

AN ARCHAEOLOGICAL EVALUATION AT EAST WALLS CAR PARK,
CHICHESTER, WEST SUSSEX

Site Code: WEWC05

Central National Grid Reference: SU 486450 104900

Commissioning Client:
Seaward Properties Ltd

Written and Researched by Joanna Taylor
Pre-Construct Archaeology Limited, April 2005

With contributions from C.A. Pine & P. Hunter:
Development Archaeology Services

Project Managers: Jon Butler PCA
Chris Pine DAS

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1 ABSTRACT

- 1.1 This report details the results and working methods of an archaeological evaluation undertaken in preparation of a proposed redevelopment of the site [fig 1]. The site is centred at National Grid Reference TQ 486450 104900.
- 1.2 The evaluation consisted of two trenches located in the eastern portion of the proposed development. Trench 1 measured 33.00m in length and was located to the east of the existing town walls primarily to assess the defence ditches associated with the Roman settlement at Chichester. Trench 2 was located to the N/E of Trench 1, measured 10.00m in length and was located primarily to assess the extramural land to the east of the defence ditches [fig. 2].
- 1.3 The evaluation encountered natural clay in Trench 2 at 13.00m OD and natural gravel in Trench 1 at 12.00m OD. However, the spot heights on the natural gravel in Trench 1 cannot be considered indicative of the natural topography on site for the natural deposits had been severely truncated by later intrusions.
- 1.4 A N/S orientated linear feature dating to no earlier than the 1st century was encountered in Trench 2 suggesting that extramural activity is present in the N/E of the site.
- 1.5 Excavation of Trench 1 revealed evidence for three N/S orientated ditches dating to the Roman period. Two of the ditches appear to represent the V-shaped ditches commonly associated with an earlier phase of defensive earthworks surrounding the Roman settlement at Chichester whilst the third ditch may be associated with the construction of bastions to the *civitas* wall, commonly thought to date to the 4th century.
- 1.6 Also present in Trench 1 were two N/S orientated ditches of medieval date which may represent part of the later defences of Chichester. In addition a linear feature dating to the medieval period was present in Trench 2 suggesting that extramural activity exists in the N/E of the site.
- 1.6 The remainder of the deposits on site consisted of 19th century dump layers, pits and soak-aways which were sealed by a layer of 20th century hardcore and the associated concrete slab that forms the car park surface presently occupying the site.
- 1.7 In addition to Trench survey 4 wire-line percussive shell and auger boreholes were sunk as part of the investigation. The primary aims of the borehole survey was to confirm the north south extent, within the site area, of selected ditch / fill contexts recorded at Trench 1 and to record and recover samples from selected contexts. The results of this survey element are presented at Appendix 5.

2 INTRODUCTION

- 2.1 An archaeological field evaluation was undertaken by Pre-Construct Archaeology Ltd between 15th and 18th of March 2005. The site address is East Walls Car Park, Chichester [fig. 1].
- 2.2 The commissioning client was Development Archaeological Services on behalf of Seaward Properties Ltd. The field evaluation was undertaken by Pre-Construct Archaeology Ltd under the supervision of Joanna Taylor and the project management of Jon Butler.
- 2.3 The development site as a whole is bounded by East Wall to the west, Shippam's Social Club and New Park Centre to the north, New Park Road to the east and residential/commercial buildings fronting St Pancras to the south. The area of the development assessed by this report is focused solely on East Walls Car Park in the NW corner of the proposed development [fig. 2].
- 2.4 The study area consists of concrete slab surfaces associated with the sites current use as a car park.
- 2.5 A temporary benchmark was transferred from the Ordnance Survey Bench Mark located on the Community Centre on New Park Road [14.95m OD].
- 2.6 The completed archive comprising written, drawn and photographic records and artefactual material will be deposited at the Chichester District Museum under the site code WEWC05.
- 2.7 Borehole samples recovered during survey [see Appendix 5] are currently held by Development Archaeology Services.
- 2.8 Selected processed environmental samples [see Appendix 5] are currently held by Development Archaeology Services.



Figure 1
Site Location
1:20,000



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- Notes:
 Ordnance Survey heights for bore holes
- BH1 = 14.013m OD
 - BH2 = 14.121m OD
 - BH3 = 14.013m OD
 - BH4 = 13.980m OD

Figure 2
 Trench Location
 1:1000

3 PLANNING BACKGROUND

- 3.1 As part of the Client's planning application, an Archaeological Desk-Based Assessment [DBA] was commissioned for the site to provide supporting information on the potential for archaeological remains to be encountered during development of the site [Hunter & Pine 2004].
- 3.2 The site of East Walls Car Park has a high risk of encountering archaeological remains primarily associated with the defences of the Roman city. As a consequence there is a high potential for encountering archaeological remains during the construction of any new development and further investigation is necessary to ascertain the character, date, survival and extent of the deposits.
- 3.3 The western boundary of the site is formed of Chichester City Wall, scheduled Ancient Monument 101. As a consequence any development on site may affect the surroundings of the Scheduled Ancient Monument.
- 3.4 The site is located within the Chichester Conservation Area [English Heritage 1990: 9-10]. There are no registered parks and gardens on or close to the site [English Heritage 1986] and there are no registered historic battlefields in the area [English Heritage 1994].
- 3.5 For further information on the planning background of the site see Hunter & Pine 2004 and Pine, 2005.
- 3.6 Prior to evaluation works on site permissions were sought and received from Department of Culture Media and Sport [advised by English Heritage] by Development Archaeology Services [DAS] for the investigation.

