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OXFORD ARCHAEOLOGICAL UNIT

THE EXCAVATION OF A LATER BRONZE AGE SITE AT COLDHARBOUR ROAD, GRAVESEND

By Andrew Mudd

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with contributions by Alistair Barclay, Philippa Bradley, Catherine Underwood-Keevill, Mark Robinson and Fiona Roe

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SUMMARY

Two parallel linear ditches, running for more than 100 m, associated with smaller ditches and gullies are interpreted as a droveway with attached settlement. It is dated by associated pottery and by radiocarbon to the later Bronze Age. The site provides the first good evidence for large scale land division of this period in Kent. It is suggested that the settlement was an arable counterpart to specialised transhumant pastoralism on higher and lower ground.

INTRODUCTION

Excavations were undertaken by the Oxford Archaeological Unit during April 1993 at Coldharbour Road, Gravesend, Kent (NGR TQ 638717). The work was carried out on behalf of Safeway Stores plc ahead of the development of the site for a new supermarket and access roundabout. It was conducted in fulfilment of the archaeological conditions upon planning permission (ref. GR/91/697) to a specification set by Lawson-Price Development Consultants (Archaeological Consultant Mr Paul Chadwick) and agreed by the County Archaeological Officer for Kent, Dr John Williams, on behalf of Gravesham Borough Council.

The site was situated south of Gravesend and immediately north of the A2 and covered about 2.8 ha (Figs. 1 & 2). Most of the site lay in the field to the south of Coldharbour Road, with a smaller area (the proposed roundabout) lying to the north. Topographically it straddled a ridge running north-south which was followed by the former Coldharbour Lane. The height of the ridge is about 49 m OD with the land running almost level to the north and dropping gradually in other directions. Within the areas examined archaeologically there was a maximum drop of about 6 m from north-east to south-west over a distance of 130 m. The site lies on Thanet Sand with underlying Upper Chalk at depth.

The site had been archaeologically evaluated in September 1992 by the Kent Archaeological Rescue Unit and two areas of interest had been found. In 'Site A' (Area 2 of the specification), to the south of Coldharbour Road, two trenches revealed a substantial V-profiled ditch, which was thought likely to form part of a large enclosure of prehistoric date. On the opposite side of the road, two trenches in 'Site B' (Area 1 of the specification) revealed a number of possible features and a pit containing early Iron Age pottery, suggesting at least part of an early Iron Age site here ('Northfleet 1992 (Safeways plc): An Archaeological Evaluation of a Site at Coldharbour, near Gravesend, Kent' by Brian Philp - see Appendix 1).

SPECIFICATION

In consideration of these findings, the specification proposed the excavation of further trial trenches to define more precisely the areas of archaeological interest, followed by area stripping on both sites ('Specification and Project Design for Archaeological Investigations at Coldharbour Road, Gravesend, Kent', March 1993,

Lawson-Price, Ref: 1862/0). The approach was to be flexible and staged, with provision for further work contingent upon the results of the previous stages. In 'Site B' (Area 1), provision was to be made for stripping to a maximum of 580 sq m in the 'footprint' of the proposed roundabout. All archaeological features were to be sampled by excavation. In 'Site A' (Area 2) the site was to be further defined by trenching and areas progressively stripped up to a maximum of 5400 sq m. This maximum contingency was in the event not required but, in the light of the subsequent excavations, the watching brief included the provision for stripping an additional triangle of land (of about 500 sq m) on the extreme western side of the site. The rest of the development area was subject to a watching brief during groundworks. The specification did not require exhaustive excavations in Area 2 but sufficient examination to define the site's extent, date and character. This report also follows a specification outlined by the client.

Excavations were conducted according to standard OAU practice ('Oxford Archaeological Unit Field Manual' 1992) using the Single Unique Number recording system. A higher level of context numbers were also assigned to groups of cuts which were interpreted as forming a single feature. Site plans were drawn at 1:50. Pre-excavation plans were added to and amended in the light of the excavation but not substantially altered for this report or the archive. The hachured areas (see Figs. 3 - 5) show the physical appearance of the excavated parts of the site, but do not necessarily record stratigraphic relationships. The site grid was established in relation to contemporary field boundaries and the site 'north' was arbitrary. The National Grid was later superimposed.

SITE DESCRIPTION

AREA 1 (Fig. 3: Document wallet)

Methods

An initial area of *c* 14 x 20 m was stripped in the northern part of the site within the 'footprint' of the proposed roundabout, taking into consideration the location of the possible early Iron Age pit found in the KARU evaluation (Tr.8 F.6). A light scatter of features was found over most of the area and it was decided that the southern part of the site should also be stripped to expose an area of about 700 sq m. Machine-stripping was conducted using a 360 degree tracked excavator equipped with a toothless bucket.

Under 300-400 mm of modern ploughsoil was encountered a more compact mid-brown sandy clay loam with moderate amounts of flinty gravel [2]. This sealed all the features. Upslope (ie towards the south) it was a very thin layer (100 mm), but thickened to a maximum of 250 mm in the NW area. This was interpreted as an ancient ploughsoil but there was little dating evidence from it. The natural geology under this layer consisted of an orange sandy silt ('brickearth') with patches of clay, sand and gravel.

Results

The features revealed consisted of discrete pits, many of them irregular in plan. In view of the site's close proximity to the early Iron Age pit found in the evaluation, close consideration was given to them. However, none could definitely be considered to relate to prehistoric settlement here even though knapped flints were recovered from some of them. A number were certainly tree throw-holes. For more detailed consideration these features can be divided into possible features of archaeological interest, and features of doubtful archaeological interest.

Features of Possible Archaeological Interest

Pit 10 (Fig. 9, Section 2). An ovoid feature 2.15 m long, 0.6 m wide and 0.18 m deep with a flat base. The upper fill [7] consisted largely of burnt flints, 0.30 m thick, which overlay a greyish silty sand [8] and a reddish primary fill. It yielded no finds. The burnt flints suggest that this feature was related to prehistoric occupation, but the absence of any finds or clearly associated features makes further interpretation hazardous.

Posthole 12. A small subcircular feature 0.5 m in diameter and 0.10 m deep with a concave base. It was filled with a reddish brown silt but contained no finds. It was initially considered to be a possible posthole due to its location near Pit 10, but given the lack of associated features this must be considered doubtful.

Pit 18 (Fig. 9, section 6). A circular feature 0.8 m in diameter and 0.24 m deep with moderately sloping sides and a flat base. It had a single fill of greyish brown silt without finds. Its regularity suggested that it was a possible archaeological feature but little more can be said about it.

Pit 19 (Fig. 9, Section 7). A sub-rectangular feature 1.8 m long, 1.15 m wide and 0.32 m deep with a flattish base in long profile. It was considered possibly man-made but yielded no finds.

Pit 24. A sub-oval feature 1.75 m long, 0.85 m wide and 0.30 m deep with quite regular sides and a flattish base. Its reddish brown silty fill yielded a flint flake.

Pit 25 (Fig. 9, Section 9). A circular feature 0.84 m in diameter and 0.30 m deep with a composite V-shaped profile. It was filled with varying sandy and clayey yellowish brown silts [26]-[29]. There were no finds. Its regularity suggested that it was possibly man-made, but beyond that it was difficult to interpret.

Posthole 31. A small feature 0.35 m in diameter and 0.10 m deep. As [12], a possible posthole.

Pit 44. A circular feature 0.39 m in diameter and 0.13 m deep with a bowl-shaped profile. No finds.

Pit 46 (Fig. 9, Section 16). a sub-oval feature 1.43 m long, 1.04 m wide and 0.28 m deep with a rounded base. It was filled with a yellowish brown silt [47] over a thin clayey primary silt [48]. No finds.

Posthole 55. A small feature 0.30 m wide and 0.14 m deep was observed, but it was only partly visible on the NW edge of the site and it was impossible to be sure of its true shape and dimensions. It was considered to be one of the more convincing archaeological features due to the regularity of its sides.

Features of Doubtful Archaeological Interest

Feature 3. Only partly revealed in the excavation area, this feature was 0.62 m wide and 0.21 m deep with an asymmetrical cross-profile and an irregular base. The fills [4] and [5] contained some burnt pebbles and 3 flint flakes. It is interpreted as a probable tree hole containing a fortuitous accumulation of earlier prehistoric artefacts.

Feature 13. An irregular linear feature incompletely revealed. It was 0.6 m wide and 0.18 m deep with an irregular cross-profile. Probably a tree hole.

Feature 15. An irregular linear feature 2.2 m long, 0.4 m wide and reaching a maximum depth of 0.18 m. It had an irregular long profile and sides. It was almost certainly the result of tree root disturbance although it contained a flint flake.

Feature 32. A pear-shaped feature with varying clayey and sandy fills. Almost certainly a tree hole but did yield a flint pick of uncertain date.

Feature 37. A narrow, irregular linear feature with an irregular cross-profile. It was 0.35 m deep and yielded a flint flake. Tree hole.

Feature 39. An irregular oval feature, 0.024 m deep with varying clayey and sandy fills. Tree hole.

Feature 49. An oval feature, 1.12 m long, 0.52 m wide and 0.28 m deep. It had irregular sides and base. Tree hole.

Feature 51. An irregular oval feature. 0.4 m long, 0.34 m wide and 0.19 m deep. Probable tree hole.

Feature 52. An oval feature 0.74 m long, 0.54 m wide and 0.24 m deep with an irregular base. Its reddish-brown silty fill contained 4 flint flakes. Probable tree hole.

Feature 57. An oval feature, irregular in plan and profile. 1.25 m long, 0.84 m wide and 0.38 m deep. A tree hole.

Feature 60. A large irregular feature, 0.49 m deep in the excavated section. Contained a flint flake. Clear tree hole.

Feature 65. An irregular oval feature, 1.0 m long, 0.5 m wide and 0.17 m deep with an irregular base. Probable tree hole.

Feature 67. An irregular feature, 0.36 m deep, with steep sides and a V-shaped base. Almost certainly a tree hole, though contained a flint core, a flake and a sherd of Bronze Age pottery.

Feature 70 An irregular oval 0.75 m long, 0.4 m wide and 0.17 m deep. Probable tree hole containing a flint fragment.

AREA 2 (Figs. 4 & 5: Document wallet)

Methods

In accordance with the specification (Para. 3.2), trial trenches were machine-excavated initially in order to examine the extent of the large ditch located in the evaluation. Three, which were subsequently incorporated into the site of the area excavation, and an additional three trenches to the south (D, E & F; Fig. 2), indicated that the ditch was rectilinear rather than curving as the evaluation had indicated. Three further evaluation trenches were excavated to the north and east (Trenches A, B & C) to define the limits of archaeological activity upslope. These contained no features. In consultation with the client's representative and the County Archaeologist, it was decided to strip an area centred on the rectilinear ditch with a margin on either side to reveal associated features. An area of approximately 70 m x 40 m was stripped revealing a broadly parallel series of smaller ditches and gullies to the west (downslope) but no features at all to the east. An additional 500 sq. m or so downslope was archaeologically stripped during the watching brief in order to examine the western arm of an L-shaped ditch. Following this, a watching brief was conducted during topsoil stripping and groundworks for the development. The conditions of the watching brief were unsuitable for observing subtle features, and the apparent lack of features in the remaining area of the field cannot be considered a reliable record. However, in view of the results of both the OAU and KARU evaluations, it is clear that any occupation would have been very light.

The overburden everywhere consisted of 250-300 mm of modern ploughsoil [200] over a lighter brown sandy subsoil of slightly varying character [201-203]. This was of variable thickness, being very thin or non-existent towards the top of the slope, particularly in Trenches B and C, and deepening to about 200 mm lower down. Few finds other than flints were retrieved from it during stripping.

Results

The main components of the site consisted of the major rectilinear feature (210) running north-south, a parallel ditch (209) 10 m to the west of it, and a group of shorter parallel ditches and gullies (205-208 & 334). Ditch 205 formed an L-shaped feature on the western side. It and Ditch 209 were intruded into by a large ?medieval pit (241). There were few other features of any description although three shallow charcoal-rich pits were located in the NW part of the site within the partial enclosure formed by Ditch 205.

Prehistoric Ditches, Gullies and Pit Alignments

Ditch 210. This major ditch ran north-south below the crest of the hill following a more or less level course at a little over 46 m OD. As a result of the trial trench

evaluation, area excavation and watching brief, it was observed to cross the whole field on an approximately north-south alignment. Its course was not dead straight, but had a slight eastward curve at its southern end. It detail too it appeared to be slightly sinuous (hence the conclusion from two sections dug during the evaluation that it formed a circular enclosure), but insufficient of the ditch was excavated to establish the detail of its course. It was examined by three cross sections and one small longitudinal one. Trench 4 of the KARU evaluation which crossed the ditch was also re-excavated by machine and the sections cleaned. An additional machine-excavated section (Cut 455) was examined under salvage conditions during the watching brief. This was located at the southern edge of the site near Tr. F (Fig. 2).

The width of the ditch varied between 3.4 m (Cut 210) and 1.7 m (Cut 284) and its depth between 1.55 m and 0.70 m in the same cuts (Fig. 10, Sections 15 & 49). Thus there appeared to be a general diminution of the ditch from north to south within the area of excavation. However, Cut 455 towards the southern edge of the site would have been around 1.0 m deep (although neither its true depth nor its width were examinable under the conditions) and so this trend was not continuous across the whole site and does not seem to be explicable in terms of the truncation of upper levels.

Its profile was generally V-shaped, although again Cut 284 was different and showed a wider, flatter base. Everywhere the ditch sides sloped at 40-50°, with the western slope consistently slightly steeper.

The upper fills [211], [224], [226], [227], [352], [357], [297-300] and [456] were a brown silty loam virtually identical to the subsoil. They were between 140 and 480 mm deep and almost certainly represent an accumulation of ploughsoil infilling the top of the feature long after it had gone out of use. This ploughing episode remains undated. In the central area of the sub-site the upper fills occupied a shallow hollow which was substantially wider than the main section of ditch proper. The true width of the cut at the top was therefore somewhat arbitrary.

The middle fills [296],.[353], [354], [358], [360], [212-214], [228], [301-307] were mid to greyish brown sandy or clayey silts between about 320 mm and 600 mm thick. In Cut 284/356 they were sufficiently distinct from the lower silts to suggest a shallow recut of the feature, but elsewhere this interpretation was less convincing. The fills were generally very uniform and it is uncertain whether or not they represent a deliberate backfill of the ditch. The clayey consistency of [212-214] and [228] in Cuts 210 and 225 respectively suggested a deliberate infill, since the immediately surrounding natural geology is quite sandy and the soils did not seem to be locally derived. In addition, the long section in Cut 282 showed a pattern of infilling which produced a rise or shallow 'causeway' in the centre of the ditch. This seems unlikely to have resulted naturally, notwithstanding the inconsistent nature of the ditch depth and profile which might be expected to have caused minor variations in the silting pattern. The weight of the rather limited evidence thus suggests a deliberate infill.

The lower fills were markedly different. In Cuts 210 and 225 thin, dark grey-brown silt layers [215] and [229], about 100 mm thick, suggested a possible turf/soil horizon. This, however, was absent from Cuts 284/356 and 282. In Cut 455 a large quantity of charcoal, burnt clay and domestic debris came from this general horizon (fill [458]), and it seems possible that [215] and [229] might also represent occupation layers of a more exiguous nature. Radiocarbon dates from charred residue on the interior of a sherd and from associated charcoal indicate a date of c 1000 BC for these deposits (see Radiocarbon Dates, Samples 5 and 7, this report).

Under this occupation layer were relatively thick deposits of light grey/reddish grey sands and silts representing the primary fills. In Cut 282 there were also clayey lenses. The thickness of these fills varied between 170 mm (Cut 356) and 400 mm (Cuts 210 and 225). The bottom of the primary silt was everywhere difficult to distinguish from the natural sand. The same applied to the edge-silting of Cut 284 (fills [354] & [355]) where substantial lateral overcutting took place in order to determine the feature's true edge. Very few finds came from these fills. Eight flint flakes were recovered from [230], [232] and [233] (Cut 225).

There was no clear evidence of recutting in any of the sections, although if this had taken the form periodic cleaning out of the ditch it would have been undetectable. The sharp contrast between the middle and lower fills in Cut 284/356 was initially thought to represent a shallow recut in the top of the ditch. However, a consideration of the other sections suggests rather a period of ditch stability following relatively rapid initial silting. This was marked by the deposition of occupation rubbish in Cut 455 and possibly to a lesser extent in Cuts 210 and 225. The ditch was subsequently backfilled but not made level until finally filled by ploughsoil.

There was not the slightest trace of an earthwork in the field prior to stripping and none of the ditch fills suggested evidence of a bank. Tentative evidence came from the northern trench edge section across the ditch (Section no. 34 - not illustrated), where a lighter, rather more clayey subsoil [202] lay upslope of the ditch and might be taken to represent the remains of a ploughed-out earthwork. However, the southern trench edge section was less convincing, and it seems equally possible that any variation in the subsoil between the upper and lower parts of the site is explicable in terms of the incorporation by ploughing of the natural sand and silt into the thinner soils upslope. Given the large quantity of sediment to be moved in the excavation of this feature, it would seem likely that a bank was constructed, albeit perhaps a low and diffuse one. The site layout suggests that, had this taken place, it would have been positioned on the upslope side.

Ditch 209. Ditch 209 ran parallel to 210 and 10 m from it. It was observed to run to the northern edge of the field. In a southerly direction it was not traceable further than Trench E (see Fig. 2) but the conditions of the watching brief made it uncertain whether or not it did continue. It was interrupted in the northern part of the excavation, but the intrusion of Pit 241 to the north of terminal Cut

237 made the gap between it and Cut 412 impossible to determine.

Like Ditch 210, the middle section of this ditch was the most substantial. Cut 240 (Fig. 11, Section 29) was 2.3 m wide and 1 m deep and the size of the ditch diminished substantially towards the south. Cut 399 (Fig. 11, Section 60) was 1.2 m by 0.70 m and Cut 373 (Fig. 11, Section 52) 0.6 m by 0.50 m (with recut 370 only 0.30 m deep.) To the north Cuts 288 (Fig. 11, Section 42), 408 and 412 were between 1.3 and 1.4 m wide and 0.70-0.80 m deep. The terminal (Cut 237) appeared to be very shallow (0.30 m) but it is uncertain whether the longitudinal profile here revealed its true depth.

The cross profile was normally symmetrical and composite, with a relatively shallow upper slope (20-40°) and a steep lower slope (60-70°) resulting in a narrow V-shaped base. Cut 373 showed a simpler steep-sided, round-based profile, and recut 370 similar but asymmetrical. This section showed the clearest evidence of recutting, with the recut 370 located slightly off the line of the earlier cut. However, it is possible that the recutting can be traced throughout the length of the ditch, with a shallower and wider recut in the top of the earlier ditch resulting in the characteristic composite profile.

The upper and lower fills of this feature tended to be quite distinctive one from the other. Generally, the upper fill was a mid-brown sandy silt ([238], [258], [259], [411], [401], [371]), but in Cut 240 this was a dark brown sticky clay/silt whose origin was obscure [267-270]. The primary fills everywhere were light yellowish grey/grey-brown sandy silt, with the exception of Cut 373 (Fill [375]) which was clayey.

In addition to the possible two phases of ditch, there appeared to be an earlier, shallower gully on a slightly different alignment. Cuts 402 and 274 were the only sections examinable, and elsewhere this gully seems to have been absent or truncated vertically or laterally. It was between 0.4 m and 0.8 m wide and 0.12-0.30 m deep and round-based.

Feature 255 (Fig. 12, Section 28). This was part of a ditch, or perhaps an elongated pit, within the large 'chalk pit' 241 and largely truncated by it, both vertically and laterally, so that only part of the base remained. Its visible remains were 1 m wide with steep sides and a flat base. It would have been about 0.95 m deep. While close to the line of Ditch 209, its alignment (SSW-NNE) was at a slight variance and it might not have been associated with this ditch.

Gully 208 (Fig. 12, Section 54). This was a gully running parallel to Ditch 210 and 3-4 m from it for a distance of at least 34 m. Its northern end, near the edge of the excavation area, was truncated by a recent pit. It is not known whether or for how far it continued beyond this, and the negative evidence from the watching brief is not considered reliable. It had a southern terminal and its alignment was continued by a very shallow (0.02 - 0.03 m) depression. Further south features 398 and 396 were possible gullies (not excavated) on the same alignment.

The gully was examined with four sections - Cuts 361, 364, 376 and 404. It was consistently about 0.8 m wide and varied between 0.28 and 0.50 m deep with a bowl-shaped cross-profile. It generally had a single brown or greyish brown sandy silt fill, except Cut 404 which had a lower yellow-brown primary silting. Only Cut 361 yielded finds. These comprised 2 sherds of possible late Neolithic pottery, 3 sherds of Beaker and 9 flint flakes.

