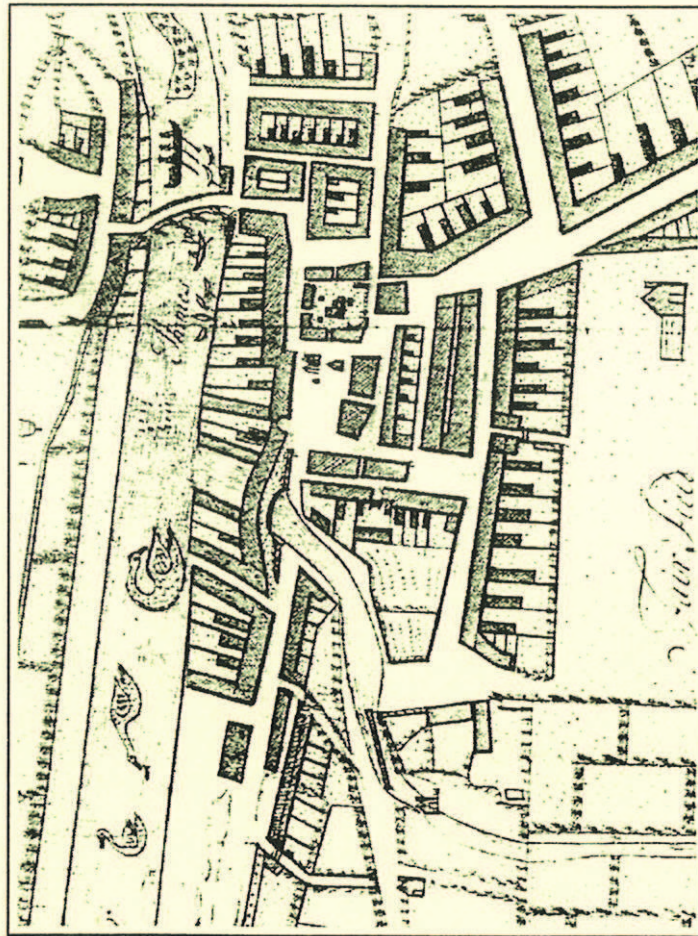


Mount Anvil

**The Bittoms,  
Kingston College,  
Kingston-upon-Thames,  
London**

*ARCHAEOLOGICAL EVALUATION REPORT*

NGR: TQ179 689  
Site Code: KHR 01  
Planning ref: 00/3212/FUL



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September 2001

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**The Bittoms,  
Kingston College,  
Kingston-upon-Thames,  
London**

*ARCHAEOLOGICAL EVALUATION REPORT*

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September 2001

**The Bittoms,  
Kingston College,  
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London**

***ARCHAEOLOGICAL EVALUATION REPORT***

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## SUMMARY

*The Oxford Archaeological Unit (OAU) carried out a field evaluation at on behalf of Mount Anvil within the grounds of Kingston College, Kingston-upon-Thames. The evaluation revealed significant archaeological remains at between 0.32m and 1.48m below current ground level across much of the site. These had, in general, been heavily truncated by 19th and 20th century ground reduction and so survived in only a partial state. A single pit was dated by pottery to the Bronze Age (1900 -700BC) and may indicate only limited activity. More extensive remains indicate a settlement of early to middle Saxon date (5th -9th century AD). This latter represents important evidence for the early development of Kingston. Pits of possible 11th to 13th century date demonstrate activity on the site into the later medieval period although this is not associated with buildings. Extensive, and in places deep, layers of soil and building rubble indicate both truncation and dumping across the site during the recent past.*

*The evidence suggests three zones of predicted archaeological survival, with the highest survival in a band running from the SW corner of the site across the central part. The impact of the proposed development is variable. The greatest impact is in the western part of the site where basement car-parking is proposed and where all archaeological deposits will be destroyed. Construction at approximately 1m below current ground levels across the rest of the site may have a more limited impact, particularly where this co-incides with archaeological deposits surviving at deeper levels or not at all.*

## 1 INTRODUCTION

### 1.1 Location and scope of work

1.1.1 Between 20.08.01 and 04.09.01 OAU carried out a field evaluation at The Bittoms, Kingston College, Kingston Hall Road, Kingston-upon Thames (OS grid ref. TQ 179 689) on behalf of Mount Anvil (the client) in fulfillment of a condition attached to planning consent No. 00/3212/FUL). Work was undertaken with reference to standard guidance's provided by the Greater London Archaeological Advisory Service (GLAAS) and a Written Scheme of Investigation (WSI)<sup>1</sup> also agreed with GLAAS.

1.1.2 The development site is situated on the W side of Kingston College and is bounded by Kent Road to the N and, The Bittoms to the W and Oaklea Passage to the S. It comprises land currently used for car-parking and teaching buildings and covers an area of approximately 77m E-W and 39m N-S, being 0.3ha in extent (Figs. 1 and 2).

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<sup>1</sup> OAU, August 2001, *Kingston College, Kingston Hall Road, Kingston-upon-Thames; Specification for an Archaeological Evaluation*, OAU internal client report

- 1.1.3 The proposed development comprises residential flats and a sports hall across the area of open car-parking with proposed education and retail facilities to be located in a ground level undercroft beneath the existing Engineering Building (currently used as car parking and bicycle storage)(Fig. 2).
- 1.1.4 The field evaluation comprised the machine excavation of 11 separate trial trenches/pits and subsequent hand excavation and recording of exposed deposits (both natural and human made). The purpose of the evaluation was to provide quantitative and qualitative information on the presence/absence of any archaeological remains sufficient to inform a decision on the appropriateness and possible scale and scope of any further mitigation.
- 1.1.5 This report details the results of the evaluation. It should be read in conjunction with a previously produced desk-based assessment<sup>2</sup> and the WSI.
- 1.1.6 Throughout the report archaeological observations are described by reference to their 'context number'. These are unique numbers assigned to each archaeological deposit or feature recorded on site, e.g. pit 308 or layer 806. A table listing all context records is provided in Appendix 2 and plans/sections are also marked up by context number.

## 1.2 Geology and topography

- 1.2.1 The site lies just to the south of the historic core of Kingston-upon Thames some 150m to the east of the River. The modern ground surface is at around 8m OD in the W sloping to 7.19 in the E.
- 1.2.2 The geology of the site is Quaternary River Brickearth, underlain by Flood Plain Gravel, beneath which is London Clay. The LBH geotechnical survey undertaken in 1999<sup>3</sup> (Section 6) recorded the presence of Made Ground across the Site to a depth of up to 1.40 m, beneath which lay Brickearth (to 3.80 m), Gravel (3.80 m - 7.30 m) and London Clay (7.30 m +).

## 1.3 Archaeological and historical background

- 1.3.1 The archaeological background to the evaluation has been the subject of a separate desk study, the results of which are presented below (OAU nos. referenced in the text refer to the archaeological gazetteer provided in that document).
- 1.3.2 The centre of Kingston-upon-Thames has been subject to a large number of archaeological investigations in the past, largely in response to development. Most of these investigations have been fruitful and revealed surviving archaeological deposits dated to the prehistoric, early medieval, late medieval and post-medieval

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<sup>2</sup> OAU August 2001, *Proposed Redevelopment At Bittoms Site, Kingston Hall Road, Kingston-Upon-Thames; Archaeological Desk-Based Assessment*, OAU internal client report

<sup>3</sup> LBH Ltd, Wembly, 1999

periods, indicating that Kingston was settled from the early prehistoric period onwards.

- 1.3.3 The most relevant archaeological investigations to the present study are four evaluations and a watching brief that were carried out in the immediate vicinity (within *c.* 50 m) of the proposed development site.
- 1.3.4 The five investigations indicate that where the ground has not been disturbed by modern activity, there is a high potential for archaeology dating to the Late Bronze Age and early medieval periods and a potential for Roman archaeology. The five sites comprise:
  - 1.3.5 An evaluation undertaken by the Department of Greater London Archaeology (DGLA) in 1990-1, *c.* 25 m to the east of the area of proposed development (OAU 20). The investigation revealed Late Bronze Age occupation. The level of activity was not intensive and it was believed that the site lay on the periphery of a settlement area (not specified in the SMR entry). A 18 m wide palaeochannel dated to the Bronze Age was recorded along with two early medieval pits.
  - 1.3.6 In 1996 Lawson Price Environmental (LPE 1996) undertook an evaluation at South Lane *c.* 30 m west of the Site, which revealed a number of Late Bronze Age stake holes, flint and pottery, and a Roman stake hole (OAU 11).
  - 1.3.7 In 1998 Pre-Construct Archaeology carried out an evaluation at East Lane (PCA 1998), *c.* 30 m west of the site, adjacent to the LPE evaluation (OAU 38). This uncovered evidence of early medieval activity in the form of a number of stakeholes, two post holes and a gully.
  - 1.3.8 In June 2000 a watching brief by the Museum of London Archaeology Service in Oaklea Passage (MoLAS 2000), *c.* 20 m south of the area of proposed development (OAU 39), revealed organic-rich alluvial deposits and a possible palaeochannel.
  - 1.3.9 In 1997-8 the OAU carried out an evaluation (OAU 1997) *c.* 50 m to the east of the Site. No archaeology was revealed due to modern ground disturbance (OAU 27).
  - 1.3.10 The details of these investigations, along with all other known archaeological sites and finds within the study area, are discussed in detail, by the period, below.

#### 1.4 Prehistoric period (500, 000 BP - AD43)

- 1.4.1 Evidence from numerous archaeological investigations within Kingston town centre have revealed a relatively high amount of activity here in the prehistoric period. During this period the River Thames formed two channels around a gravel eyot on which the historic town centre later grew and on which the proposed development site is located. In addition, the results from evaluations in the area (OAU 20 and 39) indicate that the eyot was crossed by a number of smaller channels.

- 1.4.2 The River gravels and sand deposits of the eyot would have produced fertile and well-drained soils conducive to early settlement and farming activities. At a time when much of the area may still have been heavily forested, the Thames and its tributaries would have been utilised as a means of food, communication and transport. Low-lying ground beside the river is likely to have been exploited for a number of activities associated with the Mesolithic and later prehistoric periods including hunting, fishing and fowling, and for settlement in the later prehistoric period.
- 1.4.3 The earliest activity within the general area dates to the Mesolithic (8,000 - 4,000 BC). Notable concentrations of Mesolithic finds have been found in Kingston and Richmond associated with alluvial deposits of the Thames and tributary river valleys (MoLAS 2000, 55). Within the 250 m study area, Mesolithic flint has been found 50 m to the north (OAU 16) and 150 m to the north-west (OAU 7) of the proposed development site.
- 1.4.4 The Neolithic period (4,000 - 2,200 BC) is traditionally seen as a time when hunter gathering gave way to farming and settled communities, when forest clearance occurred for the cultivation of crops. It is possible therefore that during this period the woodland on the gravel eyot was cleared for permanent settlement and cultivation. There is evidence for Neolithic activity within the study area. In 1965 the Kingston-upon-Thames Archaeological Society (KUTAS) carried out an excavation (SMR entry) which revealed evidence of Neolithic occupation debris in the form of pottery, flint flakes and animal bone, c. 250 m to the north-east of the area of proposed development (OAU 10). KUTAS excavations in 1976-7 (SMR entry) uncovered a Neolithic floor surface/platform c. 200 m north-east of the Site (OAU 1). Residual Neolithic flint was recovered during the extensive 1988-90 excavations at Charter Quay, c. 150 m to the north of the Site (OAU 7), although no features indicating settlement of this date were identified.
- 1.4.5 The study area contains evidence of prehistoric activity dated to the Bronze Age (2200 - 800 BC) and Iron Age (800 BC -AD43). During these periods there would have been a more intensive use of the landscape in the Thames estuary due to expanding population. Much of the gravel terrace along the river would have been cleared of woodland and utilised for cultivation and settlement, while the River would have continued to serve as a major transport and communication route (Merriman 1990, 27).
- 1.4.6 Evidence of Bronze Age activity has been uncovered in the vicinity of the area of proposed development. In 1996 LPE carried out an evaluation comprising five test pits, c. 30 m west of the proposed development site (OAU 11). The pits revealed Late Bronze Age activity in the form of two stake holes, pottery and burnt flint at a depth of 1 m below ground level (8.25 m above OD). The features were covered by redeposited natural, believed to be medieval/post-medieval garden soils (LPE 1996).



- 1.4.7 In 1990-1 the Department of Greater London Archaeology carried out an evaluation and excavation in the area of Kingston College c. 50 m east of the area of proposed development (OAU 20), which revealed evidence of Late Bronze Age occupation comprising flints and features (SMR entry). The occupation was not intensive and was believed to lie on the periphery of the main settlement area. The course of a Bronze Age river channel was also recorded.
- 1.4.8 Evidence of Bronze Age activity in the form of finds of pottery and occupation debris has also been found during evaluations c. 250 m to the north-east (OAU 10), c. 160 m to the north-west (OAU 7) and c. 80 m to the south-west (OAU 22) of the Site.
- 1.4.9 Evidence of Iron Age activity has been found in the form of pottery c. 160 m to the north-west of the site (OAU 7), ditches c. 200 m and c. 250 m to the north-east (OAU 1 and 21) and a ditch c. 250 m to the east (OAU 15). These finds indicated the presence of Iron Age activity in the area; the main foci of settlement has not yet been identified.
- 1.5 Roman period (AD43 - AD410)
- 1.5.1 In the Roman period there is artefactual evidence that would suggest settlement on a relatively large scale, although it is thought that this is unlikely to have been a large settlement, but more likely a concentration of smaller ones (Kingston Museum Centre). It was probably during the later half of this period and in the early medieval period that the channel on the eastern side of the gravel eyot became silted up.
- 1.5.2 Firm evidence of Roman settlement within the historic town centre has remained elusive. Leland in his *Itinerary of England and Wales*, written in the 16<sup>th</sup> century, describes numerous discoveries made during ploughing immediately east of the town that may date to the Roman period. These include the foundations of walls of houses, coins with Roman inscriptions, silver plates for minting coins, and painted yellow pots. This would suggest the presence of a Roman occupation site and a possible mint. Roman occupation was probably concentrated in the area of these finds, to the north and east of the medieval town centre, possibly on a similar gravel island as the current town centre.
- 1.5.3 The main crossing point of the River Thames may have originally been situated slightly further downstream than the present bridge during this period; Leland, writing his *Itinerary of England and Wales* in the middle of the sixteenth century, mentions '*that in the old time the common saying was that the bridge...over the Thames at Kingston, was further downstream than it is now, and when men began the new town in Saxon times they moved from the foot of the downs near Combe park and built the new town by the Thames : and built a new bridge by it.*' (Smith 1964, 85). Figure 1 in the DBA (OAU 33) shows the location of an old ford as conjectured by the Greater London SMR, apparently immediately west of the area of proposed development.

1.5.4 The study area also contains evidence of Roman activity... Three of the known sites lie c. 250 m to the north-east of the area of proposed development. These include the discovery in 1963 of a Roman altar (OAU 4), Roman building material (no features) from an excavation by Kingston-upon-Thames Archaeological Society in 1995 (OAU 6) and evidence of Roman activity (OAU 21). In addition, a Roman stake hole was revealed during an evaluation c. 30 m to the west (OAU 11), and Roman pottery has been found during archaeological investigations c. 150 m to the north-west (OAU 7) and c. 30 m to the north (OAU 22) of the proposed development site. The finds indicate Roman activity in the general vicinity of the site.

## 1.6 Early medieval period (AD410 - 1066)

1.6.1 Kingston-upon-Thames, *Cyngestun* (King's tun) was a royal manor of the kings of Wessex and was a place of considerable significance, serving as an economic, political and religious central place (Bird 1987). It was the centre of a Hundred (an early administrative unit comprising in theory a hundred families). It is possible that Kingston may be the 'lost' Royal Saxon settlement of *Freoricburna*, whose last documentary entry comes in the same year as the first documentary reference to Kingston in 836 (or 838), when it was the site of the council between King Egbert and Archbishop Ceolnoth. This meeting resulted in the combining of ecclesiastical and secular power and is the probable explanation for the crowning in Kingston of seven of the West Saxon kings in the tenth century (Blair 1991, 99).

1.6.2 The status of Kingston as an important royal demesne of the kings of Wessex suggests that there was a relatively large Saxon settlement here. The settlement of Kingston may have been an island site in the early Saxon period centred on the church located between the present course of the River and an eastern channel. The channel had probably silted up by this period.

1.6.3 The exact location of early medieval settlement on the gravel island is not certain. The historic town appears to comprise several possible 'centres' or central market places, which make it difficult to chart the early development of the settlement. The primary market place probably lay c. 250 - 350 north of the area of proposed development, beside the early medieval Chapel of St Mary, the Saxon moot hall (OAU 5) and the possible site of the 9<sup>th</sup> century palace (OAU 3).

1.6.4 There is evidence of early medieval archaeology within the immediate vicinity of the proposed development site. In 1998 Pre-Construct Archaeology carried out an evaluation comprising nine trial trenches at East Lane c. 30 m to the west (OAU 38). This revealed a number of stake holes, two postholes and a gully believed to date to this period. The report suggested a potential for further surviving features to the south-east and north-west of the evaluation site. The depth that the features were located is not made clear in the report and there is some confusion over levels above OD.

