TRYHORN FIELD,
St Martin of Tours Church, Chelsfield, London Borough of Bromley

AN ARCHAEOLOGICAL EVALUATION

COMPASS ARCHAEOLOGY

September 2012

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St Martin of Tours Church, Chelsfield, London Borough of Bromley

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Planning Ref: DC/12/00479/FULL2

SITE CENTRE NGR: TQ 47984 64109

NW corner of field: TQ 47957 64164

E corner of field: TQ 48026 64101

SE corner of field: TQ 48004 64068

SW corner of field: TQ 47944 64077

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September 2012

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Abstract

Between 24th of July and the 10th of August 2012 an archaeological evaluation was conducted in Tryhorn Field, north of the Church of St Martin of Tours, Chelsfield prior to application by the PCC for the field to be converted into an extension of the present graveyard. The fieldwork was undertaken by Compass Archaeology after compilation of a desk-based assessment and recommendations from English Heritage.

A total of 6 trial trenches were opened with a tracked machine in various locations across the field. In four of the trenches little of archaeological significance was encountered and natural clay and gravel deposits were exposed across the site. However, in the two most northern and western trenches the remains of a rounded pebble surface containing large quantities of burnt and worked flint were exposed below the subsoil. The flint-work included all stages of the process; from 'tested nodules' and 'bashed lumps' to cores, flakes, scrapers and blades.

It was decided that the nature and extent of this surface required further investigation and so four more test pits were dug to the east of, and between, trenches 1 and 2. Upon further investigation the surface in trench 2 was shown to continue up to the edge of a large feature containing water-lain deposits, and in the base, prehistoric pottery and a stone weight. The gravel surface was interpreted as a deliberate attempt to gain access to the edge of a large pond, perhaps for agricultural purposes such as watering livestock, or, (because of the struck flint), as the site of occasional tool manufacturing. The burnt flint could represent domestic or even industrial processes associated with the heating of water.

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OS maps (figs.1,2,3 and 7), reproduced from OS data with the permission of the Ordnance Survey on behalf of The Controller of HMSO. © Crown Copyright. All rights reserved. Compass Archaeology Ltd., licence no. AL10003131

1 Introduction

1.1 This report forms the summary of the results of an archaeological field evaluation conducted in Tryhorn Field, north of the church of St Martin of Tours, Chelsfield in the London Borough of Bromley. The evaluation took place between the 24th July and the 10th of August 2012 and entailed the excavation and recording of 6 trial trenches and 4 test pits across the field. The fieldwork was carried out in accordance with stipulations attached to planning consent to convert the use of the Tryhorn field from open scrubland to an extension of the church graveyard, (planning reference DC/12/00479/FULL2).

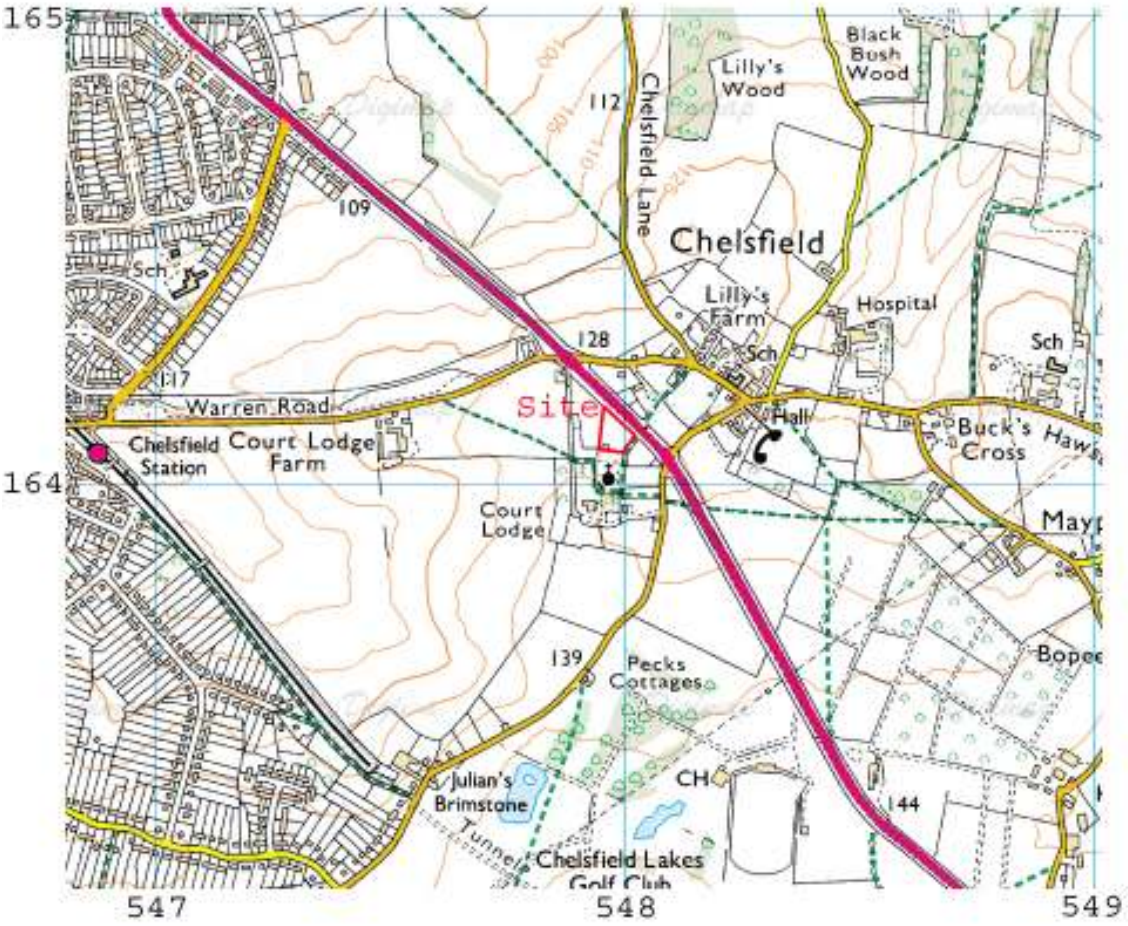

Fig.1: *Site location, the Tryhorn Field is shown outlined in red*

1.2 The works were commissioned by the PCC of the Church of St Martin of Tours following a desk-based assessment carried out by Compass Archaeology in June 2012 and recommendations from English Heritage.

1.3 Compass Archaeology is grateful to the PCC of the Church of St Martin of Tours for commissioning the works. Compass Archaeology would also like to acknowledge the help and co-operation of The Reverend Paul Spreadbridge, (Rector); Philip Lane and Steve McCann, (Churchwardens), for granting access to the site and providing welfare facilities; Philip Lane, (Philip Lane Photography), for his collection of photographs concerning the history of Chelsfield; Mark Stevenson, (English Heritage Greater London Archaeology Advisory Service), for his advice regarding the fieldwork and Alan Hart, (Orpington and District Archaeological Society), for his knowledge of other relevant local archaeological fieldwork.

2 Site location, geology and topography

2.1 The Tryhorn Field is bounded to the north by Court Road (also referred to as the Orpington By-Pass, A224), to the east by fields fronting onto Church Road, to the south by the existing graveyard of St Martin of Tours Church and to the west by fields fronting onto the north-south track which leads from Rose Cottage to Court Lodge (TQ47925 63951). In the SW corner of the field is a small modern stable/former piggery block and to the east of this a dilapidated piggery.

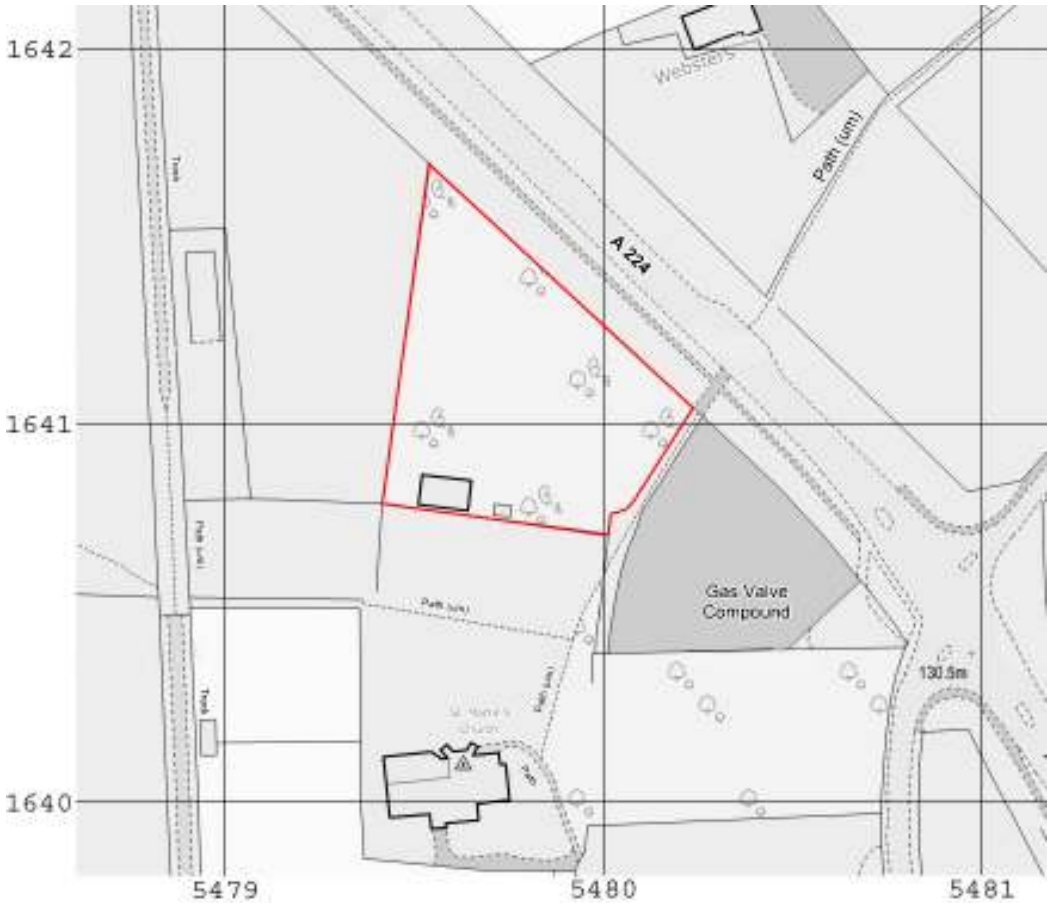

Fig.2: *Site layout, the Tryhorn Field is shown outlined in red. The small buildings, shown in the field are a small modern stable/former piggery block and to the east of this a dilapidated piggery.*

2.2 The British Geological Survey depicts the Tryhorn field lying over a geological formation known as the Blackheath Beds, comprising a mixture of sands and pebbles, with localised clay-rich pockets. The underlying stratum is Upper Chalk[1]. Geotechnical investigations in the graveyard in the form of a trial pit and two boreholes in 2006 revealed graveyard deposits to a depth of 1.2m (*circa* 133.8m OD), over natural sand (with some clay, most probably a component of the Blackheath Beds) over chalk. Philip Lane (Churchwarden) notes that the spoil that comes out of graves in the churchyard, and that was seen in some drainage works in the Tryhorn Field in 2006, is generally yellowish clay containing flints.