Ditch 205. This was another ditch generally following the north-south alignment of the others and located 3-4 m west of 209. However, after running south from the edge of the excavation for 32 m it turned sharply west at a little over a right angle (100°) and ran for 21 m before terminating in a series of pits. It is not clear whether, or for how far, it extended northwards beyond the excavation area.

It was generally 0.8-1.2 m wide and 0.60-0.75 m deep but considerably shallower towards the western terminal. Clear recuts in one of the sections (Cuts 311, 317, and 319) added to the variability of dimensions and fills and for this reason the separate cuts will be dealt with individually.

Cut 317 (Early Phase; Fig. 11, Section 38). This was a comparatively broad, shallow ditch, 1.1 m wide and 0.40 m deep. It was seen in relationship with Cuts 311 and 319 in the central part of the N-S ditch arm where it appeared to be the earliest. Its profile was only visible between the termini of 311 and 319 since it had largely been removed elsewhere. It had a bowl-shaped profile with sides sloping at 50-60° and had a light brown sandy fill. It was on a slightly different alignment to the later cuts and, had it continued southwards in this direction, it would have terminated about a metre away.

Cut 429 (Early Phase). This was a very shallow section of ditch close to the western terminal. It was 0.88 m wide and 0.17 m deep with a mid brown fill, and yielded a large quantity of Bronze Age pottery. It was probably truncated to the west by Cut 433 which, though on the same alignment was clearly a separate feature. However, there was insufficient depth to 429 to be sure of any relationships. It was interpreted as probably belonging, with 317, to an early phase of shallow ditch.

Cut 311 (Middle Phase; Fig. 11, Section 38). This was a deep ditch terminal cutting 317. It had an unclear relationship with Cut 319 since there was very little overlap between them While the excavator considered that, on balance, it was likely to have been cut by 319, this relationship cannot be considered to be reliable. It was 1.05 m wide and 0.73 m deep with a composite cross profile. The upper slope was about 50° and the lower slope 65° on the eastern side and 80° on the western.

The upper fills ([312], [313] and [314]) were generally light brown sandy silts. The middle one of these ([313]) contained a deposit of flints, many burnt (including large amounts of worked flint), associated with burnt clay and charcoal. A small sample was taken for a radiocarbon determination

(Sample 2). Four Bronze Age potsherds were also recovered. The lower fills were a dark silty sand ([315]), 0.20 m thick, containing flints and charcoal (Radiocarbon Sample 4), over a very thin (0.07 m) light grey primary silting (316).

Cut 366. To the south of 311, this Cut probably represents a continuation of the same ditch. It was 1 m wide and 0.75 m deep with steep (60°) sides and a narrow V-shaped base. Its upper fills comprised a light grey-brown silty sand over a browner silt, which yielded relatively large amounts of flint and Bronze Age pottery. The primary silting was a yellowish grey silt 0.32 m deep.

Cut 327. This Cut was similar to 366. It was 1.2 m wide and 900 m deep with a V-shaped, narrow-based profile. The western side was slightly steeper than the eastern (65° and 50°). The sequence and nature of the fills was identical to those in Cut 366 which lay immediately to the north. The upper fills contained large quantities of flint.

Cut 260/275 (Fig. 11, Section 31). Interpreted as a single cut, this was located half way along the western arm of the ditch. It was 1.5-1.8 m wide and 0.75 m deep, and had a symmetrical shallow V-shaped profile with a rounded base. The sequence of fills showed a rather yellowish upper silt overlying a browner lower fill, which in turn overlay a thin (80-150 mm) greyish yellow primary fill.

Cut 319. This possibly represents the latest phase of N-S ditch. It ran northwards from a terminal close to its intersection with 311. It was 0.8 m wide and 0.53 m deep with a symmetrical composite profile. The upper slope was about 45° and the lower one 60°. The base was rounded. It was filled with a mid-brown loamy sand over a light grey primary silt 0.15 m thick.

Cut 247. This was the earlier phase of ditch in the section located north of the large pit 241, and here formed a deep terminal. It was about 1.10 m wide (although largely truncated by 245 to the east) and 0.70 m deep. Its surviving western side was steep at 70°. It had a dark grey-brown upper fill over a light grey primary fill. A fragment of possible quernstone came from the upper fill [248].

Cut 245. This was very slightly shallower than 247 and about the same width. Its cross profile was composite and slightly asymmetrical, with a steeper western side (50° upper and 70° lower) than eastern (45° upper and 50° lower). It had a single light brown fill.

Pits 433/436 & 417/437 (Fig. 11, Section 70). These two elongated sub-rectangular pits (or short ditch sections) were located at the western end of Ditch 205. They can be considered as integral to this ditch and, indeed, were thought to be part of

the ditch prior to excavation. The excavated sections were therefore not positioned to determine the relationship between the two pits although there was clearly some degree of overlap.

433/436 (probably, but not conclusively the same feature) was 2.5 m long and 1.3 m wide, and 417/437 was 2.8 m long and 1.5 m wide. While the centres of these features were not examined, the excavated sections showed a maximum depth of 0.44 m for 433/436, and 0.23 m for 417/437.

Pit 435 and Postholes 434, 438 & 441. These features formed an alignment on the northern side of the terminal of Ditch 205. The postholes were all small and of a similar size, being 0.25-0.30 m in diameter and 0.09-0.14 m deep. Including an unexcavated posthole to the west, they were between 1.75 and 2.50 m apart. Pit 435 was 0.80 m in diameter and 0.14 m deep, and less than 1 m from 434. While there was some overlap between these features and the fills of the adjacent pits, no stratigraphic relationships were visible.

Ditch 207 (Fig. 12, Section 56). This was a short length of ditch following the southerly alignment of 205, but separated from it by about 12 m. It was 9.5 m long, 1.2-1.6 m wide and 0.65 m deep, and was examined by two cuts.

Cut 324 through the middle of the feature showed a steep-sided profile (45-50°) with a narrow, flattish base. Cut 385, at the northern terminal, was similar, although the end of the ditch had a shallower slope (30-35°).

Cut 390 was a possible earlier gully on this alignment which extended a further 2.4 m northwards. It was 0.6 m wide, and just 0.02 m deep and would have been removed by 207 further south.

Pit 206. A large elongated pit close to the southern terminal of 207, but with its alignment offset slightly to the east. It was 4 m long, 1.8 m wide and 0.50 m deep with a bowl-shaped profile. A section was dug at each terminal (Cuts 348 and 331).

Gully 334. A small gully aligned on 206 and running south off site. It was at least 5 m long and 0.84 m wide. A single section was dug to examine the terminal which showed a shallow, bowl-shaped profile 0.22 m deep.

Gully 382. This was a shallow linear feature running for 11 m parallel to 207 and in approximate alignment with 208. It was very insubstantial and difficult to define precisely, and it is uncertain whether or not it represented the surviving portion of a rather longer feature. Its width was about 0.3 m and its depth around 0.10 m. Its base was very uneven, leading to the conclusion that it had either been disturbed by roots, or perhaps that it was itself the line of an ancient a hedgerow. It yielded no finds and it is not certain that it is prehistoric.

Gully 378. This was a feature running NE-SW at an angle to the main ditch alignment. It was 0.5 m wide and very shallow (0.06 m) and it is uncertain

whether its apparent respect for Gully 208 was real, or a result of the truncation of the feature further north. It ran for 4 m and was cut by Pit 241. It yielded 8 flint flakes.

Gully 460. This shallow gully, also running NE-SW and on an approximate alignment with 378, was located in the extreme western part of the site. It comprised three or perhaps four sections of gully which, because of their extreme shallowness (0.10-0.18 m), are considered likely to have been originally continuous. The main length was examined with three sections (Cuts 422, 431 and 439). It yielded a sherd of pottery and some knapped and burnt flint, strongly suggesting that the feature was prehistoric. A further section was dug near the edge of the excavation area (Cut 453) but it was uncertain whether the feature here was the same gully.

Prehistoric and Undated Pits

Pit 242. This was a shallow, irregular sub-rectangular pit located on the eastern side of Ditch 209 (Cut 240) and cut by it. It was 2.80 m long (N-S) by 2.5 m wide and 0.20 m deep with moderately steep sides and a flattish base. It was filled with a grey-brown sandy silt containing large quantities of flint pebbles and broken nodules [266], concentrated particularly towards the base of the layer. It also contained some knapped flint which included 2 scrapers, a retouched flake and a fabricator.

The feature was probably a flint-working hollow or store. An alternative suggestion would see it as part of a cobbled surface, albeit somewhat disturbed, located between Ditches 210 and 209, which was fortuitously preserved by sinkage below the later ploughed horizon. However, there was no apparent reason for subsidence in this particular area, and there was no trace of cobbling elsewhere on the site, so this seems a less likely explanation.

Pit 322 (Fig. 12, Section 37). A shallow, sub-circular feature located on the western side of the site within the partial enclosure formed by Ditch 205. It was 1.70 m in diameter and 0.20 m deep, and filled with a mid-brown clay loam. It contained knapped flint, a sherd of pottery and 2 fragments of quernstone. Although it contained relatively large amounts of charcoal, there was no in situ burning and no indication that the feature was used as a hearth.

Pit 424. A shallow, circular feature, 0.75 m in diameter and 0.08 m deep, located about 6 m from Pit 322. The upper fill [425] consisted of about 50% charcoal within a brown silt matrix. Perhaps the remains of a hearth.

Pit 427. A small, shallow, circular feature, 0.4 m in diameter and 0.04 m deep. The fill [428] consisted of about 50% charcoal with occasional smears of burnt clay. Perhaps the remains of a hearth.

Pit 383. A possible pit located in an area of tree roots at the southern edge of the

site. It was about 1.50 m long, 0.60 m wide and 0.060 m deep, and aligned approximately on Ditch 207.

Pit 420. A roughly oval feature located in the extreme western side of the site. It was 1.40 m by 1.00 m and 0.18 m deep with a flattish, uneven base. Of unknown date and function (possibly a tree-root hole), it yielded a single flint flake.

There were also two other probable tree-root holes excavated, 309 and 392. The former yielded 2 potsherds from the surface.

Medieval and Probably Medieval Features

There were a small number later features (interpreted as being of medieval and/or later date) which appeared to be associated with chalk mining.

'Chalk Pits'. Feature 241 was a large subcircular pit, 12-13 m in diameter, in the northern part of the site cutting Ditches 205 and 209. A trench on the south-eastern side of it was initially excavated by machine and then dug deeper and cleaned by hand. The sides were found to be irregularly stepped to a depth of 1.60 m in the western corner of the trench (Fig. 12, Section 28). However, this was not the centre of the feature and it was highly likely that the feature continued deeper towards the north-west. It was filled with a series of highly friable sandy loams [250-253], the upper one of which, in particular, contained a high proportion of chalk lumps. Six sherds of medieval pottery came from this fill.

It was considered probable that the feature was a marl pit, tapping deposits of chalk at depth. Alternatively, it might have been a well, but in the absence of occupation here later than the 1st/2nd millennium BC, this is considered less likely. Chalk lumps and flecks were present in the subsoil [201] in this area of the site, and were also present in shallow gullies (such as 243 and 337) which were presumably associated with the mining activity in some way.

Two other pits with chalky fills were discovered. Pit 406 at the northern edge of the site was of undetermined size, and 416, observed at NGR TQ 63857164 during the watching brief (see Fig. 2), was about 3.50 m in diameter at 0.50-1.00 m below the surface of the natural geology. None of these pits were bottomed and it can be noted that they must have been of considerable depth. A depth of about 3 m of sand was seen removed from the top of the hill during groundworks for construction without the chalk being reached. The Geological Survey (Sheet 271) gives the general depth of Thanet Sand as 18-24 m.

Other Features

Feature 342 was a short length of shallow, curving gully cut into the top of Ditch 209. It apparently terminated in a small subcircular feature 347. The gully was

0.20 m deep and the subcircular feature 0.13 m deep. Neither contained any finds. They do not seem to bear any logical relationship to the prehistoric settlement here and are considered more likely to be later. However, the fills did not contain any chalk and they are therefore not obviously associated with the 'chalk pits'.

FINDS

CHARRED PLANT REMAINS by Mark Robinson

Seven samples were investigated for charred plant remains. Samples 2 and 4 were lumps of soil containing charcoal, the others comprised floats from soil samples of unspecified volume which had been floated onto a 0.5 mm mesh. Charcoal fragments were identified where possible to a maximum of ten from each sample. The results are given in Table 5. In addition, an unidentified seed was noted from Sample 3, context 425. The range of charcoal identified is unexceptional, but the absence of charred crop remains is possibly of significance.

FIRED CLAY by Alistair Barclay

A small quantity of fired clay (175 g), consisting of amorphous lumps, was recorded from ditch contexts 246, 296, 313 and 325 and from context 251 in one of the 'chalk pits'. One fragment (38 g) from context 296 could have formed part of an object. In addition a single piece of ?briquetage was recorded as unstratified.

PREHISTORIC POTTERY by Alistair Barclay

Introduction

The excavated assemblage consists of 335 sherds (2563 g) of prehistoric pottery. With the exception of eight late Neolithic/Beaker sherds the pottery assemblage can be assigned to a later Bronze Age-Early Iron Age date range. The assemblage is characterised by a high percentage of body sherds with relatively few featured sherds and the average sherd weight is less than 8 g.

Method

The material was examined using a (x20/40) binocular microscope and fabrics were characterised by inclusion type, size and frequency. The material was quantified by sherd count and weight and is summarised in Table 6.

Inclusions

F = flint (white, grey and/or calcined)
G = grog (crushed fired clay or pottery)
Q = quartz or quartzite (white)
S = sand (white, black or colourless)
Sh = shell
V = voids (mostly leached shell)

Fabrics

Late Neolithic / Beaker

F/LN	Hard fabric with sparse angular flint (<4 mm)
GFS/BKR	Soft fabric, with common sub-round grog (<3 mm), rare angular (<3 mm) flint and quartz sand
GSV/BKR	Soft fabric with common sub-round grog (<3 mm), quartz sand and rare voids.

Bronze Age

GF/BA	Soft fabric with common sub-round grog and rare calcined flint (<4 mm)
F1/BA	Hard fabric with common angular flint (<2 mm)
F2/BA	Hard fabric with common angular flint (<4 mm)
F3/BA	Hard fabric with common angular flint (<8 mm)
FGV(Sh)/BA	Soft fabric with common angular flint (<4 mm), sparse sub-angular grog (<4 mm) and rare lenticular voids (?shell).
FV(Sh)/BA	Soft fabric with common angular flint (<4 mm) and common lenticular voids (?shell, <4 mm)
QF/BA	Hard fabric with common angular ?quartz(ite) and flint (<2 mm)
FS/ind	Hard fabric with common ill-sorted angular flint (<8 mm) and coarse-medium sub-round quartz sand

Catalogue of Illustrated Sherds

1 362 Beaker. Impressed paired finger-nail. Fabric GFS/BKR. Colour: *ext*: reddish brown; *core*: dark grey; *int*: dark grey. Condition: fair.

2 302 Indeterminate. Comb impressions. Fabric F1/BA. Colour:*ext*: dark grey; *core*: dark grey; *int*: dark grey. Condition: fair.

3 313 Indeterminate. Impressed combed lines. Fabric F1/BA. Colour: *ext*: dark grey; *core*: dark grey; *int*: dark grey. Condition: worn.

4 367 Bronze Age. Base from a miniature vessel. Fabric GF/BA. Colour: *ext*: brown; *core*: dark grey; *int*: dark grey. Condition: fair-worn.

5 367 Indeterminate. Impressed combed lines. Fabric F1/BA. Colour: *ext*: dark brownish grey; *core*: dark grey; *int*: dark grey. Condition fair.

6 367 Deverel-Rimbury, Bucket Urn. Finger-tip impressions below the rim. Fabric F2/BA. Colour: *ext*: pale orange brown; *core*: dark grey; *int*: pale orange brown. Condition: fair.

7 458 Deverel-Rimbury, Bucket Urn. Applied cordon with finger-tip decoration. Fabric FGV(Sh)/LBA. Colour: *ext* orange-brown; *core*: grey; *int*: brown. Condition: fair.

8 458 Later Bronze Age, hooked rim jar with slashed rim. Fabric FGV(Sh)/LBA. Colour: *ext*: brown; *core*: grey; *int* dark grey. Burnt residues on the interior surface. Condition: fair.

9 458 ?Deverel-Rimbury. Rusticated, all-over finger-tip impressions. Fabric FGV(Sh)/LBA. Colour: *ext*: reddish Orange; *core*: grey; *int*: reddish grey. Condition fair.

10 283 LBA/EIA. Finger-tip impression. Fabric : QF/BA.

Late Neolithic and Beaker

Eight sherds can be assigned to this period by the character of their fabrics. Two sherds in fabric F/LN are different from the flint-tempered material assigned to the later Bronze Age and are tentatively dated to the late Neolithic. The remaining six sherds, in fabrics GFS, GSV/BKR, can be assigned to the Beaker ceramic tradition and include one sherd of Beaker domestic ware with paired finger-nail decoration (Fig 13, 1).

Later Bronze Age Form, Fabric and Decoration

The remaining 327 sherds can be assigned to the later Bronze Age. Twenty-two sherds (49 g) are from fine walled (4-6 mm) vessels that have been manufactured from fabric F1/BA. Nine sherds from a minimum of four vessels (contexts 302, 313 & 367) carry simple geometric decoration consisting of bands, squares and triangles composed of impressed comb and combed lines. A base angle (not illustrated; context 265) and the curvature of the body sherds of Fig 13, 5 indicate that the sherds belong to globular vessels. The form of Fig 13, 5 is unusual and it is difficult to parallel within either Deverel-Rimbury or post Deverel-Rimbury (decorated ware) assemblages. Both the fabric and decoration are consistent with globular urns although the combed decoration is rather fine.

A total of 303 sherds (2484 g) are from coarse ware vessels, Bucket Urns and,or jars, manufactured from fabrics F2-3, FGV(Sh) and FV(Sh). This material is again very fragmentary but it includes at least three rims (Fig 13, 6 and contexts 430, 458), a sherd with an applied cordon (Fig 13, 7) and base sherds from at least four vessels (context 246, 318, 430 and 458). The rim forms are simple either upright and flattened (Fig 13, 6) or slightly expanded (context 430). Decoration consists of finger-tip impressions and was recorded either on (context 458) or below the rim (Fig 13, 6), on an applied cordon (Fig 13, 7) and on the body (Fig 13, 9). The cordoned sherds of Fig 13, 7 are probably from a bucket urn. Eight sherds, possibly from two vessels, from context 458 had been decorated with all-over finger tip impressions. This type of rustication is found on Deverel-Rimbury Bucket Urns, in particular, those belonging to the Ardleigh substyle.

The fragmentary and incomplete remains of a hooked rim jar (Fig 14, 8) came from context 458. Burnt residues are present on some of the sherds from this vessel. Similar vessels have been recorded from the North Ring, Mucking (Barrett and Bond in Bond 1988, 29) and are a common form in post-Deverel Rimbury assemblages from the Kennet Valley and Upper Thames region (Bradley and Ellison 1975, 103; Bradley 1983-5, 27).

Fig 14, 10 represents part of a fine, slack-shouldered jar with a slightly flaring rim. The rim form of this vessel cannot be easily paralleled amongst the published material from Kent, although the shoulder form, fabric and finger-tip decoration would be consistent with a late Bronze Age/early Iron Age date.

Discussion

With the exception of a small quantity of late Neolithic/Beaker material the majority of the ceramic assemblage can be placed within the later Bronze Age. Although this material is very fragmentary, both the fabrics and the few feature sherds are consistent with the Deverel-Rimbury and post Deverel-Rimbury ceramic traditions. Very little Deverel-Rimbury pottery has been published from north Kent, although both Bucket and Globular Urns have been recorded (Philp 1973). It is more common in the middle Thames Valley although Barrett (1973, 121) has previously noted the rarity of Globular Urns within the known assemblages.

The chronological developments of the Deverel-Rimbury ceramic tradition around the Thames estuary have been briefly discussed by Barrett and Bond (Bond 1988, 36-7) and if their arguments are correct then we would expect the Deverel-Rimbury material from Coldharbour Road to date before 1000 cal BC. Ditch 210 contained fragments of Bucket Urn and hooked rim jar in direct association; furthermore the vessels were manufactured from similar fabrics. These fabrics were different from the bulk of the Deverel-Rimbury material (Table 6). The difference in fabric need not be chronological although it is tempting to see this material as 'transitional' between the Deverel-Rimbury and Plain Ware traditions of the later Bronze Age. Bradley (1983-5, 28) has put forward a similar argument

for material from Pingewood, Berks.

