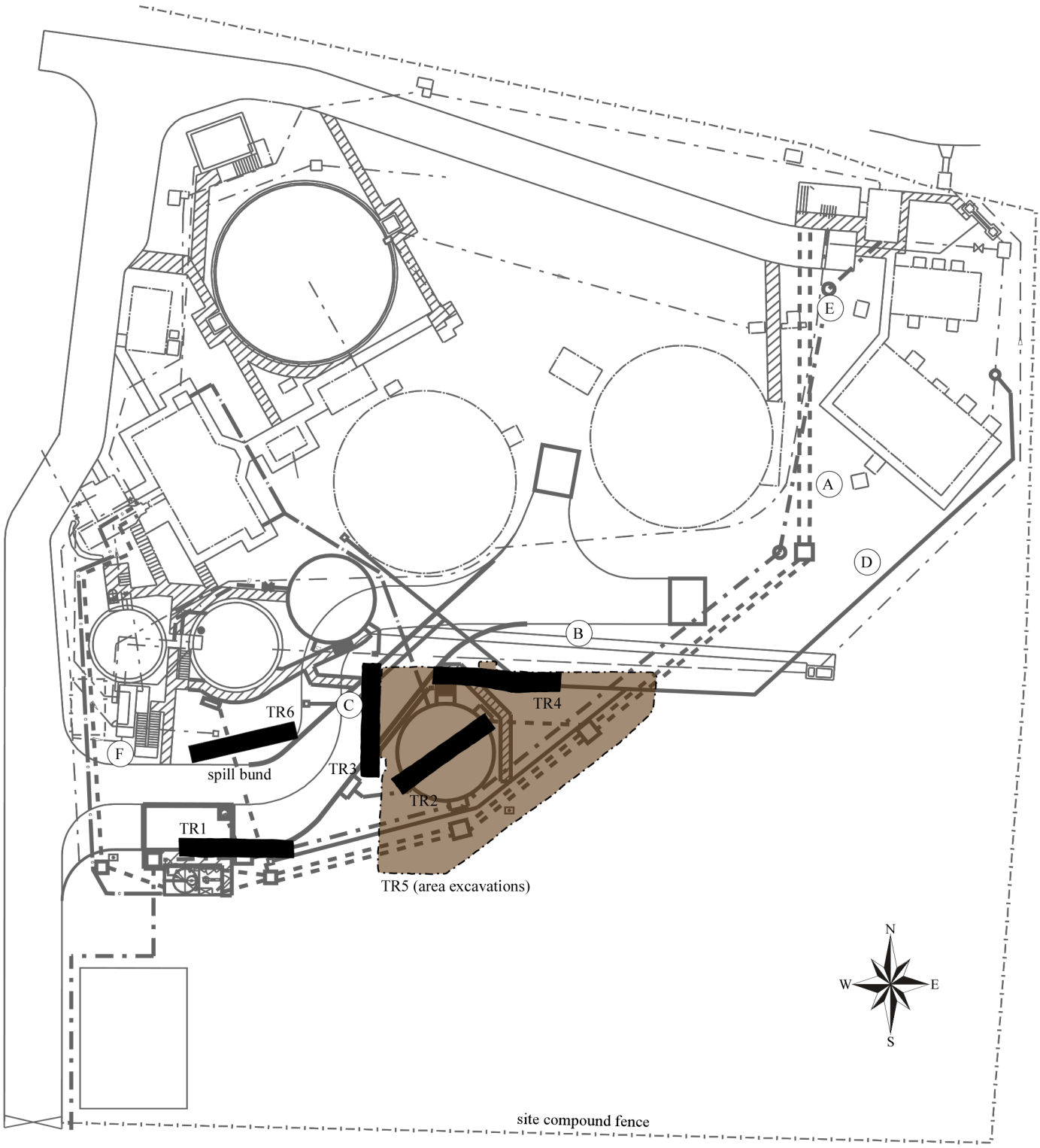


Figure 2: site plan showing the location of evaluation trenches and the area excavation