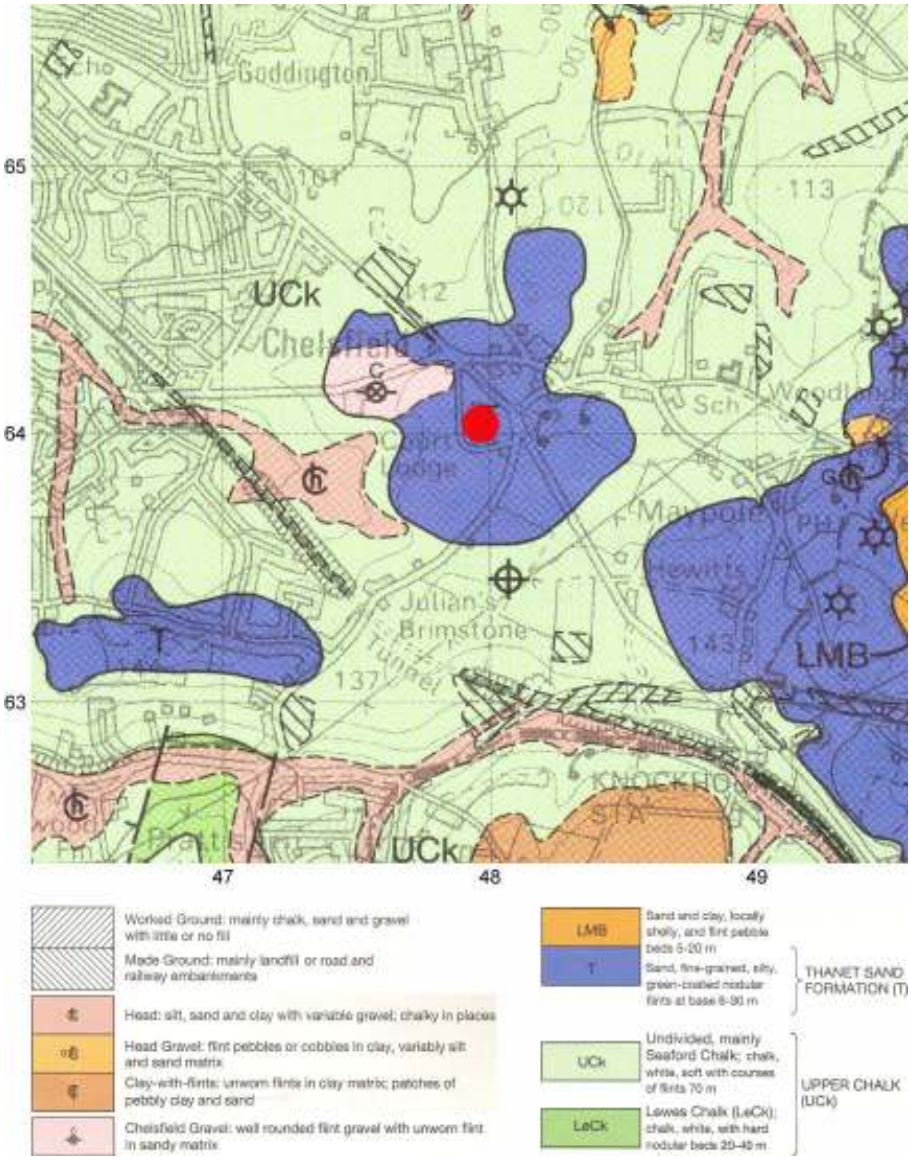

Fig.3: *Extract from the British Geological Survey 1998: Dartford: England and Wales, Sheet 271. 1:50,000 series. The approximate location is shown circled in red*

[1] British Geological Survey 1992. *Dartford. England and Wales Sheet 271. 1:50,000 series*

2.3 The Church of St Martin of Tours lies at a height of about 135m OD, and is approximately centred at NGR TQ 47962 64002. The church is visible for a considerable distance and is on top of a natural rise in the landscape. A walkover survey conducted by Compass Archaeology for the desk-based assessment recorded the site as gently sloping off towards the north and east, but with no major variations noted.

3 Archaeological and historical background

A highly detailed background to the site was provided in the desk-based assessment produced in June 2012 by Compass Archaeology prior to the evaluation works being commissioned. What follows is a highly condensed version of this so as to avoid unnecessary repetition.

3.1 Prehistory

The Church and field are located on high, well-drained land which would have created a natural topographical advantage and might suggest that this area would have been favoured for settlement during the prehistoric periods. However, the paucity of HER entries for prehistoric finds, (5 within a 750m radius around the Tryhorn Field), and the fact that the five individual find-spots were all generally unprovenanced seems to suggest otherwise. The entries are mainly antiquarian, chance finds, dating from the late 19th to early 20th century, which adds further potential for error. The individual finds appear to simply indicate 'background noise', rather than evidence of settlement.

Of particular interest however, (considering the results of the archaeological evaluation), is that when the accommodation road to the Orpington By Pass was built in *c.*1934 by Fordyce Bros (Builders) a clay-lined, oblong pit with rounded ends was found cut in the solid chalk at TQ 4699 6498. This is approximately 1km to the northwest of the Tryhorn Field. The description from the 1930s sounds quite vague, but reading between the lines it appears to describe a later prehistoric burnt mound. A rectangular pit was found, lined with clay, which had been extensively burnt and among the calcined flints and animal bones which half-filled the pit was found the base of a very coarse-ware black pot of Early Iron Age date. There is wide debate over the function of burnt mounds and the generally accepted explanation is that they are used primarily to heat water by the immersion of hot stones. The most common feature of all these monuments, of which there is a growing number in the south of England, is water and the containment of water[2].

[2] *Barber (1990, 101) suggests the purpose of burnt mounds is multifunctional, being used for bathing, washing and as sweathouses alongside a wide range of other semi-industrial functions of which we have as yet little indication. Barfield & Hodder (1987) and more recently Armit & Braby (2002) have demonstrated ethnological parallels for burnt mounds and their internal structures. Work on the numerous Shetland mounds by Moore & Wilson (1999) has indicated that they are not a homogenous class of site and they cannot be neatly accommodated within any single umbrella explanation, it is probable that similarly the southern mounds may have been used for various purposes dependent upon the individual requirements of their users.*

3.2 Roman

Very little evidence has been found for Roman activity in the vicinity of the site. A single HER entry is an individual chance find, (essentially residual evidence), rather than extensive evidence for Roman activity or occupation. Marie-Louise Kerr (Curator, Bromley Museums Service) notes that the Museum database has a reference to some sherds of pottery and tile (identified as Romano-British, medieval and post-medieval) being found at Rose Cottage on Warren Road, apparently by the field track to St Martin's Church, in 1983. The Museum record notes state: "*Mrs M…, owner of Court Lodge Farm, told Mrs J…, tenant of Rose Cottage and donor, that three cartloads of similar (?) material was removed c.1933 and dumped*"[3]. It is difficult to know what weight to attach to this reference as the HER entry for this same event refers to the pottery as being solely post medieval in date. No Roman evidence of any sort has been found during other archaeological investigations and fieldwalking projects in the immediate vicinity of the site.

3.2 Saxon

There is only one HER entry dating to the Saxon period. This refers to a chance find by a metal detectorist of some fragments of metalwork, one of which was identified as an animal head decoration and therefore thought to be Late-Saxon.

However, more reliable evidence for Saxon Chelsfield comes from the *Domesday Monachorum,* which is an ancient book in the archives of Canterbury Cathedral. Research has shown that the list in the *Domesday Monachorum* is a Saxon list, hurriedly found and copied out to meet the instructions of Archbishop Lanfranc when he came into office in 1070. The book contains a list of churches which paid a '*Chrisom Fee'* to their diocesan bishop for the 'consecrated oil' he supplied for use during Christenings. Parishes with a resident priest were listed as Churches and those without a priest were listed as Chapels to the parish where the priest resided. '*Faernberga'* (Farnborough) paid 6d as '*Chrisome fee'* as a Chapel to Chelsfield. There is little else to suggest Saxon settlement or activity in the area of the Tryhorn Field.

The origin of the name 'Tryhorn' is not known, but it is most likely that it refers to the name of an earlier tenant or landowner. Tryhorn is generally felt to be a derivation of the surname recorded as *Tryhorn, Trehorne, Trayhorne, Tryhern* and possibly others. It is thought to be of Old English and Welsh pre-7th century origins. It is either a patronymic or a locational name. In both cases it is felt that it is derived from the ancient *Trahaearn*. This was composed of the elements '*tra*' meaning most, and '*haearn*' – iron. Though of interest, this does not mean that the Tryhorn Field in Chelsfield is derived from such ancient origins.

[3] Marie-Louise Kerr, *pers comm* 7th June 2012.

3.3 Medieval

HER entries refer to two chance coin finds, and to the medieval church and the manorial estate on the site of Court Lodge; some residual medieval pottery was discovered in the Brass-Crosby Hall excavations of 2001 and 2006 in the graveyard. These excavations revealed extensive burials within close proximity of the church ranging from pre-13th century to late 19th century in date.

The Church of St Martin of Tours is, ecclesiastically, in the diocese of Rochester[4]. The Church is in the early English style and probably has its origins in the twelfth century. The small parish church of St Martin of Tours is first documented in the *Textus Roffensis* of 1122; the *Textus Roffensis* was a collection of legal documents that detailed the laws of King William I of England and recorded ownership of land.[5] At St Martin of Tours elements of the nave and chancel are probably of at least early Norman date, with later alterations such as the south aisle and square tower belonging to the 13th century[6]. It is apparent that the church has undergone several other phases of restoration/alteration during its lifetime.

In 1290 the possession of the manor of Chelsfield passed to Otho de Grandison, who obtained licence for a market here, and a fair on the feast of St. James the apostle, and free warren in all his demesne lands in *Chelesfeld*. His grandson Otho died during the reign of Edward II (1307-1327) and, by his will directed that his body, if he died at Chelsfield, be buried in the chapel of St John there. A small chapel, dedicated to St. John, still survives in the church on the south side. In a taxation, in the reign of King Edward III (1327-1377) this church is said to have consisted of a *messuage,* [now known as Court Lodge] and fifty acres of arable, pasture, and wood, also in the inheritance of the Church[7].

There are other detailed parish and manorial records that do survive, but they do not materially inform on the field plots to the north of the Church. Geoffrey Copus' excellent work, '*Chelsfield Chronicles: Annals of a Kentish Parish, 1450 – 1920*', published in 2003, is perhaps the best local account of the history of Chelsfield parish

There is no definitive evidence to suggest that medieval settlement extended north of the Church and into the area of Tryhorn Field.

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[4] John Marius Wilson, comp. *The Imperial Gazatteer of England and Wales*. (London, England: A. Fullerton & Co., 1870). Extracted from the on-line site 'Kent Online Parish Clerks: Chelsfield Parish'

[5] Hart, A. 2002 Trial excavations in the churchyard of St Martin of Tours, Chelsfield *Archives of the Orpington & District Archaeological Society* **24** (2) 21-31, 2002.

[6] Newman, J. 1969 'West Kent and the Weald' in *The Buildings of England*, Pevsner, N. (ed.) 1969 pp.200-201

[7] Extracted from Hastead, E 1797 'Parishes: Chelsfield', The History and Topographical Survey of the County of Kent: Volume 2 (1797), pp. 83-97.

3.4 Post medieval

The post medieval settlement of Chelsfield had two centres: the manorial estate of Court Lodge to the south of the Church and the historic village set some 350m away to the northeast in the hollow. The HER has nineteen references to listed buildings in the village, however, as these were not particularly relevant to the study site they were not included in discussion within the desk-based assessment[8].

Cartographic evidence depicts the study site as being part of a system of open fields extending north of the church and along the western side of the medieval village. Chelsfield is depicted as being located on a well established trackway between Halstead to the south and St Mary Cray to the north in 1596, and 17th and 18th century maps depict the road layout largely as it exists today excluding the by-pass which was built in 1928.