4 GEOLOGY AND TOPOGRAPHY

- 4.1 The site is located on the West Sussex Coastal Plain at a level of c.14.10m OD
- 4.2 The underlying geology is Valley Gravels over Reading Beds that in turn overlie Cretaceous Upper Chalk [British Geological Survey, One Inch Series Sheet 317 Chichester].
- 4.3 The site is generally flat and currently consists of tarmac surfaces associated with its use as a public car-park.

5 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

5.1 PREHISTORIC

- 5.1.1 Evidence for prehistoric activity in the vicinity of the site is limited and tends to be concentrated to a hundred years before the Roman Conquest. A system of Late Iron Age bank and ditch earthworks, the Chichester Entrenchments and three Iron Age Round Houses were found in the Cattle Market to the South of the site [SMR no. 520].
- 5.1.2 Although there is limited evidence for the prehistoric periods within Chichester it is important to note that the site is located on the West Sussex Coastal Plain, an area known to have been utilised by prehistoric people.

5.2 ROMAN

- 5.2.1 Evidence has been found within Chichester to suggest that a military presence existed from the Roman Invasion in AD43 onwards. Finds indicating a military presence within the *civitas* include ditches and military equipment at St Martins Lane/Little London [Samuels 2002:7; SMR no.344].
- 5.2.2 The Romans had created their first *civitas* at Chichester by the second half of the 1st century AD. The town was known as *Noviomagus Reginorum* a name that translates as the 'new market of the people of the Kingdom' [T. Strickland *pers. comm.* see Taylor 2005].
- 5.2.3 The basic planned grid of the *civitas*, which is still recognisable today, was laid out in AD70-85. This consisted of four main streets [North, South, East and West] which crossed to form a central area where the Roman forum was consequently constructed. Other public buildings are known in Chichester including classic temples, public bathhouses, a basilica and an amphitheatre. Whilst most public buildings are located within the *civitas* it should be noted that the amphitheatre was located outside of the *civitas* defences which suggests that significant Roman deposits may exist beyond the defined limit of the settlement.
- 5.2.4 The important Roman road of *Stane Street* commenced at the East Gate of Chichester and provided a direct route for traffic to *Londinium* [London] [Magilton 1991].
- 5.2.5 In the past it has been considered that the *civitas* was surrounded by two ditches during the 2nd century which were replaced by a stone wall in the late 3rd/early 4th century [Down & Rule 1971:2; Down & Magilton 1993]. However, more recent excavations have suggested that the two earlier ditches and the *civitas* wall were all contemporary and date to the 3rd century [Magilton 1993].
- 5.2.6 The city wall visible today dates to the medieval and post-medieval periods when it was rebuilt. Whilst the more recent rebuild is considered to largely follow the course of the original wall recent excavations to the north of the study site showed the original

foundations of the wall to be 2m further to the east than the current city wall [Taylor 2005].

- 5.2.7 Excavations to the east of the city walls in the 1950's found evidence to suggest a third wider ditch was constructed in the medieval period [Magilton 1991]. However, recent reappraisal of the data suggests that the ditch dates to the 4th century and was installed as a consequence of the construction of bastions on the outer face of the *civitas* wall [Magilton 2003].
- 5.2.8 In 1972 a 4th-century bastion was excavated either on or in the vicinity of the site and it is not implausible that a bastion may be encountered during excavations on site [Evans 2004].
- 5.2.9 Roman settlement may have existed outside of the *civitas* walls prior to the formal demarcation of the town, thus there is a possibility that occupation deposits dating to the Roman period may be encountered on site [J. Kenny *pers. comm.* 2005]. In addition excavations around the eastern gate have suggested that extra-mural settlement spilled out beyond the *civitas* walls in the 4th century most probably around Stane Street.
- 5.2.10 Roman burials have been excavated in the St Pancras area and these may have continued north westwards towards the site [Evans 2004].

5.3 MEDIEVAL

- 5.3.1 There is limited evidence for the Saxon period in Chichester and it is difficult to speculate on what happened to the residents of the town after the end of the Roman occupation in the early 5th century. However, Saxon occupation deposits are known in the north west of the town [SMR no.280/344] and it is possible that the settlement remained occupied throughout the Saxon period though in a reduced and less organised form
- 5.3.2 By the late 9th century/early 10th century Chichester once again developed as a town whereby it was fortified to fend off the Danish Invasions.
- 5.3.3 The first references to *Cisseceaster* [Chichester] appear in AD895 when it was named after Cissa, son of Aelle and in 1086 whereby Chichester is referred to as *Cicestre* in the Domesday Book [Evans 2004].
- 5.3.4 When the Normans invaded in 1066, major land divisions had been introduced within the city walls [Down & Rule 1971:4]. Land had been granted to Brithelm, Bishop of Chichester and his brethren by King Eadwig in AD956 [Sawyer 1968:616]. This bequeath of land has been interpreted by some as an indication that a pre-Norman Conquest Minister existed in Chichester although to date this theory has not been substantiated [Samuels 2002:8].
- 5.3.5 The city layout in the 10th century retained the elements of the Roman *civitas*, whereby North, South, East and West Street led from the city gates and converged to form a central area to the town [Morgan 1992:37]

5.3.6 Chichester developed as a prosperous market town throughout the medieval period as a consequence of its proximity to the ports and agricultural land located nearby. When Chichester became a borough it was permitted to hold regular markets where cattle, wool and grain were regularly traded. Merchants formed influential guilds and a Guildhall had been constructed in South Street by the 12th century [Evans 2004].