1.6.5 Other evidence of early medieval settlement within the remainder of the study area includes the remains of settlement in the form of an extensive concentration of stake holes, a ditch and a considerable quantity of pottery found during a Pre-Construct Archaeology excavation, c. 80 north-east of the Site (OAU 25), and the remains of a possible early medieval ditch found during a KUTAS excavation c. 150 m to the north of the Site, in 1976-7 (OAU 1). Early medieval pottery has also been found during archaeological investigations c. 150 m to the north-west (OAU 7) and c. 30 m to the north (OAU 22) of the proposed development site.

## 1.7 Later medieval period (AD1066-1550)

1.7.1 In the early post conquest years the focus of the town is likely to have been to the north of the proposed development site in the area of the church, market place and the quayside, with the main early Norman town likely to lie between these buildings. Kingston's 'Great Bridge', located c. 500m to the north-west of the site, is the most westerly of the London bridges. It seems likely to have been the chief factor in the development and prosperity of the town before the sixteenth century, as it would have provided a focus for long distance trade routes. There is no precise evidence to determine when the bridge at Kingston was built, but it is very likely that it was in existence before 1219, when it was endowed with lands for its maintenance. It is probable that there was little change in street layout from the twelfth to the nineteenth century. In 1208 King John granted the *vill* of Kingston to the men of the town, taking the estate out of the Royal demesne. The *vill* was granted later borough status during the reign of Henry III.

## 1.8 Post-medieval period (AD1550-present)

- 1.8.1 Kingston upon Thames was located on an important trade route into London (MoLAS 2000, 262). The town had developed a number of manufacturing specialisations by at least the 17<sup>th</sup> century, and was a centre for tanning, brewing and malting (MoLAS 2000, 276). There is also evidence for pottery and clay-pipe kilns (*ibid.*, 276). The settlement evidence for the post-medieval period would seem to be similar to that of the medieval period, with roughly the same plots re-used and redeveloped over time.
- 1.8.2 The earliest map which shows the area of proposed development (DBA Figure 2) is a copy of a 17<sup>th</sup> century 'bird's eye view' of Kingston (date of copy not known) reproduced in McCormack's 1989 publication *Kingston-upon-Thames A Pictorial History*. The reproduction is good and the original map, held in the British Library, was not consulted for the present study. The map is pictographic rather than representing an accurate survey. Only the general elements of the town such as the Market Place and the layout of some of the roads around the Market Place are identifiable. The map does however provide a general survey of the relationship between the town and the proposed development site, suggesting that the site was probably located on the edge of the town, where buildings had grown up along the roadside with extensive fields to the rear.

- 1.8.3 Rocque's Map of Surrey (1745) is large-scale and is a largely representational map of the town (DBA Figure 3). As with the 17<sup>th</sup> century map, Rocque shows the general layout of the main roads but again it is difficult to place the exact location of the proposed development site. Using the 'V' shape junction of The Bittoms and South Lane as a guide, the site would appear to lie in an area occupied by buildings fronting The Bittoms road with a substantial orchard or garden to the rear.
- 1.8.4 A Plan of the Town and Parish of Kingston-upon-Thames (1813) is the first detailed survey of the town (DBA Figure 4). The map shows a group of buildings in the north-west corner of the site along a property boundary represented today by Kent Road. The map shows a single building in the middle of the western edge of the site and a large building or building(s) on the site currently occupied by the southern half of the Kingston College Engineering Building. The remainder of the site is open. It would appear that the line of two property boundaries shown on this map have survived in the layout of modern buildings - along the northern edge of the former cold store and between the proposed Sports Hall and Engineering Building.
- 1.8.5 The Tithe Map of Kingston Parish dated 1840 (DBA Figure 5) represents a more accurate survey of the town than the 1813 map, showing individual buildings and tenement boundaries. The map essentially shows the same buildings within the area of proposed development as the map of 1813, but in more detail, and it would appear that there has been no change within the area of the site. The Tithe Apportionment lists the landowner as 'E. Stanning and others'. The occupier is 'G. Nightingale'. The given land use is 'House, Buildings and Gardens'. The northern end of the existing College Engineering Building lies within land owned by 'Kempster and others' and occupied by several individuals (not named). The Apportionment lists 'Garden' as the land use.
- 1.8.6 The Ordnance Survey (OS) 1<sup>st</sup> edition 25" map dated 1865/7 (DBA Figure 6) shows even more detail than the Tithe Map. There have been some minor changes within the area of proposed development. A new building has appeared in the south-west corner of the Site. The building shown in 1813/1840 on the site of the existing Engineering Building has been demolished. A new road (Kent Road) has been constructed along the northern boundary of the Site. The buildings in the north-western and western part of the Site are unchanged from the Tithe Map/1813 map. The remainder of the area of proposed development is shown as a garden with some trees and pathways.
- 1.8.7 The OS 2nd edition 25" Map of 1898 (DBA Figure 7) and the OS 25" map of 1913 (Figure 8) shows no change within the area of proposed development. The 1898 map shows the newly constructed Kingston Hall Road and the newly straightened course of the Hogsmill Stream, immediately north of the Site. The 1913 map shows the Technical Institute and Tiffins' Girl School in the area currently occupied by Kingston College.

- 1.8.8 The OS 25" map of 1932 (DBA Figure 9) and OS 1:1250 Scale Map of 1956 (Figure 10) shows some minor changes to the buildings in the north-western part of the area of proposed development, with the removal of buildings fronting Gloucester Road (now Kent Street). The Technical Institute has expanded westwards into the area currently occupied by the College Engineering Building. A large building marked 'Ice Works' has been constructed immediately south of the site of the proposed Sports Hall. This building is still extant.
- 1.8.9 The OS 1:1250 Scale Map of 1971 (DBA Figure 11) shows a new Cold Store (not shown on the OS 1:10,000 map of 1968) in the northern part of the area of proposed development. The construction of this substantial building entailed the demolition of the remainder of the historic buildings in the north-west part of the Site. This building was still extant in 1987 but has subsequently been removed to make way for the existing College gym and car park.

## 2 EVALUATION AIMS

- 2.1.1 These were defined within the WSI and are re-produced below.
- 2.1.2 The primary aim was to establish the presence/absence of archaeological remains within the development area and to determine their extent, thickness, condition, nature, character, quality, date, depth below ground surface and overall depth. In particular:
- Do remains of prehistoric date survive? What potential do they have to indicate the types of activities, settlement or otherwise, being undertaken on the gravel island?
  - Is there any evidence for palaeochannels on the site? Are they contemporary with any periods of human activity and do they contain evidence for that activity, in particular deposits with potential for environmental analysis?
  - Do remains of Romano-British date survive? Can they indicate activity peripheral to the main settlement to the N or do they indicate a smaller-scale nearby focus?
  - Do remains of early medieval date survive? Can an early Saxon landscape be identified prior to the establishment of the 'Royal' centre.
  - What evidence survives for the later history of the site and what level of impact has this had on the survival of prehistoric to early medieval remains?
- 2.1.3 To establish the artefactual, ecofactual and environmental potential of archaeological deposits and features.
- 2.1.4 To encourage local participation in the fieldwork phase of the project and access to the results.

2.1.5 If significant archaeological remains are discovered, to determine what further mitigation measures may be required and to agree these with the Local Planning Authority and English Heritage.

2.1.6 To make available the results of the investigation.

### 3 EVALUATION METHODOLOGY

#### 3.1 Scope of fieldwork

3.1.1 Works comprised the excavation of 11 trial trenches (Fig. 2). These were located across the site to provide even coverage although some adjustment was required to avoid live services and facilitate the continued use of the car-park during works.

3.1.2 Trenches varied in dimensions dependant on the space available. Where possible they were 10m long by 2m wide. Trenches were excavated wherever possible to the top of undisturbed archaeological or natural deposits. Trench dimensions are given in the table below.

*Table 1: Trench dimensions*

<i>Trench No</i>	<i>Length (m)</i>	<i>Width (m)</i>	<i>Depth (m)</i>
1	10	2	1
2a	6	2	1.2
2b	10	2	1.2
3	10	2	0.72
4	4	4	1.1
5	4	4	1.8
6	11	2	1.48
7	5	2	0.95
8	10	2	1.65
9a	10	2	1.35
9b	6	2	1.7
10	2	2	1.8
11	2	2	1.5

#### 3.2 Fieldwork methods and recording

3.2.1 Trenches were machine excavated to the top of archaeological deposits or undisturbed natural whichever was encountered first. Where depths of made ground exceeded approximately 1.5m excavation was curtailed before natural was identified (eg trenches 10 and 11).

3.2.2 Trenches were then cleaned in plan and section, and a sample of features/deposits excavated and recorded. Trenches were drawn in plan together with at least one long section. All trenches were photographed.

3.2.3 Trenches were surveyed in with reference to the OS grid. OS heights were located on drain covers and provided by the client.

- 3.2.4 All excavated finds were retrieved for analysis.
- 3.2.5 Deposits were assessed for their potential to preserve palaeoenvironmental remains. None were assessed positively and no sample were retrieved.
- 3.2.6 Detailed fieldwork methodologies are given in the WSI and accord with procedures detailed within the OAU *Field Manual*<sup>4</sup>.

### 3.3 Presentation of results

- 3.3.1 Section 4 provides a summary of the stratigraphic, artefactual and ecofactual evidence. Detailed trench descriptions are provided in Appendix 1 with a tabulation of contexts in Appendix 2 and plans /sections bound at the back of the report. Full artefactual and ecofactual reports are given in Appendices 3 to 4 and a brief summary of results in Appendix 5.
- 3.3.2 The results are discussed in Section 5 where the reliability of the evidence is considered together with its significance within the local and regional setting. The impact of the proposed development on the archaeological resource is discussed in Section 6.

## 4 RESULTS: GENERAL

### 4.1 Soils and ground conditions

- 4.1.1 A baseline description of natural geological and drift deposits is provided in Section 1.2. Trial trenches were only excavated to the top of these deposits and only in a few cases were sondages dug down to further explore their composition (eg trenches 2a/2b). Where the upper (invariably truncated) surface of natural deposits was exposed in plan or section within the trenches it appeared as a mid yellow brown sandy silt, similar to deposits commonly called Brickearth.
- 4.1.2 The height of natural deposits varied across site, although a W to E trend of decreasing levels was evident. Natural deposits were recorded at a maximum of 7.19m OD in trench 1 in the NW part of the site (Fig. 4) falling to 5.99m OD in trench 9a in the E (Fig. 14). Natural was not reached further to the E in trenches 9b, 10 and 11 where recent made ground was seen to continue down at 5.72m OD, 5.44m OD and 5.69m OD respectively (see table 2). The trend may be due to differential truncation or a natural drop off in ground levels towards the old course of the Hogsmill River located to the west.

### 4.2 Nature and distribution of archaeological deposits

#### *Summary of results*

- 4.2.1 Archaeological features/deposits were identified in six trenches. These comprised primarily cut features but included some layers, both truncated by recent activity.

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<sup>4</sup> Wilkinson, D. 1999 OAU Fieldwork Manual

They survived at varying depths below modern ground surface at between 7.13m OD (trench 3) and 6.12m OD (trench 8) depending on the extent of later truncation (0.32m and 1.40m below modern ground surface respectively). Table 2 gives the heights of archaeological survival in each trench.

- 4.2.2 Features and deposits were located in plan across the SW and central part of the site (see Fig.18). The best preservation occurred in trenches 3, 4, 6, 8 and 9a. Trenches 1 and 2a/2b in the NW were blank, as was trench 5 to the S and trenches 9b, 10 and 11 to the E. Although this indicates a likely zone of good survival running across the site from SW to NE (marked as Zone 1 on Fig.18) the absence of recorded features/deposits elsewhere cannot be taken as conclusive evidence for lack of archaeological remains. In particular, the height of natural deposits in Zone 3 suggests light truncation and so some potential for survival beyond the excavated trenches, and in Zone 2 the deep truncation noted in the trenches may hide localized areas of better survival.
- 4.2.3 Three main periods of activity were identified, Neolithic/Bronze Age, early-middle Saxon and medieval 11th-13th century. The prehistoric material appears to be largely residual (i.e. disturbed and surviving only as re-deposited material in later contexts, see s.4.2.5 below) while the evidence for other periods corresponds approximately to a three phase stratigraphic model as follows;
- Saxon features cutting natural and sealed by 'relic ploughsoil'
  - 'relic ploughsoil' layer
  - medieval features cutting 'relic ploughsoil' and sealed by later dumps
- 4.2.4 The three phases were repeated across the site and were visible in trenches 4, 6 and 9a (Figs 8, 10 and 14). In trenches 3 and 8 only ploughsoil sealing features was recorded (Figs 7 and 12). In places truncation has removed all but the base of pits (e.g. trench 7, Fig. 11). The deposits above were sealed by between 0.32m and 1.4m of 19th/20th century made ground.

*Table 2: Heights above ordnance datum for modern ground surface, top of archaeological deposits and top of undisturbed natural deposits*

Trench	Height of modern ground surface (mOD)	Depth of non-archaeological deposits (m)	Height of top of undisturbed archaeological deposits (mOD)	Height of top of undisturbed natural (mOD)	Comments
1	8.04	0.62	-	7.19	No archaeology. Natural located
2	7.62	0.60	-	7.02	No archaeology. Natural located
3	7.46	0.32	7.13	6.86	Saxon/medieval features ?sealed by plough/garden soil
4	7.93	0.71	7.22	7.12	Two phases of pits -latest C11th AD
5	7.64	1.80	-	5.84	No archaeology. Natural located
6	7.96	1.48	6.48	6.40	Undated -possibly 'early' pits, otherwise C19th/C20th pits and dumps.
7	7.65	0.60	7.05	7.05	Undated features



8	7.52	1.40	6.12	5.97	Undated features - poss. early-middle Saxon
9a	7.21	1.00	6.21	5.99	Early-middle Saxon/later medieval features
9b	7.42	+1.70	-	-	Recent deposits, natural not located
10	7.24	+1.80	-	-	Recent deposits, natural not located
11	7.19	+1.50	-	-	Recent deposits, natural not located

\* Heights for modern ground surface are average of trench

\*\* Heights for top of archaeology are maximum surviving within trench

### *Prehistoric: Neolithic/Bronze Age*

- 4.2.5 Flint artefacts, probably of Neolithic date (see Appendix 3), were found largely within later features and layers. Primary deposits may have been identified in otherwise undated features 310 (fill 309), 406 (fill 410) and 813 (fill 812 although these could also be residual).
- 4.2.6 Evidence for Bronze Age activity on the site comprises a single pit 418 within trench 4 containing one sherd of possible Bronze Age pottery, together with flints (Fig. 8). The stratigraphic position of 418 as the latest in a sequence of pits, however, (cutting ploughsoil) suggests, that the finds may be residual.
- 4.2.7 The evidence suggests light activity in the vicinity during the Neolithic, although not necessarily within the site boundaries. The tentatively dated Bronze Age pit probably indicates a similar level of activity during that period.

### *Early to middle Saxon*

- 4.2.8 Evidence for activity during this period comprises a limited number of cut features seen in trenches across the SW and central part of the site and dated by a small amount of pottery. Features survived at the base of the observed profile cut into natural and sealed by later ploughsoil or truncated by later activity. They comprise pit 307 in trench 3 (Fig. 7) and pit 909 in trench 9 (Fig.14). Residual Saxon pottery was also recovered from 11th century pits 308 and 415 and may also be residual in ploughsoil layer 806. A number of stratigraphically early, but undated/unexcavated, features may also date to this period.
- 4.2.9 Bearing in mind the three phase model (see above) it appears that the Saxon period features are sealed by ploughsoil. Pit 912 was certainly sealed and 307 may have been, although the relationship was uncertain.
- 4.2.10 The dating evidence is on the face of it unreliable in that only a single sherd was recovered from each feature. These may be residual and so only indicate general activity in the vicinity. No other finds of diagnostically Saxon date were recovered. However, sites of early to middle Saxon are often characterised by low quantities of

material remains, including pottery, and the low concentration here is likely to be significant, particularly in the light of contemporary discoveries made nearby.

- 4.2.11 It is likely that the features indicate *in-situ* activity, probably related to settlement and associated activities. Activity appears to be of moderate density, possibly an extensive open settlement. In addition to pits and ditches suggested by the excavated evidence structural features such as post-built and sub-ground building might be expected.

#### ***Late Saxon ploughsoil/garden soil***

- 4.2.12 A layer of dark soil between 0.15 and 0.30m thick was seen close to the base of the profile, above natural in a number of trenches. It included;

- Layer 303/304, trench 3, undated (Fig.7)
- Layer 417, trench 4, undated (Fig. 8)
- Layer 607, trench 6, dated by cbm to the post-medieval (Fig. 10)
- Layer 806, trench 8, dated by pot to early/mid Saxon (Fig. 13)
- Layer 910, trench 9a, undated (Fig.14a)

- 4.2.13 On the basis of only a few observed relationships it appeared to seal Saxon features and was cut by medieval features (no earlier than 11th century). Some relationships were difficult to see (e.g. Fig. 7) and in one case it appeared to seal a pit of 13th century date (915 in trench 9). Dating was ambiguous. The Saxon pot from 806 may be residual and the cbm in 607 intrusive.

