



**Archaeological Evaluation on Land at
the former Buckland Paper mill,
London Road, Dover, Kent
*October 2011***

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Report on Phase 1 of an Archaeological
Evaluation on land at the former Buckland
Paper Mill, London Road, Dover, Kent

NGR: 630400 142950

Site Code: BCM-EV-10

(Planning Application Number: DOV/09/00462)

Report for
SEEDA/Gillcrest Homes

SWAT. ARCHAEOLOGY

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SUMMARY

Project Name: Buckland Paper Mill

Location: Dover, Kent

NGR: 630400 142950

Type: Evaluation

Date: 22nd October – 1st November 2010

Planning Reference: *DOV/09/00642*

Site Code: BCM-EV-10

Swale & Thames Survey Company (SWAT Archaeology) was commissioned by Gillcrest Homes to carry out an archaeological evaluation at the above site. The work was carried out in accordance with requirements set out within an Archaeological Specification (KCCHC 2010), and the Standards of the IfA, (IfA, 2008), and in discussion with the Archaeological Officer, Kent County Council.

In this phase of works fluvial gravels and alluvium were uncovered at the base of the sequence. Overlying this was a thick layer of colluvium, probably heavily laminated, containing abraded worked Bronze Age flints and early to mid Saxon and early medieval pottery. Above this was modern made ground.

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An Archaeological Evaluation on land at the former Buckland Paper Mill, London Road, Dover, Kent

NGR: 630400 142950

Site Code: BCM-EV-10

Introduction

Swale & Thames Survey Company (SWAT Archaeology) carried out an archaeological evaluation on land at the former Arjo Wiggins, Buckland Paper Mill adjacent to London Road in Dover. A planning application for Phase 1 (PAN: DOV/09/00642) for the construction of a 80 bed care home, (C2) with associated car parking and garden amenity space, re-terracing of land levels, formation of new vehicle access and erection of boundary treatment, with the existing warehouse building to be demolished (KCCHC, 2010) at the above site was submitted to Dover District Council (DDC). Kent County Council Heritage and Conservation (KCCHC), on behalf of DDC requested that an Archaeological Investigation be undertaken in order to determine the possible impact of the development on any archaeological remains.

The work was carried out in accordance with the requirements set out within an Archaeological Specification (KCCHC, 2010) and in discussion with the Archaeological Officer, Kent County Council.

The archaeological evaluation encountered no significant archaeological features within the Phase 1 work, with the investigation trenches having only modern deposits or extreme truncation. In Trench 3 no archaeological features were visible, however, a large number of re-deposited worked flints were found in the colluvium. These flints appeared to be in extremely good condition with little but noticeable abrasion. This, most likely, shows that any habitation or working sites of this period lay along the extreme northern edge of the site, or beyond the site boundary under or to the north of Crabble Hill. The only trench laid out, in this phase, in this northern part of the site revealed extreme truncation of Victorian and Twentieth century dates. The area was also subject to a geoarchaeological study by members of the QUEST team from the University of Reading.

SITE DESCRIPTION AND TOPOGRAPHY

The application site lies within the present day town of Dover, but is located just to the north-west of the Domesday mentioned settlement of Buckland, which lies approximately 1.75km north-west of the medieval core of Dover. The site lies approximately at an elevation of between 14m and 16m OD and straddles the River Dour. The area of the Phase 1 evaluation trenches lies in the northernmost corner of the site and is located entirely on the north-eastern bank of the river. The National Grid Reference centre for the new development is NGR 630400 142950.

The stated underlying geology of the site, according to the British Geological Survey, (BGS, 1966), consists of Cretaceous Chalks of the Middle and Upper Chalk, New Pit and Lewes Nodular Chalk Formations, with Eocene Clay-with-Flints in the higher areas, and Holocene Head Deposits and Alluvium in the areas closest to the River.

PLANNING BACKGROUND

A planning application (PAN: DOV/09/00642) for the construction of *an 80 bed care home, (C2) with associated car parking and garden amenity space, re-terracing of land levels, formation of new vehicle access and erection of boundary treatment, (existing warehouse building to be demolished)*, (KCCHC, 2010), at the above site was submitted to Dover District Council (DDC). Kent County Council Heritage and Conservation (KCCHC), on behalf of Dover District Council, requested that an evaluation be undertaken in order to determine the possible impact of the development on any archaeological remains. The following condition was placed on the planning consent:

“No development shall take place until the applicant(s), or their agents or successors in title, has secured the implementation of:

i) archaeological field evaluation works in accordance with a written programme and specification and timetable which has been submitted to and approved by the Local Planning Authority;

ii) following on from the evaluation, any safeguarding measures to ensure preservation in situ of important archaeological remains and/or further archaeological investigation and recording in accordance with a specification and timetable which has been submitted to and approved by the Local Planning Authority. (South East Plan Policy BE6).

Reason: To ensure appropriate assessment of the archaeological implications of any development proposals and the subsequent mitigation of adverse impacts through preservation in situ or by record.” (KCCHC, 2010).

The present phase of archaeological work forms the first phase of archaeological fieldwork at the site in accordance with part i) of Condition 24 of the planning consent.

ARCHAEOLOGICAL BACKGROUND

The area surrounding this London Road site is of interest mainly due to its proximity to the historic port town of Dover, 1.75km to the southeast and to the presence of the main Dover to Canterbury Roman Road which lies only 40m to the north of the centre of the development. A few other minor archaeological remains of prehistoric and/or Roman date have been found along the line of the road in this area and Early Medieval/Jutish burials have also been recorded 600m east of the site at the Buckland cemetery. The historic environment of the area is, however, mainly characterised by Late Georgian and Early Victorian listed buildings, some being substantial private dwellings, but the majority being related to the milling industries which grew up along the River Dour, a substantial number probably succeeding mills of a much earlier date. Milling on the Dour is mentioned at least as early as the Domesday Book (Williams and Martin 1992, 4) and possibly as early as the 8th century in the Anglo Saxon charter S25 (Miller 2001).

The prehistoric period is well attested in the area with spot finds and scatters being found all along the valley. The earliest possible finds within the scope of this report were originally thought to date from the Mesolithic period. However, this is now disputed and the finds are now thought to date from the Neolithic or Bronze Age. This was a collection flints discovered in the rear garden of a house in the village of River some 900m NW from the application site. Entry TR 24 SE 24 - MKE5865 and is listed as a, "Mesolithic working site", this has been augmented with a second entry from the same site, TR 24 SE 32 - MKE5872 which is listed as, "Prehistoric and later finds", these later finds mostly date from the Iron Age. It is this entry that it states that the earlier assemblage was reappraised and the supposedly Mesolithic finds could be compared with Neolithic and Bronze Age material which it is argued probably originated further up the valley. The site lies immediately on the southerly bank of the River Dour at a spot where a ford appears to have existed for many years before the present, possibly Victorian, bridge was constructed.

A "Prehistoric flint scatter", was found nearby at the top of Old Park Hill on the northern side of the Dour valley overlooking the Buckland and Dour Valleys at Old Park Estate, (TR 34 SW 617 - MKe17726). This was also dated to the Neolithic/Bronze Age period and was 900m NW from the application site. At the foot of Old Park Hill in the base of a deep coombe that is Buckland Valley, an assemblage of worked flints and pottery was found, (TR 34 SW 466- MKE15995). The flints were undated, but the majority of the pottery was dated to the Late Bronze- Early Iron Age. Earlier fragments of pottery were also found dating back to the Early Bronze Age. This site is 400m NE of the current site.

From the base of Coombe Valley which branches off from the southern side of the Dour Valley a hoard of Bronze Age metalwork was found in the mid C19th, consisting of, "...three bronze flanged

axes and a tanged spearhead...", (TR 34 SW 33 - MKE6970). This site was located approximately 925m S of the current site.

Considering the major occupation of the area of Dover town centre and the continuous use of the Roman Road during this period, very little has been recovered from this period. The line of Watling Street is recorded itself as TR 34 SW 259. Excavations from within the line of Watling Street have revealed abraded fragments of possibly Roman brick or tile, (TR 34 SW 690 – MKE 21107) only 50m N of the site. A Denarius of Septimius Severus was also discovered in 1939 from just to the north of the line of the road, (TR 34 SW 54 - MKE6991), this was 200m SE from the current site.

The sub-Roman period is characterised by the nationally important 'Buckland Early Medieval Cemetery', (TR 34 SW 32 - MKE6969) and the associated 'Castle View, Anglo-Saxon burial site', (TR 34 SW 461 - MKE 15690). The former site was excavated in the 1950s and the latter in the 1990s. From both of these sites 370 burials were excavated. These two sites were separated by the cutting for the Dover to Sandwich Railway and so it was likely to have been substantially larger. The cemetery has been dated to between c. AD 475-625 and was situated on a south west facing promontory, to the south, and overlooking, the Buckland Valley mentioned above, centred some 650m E of the current site, the Castle view site is slightly closer at around 400m ESE. A background 'noise' of prehistoric flints and Roman brick and tile was also recovered.

The C12th church of St Andrew in Buckland 250m SE of the site of the Phase 1 trenches, (TR 34 SW 13 - MKE6950) and (MKE25723) possibly shows the site of the medieval village centre of Buckland, this also appears to have been focussed around the Bridge and Ford across the River Dour.