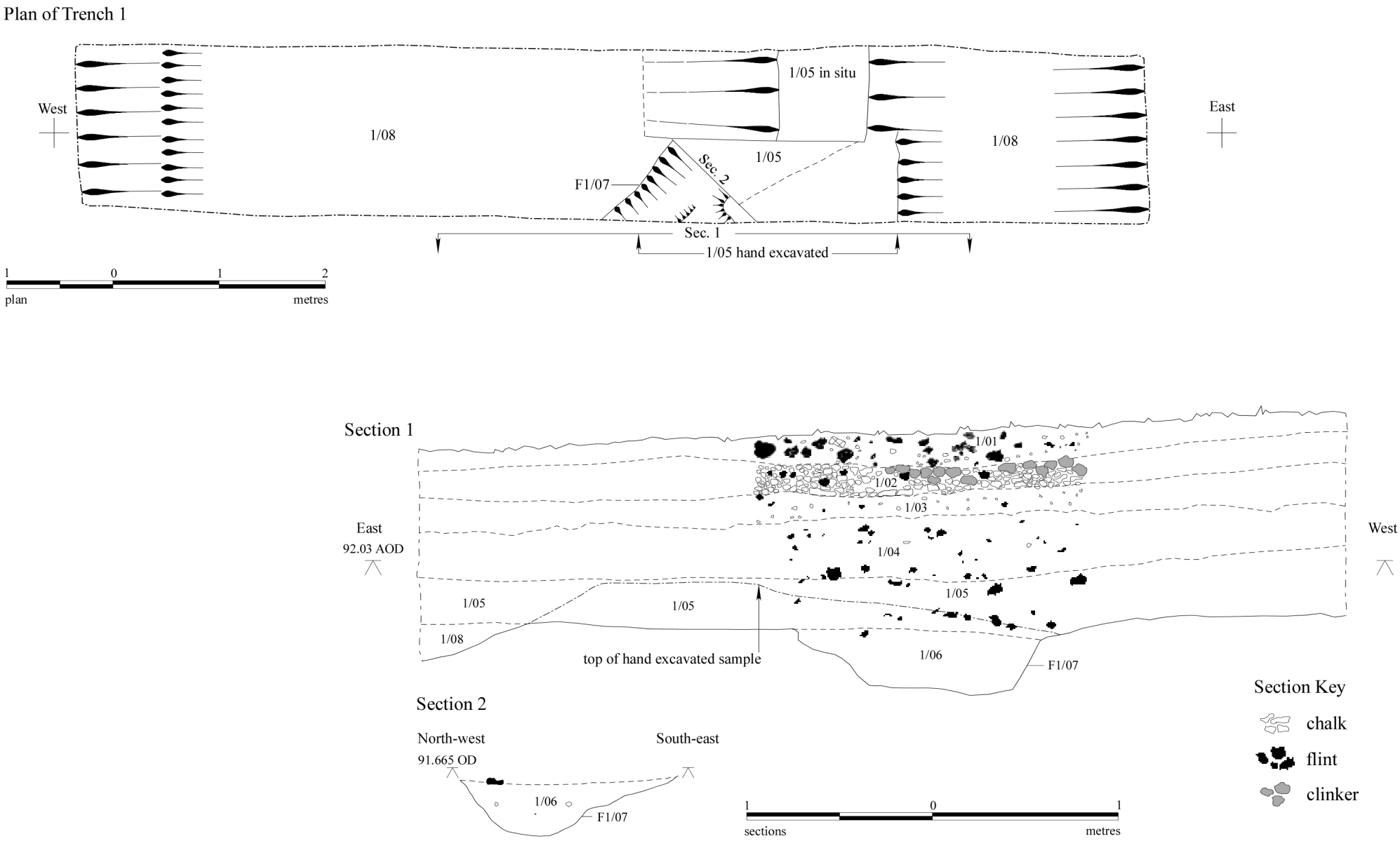


Figure 3: plan and sections of Trench 1

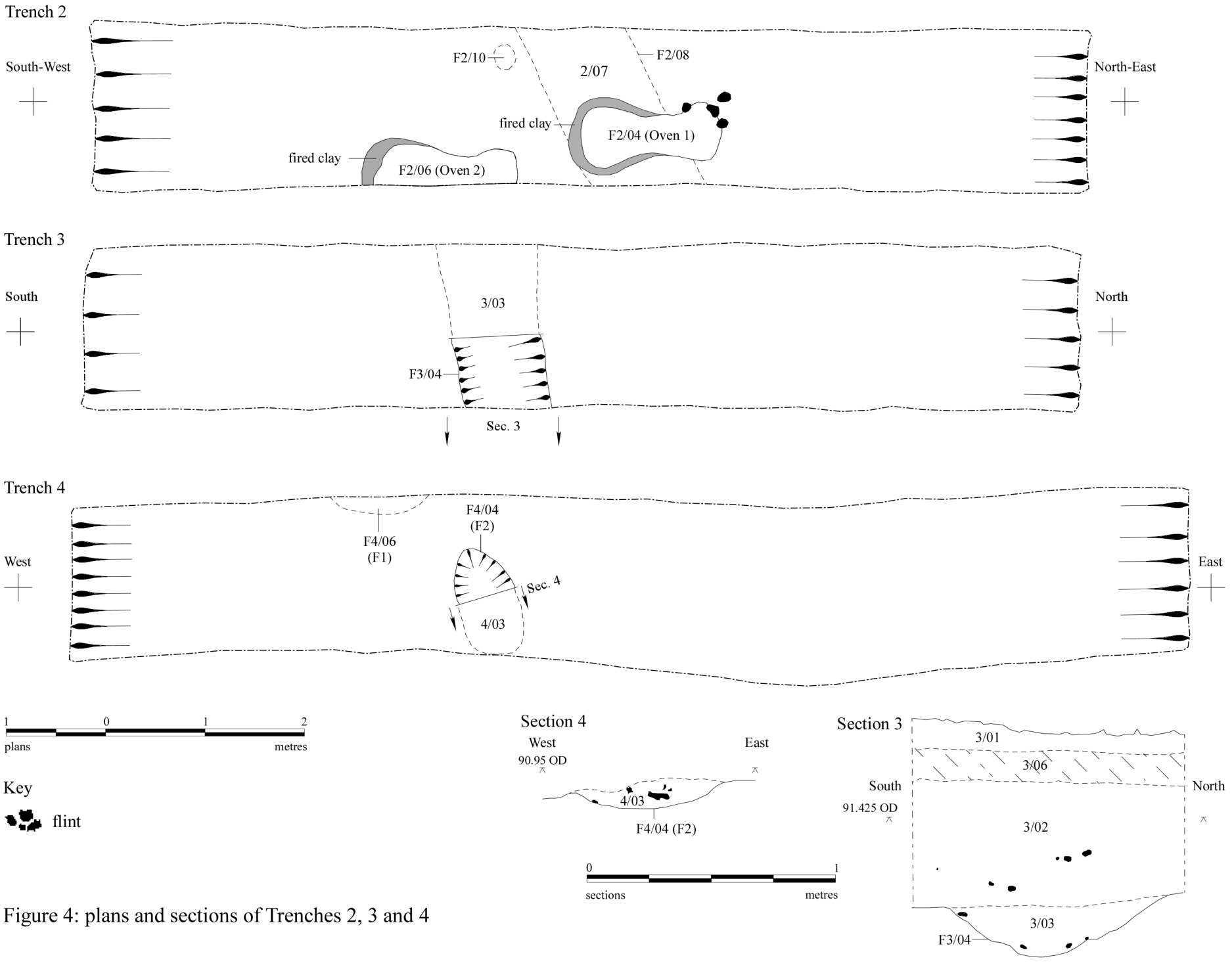


Figure 4: plans and sections of Trenches 2, 3 and 4