- 4.2.14 The origin of the deposit is obscure and could lie in either extensive agricultural tillage or more localised garden cultivation.

#### ***Later medieval 11th to 13th centuries***

- 4.2.15 Cut features (pits) were recorded containing pottery of 11th to 13th century date. They comprised pits 308 in trench 3, 415 in trench 4, 628 in trench 6 and 915 in trench 9.

- 4.2.16 Pit 415 cut the ploughsoil 417 in trench 4 (Fig.8) as did 915 in trench 9 (shown cutting 910 in Fig. 14). The relationship of pit 308 to the the ploughsoil 304 in trench 3 was uncertain (Fig. 7) and pit 628 was sealed by ploughsoil 607 in trench 6 (possibly mistakenly recorded, however?) (Fig. 10).

- 4.2.17 The pits had no diagnostic function and may indicate only a low level of activity. Some of the undated pits may date to this period (e.g. those cutting ploughsoil 910 in Trench 9).

#### ***Post-medieval and modern ground disturbance***

- 4.2.18 The desk-based assessment shows that a number of phases of building were constructed on the site, mainly fronting Kent Street and the Bittoms, from the at least the 17th century (DBA Fig. 2). Much of the site may otherwise have been open ground.

- 4.2.19 However, no *in-situ* footings were recorded other than re-inforced concrete associated with the most recently demolished structures. Dumps sealing Saxon/medieval remains appear to be uniformly of 19th/20th century date suggesting a major phase of truncation has occurred. Depth varies across site although a trend of increasing depth from W (e.g. 0.85m in trench 1) to E (eg 1.5m in trench 11) is evident (see Table 2). Local variations exist (eg 1.8m in trench 5 and only 0.33m in trench 3).
- 4.2.20 A network of existing and redundant services cross the site. Trenches were located wherever possible to avoid these and so their depths were not investigated. Where they penetrate to the level of archaeological survival they will have wholly or partly destroyed archaeological remains.
- 4.2.21 The modern ground surface comprises a mix of tarmacadam and reinforced concrete slab. It mirrors the W to E trend of the natural deposits and made ground falling from 8.04m OD in the NW to 7.19m OD in the NE (see Table 2).

#### ***Undated/unexcavated features***

- 4.2.22 Eighteen undated/unexcavated features were recorded in trenches 3, 6, 7, 8 and 9a, more than double the number of features dated to the prehistoric/Saxon/medieval periods. Their location is the same as dated features so this does not suggest a separate phase of activity or an alternative focus. While some of these will have been of recent origin the stratigraphic position of most suggests they date to one of the three main archaeological, periods. This enhances our understanding of feature concentration across the site.

### **4.3 Artefacts**

- 4.3.1 A relatively small quantity of artefacts were recovered including pottery, flints, ceramic building material, and animal bone (Table 3). Full reports on this material are provided in Appendices 3/4.

***Table 2: Artefact quantities***

<i>Type</i>	<i>No</i>	<i>Weight (g)</i>
Pottery	110 sherds	1964
Flint (struck/burnt)	46	600
CBM	-	3704
Glass	-	525
Animal bone	15 Frags.	-

### **4.4 Palaeo-environmental remains**

- 4.4.1 No deposits suitable for the preservation of macroscopic or microscopic plant/animal remains were identified on site. None of the dated excavated deposits contained visible burnt/charred deposits and none were waterlogged.

## 5 DISCUSSION AND INTERPRETATION

### 5.1 Reliability of field investigation

- 5.1.1 All areas of the site were investigated despite changes to the original trench design to avoid services and allow continuous operation of the car-park. The 11 excavated trenches cover 196m<sup>2</sup> and represent a 6.5 % sample by area of the site.
- 5.1.2 Sufficient deposits were exposed in section and plan and sample excavated to meet the project objectives. Of the 11 trenches 9 were machine excavated to the top of undisturbed natural while excavation of trenches 10 and 11 was stopped before natural was encountered due to depth. Where archaeological remains were identified in a trench a sample of features/deposits was investigated except trench 8 due to depth.
- 5.1.3 Despite this sample some uncertainties still remain, largely in connection with the eastern part of the site;
- the SE corner of the Sports Hall was not investigated
  - where truncation appears heavy in Zone 3 (Fig. 18) it may just be localised
- 5.1.4 Although few finds were recovered they are sufficient to suggest the nature and intensity of activity. However, while dating is relatively certain with regard to indicating general periods of activity it is imprecise in respect of the individual features. It is unlikely, for instance, that all the Saxon pottery is residual but it is possible that there is less Saxon activity and more medieval activity than we are currently able to predict.
- 5.1.5 No palaeoenvironmental evidence was recovered to assess potential survival. This is due in the main to a lack of suitable deposits for sampling and this suggests that preservation is not significant. However, deposits of charred or waterlogged material may survive still in isolated or deep features.
- 5.1.6 Ground conditions were suitable throughout for the effective recording of archaeological deposits.

### 5.2 Complexity of deposits

- 5.2.1 Three zones of predicted archaeological survival have been identified (Fig. 18).
- 5.2.2 The main concentration of deposits was in a wide band running from the SW corner of the site through the central part towards the NE. This area is marked as Zone 1 on Fig. 18 and takes in the location of trenches 3, 4, 6, 7, 8 and 9a. Severe truncation in the extreme SW (trench 5) suggests few deposits will survive in that area.
- 5.2.3 In the E part of the site severe truncation appears to have taken place reducing the likelihood of significant archaeological survival. This area is marked as Zone 2 and takes in the location of trenches 9b, 10 and 11. However, if these represent localised deeper truncation events this may be an over-simplification and at the very least it

should be born in mind that pockets of better archaeological preservation may survive in this area.

- 5.2.4 To the NW natural survives relatively free from truncation. Although not seen in the evaluation trenches archaeological deposits may survive here to a lower density in areas between the trenches. This area is marked as Zone 3 and takes in the location of trenches 1, 2a and 2b.
- 5.2.5 Archaeological features and deposits are likely to be most dense in Zone 1, and less dense in Zone 3. They may survive badly truncated or in localised areas in Zone 2.
- 5.2.6 Archaeological remains comprise, in the main, cut features (pits, post-holes, ditches, etc) together with thin horizontal stratigraphy (relic ploughsoil) up to 0.30m deep. Cut features survive more or less truncated and vary in depth between 0.15m and 0.75m deep. Deeper features might be expected although the majority should fall within the range already recorded.

### 5.3 Summary of significance/potential

#### *Neolithic/Bronze Age 'residual' activity*

- 5.3.1 The Bittoms evidence may indicate Neolithic/Bronze Age activity in the near vicinity rather than directly on site although it is possible that isolated features of this date survive.
- 5.3.2 There is little evidence for Neolithic settlement/activity in the Greater London area and the Brickearths of west London have been highlighted as of particular significance due to their potential to preserve evidence<sup>5</sup>. Any evidence for activity during this period would provide a valuable adjunct to that recorded from earlier investigations (see above s. 1.4.5) and contribute towards the future reconstruction of early settlement.
- 5.3.3 Evidence for Bronze Age settlement and activity is more widespread throughout Greater London, and within Kingston exists particularly for the later Bronze Age<sup>6</sup> (see above s.1.4.6 to 1.4.9). Although probably not intensively settled The Bittoms site may still contain some significant evidence and this would be enhanced if dated to the early/middle Bronze Age.

#### *Early to middle Saxon rural settlement*

- 5.3.4 The evidence suggests part of an extensive rural settlement may survive within the boundaries of the site.

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<sup>5</sup> Lewis, J. 'The Neolithic Period', in MOLAS, 2000, *The Archaeology of Greater London; an assessment of archaeological evidence for human presence in the area now covered by Greater London*

<sup>6</sup> Brown, N. and Cooton, J. in MoLAS, 2000

- 5.3.5 Rural settlements of early to middle Saxon date are underrepresented in the archaeological record with few sites identified within Greater London. Excavation research opportunities have been focussed on *Lundenwic* and the City<sup>7</sup>.
- 5.3.6 Settlement evidence of this date has, however, already been identified in Kingston (see above s.1.6). The evidence from The Bittoms complements this and is significant both for the early history of Kingston and more generally Greater London.
- 5.3.7 The evidence suggests only cut features survive beneath a later truncation event. These comprise pits, but are also likely to include ditches/gullies and structural features such as post-holes and other sub-ground elements (e.g. sunken feature building). These will include good evidence for the broad date, function and layout of any settlement.
- 5.3.8 The artefactual assemblage was restricted to a small amount of pottery suggesting it has limited potential beyond indicating general date/function, etc. The faunal/plant assemblages does not appear significant and so evidence for environment and agriculture may also be limited. The possibility exists, however, for the survival of isolated rich assemblages/deposits not picked up in the evaluation.

*?Late Saxon, ploughsoil horizon,*

- 5.3.9 A plough/garden soil was identified in a number of trenches tentatively interpreted as sealing Saxon pits and cut by later medieval features. It may represent a hiatus in activity between the two periods, or at least a change of use. It was poorly dated, containing both early to middle Saxon pottery and post-medieval cbm.
- 5.3.10 Any resolution of the stratigraphic relationships, together with more secure dating would provide significant evidence for the sequence and chronology of activity on the site.

*Medieval, 11th - 13th century; open area activity*

- 5.3.11 The site lay outside the main town during at this time and the evidence suggests only small-scale activity during this period. There is no evidence for buildings and the area was likely to have been open ground, either enclosed within backyards or a larger field/paddock.
- 5.3.12 While not indicating intensive activity the evidence is nevertheless significant in terms of the information it might hold for the continued use of areas previously settled during the early Saxon period and for the possible specialised use of areas beyond the core of the medieval town.

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<sup>7</sup> Cowie, R. and Harding, C. 'Saxon Settlement and Economy from the Dark Ages to Domesday', in MOLAS 2000

## 6 IMPACT OF THE DEVELOPMENT

6.1.1 The proposed development comprises the construction of a new residential block with frontage along The Bittoms and Kent Road, a sports hall, and student facilities attached to the existing engineering building (figs 2 & 8).

6.1.2 OAU have been supplied with detailed plans of the development by Mount Anvil and Upton McGouhan Consulting Engineers (correct as of 04/05/01).

### 6.2 Proposed residential building - proposals

- The entire area of ground within the footprint of this building will be lowered by c. 2.0 m for a basement car park. A ramp will provide access from the basement level to the existing ground level adjacent to the building, which will remain unchanged.
- Foundations will comprise 272 piles of 900 mm diameter set to a depth of 20 m.
- Pile caps will be set to a depth of 1.0 m below the basement level (i.e. a total of 3.0 m below existing ground level). Pile caps will measure 3.0 m by 0.9 m above isolated piles and 0.9 m x 0.9 m above paired piles.
- Trench-built ground beams set to a depth of 1 m below the basement (i.e. a total of 3.0 m below existing ground level).

### 6.3 Proposed residential building - archaeological implications

6.3.1 Construction of the basement car park will entail the removal of all Made Ground on the site and up to c. 1.2 m of natural Brickearth.

6.3.2 Construction of the basement will be the primary archaeological impact. In addition, insertion of the both the ground beams and pile caps will extend a further 1.0 m into the Brickearth, and therefore have the potential to further impact any deeper archaeological deposits that may be present.

6.3.3 The piles themselves will extend down into natural deposits (through any archaeology that may be present) but will only impact archaeology within the footprint of each pile in this case.

6.3.4 Significant archaeological deposits have been shown in this evaluation exercise to survive in the S part of this area at between 0.32m and 0.71m below ground surface, and survive in a zone up to 1m below that. The above proposals suggest all remains will be destroyed as a result of construction. While trenches 1, 2a and 2b in the N part of the site did not expose archaeological remains should any such remains survive they would almost certainly be impacted on by the development.

### 6.4 Proposed sports hall - proposals

- The level of the ground floor will remain the same as the existing ground level (Jeremy Collett of Mount Anvil, *pers. comm.*).
- The foundations will comprise 450 mm diameter piles set to a depth of 20 m. These will have c. 40 pile caps set to a depth of 1.0 m below ground level. The caps vary in size to between 2.1 x 0.7 m to 2.7 x 2.7 m. They will be placed at 5-6 m intervals across the footprint of the proposed buildings.

- Trench-built ground beams will be set at a depth of 1.0 m. They will be 0.75 m deep by 0.6 m wide.

## 6.5 Proposed sports hall - archaeological implications

6.5.1 Archaeological deposits survive in the N part of this area and may be more extensive, particularly to the SW. They survive at depths below ground level between 1.0m and 1.48m (although note that outside of, but close to, the SW edge of the area deposits survived at 0.6m). In the E and SE part of the area significant earlier truncation may already have removed archaeological deposits, at least to +1.70m.

6.5.2 It is possible that the insertion of ground beams and pile caps will not have an archaeological impact across the whole area where they do not extend to the depth of surviving deposits. Their construction will entail the removal of some made ground of 19th/20th century date and may impact on earlier deposits where they survive at less than 1m below present ground surface.

6.5.3 The piles themselves will extend down into natural deposits (through any archaeology that may be present) but will only impact archaeology within the footprint of each pile in this case. Depending on the location of pile caps these may have a significant impact on deposits surviving at or above 1m below present ground surface.

## 6.6 Proposed student facilities - proposals

6.6.1 The existing undercroft car park beneath the Engineering Building will be developed into new student facilities. The proposed ground level will remain the same. The northern end of the building, in the area of the Wholesale and Distribution/Hair and Beauty Salon Units, will have new piled foundations alongside the existing pad foundations in order to support proposed student accommodation on top of the existing college Engineering Building.

- The 250 mm wide piles will presumably extend down to a depth of c. 20 m (to the solid geology).
- The pile caps will be set c. 1 m below existing ground level. The dimensions of the caps vary in size but are typically 1.6 m x 1.6 m x 0.79 m deep.
- Ground beams of varying dimension (0.45 m wide/deep and 1.0 m x 0.55 m wide/deep) will be set c. 1.0 m below existing ground level.

## 6.7 Proposed student facilities - archaeological implications

6.7.1 The proposed ground beams and pile caps will be set c. 1.0 m below existing ground level. The evaluation trenches 10 and 11 indicate recent made ground to a depth of at least 1.5 to 1.8m. Consequently neither pile caps or ground beams should have any archaeological impact unless isolated pockets of survival exist undetected.



6.7.2 The piles themselves will extend down into natural deposits (through any archaeology that may be present) but will only impact archaeology within the footprint of each pile in this case.

## 6.8 Other works

6.8.1 OAU have received no details of any associated infrastructure or service works in addition to the above, nor details of methodologies in respect of ground clearance prior to construction or breaking out prior to piling. All these works might be expected to disturb archaeological remains to a currently unquantifiable level should they be undertaken.

6.8.2 It would be prudent to anticipate greater areas and depths of ground disturbance as a result of construction than those indicated by the engineering design.

## 7 CONCLUSIONS

7.1.1 Significant archaeological remains survive across much of The Bittoms site. These date to the Neolithic/Bronze Age, early/middle Saxon and medieval periods, the most significant being Saxon in date.

7.1.2 The archaeological remains comprise mainly cut features together with thin horizontal deposits and survive at between 0.32m and 1.48m below present ground surface. Survival is best in the SW and central part of the site.

7.1.3 The development will impact on the archaeological remains at between 1m and 3m below present ground surface dependant upon the location of basements, ground beams and pile caps. Deeper more localised impacts will result from piling.

## 8 ACKNOWLEDGEMENTS

8.1.1 Fieldwork was undertaken by Granville Laws assisted by Tim Power and David Houghton. The project was managed by Nick Shepherd. Monitoring, on behalf on Kingston-upon-Thames Borough Council, was undertaken by Mark Stevenson of English Heritage (GLAAS).

## APPENDICES

## APPENDIX 1 TRENCH DESCRIPTIONS

*Trench 1* (Figs 3 and 4)

Located parallel to Kent Road in the north-west corner of the site. The trench was orientated east to west and measured 10 m long by 2 m wide and 1 m deep. The trench was machined down to the top of natural, the exposed surface cleaned and planned with two sample sections drawn to full depth. A possible post-medieval ?plough/garden soil was located in section (layer 103 below). No finds were retrieved.

The yellow sandy silt natural 104 was located at a depth averaging 0.68m below the present surface (8.04m OD). It was sealed by 103 a 0.25m deep layer of mid-brown mottled yellow silt clay with sand. The excavator has described this as a possible post-medieval ploughsoil, although it could also be a garden soil or a dump/make-up layer.

Layer 103 was overlain by up to 0.62m of recent dumps 102, a mid brown-grey silt loam with inclusions of post-medieval building material. This was cut into by concrete footings (e.g. 107) and sealed by concrete slab and tarmacadam.

*Trench 2* (Figs 5 and 6)

Located south of Trench 1 in the west of the site. Due to the presence of live services, trench 2 was excavated in two parts 2/a and 2/b. Both were orientated east-west and measured 6 m and 10 m long respectively by 2 m wide and 1.20 m deep. The trenches were machine excavated down to the top of undisturbed natural, and then to a depth of up to 0.74m below that. No archaeological features or deposits were recorded and no finds retrieved.

