**PRE-CONSTRUCT ARCHAEOLOGY LIMITED**

# AN ARCHEOLOGICAL EVALUATION AT ORPINGTON HOSPITAL, SEVENOAKS ROAD, LONDON BOROUGH OF BROMLEY



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# AN ARCHAEOLOGICAL EVALUATION AT ORPINGTON HOSPITAL, SEVENOAKS ROAD, LONDON BOROUGH OF BROMLEY

by Jonathan Butler with contributions by Barry Bishop, John Brown, Chris Jarrett & Lynne Keys

*An archaeological evaluation by Pre-Construct Archaeology Limited at Orpington Hospital in the London Borough of Bromley produced a quantity of struck and burnt flint within a colluvial deposit. Analysis of these artefacts suggested that the area was an important source of flint from the Mesolithic to the Bronze Age, with both flint mining and initial preparation of the stone taking place on the site.*

## Introduction

An archaeological evaluation was undertaken by Pre-Construct Archaeology Limited at Orpington Hospital, Sevenoaks Road, London Borough of Bromley on the 1st June 1999. Thereafter, further work was conducted between the 7th and 18th June 1999, on the 18th November 1999 and between the 22nd and 23rd May 2000. The work was commissioned by Duncan Hawkins of CgMs Consulting on behalf of Barratt South London. It was centred at National Grid Reference TQ 460 647 and was given the site code SVO 99.

The site was located on a hill with a significant slope from the east down to Sevenoaks Road to the west (90.88m OD down to 64.50m OD) (Fig 1). Two trenches were excavated down to the top of the archaeological deposits by a mechanical excavator (JCB) in a grassed area in the north-west corner of the development site. Trench 1 was located beside the showroom car park to the east of the area and measured 12.90m N-S x 1.80m. Trench 2 was situated to the south-west of the area beside the disused car park and measured 12.50m N-S x 1.80m.

After the discovery of struck and burnt flints within a homogeneous silty clay deposit it was decided in consultation with Mark Stevenson, English Heritage GLAAS, that a larger area should be evaluated. An area measuring 30m x 20m was proposed to be excavated. However, due to the presence of live services four separate smaller areas were subsequently dug. Trench 3 measured a maximum of 18.10m N-S x 11.20m and was located to the north of the area along Sevenoaks Road and incorporated Trench 1 to the east. Trench 4 measured 7.40m N-S x 3.80m and was situated to the south of Trench 3. Trench 5 measured 9.10m N-S x 3.70m and was located to the west of Trench 4 beside the disused car park. Trench 6 measured 6.80m N-S x 7.30m and was situated to the south of Trench 5 and incorporated the northern part of Trench 2.

The north-western part of Trench 3 was divided into 36 one metre by one metre sample squares, measuring 6m x 6m in total. Within this area all 19th- and 20th-century features were removed by hand and the homogeneous mid-brown silty clay deposit containing struck flints was excavated carefully for as full a finds recovery as possible.

Eight further trenches measuring 20m x 1.80m x 0.55m were also excavated by a JCB in the two fields at the top of the hill to the east of the site. No archaeological deposits were observed in any of these trenches.

## Archaeological Sequence

At the top of the hill to the east natural chalk with large flint nodules was present in all trenches. This was aligned in narrow strips up to 0.30m thick with hollows between, filled with a mixture of light off-white to brown chalk and clayey silt and occasionally patches of mid orange-brown brickearth type clay up to 0.30m thick. Covering these deposits was a mid brown sandy-clay silt subsoil 0.06-0.20m

thick, which was in turn sealed by up to 0.15m of dark grey brown topsoil. No archaeological deposits were revealed in the trenches at the top of the hill.