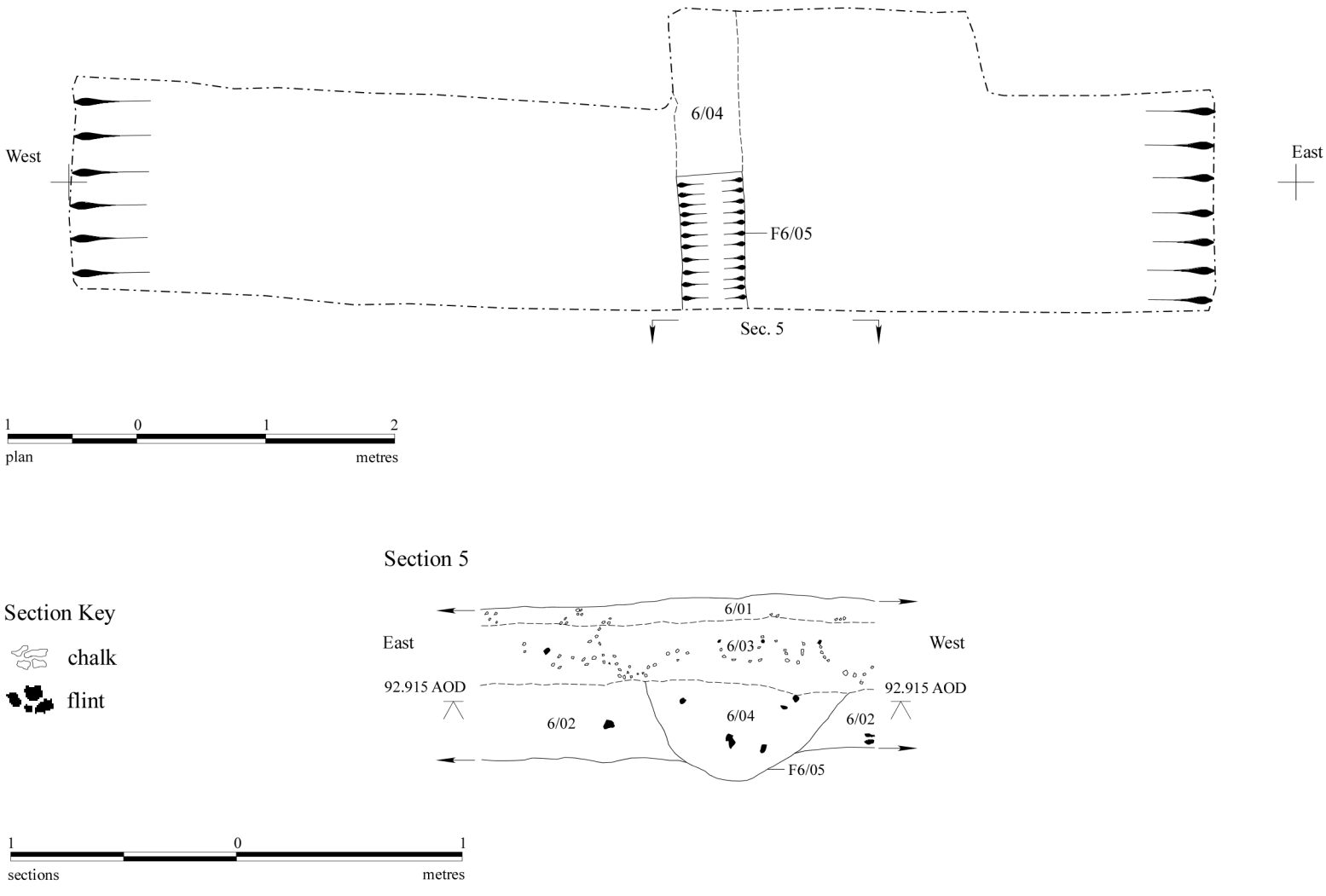


Figure 5: plan and sections of Trench 6

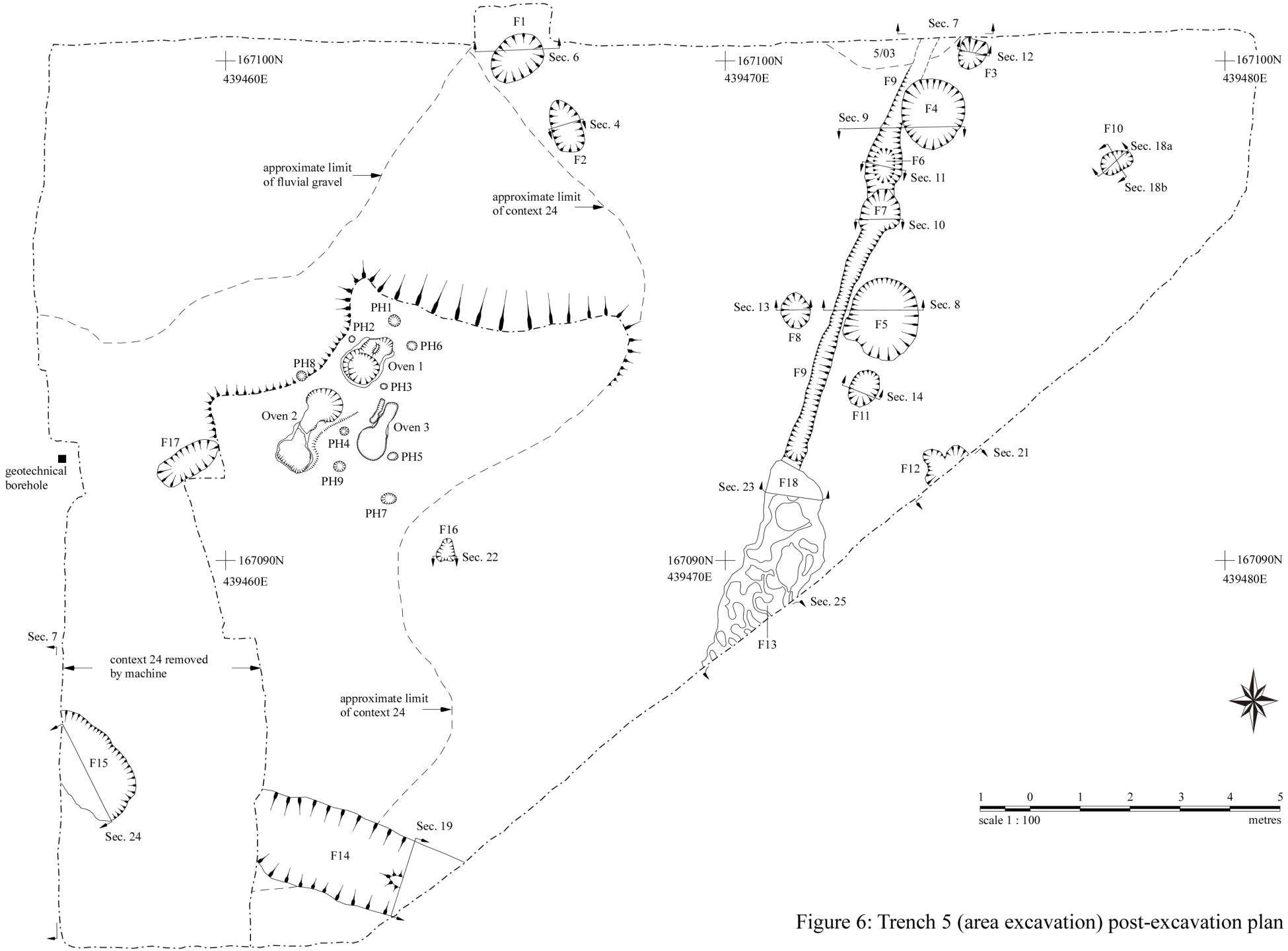


Figure 6: Trench 5 (area excavation) post-excavation plan

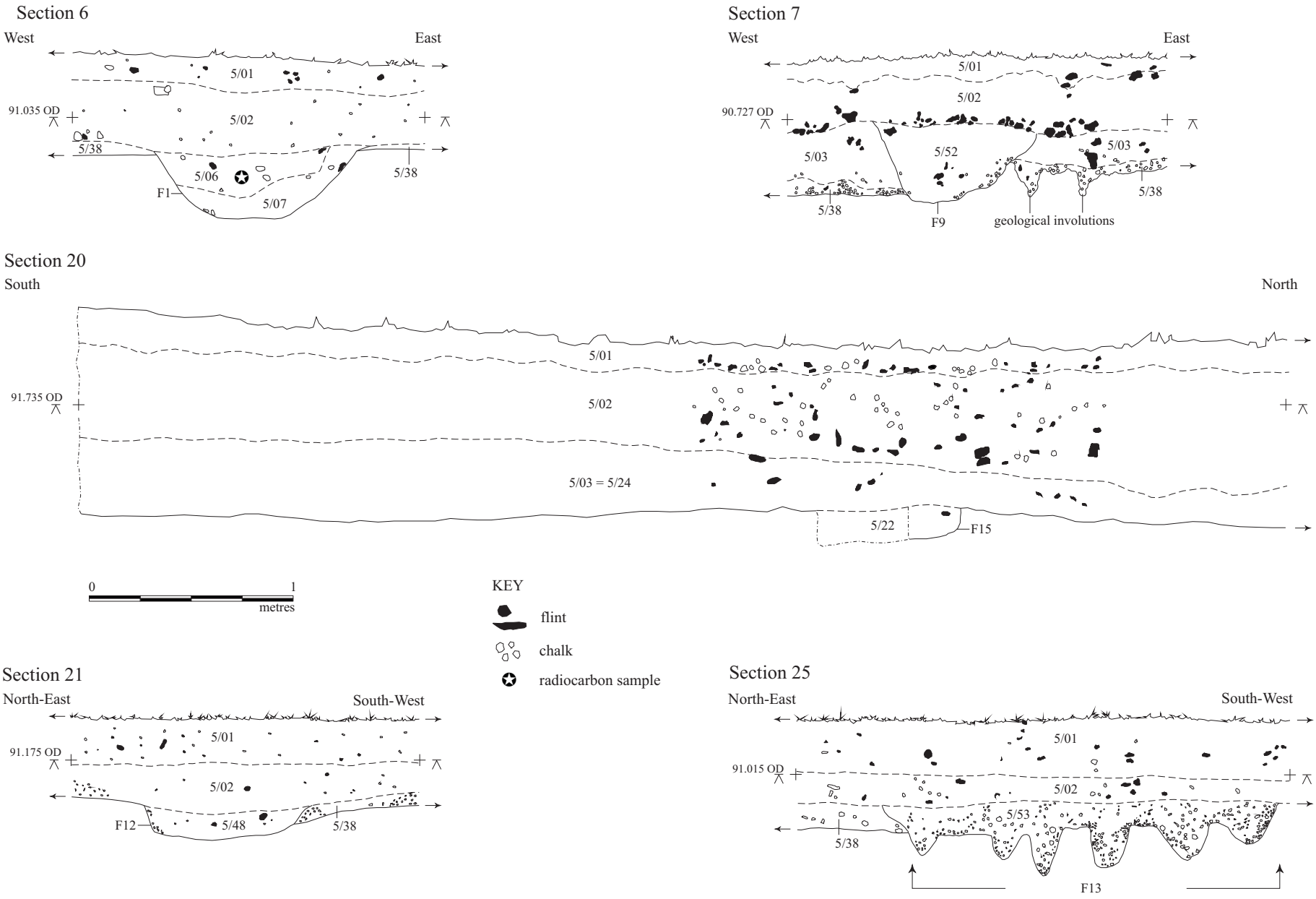