A metalled road (TR 24 SE 47 - MKE5887) was uncovered in excavations in the village of River along with fragments of Roman and medieval pottery. This site is below and to the south of the presumed line of Watling Street and is thought to be part of the line of the Pilgrims Way. This site was located around 550m NW of the application site. Medieval and post-medieval pottery was also found during trial trenching on the present site, (TR 34 SW 457 - MKE 15531) 50m SE of the present evaluation trenches.

AIMS AND OBJECTIVES

The aim of the archaeological evaluation with the associated geo-archaeological work is to determine whether any significant archaeological, geo-archaeological or palaeo-environmental remains are present on-site. Assessment of the results should provide guidance on what mitigation measures would be appropriate and will help future evaluation and mitigation on the remainder of the site. Such measures may include further archaeological trial trenching; detailed archaeological excavation; historic landscape/structural recording; and/or an archaeological watching brief during construction work.

Particular aims that should be addressed by the evaluation include (not exclusively):

- to establish whether there are any archaeological deposits at the site and to ascertain the extent, depth below ground surface, depth of deposit, character, significance and condition of such deposits;
- to assess the potential of the site to contain nationally important remains, using English Heritage assessment criteria.
- to determine the impact of past activity and especially the construction of the modern mill buildings and any terracing works on the sites' archaeological potential.
- to establish the degree of survival of potential buried remains relating to the Roman and later road and any roadside activity or occupation;
- to place any remains exposed in their wider setting and contribute to our understanding of the history of the development of the settlement of Buckland;
- to determine whether there are significant geo-archaeological or palaeo-environmental deposits present at the site and if so relate these to other exposures within the Dour Valley;
- to contribute to the environmental and landscape history of the area; and
- to contribute to the objectives of the South East Regional Framework.

(from Specification, KCCHC 2010)

ARCHAEOLOGICAL METHODOLOGY (for Geo-archaeological Methodology see Appendix 3)

The archaeological and geoarchaeological evaluations were carried out in accordance with the following:

The European Association of Archaeologists' *'The EAA Principles of Conduct for archaeologists involved in contract archaeological work'* (EAA, 1998)

English Heritage's *'Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide' v1.1* (EH, 2009)

Institute for Archaeologists' *'Standard and Guidance for archaeological field evaluation'* (IfA, 2008a)

Institute for Archaeologists' *'Standard and Guidance for the collection, documentation, conservation and research of archaeological materials'* (IfA, 2008b)

Institute for Archaeologists' *'Code of approved practice for the regulation of contractual arrangements in archaeology'* (IfA, 2008c)

Institute for Archaeologists' (Institute for Archaeologists) *'Code of conduct'* (IfA, 2010)

Kent County Council Heritage and Conservation's *'Specification for an Archaeological Evaluation of Land adjoining Buckland House, Crabble Hill, Dover, Kent. (Phase 1 Care Home Application)'* (Revised Oct, 2010). (KCCHC, Feb 2010)

This evaluation is being carried out in multiple stages. In Phase 1, six trial trenches, measuring between 30 and 20m x 1.8m, were machine excavated across the area of proposed development under archaeological supervision (Figures 1 and 2).

Trenches 1, 2 and 3 were opened first, these lying under tarmac or grass. Trenches 4 and 5 were opened later with a larger machine as these lay under thick reinforced concrete, which necessitated pecking the concrete away before excavation. Trench 2 (fig 2) had to be rotated by 90° due to the presence of the warehouse building which was expected to have been removed. Trench 2 also had to be divided into two separate trenches, 2a and 2b as a number of drains and service chambers were found approximately midway along the length of the proposed trench. Trench 6 was opened even later, after demolition of the warehouse which was heavily contaminated with pigeon droppings causing the trench to be avoided for Health and Safety reasons.

The trial trenches were scanned prior to excavation using a Cable Avoidance Tool (CAT). All of the trenches were excavated under constant archaeological supervision, Trenches 1, 2 and 3 using a JCB wheeled excavator, fitted with a toothless ditching bucket and 4, 5 and 6 using a 13 tonne 360° tracked machine. Revealed surfaces were manually cleaned in an attempt to identify any archaeological deposits or features. The sections of the trenches were selectively cleaned to observe and record their stratigraphy. All spoil removed from the trenches was scanned visually for the presence of any stray, unstratified artefacts.

All encountered archaeological deposits, features and finds were recorded according to accepted professional standards using pro-forma context record sheets. Archaeological features and deposits were planned at a scale of 1:20 and sections generally drawn at a scale of 1:10.

A full photographic record of the trenches and associated deposits and features was kept and will form part of the site archive. The archive is presently held in secure storage at the offices of Swale and Thames Archaeology, and will be offered to a local museum when an accession policy by KCC is implemented.

Only undifferentiated topsoil, subsoil and overburden of recent origin was removed by machine and kept separately. The excavation was taken, in spits of no more than 0.1m for the top and sub soil, down to the top of the first significant archaeological horizon or the top of the underlying 'natural'.

The trenches were surveyed in by 'Digitise This' using a Leica 1200 series GPS. This information was then digitised using AutoCAD 2007 and the final plan dropped directly onto an Ordnance Survey tile.

MONITORING

The KCC Archaeological Officer was informed of the commencement of the project and paid a site visit after the first three trenches had been dug and recorded.

RESULTS

The common modern stratigraphic sequence in Trenches 1 and 3 comprised a tarmac layer, **(100)**, and **(300)**, beneath which lay the substrate, **(101)**, **(301)**. Below these again are layers of make up, primarily composed of brick rubble, used to level out this car-park area, **(102)** and **(302)**.

Below these layers in Trench 1 are natural deposits (fig 5) both superficial and bedrock. Layer **(103)** was colluvium which lay above **(104)** a layer resembling Coombe Rock and **(105)** Head deposits. Below this lay the upper surface of the Middle Chalk, **(106)**.

The sequence in Trench 3 was similar, (fig 7) except here there was an extra layer of substrate to the car park, this, **(303)** was composed of what appeared to be cement waste. Below this was the colluvial deposit, **(304, Quest Unit 3)**. Within the Geo-archaeological sondage the geology appeared to show that the area of the southern end of this trench was once within the riverbed. Deposit **(305, Quest Unit 2)** was composed of alluvial deposits, below which lay **(306, Quest Unit 1)** which was formed of predominantly rounded stones with tufa sand and gravels. Contexts **(307)** and **(308)**, (fig 4) were areas of the colluvium which appeared to have a denser concentration of worked flints. These were numbered solely so they could be surveyed in and regularly checked to see if a feature 'weathered out' which may have contained these flints, unfortunately no features were seen.

Trench 2 lay below a lawn area to the north of the existing warehouse, (figs 1 and 2), giving it a very different stratigraphic make-up (figs 5 and 6). The Turf and topsoil layer **(200)** was obviously a recent addition as below this lay **(201)** which was a crushed mortar layer and below this again was a layer of re-deposited natural, **(202)**. All of these lay above the natural, which here, was seen to be head deposits. **(203)**, however, very little was left of this natural layer as it was truncated by many recent features.

Cutting into the Head deposits in Trench 2a (fig 5) was **(204)**, **[205]**, a feature that was interpreted as a tree or bush bowl due to its irregularity. Due to the three sherds of C13th pottery, from the same vessel, recovered it is possible that this may be a medieval feature and may even represent a medieval pit with eroded edges. Also cutting into the Head deposits was a robbed wall cut and its backfill, **(206)**, **[207]** and a recent pit, **(208)**, **[209]**. No Head deposits were visible within Trench 2b (fig 6), this had all been cut away by later structures and services. Two complete structures were seen within this trench comprising contexts **{212}**, **{213}**, **(214)**, and **{215}**, **{216}**, **(217)**. Running along the length of this trench and cutting these structures, a modern drain was seen, **(210)**, **(218)** and **[211]**

Trenches 4 and 5 were both covered by reinforced concrete. The ground surface had been severely truncated in this area, judging by the rise on which Buckland House sits, by anything up to two metres. Beneath the concrete, (figs 7 and 8) **(400)** and **(500)**, lay the truncated Middle Chalk, **(401)** and **(501)**. In trench 4 a single oval cut feature was seen (fig 4), which contained modern material,

(402) and **[403]**, this may also have been truncated and may date to the C19th when this area was within the gardens of Buckland House. Trench 5 also contained a single feature, **(502)** and **[503]**, (fig 4) which was so large that only the one edge was seen. This appeared to contain no artefactual material and as such, no obvious date or function was forthcoming.

Trench 6 lay under the floor of the warehouse building. Its location was moved due to anticipated heavy truncation in the suggested location. Immediately below the floor lay a 0.25m layer of substrate upon which the floor was constructed, **(600)**. Below this lay what appeared to be the colluvial sequence, **(601)** which was up to 0.80m in thickness. Below this again lay a dark sticky clay, **(602)** which in turn lay above a chalky silt layer, **(603)** which in turn rested upon tufa deposits, **(604)**. Beneath the tufa lay another layer of chalky silt, this time richer in chalk, **(605)** which lay on a dense dark clay layer **(606)** which lay above the basal angular gravel deposits, **(607)**. No features were seen or archaeological artefacts recovered from this trench.

FINDS

Many worked flints were found in Colluvial layer **(304)** comprised mainly of flakes and burnt unworked flint pieces. These were not derived from any archaeological features found on site and may originate from areas towards the northern edge or beyond the bounds of the site. The results of the flint analysis are shown in Appendix 2.