5.3.7 Chichester developed as an established and important port and by 1353 it controlled the wool trade. In the 14th and 15th Centuries pilgrimages to the shrine of St Richard de Wych, Bishop of Chichester further increased trade within the city.

5.3.8 Excavations at the East Gate bastion have indicated that by the 14th century occupation within the city wall extended up to the East Walls.

5.4 POST-MEDIEVAL

5.4.1 The commercial expansion of Chichester witnessed in the medieval period continued into the post-medieval period with the town continuing to be a major port and leading manufacturer of woollen cloth. Notably, some of Chichester's major industries, clothing, malting, tanning, metalworking, blacksmithing and bell founding, were located close to the East Gate and Eastern city walls.

5.4.2 The Civil War of the 17th century inflicted substantial damage on Chichester when Parliamentary forces besieged the city and commercial expansion suffered as a consequence [Evans 2004]. However, as a result of the rebuilding projects after the Civil War the building trade within Chichester began to develop.

5.4.3 The map regression in the DBA identified a possible Civil War defensive earthwork crossing the site in William Stukely's map of 1723. The earthwork was likely to have been levelled after the Parliamentary victory and nothing can be seen above ground today [Evans 2004]. Furthermore Glot's map of 1775 shows the Roman town wall on the western boundary of the site to only exist as a banked earthwork with no masonry visible.

5.4.4 The 18th century saw a further change in the fortunes of Chichester with farming of grain, cattle and sheep bringing wealth to the city. The money brought into the town facilitated the development of Chichester as the Georgian town that stands today. The city walls were repaired, trees were planted, the city gates were removed in 1772 and 1783 and in 1794 an Act of Parliament led to the paving and lighting of Chichester's streets [Evans 2004].

5.4.5 Recent conservation work on the town wall to the north of Priory Road revealed that the Roman core and medieval repairs of the wall remained in situ behind the post-medieval rebuild [Tim Strickland *pers. comm.* 2005]. Whilst no such work has taken place on the study site it remains possible that the Roman and medieval masonry remains *in situ* behind the existing face of the wall.

5.4.6 By the 19th century the population of the city had risen dramatically and by the middle of the century the population had increased by 60%. In 1874 fresh piped water was introduced and in 1896 drainage arrived [Evans 2004].

6 METHODOLOGY

- 6.1 The archaeological evaluation was comprised of two trenches located within the footprint of the proposed development [fig. 2].
- 6.2 The evaluation trenches were excavated to the following dimensions:
- Trench 1 was orientated E/W and measured 33.00m x 4.00m x 3.80m max depth
 - Trench 2 was orientated NW/SE and measured 10.20m x 2.00m x 0.78m max. depth
- 6.3 The trenches were located and broken out by Development Archaeological Services in advance of Pre-Construct Archaeology conducting the archaeological evaluation. The positions of all services were checked before locating the trenches on the ground and trenches were CAT scanned by DAS before work commenced. Provision was made but none taken to modify the extent, axis and location of the trenches to avoid live services and physical obstructions on site.
- 6.4 The removal of ground level surfaces and subsequent mechanical excavation were undertaken utilising a c. 18 Ton 360° mechanical excavator fitted with a flat bladed ditching bucket under archaeological supervision.
- 6.5 Mechanical excavation continued through undifferentiated deposits in spits of no greater than 200mm until either significant archaeological, or natural, deposits were encountered. As a consequence of the depth of archaeological deposits in Trench 1 the area of excavation was stepped in 1.20m from the edge of the trench when depths of 1.20m were attained. The mechanical excavator operated under archaeological supervision at all times.
- 6.6 Following fill clearance, all faces of the trench that required examination were cleaned using appropriate hand tools. All investigation of archaeological deposits was by hand, with cleaning, examination and recording both in plan and section.
- 6.7 Recording on site was undertaken using the single context recording system as specified in the Museum of London Site Manual. Plans were drawn at a scale of 1:20, and full or representative sections at a scale of 1:10. Contexts were numbered sequentially and recorded on *pro-forma* context sheets.
- 6.8 The site was given the code WEWC05
- 6.9 Trenches were fenced off during the excavation to protect the archaeology and the public and were backfilled following the end of the excavation.
- 6.10 A borehole survey [wire line percussive shell and auger] at four spaces site locations was undertaken as part of the investigation to supplement results of trench survey. This

element of the site evaluation was undertaken by Development Archaeology Services and details of the investigation, methodology and results are presented at Appendix 5.