Figure 7: Trench 5 (area excavation) baulk sections

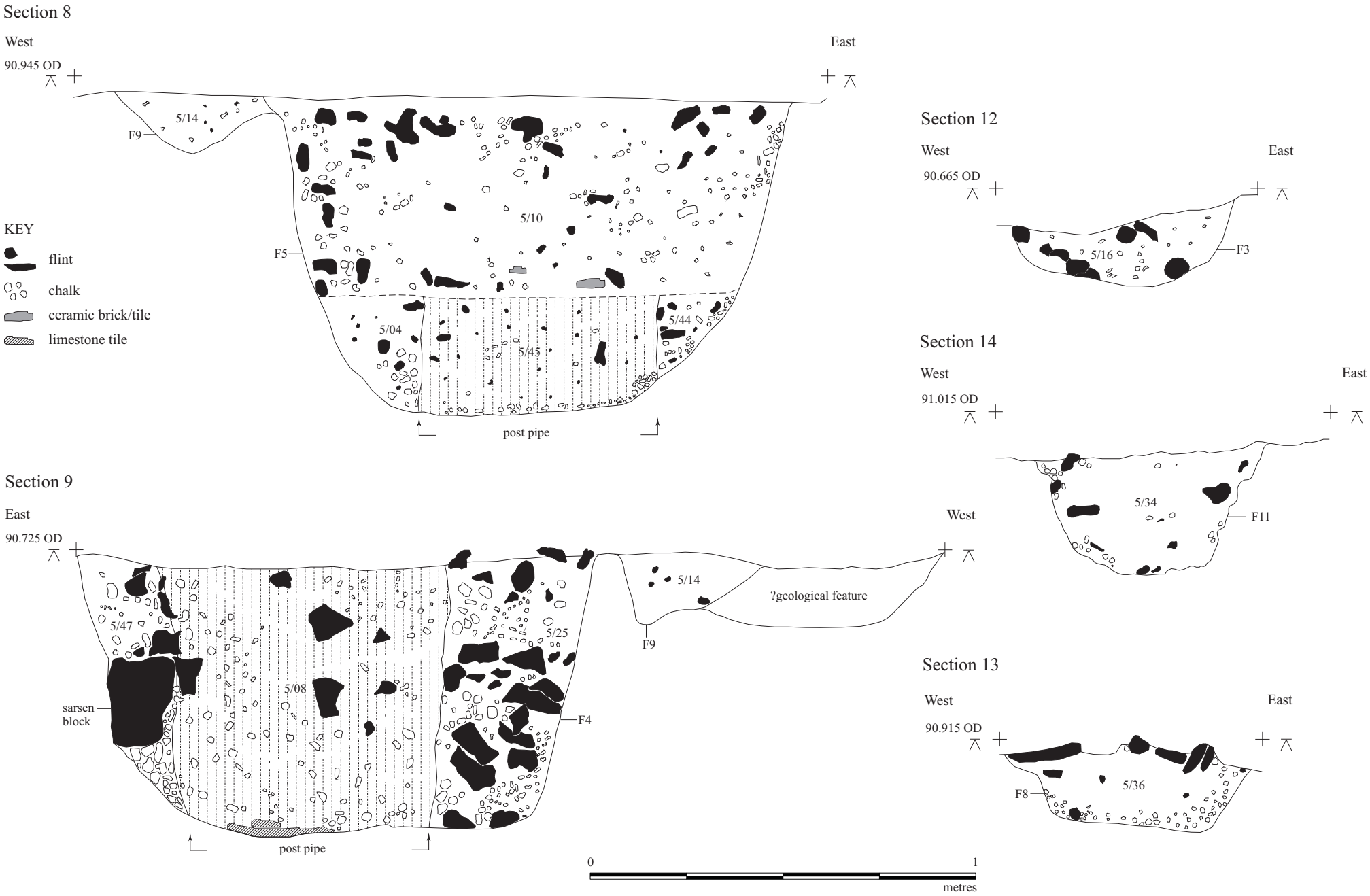
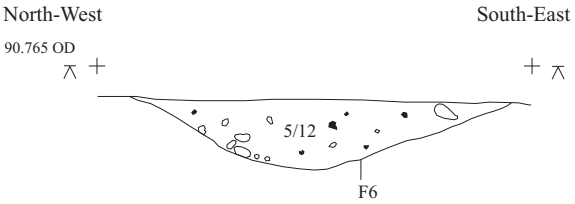
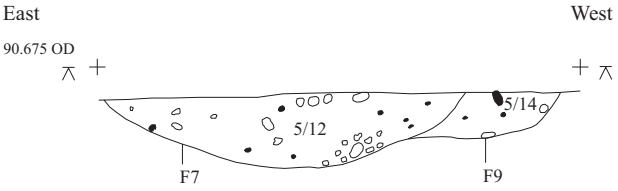