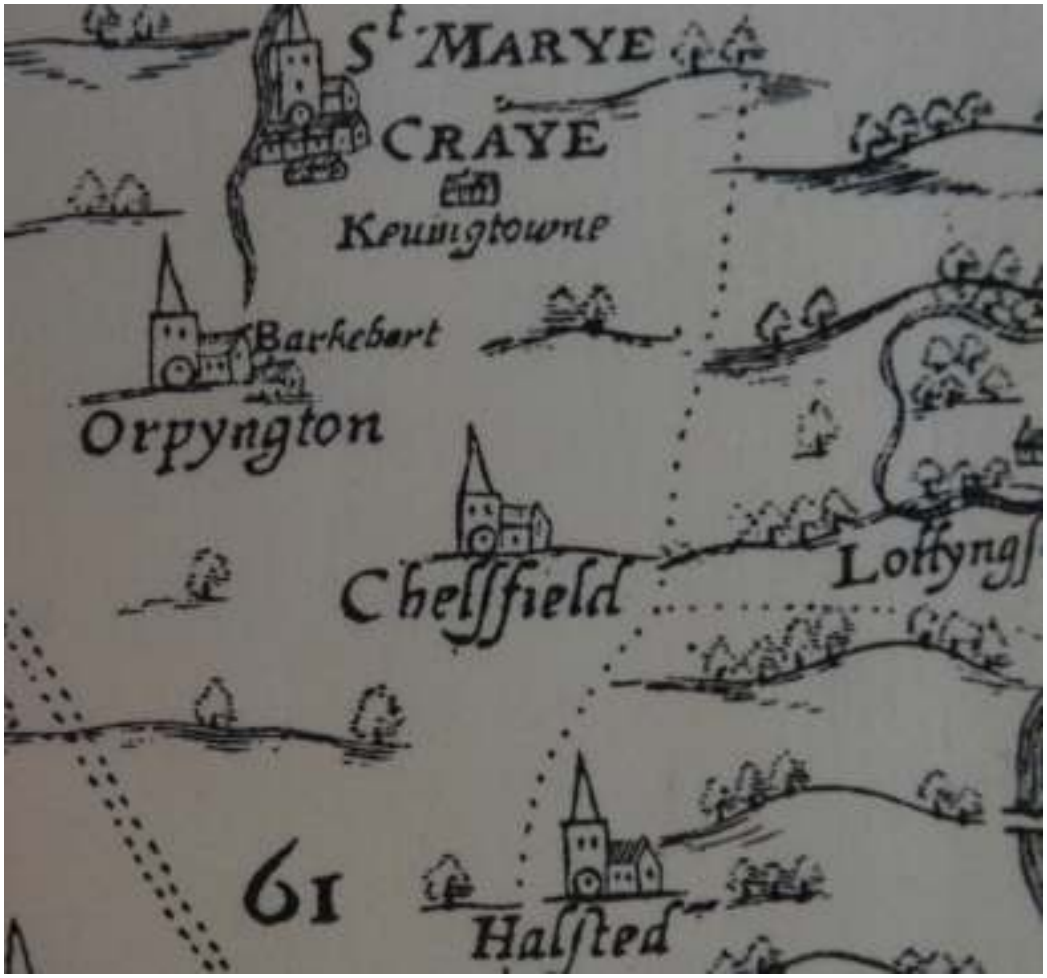

Fig.4: *Extract from Symondson's 'Map of Kent', dated 1596, showing the Church*

[8] A full print out of the HER search commissioned by Compass Archaeology for the desk-based assessment is available upon request.

It is not until the 1840 Tithe map that the study site is shown in sufficient detail to see that it was part of a much larger field that extended to the north, east and south. The western boundary is hereby shown to be the most historic boundary to the field. The apportionment states that it belonged to Robert Crawford Esq., was laid to pasture and was then known as 'Little Church Field'.

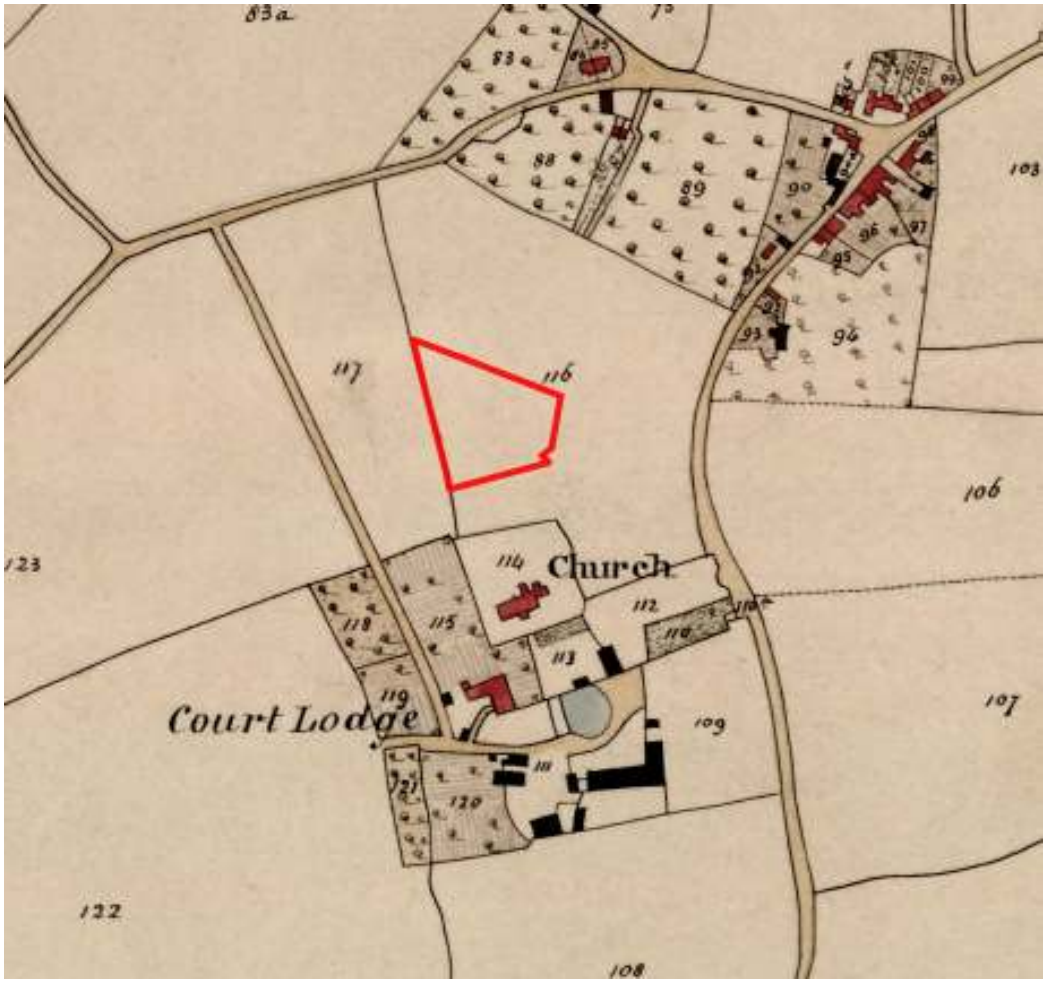

Fig.5: *Extract from the 1840 Tithe Map. The Tithe apportionment names Field 116 as 'Little Church Field'*

The 1863 and 1896 OS Maps depict the site as being part of the same large field but with the graveyard of the church having been extended up to the southern boundary of the modern day site. In 1868 the railway reached Chelsfield and provided much easier access to London trade and resources such as coal which helped with the expansion of 'New Chelsfield' to the NE of the church.

The 1909 OS series shows the fields in much better detail and for the first time we can see the footpath leading up the eastern boundary of the study site, known as the church path. This was the main foot route from the village to the church. Other footpaths are also shown. The 1909 series is the first map to have the route of the Orpington By Pass, (Court Road), plotted out. This road was to dramatically isolate the church from the village and cut the large field in two.

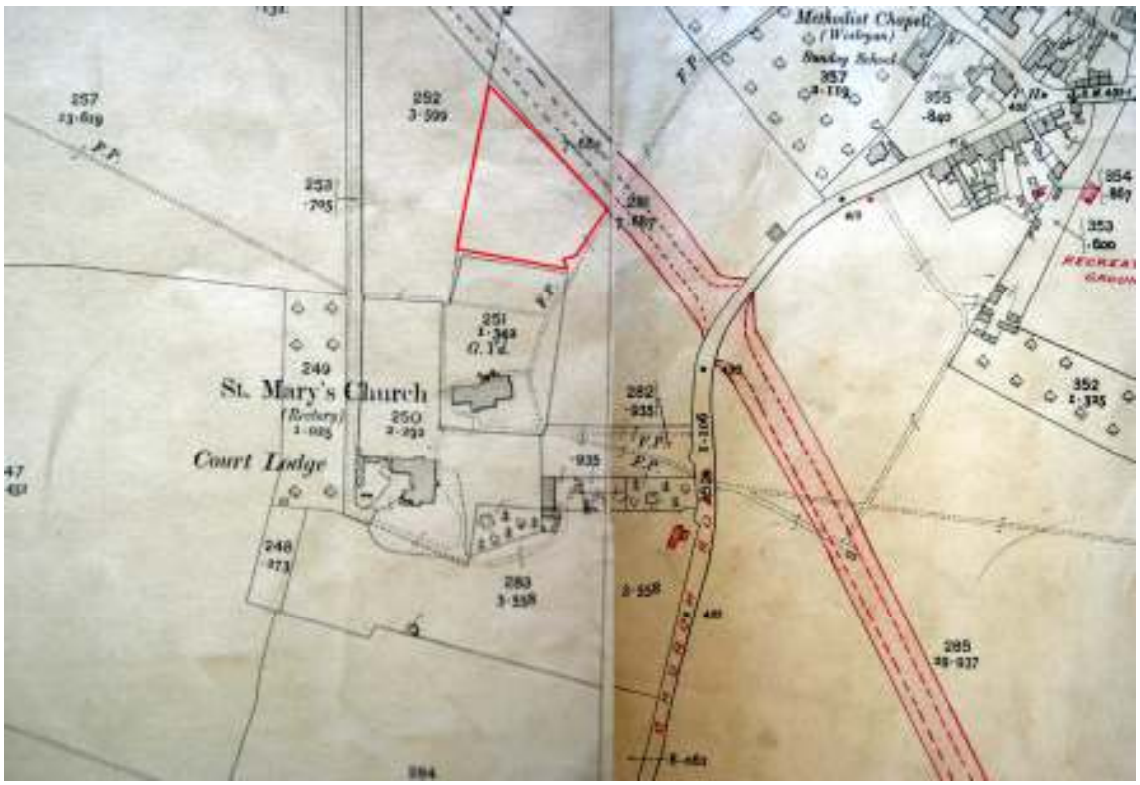

Fig.6: *Extract from the Ordnance Survey 25inch OS Map, 1909, with site marked*

The construction of the by-pass in 1928 heralded the last major change to the outlay of the local area and established the fields' northern boundary. Besides the use of the Tryhorn Field as a piggery / stables, with their associated buildings, the area has remained largely unchanged since this time.

4 Archaeological research questions

The site represented an opportunity to address several research questions, these include:

- Is there any evidence for prehistoric or Roman activity in the site-area?

- Is there any evidence relating to Saxon and / or medieval activity in the site-area? In particular, does this evaluation provide any evidence for where the earliest settlement may have been located?

- At what levels do any archaeological or geological deposits survive across the area?

5 Methodology

5.1 Fieldwork

The fieldwork was carried out in accordance with current English Heritage guidelines (in particular, *Standards for Archaeological Work, June 2009)* and to the standards of the Institute for Archaeologists. Overall management of the project was undertaken by a full member of the Institute. Fieldwork was carried out in accordance with the Construction (Health, Safety & Welfare) Regulations.

Initial ground reduction was undertaken by mechanical excavator under constant archaeological supervision. This was continued until archaeological deposits were encountered or natural deposits reached, whichever was first.

Upon reaching archaeology, deposits were excavated by hand in stratigraphic sequence.