A light yellowish brown sandy silt natural 206 was located at a depth of 0.60 m below the present car-park surface (7.62 m OD). This was cut into by recent drain trenches 208 and 209 which were sealed by 203 a continuous layer, up to 0.34m thick, of mid-grey brown silty sand with building rubble. This latter was cut by modern concrete foundations and finally capped by tarmacadam.

*Trench 3* (Fig. 7)

This trench was located to the west of the development site, orientated east-west and measured 10m long by 2 m wide and 0.72 m deep. The trench was machine excavated to a level where features were visible cut into the natural. Five archaeological features were located within the central part of the trench probably sealed by a later plough/garden soil.

The yellow mottled brown sandy silt natural 305 was located at a depth of 0.62 m below the present surface (7.46 m OD). It was cut by a pits 307 and 308 and posthole 310. A posthole 314 and a pit were recorded in plan but not investigated by excavation.

Only the N part of pit 308 was exposed indicating that it might represent the butt-end of a linear feature. It was 1.65m across with steep sides and flat bottom. It was filled by 311, a friable dark brown silty clay with sandy inclusion. Finds collected from the fill included pottery, bone, cbm, and burnt flint. The pottery comprised sherds of prehistoric, early to middle Saxon and 11th/12th century date. Small fragments of post-medieval cbm were also collected.

Postholes 310 and 314, and pit 307 were located to the E of 308 and may be associated. Only 307 contained datable material, a single sherd of early-middle Saxon pottery.

A layer of a mid-brown mottled yellow silty clay with sand 304, up to 0.25m thick may have sealed the features although the relationship was not well defined in section. This may represent a relic plough/garden soil. Overlying this was 303, a localised 100mm thick layer of mid-grey sandy silt, possibly a dump.

Sealing 303/304 and continuous across the whole trench was 302, a recent layer up to 0.35m deep consisting of a mid greyish-brown silty clay and with inclusions of building rubble, capped by reinforced concrete surface 301.

To the west end of trench 2 a modern brick structure and pipe trench 312 was recorded cutting layer 302 and sealed by 301.

#### ***Trench 4*** (Fig. 8)

Trench 4 was located close to the west boundary wall and towards the south-west corner of the development site. This trench measured 4 m x 4 m square and 1.10 m deep. Archaeological features and deposits were located to the north and west of the trench.

The underlying geology, a yellow mottled brown sandy silt 405 was reached at a depth of 1 m below the present surface (7.93 m OD). The natural was cut by a series of pits. Two tentative phases were identified separated by a possible alluvial horizon 417.

The earliest pits 404, 416/407 appeared to be sealed by layer 417 although the relationship was not certain. All pits contained similar fills of a friable mid brown to brown grey silty clay with sand. No finds were retrieved. Pit 406 may also be early in the sequence but did not have a relationship with layer 417.

Layer 417 was up to 0.20m thick and continuous across the trench except where it had been truncated by later features. It comprises tenacious mid-brown yellow sandy silty clay and may have been water-lain, and possibly alluvial in origin.

Layer 417 was cut by pits 418 and 415 both filled with a friable dark brown grey silty clay. A single sherd of possible Bronze Age pottery was recovered from fill 411 in 418, with two sherds of 11th century AD pottery from 414 filling 415.

A 0.60m deep layer of dark brown sandy silt with recent building rubble 402 sealed the pits and was then capped by 0.20m of reinforced concrete surface 401.

#### ***Trench 5*** (Fig. 9)

This trench was located directly to the south-west corner of the development site. The trench, cut on an L-shape to avoid a live drain on its SW side, measured roughly 4 m by 4 m on its long sides. Natural was located truncated to 1.8m below ground level (7.64m OD) across much of the trench, although it may have survived in the very NE corner to 0.65m below ground surface. No archaeological features were located other than a large 19th century pit 507.

Pit 507 measured up to 4 m x 3 m and 1.10 m deep and was filled by 504 a dark bluish-brown sandy silt containing slag, pottery and building demolition rubble. This was overlain by a layer of dark grey yellow sandy silt with inclusions of pebbles 503 sealed by a layer of mid greyish brown silty sand containing rubble and building demolition material 502. The trench was capped by reinforced concrete surface 501.

**Trench 6** (Fig. 10)

Trench 6 was located on the N edge of the site close to Kent Road. It was orientated approximately N-S and measured 11 m long by 2 m wide and 1.48 m deep. The trench was machine excavated to a point where natural deposits could be seen. A sample of features were excavated in part to clarify relationships and obtain dating material. Although some undated stratigraphically early features may be of early date many of the features produced small amounts of late pottery and could be of relatively recent origin, possibly 19th century.

The underlying natural geology, a yellow mottled brown sandy silt 623, was reached at a depth of 1.48 m below the present surface (7.96 m O D).

Stratigraphically early pits 611, 613, 615, 625 and 628 cut the natural. Only pits 625 and 628 were sample excavated. The fill of 628 produced a fragment of 19th century pot and both 628 and 625 contained fragments of medieval/post-medieval cbm. These features were sealed by layer 607 comprising mid-brown mottled yellow sandy silt 607 up to 0.20m thick. This was seen across the whole trench except where it had been truncated by later features. It may represent a relic plough/garden soil and contained small amounts of medieval/post-medieval cbm.

Pit 609 (which again included cbm fragments within its fill) cut layer 607. Both were sealed by 606 a layer of mid-brown silty loam with sand and occasional gravel of varying depth between 1.25m and 0.4m depending on later truncation. Visible only in section and containing recent material (although none was collected) this may possibly be a make-up/levelling layer although it did not contain large amounts of building rubble as in other trenches. Late pits were seen to cut layers 606 (pit 620) but were sealed by dump 605 (pit 622) and these contained 19th century material. The trench was sealed by further more coarse layers of levelling and concrete/tarmac surfacing.

**Trench 7** (Fig. 11)

This trench was located on the S edge of the site, close to the vehicle maintenance training workshop. It was orientated north to south and measured 5 m long by 2 m wide and 0.95 m deep. Two undated possibly archaeological features were recorded.

A yellow mottled brown sandy silt natural 704 was located at a depth of 0.70 m below the present surface (7.65 m O D) and was cut by two features interpreted as a pit and a ditch.

Two undated features 708 and 709 cut the natural, both were filled with a similar mid brown mottle yellow sandy silt. No find were recovered from either feature.

Both features were sealed by 711 a dark bluish brown sand silt up to 0.4m thick containing modern bricks and other 'demolition' debris. This was cut by a large pit 707, the trench being sealed by further layers of rubble and finally concrete and tarmac.

**Trench 8** (Figs 12 and 13)

Trench 8 was situated centrally within the development area, orientated E to W. It measured 10 m long by 2 m wide and 1.65 m deep. Due to the depth of the trench the archaeological features were not sampled excavated.

The underlying natural geology a yellow mottled brown sandy silt 811 was reached at a depth of 1.50 m below the present surface (7.52 m O D). Several features were identified truncating the natural. These included a possible pit 813 (from the surface of which burnt flint was retrieved) and linear feature/ditch 810, both filled with mid-brown slightly grey and

yellow silty clay with sand. The latter was sealed/truncated in section by 808, a shallow and itself truncated feature.

The features were sealed in section by 806, a mid-brown mottled yellow silt clay layer up to 0.22m thick. A small number of artefacts were retrieved during machine excavation including a fragment of early to middle Saxon pottery.

Layer 806 was sealed by extensive and deep (up to 0.82m thick) soil dumps 805, in turn capped by make-up, concrete/tarmacadam, etc.

#### **Trench 9** (Figs 14 and 15)

This trench was located to the east of the development site. Due the location of services the trench was excavated in two parts 9/a and 9/b. These trenches measured 10 m and 6 m long by 2 m wide and varied in depth from 1 m to 1.20 m. The trench was orientated north to south. Archaeological features and deposits were identified in the trench.

##### **9a**

In the N trench 9a yellow mottled brown sandy silty natural 911 was located at a depth of 1.35 m below the present surface (7.21 m OD). This layer was only revealed in the base of a sondage dug centrally on the W side of the trench. Elsewhere the trench had been machined down to the top of layer 910 (see below).

A pit cut 912 cut the natural and was filled with a mid-brown silty clay 909 which contained a sherd of early to middle Saxon pottery. The pit was sealed by 910, a layer of mid-brown silty clay up to 0.22m thick. A pit 915 was located at the south end of the trench and cut layer 910. Within the mid-brown silty clay fill of 915 a single sherd of mid 13th century pottery was recovered. Five other unexcavated features also cut 910.

Pits 913 and 907 in the S were stratigraphically later and appear to have been cut from a much higher level. Pit 913 contained cbm and glass suggesting a post-medieval date. Neither pit was excavated to full depth. To the N a further pit 918 (undated) was cut from a similar height and was also not fully excavated. These three pits were sealed by horizontal dumps and make-up layers 903/902 to the concrete/tarmacadam surface 901.

##### **9b**

Natural was not located despite the excavation of a sondage to 1.7m below ground surface (7.37 m OD) in the centre/N part of the trench. A firm/friable mottled brown dark yellow sandy silt 925 was recorded in plan to the E, possibly redeposited subsoil.

The layer 925 was cut by two pit features 919 and 923. Both are probably late in date, 919 containing brick and coal within its fill (not collected) and 923 also containing brick. These were the earliest in a sequence of pits recorded in section (including 926 and 928) and separated by dump layers 929 and 927. These were all truncated by a large modern intrusion 934 at the S end of the trench which had been filled with rubble 902 that extended across both 9a and b. An isolated, unexcavated cut 921 also cut layer 925.

#### **Trench 10** (Fig. 16)

This trench was located in the NE corner of the development site, in a car parking area beneath the first floor of an existing college building. The trench measured 2 m square and 1.80 m deep and was stepped down on the east side of the trench. No archaeological features were present however, although recent made ground deposits were located.

The trench was excavated to a depth of 1.80 m below the present surface (7.24 m OD).

The lowest recorded layer, **1009** comprised a mid brown grey slightly yellow silty clay with a high concentration of shell and chalk flecks. Pottery and cbm suggest a 20th century date. This was overlain by **1008** a mid-brown grey silt loam with sand and shell inclusions also dated by pottery to the 20th century. Subsequent dumps **1007**, **1006** and **1010** was sealed by a concrete base **1005**. This was overlain by building rubble **1004** and then topped by concrete **1003**. The concrete was overlaid by another layer of building rubble **1002** and this was capped by a tarmac surface **1001**.

**Trench 11** (Fig. 17)

Trench 11 was situated to the immediate north-east corner of the development site, close to Kingston Hall Road and again underneath existing college building in a car parking area. The trench measured 2 m square and stepped down to the east to the depth of 1.50 m. No archaeological features or deposits were located, only made ground deposits were present.

The trench was excavated to a depth of 1.50 m below the present surface (7.19 m) and the natural was not located.

At the base of the trench a layer of firm/ friable light brownish grey sandy silt flecked with brick fragments **1112** was located. This was dated by pottery to the 20th century. Overlying this was a slightly grayer layer **1111** with the same inclusions sealed in turn by mid greenish grey to mid orange silty clay with pebbles **1110**. All these last three layers appeared mixed and probably represent dumping deposits. All subsequent layers comprised mixed building debris including concrete, finally sealed by the tarmac surface **1101**.

A concrete column-base **1113**, supporting the first floor of the college building, was located to the west of the trench. Most of the above layers probably post-date its insertion.

## APPENDIX 2 ARCHAEOLOGICAL CONTEXT INVENTORY

Trench	Ctxt No	Type	Width (m)	Thick. (m)	Comment	Finds	No./wt	Date
1								
	101	Layer		0.28	Concrete	-		
	102	Layer		0.40-50	Made ground	-		
	103	Layer		0.25	Subsoil, old plough soil	-		
	104	Layer			Natural	-		
	105	Layer		0.95	Dump	-		
	106	Layer		0.10	Tarmac surface	-		
	107	Cut		0.95	Foundation trench	-		
	108	Str			Concrete foundation	-		
2								
	201	Layer		0.05	Tarmac	-		
	202	Layer		0.25	Concrete	-		
	203	Layer		0.29	Made ground	-		
	204	Fill		0.20	Dump	-		
	205	Fill		0.80	Fill to 208	-		
	206	Layer			Natural	-		
	207	Fill		0.80	Back fill to 209	-		
	208	Cut		0.80	Drainage trench	-		
	209	Cut			Pit cut	-		
3								
	301	Layer		0.21	Concrete	-		
	302	Layer		0.33	Made ground	-		
	303	Layer		0.12	Dump	-		
	304	Layer		0.20	Subsoil, old plough soil	-		
	305	Layer			Natural	-		
	306	Fill		0.32	Fill to pit 307	Pot Bone Burnt flint	1 3 2	E-M Saxon
	307	Cut	1.10	0.32	Pit			
	308	Cut	1.54	0.60	Pit			
	309	Fill	0.48	0.12	Fill to posthole 310	Flint	1	

						Burnt flint	2	
	310	Cut	0.48	0.12	Posthole			
	311	Fill		0.60	Fill to pit 308	Pot CBM Flint Bone	12 3 1 6	?11th C
	312	Str			Brick manhole and drain	-		
	313	Fill	0.40		Fill to posthole 314	-		
	314	Cut	0.40		Posthole	-		
4								
	401	Layer		0.27	Concrete surface	-		
	402	Layer		0.80	Rubble made ground	Pot glass CBM	1 2 1	20th C
	403	Fill		0.40	Fill to pit 404	-		
	404	Cut	2 m	0.40	Shallow pit	-		
	405	Layer			Natural	-		
	406	Cut	2.60 m	0.75	Pit	-		
	407	Cut			Pit	-		
	408	Fill		0.35	Fill to 406	-		
	409	Fill		0.20	Fill to 406	-		
	410	Fill		0.40	Fill to 406	Flint	1	
	411	Fill		0.40	Fill to 418	Pot Flint	1 1	?Bronze Age
	412	Fill			Fill to 416	-		
	413	Fill			Fill to 407	-		
	414	Fill		0.40	Fill to 415	Pot Bone CBM Burnt flint	2 1 1 5	?11th C
	415	Cut	1.50	0.40	Pit	-		
	416	Cut	1.20		Pit	-		
	417	Layer		0.20	Subsoil, old plough soil	-		
	418	Cut	2.60	0.40	Pit	-		
5								
	501	Layer		0.27	Concrete	-		
	502	Layer		0.40	Dump, made ground	Pot	35	19th C



						CBM Metal	3 1	
	503	Layer		0.24	Dump	-		
	504	Fill		1.10	Fill to 507	Pot CBM Glass Slag	9 6 5 5	19th C
	505	Layer		1.40	Natural	-		
	506	Layer			Natural	-		
	507	Cut	3 x 4	1.10	Pit / dump			
6								
	601	Layer		0.08	Tarmac	-		
	602	Layer		0.20	Rubble and concrete	-		
	603	Layer		0.15	Polystyrene	-		
	604	Layer		0.27	Concrete and rubble	-		
	605	Layer		0.26	Dump and leveling	Pot CBM Glass	14 1 2	20th C
	606	Layer		0.40	Possible remains of garden soil	-		
	607	Layer		0.22	Subsoil, old plough soil	CBM Flint Burnt flint	2 3 1	P-med
	608	Fill		0.42	Fill to pit 609	CBM Bone Flint Burnt flint	2 2 1 1	P-med
	609	Cut	1.10	0.42				
	610	Fill			Fill to pit 611	Burnt flint	6	
	611	Cut	0.70					
	612	Fill			Fill to pit 613	-		
	613	Cut	0.60					
	614	Fill			Fill to pit 615	-		
	615	Cut	0.55					
	616	Fill	4.60	0.47	Fill to pit 620	Pot CBM	2 1	19th C
	617	Fill	3.40	0.45	Fill to pit 620	-		
	618	Fill		0.23	Fill to pit 620	-		

	619	Fill		0.35	Fill to pit 620	-		
	620	Cut	4.80					
	621	Fill			Fill to pit 622	Pot CBM	2 2	20th C
	622	Cut	1.70 x 1		Modern pit			
	623	Layer			Natural			
	624	Fill		0.52	Fill to pit 625	Bone CBM Flint Burnt flint	2 3 1 6	P-med
	625	Cut	1.70	0.52	Pit			
	626	Str	0.75		Concrete foundation			
	627	Fill		0.23	Fill to 628	Pot Bone CBM Flint Burnt flint	1 1 2 1 3	?11th C
	628	Cut	2.5 x 1.3	0.23				
	629	Fill		0.20	Fill to 630	-		
	630	Cut	1.20	0.20				
7								
	701	Layer		0.25	Concrete	-		
	702	Layer		0.22	Made ground	-		
	703	Layer		0.28	Made ground	Pot CBM Glass Metal	2 2 1 2	19th C
	704	Layer			Natural	-		
	705	Fill		0.60	Fill to pit 708	-		
	706	Fill			Fill to 707	CBM	3	P-med
	707	Cut	2 m		Modern truncation			
	708	Cut	1.80	0.60	Pit			
	709	Cut		0.15	Linear ditch			
	710	Fill		0.15	Fill to cut 709	Bone Flint Burnt flint	7 4 4	
	711	Layer		0.18	Made ground	-		
8								