Figure 8: sections of the ditch (F9) and associated pits

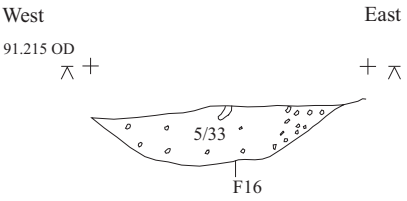
Section 11



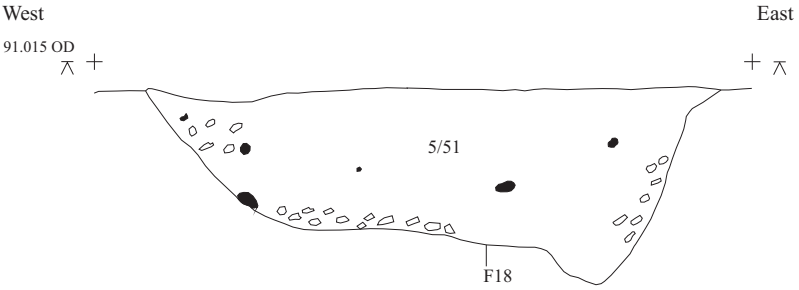
Section 10



Section 22



Section 23



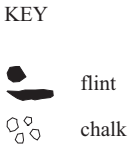
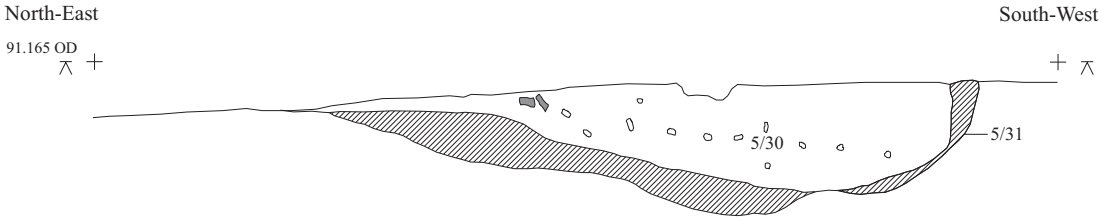
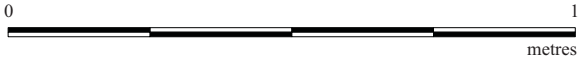


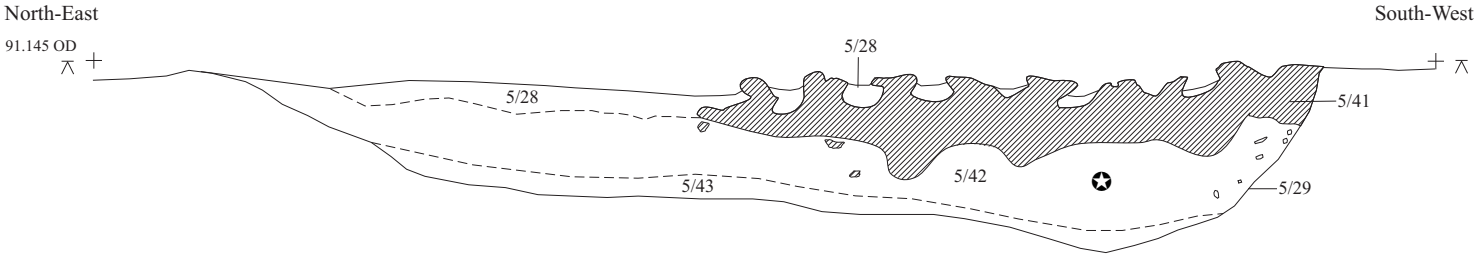
Figure 9: section of ditch F9, pit F6 and natural features(F16 & F18)