The archaeological evaluation included an on-site photographic and written record. As a minimum *pro forma* Trench Record sheets were completed for individual trenches and test pits; recording the nature of exposed deposits and details of any archaeological finds and features. Individual features were allocated unique context numbers and *pro forma* context sheets completed. Where suitable finds/samples were collected from deposits for dating purposes. The written record was supplemented by photography recording general trench locations and representative trench sections. Relevant trench plans and representative sections were drawn at a scale of 1:10 or 1:20.

The Client and Mark Stevenson of English Heritage were kept advised of the progress of the fieldwork, especially regarding any significant finds and remains that required further work.

5.2 Post-excavation work

The fieldwork was followed by off-site assessment and compilation of a report, and by ordering and deposition of the site archive.

Finds were treated in accordance with the appropriate guidelines, including the Museum of London's *'Standards for the Preparation of Finds to be permanently retained by the Museum of London'*. Finds and artefacts were retained and bagged with unique numbers related to the context record, although some material was discarded following assessment. Assessment was undertaken by appropriately qualified staff.

Copies of this report will be supplied to the Client, English Heritage, the local planning authority and the local studies library. A short summary of the fieldwork has been appended to this report using the OASIS Data Collection Form, and in paragraph form suitable for publication within the 'excavation round-up' of the *London Archaeologist*.

6 Results

The proposed field evaluation consisted of six trial trenches located within the site (fig.7 below). The two southern trenches measured *c.*12m in length by 3.6m in width; the two in the central part of the site *c.*10m in length by 1.8m in width; and the two in the northern-most part of the site *c.*12m in length by 1.8m in width. This covered an area of *c.*165.6m^2, within an area of *c.*0.45ha (amounting to *c.*3.6% of the footprint).

The trenches were sited in various locations across the study area, and at opposing angles. They are also located to provide the best chance of encountering areas of archaeology, (i.e. the possible boundary feature along the western boundary), and avoid those areas believed to have been disturbed by recent developments, (i.e. the areas of concrete bases observed in the 1960s aerial photograph), (Compass Archaeology, June 2012).

A further contingency for another area of trenching equivalent to the size of one trench (*c.*12m x 1.8m) was included. This was used where archaeological remains were encountered during the initial excavations within trenches 1 and 2. A further 4 test pits were machine dug, and then cleaned by hand, to better establish the nature and extent of the archaeological deposits encountered in the west and north west corner of the field.

The results of the archaeological evaluation are discussed below in the order in which the trenches were first excavated and as numbered in fig.7

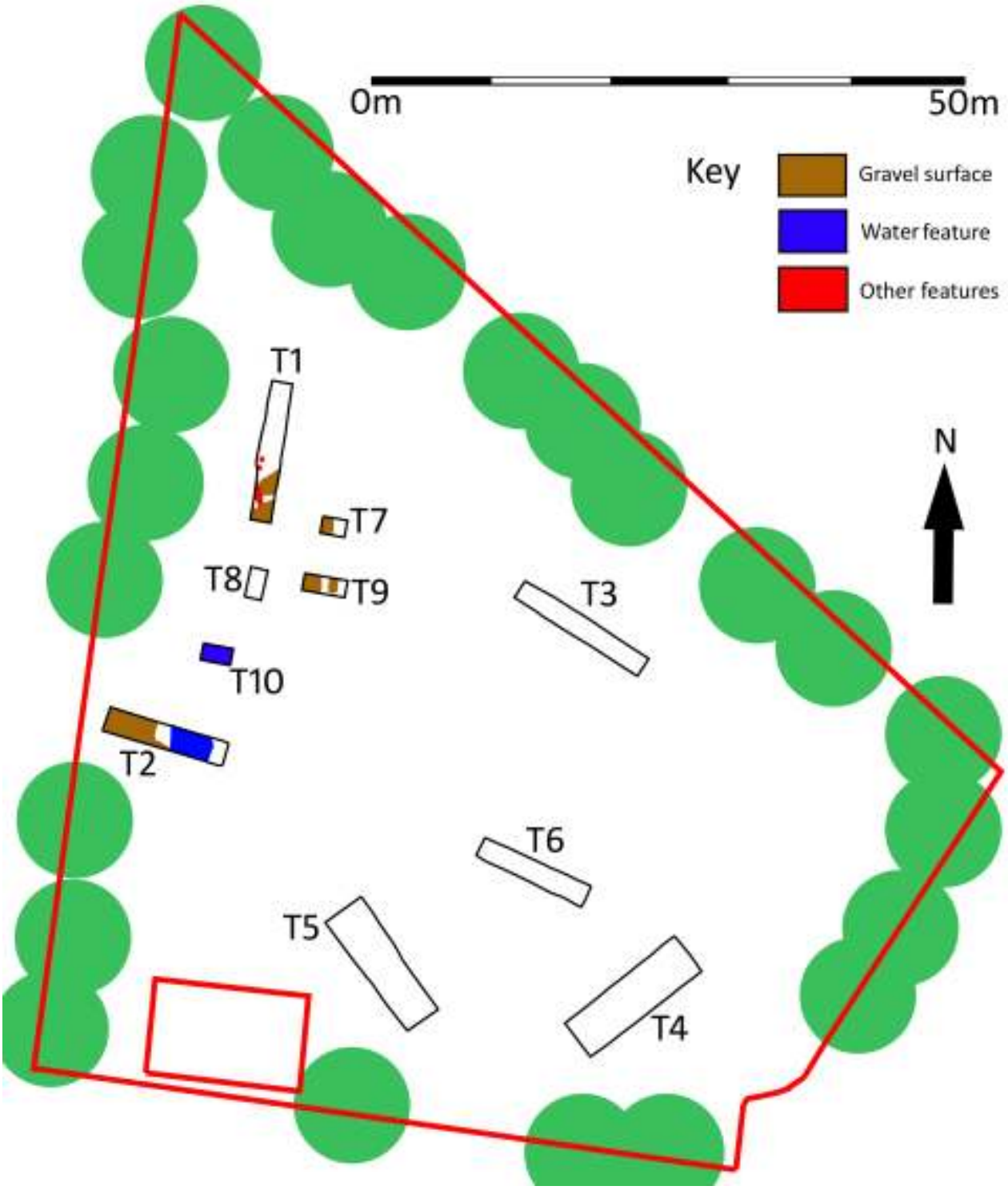

Fig.7: *Site plan with trench locations and archaeological features. Numbers allocated refer to the order in which they were excavated*

Trench 1 *(see Appendix I figs.32-33)*

Trench 1 was 1.8m wide by 11.75m long and situated in the NW corner of the field. Excavation exposed natural gravels and patches of iron panning at the northern end of the trench 330mm below present ground level and gently sloping off to a depth of 840mm towards the centre of the trench. The greater depth of the natural deposits, (those towards the centre of the trench), were sealed below a mixed silt-clay deposit, up to 500mm thick, (context 15). This was sterile and may represent weathered natural accumulating in the base of a natural hollow.

Fig.8: *Trench 1 facing N with surface (5) in foreground, feature [4] to left of scale, and charcoal rich features [7] and [9] in centre of frame.* (1m scale)

Overlying this accumulative deposit at the north end and natural clay towards the south, and extending across the width of the trench for the southernmost 4.5m, was a thin rounded pebble surface containing frequent burnt flint, and some struck flint, (see fig.9). This deposit, (context 5), was exposed at 131.76mOD, and was overlain by 580mm of brown-grey subsoil, (context 1), and the existing topsoil.

Fig.9: *Detail of pebbled surface (5) in Trench 1.* (20cm scale)

Two discreet sub-circular features, (7 and 9), were cut into the surface of the deposits on the edge of the lain pebbles. They appeared to respect the metalled surface rather than truncate it and contained large quantities of burnt flint and some concentrated patches of charcoal suggesting *in situ* burning, or dumps of burnt material. As they were rather shallow and few in number it is hard to decide their true function, whether part of a post alignment or some other structure.

Fig.10: *Post hole [7], facing S. Is the concentration of charcoal the remains of a post pipe?* (20cm scale)

An isolated feature, (context 4), was present within the top of the metalled surface, (5), at the southern end of the trench. It appeared linear in shape, aligned NW-SE, terminating in a rounded end at the SE end, and measuring approximately 1.4m+ long and 500mm wide, but only 110mm deep. It was filled with a loose brown, silt-clay, (context 5), but came down onto the same pebbled surface, (5). This may suggest that the feature was actually just a subsidence in the surface rather than a physically cut feature.

Whilst stripping the overburden to expose the metalled surface within Trench 1 a peculiar find was recovered. It took the form of a large piece of flint, which had split in half to reveal the imprint of a fossilised bivalve shell belonging to the Pecten genus, (scallops)[9]. The face of the fossil had been partially smoothed and someone had carefully knapped away around the edge of the flint to expose the image of the fossil to form what can best be described as a discoidial core[10]. This had created an object that could be held in the palm of the hand, perhaps as a keepsake or curio as one does in modern times: collecting shells from a beach or fossils from a quarry.

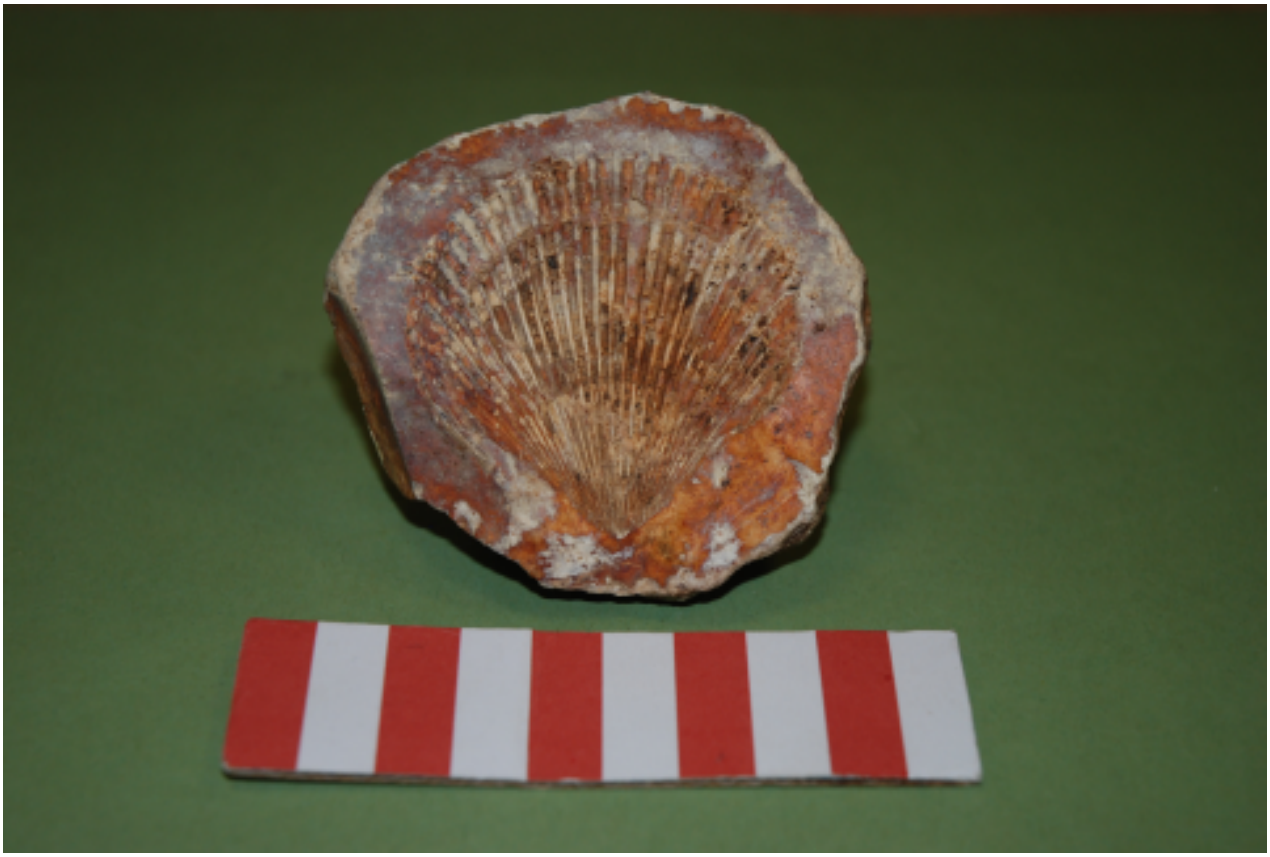

Fig.11: *Pecten Fossil curio found within the subsoil of Trench 1* (10cm scale)

[9] British Geological Survey website bgs.ac.uk/discoveringGeology/time/fossilfocus/bivalve.html
[10] Pers.comm. Jon Cotton

Fig.12: *The rounded shape of the fossil curio created by carefully knapping at the edges of the flint to create a hand held object, yet preserve the fossil intact* (10cm scale)

Fig.13: *Detail of the edge of the fossil curio showing the careful knap marks in the brown and orange banded flint* (10cm scale)

Trench 2 *(see Appendix I figs.34-35)*

Trench 2, (fig.14), was substantially deeper than all the other main trenches, (1-6), with archaeological deposits lying under a thick deposit of accumulated subsoil, 760mm deep at the west end and 900mm deep and the east end. The trench itself measured approximately 2.10m wide by 10.7m long.