In addition to the flint assemblage pottery was recovered which dates from the early medieval to the modern periods. An Early to Mid Saxon sherd was recovered from Colluvial layer **(304)**, as were sherds possibly dating to the 12th century (Macpherson-Grant, Appendix 1, p9). These elements all show that colluviation events were occurring at these points and possibly had been since the post-Neolithic, (Young and Green, Appendix 3, p15).

The possible admixture of medieval pottery and possible Bronze Age flints may be due to any number of reasons. It is possible that this thick colluvial layer may be comprised of many thin colluvial laminae, each one a separate event, bringing different soil elements of different dates to this point. It is also possible that there may have been a straight chronological sequence of deposition with the flints occurring in the fine lower laminae and the pottery coming from the upper, although there was no direct proof of this due to machining occurring in horizontal spits cutting through the hillslope. The fact that the flints and all the pottery from the Colluvial contexts appear to show the same degree of abrasion highlights that these are the most likely suggestions.

In addition to the above early finds three sherds of 12th century pottery all from the same vessel were found in feature **[205]** in Trench 2 from context **(204)**, (Macpherson-Grant, Appendix 1, p8).

CONCLUSION

The archaeological works of Phase 1 have been successful in fulfilling the primary aims and objectives of the Specification.

Trench 1 reached natural Chalk and Coombe Rock deposits showing that this area was highly likely to have been truncated at its northern end. Trench 2 uncovered foundations from Victorian and early C20th mill buildings, and Trench 3 came down onto colluvium, which contained large quantities of worked flints. Trenches 4 and 5 came down onto Chalk showing extreme truncation in this area. Trench 6 appeared to have been only lightly truncated and had a full Geological sequence visible in the sondage. Trenches 1 and 3 also had sondages dug at their southern ends, (closest to the river) for the purposes of environmental sampling by column sample, which was undertaken by a team from QUEST (Appendices 3 and 4). The results of these investigations are detailed in Appendix 4.

Despite the archaeological potential of the surrounding area, significant buried archaeological features have not so far been found in this part of the Phase 1 area. The significant worked flint scatter in trench 3 and the presence of early Saxon and early medieval pottery, the pottery only lightly abraded, may suggest that archaeological features possibly occupational in nature exist in the immediate locality up hill of the site. It is possible that the flints may be slightly more abraded than the pottery sherds and may, therefore, be derived from a source at a greater distance than the pottery. However, it is unwise to compare the abrasion patterns of two materials as diverse as these.

The Geo-archaeological investigations were also a success, revealing coarse fluvial gravels probably from the late-Devensian period, with flood plain deposits of the River Dour overlying these. Above these are the Colluvial deposits mentioned above which are so rich in archaeological artefacts. It is stated in the Geo-archaeological report that colluvial material of this nature in the south-east of England started being deposited in the post-Neolithic period, (Young and Green, Appendix 4, p30). This was probably as an immediate result of primary deforestation for agriculture and would mesh well with the provisional mid-Bronze Age date for the lithics assemblage (Lamdin-Whymark, Appendix 2, p21). It is possible that these colluvial events may, however, be somewhat later as they are seen to lie above the tufa and river gravels layers, the tufa element of which is said to have surrounded the matrix of the Dover boat, (C. Green *pers. comm.*). This sequence is common all along the Dour valley and confirms the results of previous work in the valley (Bates and Barham 1993).

The formation levels of the development are unknown at present. From the plan in Figure 1 only the areas evaluated by Trenches 1, 2 and 6 may have the archaeology compromised. The area around Trench 3 appears to be under a car-park, which, it is suggested, will be built up and have only minor services below its surface, and Trenches 4 and 5 have already been truncated down to bedrock. It

remains to be seen if the pattern of large amounts of late deposition in some areas and severe truncation in others is continued across the area of Phase 2.

ACKNOWLEDGEMENTS

SWAT would like to thank Gillcrest Homes for commissioning the project. Thanks are also extended to Heritage and Conservation (Kent County Council) for their advice and assistance. Geoff Morley carried out the archaeological fieldwork, surveying was undertaken by Jonny Madden. This project was managed by Dr. Paul Wilkinson.

G. Morley MSc, FSA Scot, PlfA

May 2011

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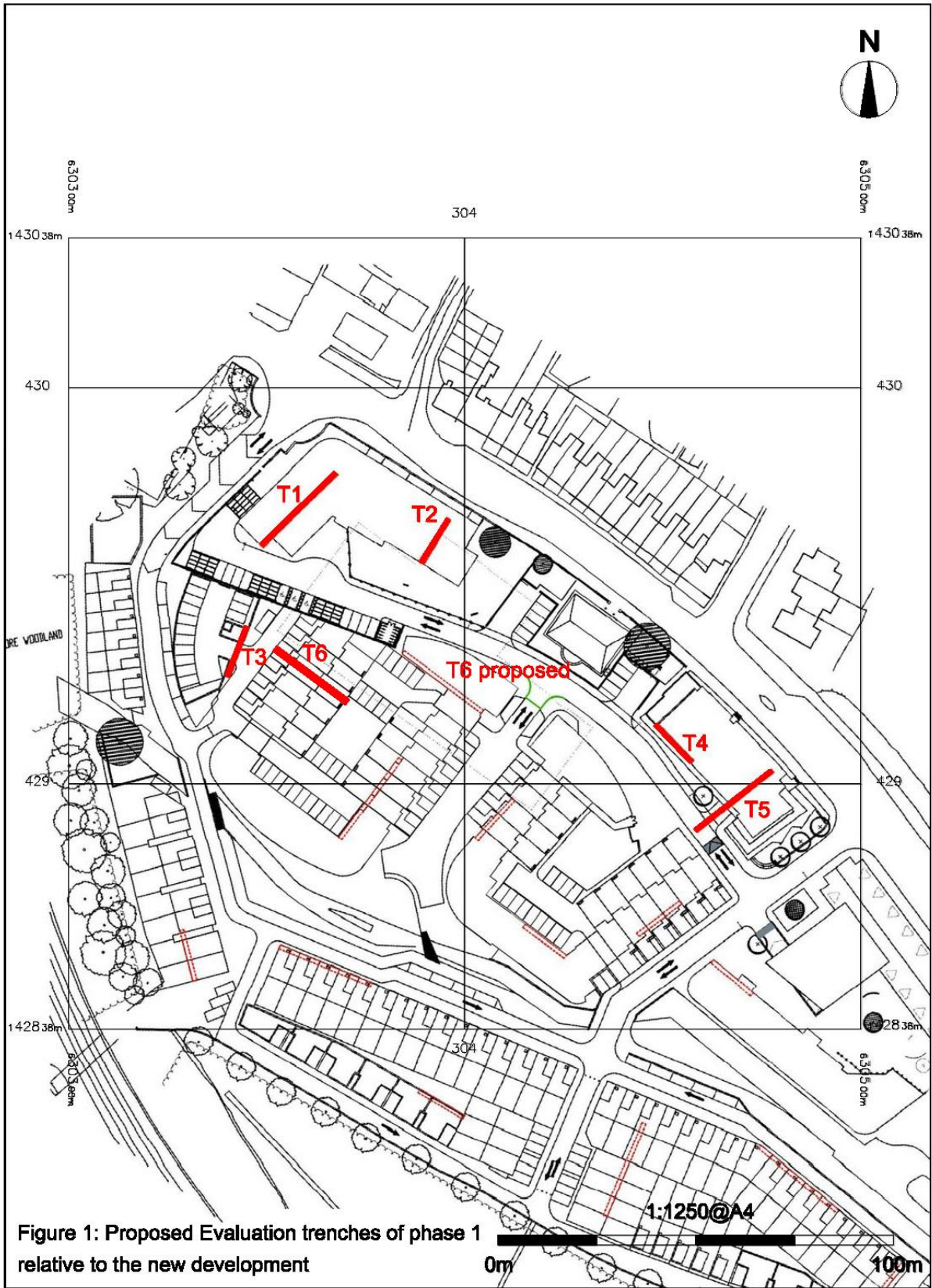


Figure 1: Proposed Evaluation trenches of phase 1 relative to the new development