Natural sub-angular gravel and large flint nodules within a matrix of mid orange-brown silty clay was encountered in all the trenches at the base of the hill to the west of the site. This natural deposit varied in level from 65.28m OD in Trench 6 to the east to 64.11m OD in Trench 3 to the west and thus generally respected the east to west downward slope of the site. However, in the eastern part of Trench 6 the gravel also sloped down to the east and this natural hollow was filled with a deposit of mid orange brickearth-like silty clay. This was not present in any of the other trenches suggesting that it was an isolated pocket within the natural hollow or that elsewhere it had been washed away and eroded.

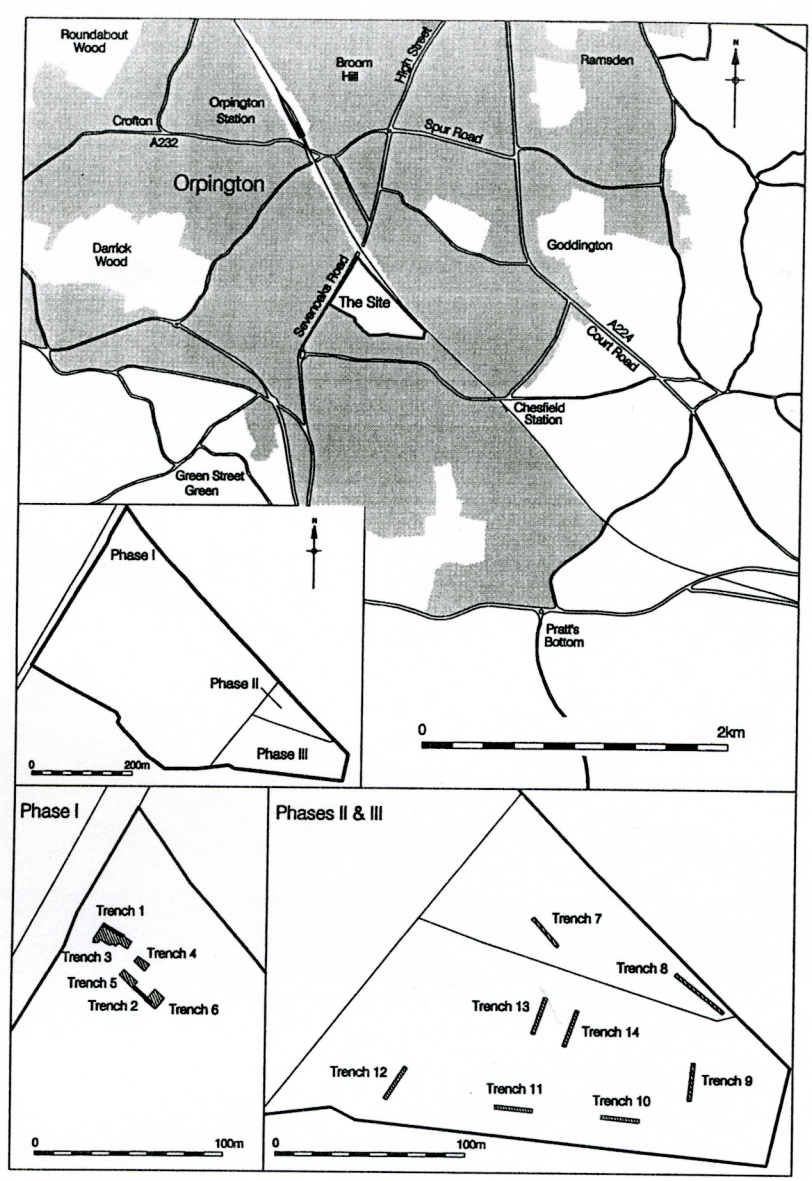


Figure 1

Covering the natural gravels and flint nodules in all the trenches was a homogeneous deposit of mid-brown clay silt which had been largely truncated to the east but increased in thickness towards the base of the hill slope to the west where it was up to 0.60m thick. This deposit contained frequent medium-sized fragments of medieval tile in the top 0.10m but scattered through it were struck flints (both waste flakes and cores), burnt flint and occasional iron nails and fragments of burnt daub and pottery of medieval and later date. This indicates a very mixed deposit representing a possible ploughsoil or, more likely, hillwash travelling down the slope from south to north. Some 0.40-0.60m of similar hillwash covered the Roman villa at Crofton Road, Orpington[i]. This would suggest the

former presence, further up the hillside to the east, of significant archaeological deposits, perhaps features and activities of various dates ranging from the prehistoric to the medieval.