Oven 1, Section 15

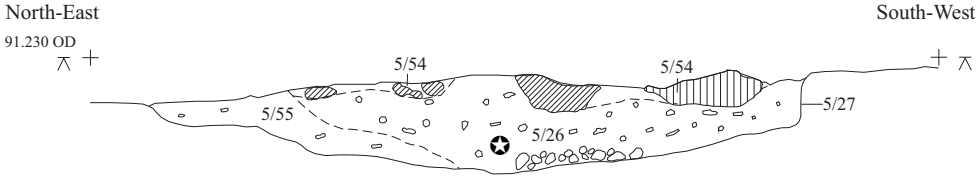




Oven 2, Section 16



Oven 3, Section 17



F10, Profiles 18a and 18b

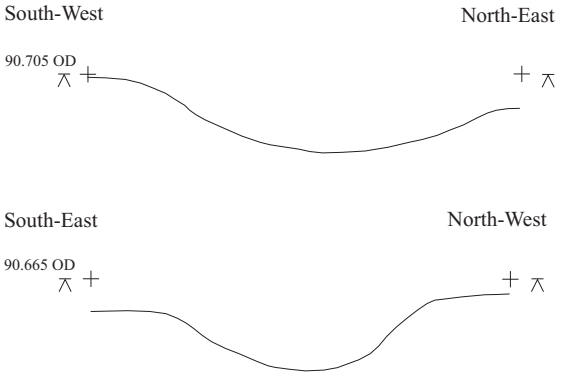


Figure 10: oven sections and profiles of pit F10

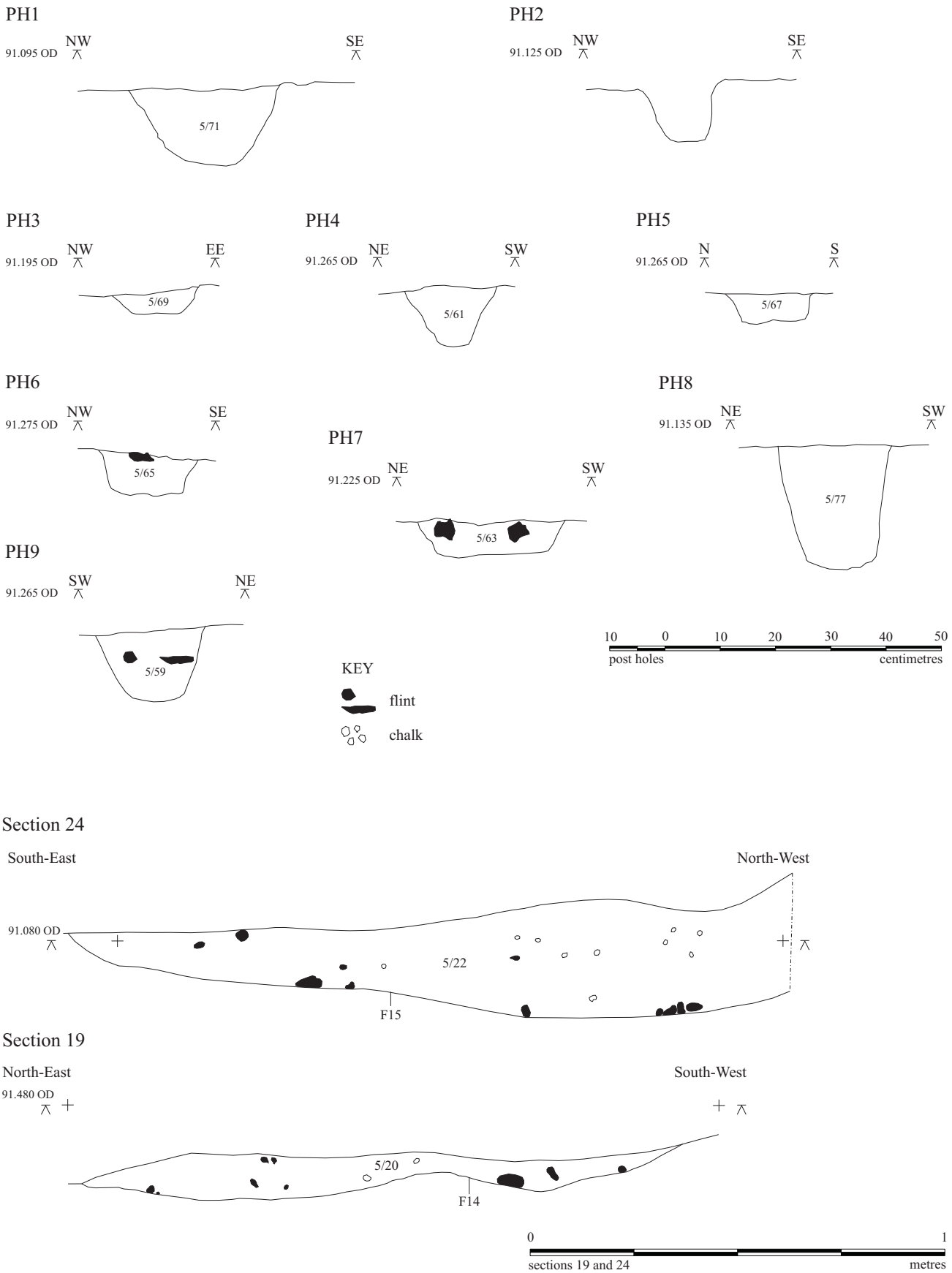


Figure 11: sections of post-holes PH1 to PH9 and features F14 and F15

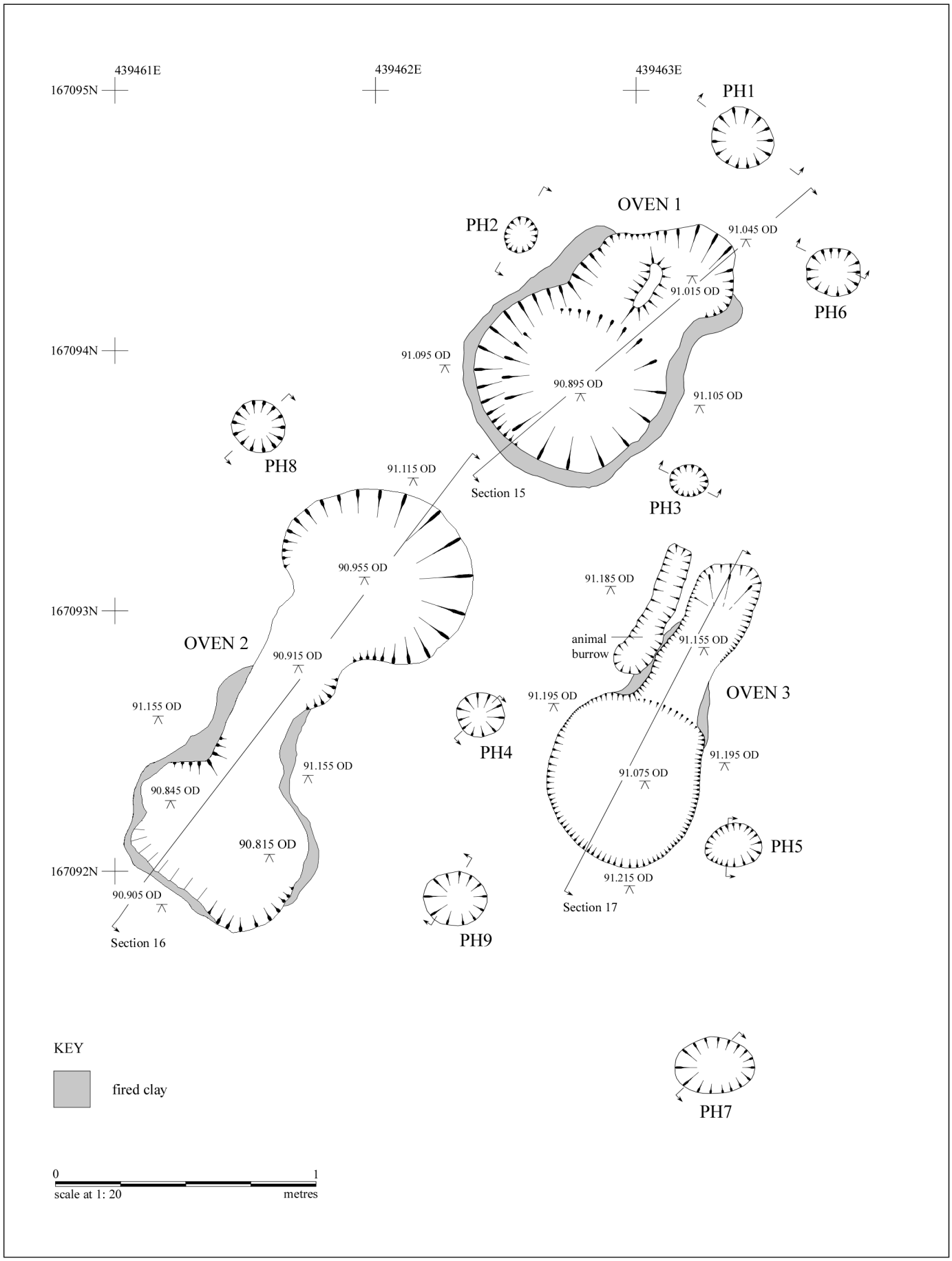
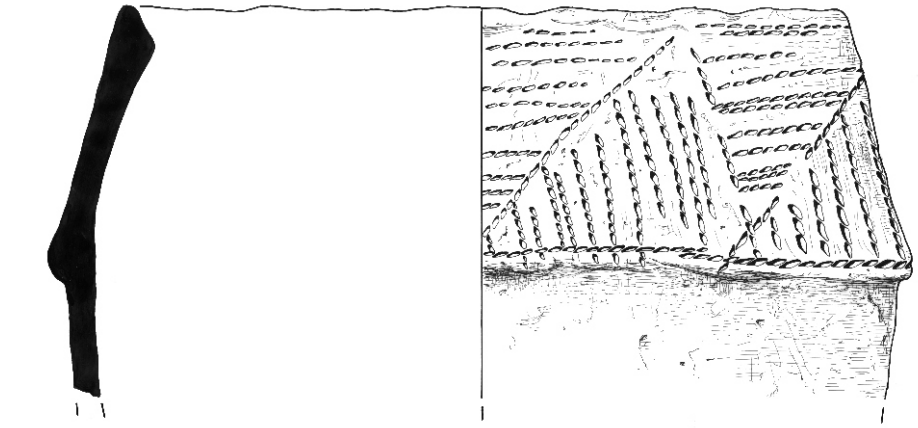
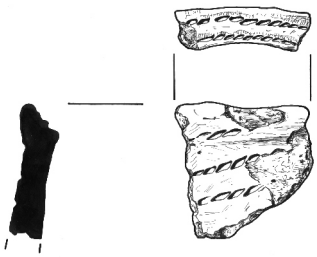