MEDIEVAL POTTERY by Catherine Underwood Keevil

Five sherds were recovered, ranging in date from the eleventh to thirteenth centuries. Three sherds from layer 250, the upper fill of 'chalk pit' 241, are of Canterbury Saxo-Norman shelly ware, Canterbury sand- and shell- tempered ware early medieval flinty ware. One sherd from layer 236 of the same pit is of Aardenburg type ware. The final, unstratified, sherd is of early medieval flinty ware.

STRUCK FLINT by Philippa Bradley

Introduction

A total of 756 pieces of struck flint and 35 pieces of burnt unworked flint was recovered. The material came from a series of field boundary ditches, gullies, pits and tree-throw holes. A small quantity of material was redeposited in the 'chalk pits'. The composition of the assemblage is summarised in Table 7, selected artefacts are illustrated in figures 15 and 16 and described in the catalogue.

Raw materials

The majority of the flint is dark brown to grey in colour, there is also a small amount of Bull Head flint (Shepherd 1972). The flint is good quality and flakes well. Cherty and crystalline inclusions and some thermal fractures were noted. The cortex is frequently very thin, white or sandy brown in colour. Cortication is generally very light although pieces occasionally exhibit heavy cortication. Sand glossing was noted on some of the flint. The flint would probably have been available locally.

Technology

The majority of the assemblage is the product of a simple unsystematic technology. Hard hammers were used almost exclusively, resulting in frequent hinge fractures and other mishits. Flakes are often fairly large, reflecting the availability of the raw material, butts tend to be thick. Occasionally thermal flakes were used as blanks for retouched pieces, for example, a retouched flake from context 224.

Core preparation is almost entirely absent, flakes often have cortical butts, indicating that little preparation had taken place. Cores were discarded when no further flakes could be removed, usually because of hinge fractures, for example, Fig. 15, 1. Only three core rejuvenation flakes were recovered indicating that there

was little concern with rejuvenating cores. Cores tend to be irregularly worked and do not seem to have been systematically reduced, tested nodules and multi-platform flake cores dominate the assemblage (see Table 8 for core typology). The average core weight is 144 g. One or two tested nodules weighing up to 2.5 kg. from gully 460 had only a few flakes removed prior to their discard. A Bronze Age date for the majority of the assemblage would not be out of place.

Occasional blades and blade-like flakes from tree-throw holes in Area 1 and layers within ditches 205 and 210 and some of the retouched forms may indicate an element of earlier flintwork. Some of the blades and blade-like flakes were soft-hammer struck, perhaps indicating deliberate production rather than chance removals. One or two cores exhibited two phases of flaking (e.g. Fig. 15, 2), these pieces tended to be heavily corticated, suggesting the reuse of discarded cores in the Bronze Age. This reused material may be Neolithic or early Bronze Age in date.

Refitting flakes and irregular waste were recovered from context 54 (two refitting flakes), context 320 (three refitting cortical flakes), context 367 (two refitting flakes), and context 296 (three refitting pieces of irregular waste). No long sequences could be established. The refitting pieces of irregular waste from context 296 reinforce the unsystematic method of flaking, the original nodule had simply been smashed in the hope of producing usable pieces.

Burnt unworked flint appears to have had a restricted distribution; occurring sporadically in ditch 205, a little more frequently in ditch 210 and a few pieces were recovered from gullies 378 and 460. The 'chalk pits' contained quantities of redeposited burnt unworked flint. Heavily burnt and calcined flint such as the material from Coldharbour Road is common on Bronze Age sites.

Retouched Forms (Table 9)

A pick from context 33 (Fig. 15, 3) was initially thought to be of Mesolithic date. However, it is made from the same flint and is in the same condition as the rest of the material from the site and may be Bronze Age in date, similar examples have been found at Grimes Graves (Saville 1981, fig. 32, F78; fig. 36, F90). Rather nondescript scrapers are the most frequent retouched form (Fig. 15, 4-5). The blanks for scrapers are often fairly thick and retain much cortex. Retouch is usually perfunctory, end scrapers/end and side scrapers predominate. One or two scrapers from contexts 283, (Fig. 15, 4) and 313 were much more finely retouched than other examples in the assemblage. Although their dorsal faces were often almost completely cortical, these pieces may be earlier in date. A broken flaked axe came from context 283, a form which would be better placed in a Neolithic or Early Bronze Age context. A burnt serrated flake from context 328 may also be earlier in date. It is possible that some redeposition has occurred within these contexts. Retouched flakes are well represented in the assemblage and are often very roughly retouched. The other retouched forms include piercers (Fig. 16, 6), backed knives (Fig. 16, 7), denticulates and a fabricator. These forms would not

be out of place in a Bronze Age assemblage.

Discussion

The assemblage contained few retouched pieces, the presence of many cores, irregular waste and wholly cortical flakes would suggest that the material was being worked on site. The raw material would have been available locally, Upper Chalk is present within 1 km of the site.

The majority of the assemblage from Coldharbour Road is of Bronze Age date. A small quantity of Neolithic or Early Bronze Age material has been identified. This accords well with the ceramic evidence, Middle to Late Bronze Age pottery and some Beaker material was recovered from the boundary ditches (205, 210 and 208).

A decline in craftsmanship in Bronze Age flint industries is well established (Ford et al. 1984). It has been demonstrated that flakes become broader and squatter through time (Pitts 1978) and that knapping was less controlled. The reduction in numbers of different retouched types has also been noted elsewhere, for example, at Knighton Heath, Dorset (Healy 1981) and Micheldever Wood, Hampshire (Fasham and Ross 1978). Middle to Late Bronze Age assemblages reflect the need for expedient artefacts, thus retouching is often minimal and cortex is frequently left on the artefact.

Locally the assemblage from Coldharbour Road can be compared with the Bronze Age material from the North Ring, Mucking (Healey 1988), some of the material from East Northdown, Margate (Smith 1988) and the Late Bronze Age assemblage from Lofts Farm, Essex (Holgate 1988).

Catalogue of Illustrated Pieces

Catalogue entries are ordered as follows: catalogue number, context number, artefact type, brief description, condition, small find number (if any).

1. 283. Multi-platform flake core, rejected because of hinge fractures. Slight sand glossing.

2. 270. Reworked nodule. Heavily corticated.

3. 33. Pick, tip broken. Slight sand glossing. Sf 1.

4. 313. End scraper, steep, neat retouch at distal end. Slight sand glossing. Scraping angle 70-80°. Sf 16.

5. 270. End scraper on a core fragment. Slight sand glossing.

6. 283. Piercer, on a flake from a heavily corticated nodule.

7. 367. Backed knife, on a sub-circular blank. Minimal retouch around circumference of flake. Fresh condition.

WORKED STONE by Fiona Roe

There are two fragments of saddle quern, both from context 323, the fill of pit 322. One (sf 9) has a slightly concave worked surface, the other (sf 10) a flat one). Both are of the same rock and may have come from the same quern. The rock is dark, purplish-brown fairly fine-grained sandstone, which seems, on macroscopic examination, to be a Tertiary iron-rich sandstone, probably obtained locally. A third fragment of the same rock, from context 248, lacks any modified surface but may also have come from a quern. There is a further unstratified quern fragment (sf 22), with one worked surface which has been slightly burnt. This is of a banded, light-coloured stone that has the appearance of an impure flint which could have been obtained locally from the chalk.

RADIOCARBON DATES by Andrew Mudd

Four samples were selected for radiocarbon dating. One was a conventionally sized sample (Godwin Laboratory, Cambridge) and three were small samples for accelerator dating (Oxford Research Laboratory).

Sample No. 2 (OxA-4717)
Context 313, Cut 311, Ditch 205. A small sample from a patch of hazel/alder charcoal within secondary ditch fill. Associated with burnt and struck flints and some pottery representing a discard of occupation material. Dated to 2895+/-70 BP, giving a calibrated two sigma date range of 1267-898 BC (one sigma; 1136-983 BC).

Sample No. 4 (OxA-4718)
Context 315, Cut 311, Ditch 205. A small sample of charcoal from a lower fill of the ditch. Associated with burnt and struck flints. Dated to 3085+/-75 BP, giving a calibrated two sigma date range of 1511-1124 BC (one sigma; 1422-1258 BC).

Sample No. 5 (Q-3255)
Context 458, Cut 455, Ditch 210. A conventional sample from large lumps of charcoal within secondary ditch fill. Associated with large quantities of pottery representing a discard of occupation material. Dated to 2835+/-45 BP giving a calibrated two sigma date range of 1135-900 BC (one sigma 1050-925 BC).

Sample No. 7 (OxA-4719)
Context 458, Cut 455, Ditch 210. A small sample from charred residue on the

interior of a sherd from a late Bronze Age hook rim jar (Fig 16, 8). Dated to 2880+/-65 BP, giving a calibrated two sigma date range of 1225-898 BC (one sigma; 1126-974 BC).

There is no need to doubt the validity of any of these results. The dates from samples 2, 5 and 7 are very similar and suggest that the most intense occupation was around 1000 BC. Sample 4 is stratigraphically earlier than Sample 5. It is thought to come from a feature of the middle, rather than the earliest, phase of occupation.

INTERPRETATION AND DISCUSSION

AREA 1

This area was of little archaeological interest. Most of the features were found to be tree holes or perhaps other natural disturbances. The remaining features were considered to be possibly man-made principally because of their regularity, but they formed no clear pattern and contained very few artefacts and must be regarded as dubious. Some knapped flints and a sherd of Bronze Age pottery were recovered from a few of these features, but the occasional artefact did not appear to be a guide as to whether or not features were man-made. It seems that artefacts were on occasion fortuitously incorporated into tree throw-holes during land clearance. The possible man-made features might also be related to the grubbing out of tree-roots. There is little material to aid the dating of this putative activity. The flintwork was rather undiagnostic (see P. Bradley, this report), but would not in general be inconsistent with a Middle Bronze Age date. There may have also have been earlier activity.

The excavation was unable to put into context the ?Early Iron Age pottery assemblage from Pit 6, Trench 8 of the KARU evaluation. All that can be said is that the feature was either isolated, or related to a site lying exclusively to the NW of Area 1.

AREA 2

Nature of the site

The main archaeological components of the site comprised mutually aligned ditches and gullies, suggesting that the chief function of the site was connected with land division and demarcation. Ditches 210 and 209, each running for well in excess of 100 m and almost certainly beyond the limits of the development site see Fig. 2), can readily be seen as a ditched trackway 10 m wide. Ditch 205 was an associated partial enclosure to the west with access to it provided by a break in Ditch 209 (terminal Cut 237). Its N-S arm included at least three recut ditch terminals (Cuts 247, 311 and 319) indicating a series of entrances on this side.

Within the area of excavation, there were few finds from the main ditch (210). Relatively large quantities of flintwork and pottery from Ditch 205 and adjacent features strongly suggest occupation, probably of a domestic nature, in this area. This was probably focused on the partial enclosure formed by 205. However, there was no evidence of domestic structures and it must be assumed that any structurally related features were very insubstantial and had been ploughed out. The material recovered from the ditches clearly related to rubbish disposal rather than in situ use. There were few other features in this area. A short alignment

of a pit and four postholes near the western terminal of 205 were probably boundary-related rather than domestic. Two shallow charcoal-filled hollows (424 and 427) are considered to be possibly the remains of hearths. They yielded no diagnostic finds. Another possibly domestic feature, Pit 322, yielded two fragments of quern as well as a small quantity of flint. It should be noted that the large quantity of pottery recovered from the main ditch on the southern side of the field during the watching brief (Cut 455, Fill 458), might well indicate a second focus of settlement about 80 m away.

Phasing (Figs. 7 & 8)

The general orientation and alignments of the ditches suggest, with one exception, a single phase of site organisation. The pottery and flintwork, supported by four radiocarbon dates, indicate that the major episode of occupation occurred in the later Bronze Age. Three of the dates are very close and suggest a date within a century of 1000 BC for the main occupation. (Samples 2, 5 & 6: see Radiocarbon Dates). However, a small amount of earlier pottery might suggest an origin to this settlement in the later third millennium BC. The exception mentioned to this arrangement is Gully 460, and its probable continuation as 378, whose NE-SW alignment suggests that they belong to a different, probably later, phase.

The earlier pottery consists of 5 sherds of domestic Beaker and 2 perhaps belonging to the late Neolithic period. It is notable that 5 of these early sherds came from Gully 208 (Cut 361) which yielded no certainly later material, and it is therefore possible that this was the earliest feature on the site. It can be suggested that an early version of the L-shaped ditch 205 was contemporaneous. The coincidence of the southern terminal of 208 with the corner of 205 11 m to the W is noteworthy. While only 2 (redeposited) early sherds were recovered from 205, the variability in the dimensions and fills of this feature, which comprised several recut sections (see Fig. 11), suggest that any early Bronze Age phase might have been removed by later cleaning and recutting.

Three episodes of ditch digging were recorded in the central part of the N-S arm of Ditch 205 (Cuts 317; 311 and 319). The pottery recovered here was exclusively later Bronze Age. Cut 317, the shallowest, was considered to be the earliest. It might have been contemporary with Cut 429, near the western terminal which was also relatively early and very shallow. It yielded pottery of later Bronze Age date, and it must be assumed that, had any earlier Bronze Age phase of ditch existed, it had not survived.

Relatively early, but not closely dateable features include Gully 390 (an earlier version of 207?) which followed the southerly alignment of 205. Gully 382, located 9 m to the E of 390, is possibly very similar as regards its alignment and dimensions and it too might be early. The unexcavated gullies 396 and 398, just to the north and approximately on the alignment of 208 could also be early features.

An early, heavily truncated version of Ditch 209 is also apparent (Cuts 402 and 274). It is uncertain whether or not the two sections of gully were separated by an entrance mirroring the arrangement of 205, 390, 208 and 382.

It is unclear how early the main ditch (210) was and whether it was at any time contemporary with Gully 208. The clearest dating came from the middle fills of the ditch, particularly in Cut 455 (Fill 458) which yielded considerable quantities of later Bronze Age pottery. Two radiocarbon dates, one from charred residue on the interior of a vessel and one from associated charcoal, indicate a date of around 1000 BC for these deposits (samples 5 & 7: Radiocarbon Dates, this report). However, they followed a deep infill of primary silting, possibly followed by a long period of stability. The few finds which came from the primary fills (contexts 230, 232 and 233) were undiagnostic flints.

The ditch was positioned 3-4 m from Gully 208 and conceivably defined the eastern side of a narrow double-ditched trackway or broad territorial boundary (perhaps with an earthwork between the two). However, its dimensions are clearly of a different order to those of 208, and it is perhaps best seen as a replacement for the latter.

Ditch 209, located 10 m from 210 and 3 m from 205, was undoubtedly contemporary with both these features. Excluding the earliest cuts already mentioned (Cuts 274 & 402), it was probably recut at least once, although this was hard to determine from most of the sections. Its northern terminal, 237, closely mirrored terminal 311 of the middle phase of Ditch 205.

The ultimate phase of prehistoric occupation seems to have been marked by the laying out of Gullies 460 and 378 on a NE-SW alignment. This presumably occurred after 205 and 209 had gone out of use. The dating of these gullies is very tentative, but the relatively large quantity of flint recovered suggests that they were prehistoric and did not post-date the main occupation by a long period. Gully 378 probably respected Ditch 210 which would have remained as an earthwork for a considerable time, and perhaps even until the medieval period.

The later 'chalk pits' do not respect the prehistoric occupation. While some early medieval pottery was recovered from the excavated part of 241, the dating of the origin of the features must remain obscure. They might come under the label 'denehole' - a class of deep shaft which appear peculiar to Kent and S Essex and which seem to have had a wide range of dates and purposes (F.C.J. Spurrell, 1881 & 1882; V.C.H Kent, 1908). However, there appear to be some problems over definition. Spurrell was clear that deneholes, with deep narrow shafts, were distinct from marl pits which were broader and shallower. The definition of a denehole in the Victoria County History of Kent excludes 'chalk wells' and other forms of mine which were dug 'for the sake of the material extracted'. Deneholes by this definition were deep shafts used as secret hiding places, storehouses, or for other domestic purposes. Examples of shafts which might be comparable to the Coldharbour Road features have been reported from Stankey Wood near Dartford Heath (Spurrell, op. cit; V.C.H., op. cit.). Between forty and fifty 'deneholes' were

found here, all passing through Thanet Sand to reach chalk at depths between 40 and 70 feet (14 - 24 m). According to the V.C.H. these were not 'chalk wells' because there was plenty of bare chalk within a mile which would have been far easier to extract (op. cit., 455). The Coldharbour Road features pose similar difficulties of interpretation since surface chalk is accessible quite locally. However, it is possible that factors such as land tenure and traditional rights and uses played an important role in allocating such resources. A medieval date for these features is perhaps the safest guess, although prehistoric and Roman dates have been claimed for some deneholes. It can be noted that Pliny relates that shafts for the extraction of chalk were dug in Britain, sometimes to depths of 100 feet (ibid., 446).

The Site in its Setting

The site lies on the dip slope of the North Downs within 3 km of the River Thames at Northfleet. This topographic zone, which is labelled the 'Foothills' by Everitt, has historically been the richest and most populous part of Kent and its most important cornland (A. Everitt, 1986, 45). Upper Chalk is the general geology of the area and is extensive to the south and east. Nodular flint as a raw material would have been available quite locally. The site is actually located on Thanet Sand. This would have been easily cultivable although, as the presence of the ?medieval marl pits would indicate, the soil might have been rather poor in agricultural terms. On the higher Downs, 3-4 km to the south, the chalk is capped with Clay-with-flints.

In general terms, the area is not well-watered. There does not appear to be a natural source of water in the immediate vicinity of the site. Spring-line sources at Springhead (2 km to the west) and probably another about the same distance to the north are the nearest streams, but it is possible that urban development and de-watering over the past hundred years have extinguished a closer supply.

There are no known contemporaneous sites in the neighbourhood. Cropmarks, about 200 m to the south, showing rectangular ditched fields are undated. They are not on the same alignment as the Coldharbour Road ditches and may not be associated. Fieldwalking in this area (by the OAU in connection with the Rail-link Project) did not locate any particular concentration of Bronze Age material.

General discussion

Later Bronze Age settlements are rare in Kent. A handful of sites have been examined in the east of the county (eg. Mill Hill, Deal; Highstead, Chislet; Minnis Bay, Birchington) but in West Kent only the settlement at Hayes Common has been identified (T. Champion, 1980; P. Drewett, D. Rudling and M. Gardiner, 1988). Here possible grain storage pits, quernstones and loomweights suggested a small mixed farming settlement (B. Philp, 1973). Its situation on the acidic Blackheath and Woolwich Pebble Beds was perhaps evidence of a general intensity

of settlement and land use elsewhere (P. Drewett el al., op. cit., 116-118). The type of site found at Coldharbour Road, closely associated with large-scale land division, appears to be the first of its kind to be recognised in the county.

Bronze Age land division is becoming increasingly recognised in many areas of Britain. Perhaps the nearest example comes from Mucking, where two large ditched fields were integrated within a ring-ditch scatter and probably predated the Late Bronze Age South Ring (M. U. Jones and D. Bond, 1980). No contemporary settlement was identified. Possibly Bronze Age ditched fields have also been located further up the Thames valley on the gravels of NW Surrey (Longley, 1976).

More positive evidence of settlements associated with fields and trackways comes from the South Downs (P. Drewett, 1982). Here, Later Bronze Age settlements consisted of small, scattered groups of houses which are suggested to relate to joint family farmsteads engaged in mixed farming. These were located within rectangular plots defined by lynchets. It has been suggested that this type of site, presently confined to the South Downs, might originally have had a widespread distribution (P. Drewett et al., 1988, 96).

The Coldharbour Road site offers many points of comparison with another site showing settlement closely integrated within a system of land division - that at Fengate, Cambridgeshire (Pryor, 1980). Here droveways and enclosures incorporated domestic structures scattered around the ditch system. The dating of the system, which was considered to have its origins in the later third millennium BC, is also perhaps close to the inception of the Coldharbour Road ditches. In both instances it is possible that the dominance of later Deverel-Rimbury/post-Deverel-Rimbury material was due to the mucking out and recutting of the original ditches. As mentioned above, it is uncertain when the main ditch (210) at Coldharbour Road was laid out, but a Late Neolithic/Beaker period date is regarded as possible. If so, it might have been paired with Ditch 208 to form a narrow trackway 3-4 m wide (as at Fengate). However, in view of the shallowness and discontinuity of 208, it is perhaps more plausible to see 210 as a replacement for 208. In either case, in its developed form the site shows a major uninterrupted boundary ditch with a slightly shallower parallel ditch (209) which gave access to a partial enclosure of a probable domestic nature. Like Fengate this was a 'co-axial' system of land division in which the main boundaries were established first before further apportionment took place.