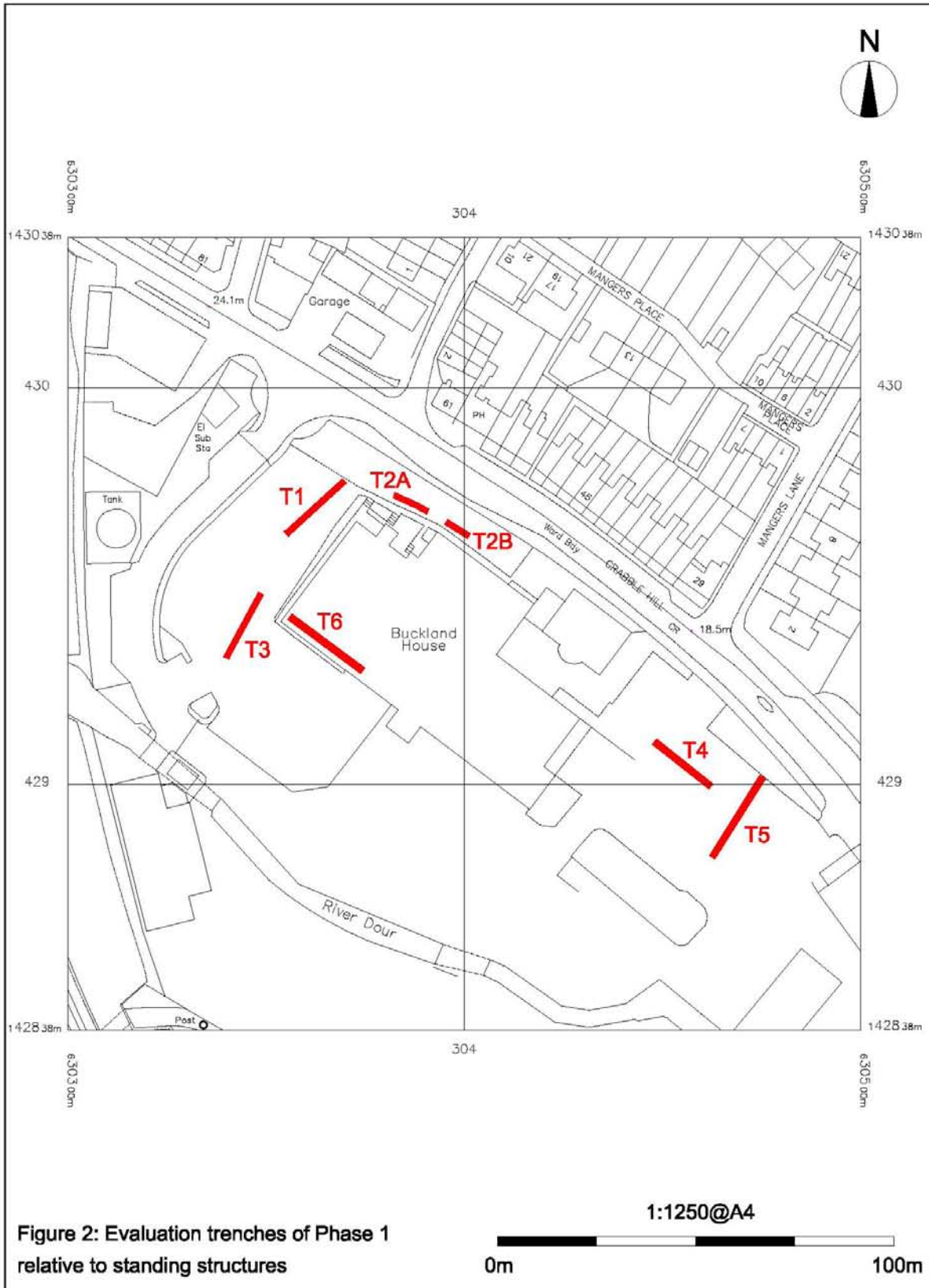


Figure 2: Evaluation trenches of Phase 1 relative to standing structures

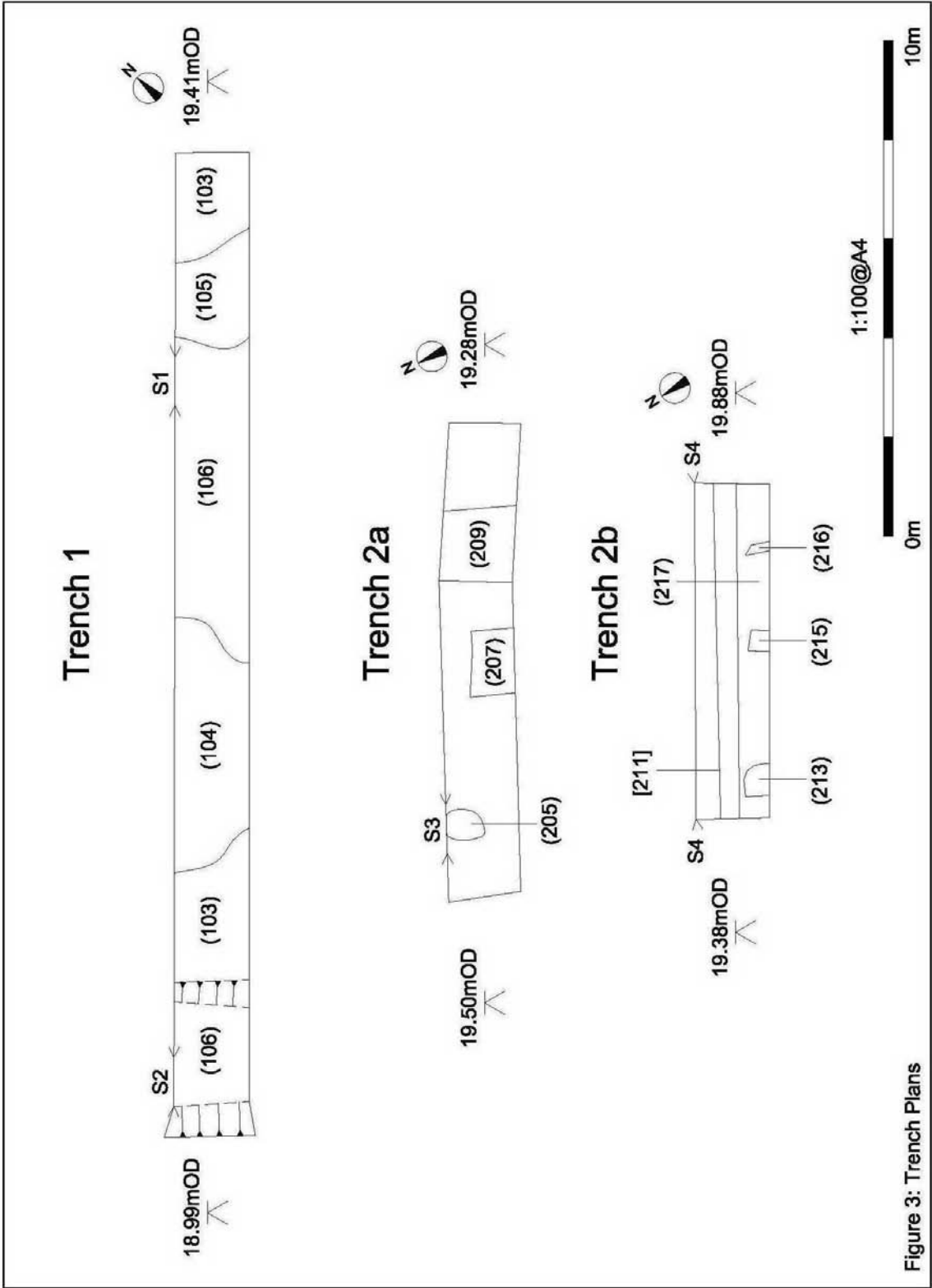


Figure 3: Trench Plans

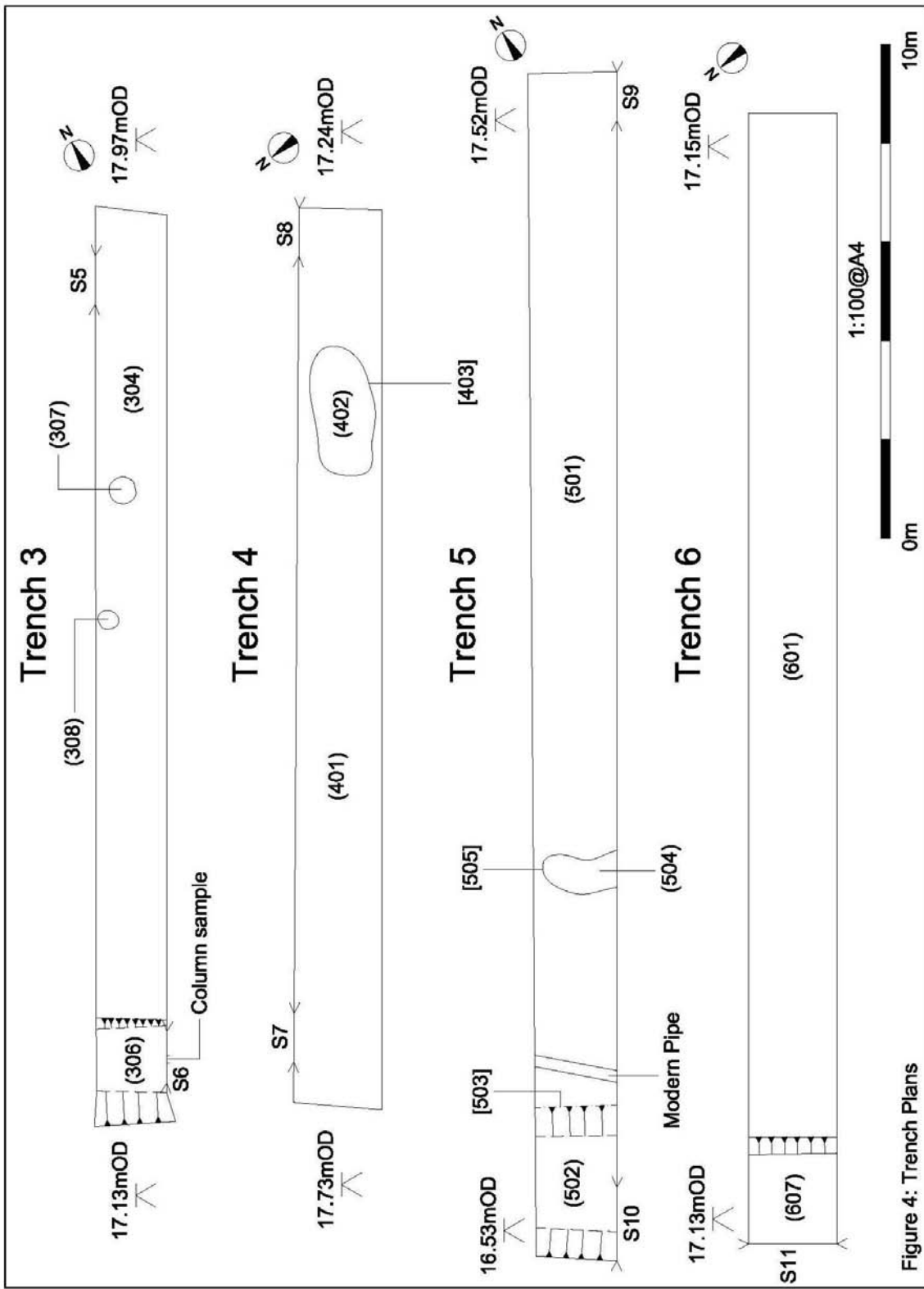


Figure 4: Trench Plans

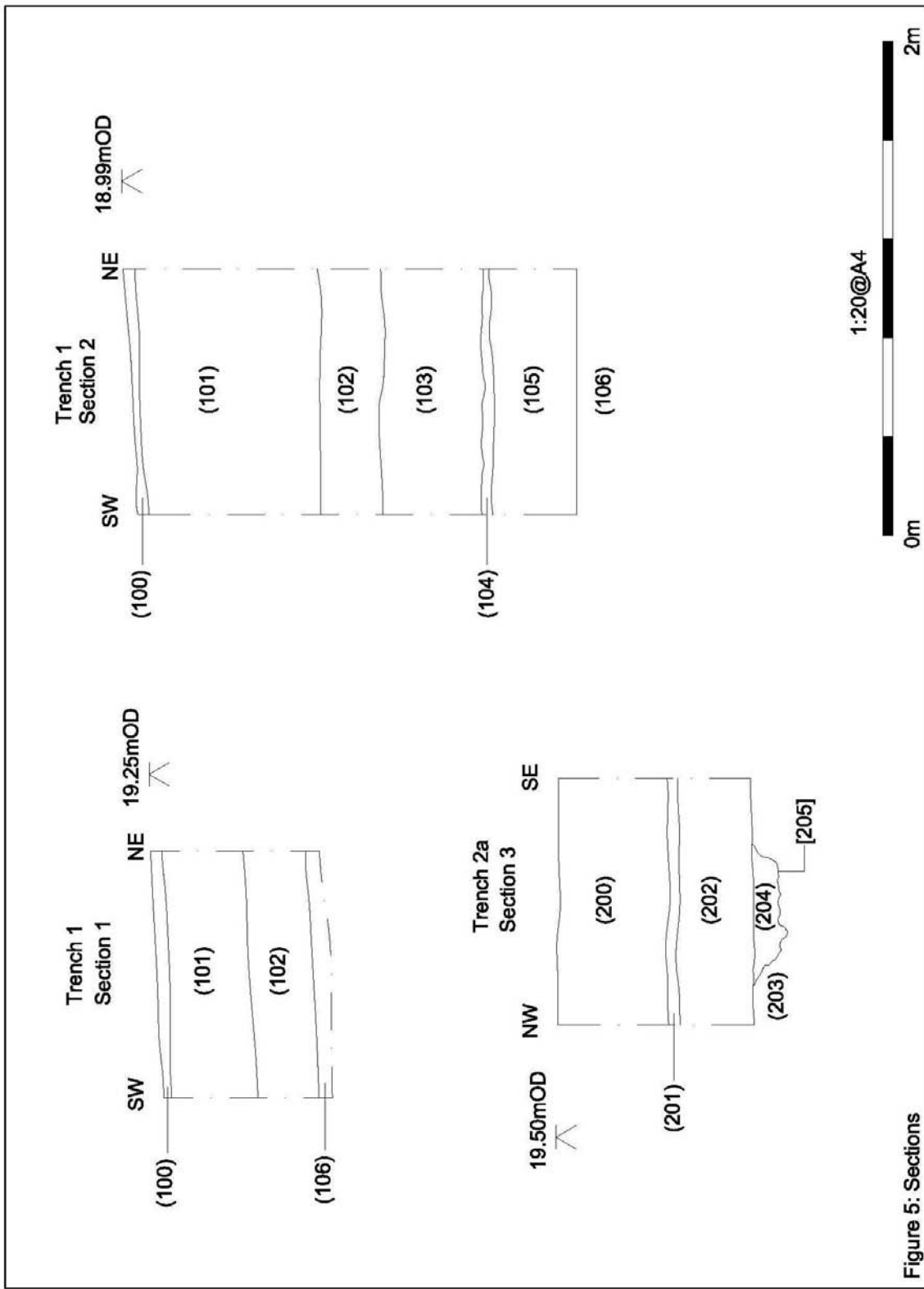


Figure 5: Sections

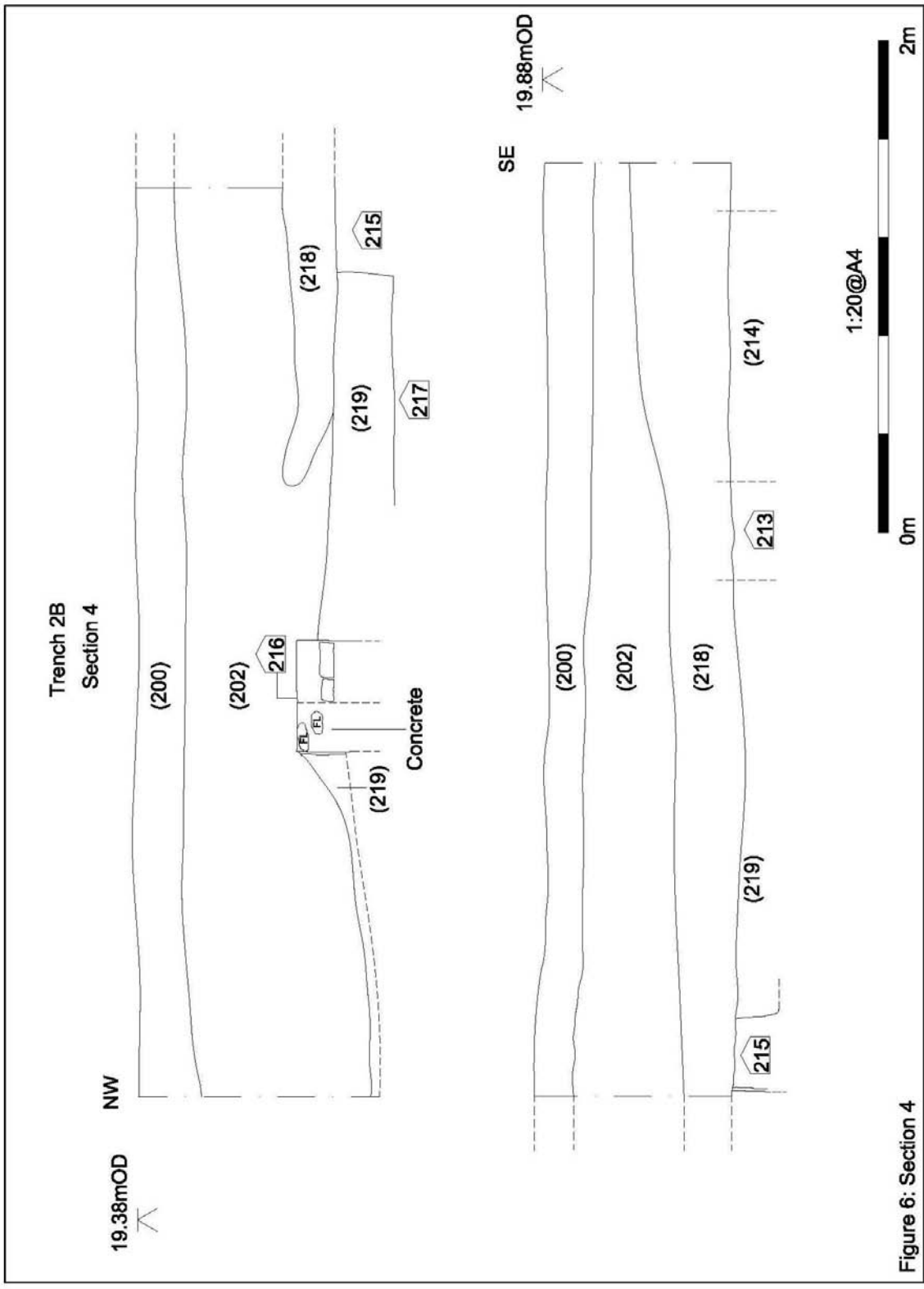


Figure 6: Section 4

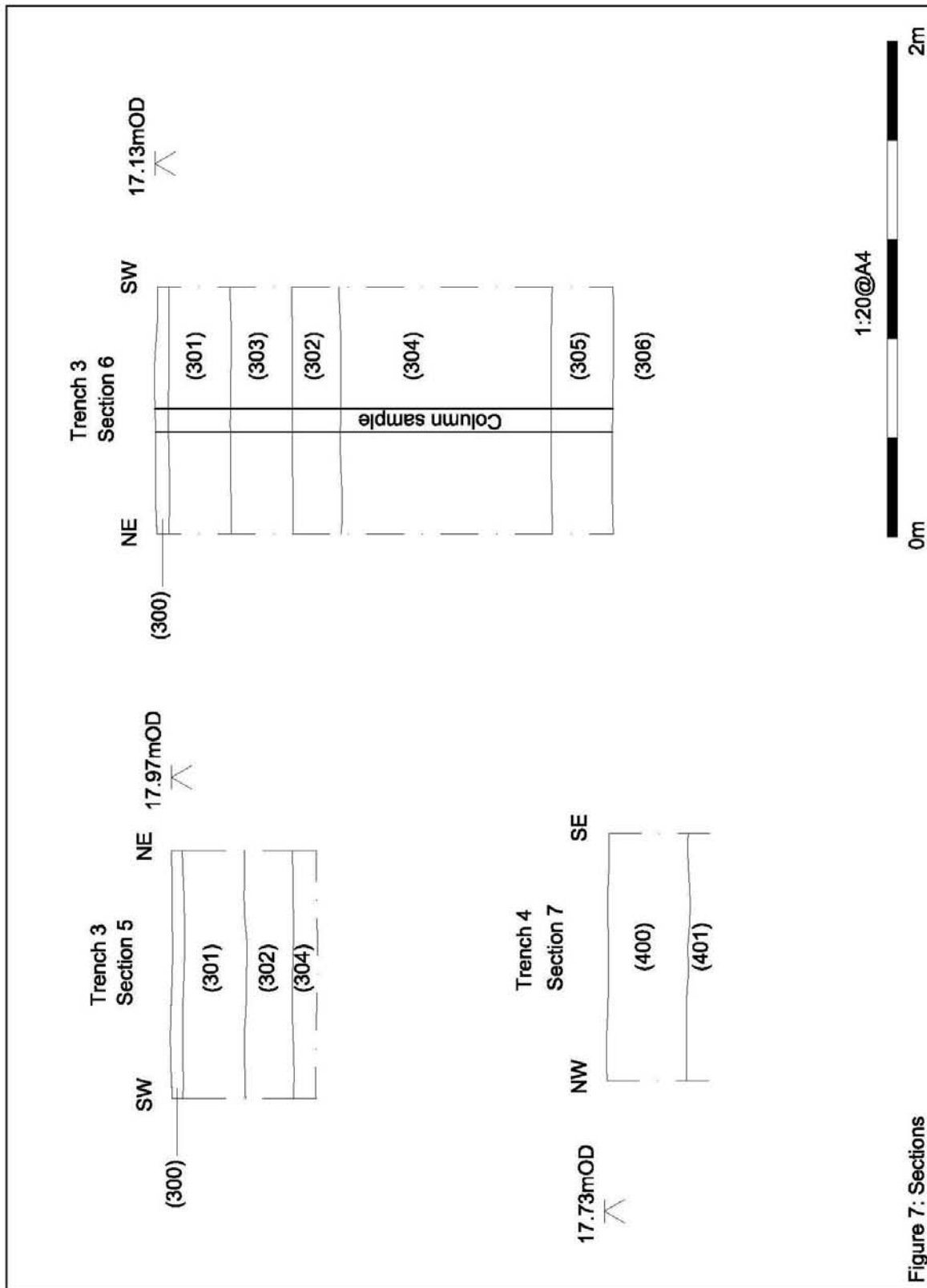


Figure 7: Sections

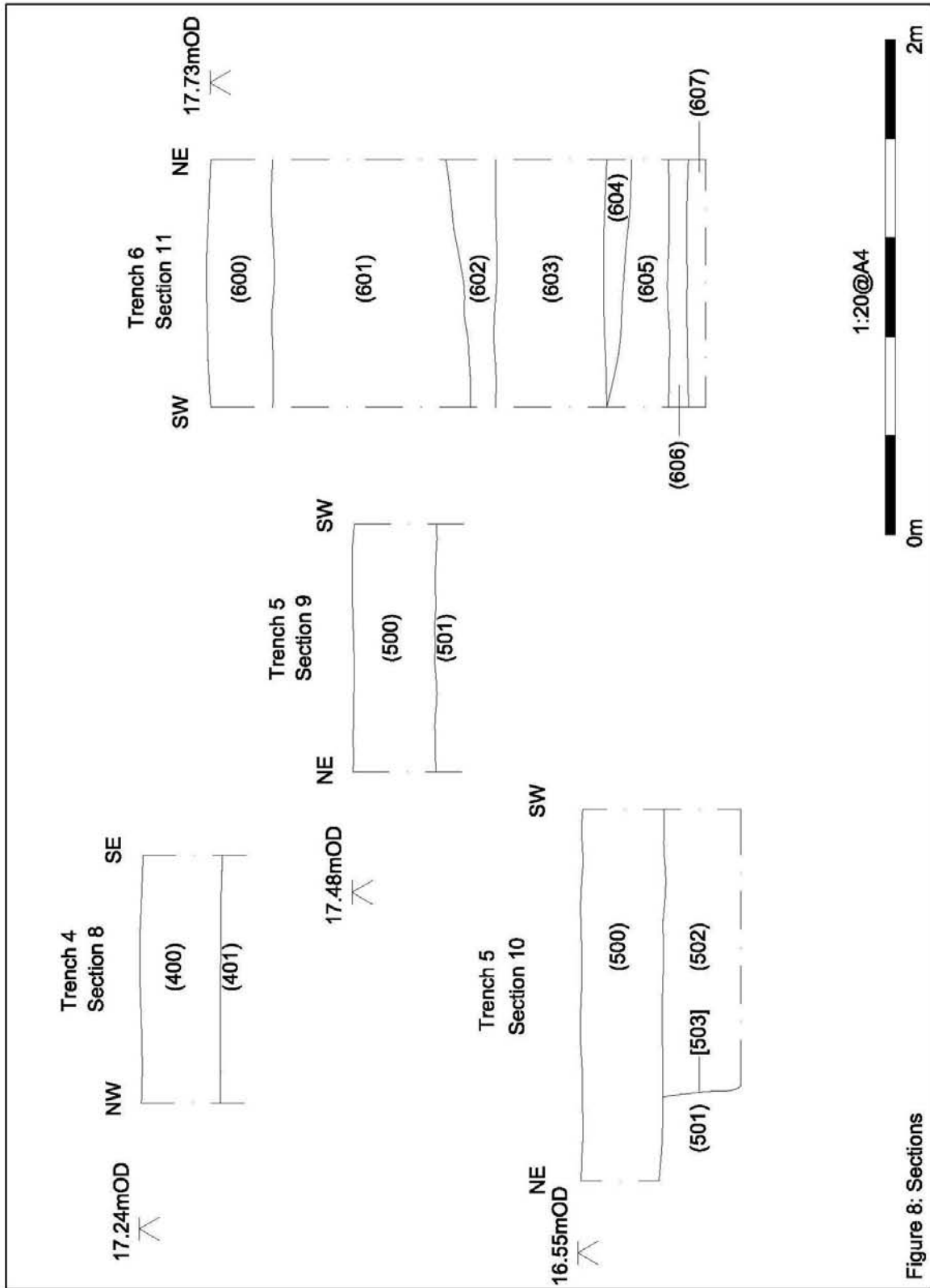




Figure 8: Trenches 1 and 3 (3 in foreground)



Figure 9: Trench 2



Figure 10: Sondage in Trench 1



Figure 11: Sondage in Trench 3



Figure 12: Section in Trench 2



Figure 13: Section in Trench 4

APPENDIX 1

DATING AND ASSESSMENT OF THE POTTERY FROM: BUCKLAND (CRABBLE) MILL, DOVER, KENT 2010 (BCM-EV-10)

A. Primary quantification:

Overall sherd count and weight: 10 sherds (45gms)