Figure 12: post-excavation plans of the ovens and associated post holes



P1



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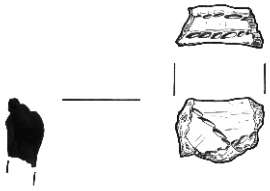


P3

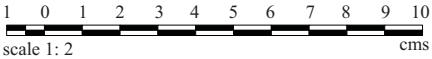
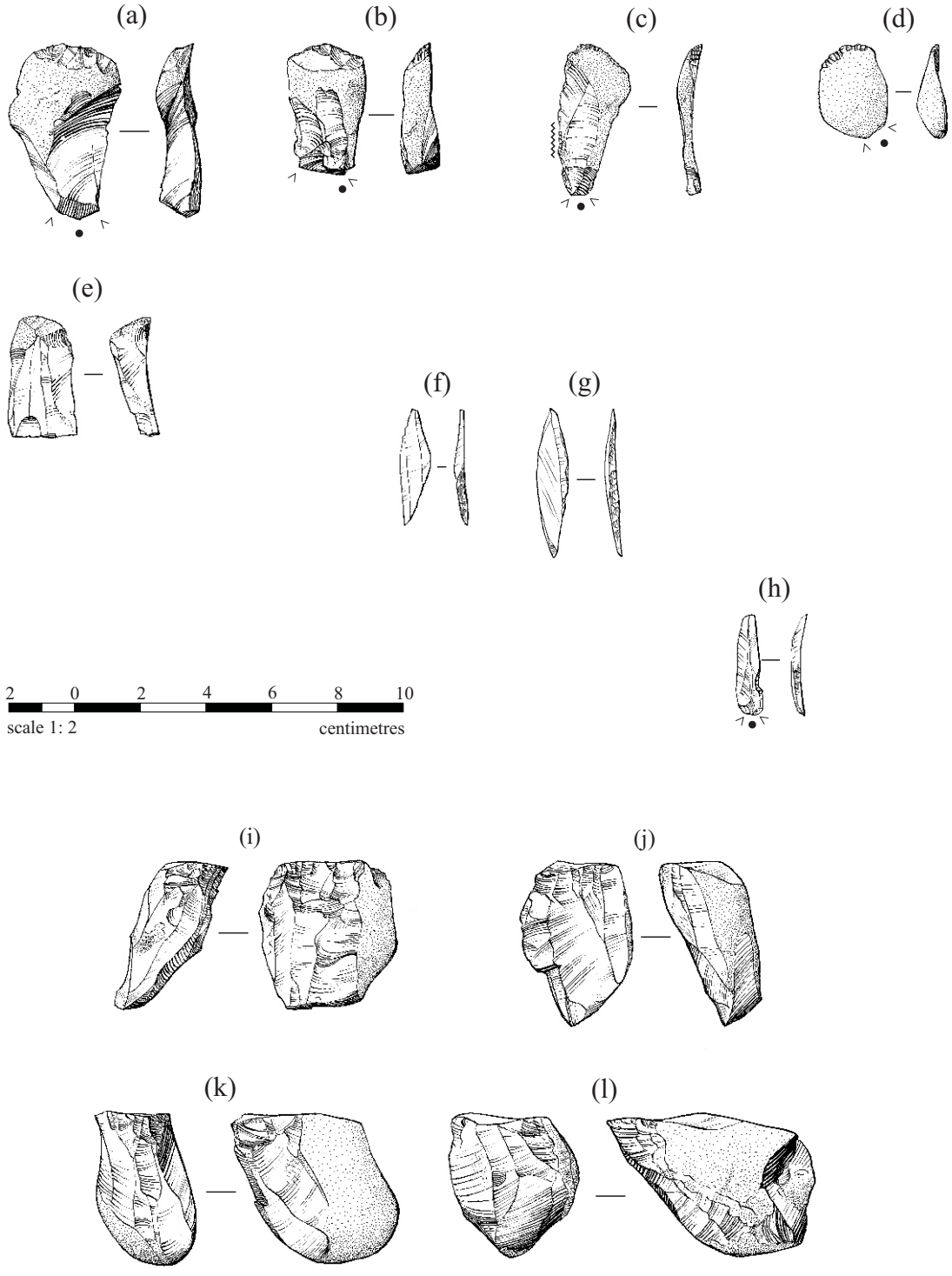
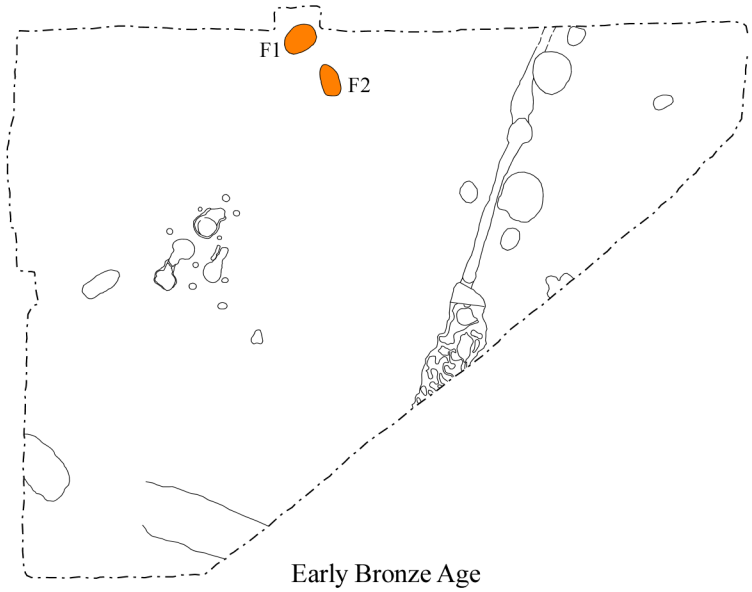


Figure 13: the early Bronze Age pottery



end scrapers: (a) to (e)
microliths (f) & (g)
notched bladelet (h)
cores (i) to (l)

Figure 14: Mesolithic tools and cores



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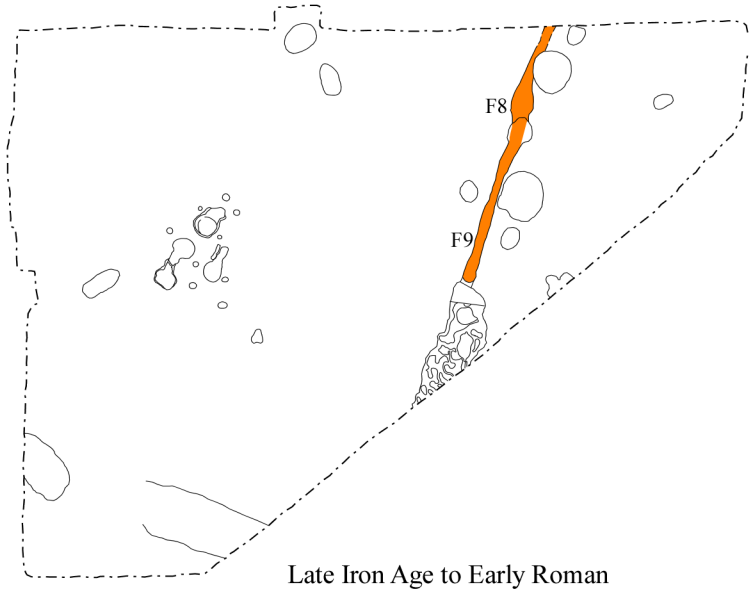