As at Fengate too, it is possible to see the linear ditches as forming a droveway for cattle or other livestock which would have connected higher and lower ground as part of a system involving transhumant pastoralism. Certainly, in historical times, the interdependence of marsh and upland in a cycle of transhumant pastoralism has been a prime feature of the agricultural economy of Kent, although the emphasis has been on sheep rather than cattle (A. Everitt, 1986, 34-38). However, the weight of evidence indicates that, unlike Fengate, the site at Coldharbour Road was not oriented towards pastoralism. The soils here, which are very sandy, would have been ill-suited to grazing and a predominantly arable

regime seems far more likely. As far as site morphology indicates, the single partial enclosure does not appear designed to control livestock (although admittedly fences or hedges could have been used). The absence of animal bones is probably accounted for by soil conditions, but the presence of quern fragments does suggest some cereal processing, although no cereal remains were recovered (Table 5).

Coldharbour Road might therefore be interpreted as a counterpart to a Fengate-type pastoral site, with a droveway used to channel livestock through possibly arable land between summer and winter grazing. It could be seen as a response to similar social and economic pressures on land which resulted in the need for intensive land management and boundary definition. While there appear to be no comparable sites as yet identified in Kent, this type of site would fit in with a general trend which sees, from the mid-second millennium, a change in economic organisation from economically independent units focused on ceremonial sites to highly organised mixed farming and specialised units (P. Drewett et al., 1988, 87). The lower Thames Valley would appear to be a key area in this economic organisation but the existence of substantial and dense settlement here has been inferred, almost exclusively, from the locations of stray bronzes (P. Drewett et al., 1988, Fig.4.1). Actual settlement sites have proved elusive. However, the results of excavations at Runnymede Bridge and Petter's Field in NW Surrey have suggested the importance of the lower Thames as a zone of trade and contact, and perhaps also of specialised pastoralism (ibid., 110-111). This would imply a need for the production of agricultural surpluses elsewhere and paths of contact between the different zones. Coldharbour Road perhaps furnishes indirect support for this model. It provides evidence for a large scale organisation of land use which is may have had an arable emphasis, and it hints at the importance of the routeway between the Downs and the north Kent coast which would have been an important element in the articulation of such an economic system. At the risk of overstatement, it can perhaps be suggested that the site shows evidence of the origins of the transhumance-based agricultural economy which has done so much to shape the countryside of Kent.

COMMENT ON THE RESULTS

The main aims of defining the extent, date and phasing of the site were accomplished quite satisfactorily by the excavation strategy. The aim of defining the function and character of the site was less successful and the interpretation presented has relied largely on indirect reasoning. While this was mainly due to the nature of the remains (eg. the lack of pits or structural evidence and the paucity of the environmental remains), it seems reasonable to suppose that the excavation of a greater sample of the features would have presented a greater chance of finding the evidence to resolve these questions. It can be noted, for example, that a substantial deposit of pottery and charcoal were recovered from the middle deposits of Ditch 210 (Context [458]) during the watching brief. Elsewhere this ditch had been largely devoid of cultural material. It is possible that other deposits existed elsewhere in the unexcavated portions of this ditch

which might have helped answer some of the remaining questions about the site, including the date of the lower deposits and the origin of this important feature.

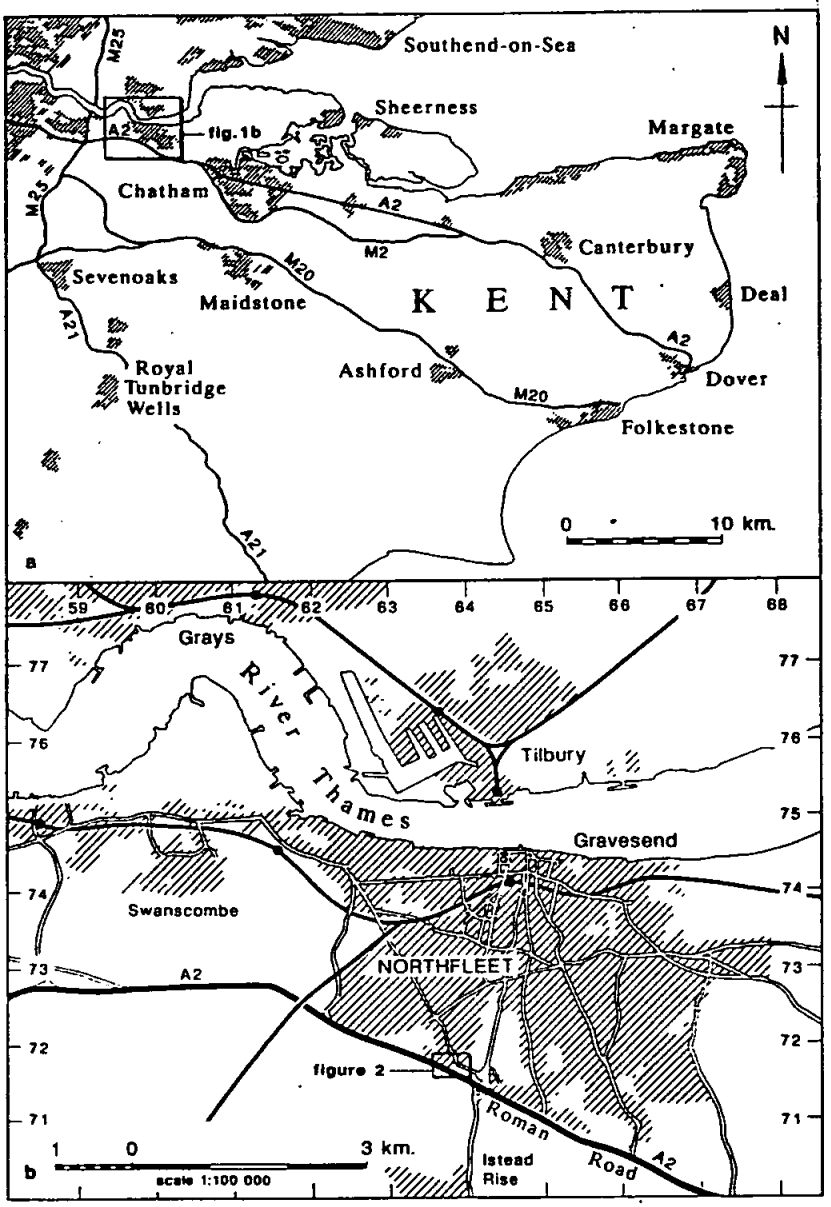


Figure 1 (a & b): Site Location.

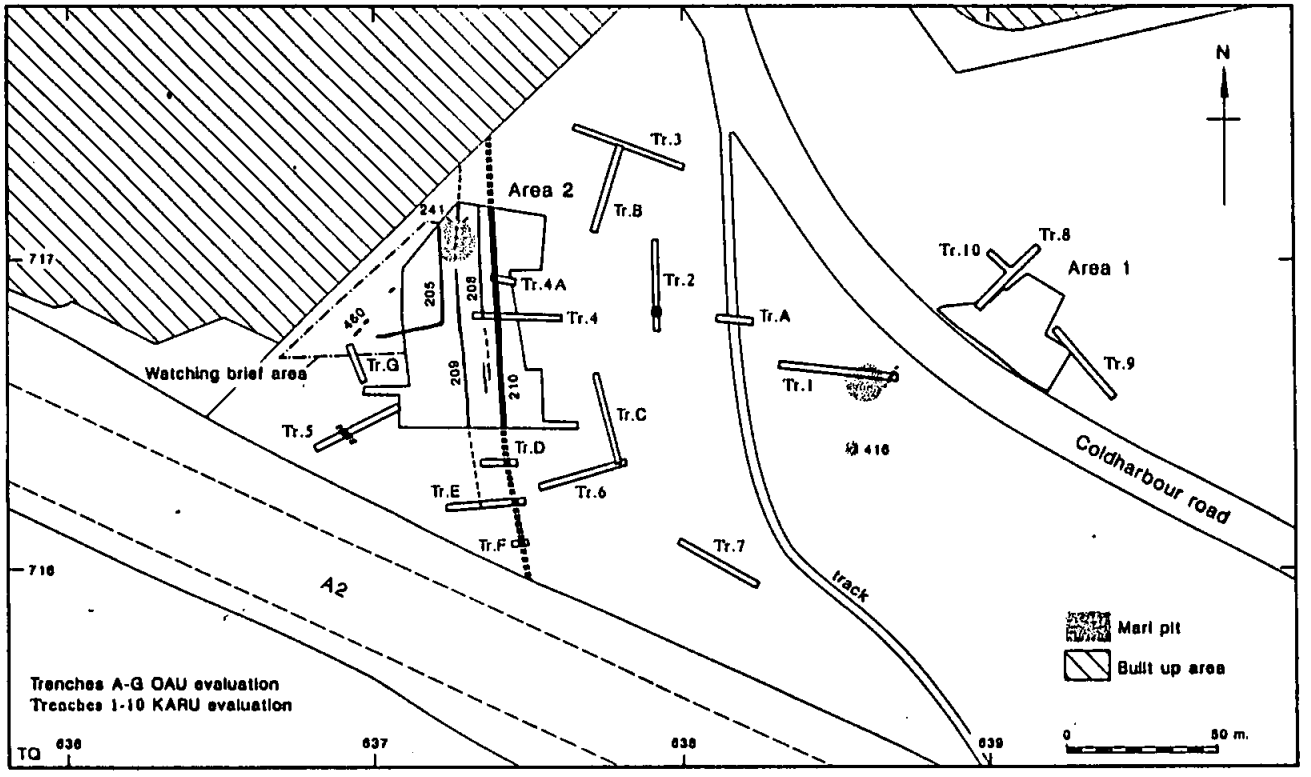


Figure 2: Location of trial trenches, excavated areas and major features.

Figure 3: Area 1 (see document wallet).

Figure 4: Area 2 (see document wallet).

Figure 5: Area 2 watching brief area (see document wallet).

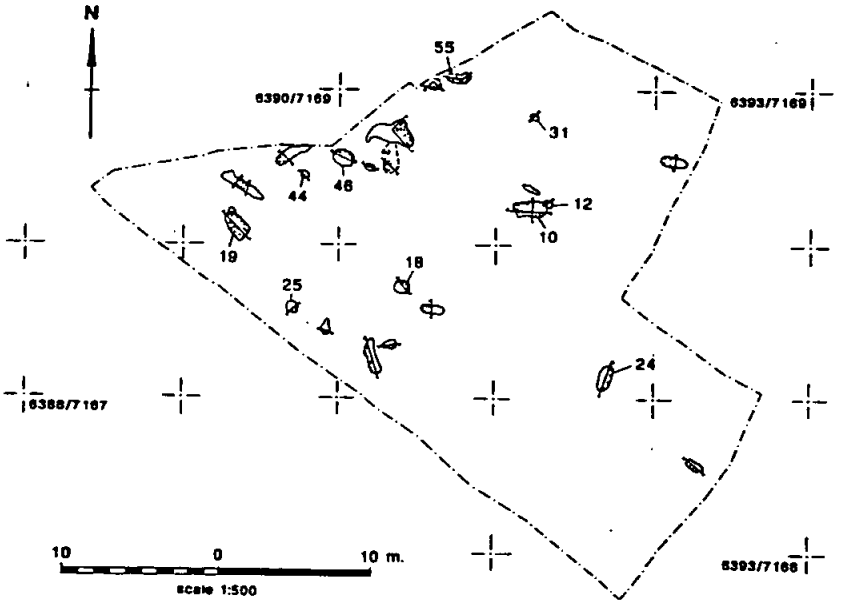


Figure 6: Plan of Area 1.

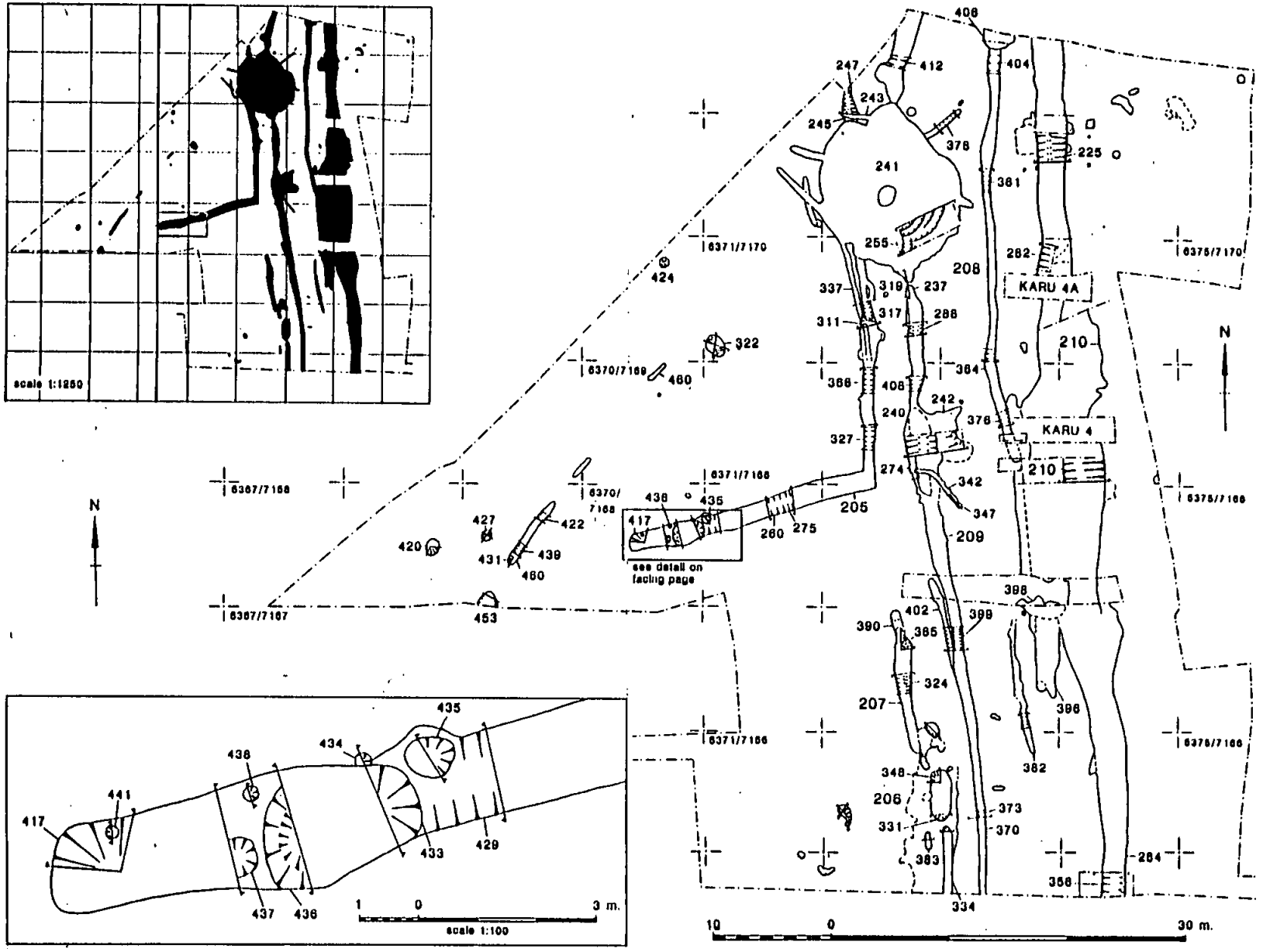


Figure 7: Plan of Area 2.

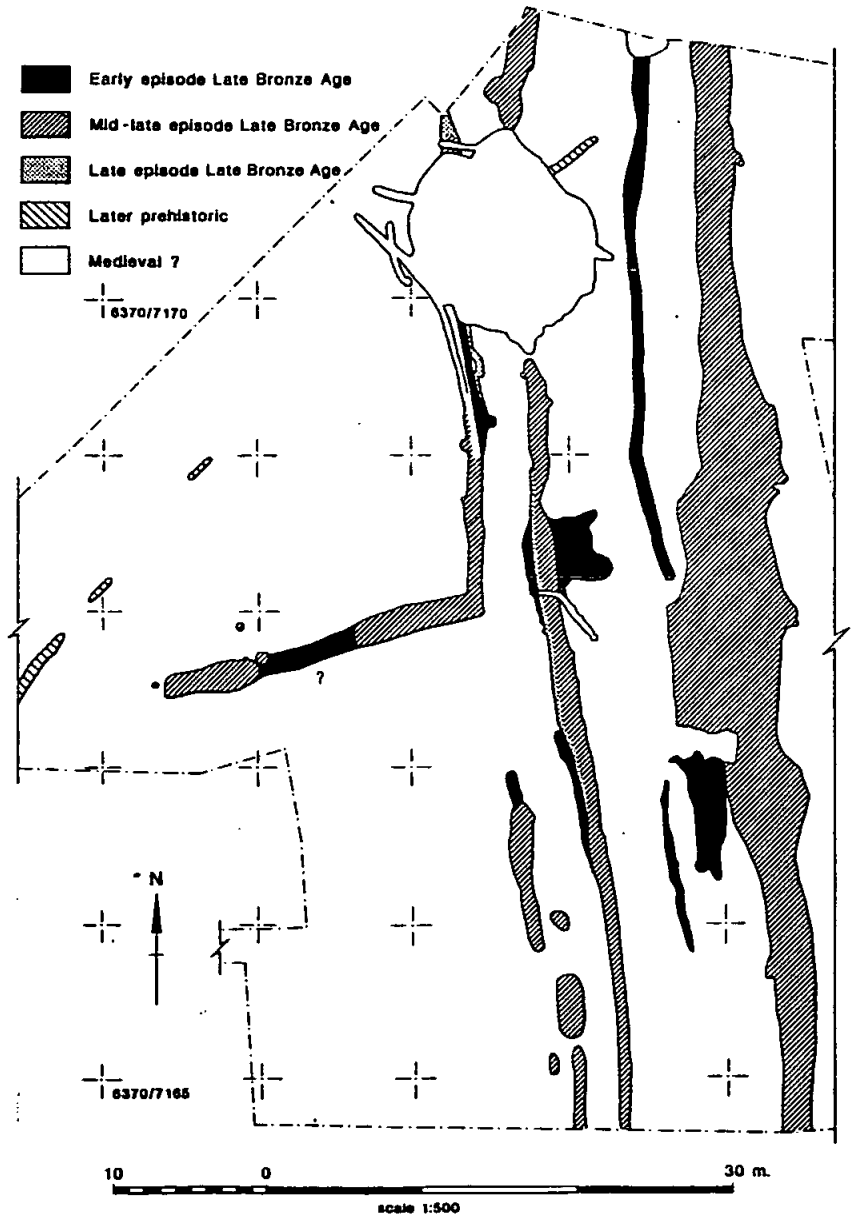


Figure 8: Area 2 phase summary.

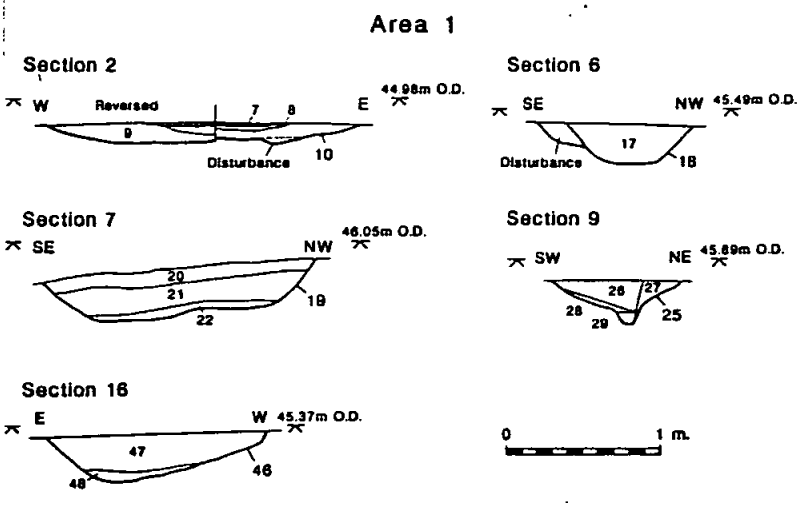


Figure 9: Area 1 sections.