Cut into this deposit to the west of the site were various sub-circular, rectangular and linear features running along Sevenoaks Road. These were further cut by a series of linear features aligned E-W measuring up to 10.00m x 0.30m x 0.12m deep. All of these represent 19th- and 20th- century agricultural and gardening features, perhaps part of a kitchen garden attached to the First World War Canadian military hospital which was a forerunner of Orpington Hospital. Alternatively they might be part of allotments dug during the Second World War when all available land was turned over to vegetable production. The linear cuts would appear to have been the result of potato cultivation.

All the trenches were covered with c.0.40m (up to 0.80m in Trench 4) of made ground and topsoil. This suggests terracing and truncation of the natural slope which is evident over much of the hospital area.

**Discussion**

The flints recovered from the colluvial deposit represented the 'procurement, testing and initial dressing of cores which were subsequently dressed elsewhere' (see Bishop this report). This activity, possibly started in the Mesolithic, was most prolific during the Neolithic and Bronze Age periods. Although it would suggest the hillside was used for its flint resource rather than for settlement, the presence of large numbers of burnt flints, possibly from hearth construction, might suggest occupation in the vicinity. However, this may represent nothing more than temporary camps set up during gathering and rough preparation of the flint before removal from the site. A Mesolithic pick has been recorded from Goddington Lane, Orpington which together with several deneholes sunk into the chalk in the area, one of which is recorded on the site itself[ii], are indicative of flint mining in the vicinity.

The majority of the flint assemblage has chipped and abraded edges consistent with its being part of a colluvial deposit: the presence of a mixture of medieval and later tiles and pottery concentrated in the top 0.10m of the deposit confirms this premise. The medieval pottery and tile assemblage suggests an occupation of the site perhaps as early as the 12th or 13th century but this may have been no more than an isolated farm. However, the medieval artefacts found on the site could also be the result of manuring the fields with human and animal waste from nearby settlements and not direct evidence of a medieval occupation of the area.

**Conclusions**

The homogeneous deposit, containing substantial numbers of struck and burnt flints and finds of later date, which covered the southern part of the evaluation area suggests that significant archaeological remains of prehistoric and later date had been present in the vicinity and that these finds had been washed down the hill. The presence of a denehole on the site and the nature of the flint artefacts suggest that the site was an important source of flint from the Mesolithic to Bronze Age with flint mining and initial preparation of the material taking place on the hillside, both activities necessitating only sporadic occupation of the area. Thereafter, the next use of it seems to have occurred during the 12th /13th century with a farm possibly occupying the site. It is likely that terracing took place during the construction of the hospital destroying any in situ remains.

**The Pottery**

by Chris Jarrett

Condition of the Pottery:

All the pottery occurred as small to medium-sized sherds. The post-medieval pottery from the site was generally fragmentary and, though the medieval pottery tended to be abraded, the 19th century pottery was in better condition.

General characteristics comments:

The assemblage consisted of 41 stratified sherds from five contexts. Medieval pottery dating to the late 12th and 13th century was present in context [4] as 8 sherds, and the remaining pottery dated to the 19th/20th century, occurring as 33 sherds in contexts [9], [14], [26] and [50]

Deposit [4] produced eight sherds of medieval pottery, comprising one sherd of a London-type ware (LOND) jug with external white slip and a mottled green clear glaze. The other seven sherds can be described as local Limpsfield-type wares (LIMP), dated 1150-1300. The Limpsfield wares were present as a number of non-distinctive body sherds but a jug was identified with an applied horizontal rib on the neck. Two sherds of Shelly Limpsfield-type ware (LIMPS SHEL) were also identified, one sherd coming from a shouldered vessel, but the presence of external sooting indicating a cooking pot. Most of the medieval pottery sherds were abraded and derived from plough soils or hillwash and were residual. A small sherd of a Refined white earthenware vessel was present in context [4].