Fig.14: *Trench 2, facing E, pebbled surface (11) in foreground. There is an excess of subsoil in the centre of the trench.* (1m scale)

The same metalled surface as was observed in the southern end of Trench 1 was present from the western end of Trench 2 for 5.3m, (half its total length), and across the entire width of the trench, and was exposed at 131.97mOD. The gravel layer, (context 11), was no more than 60mm thick, contained frequent worked flints, and large quantities of burnt flint, and overlay natural clay-silts. A single sherd of late Iron Age or early Roman date was recovered from cleaning over the surface[11]. Of note is the fact that pebbles (5)/(11) directly overlay the natural; suggesting a deliberate truncation of any previous land surface prior to laying down of the surface.

[11] See Appendix II page for more detail.

At the eastern end of the trench the pebbles partially slumped into the uppermost fill of a large cut feature, approximately 3.25m wide and 1.00m deep. The feature, (context 14), had steeply sloping sides, a narrow base, and was filled with a thick, grey-blue clay merging into a pale-brown / orange clay-silt higher up, (fills 13 and 12 respectively). In the lower fill, (13), several fragments of prehistoric pottery were recovered along with a few small worked flints. The pottery was very coarsely made, comprised of a groggy mix of clay and fired/crushed flint. It had very little diagnostic value as the pottery almost entirely comprised small body sherds with one or two pieces hinting at the vessel having had a flat base. Without more of the vessel rim the pottery could only be broadly dated to the late Bronze Age, possibly early Iron Age. The flints were also dated to the Late Bronze Age, showing signs of utilisation[12]. The base of the large feature was at 130.73mOD and took a slightly irregular linear form in shape. The clay-like nature of the fills, and the bleeding of the deposits into one another suggest they are of a water-lain nature, and the cut may be that of a large pond, or a channel feeding into a larger pond.

Fig.15: *Pottery recovered from the base of feature [14]* (10cm scale)

[12] Pers.comm. Jon Cotton for a more thorough discussion of the flints see Appendix I

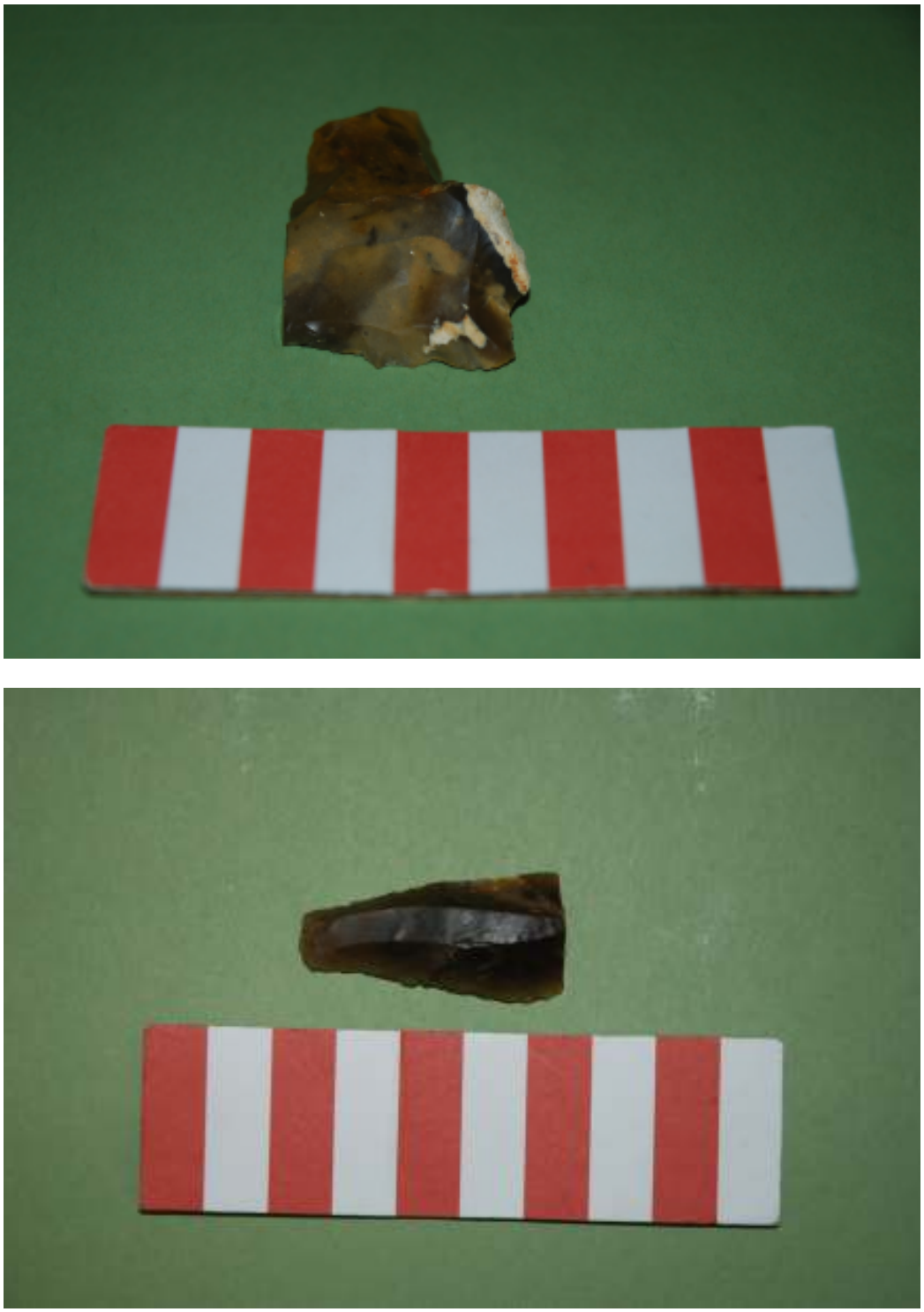

Fig.16: *Flints found in the base of feature [14]. Above a denticulated scraper for cleaning fat from the inside of hides, and below the broken, distal, end of a small blade. Both dated to the late Bronze Age* (10cm scale)

Also of note was a holed stone that was deposited in the very base of the feature. These naturally occurring stones have featured in folklore for thousands of years and are believed to have held magical properties, including protection against witches, (hence the name 'hagstones'), healing ailments and as fertility symbols. It is therefore believed that this stone in the context of its deposition was deliberately gathered[13] it may possibly have been deposited as a crude votive offering to protect the water hole from evil influences.

Fig.17: *The 'Hagstone' recovered from the base of the pond, context (13)* (10cm scale)

[13] Pers.comm. Jon Cotton

Fill (12), in the upper half of the feature, also contained worked flint including two 'tested nodules' where the knapper had chipped small portions of the cortex away to determine the quality of the core material. Upon answering this question the nodules were discarded, as they were not deemed of sufficiently high quality. One other piece of flint recovered appeared to have characteristics suggesting it had been chipped from the edge of a Neolithic polished axe. Nearly all the worked flint recovered from the site appeared of inferior quality with few examples of retouched or utilised tools, cores and flakes. Where these were present they generally showed signs of abrupt retouching with little finesse. This is typical of late Bronze Age tool work.

Fig.18: *'Tested nodules' from context (12) within the upper fill of feature [14],* (10cm scale)

Fig.19: *A fragment of Neolithic hand axe found in the upper fill of feature [14] note the shine on the polished edges. This may be residual or have been accidentally chipped off of an existing tool*

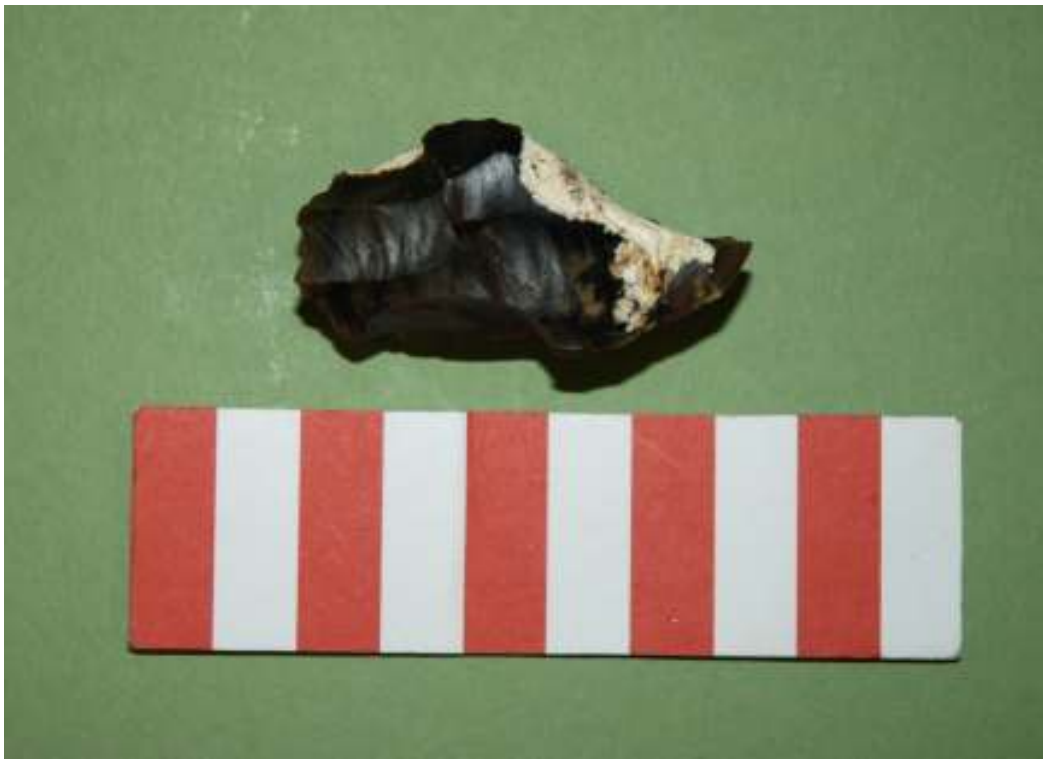

Fig.20: *Bladelet core from context (12) Trench 2. Note the blade removal platforms shown on the left hand side of the flint* (10cm scale)

Fig.21: *Trench 2 facing SW. Feature [14] in foreground and section through rounded pebble surface (11) in the upper half of frame.* 1m scale in base of feature [14]

Associated with the pebbled surface were large quantities of burnt and fired flint recovered from the subsoil. In fact 49% of the total burnt flint found on site was found in the subsoil of Trench 2 immediately above the gravel surface. This amounted to 157 pieces ranging in size from 30-80mm big and represents a significant effort to produce such quantities. Is it evidence of an industrial process whereby the flints are heated and then thrown into water to boil it, or the truncated / redistributed remains of a burnt mound[14]?