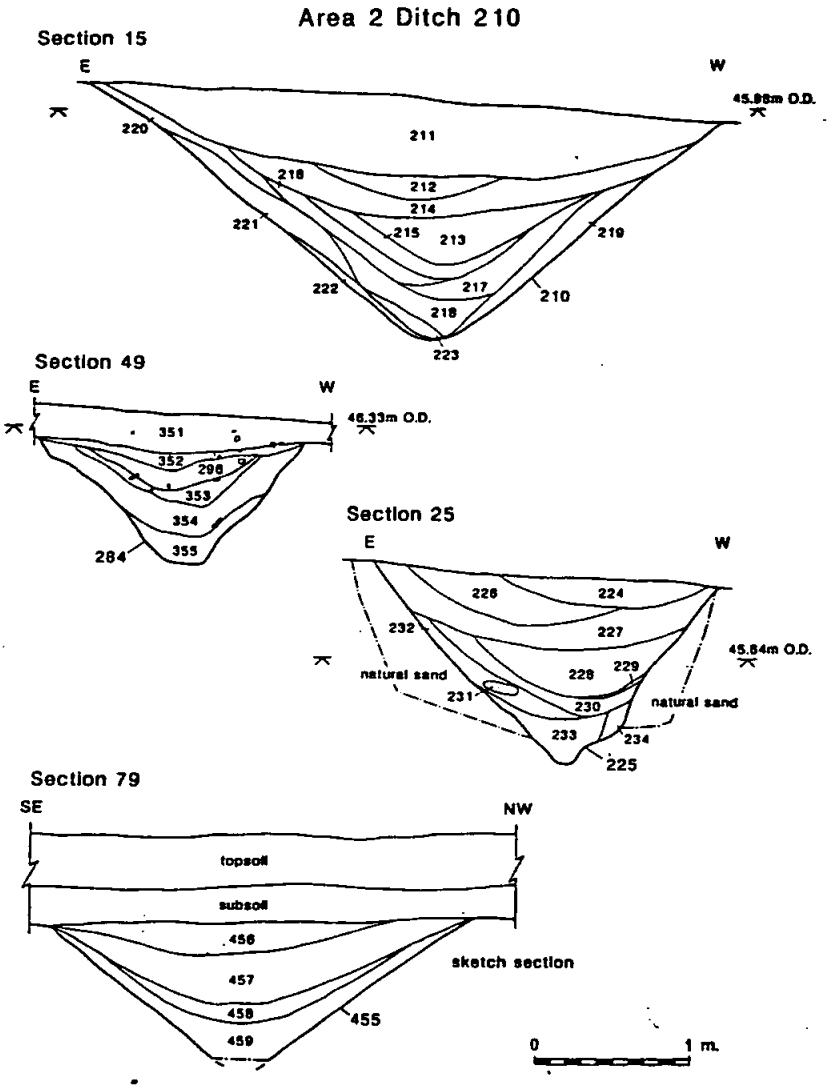
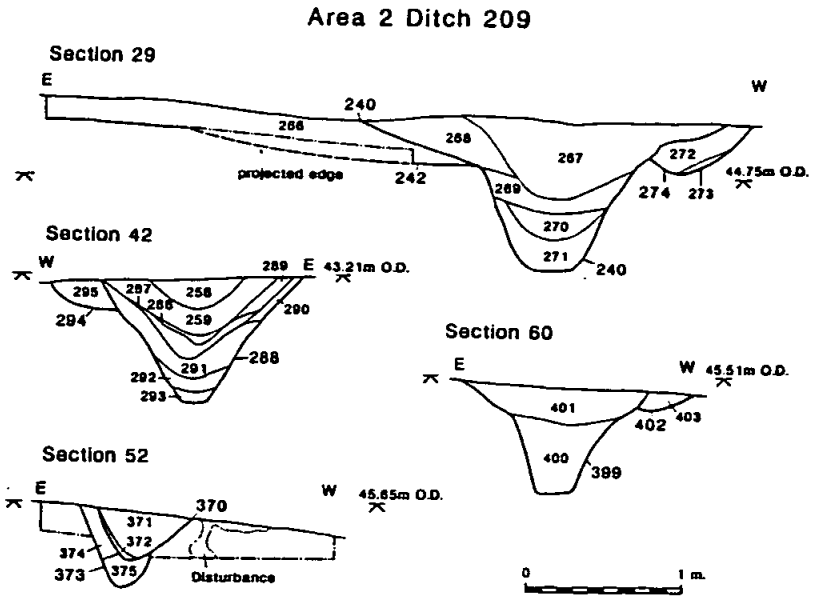


Figure 10: Area 2 sections.



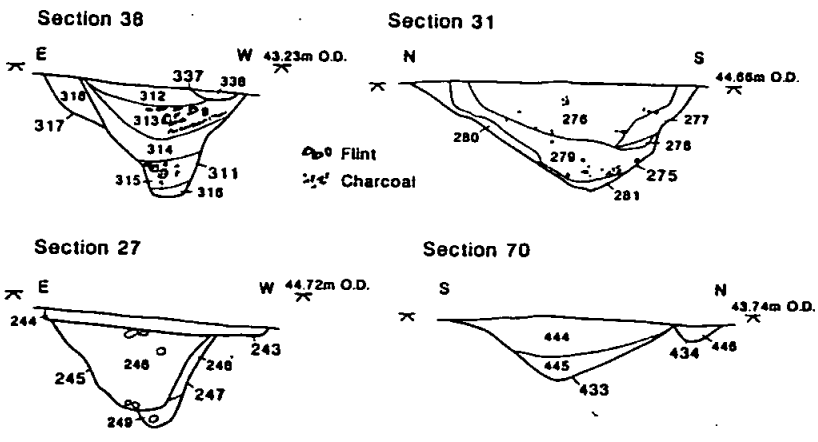


Figure 11: Area 2 sections.

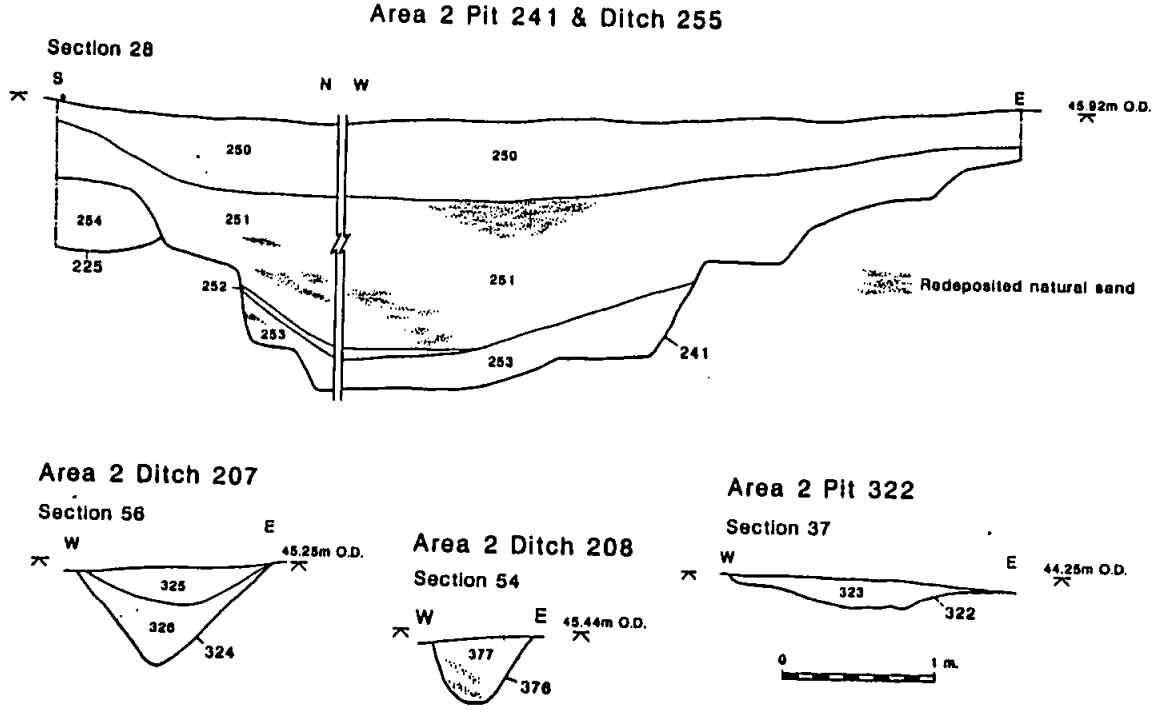


Figure 12: Area 2 sections.

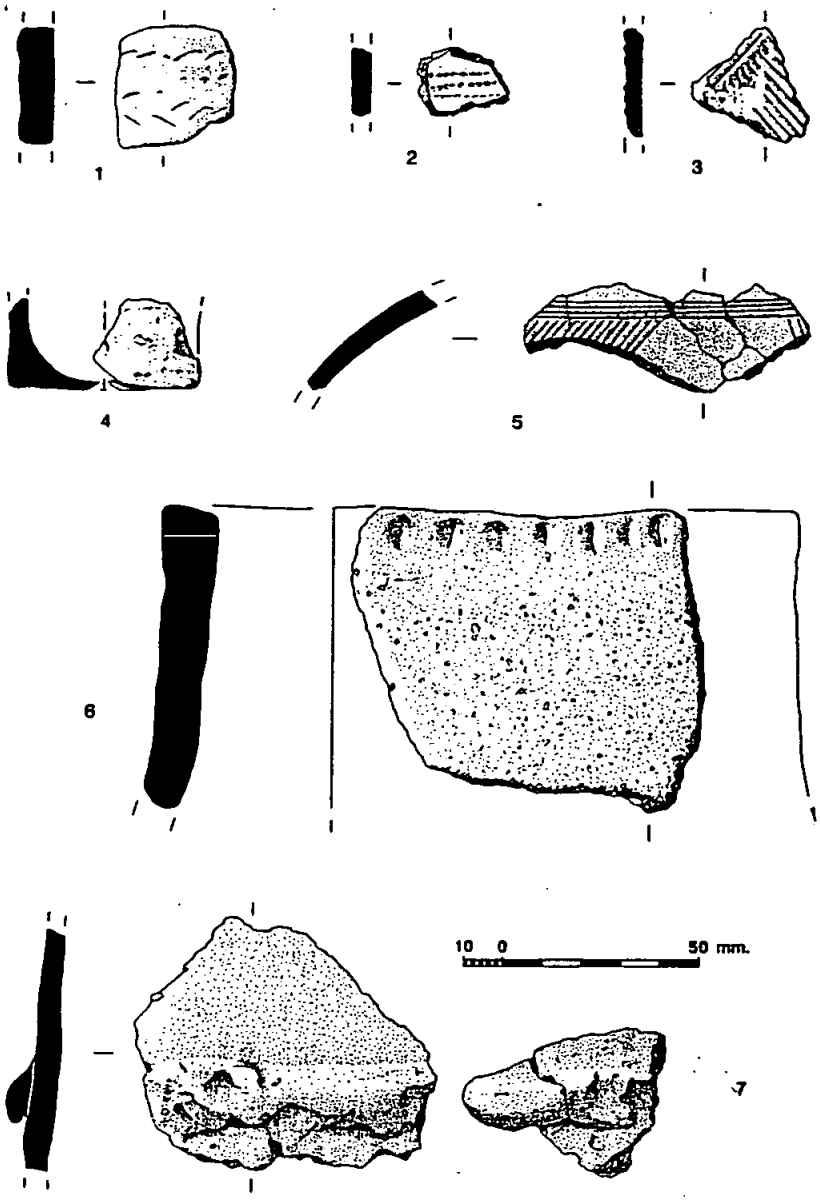


Figure 13: Prehistoric pottery.

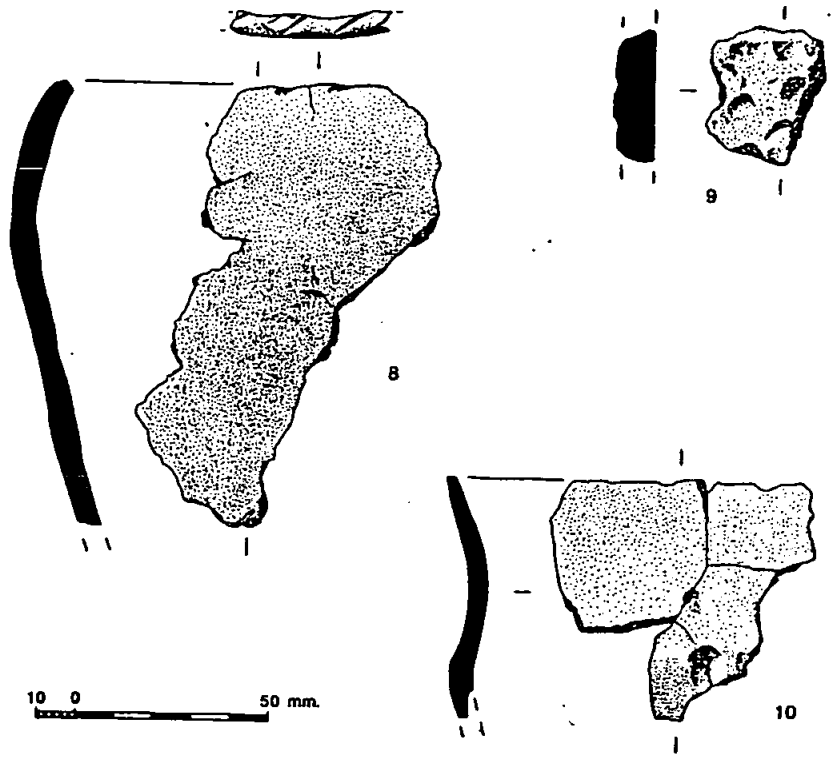


Figure 14: Prehistoric pottery.

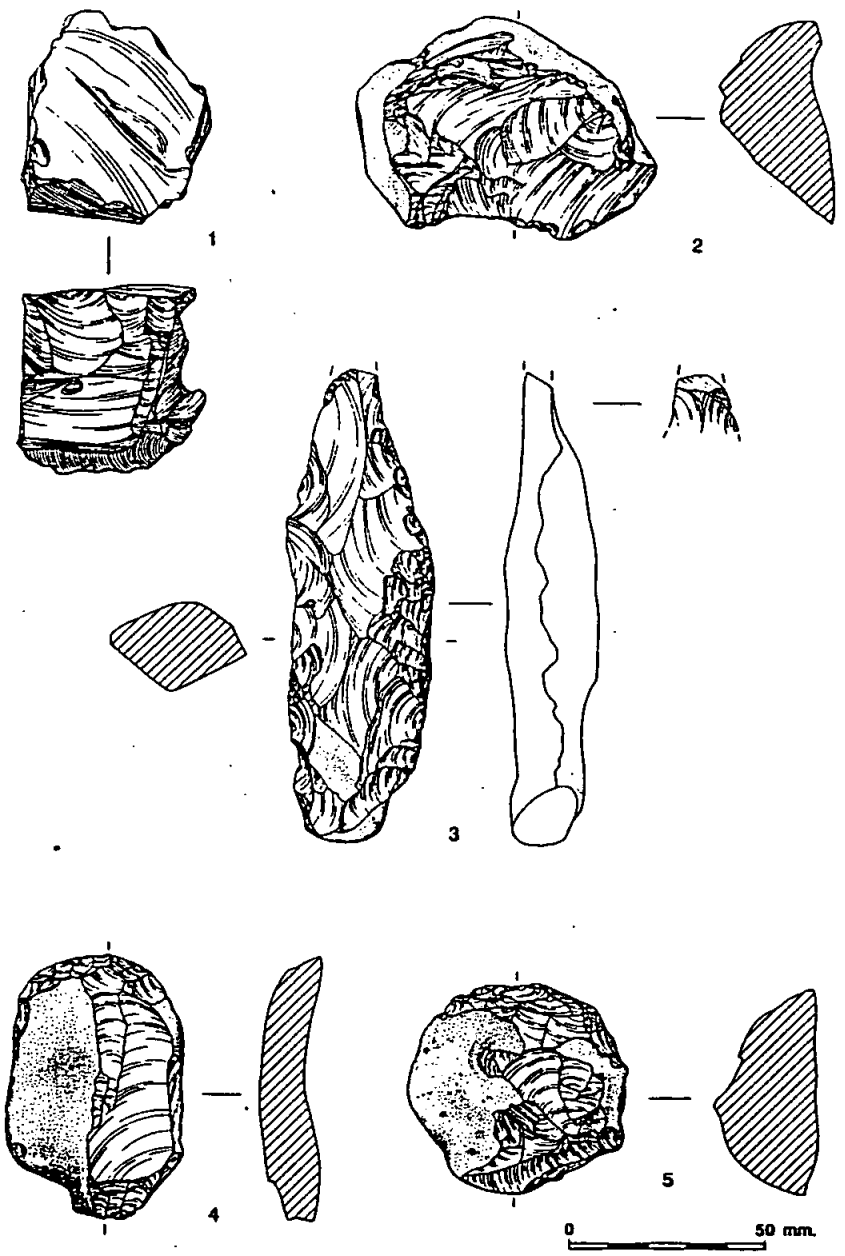


Figure 15: Struck flint.

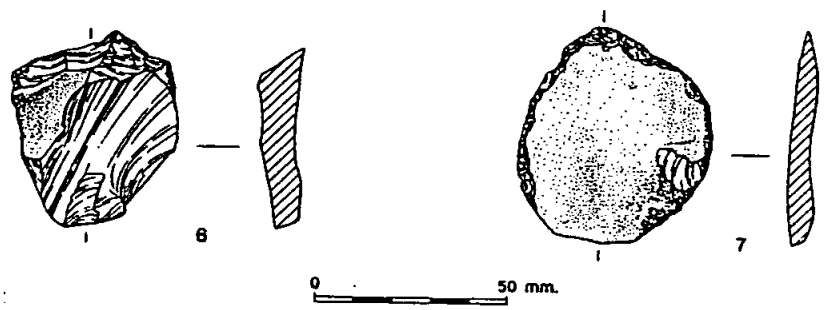


Figure 16: Struck flint.

TABLES

Table 1. Feature list. Area 1

Feature	Fills	Type	Sect.	Strat. Rel.
3	4 5	tree-hole	1	
10	7 8 9	pit?	2	
12	11	posthole?	3	
13	14	tree-hole	4	
15	16	tree-hole	5	
18	17	pit	6	
19	20 21 22	pit?	7	
24	23	pit?	8	
25	26 27 28 29	pit?	9	
31	30	posthole?	10	
32	33 34 35 36	?/tree-hole	11	
37	38	tree-hole	13	
39	40 41 42 43	tree-hole	12	
44	45	pit?	14	
46	47 48	pit?	16	
49	50	tree-hole	17	
51	53	tree-hole	19	cut by 52
52	54	tree-hole?	19	cuts 51
55	56	posthole?	20	
57	58 59	tree-hole	18	
60	61 62 63 66	tree-hole	22	
65	64	tree-hole	21	
67	68	tree-hole	23	
70	69	tree-hole	24	

Table 2. Feature List. Area 2					
Fea-ture	Cut	Fills	Type	Sec	Strat. rel.
205	260	261 262 263 264	L-shaped Ditch	30	
	275	276 277 278 279 280 281		31	
	311	312 313 314 315 316		38	cut by 319? 337 cuts 317?
	317	318		38	cut by 311? 319?
	319	320 283		/	cut by 337 241 cuts 311? 317?
	327	328 329 330		39	
	366	367 368 369		53	
	245	246		27	cut by 243 241 cuts 247
	247	248 249 265		27	cut by 245
	429	430		65	
	433	445 444	Pit on alignment	70	
	436	447 448 449	"	74	
	437	450 451	"	75	
	417	418 419	"	65	
206	348	349 350	Long pit	46 47	
	331	332 333		40	
207	385	387 388 389	Short ditch	59	cuts 390
	390	391		59	cut by 385
	324	325 326		56	
208	361	362 363	gully	48	
	364	365		51	
	376	377		54	
	404	405			cut by 406
209	240	267 268 269 270 271	Parallel ditch	29	cuts 242 274
	237	238 239		26	
	257	258 259 286 289 287		42 43	cuts 288

Table 2. Feature List. Area 2					
Feature	Cut	Fills	Type	Sec	Strat. rel.
	288	290 291 292 293		42 43	cut by 257 cuts 294
	370	371 372		52	cuts 373
	373	374 375		52	cut by 370
	399	400 401		60	cuts 402
	402	403		60	cut by 399
	408	409 410 411		62	
	412	413			
	274	272 273		29	cut by 240
	343	341 339		44	cut by 342
210	210	211 212 213 214 215 216 217 218 219 220 221 222 223	Main ditch	15	
	225	224 226 227 228 229 230 231 232 233 234		25	
	356	357 358 359 360 380		50	
	284	296 351 352 353 354 355		49	
	285		recut?	49	
	282	297 298 299 300 301 302 303 304 305 306 307 308		33	
	455	456 457 458 459			
241	241	250 251 252 253	marl pit	28	cuts 245 255 319 378
	235	236		26	
242	242	266	flinty hollow	29	cut by 240
243	243	244	gully assoc. w. marl pit	27	cuts 245
255	255	254	ditch? in marl pit	28 32	cut by 241
294	294	295	pit?	42	cut by 288
309	309	310 321	pit/tree	35 36	
322	322	323	pit	37	