6.11 Environmental sampling was undertaken by DAS. The results of Assessment are presented at Appendix 5.

7 THE ARCHAEOLOGICAL SEQUENCE

7.1 TRENCH 1 [FIGS. 2 & 3]

7.1.1 Phase 1

7.1.1.1 The earliest deposit recorded in Trench 1 was a naturally deposited sandy gravel layer [13] seen throughout the trench and encountered at maximum height of 12.00m OD. Due to the extensive truncation that had taken place in Trench 1 levels obtained on the natural deposits cannot be considered indicative of the natural topography of the site.

7.1.1.2 The naturally deposited clay, which is known to seal the gravel horizon in the vicinity of the site [Taylor 2005], had been fully truncated by later intrusions in Trench 1 and was not encountered during the evaluation of this area of the site.

7.1.2 Phase 2

7.1.2.1 The earliest archaeological deposit encountered in Trench 1 was a heavily truncated layer [52], encountered at 13.18m OD and only seen in section. The layer was a mid brownish grey, silt which contained abundant flint nodules. No cultural material was retrieved from the deposit and its mode and precise date of deposition remain unknown.

7.1.2.2 The earliest features in Trench 1 were two N/S orientated ditches which truncated layer [52] in the western half of the trench. The most western of the two ditches [47], encountered at 13.22m OD and located c.6.00m to the east of the existing town wall, was 2.92m in width and 1.48m in depth. The ditch had suffered heavily from later truncation but its sub V-shaped profile remained apparent in section.

7.1.2.3 The ditch was filled by a mid orange brown, silty clay primary fill [46] which contained occasional fragments of pottery dating to between 50 – 70 AD and was encountered at 12.68m OD. Sealing the deposit was a cream/brown, chalky silt secondary fill [53] which contained occasional fragments of *opus signium* and was encountered at 13.22m OD.

7.1.2.4 The second of the ditches [8] was located immediately to the east of ditch [47], approximately 10.00m to the east of the existing town wall and was encountered at 13.04m OD. The ditch was 5.18m in width and 2.58m in depth. Whilst the ditch had suffered heavily from later truncation its sub V-shaped profile remained apparent in section.

7.1.2.5 The ditch contained an orange brown, sandy silty clay primary fill [7] which was similar in composition to the primary fill of ditch [47]. The deposit was encountered at 12.48m OD and contained occasional fragments of pottery and ceramic building material dating to between 50 – 80 AD. Sealing the earlier deposit was a greyish brown silty gravelly clay secondary fill [32] encountered at 13.04m OD.

7.1.2.6 Cutting through the primary fill [7] and base of ditch [8] was a large vertical posthole [10], 0.62m in width and 1.44m in depth. The posthole was encountered at 11.74m OD and

contained a dark brown, sandy silt fill [9] within which were occasional fragments of pottery dating between 50 – 80 AD. As a consequence of later truncation on site the stratigraphic relationship between the posthole and the secondary fill [32] of ditch [8] could not be established, however, it is considered that the posthole was formed by the removal of a large post and the void that remained was most probably backfilled at the same time as the ditch.

7.1.3 Phase 3a/b

7.1.3.1 Truncating the eastern edge of ditch [8] and located c.14.50m to the east of the existing town wall was a large N/S orientated ditch [12] encountered at 13.06m OD. The feature was 9.00m in width and had been excavated to a depth of 2.80m. Whilst the feature had suffered heavily from later truncation its gradually sloping outer edge and rounded base remained apparent both in plan and section.

7.1.3.2 Contained within the ditch were five separate fills [11], [48], [49], [50] and [51], all of which were a variant of a greyish brown colour and sandy silt composition that were largely impossible to distinguish between aside from in section. The pottery assemblage retrieved from context [11] contained Roman wares dating to between 70 – 300 AD and a single sherd dating to 1150 – 1300 AD. The later pottery may be intrusive to the assemblage suggesting that the ditch, and the lower fills within it, date to the Roman period, however, in turn the presence of later pot may indicate that the ditch remained open as late as the 13th century.

7.1.3.3 The size, profile and location of the feature strongly suggest that it represents the presence on site of the outer defence ditch commonly associated with the construction of bastions on the *civitas* wall. It is believed that the bastions and the associated defence ditch were constructed in the 4th century, however, the dating evidence collected on site cannot, as yet, confirm the suggested date of construction.

7.1.4 Phase 4a

7.1.4.1 Truncating the eastern edge of ditch [12] was a large, gradually sloping cut feature [42], encountered at 13.32m OD and continuing beyond a depth of 2.00m. The feature was filled by numerous clay and gravel fills, [38], [39], [40], [41], [43], [44] and [45], which contained charcoal flecking, pottery and CBM.

7.1.4.2 The pottery collected from the deposits dates to between 50 – 400 AD, however, the sherds are notably abraded suggesting them to be residual. In addition, the retrieval from a column sample of a sherd of pottery dating to between 1250 – 1350 AD suggests that the feature probably dates to the medieval period and that the residual Roman pottery is most present as a product of the truncation of earlier features on site.