Deposits [9], [14], [26] and [50] produced either industrial finewares as Refined white earthenware (REFW), Transfer-printed ware (TPW), dated 1780-1900, or Hard paste English porcelain (ENPO HP) or English stoneware with Bristol glaze (ENGS BRIS), dated from 1830. The plain style of many of the vessels might associate them with the hospital use of the site. Some of the vessels may be late 19th century in date, and several of the cups and saucers may belong to the 20th century.

**The Lithics**

by Barry Bishop

The site produced a total of 370 struck flakes and blades, 30 cores and core fragments, seven core testing nodules, two hammerstone fragments and over 7kg of unmodified burnt flint. The assemblage was examined and quantified but no detailed metrical or typological analysis was attempted. The material was mostly recovered from an undifferentiated ploughsoil/colluvial deposit and therefore stratigraphic/contextual information relating to original depositional conditions is limited.

The raw material utilised consisted of small to large thermally flawed flint nodules with a slightly abraded chalky cortex. The colour of the flint ranged from translucent black to opaque cherty grey and various stages of recortication were evident. A few pieces of bullhead flint were also recovered although none of these appeared to have been worked. The flaking qualities of the raw material varied from good to poor according to the extent of impurities and the degree of thermal fracturing. The raw material is typical of flint deriving from the North Downs with the abrasion of the original cortex and extent of thermal fracturing suggesting a derivation from peri-glacially mass-weathered deposits[iii]. It is likely that it originated from, or very close to, the site.

The burnt flint was typical of that deriving from such activities as hearth construction and may be indicative of some form of occupation in the vicinity. The dating of any such activity cannot be determined from the flint alone, and could have occurred at any time from the prehistoric period to the present.

The condition of the struck assemblage was variable, although the vast majority of pieces had chipped and abraded edges consistent with post-depositional damage. This could have occurred through such agencies as prolonged ploughing or, possibly more likely, through taphonomic transport suggested by the colluvial nature of the deposit. Some pieces were in much better condition, and these were likely to have been deposited closer to where they were recovered. Flakes representing the initial decortication and primary shaping of cores produced during the initial stages of core reduction dominated the assemblage. The cores recovered were unsystematically reduced with randomly orientated multi-directional striking platforms. Most showed evidence of thermal flawing and it seems likely that they had been discarded during their initial preparation. Also recovered were a few nodules which had evidently been 'tested' and subsequently rejected as unsuitable due to thermal flawing. It is likely that many more 'testing nodules' were present but due to the possibility of later accidental damage, such as from ploughing, they have been rejected here. The later stages of core reduction, as represented by exhausted cores, trimming-, core rejuvenation-, utilisable- or retouched-flakes were notably under-represented. This suggests that the main activities represented here consisted of the obtaining, testing and initial dressing of cores, which were subsequently reduced elsewhere.

The assemblage was a product of several technological traditions and evidently of a multi-period origin. A few systematically produced blades with complex abraded or facetted striking platforms and parallel lateral margins and dorsal flake scars were present. These are typical of industries dateable to the Mesolithic or Early Neolithic, the presence of an obliquely truncated broad blade suggesting the former. The majority of the assemblage consisted of medium to narrow shaped flakes, usually with unmodified or lightly trimmed striking platforms and uni-directional dorsal flake scars, most likely of a Later Neolithic or Bronze Age date. A significant number of flakes were rather more crudely and opportunistically produced with thick, unmodified striking platforms, often exhibiting incipient Hertzian cones and multi-directional dorsal flake scars, and more typical of industries dating from the Middle Bronze to Iron Ages. Only nine retouched items were present, comprising the obliquely truncated blade, two minimally retouched points, an edge trimmed flake, a small short end scraper and three implements manufactured from thermal spalls; a cutting tool, a scraper and a notch. Only the obliquely truncated blade was diagnostic, although a Middle Bronze Age or later date would be compatible for the tools on thermal spalls, with the others only dateable to between the Mesolithic and Bronze Age.