Table 2. Feature List. Area 2					
Fea-ture	Cut	Fills	Type	Sec	Strat. rel.
334	334	335 336	gully	41	
337	337	338	gully assoc. w. marl pit	38	
342	342	340	curving gully	44	cuts 343
	345	344		45	cuts 347
347	347	346	pit	45	cut by 345
378	378	379	N-S gully	55	cut by 241
382	382	381	gully	58	
383	383	384	pit?	57	
386	386	386	disturbed	/	
392	392	393 394	pit/tree	61	
396	396	395	gully	/	
398	398	397	gully	/	
406	406	407	small marl pit	/	cuts 404
416	416	415	w-brief marl pit	/	
420	420	421	pit	67	
424	424	425 426	charcoal pit	68	
427	427	428	"	69	
434	434	446	post-hole	70	
435	435	443	pit	71	
438	438	452	post-hole	76	
441	441	442	"	72	
460	422	423	gully	66	
	431	432		78	
	439	440		77	
	453	454		/	

Table 3. Finds by Feature. Area 1			
Feature	Knapped Flint (total)	Retouched Flint	BA Pot
3	3		
10			
12			
13			
15	1		
18			
19			
24	1		
25			
31			
32	1	1	
37	1		
39			
44			
46			
49			
51			
52	4		
55			
57			
60	1		
65			
67	2		1
70	1		

Table 4. Finds by Feature. Area 2						
Feature	Cut	Knapped Flint (total)	Retouched Flint	LN/BKR Pot	BA Pot	Other Finds
205	260	53	2	1	9	
	275					
	311	148	5		6	fired clay
	317				4	
	319	130	7		37	
	327	44	3	1	4	
	366	40	5		16	
	245	12	1		12	fired clay
	247	20	1		4	1 possible quern frag.
	429	8			40	
	433	2				
	436	2				
	437	10	2			
	417	1	1			
206	348	5				
	331	2	1			
207	385	1				
	390					
	324	14	1			fired clay
208	361	9		5		
	364					
	376					
	404					
209	240	13	3			
	237	4				
	257	16	1		11	
	288					
	370					

Table 4. Finds by Feature. Area 2						
	373	1				
	399	8				
	402					
	408	12				
	412	6				
	274				1?	
	343					
210	210	13			6	Fe nail (from topmost fill)
	225	44	2		2	Animal rib & tooth fragments
	356					
	284	20	1			fired clay
	282				2	
	455				166	
241	241	34	4			6 med. sherds, fired clay, Abraded animal bone fragments
	235	9	1			1 Med. sherd
242	242	7	4			
243	243					
255	255	2				
294	294					
309	309				2	
322	322	13			1	2 quern frags
334	334					
337	337					
342	342					
	345					

Table 4. Finds by Feature. Area 2						
347	347					
378	378	8				
382	382					
383	383	1				
386	386	8				
392	392					
396	396					
398	398					
406	406					
416	416	1				
420	420	1				
424	424					
427	427					
434	434					
435	435	2				
438	438					
441	441					
460	422	3				
	431	1			1	
	439	8				
	453					

Table 5. Charcoal

Sample No.	Context	cf. *Alnus/Corylus* tp. (alder/hazel)	Pomoideae (hawthorn etc)	*Quercus* (oak)
1	323 (pit 222, with quern fragments)	-	5	1
2	313 (cut 311 of ditch 205)	1	-	-
3	425 (pit 424)	-	2	8
3	428 (pit 427)	-	-	1
4	315 (cut 311 of ditch 205)	1	-	-
5	458 (cut 455 of ditch 210)	-	-	10
6	458 (cut 455 of ditch 210)	-	5	

Table 6. Prehistoric pottery by context												
Context	Fabric groups: number of sherds, weight (g) and illustrated sherds											
	F/LN	GFS/BKR	GSV/BKR	GF/BA	F1/BA	F2/BA	F3/BA	FV(Sh)/BA	FGV(Sh)/BA	QF/BA	FS/BA	Totals
u/s						8, 40g						8, 40g
D/2					1, 2g							1, 2g
68										1,1g		1, 1g
211					1, 1g	1, 5g	1,8g					3, 14g
212						3, 14g						3, 14g
224								1, 3g				1, 3g
228						?1, 1g						1, 1g
246							12,292g					12, 292g
248						2, 24g						2, 24g
249						8, 94g						8, 94g
258					4, 1g							4, 1g
259						7, 54g						7, 54g
261		1, 6g				1, 4g						2, 10g
263						8, 46g						8, 46g
265					1, 8g	1, 5g						2, 13g
273											1, 1g	1, 1g
283						14, 60g				23, 56g		37, 116g
302					2, 4g							2, 4g
310						?1, 2g				1, 1g		1, 2g
313					4, 9g							4, 9g
314						2, 14g						2, 14g

Table 6. Prehistoric pottery by context												
Context	Fabric groups: number of sherds, weight (g) and illustrated sherds											
318					4, 9g							4, 9g
323							1,44g					1, 44g
328						3, 8g						3, 8g
329		1, 3g										1, 3g
330						1, 25g						1, 25g
362	1, 2g	1, 3g										2, 5g
363	1, 3g		2, 4g									3, 7g
367				2, 6g	17g	8, 156g						16, 179g
430							40, 472g					40, 472g
432											1,5g	1, 5g
443						20,****						20, *****
458								94, 515g	72, 692g			166, 1207g
Totals	2, 5g	3, 12g	2, 4g	2, 6g	23, 51g	81, 458g	54, 816g	95, 518g	72, 692g	2,2g	2,6g	335, 2563g

NB:**** = sherds in lumps of cement-like mud

Table 7. Flint Assemblage Composition

Context Number	Irregular Waste	Core Rejuvenation Flake	Core	Flake	Chip	Retouched Piece	Burnt Unworked Flint	Total
(Area 2) 261	-	-	-	2	-	-	-	2
(Area 1) 4	-	-	-	1	-	-	-	1
D/2	-	-	-	1	-	-	-	1
5	-	-	-	2	-	-	-	2
16	-	-	-	1	-	-	-	1
23	-	-	-	1	-	-	-	1
33	-	-	-	-	-	1	-	1
38	-	-	-	1	-	-	-	1
54	-	-	-	4	-	-	-	4
62	-	-	-	1	-	-	-	1
68	-	-	1	1	-	-	-	2
69	1	-	-	-	-	-	-	1
U/S	-	-	2	1	-	-	-	3
211	-	-	-	6	-	-	4	10
212	-	-	-	7	-	-	6	13
213	-	-	-	1	-	-	-	1
224	-	-	-	17	-	1	-	18
227	-	-	1	8	-	1	-	10
228	-	-	-	8	-	-	-	8
230	-	-	-	3	-	-	-	3
232	-	-	-	4	-	-	-	4

Table 7. Flint Assemblage Composition

Context Number	Irregular Waste	Core Rejuvenation Flake	Core	Flake	Chip	Retouched Piece	Burnt Unworked Flint	Total
233	-	-	-	1	-	-	-	1
236	-	-	-	8	-	1	-	9
238	-	-	2	1	-	-	-	3
239	-	-	-	1	-	-	-	1
246	-	-	1	10	-	1	-	12
248	-	-	2	8	1	-	-	11
249	1	-	3	4	-	1	-	9
250	-	-	-	17	-	1	14	32
251	-	-	1	12	-	3	-	16
254	-	-	-	2	-	-	-	2
258	-	-	1	9	-	-	-	10
259	-	-	-	5	-	1	-	6
263	5	1	10	33	-	2	-	51
266	-	-	-	3	-	4	-	7
267	-	-	-	1	-	-	-	1
270	-	-	3	1	-	2	-	6
271	2	-	2	1	-	1	-	6
283	-	-	1	45	-	6	-	52
296	1	-	7	11	-	1	-	20
313	11	2	7	86	-	4	1	111
314	4	-	-	19	-	1	-	24
315	3	-	-	11	-	-	-	14

Table 7. Flint Assemblage Composition

Context Number	Irregular Waste	Core Rejuvenation Flake	Core	Flake	Chip	Retouched Piece	Burnt Unworked Flint	Total
320	2	-	6	67	2	1	-	78
323	-	-	5	8	-	-	-	13
325	-	-	2	9	-	1	-	12
326	-	-	-	2	-	-	-	2
328	-	-	-	39	-	3	-	42
329	-	-	-	2	-	-	1	3
332	-	-	-	-	-	1	-	1
333	-	-	-	1	-	-	-	1
349	-	-	-	5	-	-	-	5
362	2	-	-	3	-	-	-	5
363	-	-	-	4	-	-	-	4
367	-	-	1	29	-	5	-	35
368	-	-	-	5	-	-	-	5
375	-	-	-	1	-	-	-	1
379	2	-	1	5	-	-	2	10
384	-	-	-	1	-	-	-	1
386	-	-	-	8	-	-	-	8
387	-	-	-	1	-	-	-	1
401	-	-	-	8	-	-	-	8
411	-	-	2	10	-	-	-	12
413	1	-	1	4	-	-	-	6
415	-	-	-	1	-	-	1	2

Table 7. Flint Assemblage Composition

Context Number	Irregular Waste	Core Rejuvenation Flake	Core	Flake	Chip	Retouched Piece	Burnt Unworked Flint	Total
418	-	-	-	-	-	1	1	2
421	-	-	-	1	-	-	-	1
423	-	-	-	3	-	-	-	3
430	-	-	-	8	-	-	-	8
432	-	-	1	-	-	-	-	1
440	-	-	2	6	-	-	5	13
443	-	-	1	1	-	-	-	2
444	-	-	-	2	-	-	-	2
448	-	-	-	2	-	-	-	2
450	-	-	1	7	-	2	-	10
458	1	-	-	-	-	-	-	1
Totals	36	3	67	602	3	46	35	792

Table 8. Core Typology						
Context	Single Platform Flake Core	Multi-Platform Flake Core	Core on a Flake	Tested Nodule	Fragmentary/Unclassifiable Core	Total
(Area 1) 68	-	1	-	-	-	1
U/S	-	-	-	-	2	2
(Area 2) 263	2	4	-	-	4	10
313	2	1	2	-	2	7
320	2	-	1	-	3	6
283	-	1	-	-	-	1
367	-	-	-	1	-	1
246	-	1	-	-	-	1
248	-	-	-	-	2	2
249	2	-	-	-	1	3
450	1	-	-	-	-	1
325	-	-	-	1	2	2
270	1	-	-	-	2	3
271	-	2	-	-	-	2
238	1	1	-	-	-	2
258	-	1	-	-	-	1
411	-	1	-	1	-	2
413	-	-	-	1	-	1
227	-	1	-	-	-	1
296	-	2	-	5	-	7
251	-	-	-	1	-	1
323	-	-	-	5	-	5

Table 8. Core Typology						
Context	Single Platform Flake Core	Multi-Platform Flake Core	Core on a Flake	Tested Nodule	Fragmentary/Unclassifiable Core	Total
379	-	-	-	1	-	1
443	-	-	-	1	-	1
432	-	-	-	1	-	1
440	-	-	-	2	-	2
Total	11	16	3	20	17	67

Table 9. Retouched Composition

Context	Heavy tool	Scraper	Serrated flake	Retouched Flake	Denticulate	Knife	Fabricator	Piercer	Miscellaneous Retouched	Total
(Area 1) 33	1	-	-	-	-	-	-	-	-	1
263	-	1	-	1	-	-	-	-	-	2
313	-	3	-	1	-	-	-	-	-	4
314	-	-	-	-	-	1	-	-	-	1
320	-	-	-	1	-	-	-	-	-	1
283	1	2	-	-	-	-	-	2	1	6
328	-	2	1	-	-	-	-	-	-	3
367	-	1	-	2	1	1	-	-	-	5
246	-	-	-	-	1	-	-	-	-	1
249	-	1	-	-	-	-	-	-	-	1
450	-	1	-	1	-	-	-	-	-	2
418	-	-	-	1	-	-	-	-	-	1
332	-	-	-	-	-	1	-	-	-	1
325	-	-	-	1	-	-	-	-	-	1
270	-	1	-	-	-	-	-	1	-	2
271	-	-	-	1	-	-	-	-	-	1
259	-	1	-	-	-	-	-	-	-	1
224	-	-	-	1	-	-	-	-	-	1
227	-	1	-	-	-	-	-	-	-	1
296	-	-	-	1	-	-	-	-	-	1
250	-	1	-	-	-	-	-	-	-	1

Table 9. Retouched Composition

Context	Heavy tool	Scraper	Serrated flake	Retouched Flake	Denticulate	Knife	Fabricator	Piercer	Miscellaneous Retouched	Total
251	-	3	-	-	-	-	-	-	-	3
236	-	-	-	-	-	-	-	-	1	1
266	-	2	-	1	-	-	1	-	-	4
Total	2	20	1	12	2	3	1	3	2	46

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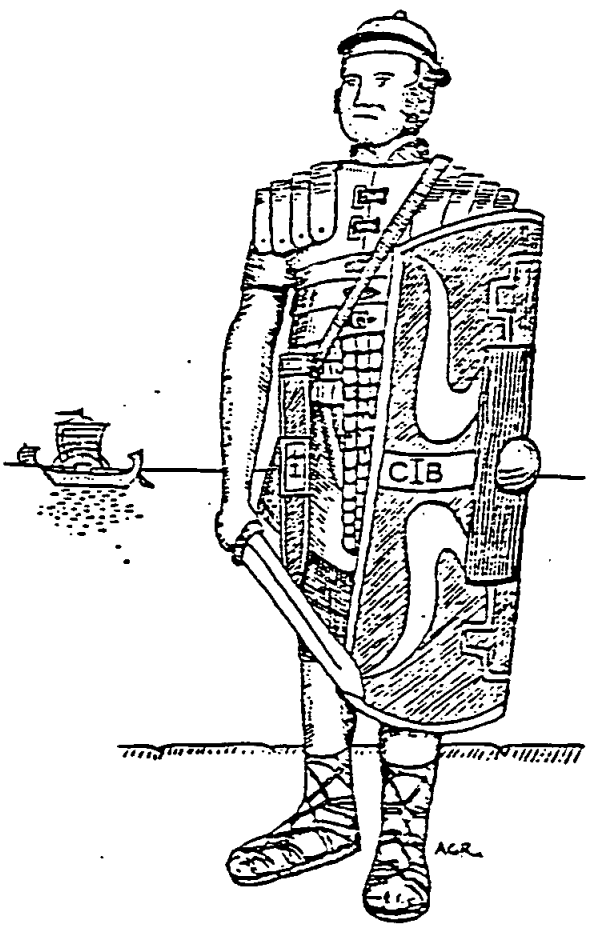
NORTHFLEET 1992 (Safeways P.L.C.)

An Archaeological Evaluation of a Site at Coldharbour, near Gravesend, Kent



Report by BRIAN PHILP
KENT ARCHAEOLOGICAL RESCUE UNIT

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CIB Headquarters
Dover Castle
Kent

Tel: Dover (0304) 203244/203279 or West Kent 081-462-4737

1) INTRODUCTION

This site (Fig. 1) lies in the parish of Northfleet, near Gravesend in Kent (N.G.R. TQ.638.717) and is at present arable land on the north side of the A2. The site was selected by Safeways P.L.C. for the possible location of a major food store and a formal application for planning consent was made in 1991 (GR/91/697).

The site is situated on Thanet Sand, generally sloping ground and with a high point, or crest, on the east side. From this apparent crest the ground falls away on most sides by varying degrees. In detail, the majority of the site lay south of Coldharbour Road, where the Safeway Store and car park are planned. A much smaller area lay north of Coldharbour Road, where a new roundabout is planned close to the Hospice. In all some 2.8 hectares of land is involved and the whole site lies between the 41 and 49 metre contours.

As the site flanked the Roman arterial road, later known as Watling Street, the planning department of Gravesham Borough Council required that an archaeological evaluation excavation should be carried out ahead of any consent. This was carried out by the Kent Archaeological Rescue Unit (K.A.R.U.) in September, 1992 in consultation with Paul Chadwick, the latter acting as advisor for Safeways through Lawson-Price. This Report is produced following the completion of the excavation.

Nothing was known of the archaeological significance of the site before work began and the limited air-cover was unhelpful. Excavations by K.A.R.U. on adjacent sites, ahead of development, in the 1980s had revealed nothing of significance. The existance of the Roman arterial road, however, seldom seen in adjacent roadworks observed by the writer since the 1960s, was of some interest. The application-site lay well outside the orbit of the Roman road-settlement of Springfield (*Vagniacae*), some 2.5 km. to the west. Excavations by the K.A.R.U. in November, 1991 revealed features limited to the immediate environs of that settlement.

The specification of work was provided for the evaluation which, to the Unit, seemed more than adequate and this aimed to:
"establish whether there are any archaeological deposits (structures or

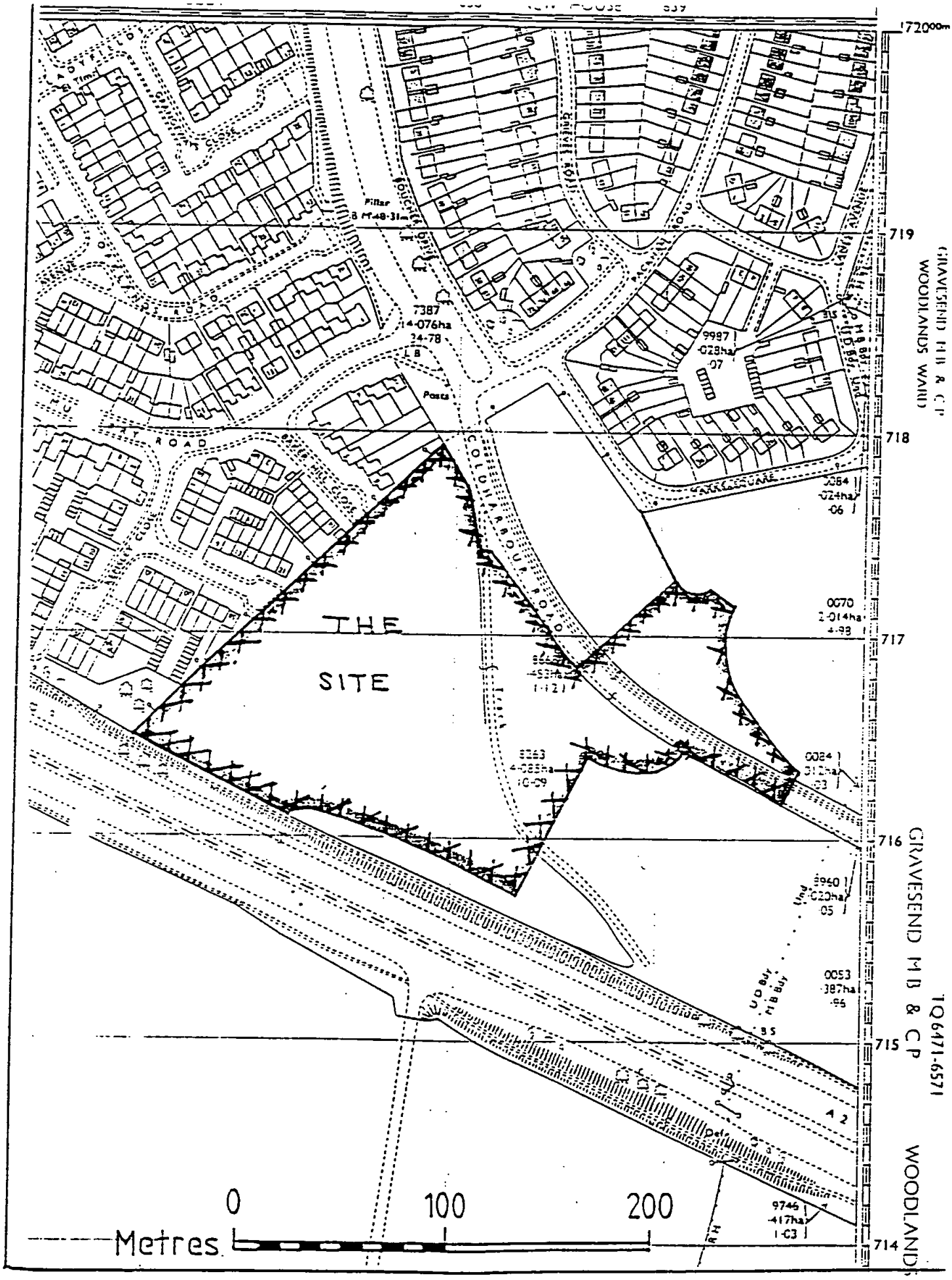


Fig. 1. Site location map (1/2500)

artefacts) present on the site which need to be considered in determining the application. The excavation is thus to ascertain the extent, depth below ground surface, depth of deposit, character and quality of any archaeological remains on the site."