7.1.5 Phase 4b

7.1.5.1 At the western end of the trench an additional N/S orientated ditch [18] was encountered. Only the eastern edge, c. 6.00m from the town wall, was present within the area of excavation and it is not known where the western edge was located or how it may have impacted on deposits associated with the original Roman wall. The ditch was encountered at 13.20m OD, had been dug to a depth of 2.19m and was filled by a number of fills [19], [54], [55] and [56] from which late medieval pottery was retrieved.

7.1.6 Phase 5

7.1.6.1 A shallow pit [37] was encountered at 13.28m OD at the eastern end of Trench 1. The pit measured 1.00m in width and contained no noticeable cultural material within its fill but clearly post-dated the latest fill of ditch [42].

7.1.6 Phase 6

7.1.6.1 Sealing the earlier deposits in Trench 1 was a wide spread garden soil [35], encountered at 13.60m OD, which contained residual Roman pottery in addition to pottery and CBM fragments dating to the late post-medieval period.

7.1.6.2 Truncating this horizon, and subsequently the underlying archaeological deposits was a N/S orientated rectangular rubbish pit [22] containing a dark grey silty sand fill [34] and three N/S orientated brick lined soak-aways [15], [24] and [33] contained within construction cuts [17], [20] and [31]. The construction cuts were significantly wider than the soak-aways that they contained and consequently impacted significantly on the underlying archaeological deposits. The construction cuts were backfilled with dark grey, silty sand deposits [14], [21] and [28] whilst the soak-aways were in-filled with poorly sorted, greyish brown, silty clay deposits [16], [25] and [27]. The soak-aways were encountered at between 12.78m OD and 12.69m OD, had been excavated to a depth of c. 1.20m and all dated to the late 19th/20th century.

7.1.6.3 The remainder of the trench was constituted by a layer of brick hardcore and a layer of concrete lain down as part of the current car park. The height of the concrete and thus the height of the current land surface was 14.10m OD.

7.2 TRENCH 2 [FIGS. 2 & 4]

7.2.1 Phase 1

7.2.1.1 The earliest deposit recorded in Trench 2 was a naturally deposited clay layer [2] encountered between 13.08m OD and 12.90m OD.

7.2.2 Phase 2

7.2.2.1 A N/S linear feature [6], 0.34m in depth and encountered at 13.28m OD was partially excavated at the eastern end of Trench 2. Contained within the feature was a mid grey brown, sandy silt fill [5] which was largely devoid of cultural material. However, a number

of fragments of pot were retrieved from environmental samples taken on site which suggest the deposits date to between 50 – 100 AD. In addition the presence of Late Bronze Age/Early Iron Age wares in the retrieved assemblage suggests that there maybe prehistoric activity on or within the vicinity of the site.

7.2.3 Phase 4b

7.2.3.1 An additional N/S orientated linear feature [4], 0.28m in depth and containing a mid grey brown, sandy silt fill [3] truncated the natural clay at a height of 13.06m OD. The feature contained medieval peg tile and pottery dating to between 1150-1500 AD suggesting that extramural activity exists in the N/E of the site in the medieval period.

7.2.4 Phase 6

7.2.4.1 Sealing the earlier deposits throughout the trench was a firm, mid greyish brown, clayey sandy silt layer [1] encountered at 13.38m OD. The layer contained pottery and CBM dating to the late post-medieval period and probably represents ploughing on site in the 19th century.

7.2.4.2 The central area of the trench was not reduced to the natural/archaeological horizon due to the presence of an electricity supply running across the trench. The remainder of Trench 2 was constituted by a layer of brick hardcore and a layer of concrete lain down as part of the current car park. The height of the concrete surface and the thus the height of the current land surface in the vicinity of Trench 2 ranged between 13.97m OD and 13.78m OD.