B. Period Code employed:

EMS = Early-Mid Saxon

LS = Late Saxon

EM = Early Medieval

EM/M = Early Medieval-Medieval transition

M = Medieval

LPM = Late Post-Medieval

C. Context dating:

CONTEXT: 204 Trench 2

Sherds: 5 (weight: 17gms)

1 sherd EM/M Canterbury sandy ware (c.1150-1200/1225 AD emphasis)

3 sherds M Canterbury Tyler Hill sandy ware (c.1225-1250/1275 AD emphasis; **same vessel**)

1 sherd M Canterbury Tyler Hill sandy ware (c.1250/1275-1325 AD probably)

and:

1 fragment mortar (weight: 2gms) – hard, angular fragment, slightly worn

Comment:

The earliest sherd is a small, fairly worn scrap from a later twelfth century jug. It has traces of glaze externally, under the rim, and is oxidised externally. These aspects, coupled with its thickened, externally bevelled rim are fairly typical manufacturing characteristics of early Canterbury jugs. These jugs, and their associated forms, have been recently summarised in a review of the material recently excavated from Townwall Street, Dover (Cotter 2006, 136-143). This particular example should pre-date c.1200 AD. This sherd is definitely residual in relation to the 3 later, medieval, bodysherds, all from the same vessel. These have the pale buff firing colours that tend to be more typical of the earlier-mid thirteenth century, than earlier or later. These are unworn and fresh – as is the latest element - a single more oxidised orange-red bodysherd. This firing trend begins to predominate from the mid thirteenth century, continuing through into the fourteenth. However the fabric is still relatively soft and a mid-later thirteenth century date more likely – which fits well with the condition of the slightly earlier Tyler Hill sherds.