	801	Layer			Rubble made ground	-		
	802	Layer			Polystyrene	-		
	803	Layer			Concrete	-		
	804	Layer			Rubble made ground	-		
	805	Layer			Made ground mixed garden soil	Pot CBM Glass	7 4 2	20th C
	806	Layer			Subsoil, old plough soil	Pot Flint Burnt flint	1 1 2	E-M Saxon
	807	Fill			Fill to 808	-		
	808	Cut			Scoop/ pit	-		
	809	Cut			Ditch	-		
	810	Fill			Fill to ditch 809	-		
	811	Layer			Natural	-		
	812	Fill			Fill to pit 813	Flint Burnt flint	1 2	
	813	Cut			Pit			
	814	Layer			Made ground	Pot Bone CBM	5 1 1	19th C
	815	Str			Concrete foundation	-		
	9/a							
	9/a /b	901	Layer	0.20	Concrete	-		
	9/a /b	902	Layer	0.35	Rubble made ground	-		
		903	Layer	0.15	Dump made ground	-		
		904	Fill	0.60	Fill to 913	-		
		905	Fill		Fill to 913	CBM Glass	3 1	P-med
		906	Fill	0.67	Fill to pit 907	-		
		907	Cut	2 m	Pit	-		
		908	Fill		Fill to pit 907	-		
		909	Fill		Fill to pit 912	Pot	1	E-M Saxon
		910	Layer	0.22	Subsoil, old plough soil	-		
		911	Layer		Natural	-		
		912	Cut	2 m	Pit	-		

	913	Cut	4 m		Large pit	-		
	914	Fill			Fill to pit 915	Pot Bone	1 1	?Mid 13th C
	915	Cut	1.8 x 2.5		Pit	-		
	916	Fill		0.50	Fill to pit 918	-		
	917	Fill			Fill to pit 918	-		
	918	Cut			Pit	-		
9/b	919	Cut			Pit	-		
	920	Fill			Fill to 919	-		
	921	Cut			Pit	-		
	922	Fill			Fill to pit 921	-		
	923	Cut	3 m		Pit	-		
	924	Fill			Fill to pit 923	CBM Flint	2 1	P-med
	925	Fill			Fill to 926			
	926	Cut			Poss pit	-		
	927	Layer			Dump made ground	Pot Glass	3 1	20th C
	928	Layer			Dump made ground	-		
	929	Layer			Dump made ground	-		
	930	Fill			Fill to pit 923	-		
	931	Layer			Dump made ground	-		
	932	Fill			Fill to pit 923	-		
	933	Fill			Fill to 926	-		
	934	Cut			Modern truncation	-		
10								
	1001	Layer		0.15	Tarmac surface	-		
	1002	Layer		0.25	Rubble, made ground	-		
	1003	Layer		0.12	Concrete	-		
	1004	Layer		0.10	Rubble, made ground	-		
	1005	Str		0.30	Concrete base for a pillar	-		
	1006	Layer		0.12	Dump, made ground	-		
	1007	Layer		0.12	Made ground	-		
	1008	Layer		0.47	Mixed garden soil and dump	Pot CBM Glass	8 4 2	20th C

						Shell	1	
	1009	Layer			Mixed garden soil and dump	Pot Bone CBM Shell Chalk	2 2 1 5 1	20th C
	1010	Layer		0.10	Make up layer			
11								
	1101	Layer			Tarmac	-		
	1102	Layer			Rubble made ground	-		
	1103	Layer			Made ground	-		
	1104	Layer			Made ground	-		
	1105	Layer			Made ground	-		
	1106	Layer			Made ground	-		
	1107	Layer			Made ground	-		
	1108	Layer			Made ground	-		
	1109	Layer			Made ground	-		
	1110	Layer			Made ground	-		
	1111	Layer			Mixed garden soil	Glass	2	20th C
	1112	Layer			Mixed garden soil	Pot CBM Metal nail	1 3 1	20th C
	1113	Str			Concrete base for a pillar	-		

## APPENDIX 3 ARTEFACT REPORTS

## Pottery

*Paul Blinkhorn*

The pottery assemblage comprised 110 sherds with a total weight of 1964 g. The majority of the pottery was of 19<sup>th</sup> or 20<sup>th</sup> century date, but small quantities of Bronze Age, early/middle Saxon and early medieval wares were also noted.

The pottery was recorded utilizing the coding system and chronology of the Museum of London Ceramic type-series<sup>8</sup> (Vince 1985; Blackmore 1988), as follows:

CHAF: *Early/middle Saxon chaff-tempered ware*, 5<sup>th</sup>-9<sup>th</sup> century. 2 sherds, 19 g.

SSANC: *Early/middle Saxon sand-tempered ware*, ?Surrey type, 5<sup>th</sup>-9<sup>th</sup> century. 3 sherds, 21 g.

EMSH: *Early medieval shelly ware*, 11<sup>th</sup> – 12<sup>th</sup> century. 1 sherd, 10 g.

ESUR: *Early Surrey sand-tempered ware*, 11<sup>th</sup> – 12<sup>th</sup> century. 9 sherds, 74 g.

KING: *Kingston ware*, mid 13<sup>th</sup> – mid 15<sup>th</sup> century. 1 sherd, 4 g.

In addition, 90 sherds (1,776 g) of 19<sup>th</sup> and 20<sup>th</sup> century wares (eg, mass-produced white earthenwares, mocha/yellow ware, stonewares) were noted, as were four sherds (60 g) of flint tempered prehistoric material. These are likely to be of Bronze Age date.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 3.1. Each date should be regarded as a terminus post quem.

*Table 3.1: Pottery occurrence by number and weight (g) of sherds per context by fabric type*

Cntxt	P/HIST?		CHAF		SSANC		EMSH		ESUR		KING		19/20th		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
306			1	5											E/MS?
311	3	33			1	12	1	10	7	42					11thC
402													1	15	20thC
411	1	27													BA??
414					1	5			1	24					11thC?
502													35	556	19thC
504													9	213	19thC
605													14	395	20thC
616													2	26	20thC
621													1	24	20thC
627									1	8					11thC?
703													2	10	19thC
805													7	244	20thC
806					1	4									E/MS?
814													5	54	19thC
909			1	14											E/MS?
914											1	4			M13thC?

<sup>8</sup> Vince, AG, 1985 'The Saxon and Medieval Pottery of London: A review', *Medieval Archaeol* 29, 25-93, and Blackmore, L, 1988 The Anglo-Saxon Pottery in RL Whytehead and R Cowie with L Blackmore 'Two Middle Saxon Occupation Sites: Excavations at Jubilee Hall and 21-22 Maiden Lane', *Trans London Middlesex Archaeol Soc* 39, 81-110

Cntxt	P/HIST?		CHAF		SSANC		EMSH		ESUR		KING		19/20th		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
927													3	2	20thC
1008													8	224	20thC
1009													2	9	20thC
1112													1	4	20thC
<b>Total</b>	<b>4</b>	<b>60</b>	<b>2</b>	<b>19</b>	<b>3</b>	<b>21</b>	<b>1</b>	<b>10</b>	<b>9</b>	<b>74</b>	<b>1</b>	<b>4</b>	<b>90</b>	<b>1776</b>	

The range of fabric types present suggests that there was small-scale activity in the region of the site during the Bronze Age, early middle Saxon and early medieval periods. Otherwise, the bulk of the assemblage is of 19<sup>th</sup> or 20<sup>th</sup> century date.

## Flint

*Kate Cramp*

The evaluation produced a total of 13 struck flints, (*table 3.2*). A further 33 pieces of burnt unworked flint, weighing a total of 600g, were recovered from the site. No significant concentrations of material were noted.

*Table 3.2: Flint by context and by type.*

Context:	309	311	410	411	607	608	624	627	806	812	924	Total:
Flake			1	1	3	1	1			1		8
Blade	1											1
Blade-like							1					1
Irregular waste											1	1
Retouched blade		1										1
End scraper									1			1
<b>Total:</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>13</b>

For the most part, the raw material used for the production of the flakes was probably a locally available gravel flint, characterised by a thin, abraded cortex and the presence of thermal fractures. One flake of bullhead flint, retrieved from context 411, was noted.

The majority of the assemblage consists of flakes. A total of eight were recovered, many of which are in a poor, rolled condition and largely undiagnostic. A small number are in reasonably good condition, including two of possible late Neolithic tertiary flakes. These were contained within contexts 410 and 812. One piece of irregular waste was noted.

A single unretouched blade and blade-like flake were identified, both exhibiting a moderate degree of post-depositional edge damage. The snapped tertiary blade with a small amount of platform edge abrasion from context 309 may be attributed to the Mesolithic, although it is conceivable that it represents an earlier Neolithic product.

Context 311 produced a large, tertiary blade in relatively fresh condition exhibiting a small amount of light edge retouch and heavy, rounded use-wear. The blade probably dates to the Mesolithic or Neolithic. A date at the latter end of this time range is more plausible, given the relatively broad dorsal flake scars exhibited by the piece.

Context 806 contained a rolled and glossed end-scraper. The condition is consistent with a heavily disturbed context. The blade-like dorsal flake scars suggest a Neolithic date.

It appears that Neolithic is relatively well represented by the assemblage. Given the limited assemblage size and the residual condition of much of the flint work, however, further interpretation is largely prohibited.

### ***Other Artefacts***

*Leigh Allen*

#### Ceramic building material

A total of 3704g of ceramic building material was recovered from the evaluation. The small assemblage is post-medieval or modern in date and comprises small undiagnostic fragments of plain flat tile. There are two fragments with traces of peg holes through them. Comparing the thickness of these fragments with the rest of the assemblage it seems likely that the majority of the fragments come from peg tiles.

This material probably originated from the layer of modern overburden covering the site and requires no further work.

*CBM was recovered from the following contexts:*

*311,402,414,504,605,608,616,621,624,627,703,706,805,814,905,924,1008,1009,1111,1112*

#### Glass

A total of 525g of glass was recovered from the evaluation. The assemblage is post-medieval/modern in date and mostly consists of fragments of dark green bottle glass.

*Glass was recovered from the following contexts:*

*402,504,605,703,805,905,927,1008,1111*



**APPENDIX 4 ANIMAL BONE***Bethan Charles***Introduction**

A total of 23 fragments of bone and one Oyster shell (context 1008) were recovered by hand from the evaluation trenches. Some of the fragments were re-assembled reducing the fragment count to 16 of which only five were identified to species.

**Methodology and Condition**

The calculation of the species recovered from the site was done through the use of the total fragment method. All fragments of bone were counted including elements from the vertebral centrum, ribs and long bone shafts. None of the fragments identified could be used to estimate age, sex or height.

The bone was in good condition with little attritional wear. None of the bones had signs of pathology or had been burnt. One cattle radius from context 1009 had tooth marks around the proximal end of the shaft. This is likely to have been caused by dog gnawing. Four of the bones had butchery chop marks including A cattle femur (context 701) and a cattle radius (context 806).

**Results**

The majority of the bone recovered came from post medieval contexts. The six identifiable fragments belonged to cattle. It is not possible to say whether this is reflective of the diet of the inhabitants during this period due to the small size assemblage. However, the good preservation of the bone does indicate that further excavation may provide more material from which to enable a better understanding of the diet and economy of the inhabitants of the site during the separate periods of occupation.

*Table 3.3: Number of bones according to context*

Context	Cattle	Unidentified
311	1	2
414	0	1
608	0	1
624	1	1
627	0	1
701	2	0
806	1	0
814	0	1
914	0	1
1009	1	1
<b>Total</b>	<b>6</b>	<b>9</b>

**APPENDIX 5 SUMMARY OF SITE DETAILS**

**Site name:** The Bittoms, Kingston College, Kingston Hall Road, Kingston-upon-Thames

**Site code:** KHR 01

**Grid reference:** TQ179 689

**Type of evaluation:** Trench

**Date and duration of project:** 20.08.01 to 014.09.01

**Area of site:** 0.30ha

**Summary of results:** Residual Neolithic/Bronze Age artefacts, early to middle Saxon rural settlement features and 11th/13th century pitting. Largely truncated cut features and thin stratigraphy sealed by 19th/20th made ground.

**Location of archive:** The archive is currently held at OAU, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with the Museum of London in due course, under the site code.



Scale 1:25,000

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Figure 1: Site location.

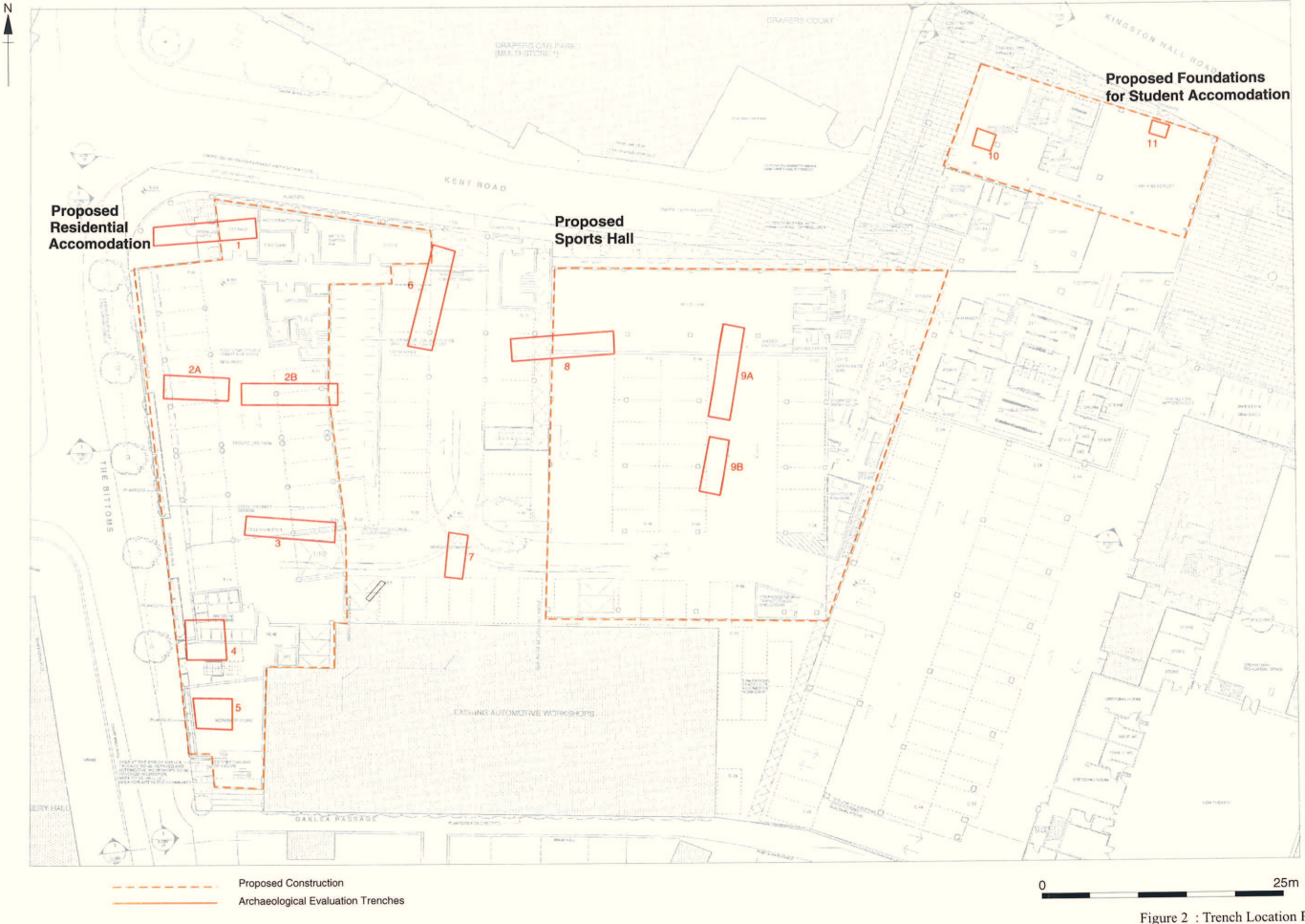


Figure 2 : Trench Location Plan

K:\188 15\Mapgen Collage\Map14.dwg

## KEY TO FIGURES



Made ground and modern features (services, bricks etc.)