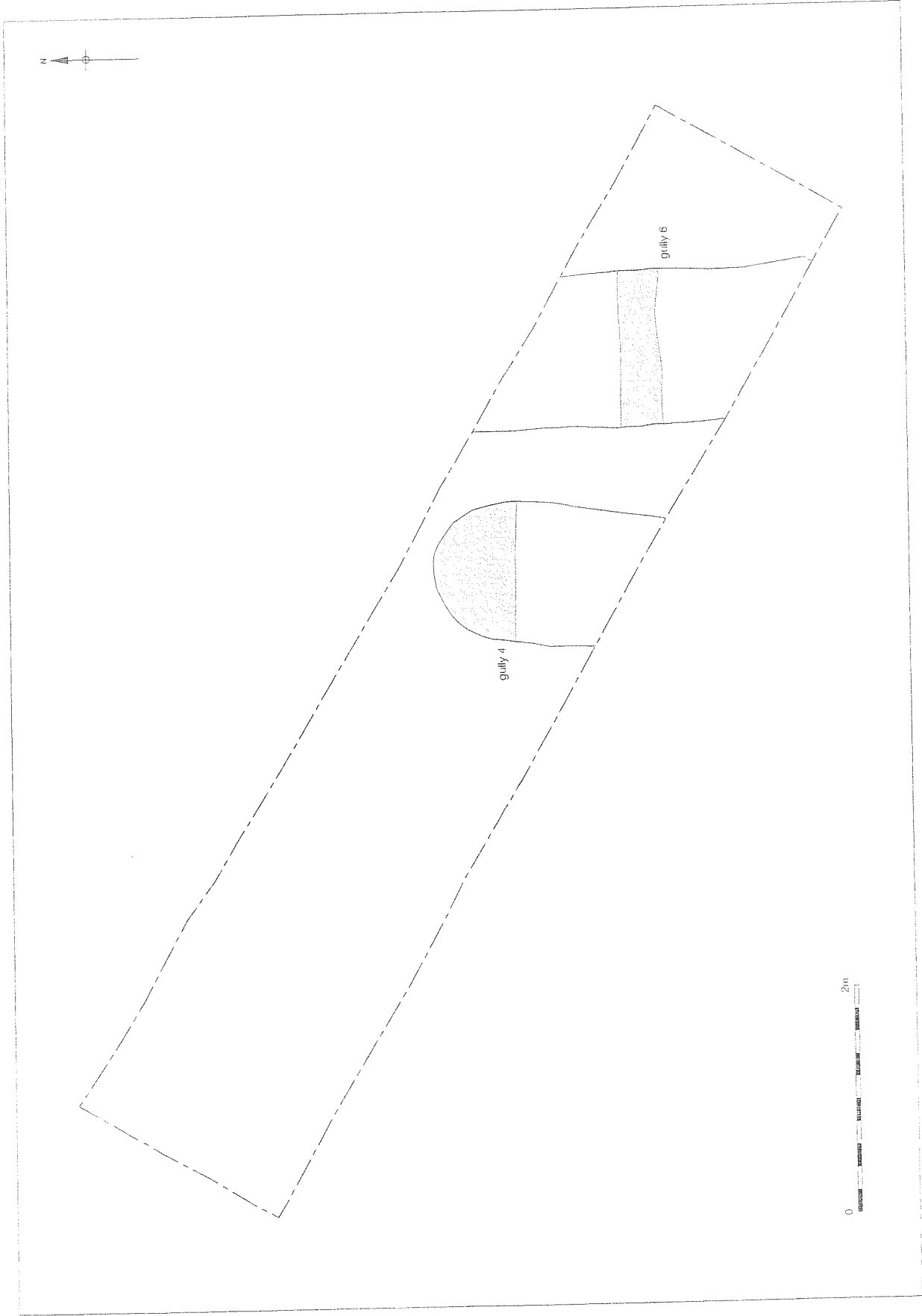


Figure 4
Trench 2
1:50

8 PHASED DISCUSSION

11.2 PHASE 1: NATURAL

11.2.1 Natural gravel was found throughout Trench 1 but on all occasions had been heavily truncated by later intrusions on site. Whilst the highest level of the natural gravel in Trench 1 was 12.00m OD the levels obtained on the natural deposits cannot be considered indicative of the natural topography of the site.

8.1.2 The naturally deposited clay, known to seal the gravel horizon, had been fully truncated by later intrusions in Trench 1 and as such was only encountered in Trench 2 at a height of 13.08m OD.

8.2 PHASE 2: EARLY ROMAN [1st CENTURY]

8.2.1 The presence of at least one feature potentially dating to the 1st century in Trench 2 suggests that extramural activity is present in the N/E of the site.

8.2.2 An earlier, apparently archaeological, horizon predated the earliest cut features in Trench 1, however, so little remained of the deposit that it was impossible to determine the nature and date of its deposition.

8.2.3 Whilst the two N/S orientated cut features, [8] and [47], encountered to the west of Trench 1 had suffered heavily from later truncation the sub V-shaped profiles of the features remained evident in section. Despite their location being somewhat further from the existing wall than initially expected it is probable that these features represent the two V-shaped ditches associated with the earlier defences of the Roman settlement. Additionally it is important to note that the pottery retrieved from the fills of these features dates exclusively to the 1st century. When considered in addition to the dearth of 3rd century wares retrieved on site the evidence strongly suggests that the ditches were established significantly earlier than is considered at present.

8.2.4 The large vertical posthole that truncated the primary fill and base of the outer ditch appeared to have been formed by the deliberate removal of a large post. As a consequence of later truncation on site the relationship between the posthole and the secondary backfill of the ditch could not be established, however, it is considered that the posthole was probably created and backfilled at the same time as the outer defence ditch was backfilled. At present it is not known what role the post may have served within the outer defence ditch and further research is needed to establish the presence or absence of parallels in other settlement defences.

8.3 PHASE 3a: LATER ROMAN [4th CENTURY]

8.3.1 Whilst the large N/S orientated ditch, truncating the earlier outer defence ditch, had suffered from later truncation, the profile of the features sloping edges and rounded base remained apparent both in plan and section and it is probable that the feature represents

an outer ditch commonly associated with the construction of bastions to the *civitas* walls in the 4th century.

8.4 PHASE 3b: POST ROMAN-13th CENTURY

8.4.1 Initial analysis of pottery from the outermost defence ditch suggests that two phases of deposition exist within it. Whilst the later pottery may be intrusive to the assemblage suggesting that the ditch, and the lower fills within it, date to the Roman period the presence of pottery of a later date may indicate that the ditch remained open as late as the 13th century.