Fig.22: *A sample of the burnt flint recovered from site, (context 10),* 10cm scale

[14] A comparative quantity of burnt flint was found at another local site, 'Late-Neolithic site at Ramsden, Orpington', *Kent Archaeological Review* 163 (Spring 2006), 59-69.

Trench 3

Trench 3 was centrally located in the northern part of the field, aligned E-W, just south of the tree-line and measured 12.4m long by 1.8m wide. It was excavated by machine to a depth of approximately 600mm. Natural, vivid orange-white, silt-clay deposits were exposed as little as 300mm below the existing ground surface. The natural was sealed below 150mm of accumulated subsoil, (context 16) of light-brown colouration and containing occasional rounded pebble inclusions, overlain by 150mm of loose grey-brown topsoil containing frequent roots and organic matter.

No archaeological features or deposits were encountered.

Fig.23: *Trench 3 facing NW*. (1m scale)

Trench 4 *(see Appendix I, fig.36)*

Trench 4 was aligned NE-SW in the SE corner of the field and measured 3.7m wide by 11.7m long. Natural clay deposits were exposed at a depth of between 500-600mm below the modern ground surface. The natural was sealed below a loose, light-grey/brown silty soil containing infrequent rounded pebbles and a thin layer of topsoil. A single discreet feature, [19], 600mm in diameter, and up to 450mm deep, was sectioned towards the SW end of the trench. The feature was filled with a loose grey silty deposit, (18), containing only two fragments of burnt flint which suggests they were residual compared to the amount of flint coming from other features across the site. It probably represented some form of pit, but with no great quantity of finds its function is hard to determine.

Fig.24: *Trench 4 facing NE with feature [22] immediately behind the 1m scale. The larger brown spread was investigated and proved to be accumulated subsoil within a natural hollow.*

Trench 5 *(see Appendix I, fig.37)*

Another double-width trench was dug in the centre of the southern part of the site measuring 3.4m wide by 11.6m long. It was aligned NW-SE and excavated to a depth of approximately 400-600mm deep, getting shallower towards the NW end. Mottled yellow-orange-cream coloured natural was exposed at a depth of as little as 400mm below the ground surface. Two discreet sub-circular features were exposed on the NE side of the trench towards the SE end. They were both very shallow and both contained a silty, pale-brown fill, which looked like weathered natural and was sterile; producing no finds at all. As such the features were interpreted as likely root ball disturbances and of little archaeological significance. Another lone feature, cut square, and containing a very black, charcoal-rich fill with rotten wood still intact was observed in the NW end of the site and dismissed as modern.

Fig.25: *Trench 5 facing NW with the two root ball features in the foreground and the modern pit towards the back of the frame*. (1m scale in centre)

Trench 6

Trench 6 was aligned NE-SW in the centre of the field and measured 10m long by 1.9m wide. Natural deposits were exposed 500mm below the existing ground surface, which were comprised of mottled yellow-orange clays containing patches of compacted gravels. As in trench 5 a square-cut feature containing a brown/black fill was observed towards the NE end of the trench and dismissed as modern. At the far SW end of the trench a linear feature, with an irregular profile and producing no finds, was interpreted as being of little archaeological significance.

Fig.26: *Trench 6 facing NW with linear feature in the bottom right of frame*. (1m scale)

Trench 7

Trench 7 was the first of the contingency test pits to be dug. It was located to the east of the southern end of trench 1, located to try and ascertain the extent of pebble surface (5). The pit measured 2.0m E-W by 1.4m N-S and was dug 610mm deep.

Natural clay-silt was exposed in the eastern 1.05m of the pit at a depth of 400mm. This was overlain in the western 0.95m of the trench by a thin layer of rounded water-worn gravels containing some burnt flint. The layer was sealed below 320mm of strong brown clay-silt subsoil overlain by 80mm of greyish-brown topsoil.

The metalled surface exposed was interpreted as the western limit of deposit (5) in this part of the site as the pebbles were not exposed in section across the whole length of the test pit. The surface was therefore not truncated by the machine but rather it never extended this far in the first place.

Fig.27: *Section through pit 7 with metalled surface to left of frame and natural deposits to right*. (40cm scale)

Trench 8

Trench 8 measured 2.5m long by 1.4m wide and was excavated to a depth of approximately 650mm deep. Clay-rich colluvial deposits were exposed at a depth of 650mm below modern ground level sealed below a shallow layer of topsoil. The lower half of the colluvium contained some pockets of metalling and it may represent an attempt to consolidate a natural hollow. Although less clearly defined as elsewhere it was interpreted as part of the same metalled surface as (5) and (11).

Fig.28: *East facing section through Pit 8.* (60cm scale)

Trench 9

Pit 9 was situated to the SE of Trench 1 and was aligned E-W. It measured 3.5m long and 1.4m wide by up to 550mm deep. Natural yellowish clay was observed in the east end of the trench, 550mm below ground level, and overlain by a thin layer/surface of small round pebbles and flint fragments, (some burnt) as in trenches 1, 2 and 7. The pebbled surface was patchy and had been truncated in the central part of the trench and petered out at the east end. These deposits were overlain by a clay-rich silty subsoil of colluvium sealed below a thin layer of rooty topsoil.

Fig.29: *Pit 9 facing W with pebble surface exposed and natural deposits at bottom of frame*. (50cm scale)

Trench 10

Trench 10 was dug between the southern end of trench 1 and the northern side of trench 2. It measured 2.6m long by 1.4m wide and was excavated by machine to a maximum depth of 2.01m below modern ground surface. Natural deposits were not reached and the clays encountered were much more alluvial in nature than elsewhere on the site. It is thought that these represent part of the same water feature excavated in trench 2. The fills were very similar and produced large quantities of burnt flint. The pit demonstrated the continuation of the feature in trench 2 to the north, and confirmed its substantial size and depth. The base of the feature was not reached at the bottom of the trench, 131.57mOD, making it at least 0.16m deeper than in trench 2.

Fig.30: *Northern section through trial pit 10 with a level staff extended to 2m*.

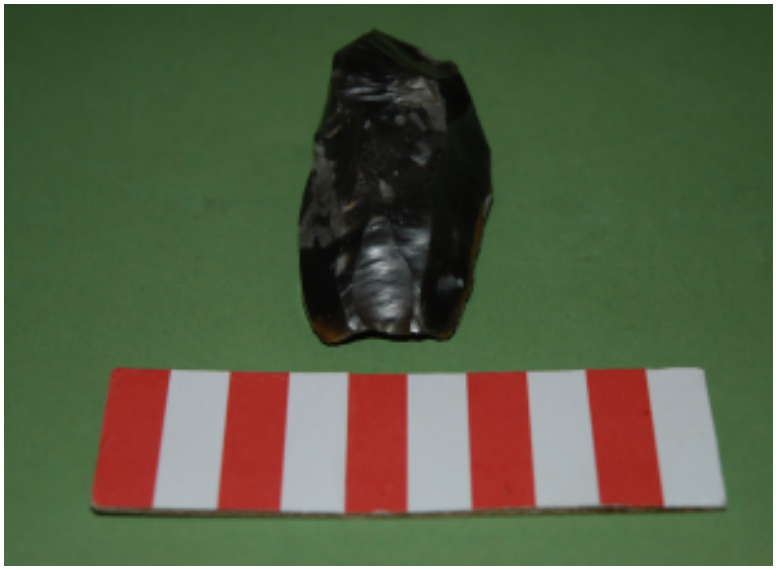

Fig.31: *Bladelet core from the lower alluvium exposed in the base of pit 10* (10cm scale)

7 Conclusions

All the research questions outlined in section 4 have been addressed and answered by the field evaluation.

There appears to be substantial evidence for localised prehistoric activity in the north and west side of the field comprising the gravel surface and water feature, with little evidence of any extensive activity from later periods.

The natural clays and gravels are present across the whole field, and were exposed at depths from as little as 400mm to up to 500mm below current ground level, with trench 2 being the exception to the case with natural being buried below up to 900mm of accumulated colluvium at the east end. This may however be the result of the soil accumulating in the natural hollow around the water feature at this end of the trench.

Little of archaeological significance was exposed in trenches 3-6 across the central and eastern parts of the field with features being confined to natural hollows in the topography and the remains of old tree throws, animal burrows and root balls.

Based on the evidence accrued it appears that the features located in the north and west side of the site represent a pond, around which was lain a metalled surface comprised of local rounded pebbles, to ease access to the water for livestock, or human use. The high levels or burnt flint, and particularly the large size of the individual flint nodules suggest intense heating of water in the immediate area. The fragments of later prehistoric worked flint and pottery and the ‘hagstone’ deposited in the base of the pond would also suggest episodic manufacturing of flint tools, and possible domestic activity such as fire building, and the heating of water for numerous purposes.

8 Bibliography

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Appendix I: Plans and sections of excavated archaeology