The assemblage as a whole would appear to represent mostly extractive waste products. It seems likely that flint nodules within the natural geological deposits were being procured and initially prepared for reduction, with unsuitable ones discarded. The small number of retouched items, trimming flakes and viable cores would seem to preclude domestic or industrial usage, although the quantities of burnt flint may suggest some short term settlement, possibly related to occupation occurring during the extracting and preparation of the flint. The relatively small size of the assemblage and the varied technological traditions represented suggest that this exploitation was occasional and occurred over a long period, possibly starting during the Mesolithic, but most prolific during the Neolithic and Bronze Age. The condition of the flint suggests that the area where most of the raw material was primary reduced may have been located up-slope, with the material being washed down within the colluvial deposit.

**The Ceramic Building Material**

by John Brown

Quantity and Condition

Approximately 9.4kg of ceramic building material was recovered from the excavation, the majority of which came from layer [04]. This material consisted of numerous fragments of roof tile, most of which were non-diagnostic and abraded. It mainly included medieval roof tile, including occasional splash-glazed examples. Some peg tiles, with round holes were present. Apart from some small fragments of 19th century fletton brick [26], the material from other contexts consisted almost exclusively of roof tile.

Discussion

Many tile fragments were in a fabric similar to Roman fabric 3009[iv], except with more rounded, lighter silt inclusions. However, the presence of splash glaze and strike lines on some fragments, as well as peg tile fragments, signify that they are of medieval character. A full fabric description is given below, and a site fabric code was designated, SV01.

Medieval fabric SV01:silty background matrix, frequent quartz < 0.2mm, common red iron oxide/clay inclusions < 4mm. Frequent light beige silty pellets, sub-angular to rounded, < 7mm. small to medium grained moulding sand. In reduced cores silt pellets are sometimes bright blue-grey in colour.

Other fabrics were probably locally produced, and were similar to medieval fabrics 2271, 2586 and 3090.

**The Small Finds**

by Lynne Keys

The small finds included a square copper alloy buckle plate [4] <4>, measuring 23x23mm, with a slot for a pin, four holes towards each corner and one in the centre. In addition there was an iron window catch [26] <21>; a piece of copper alloy wire [50] <27>, possibly part of a woman's headdress; an incomplete iron knife [20] <2> with a whittle tang, curved back, a possibly concave blade with a surviving length of 105mm, and traces of what may be two maker's stamps. There was also a copper alloy spur of which most of one branch was intact. This was straight, with the end turned up towards a figure 8 terminal. This type is likely to date to the 14th or 15th century.[v]

This collection represents a small group of personal items of late medieval to post-medieval date, probably the result of accidental losses.

**Notes**

[i] Philp, B., (1996) *The Roman Villa Site at Orpington, Kent,* Kent Archaeological Rescue Unit, Dover, 95
[ii] SMR Ref. 071633
[iii] Gibbard, P.L., (1986) 'Flint Gravels in the Quaternary of South-east England' in G. De C. Sieveking & M.B. Hart (eds.) *The Scientific Study of Chert and Flint,* Cambridge University Press, Cambridge

[iv] The building materials were examined using the London system of classification. A fabric number is allocated to each object, specifying its composition, form, method of manufacture and approximate date range. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London Specialist Services.
[v] Ellis, B., (1995), 'Spurs and spur fittings', in J Clark (ed)*, The Medieval Horse and its Equipment (Medieval Finds from London Excavations 5)*, London, 124-50