8.5 PHASE 4a: 13th CENTURY

8.5.1 The exact nature and purpose of the large, gradually sloping ditch at the eastern end of Trench 1 is not immediately clear. However, the orientation of the feature is such that should it continue on the same path to the north of the site it would inevitably converge with the "bastion ditch". Pottery retrieved from the feature is dated to the 13th/14th century, evidence that may go some way towards explaining the previous discrepancies in the dating of the "bastion ditch" of Chichester.

8.6 PHASE 4b: LATE MEDIEVAL

8.6.1 The ditch located at the western end of Trench 1 was possibly encountered in recent excavations to the north of the site [Taylor, 2005]. At present the purpose of the feature, and how it may have impacted on deposits associated with the original Roman wall is not known.

8.6.2 A linear feature dating to the later medieval period was present in Trench 2 suggesting that extramural activity of this date exists in the N/E of the site.

8.6 PHASE 5: POST-MEDIEVAL

8.6.1 With the exception of a small pit at the western end of Trench 1 there are no other features on site dating to this period supporting the cartographic evidence which suggests the site was undeveloped throughout the post-medieval periods.

8.7 PHASE 6: LATE POST-MEDIEVAL/MODERN

8.7.1 In both trenches the earlier deposits were sealed by a widespread layer dating to the late post-medieval period. The layer represents the disturbance of accumulated soils from the medieval and post-medieval periods through ploughing in the 19th century.

8.7.2 The three N/S orientated brick lined soak-aways and N/S rectangular rubbish pit encountered in Trench 1 all truncated the 19th century ploughsoil. None of the features are shown on the maps of this date and it is possible that they were not in use for an extended period of time before being sealed by the concrete slab that forms the current car park surface.

9 CONCLUSIONS

- 9.1 The evaluation encountered natural deposits on site in the form of natural clay [brick earth silt] in Trench 2 and natural gravel in Trench 1. Whilst the natural horizon was relatively undisturbed in Trench 2 the spot heights on the natural gravel in Trench 1 cannot be considered indicative of the natural topography on site for the natural deposits had been severely truncated by later intrusions.
- 9.2 A N/S orientated linear feature dating to no earlier than the 1st century was encountered in Trench 2 suggesting that extramural activity is present in the N/E of the site.
- 9.3 Excavation of Trench 1 revealed evidence for two V-shaped ditches commonly associated with an earlier phase of defensive earthworks surrounding the Roman settlement at Chichester. Pottery retrieved from the features strongly suggests the fills to have been deposited during the 1st or 2nd century.
- 9.4 A third ditch containing Roman and 13th century pottery within its fills is considered to be the ditch associated with the construction of bastions on the *civitas* wall. The later pottery may be intrusive to the assemblage suggesting that the ditch, and the lower fills within it, date to the Roman period, however, in turn the presence of later pot may indicate that the ditch remained open as late as the 13th century.
- 9.5 The presence of two large ditches, dating to the medieval period and in close proximity to the town walls, may be evidence of later defensive earthworks constructed around the settlement.
- 9.6 The remainder of the deposits on site consisted of a post-medieval pit, 19th century dump layers, pits and soak-aways. These were sealed by a layer of 20th century hardcore and the associated concrete slab that forms the car park surface presently occupying the site.

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11 ACKNOWLEDGEMENTS

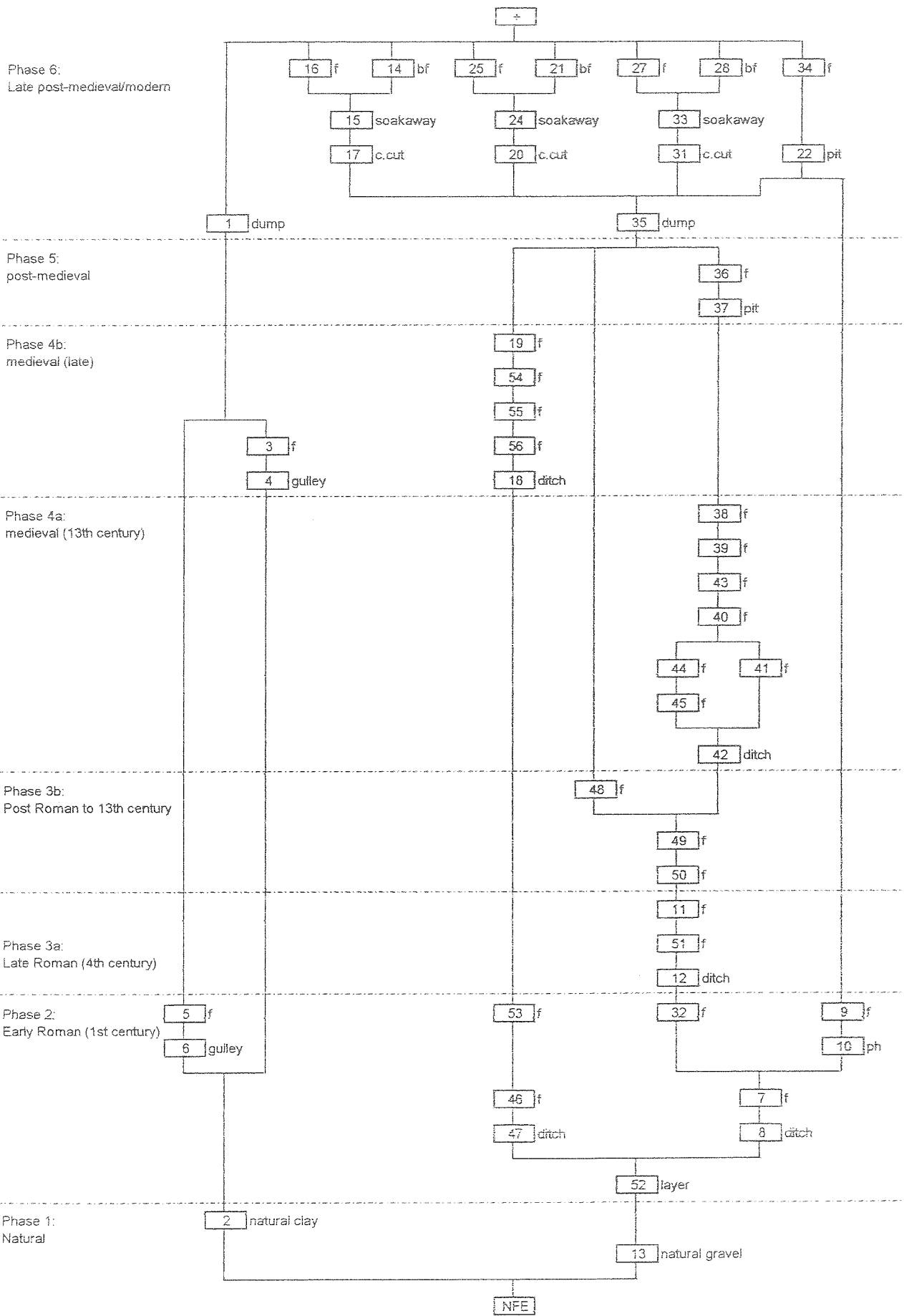
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APPENDIX 1: CONTEXT Index