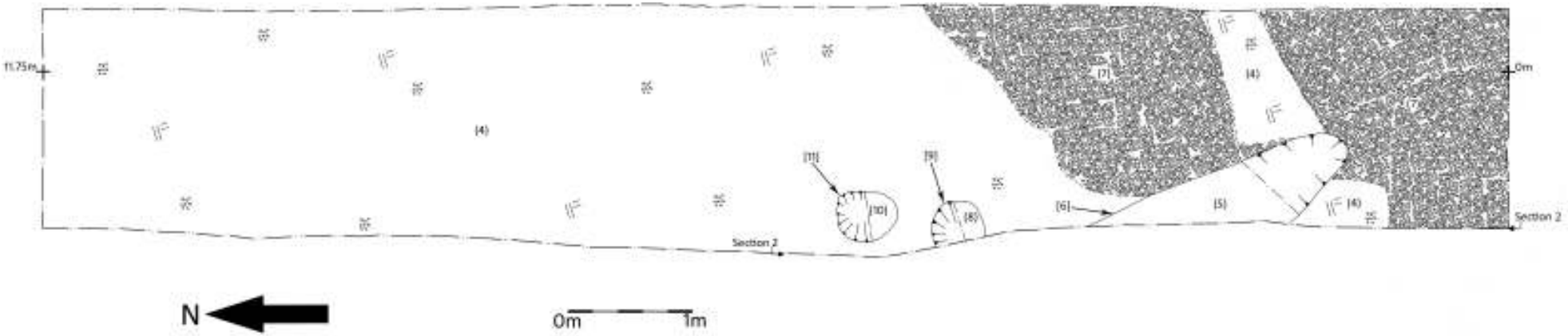

Fig.32: *Plan of Trench 1*

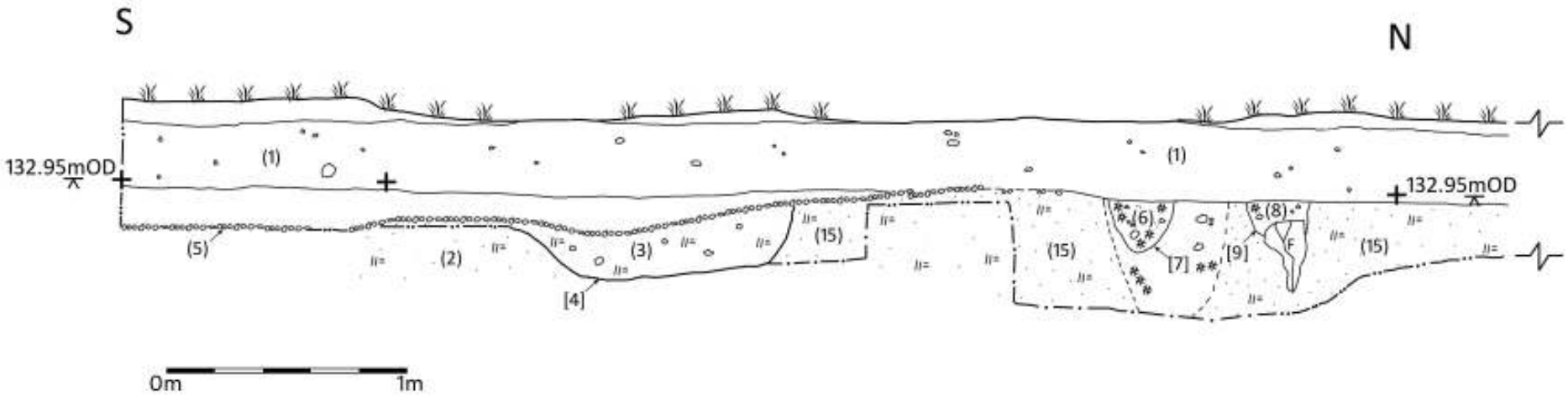

Fig.33: *East facing section through Trench 1, (Section 2)*

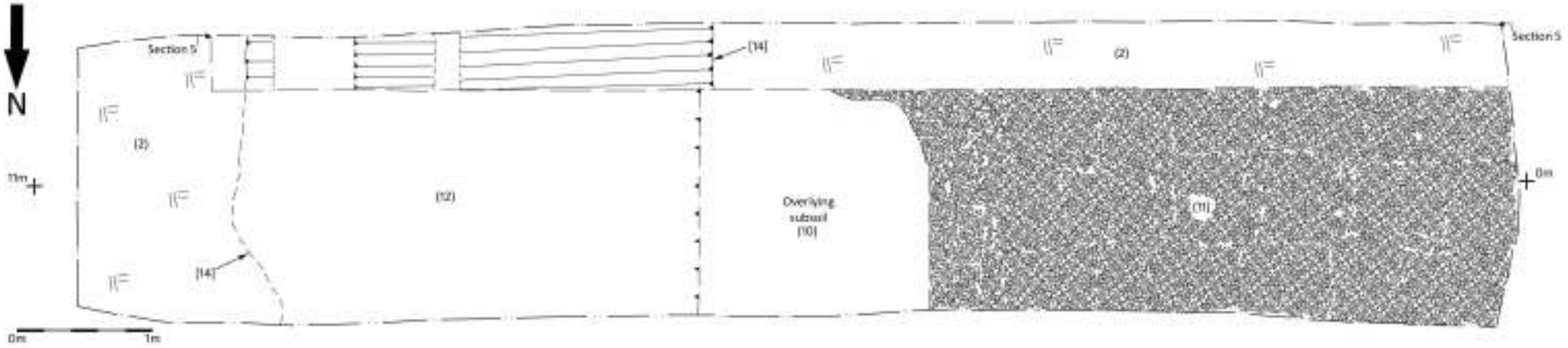

Fig.34: *Plan of Trench 2*

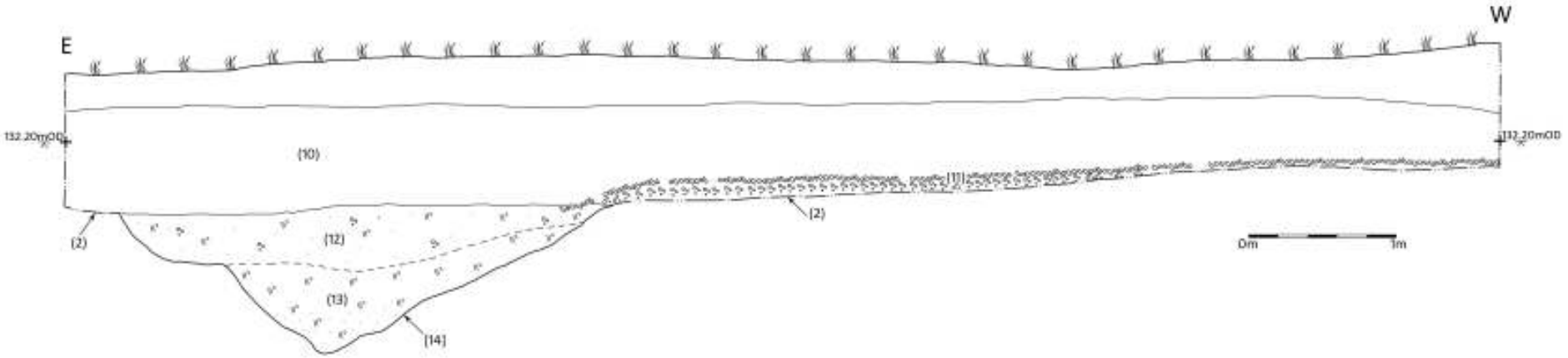

Fig.35: *North facing section through Trench 2, (Section 5)*

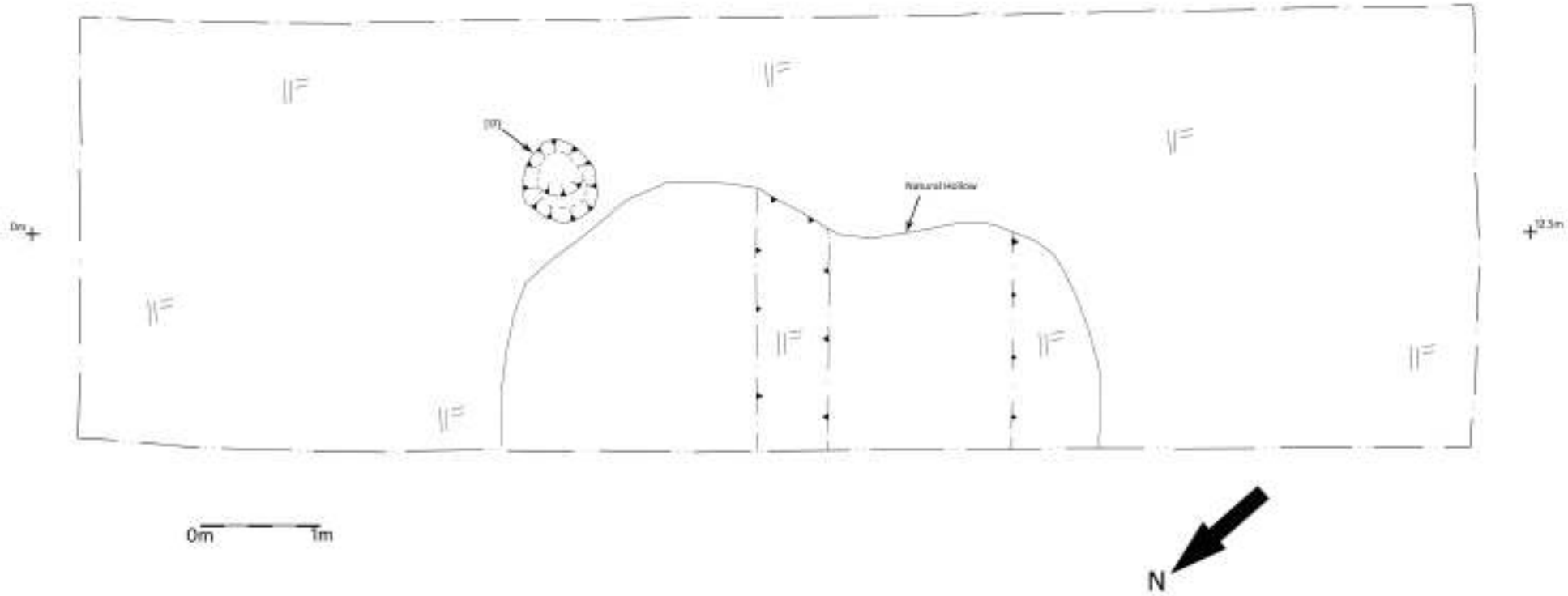

Fig.36: *Plan of Trench 4*

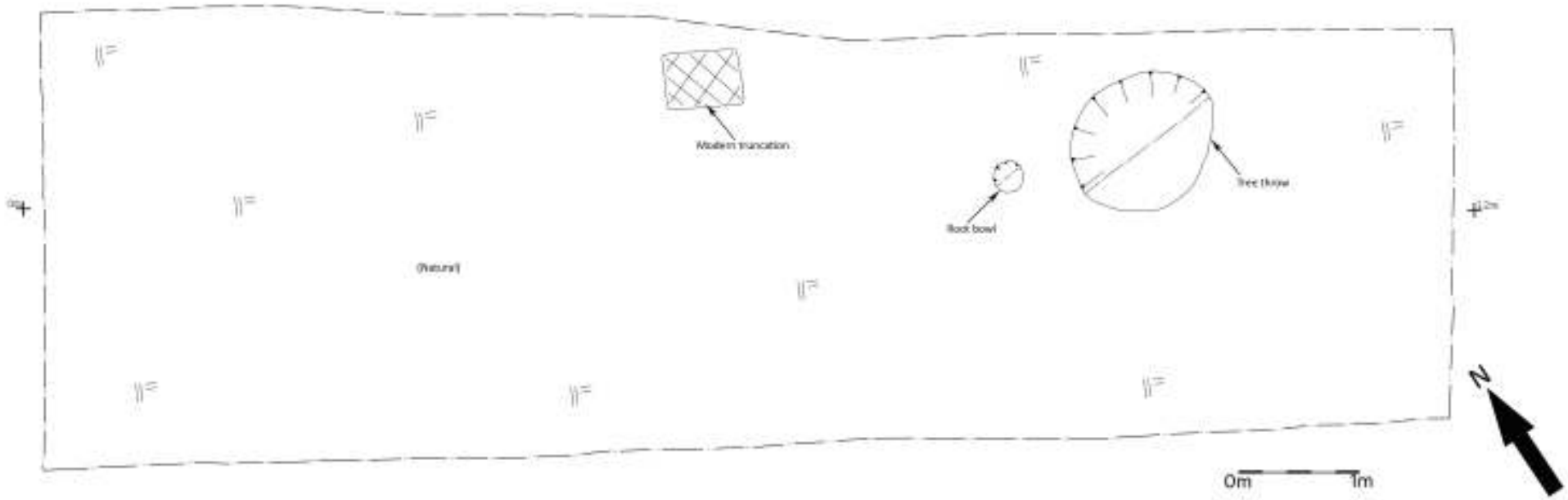

Fig.37: *Plan of Trench 5*

Appendix II: Prehistoric finds analysis

Worked flint by type and context (taken from identifications given by Jon Cotton)

TYPE	**(1)** Subsoil Trench 1	**(3)** Silting depression [4]	**(10)** Subsoil Trench 2	**(11)** Overlying metalled surface in Trench 2	**(12)** Upper fill of feature [14]	**(13)** Lower fill of feature [14]	**(16)** Subsoil Trench 3	**(17)** Subsoil Trench 4	**(24)** Subsoil Trench 9	**(25)** Alluvial fill within Trench 10	**Total**
Flakes	-	1	59	1	-	-	5	1	-	-	**67**
Narrow flakes / blades	-	-	-	1	-	-	-	-	-	-	**1**
Flake fragments	-	2	-	-	3	-	-	-	-	-	**5**
Blades (complete)	-	-	-	2	-	1	-	-	-	-	**3**
Blades fragments	1	-	-	-	-	-	-	-	2 (unfinished)	-	**3**
Bladelet segments	-	-	1	1 (distall end)	-	-	-	-	-	-	**2**
Shattered pieces	-	-	1	-	-	1	-	-	-	-	**2**
Cores	-	-	2	-	1	-	-	-	-	1	**4**
Core fragments	-	-	1	1	1	-	-	1	-	-	**4**
Core tablet	-	-	1	1	-	-	-	-	-	-	**2**
Miscellaneous retouched / utilised pieces	1	-	-	-	-	1	-	-	-	-	**2**
Scraper / notched piece	-	1	2	-	-	1	-	-	-	-	**4**
Tested nodules	-	-	2	-	-	-	-	-	-	-	**2**
Smashed pieces / Bashed lumps	-	-	6	-	8	-	-	7	4	4	**29**
Axe fragments (possible)	-	-	1	-	-	-	-	-	-	-	**1**
TOTALS	**2**	**4**	**76**	**7**	**13**	**4**	**5**	**9**	**6**	**5**	**131**

The collection is neither large enough nor sufficiently well stratified to merit detailed metrical analysis. A brief synopsis will attempt to suggest a date range and the likely activities this may represent.