Likely context date: c.1250-1275 AD probably

CONTEXT: 208 – Trench 2

Sherds: 2 (weight: 18gms)

1 sherd LPM Pearl Ware (c.1775-1825 AD)

1 sherd LPM Yellow Ware (c.1825/1850-1900 AD)

Comment:

Both these sherds are fresh and unworn, suggesting that they are from an undisturbed contemporary deposit. The earliest is from a blue transfer-printed shallow Pearl Ware bowl or, more probably, a saucer, the second from a Yellow Ware jug. The temporally close end and beginning manufacturing dates of these two wares, coupled with their condition, indicates a mid-nineteenth century date for both.

Likely context date: Broadly, c.1850 AD or slightly earlier

CONTEXT: 304 – Trench 3 (sondage 1.30m)

Sherd: 1 (weight: 5gms)

1 sherd EMS organic-tempered ware (c.550/600-700 AD)

Comment:

There is no doubt about the date of this bodysherd – its dark reduced fabric and linear voids (from burnt out organic inclusions) are typical of later sixth-seventh century Early-Mid Saxon organic-tempered products. Many of these are very heavily tempered, particularly those of the seventh century. Here the relatively low organic content could, by comparison with the Canterbury Marlowe sequence (Macpherson-Grant 1980, 818-897), imply a slightly earlier, later sixth or earlier seventh century, date. The sherd is lightly burnished internally, suggesting that it is probably from a bowl rather than a cooking-pot. The sherd is lightly worn externally and need not be seriously residual in-context.

Likely context date: If not residual in a later context, arguably, c.575-650 AD

CONTEXT: 304 – Trench 2 South

Sherds: 2 (weight: 5gms)

2 sherds LS or EM Canterbury sandy ware (c.950-975/1000 AD or c.1075/1125-1175 AD; **possibly same vessel**)

Comment:

These 2 fairly small bodysherds are more difficult to date. Their thin bodywalls and dark grey firing colours are fairly typical of either later Saxon or Early Medieval Canterbury sandy ware products. If the former, then the available manufacturing traits suggests that a pre-tenth century production date is unlikely and, again on the basis of the Marlowe sequence (*op.cit.*), is more likely to be of later tenth century date. However, any potential allocation here to the Late Saxon period is slightly coloured by the relatively unworn condition of the earlier Saxon sherd from the *Context 304 sondage* – and a later, late eleventh or more probably mid-later twelfth century date, more likely. Both sherds are slightly worn and are probably moderately residual in-context.

Likely context date: Uncertain – possibly mid-later C12 AD

D. Recommendations:

1. At this stage of site-assessment, no material worthy of illustration or publication has been recovered.
2. However, the condition of the Saxon sherd is clearly indicative of Saxon occupation either on-site or in the immediate vicinity – and it is recommended that any further site-work should bear this likelihood in mind.

E. Bibliography:

Cotter 2006: Cotter, J., 'The Pottery' in Parfitt, K., *et.al. Townwall Street, Dover, Excavations 1996*, The Archaeology of Canterbury New Series **3**, 121-254

Macpherson-Grant 1995 : Macpherson-Grant, N., 'Early to Late Saxon Pottery', in Blockley, K, *et.al., Excavations in the Marlowe Car Park and Surrounding Areas*, The Archaeology of Canterbury **V** (Part II) 1995, 818-897

Analyst : N.Macpherson-Grant 21.2.2011

APPENDIX 2

The struck flint and burnt unworked flint

By Hugo Lamdin-Whymark

Twenty-nine struck flints and nineteen pieces (421 g) of burnt unworked flint were recovered from the archaeological evaluation at Buckland Mill. The majority of the flint was recovered from colluvial deposits and exhibits extensive edge-damage resulting from movement down slope. The struck flint assemblage comprises broad hard-hammer flakes, including one with a retouched spur and notch, and a second with a notch. These flints are not intrinsically datable, but the broad proportions of the flakes and use of a hard hammer percussor, such as flint or quartzite pebble, indicate that these artefacts probably date from the middle to late Bronze Age.

Table 1: The flint from Buckland Mill, Crabble, Dover, by Evaluation Trench and context

	Trench 1		Trench 2	Trench 3	Grand Total
CATEGORY TYPE	U/S	103	204	304	
Flake			5	18	23
Blade-like		1		2	3
Irregular waste				1	1
Spurred piece and notch				1	1
Notch				1	1
Burnt unworked flint	1			18	19
Grand Total	1	1	5	41	48

APPENDIX 3

METHOD STATEMENT

LOCATION OF SITE: Land adjoining Buckland House, Crabble Hill, Dover, Kent

TITLE OF METHOD STATEMENT:

Method Statement 101/10 – Geoarchaeological Field Investigations of the deposits at Land adjoining Buckland House, Crabble Hill, Dover, Kent

The following method statement has been produced by:

ORIGINATOR (PRINT NAME)	SIGNATURE	DATE
G. Lafferty and Dr C. Green		

The following method statement has been communicated and discussed, and is fully understood by/between, all parties signed/identified below:

POSITION	NAME	SIGNATURE	DATE

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OUR REFERENCE	101/10
SITE	<u>Land adjoining Buckland House, Crabble Hill, Dover, Kent</u>
CONTRACT REFERENCE	/
DOCUMENT NUMBER	Method Statement 101/10
TITLE	Method Statement 101/10 – Ge archaeological Field Investigation (Test-pits)
DATE	19th October 2010

The supervision of work contained in this document will be carried out by competent person:	
The author of this method statement is:	G. Lafferty and Dr C. Green

1. Brief Description of Work

- 1.1.** This method statement covers the Geoarchaeological Trial Trench Investigation on land adjoining Buckland House, Crabble Hill, Dover, Kent (NGR 630400 142950). The site is on the valley floor of the River Dour, which is thought to be less than ca. 300m across at this point.
- 1.2.** The Geoarchaeological Field Investigations are being conducted to provide a detailed record of the sedimentary sequences, and to obtain samples (if necessary) through these deposits for the extraction and assessment and or analysis of sub-fossil biological remains.
- 1.3.** Five archaeological trial trenches (Figure 1) will be put down at the site (two measuring 25m in length by 1.8m in width; two measuring 20m by 1.8m and one measuring 15m by 1.8m) to assess the archaeological potential of the development site. The trial trenches will be supervised by SWAT Archaeology. The location of the test pits (northing, easting and elevation) will be recorded by SWAT Archaeology.
- 1.4.** The proposed trial trenches are between 20m and 90m from the modern stream (Figure 1), located in the middle of the valley floor. The British Geological Survey map head deposits here however alluvium deposits are also possible, especially within 20m of the stream (Trial Trench 3, Figure 1)
- 1.5.** Dan Young (QUEST) will monitor and record the sedimentary sequences exposed in the trial trenches, noting colour, composition, boundary changes and inclusions.
- 1.6.** Dan Young (QUEST) will also take continuous sequences of bulk samples and or column samples (from selected trial trenches where necessary) suitable for palaeoenvironmental laboratory-based investigations of the sedimentary sequences, sub-fossil biological remains, notably pollen, invertebrates (Ostracoda and Mollusca) and micro-vertebrates (small mammals, fish, amphibians, reptiles, birds) and dating (OSL and/or radiocarbon).
- 1.7.** Previous palaeoenvironmental investigations in the Dour valley include work undertaken on The Dover Boat (Clarke, 2004a and b) and more recently, a study involving work 31 sites downstream from Buckland into Dover Town centre in which the Holocene sediments of the Dour valley floor have been observed and recorded (Bates et al. 2008). These sites include Crabble Mill itself where flint artefacts of probable Bronze Age were recovered and Buckland School downstream from Crabble Mill where a single flint flake was recorded. Further downstream at London Road, wooden stakes and flint flakes were recovered from peat. In addition, at Crabble Mill, remains of edible shellfish were found in association with evidence of Late Neolithic/Early Bronze Age occupation. Where possible the new data and any available existing data from previous geoarchaeological, archaeological and palaeoenvironmental investigations in the area (e.g. Bates et al. 2008) will be considered and if possible will contribute to producing a deposit model of the site and its immediate environs.

- 1.8. The location of the samples (northing, easting and elevation) will be recorded onto section drawings by SWAT with assistance from Dan Young MSc (QUEST). The samples will be labelled with the site name, location, depth and orientation (where applicable), and returned Reading University for cold storage to prevent sample deterioration.
- 1.9. A report detailing the results of the Geoarchaeological Field Investigations will be produced and used to inform the design of further archaeological mitigation works at the site where appropriate. Recommendations for laboratory-based investigations of the sedimentary sequence, sub-fossil biological remains, notably pollen, invertebrates (Ostracoda and Mollusca) and micro-vertebrates (small mammals, fish, amphibians, reptiles, birds) and dating (¹⁴C, OSL and or amino acid) will be outlined in this report (if necessary).

2. Procedures

- 2.1. This method statement has been prepared after consultation with Paul Wilkinson (SWAT).
- 2.2. The *QUEST* team will liaise with Paul Wilkinson and Kent County Council regarding the overall execution of the Geoarchaeological Field Investigation.
- 2.3. Members of the *QUEST* team will be experienced and fully trained in conducting the work activities outlined in this method statement.