Tarmac / Concrete



Archaeological Features - Unexcavated



Archaeological Features - Excavated (plan only)



Natural Geology

KHR EV\*Kingston Collage\* AMD\*11.09.01

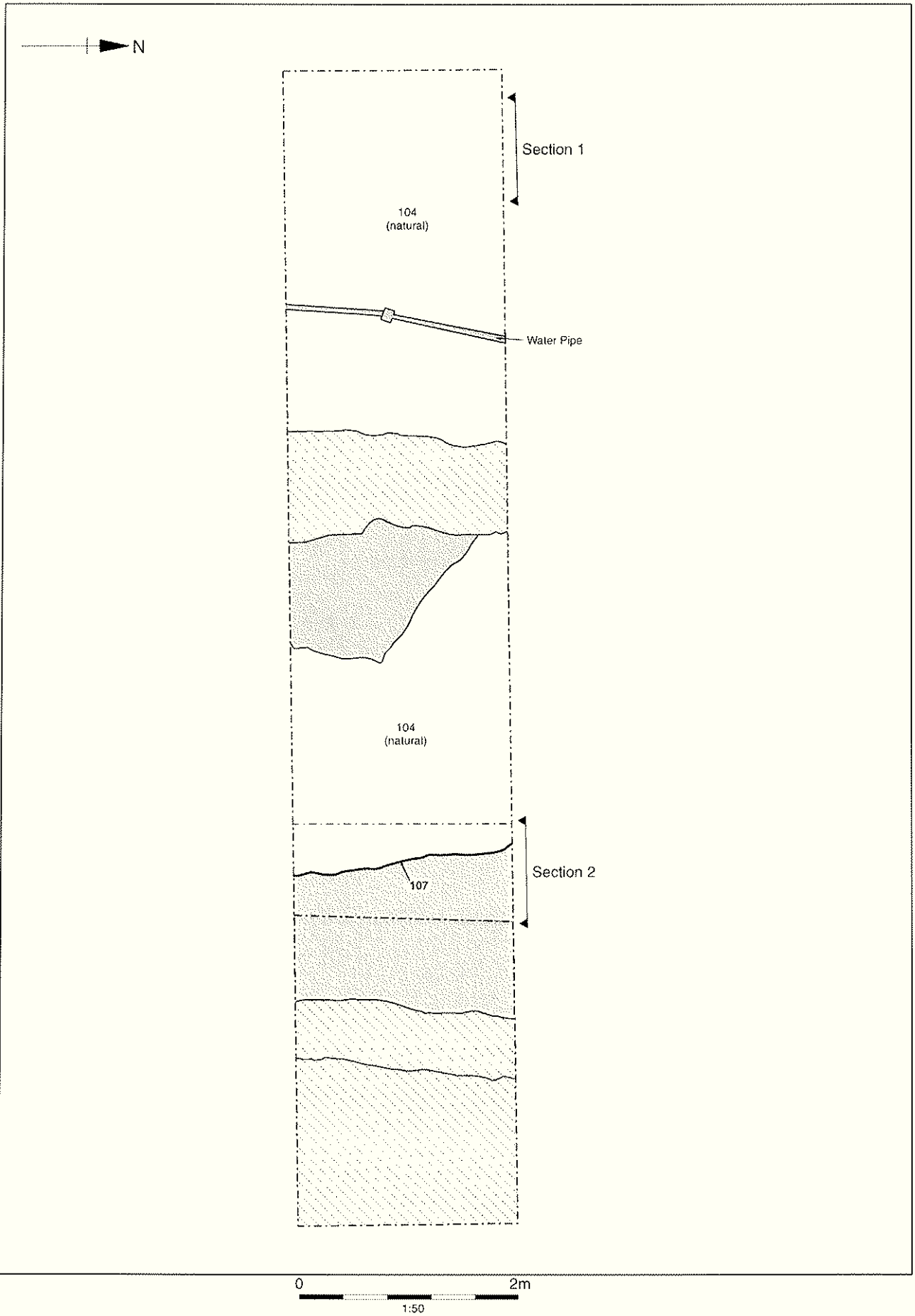
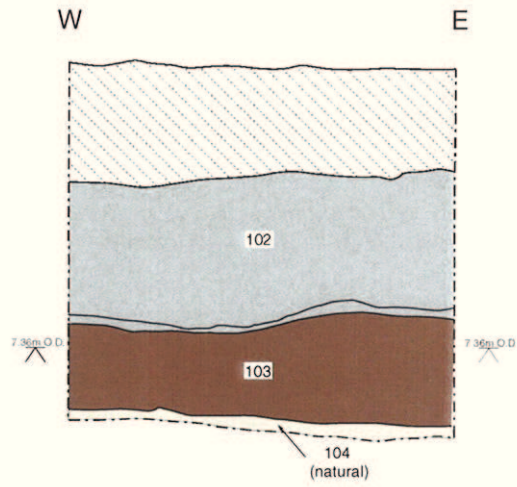


Figure 3: Trench 1: Plan

Trench 1: Section 1



Trench 1: Section 2

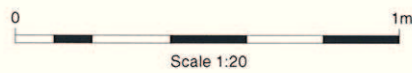
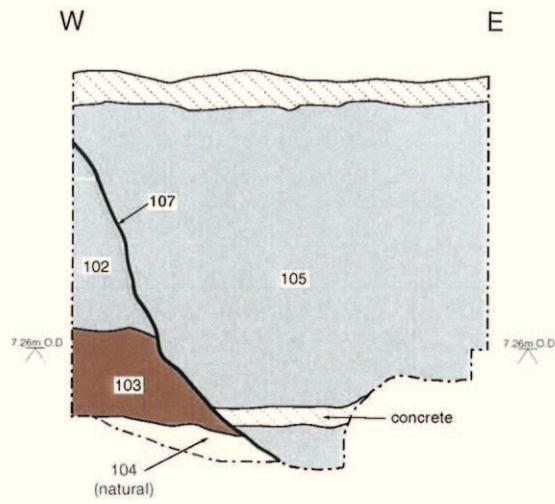