A total of 131 struck flints were recovered from the site, with the majority, 76, coming from the subsoil within Trench 2, context (10), and over 80% from contexts within trenches 1 and 2. This is significant in its association with metalled surface, (5/11) and pond feature [14].

The flints come from a variety of sources including orange cherty flint, bullhead beds of glauconite rich flint and exhibit a wide range of patinations, largely unworn. This suggests that it was all gathered locally: from surface flint and had not necessarily been especially quarried. The relatively high number of 'tested nodules' and 'bashed lumps' and cores showing signs of herzian cones (mishits) would suggest poor quality flint, knapped by poorly skilled individuals This statement is perhaps further qualified by the low number of cores or of retouched / utilised pieces and the number of partial or unfinished flakes and blades.

The quality of the flints and the techniques used in their creation are typical of late Bronze Age production. The quantity does not suggest widespread production on an industrial scale, but is more in common with the type of 'background noise' one might find on a fieldwalking survey representing episodic or occasional tool manufacturing.

This said the fact that the finds were almost exclusively found within the north and west side of the field, where the metalled surface and water feature were exposed, suggests that activity was perhaps centred around this water hole.

Fig.38: *Different flint types used in knapping at Chelsfield. The lower are cherty amber flint with quartz veins and the upper are bullhead bed flints with a green glauconite cortex* (10cm scale)

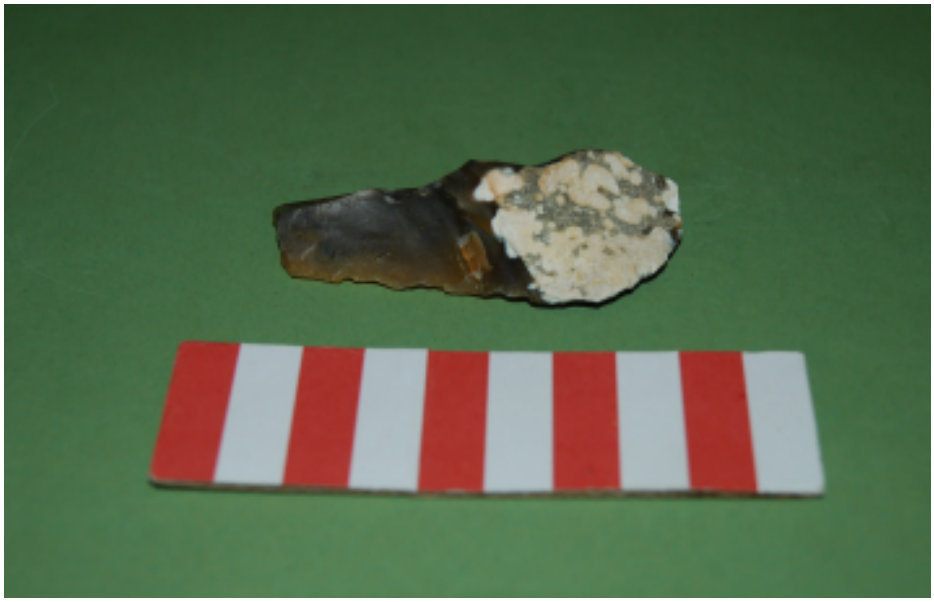

Fig.39: *A long-robust flake from context (11)* (10cm scale)

Burnt Flint by context

In total, 317 pieces of burnt flint (weighing 14,026g) were recovered from 12 separate contexts. The majority were from Trenches 1, (contexts 1-8), and Trench 2, (contexts 10-12). Most were recovered from subsoil deposits whilst cleaning the trenches. By far the largest number were found within the subsoil immediately above the metalled surface (contexts 1 and 10). In general the fragments were of medium size *c*30-50mm wide, though larger fragments up to 80mm were not uncommon.

The size and quantity of burnt flint recovered from the site, and its apparent association with the metalled surface would suggest a concentrated effort on an almost industrial scale.

Context No.	No. of pieces	Weight (g)
(1)	21	758
(3)	23	644
(6)	23	756
(8)	15	458
(10)	142	6350
(11)	15	794
(12)	30	984
(16)	7	286
(18)	10	452
(20)	3	306
(24)	3	164
(25)	25	2074
TOTAL	**317**	**14,026**

Appendix III: Pottery from Chelsfield, Bromley, Kent (site TYN12)

by *Paul Blinkhorn*

Two sherds of pottery were noted. The first, from Trench 2, weighs 4g and is from a soil horizon over a surface, and appear to be of late Iron Age or early Roman date. It is handmade, has a sparse temper of sub-rounded grog up to 1mm, and rare calcareous material up to the same size. The second, weighing 24g, is in a very similar fabric, although both red and black grog are present, and most of the calcareous material has leached out. It is harder-fired and oxidized, but also somewhat abraded, so may be residual.

Both sherds appear fairly typical of the pottery of the period in the region, such as that from excavations near Dartford (Biddulph 2011, 116).

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Appendix IV: Metalwork finds

Each trench was surveyed using a metal detector by Bill . Little in the way of metalwork was recovered from the site. Four scraps of misshapen lead weighing a total of 42g were recovered from across the field along with a 1930 silver-plated sixpence and a fragment of shrapnel from the nose-cone of an anti-aircraft shell. The most interesting piece of metalwork found was an aborted musket ball still retaining the sprue from its original moulding and weighing 12g. None of the finds came form a secure context and so are considered residual and of little diagnostic value.

Appendix V: OASIS data collection form

OASIS ID: compassa1-133557

Project details

Project name	Tryhorn Field, Chelsfield, London Borough of Bromley: An Archaeological field Evaluation
Short description of the project	Between 24th of July and the 10th of August 2012 an archaeological evaluation was conducted in Tryhorn Field, north of the Church of St Martin of Tours, Chelsfield prior to application by the PCC for the field to be converted into an extension of the present graveyard. The fieldwork was undertaken by Compass Archaeology after compilation of a desk-based assessment and recommendations from English Heritage. A total of 6 trial trenches were opened with a tracked machine in various locations across the field. In four of the trenches little of archaeological significance was encountered and natural clay and gravel deposits were exposed across the site. However, in the two most northern and western trenches the remains of a metalled surface containing large quantities of burnt and worked flint were exposed below the subsoil. It was decided that the nature and extent of this surface required further investigation and so four more test pits were dug to the east of, and between, trenches 1 and 2. Upon further investigation the surface in trench 2 was shown to continue up to the edge of a large feature containing water-lain deposits, and in the base, prehistoric pottery and a 'hagstone'. The metalled surface was interpreted as a deliberate attempt to gain access to the edge of a large pond or watercourse, perhaps for agricultural purposes such as watering livestock, or, (because of the struck flint), as the site of local tool manufacturing. The burnt flint could possibly represent domestic or even industrial processes associated with the heating of water.
Project dates	Start: 24-07-2012 End: 10-08-2012
Previous/future work	No / No
Any associated project reference codes	TYN12 - Sitecode
Any associated project reference codes	DC/12/00479/FULL2 - Planning Application No.
Type of project	Field evaluation
Site status	Area of Archaeological Importance (AAI)
Current Land use	Grassland Heathland 3 - Disturbed
Monument type	POND / WATERCOURSE Uncertain
Monument type	FLINT SURFACE Uncertain

Significant Finds	WORKED FLINT Late Bronze Age
Significant Finds	POTTERY SHERDS Late Bronze Age
Significant Finds	POTTERY SHERDS Late Iron Age
Methods & techniques	"'Sample Trenches'","'Test Pits'"
Development type	Extension of graveyard
Prompt	Direction from Local Planning Authority - PPS
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	GREATER LONDON BROMLEY ORPINGTON Tryhorn field, Chelsfield
Study area	182.00 Square metres
Site coordinates	TQ 480 641 51 0 51 21 22 N 000 07 32 E Polygon
Site coordinates	TQ 479 641 51 0 51 21 22 N 000 07 27 E Polygon
Site coordinates	TQ 480 640 51 0 51 21 18 N 000 07 32 E Polygon
Site coordinates	TQ 479 640 51 0 51 21 18 N 000 07 27 E Polygon
Height OD / Depth	Min: 0.40m Max: 0.90m

Project creators

Name of Organisation	Compass Archaeology
Project brief originator	English Heritage/Department of Environment
Project design originator	Compass Archaeology
Project director/manager	Geoff Potter
Project supervisor	Emma Jeffery
Type of sponsor/funding body	Parochial Church Council

Name of sponsor/funding body	PCC St Martin of Tours Church, Chelsfield

Project archives

Physical Archive recipient	Museum of London archaeological archive
Physical Contents	"Ceramics","Worked stone/lithics"
Digital Archive recipient	Museum of London archive
Digital Contents	"other"
Digital Media available	"Images raster / digital photography","Survey","Text"
Paper Archive recipient	Museum of London Archive
Paper Contents	"other"
Paper Media available	"Context sheet","Drawing","Plan","Section","Unpublished Text"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Tryhorn Field, St Martin of Tours Church, Chelsfield, the London Borough of Bromley: An Archaeological Evaluation
Author(s)/Editor(s)	Aaronson, J
Date	2012
Issuer or publisher	Compass Archaeology
Place of issue or publication	5-7 Southwark Street, SE1 1RQ
Description	Report of the results of the archaeological evaluation. Includes historical, archaeological, and topographical background of the site, details of the methodology used, photographs and descriptions of all trenches monitored, and brief conclusions reached.

Appendix VI: London Archaeologist summary

Site Address:	Tryhorn Field, St Martin of Tours Church, Chelsfield, London Borough of Bromely
Project type:	Evaluation
Dates of fieldwork:	24th July-10th August 2012-09-12
Site code:	TYN12
Site Supervisor:	Emma Jeffery
NGR:	TQ 47984 64109 (Site centre)
Funding body:	Parochial Church Council St Martin of Tours, Chelsfield

Between 24th of July and the 10th of August 2012 an archaeological evaluation was conducted in Tryhorn Field, north of the Church of St Martin of Tours, Chelsfield prior to application by the PCC for the field to be converted into an extension of the present graveyard. The fieldwork was undertaken by Compass Archaeology after compilation of a desk-based assessment and recommendations from English Heritage.

A total of 6 trial trenches were opened with a tracked machine in various locations across the field. In four of the trenches little of archaeological significance was encountered and natural clay and gravel deposits were exposed across the site. However, in the two most northern and western trenches the remains of a metalled pebble surface containing large quantities of burnt and worked flint were exposed below the subsoil.

It was decided that the nature and extent of this surface required further investigation and so four more test pits were dug to the east of, and between, trenches 1 and 2. Upon further investigation the surface in trench 2 was shown to continue up to the edge of a large feature containing water-lain deposits, and in the base, prehistoric pottery and a stone weight. The metalled surface was interpreted as a deliberate attempt to gain access to the edge of a large pond, perhaps for agricultural purposes such as watering livestock, or, (because of the struck flint), as the site of episodic tool manufacturing. The burnt flint could represent domestic or even industrial processes of water heating.