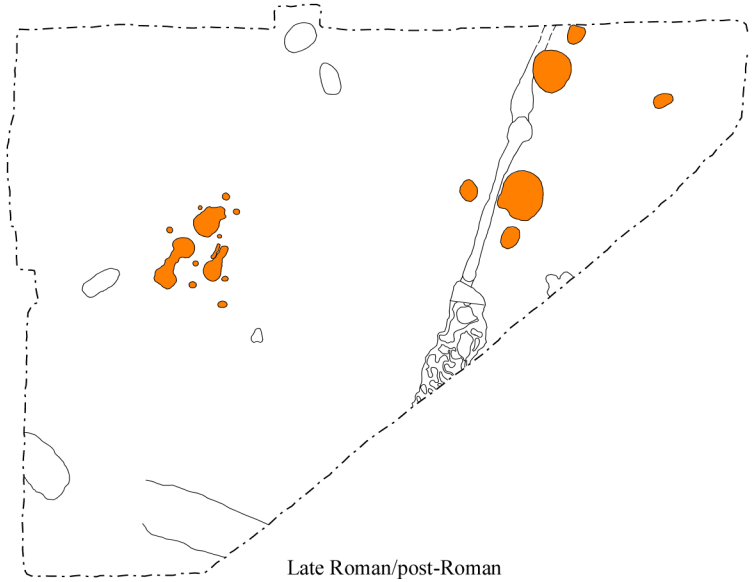

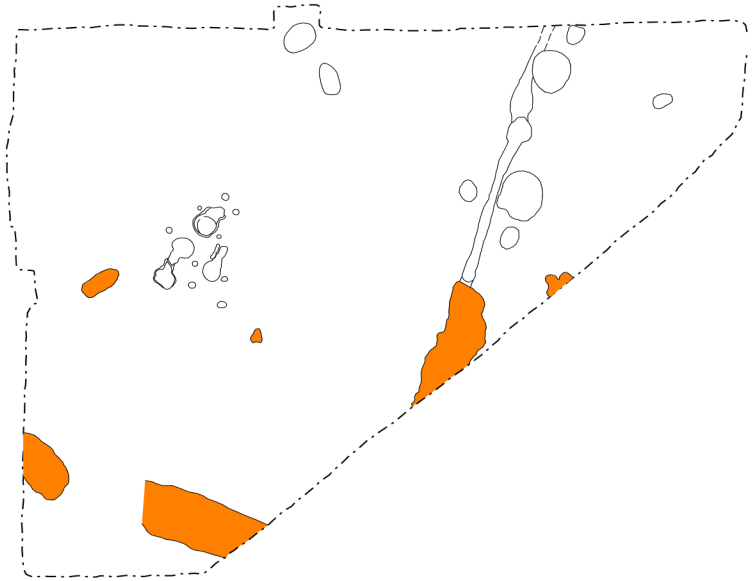

Figure 16: site phase plans

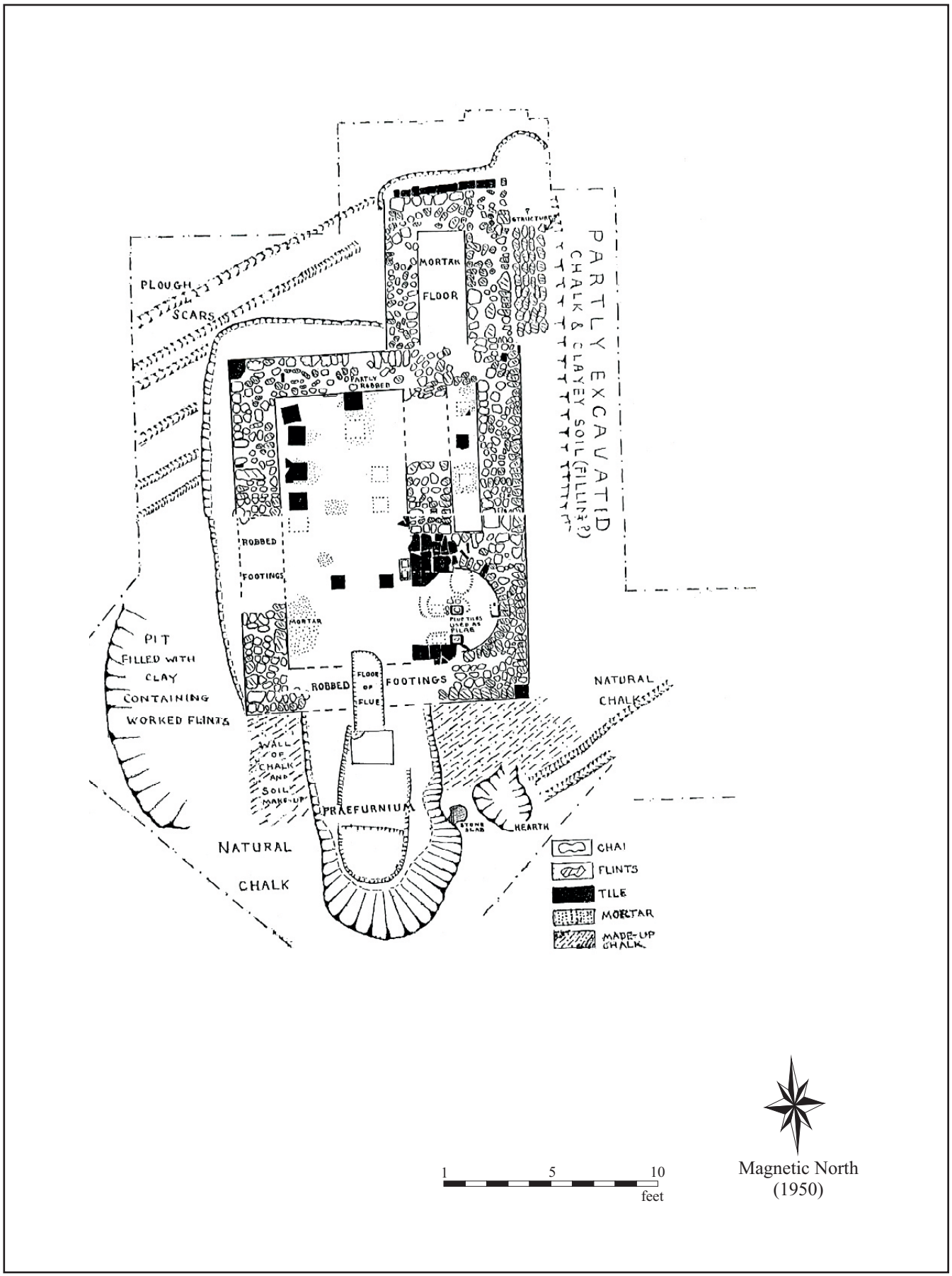

Figure 17: Connah's plan of the Roman bath house (reproduced from the site archive, NEBYM: 1980.107)