Figure 4: Trench 1: Sections

Figure 5a: Trench 2a: Plan

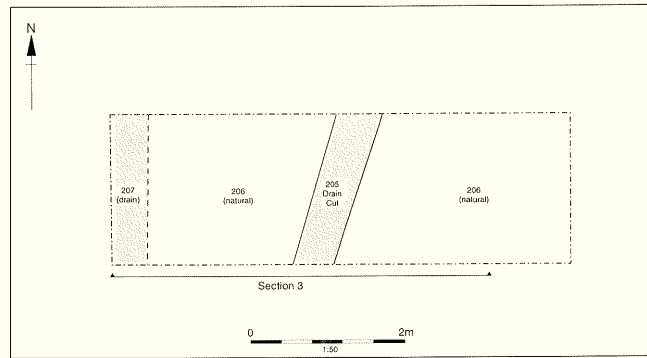


Figure 5b: Trench 2a: North Facing Section 3

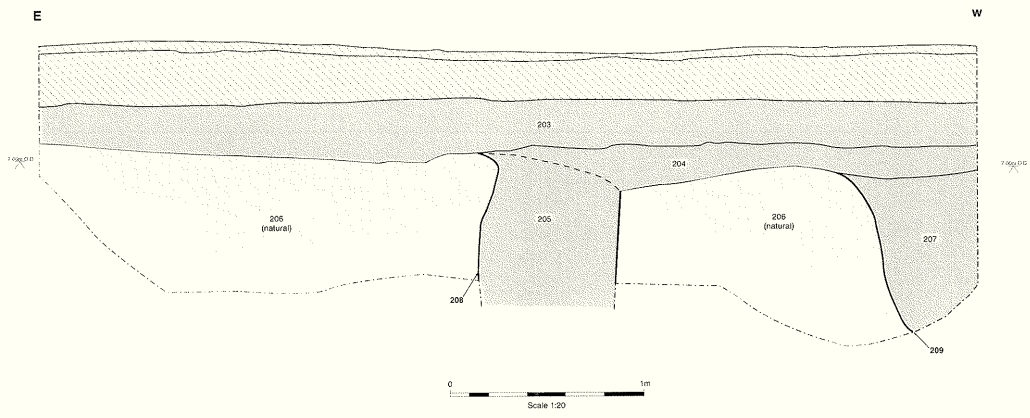


Figure 5: Trench 2a: Plan and Section



Figure 6a: Trench 2b: Plan

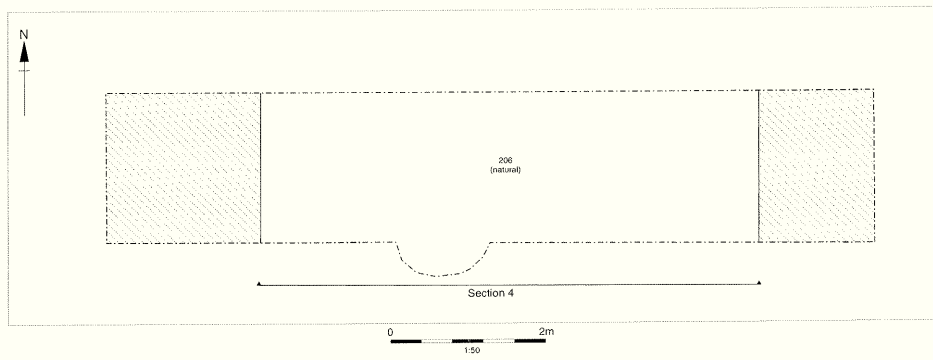


Figure 6b: Trench 2b: North Facing Section 4

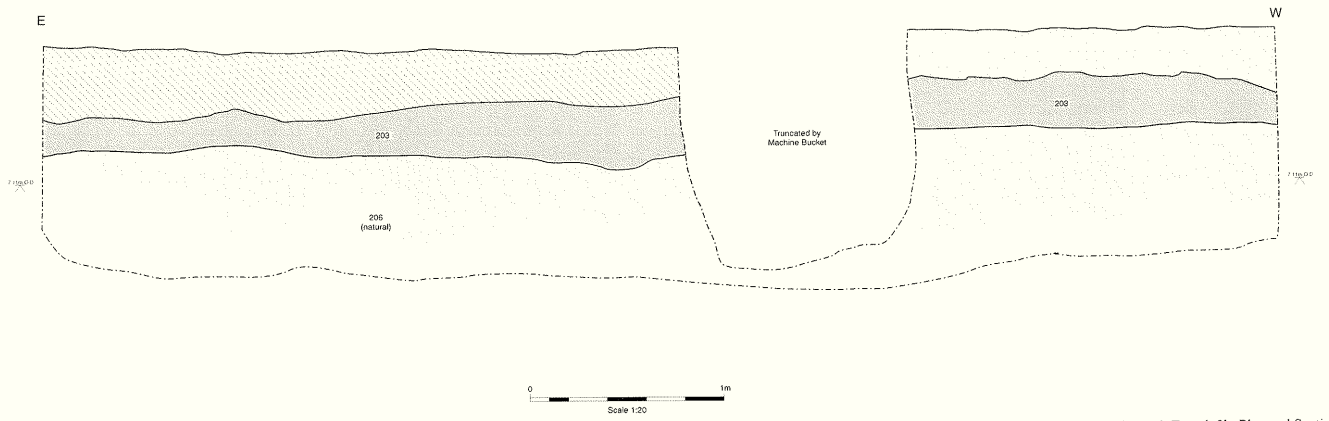


Figure 6: Trench 2b: Plan and Section

Figure 7a: Trench 3: Plan

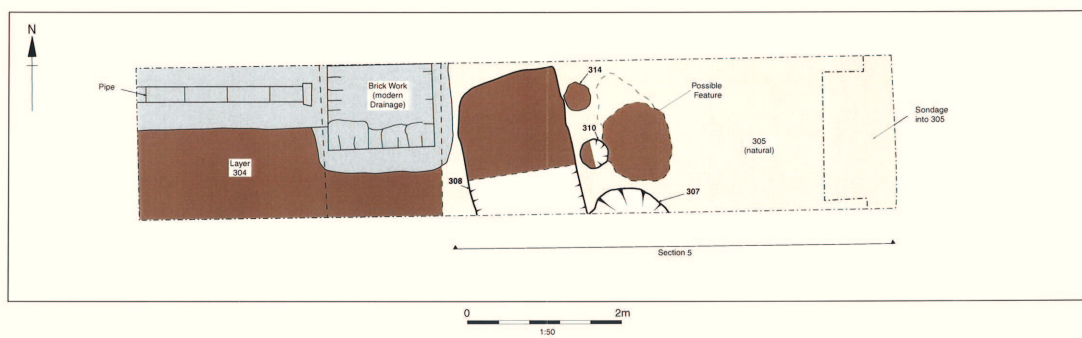


Figure 7b: Trench 3: North Facing Section 5

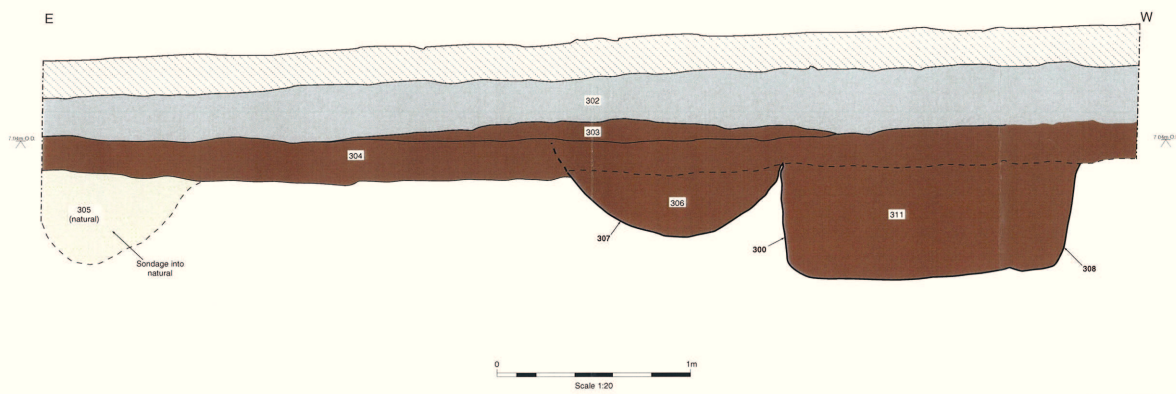


Figure 7: Trench 3: Plan and Section

Figure 8a : Trench 4: Plan

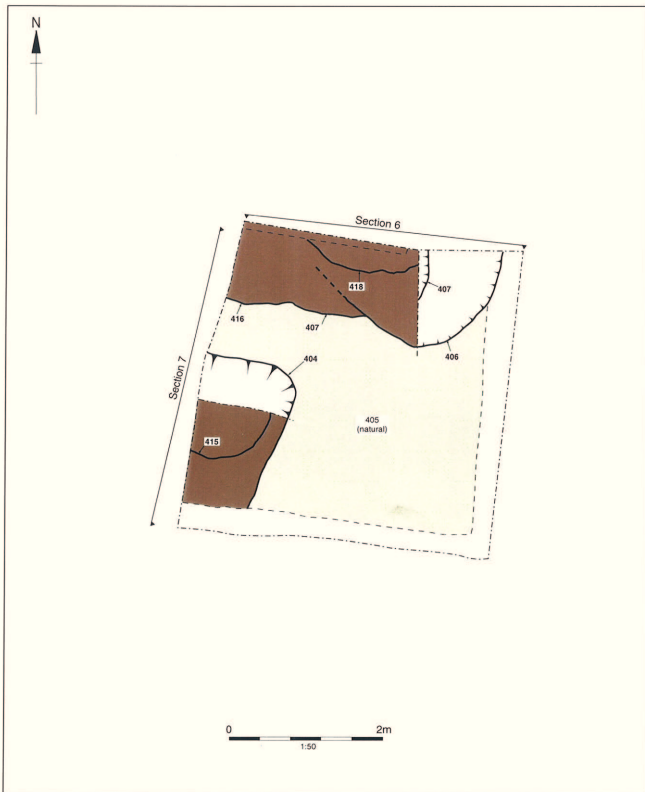


Figure 8b : Trench 4: South Facing Section 6

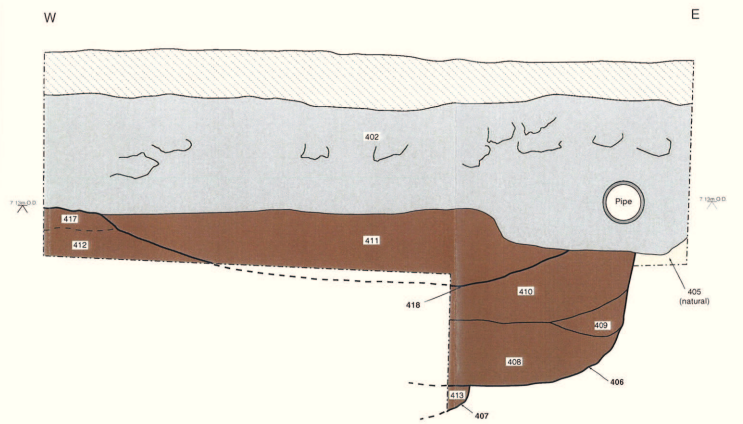


Figure 8c: Trench 4: East Facing Section 7

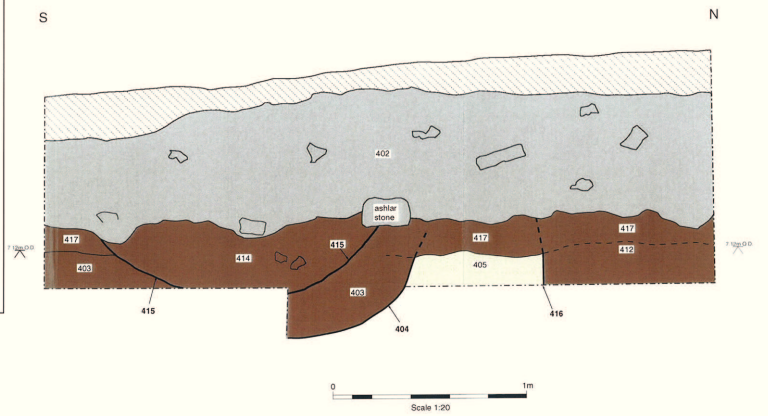


Figure 8 : Trench 4: Plan and Sections

Figure 9a: Trench 5: Plan

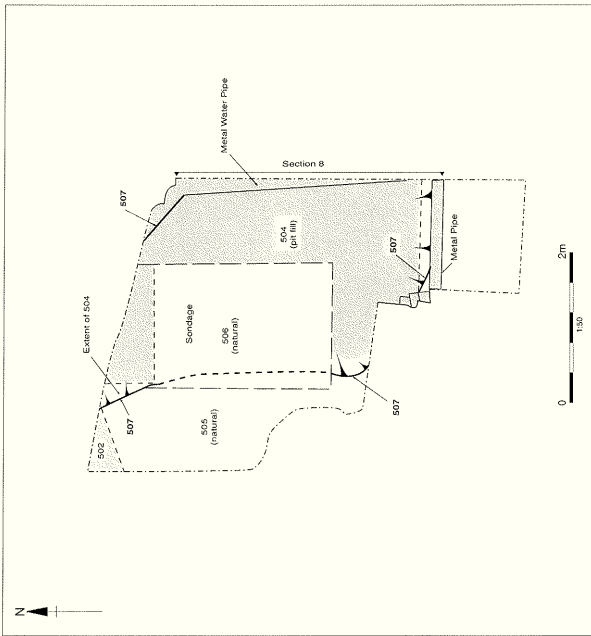


Figure 9b: Trench 5: West Facing Section 8

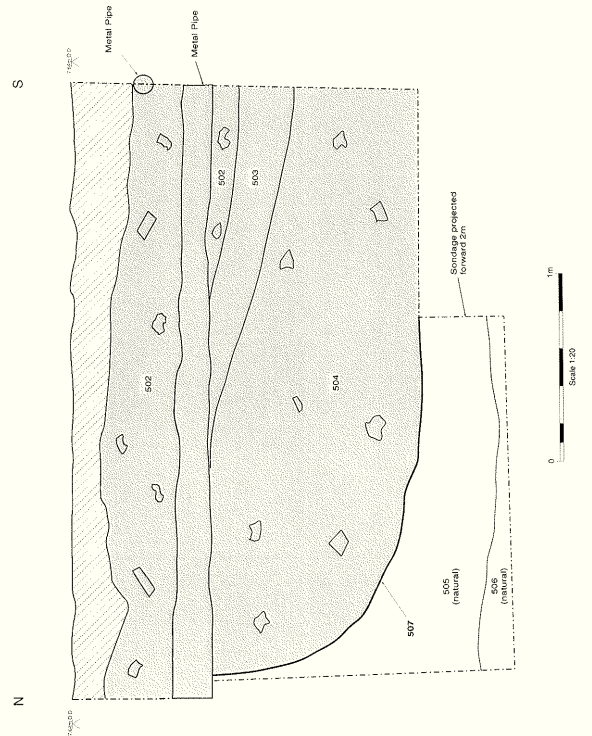


Figure 9: Trench 5: Plan and Section

Figure 10a: Trench 6: Plan

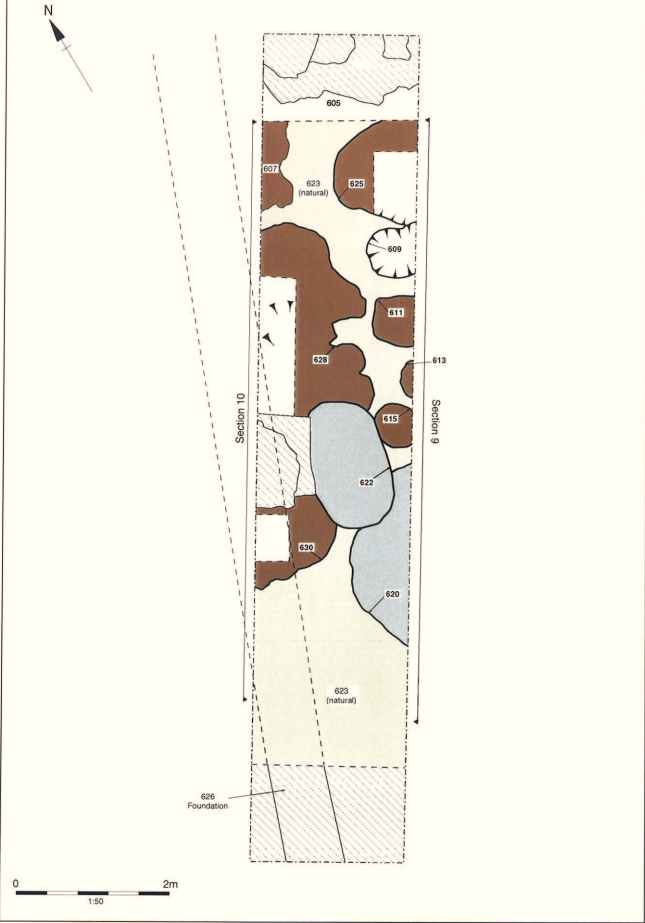


Figure 10b: Trench 6: Section 9

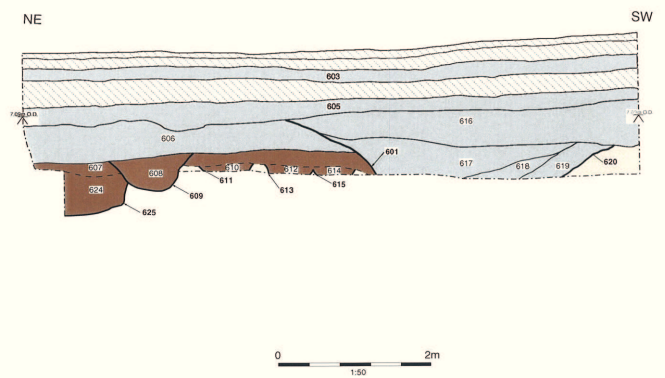


Figure 10c: Trench 6: Section 10

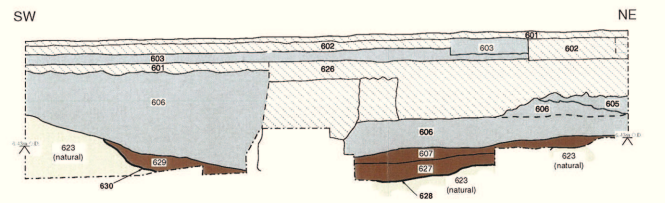


Figure 10: Trench 6: Plan and Sections

Figure 11a : Trench 7: Plan

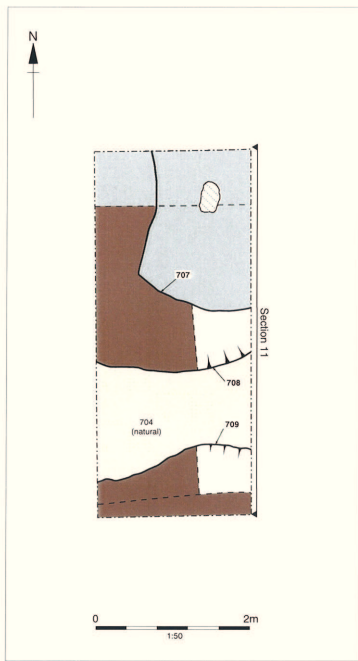