It required a 2% sample of the area and this was done with a pattern of trenches, each either 30 or 40 m. in length, to a layout kindly provided by Paul Chadwick and reflecting the footprints of the proposed buildings and roadways. The trenches also had to avoid buried cables and a water main.

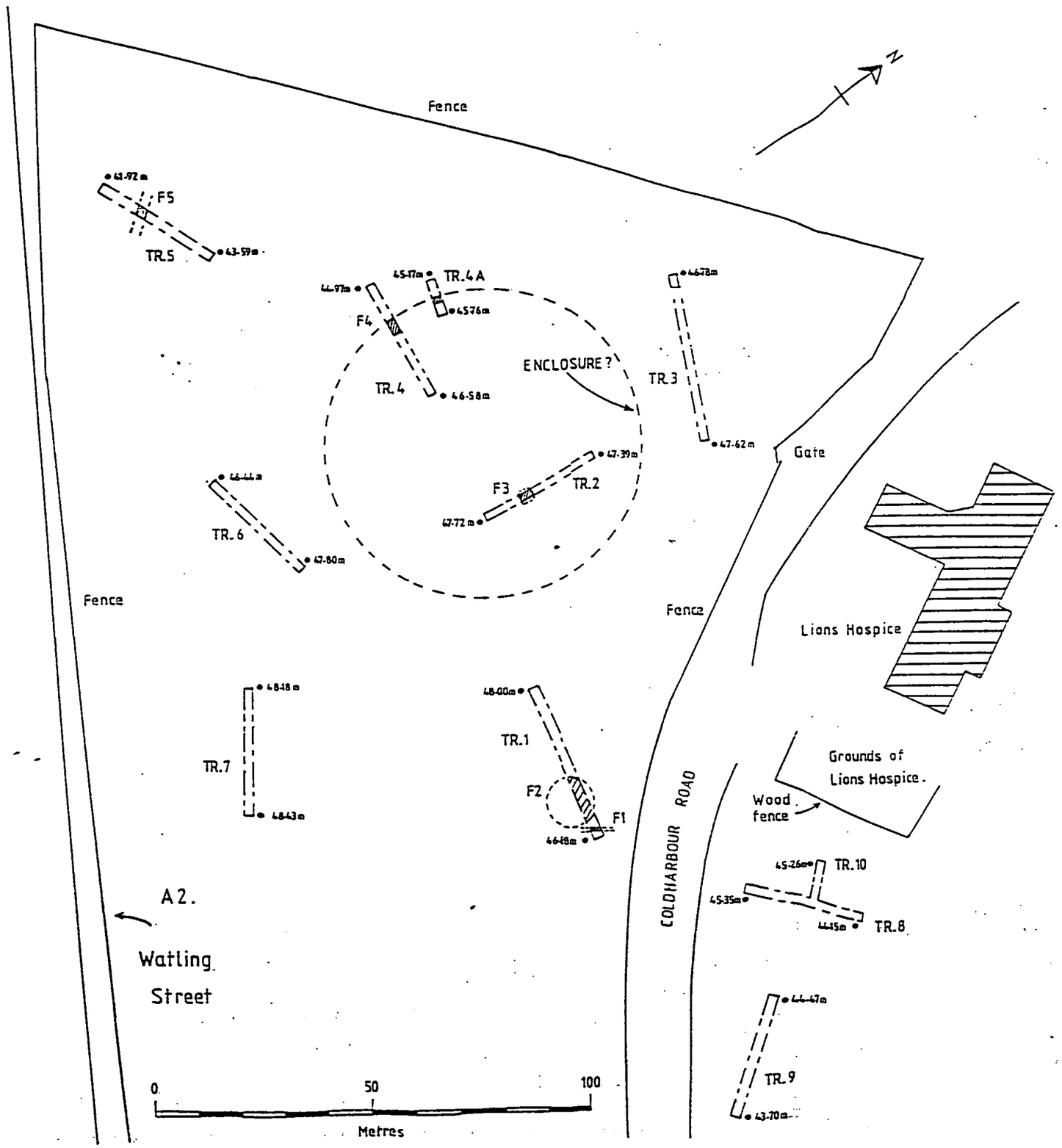
The Unit offered to carry out the work from 8th June onwards and in the event it was done from 8th - 15th September. It was even possible to extend the excavation by the addition of two more trenches (Trenches 10 and 4a) without adding to the cost.

2) ACKNOWLEDGEMENTS

The Unit wishes to acknowledge Safeways P.L.C. for funding the excavation, the processing of the finds and the Report. Mr. Paul Chadwick must be thanked for his co-operation and so too must the site owners, the Sir James Colyer-Ferguson Charitable Trust. The Unit gratefully acknowledges the hard work of Derek Garrod who supervised most of the excavation, very ably assisted by Gerry Geradine, John Payne, Maurice Chenery and other members of the Unit. Members of the Bromley and West Kent Group assisted with some of the work, particularly Miss Audrey Button and Mr. Will Foot. The writer originated the project and assisted with some of the recording and planning.

3) THE EXCAVATION (Fig. 2)

On arrival at the site the field was found to heavily overgrown with weeds and nettles to about waist level and this made marking out and measuring across the site difficult. The excavation of eleven trenches (nine specified and two added) was carried out by mechanical means using a hydraulic excavator under tight control. Each trench was topsoiled first and any subsoil reduced in layers of 100 mm. to the surface of the natural soils and, in selected places, deeper. The natural soil on the Safeways


N
Fence
F5
TR.5
TR.4A
F4
TR.4
ENCLOSURE?
TR.3
F3
TR.2
TR.6
Gate
Fence
Fence
Lions Hospice
TR.7
TR.1
F2
F1
Grounds of
Lions Hospice
Wood
fence
COLDHARBOUR ROAD
TR.10
TR.8
TR.9
A2.
Watling
Street
0
50
100
Metres

site seemed to be Thanet Sand, whilst the natural soil on the Roundabout site seemed to be an orange brickearth.

With a trench width of about 2.00 m. and a total distance of 308 m. excavated, a total area of some 615 sq. m. was examined, this being slightly more than the 2% suggested. In all, four trenches produced no archaeological material, one produced a minor feature, whilst six others produced significant features. Of these, only the linear features were excavated to any extent, but most features produced a few artefacts, mostly flints of possible late-Neoloithic of Early Bronze Age date and occasional potsherds. Significant pottery from one small feature may be of Early Iron Age date. In all, 14 features were located (F.1-F.6 and F.21-F.28).

Trench 1 This was 40 x 2 m. in the Safeways area and close to the apex of the hill. It contained two archaeological features (F.1 and F.2), both cut into the natural, here mostly 35 cm. beneath the surface. A thin band of disturbed soil 12-15 cm. deep lay beneath the ploughsoil.

F.1 (Fig. 3) was a shallow ditch running roughly N-S and crossing the trench at a slight angle. Its width was about 1.70 m., its depth at the south end about 60 cm. and reducing to only 35 cm. at the north end. Its filling of brown loam and clay produced eleven struck flints, one fire-cracked stone and one grit-loaded prehistoric potsherd.

F.2 This very large feature was visible in the trench for a maximum distance of 10 m. in the south face, reducing to about 4.60 m. in the north face. As seen, it appears to represent a segment of a large circular feature, perhaps 10-12 m. in diameter and cut steeply into the underlying clay. It was only excavated to a depth of 1.24 m. and this was clearly not the bottom. Its filling of even brown loam suggests a progressive silting over many years, whilst an admixture of chalk specks in the upper fill may reflect agricultural

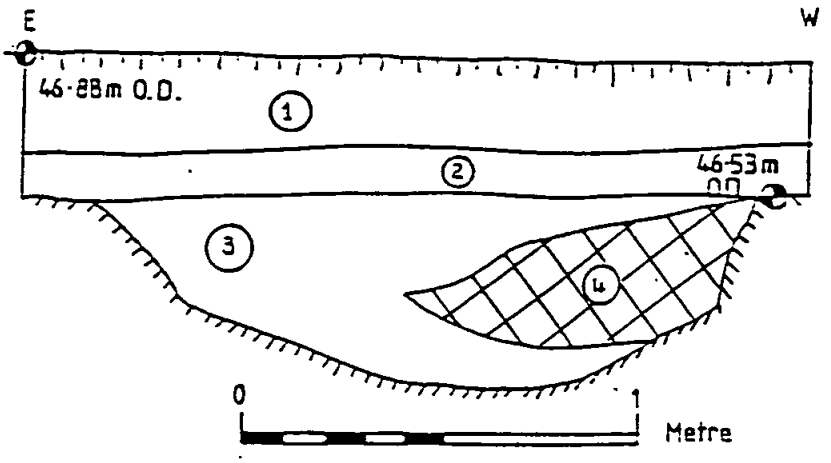


Fig. 3. Section across small ditch in Trench 1 (F.1)

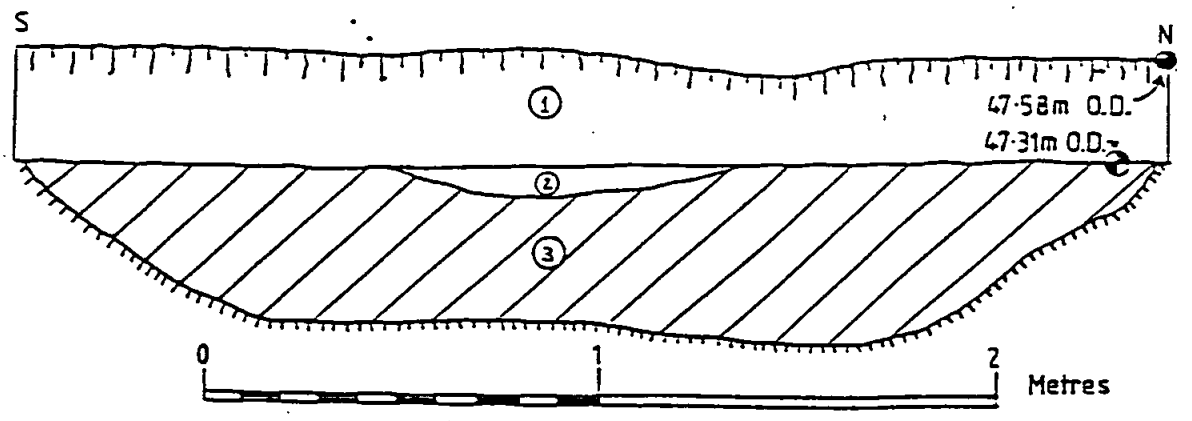


Fig. 4. Section across large pit in Trench 2 (F.3)

activity. If this is the weathered upper section of a vertical shaft, then the original depth could be anything from 3-20 m.. Some four struck flints, including a fine scraper, five fire-cracked flints and a grit-loaded potsherd of prehistoric date were recovered from the fill.

Trench 2 This was 30 x 2 m. in the Safeways area and not far below the apex of the hill. It contained a single large feature (F.3) cut into the Thanet Sand, here generally located at a depth of 28-30 cm. (Fig. 4). This feature was sub-rectangular in plan, with steep sides and a flat base. It was 3.20 m. in N-S length, but wider than 2.00 m. E-W, extending beyond the trench on both sides. It was cut about 45 cm. into the natural soil. It contained a creamy-brown sandy loam silt from which some 45 struck flints, 30 fire-cracked flints, fragments of animal bone and two sherds of 'corky' ware pottery of prehistoric date were recovered.

Trench 3 This was 40 x 2 m. in the Safeways area and nearest the Coldharbour Road on the north side. It contained no archaeolgical features and undisturbed Thanet Sand was encountered at a depth of 25-30 cm.

Trench 4 This was 30 x 2 m. in the Safeways area and it contained one large feature (F.4). Natural Thanet Sand was located at a depth of about 35-50 cm. with the ploughsoil sealing a general disturbed soil some 8-27 in depth. The feature (Fig. 5) was a large ditch running roughly N-S at a slight angle to the trench. It had a V-shaped profile, was about 3.70 m. wide and cut some 1.50 m. into the natural beds. It had a flat, narrow base 10-30 cm. wide and was filled with a series of progressive silts. The soils above the ditch contained 44 struck flints, 39 fire-cracked flints, two small black potsherds and a rim of late-medieval date.

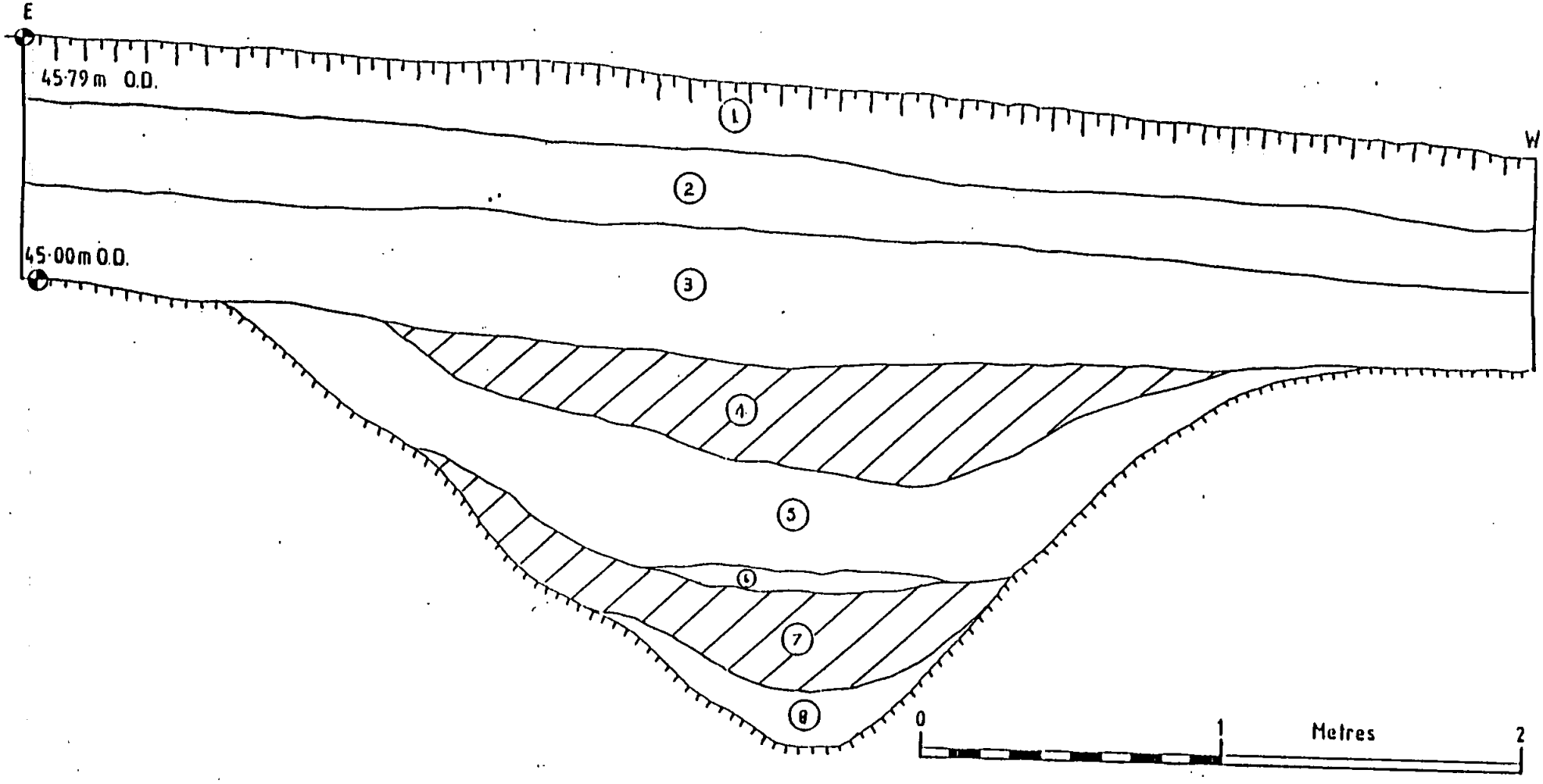


Fig. 5. Section across large ditch in Trench 4 (F.4)

Trench 4A This was 8 x 2 m. in the safeways area and dug as an extra trench to locate the continuation of the large ditch found in the adjacent Trench 4. The ditch was found at a point 10-12 m. to the north, but its profile was reduced and its depth less. Its line had also swung about 1 m. east sugesting that it may have curved. The filling was otherwise similar to that in Trench 4.

Trench 5 This was 30 x 2 m. in the Safeways area and closest to the presumed line of Watling Street and at the lower end of the site. It contained a single archaeological feature (F.5) close to its southern end, but otherwise natural Thanet Beds were encountered at 35-55 cm. with a deep band of disturbed soil (hillwash) generally 11-27 cm. above. The feature took the form of a band of medium sized pebbles some 5-8 cm. thick, lying in a shallow hollow some 3.30 m. wide and 15-20 cm. into the Thanet Sand. It ran roughly N-S across the site, contained traces of animal teeth and was generally sealed by some 50 cm. of hillwashed soils.

Trench 6 This was 30 x 2 m. in the Safeways area towards the top of the crest of the hill. It contained no archaeological features, with undisturbed natural soil at 24-32 cm.

Trench 7 This was 30 x 2 m. in the Safeways area and on top of the crest of the hill. It contained no archaeological features and undisturbed natural soils were encountered at a depth of 21-27 cm.

Trench 8 This was 30 x 2 m. in the Roundabout area (Fig. 6) on the north side of Coldharbour Road. Both ends of the trench revealed undisturbed brickearth at depths of 41-48 cm. but the central section contained a marked hollow where this increased to a maximum of 62 cm. This hollow, about 20 m. wide, contained four features (F.6 and F.21-23), of which only the first was partially excavated (Fig. 7). This contained 22 potsherds, with fine grit-loading and perhaps of Early Iron Age date. The hollow was filled with an orange-brown sandy

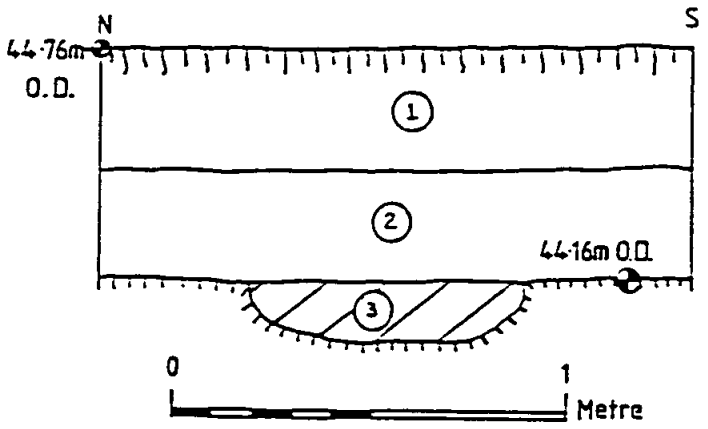


Fig. 7. Section across small pit in Trench 8 (F.6)

loam up to 34 cm. deep under 28 cm. of topsoil. The features are shown in Table A.

Trench 9 This was 30 x 2 m. in the Roundabout area on the north side of Coldharbour Road. It contained no archaeological features and undisturbed natural brickearth was encountered at a depth of 25 cm.

Trench 10 This was 10 x 2 m. in the Roundabout area and dug as an extra trench to those specified. It joined Trench 8 at a right-angle to determine if features extended on to the north (Fig.6). Another five features were located (F.24-28), but none was examined in the limited time available, on advice from K.C.C. Again, these sat in the hollow and were generally sealed by about 20-30 cm. of hillwash under a topsoil of 28 cm. deep. The features are also shown in Table A.