3. Health, Safety and Environment

- 3.1. Prior to commencement of the Geoarchaeological Field Investigation, the method statement will be presented to all interested parties.
- 3.2. *QUEST* staff will use available hygiene and welfare facilities.
- 3.3. All *QUEST* staff will wear adequate protective clothing

Dr. R. Batchelor

QUEST Project Manager

References

Barham, A.J. and Bates, M.R. (1994) The sedimentology. Pp 133-143 In: Wilkinson, D.R.P. Excavations on the White Cliffs Experience Site, Dover 1988-91. *Archaeologia Cantiana CXIV*, 51-148.

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APPENDIX 4

A REPORT ON THE GEOARCHAEOLOGICAL INVESTIGATIONS AT BUCKLAND MILL, DOVER, KENT (SITE CODE: BJH10)

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INTRODUCTION

This report summarises the findings arising out of the geoarchaeological investigations undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at Buckland Mill, Dover, Kent (National Grid Reference: TR 304 429) and following archaeological assessment of the site by Swale and Thames Archaeological Survey Company. The Buckland Mill site lies on the valley floor of the Dour, and the archaeological trenches were situated between 20 and 90m from the modern day stream. The British Geological Survey (BGS, 1966) indicates head deposits in the vicinity of Buckland Mill, suggesting that there is little topographic evidence of a floodplain on the valley floor. However, previous investigations in this part of the Dour Valley (Bates et al., 2008) have indicated that there is at least a metre of post-Neolithic colluvium (stony loam) on the valley slopes, and that on the valley floor this colluvial deposit may overlie earlier colluvium and alluvial sediments, including fine grained silts and peat.

Five 2.0m x 18.0m trenches were excavated at the Buckland Mill site (Trenches 1 to 5), of which two were observed by Quaternary Scientific (QUEST) (Trenches 1 and 3). Trench 3, located ca. 20.0m north of the modern Dour stream and aligned perpendicular to its present course, had a sondage dug at its southern end to a depth of 2.0m. The remainder of Trench 3 and the whole of Trench 1 were excavated to a level just below the surface of the natural sediment underlying the made ground.

The main aim of the geoarchaeological investigations was to observe and interpret the sub-surface stratigraphy across the site, to clarify the existence of alluvium within this part of the Dour Valley, and to highlight sediments of potential palaeoenvironmental significance.

METHODS

Lithostratigraphic descriptions

The lithostratigraphy of Trench 3 was described in the field using standard procedures for recording unconsolidated sediment and organic sediments, noting the physical properties (colour), composition (gravel, sand, clay, silt and organic matter) and inclusions (e.g. artefacts) (Tröels-Smith, 1955). The procedure involved: (1) cleaning the section within the sondage with a spade and trowel to remove surface contaminants; (2) recording the physical properties, most notably colour using a Munsell Soil Colour Chart; (3) recording the composition; gravel (*Grana glareosa*; Gg), fine sand (*Grana arenosa*; Ga), silt (*Argilla granosa*; Ag) and clay (*Argilla steatoides*) and (4) recording the unit boundaries e.g. sharp or diffuse. The results are displayed in Figure 1 and Table 1.

RESULTS OF THE LITHOSTRATIGRAPHIC DESCRIPTION

The results of the lithostratigraphic description of Trench 3 are displayed in Figure 1 and Table 1. In general, the thickness of made ground at Buckland Mill was observed, in trenches 1 and 3, to increase down-slope, so that an artificially levelled tarmac surface capped increasing depths of made ground towards the centre of the valley. Four sediment types were observed in the sequence in Trench 3:

(Unit 4) Made Ground

(Unit 3) Colluvium (clayey silt with flint clasts)

(Unit 2) Alluvium (silty clay)

(Unit 1) Tufa sand and gravel

The base of the Holocene alluvial sequence is the surface of the underlying gravel – the tufa sand and gravel (Unit 1). The gravel surface was observed only in the sondage in the southern end of Trench 3, at 2.00m to 1.90m below ground surface (bgs). Also observed only in the sondage, grey, slightly chalky alluvium rested directly on the surface of the underlying gravel at 1.90m to 1.60m bgs. Some mollusc remains and fragments of charcoal were observed in this unit. Overlying the alluvium and observed throughout the remainder of Trench 3 and in Trench 1 was a stony yellowish brown clayey silt (colluvium) containing natural flints, burnt and worked flint and fragments of prehistoric pottery.

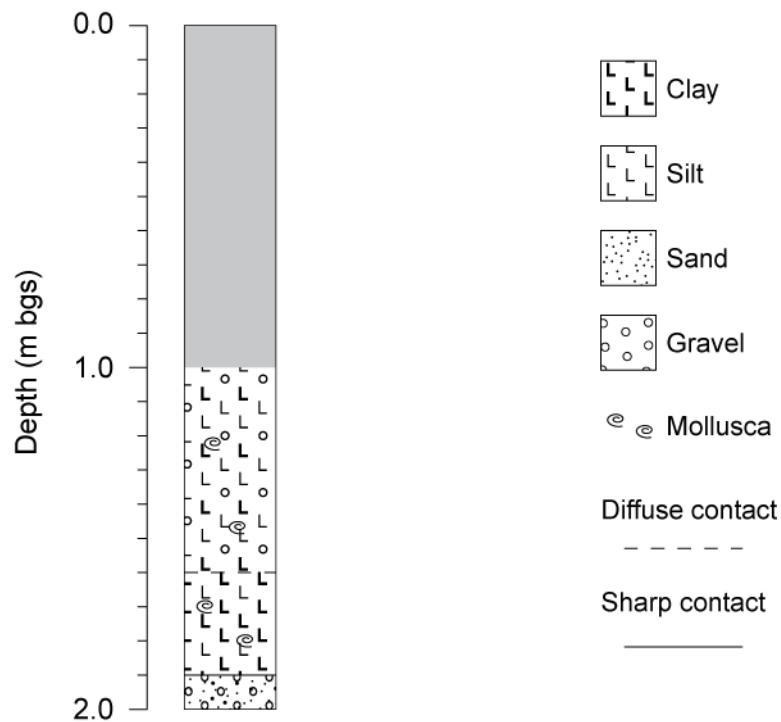


Figure 1: Lithostratigraphic diagram of Trench 3 (sondage), Buckland Mill, Dover, Kent

Table 1: Lithostratigraphic description of Trench 3, Buckland Mill, Dover, Kent

Depth (m bgs)	Composition
0.00 to 1.00	Made ground.
1.00 to 1.60	10YR 5/6; Ag2 As1 Gg1; yellowish brown clayey silt with gravel to cobble sized (8-50mm) flint clasts throughout. Burnt and worked flint. Some concentration of flint clasts in lenses but otherwise massive. Some molluscs and fragments of charcoal. Diffuse contact in to:
1.60 to 1.90	10YR 5/3; As3 Ag1 Gg+; brown silty clay with occasional gravel-sized fragments of chalk. Fragments of charcoal common. Some molluscs. Sharp contact in to:
1.90 to 2.00	10YR 5/4; Gg2 Ga2 As+; yellowish brown sand and gravel with traces of clay. Gravel and cobble sized (4-60mm) clasts of flint, sub-rounded to sub-angular. Some chalky (calcareous) sediment.

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

The sedimentary sequence in this part of the Dour Valley is characterised by tufa sand and gravel overlain by thin alluvial and colluvial deposits. The natural sediments have probably been truncated and are overlain by made ground increasing in thickness towards the modern Dour stream. The oldest sediments observed here are the coarse fluvial gravels (Unit 1) of probable Late Devensian age, found throughout the lower and middle Dour Valley downstream of Crabble (Bates et al., 2008). These sediments have yielded mammal remains elsewhere, including a mammoth tooth (*Mammuthus primigenius*) during excavations at Market Square (Bates et al., 2008; McDakin, 1900).

The alluvial sediments (Unit 2) identified in Trench 3, overlying and post-dating the coarse gravels, represent deposition on the floodplain of the Dour. These sediments may therefore yield useful palaeoenvironmental information since they may contain well-preserved pollen, diatoms, molluscs and plant macrofossils (seeds and wood).

The unit identified as colluvium (Unit 3) in Trenches 1 and 3 probably relates to a period of enhanced soil erosion reflecting increasingly intensive prehistoric agricultural land-use. In SE England such colluvial horizons are generally post-Neolithic in age, with deposition continuing intermittently down to the present day. This unit at Buckland Mill yielded burnt and worked flint and pottery, consistent with discoveries elsewhere in the Dour valley of evidence in this unit for human activity (Bates et al., 2008).

An assessment of the potential of the alluvial and colluvial sediments obtained from Trench 3 to yield information on the local and regional environment and to identify evidence of change or continuity through time at Buckland Mill is recommended. This assessment would consist of (1) organic matter determinations to permit identification of sedimentary units indicating more terrestrial conditions (e.g. peat, soil), and aid the recognition of units having a higher organic matter that may be suitable for radiocarbon dating; (2) pollen assessment, to establish the potential of the column sample to provide information on vegetation composition, land-use and diet; (3) diatom assessment, to establish the potential of the column sample to provide information on the environmental conditions (e.g. marine, brackish or freshwater) throughout the sequence; (4) waterlogged plant macrofossils (seeds and wood), to establish the potential of the column sample to provide information on climate change or vegetation history; (5) mollusc assessment, to establish the potential of the

column sample to provide information on the environmental conditions (e.g. marine, brackish or freshwater) and (6) radiocarbon dating, to provide a robust chronology for the palaeoenvironmental assessment.

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