Figure 11b : Trench 7: Section 11

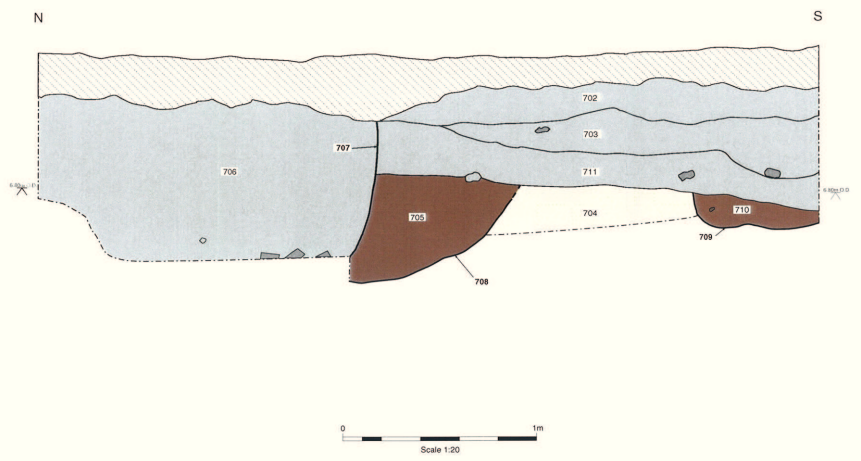


Figure 11: Trench 7: Plan and Section

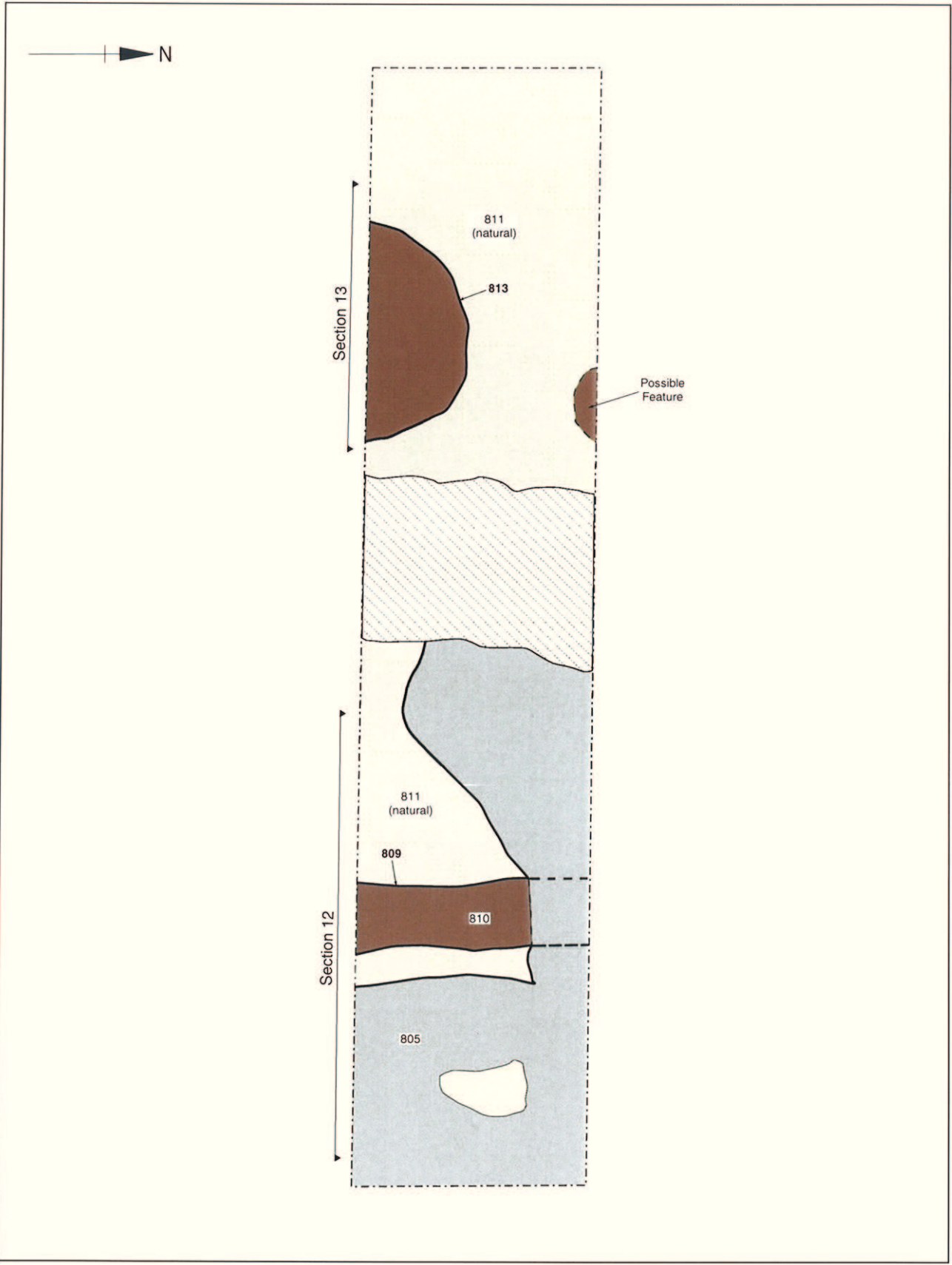


Figure 12: Trench 8: Plan

Figure 13a : Trench 8 : North Facing Section 12

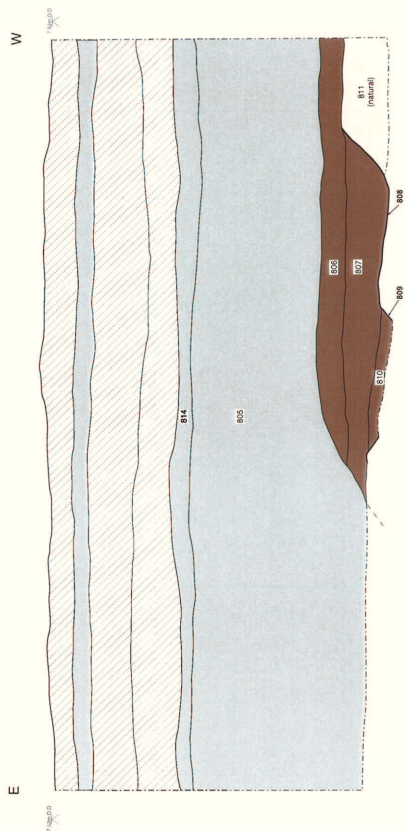


Figure 13b : Trench 8 : North Facing Section 13

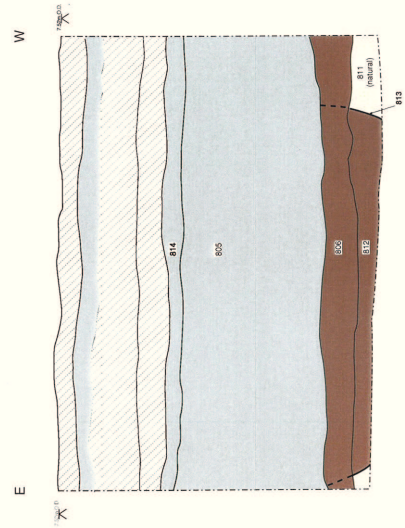


Figure 13 : Trench 8 : Sections



Figure 14a : Trench 9a: Plan

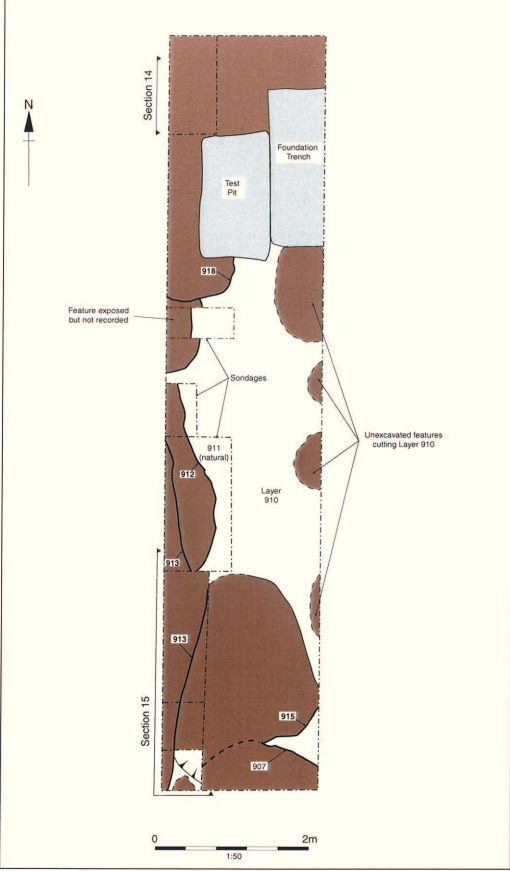


Figure 14b : Trench 9a: East Facing Section 14

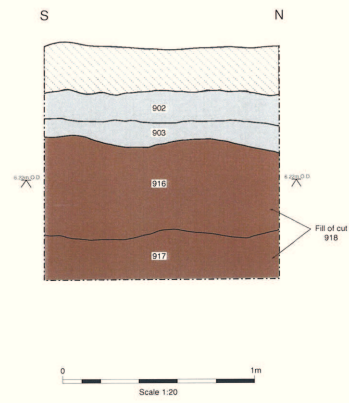


Figure 15c : Trench 9a: North and East Facing Section 15

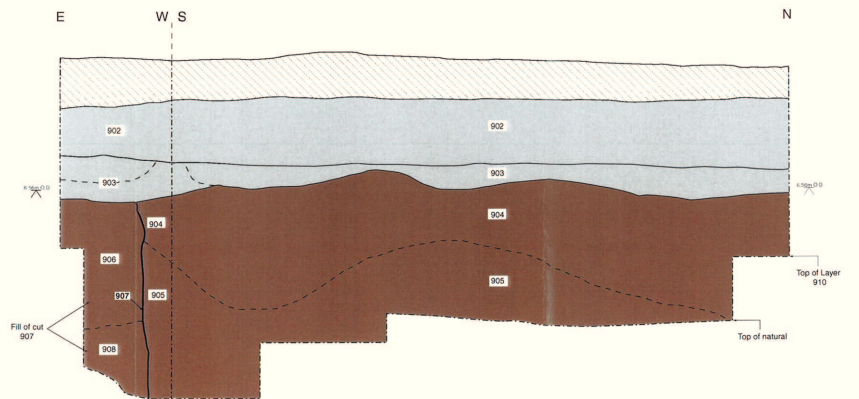


Figure 14: Trench 9a: Plan and Section

Figure 15a : Trench 9b: Plan

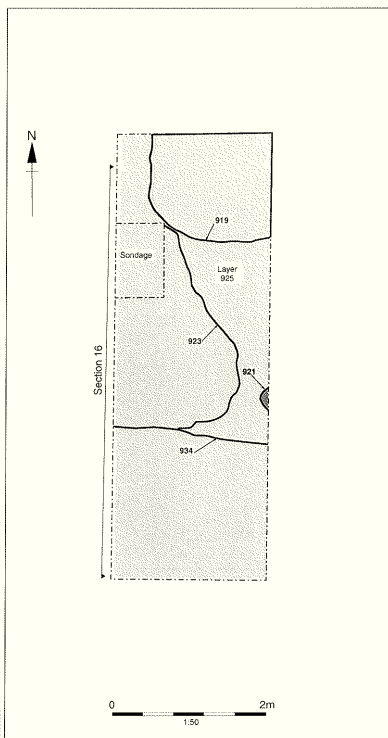


Figure 15b : Trench 9b: East Facing Section 16

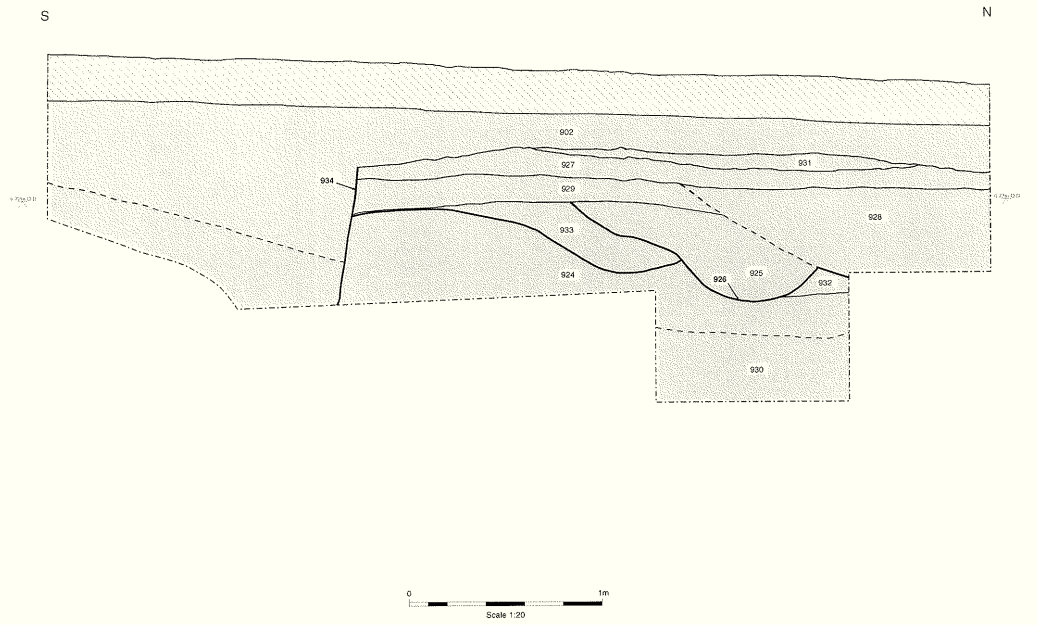


Figure 15: Trench 9b: Plan and Section

Figure 16a: Trench 10: Plan

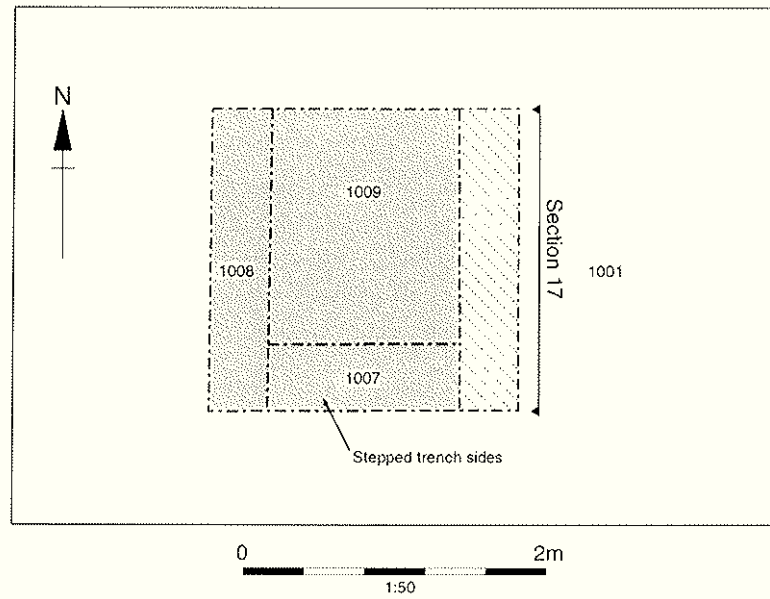


Figure 16b: Trench 10: West Facing Section 17

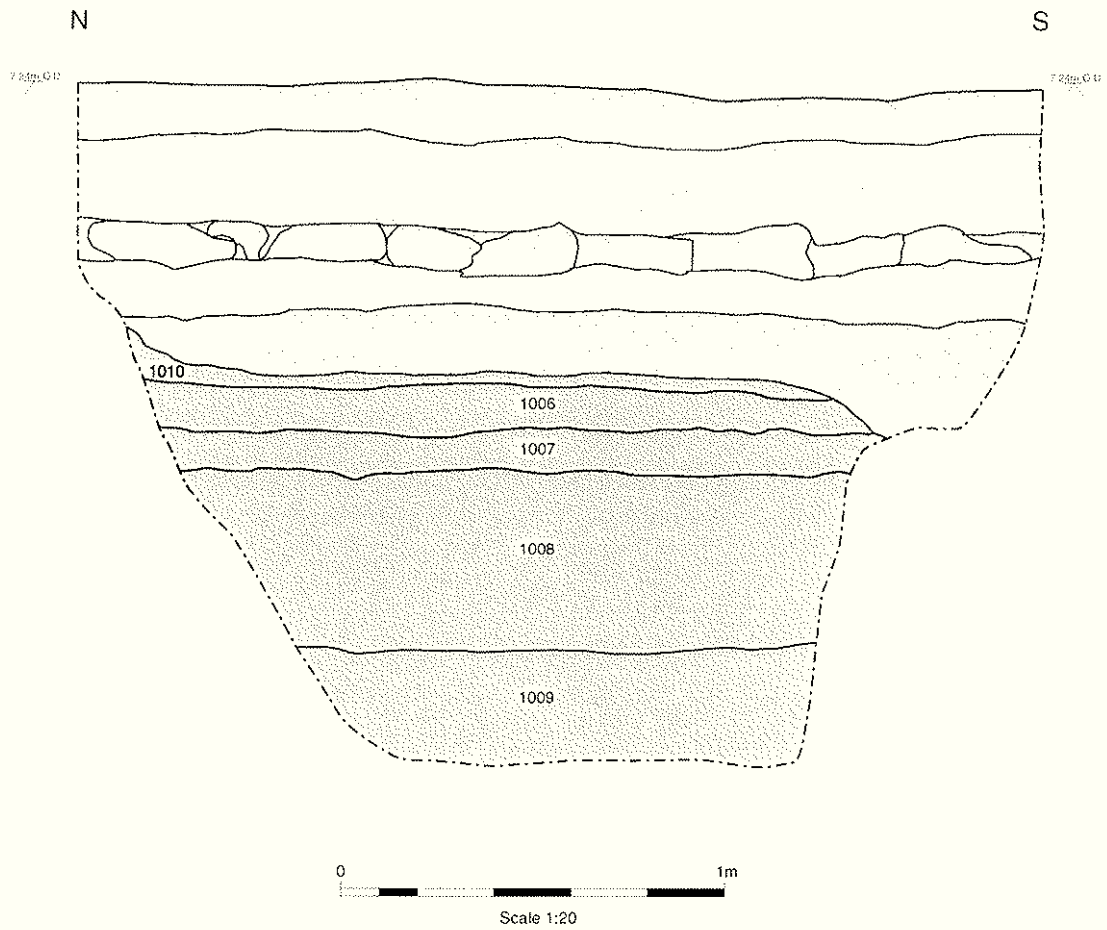


Figure 16: Trench 10: Plan and Section

Figure 17a: Trench 11: Plan

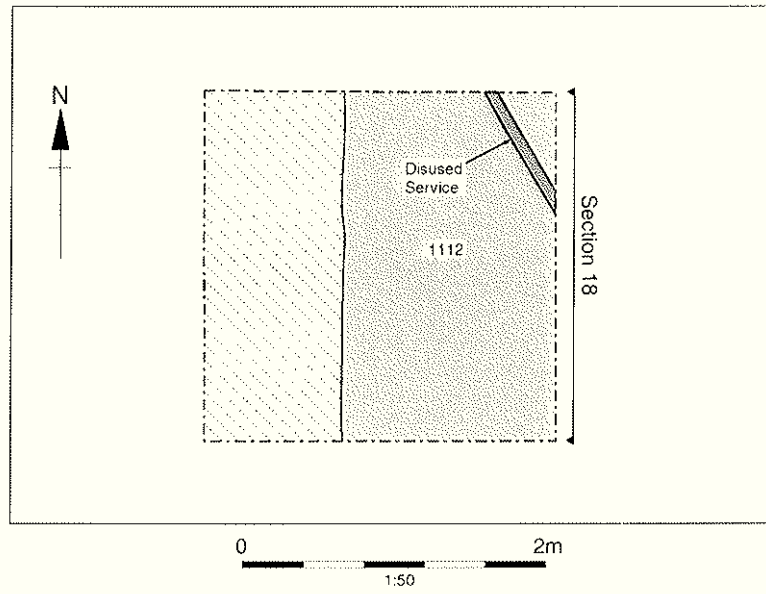


Figure 17b: Trench 11: West Facing Section 18

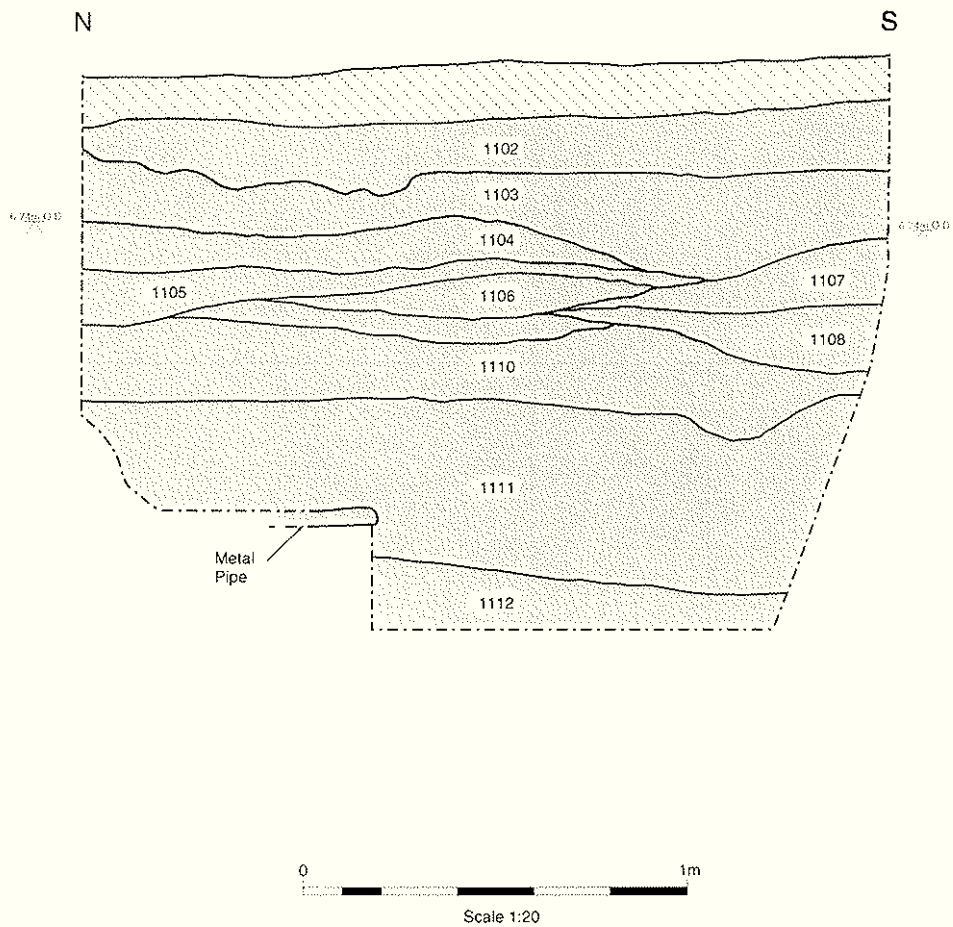


Figure 17: Trench 11: Plan and Section

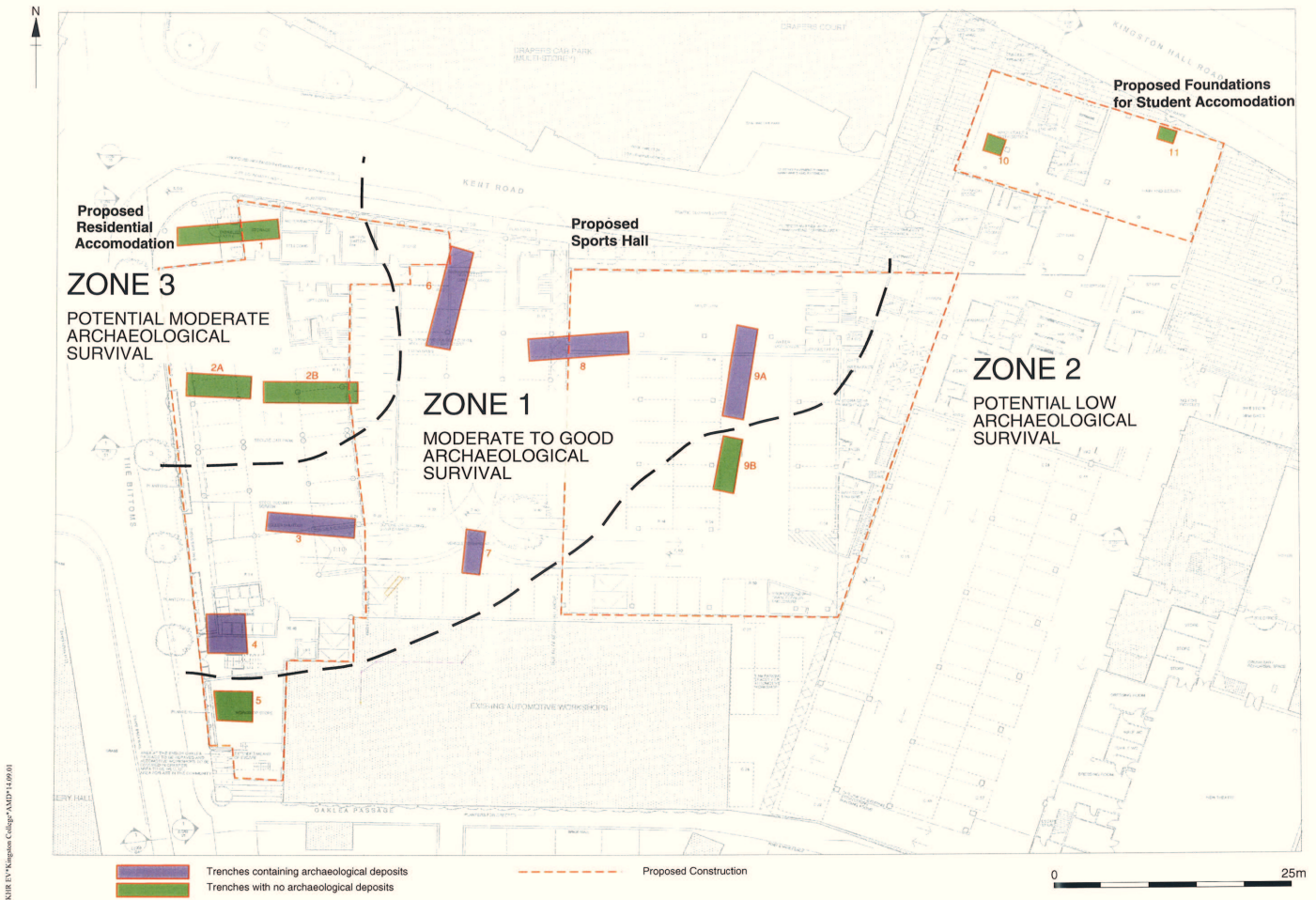


Figure 18 : Predicted archaeological survival



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