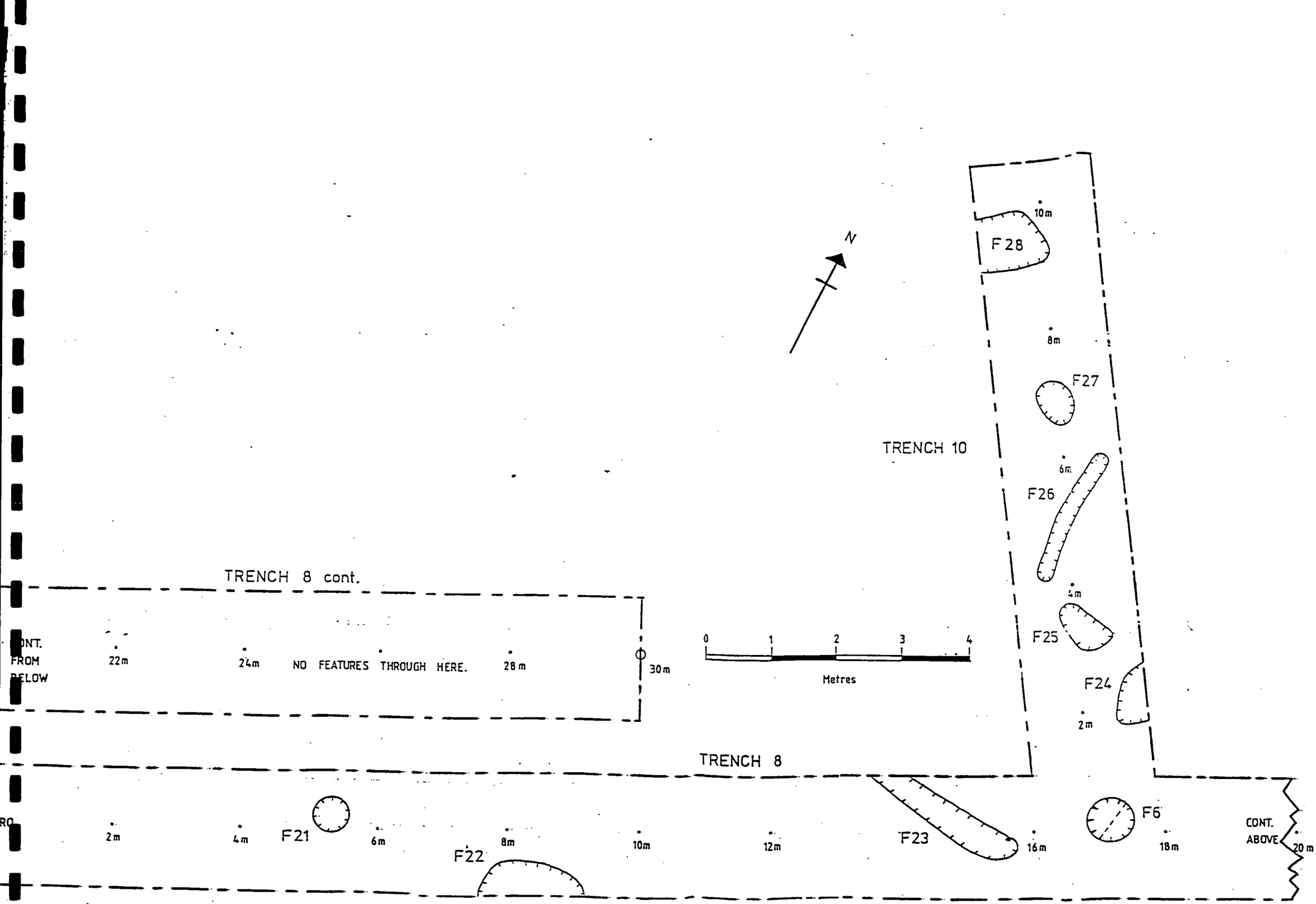


Fig. 6. Plan of Trenches 8 and 10

Feature	Trench	Size(m.)	Shape	Filling
F.6 Pit	8	0.70	circ.	Brown loam and pottery
F.21 Pit?	8	0.60 x 0.55	ovoid	Brown loam and pottery
F.22 Pit?	8	1.60 x 0.50 (min.)	ovoid	Brown loam and pottery
F.23 Gully	8	2.50 (min.) x 0.50		Brown loam and pottery
F.24 Pit?	10	0.90 x 0.50 (min.)	irreg.	Brown loam and pottery
F.25 Pit?	10	0.90 x 0.50	ovoid	Brown loam and pottery
F.26 Gully?	10	2.25 x 0.27		Brown loam and pottery
F.27 Pit?	10	0.75 x 0.55	ovoid	Brown loam and pottery
F.28 Pit?	10	1.10 (min.) x 0.90	irreg.	Brown loam and pottery

Table A showing details of features located in Trenches 8 and 10.

Feature	Code	Struck Flint	Fire-cracked Flint	Pot	Misc	Total
F.1 Ditch	2	11	1	1	-	13
F.2 Shaft	3	4	5	1	-	10
F.3 Pit	4	45	30	2	49 Bone	125
F.4 Ditch	5,6,10	44	39	3	-	86
F.5 Pebb. Track	7	-	8	-	11 Teeth	19
F.6 Small Pit	8	6	-	22	-	28
F.21 - F.28 (pits and gullies)	-	-	-	-	-	-
Total		110	83	29	60	282

Table B showing features and artefacts recovered during the excavation.

4) DISCUSSION

The broad scatter of trenches across the site appears to show that the majority of it contains no archaeological features. In fact, only five features were found in seven trenches south of Coldharbour Road and one tight group of small features was found to the north. Two areas are, however, of special significance, representing discrete sites (Sites A and B). It is possible that other, smaller sites exist between the trenches and it must be that several other features exist nearby.

1) SITE A

Trenches 4 and 4A picked up a substantial V-shaped ditch that was traced for a total of 14 m. Its line appeared to curve slightly uphill and it clearly continued beyond both trenches. This appears to be a curvilinear feature and, as such, very probably forms the lower side of a substantial ditched enclosure, probably circular or oval in plan. Whilst the short length of circumference found makes the probable diameter of any such enclosure difficult to assess, a dimension of somewhere between 50-100 m. seems probable. Trenches 2, 3 and 6 seem to have missed any continuation of this feature and this helps fix a likely outline, some 75 m. in diameter and this is shown on Fig. 2. It must be stressed that other possibilities exist, such as the ditch found could mark a curving corner of a large rectangular enclosure, or just possibly that the smaller ditch in Trench 1 could connect. If so, a diameter of 120-140 m. might apply. Ideally, this large ditch should be traced systematically in the ground, but lack of additional funds prevented this from being done.

No precise date can be given for this ditch. The only associated artefacts were struck flints and fire-cracked stones from its upper filling, of likely late-Neolithic of Early Bronze Age date. However, these may have derived from the adjacent land surface with the ditch silt and the ditch could be of much later date. On balance, the ditch should be prehistoric, but its precise date must remain open until more evidence is recovered. No trace of an upcast bank was found.

ii) SITE B - ROUNDABOUT AREA

Trenches 8 and 10 revealed that a hollow in the underlying brickearth, about 20 m. N-S and greater than 12 m. E-W contained at least nine features (F.S and F.21-28), one at least associated with a small amount of possible Early Iron Age pottery. The adjacent Trench 9 was clearly beyond the hollow and contained no features. The available evidence suggests the discovery here of a small Early Iron Age site, containing small pits and gullies, probably a settlement site. It seems probable that the associated land surface has been reduced by erosion and ploughing and that, but for features in the hollow and any deeply cut features, little may have survived.

iii) THE SHAFT

The large shaft in Trench 1 appears to be 10-12 m. in diameter at the top and certainly deeper than 2 m. This is probably the funnel-shaped top of a vertical shaft with a much smaller diameter and perhaps between 3-20 m. deep. The few flints and single potsherd in the upper filling are clearly derived from the silt and do not necessarily date the feature. It seems probable that this is a chalk well of medieval or later date and one of very many known in West Kent.

iv) PREHISTORIC SETTLEMENT

Most trenches produced small quantities of struck flint and fire-cracked flint and the former included two fine scrapers. In all, about 110 flints and 83 fire-cracked flints were recovered and some 29 small sherds of prehistoric pottery. If these are representative of the site as a whole, then substantially greater numbers must exist. These must represent residual artefacts from a settlement site hereabouts, but as most of the objects recovered came from silts in cut features of various dates, it seems likely that any such site has been reduced substantially so that only any deeply cut features will survive. This conclusion is supported by the generally shallow depth of ploughsoil, often sitting directly on the undisturbed Thanet Sand on the highest part of the site.

The one cut feature that was probably associated with such a reduced prehistoric land surface is F.3 in Trench 3. This sub-rectangular pit produced 43 struck flints and 30 fire-cracked flints. With this quantity, it seems likely these were discarded into the pit, probably in late-Neolithic or Early Bronze Age times. If so, other similar features could exist on the site. Significantly, or not, this pit also falls within the conjectured outline of the large ditched enclosure.

v) THE PEBBLE LAYER

The pebble layer in Trench 5 seems to be a carefully prepared surface, laid in a hollow cut into the natural clay. With a width of 3.30 m., this seems to represent a narrow E-W track running roughly parallel to the A2. Its deep cover of hillwash suggests a fairly early origin, though no dateable objects were found in association.

5) RECOMMENDATIONS

It now remains to consider the possible impact of the Safeways proposal for the archaeology discovered on the site during the evaluation excavation. Four features and two sites need to be considered.

a) FEATURE 1 — This ditch (lip at 46.530) lies near the petrol station where finished levels (47.530) are in excess of existing ground level and is thus not obviously threatened by development.

b) FEATURE 2 — This large shaft seems to sit exactly under one of the kiosks/shops of the petrol station. Whilst the intended finished levels (47.530) are roughly the same as now, there is some chance that the foundations may hit the top of the shaft (at 4.500). More particularly, the fill of the shaft may be highly unstable and the full implications of this need to be fully considered for the whole garage area.

c) FEATURE 3 — This pit (at O.D. 47.310) lies in the car park area (mostly at 47.250) and needs careful consideration. Apart from topsoiling, reduction of levels below 47.300 should be avoided and this should also safeguard any other cut features in this area.

d) FEATURE 5 — The pebble Trackway in Trench 5 is already deeply buried (at O.D. 42.000) and appears safe from the car park which is here raised well above existed levels (at about 45.000).

e) SITE A — The estimated area of the presumed ditched enclosure is covered by the central section of the car park (at O.D. 47.250) and the north-west corner of the Food Store (at O.D. 47.300). These are finished levels and, allowing for building formation, there is a real risk that the enclosure and any internal features could be damaged. This can be offset if the carpark area (above the existing 47.000 m. contour) can be topsoiled only and no reduction made below about 47.100 (north side) and 47.500 (south side). It is anyway likely that the foundations for the Food Store will destroy any features at its north-west corner and prior full excavation and recording here of an area about 30 x 30 m. is really needed.

f) SITE B — The hollow containing the features in the Roundabout area occurs at the edge of an access road. Providing the formation of this road is kept above 45.000 (SW) and 44.000 (NE) then the hollow will not be damaged. Provision should be made here for a full watching-brief on any service trenches.

g) WATCHING-BRIEF — In view of the features known and anticipated, a full watching-brief should be agreed for the Food Store, car park the petrol station area when service trenches are being excavated.

h) SHAFTS

It is recommended that a careful watch should be kept by contractors and engineers on all groundworks to locate any other filled shafts. Four were found over twelve hectares in a 2% sample and it seems likely that others may exist. Most such shafts contain voids at a low level and have sometimes collapsed.

CONSIDERATION:

It is quite clear that the evaluation excavation was successfully carried out in an efficient and cost-effective manner, in spite of very mixed weather. The work was completed within the time limit and also within the budget which included two more trenches than originally agreed.

The specified method of digging trenches in a scatter across the whole area, clearly provided important information on the general area. In fact, it located five individual features and a cluster of small features at one point. What is not known is how representative this result may be on a 2% sample. It seems likely that at least another 10-20 additional features could exist on the site. In particular, linear features crossing the site could still remain undiscovered passing between the trenches. Indeed, the presumed major enclosure (SITE A) was apparently missed by three trenches and located only in one.

The alternative method, employed by K.A.R.U. on some other sites, is for continuous trenching across the site and this should pick up major linear features, nearly always of key importance, as well as a scatter of other features. Whilst the scatter of features may also be unrepresentative, it should be that major linear features are located.

On the Safeways site, the large areas of barren ground suggest that much of the site is clear of archaeological features. In addition, the work suggested the possible concentration of features at two points. In these respects, the results proved satisfactory, but (as always) it remains to be seen how representative the discoveries are of the site as a whole. A 70% probability seems likely.

NFCR '93
Area 2 Plan
Scale 1:100

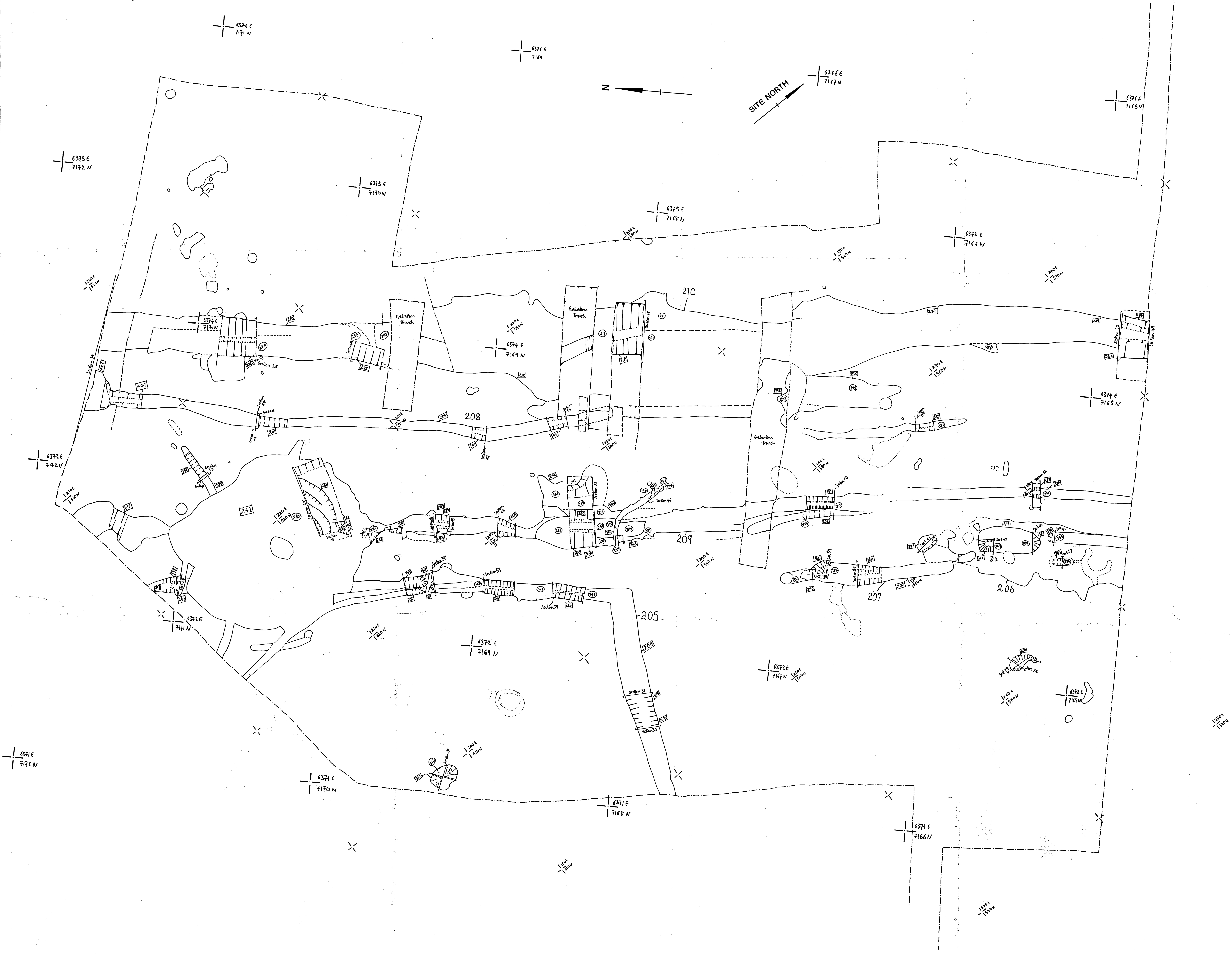


figure 4.

NFCR'93
Area 1 Plan
Scale 1:100

N

SITE NORTH

Levels Area 1a

1	44.75	11	45.85	21	44.79	31	45.16
2	44.85	12	45.65	22	45.01	32	45.35
3	44.88	13	45.76	23	45.43	33	45.14
4	44.73	14	45.47	24	45.29	34	
5	45.23	15	45.85	25	45.86		
6	44.97	16	45.53	26	45.42		
7	45.33	17	45.70	27	45.42		
8	45.09	18	45.54	28	45.30		
9	45.52.	19	45.31	29	44.94		
10	45.34	20	45.01	30	44.76		

Levels Area 1b.

1	44.94
2	44.42
3	44.78
4	44.48
5	44.78
6	45.02.

figure 3

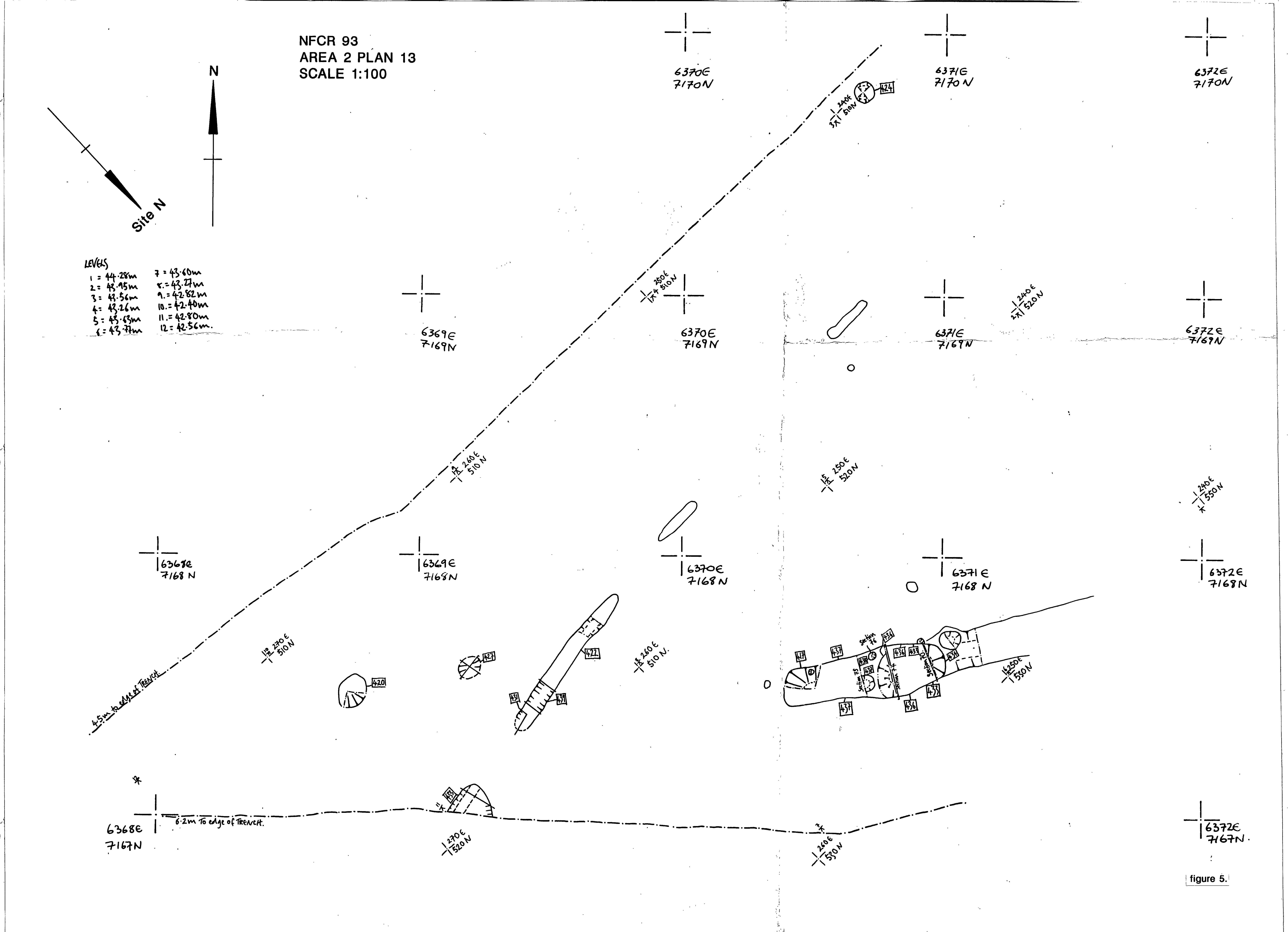

NFCR 93
AREA 2 PLAN 13
SCALE 1:100
N
Site N
LEVELS
1 = 44·28m
2 = 43·95m
3 = 43·56m
4 = 43·26m
5 = 43·63m
6 = 43·77m
7 = 43·60m
8 = 43·27m
9 = 42·82m
10 = 42·40m
11 = 42·80m
12 = 42·56m
6370E 7170N
6371E 7170N
6372E 7170N
6369E 7169N
6370E 7169N
6371E 7169N
6372E 7169N
6368E 7168 N
6369E 7168N
6370E 7168N
6371E 7168 N
6372E 7168N
6368E 7167N
6372E 7167N
4.5m to edge of TRENCH
6·2m To edge of TRENCH.

figure 5.

Oxford Archaeological Unit
46 Hythe Bridge Street
Oxford OX1 2EP

Tel: 0865 243888 Fax: 0865 793496

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