CONTEXT INDEX PAGE 2

Context Number	Trench	Plan Number	Section Number	Phase	Type	Description	N/S	E/W	Depth	High	Low
1	Tr 2	Tr 2	S 2	6	Layer	Post-med dump/ploughsoil, firm, mid grey brown, clay sandy silt	2	10	0.5	13.38	*
2	Tr 2	Tr 2	S 2	1	Layer	Natural clay	2	10	*	13.08	12.9
3	Tr 2	Tr 2	*	4b	Fill	Fill of [4], friable, mid grey brown, sandy silt	2.1	1.22	0.28	13.06	*
4	Tr 2	Tr 2	*	4b	Cut	Gully/ditch	2.1	1.22	0.28	13.06	12.78
5	Tr 2	Tr 2	*	2	Fill	Fill of [5], firm/friable, mid grey brown, sandy silt	2.28	1.4	0.34	13.28	*
6	Tr 2	Tr 2	*	2	Cut	Gully/ditch	2.28	1.4	0.34	13.28	12.94
7	Tr 1	Tr 1	S 1	2	Fill	Fill of [8], firm, mid orange brown, sandy silty clay	4	3.68	2.08	12.48	12.22
8	Tr 1	Tr 1	S 1	2	Cut	Defence ditch	4	5.18	2.58	13.04	10.46
9	Tr 1	*	S 1	2	Fill	Fill of [10], firm, mid dark brown, clayey sand	0.3	0.62	1.44	11.74	*
10	Tr 1	Tr 1	S 1	2	Cut	Poathole	0.3	0.62	1.44	11.74	10.3
11	Tr 1	Tr 1	S 1	3a	Fill	Fill of [12], loose, dark grey brown, sandy silt	4	6.52	1.06	12.38	11.72
12	Tr 1	Tr 1	S 1	3a	Cut	Bastion ditch	4	9.02	2.82	13.06	10.24
13	Tr 1	Tr 1	S 1	1	Layer	Natural gravel, mid white brown, sandy gravel (20/80)	2	33	*	12	*
14	Tr 1	Tr 1	S 1	6	Fill	Backfill of [17], firm, mid-dark grey brown, silty sand	4	4.2	1.32	13.54	*
15	Tr 1	Tr 1	*	6	Masonry	Soakaway within [17], unfrogged red brick and mortar	2.88	0.68	*	12.78	*
16	Tr 1	Tr 1	*	6	Fill	Infill of [15], loose, dark grey brown, silty clay sand	2.78	0.52	*	12.78	*
17	Tr 1	Tr 1	S 1	6	Cut	Construction cut for [15]	4	4.2	1.32	13.54	12.22
18	Tr 1	Tr 1	S 1	4b	Cut	Ditch	4	3.32	2.19	13.2	11.01
19	Tr 1	Tr 1	S 1	4b	Fill	Fill of [18], friable, light white brown, sandy silt	4	3.32	0.74	13.2	12.1
20	Tr 1	Tr 1	S 1	6	Cut	Construction cut for [24]	3.7	4.06	0.84	12.69	11.85
21	Tr 1	Tr 1	S 1	6	Fill	Backfill of [20], loose, mid brown, mixed silty clay gravel	3.7	4.06	0.84	12.69	*
22	Tr 1	Tr 1	S 1	6	Cut	Pit	4	1.46	1.06	12.72	11.66
23	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
24	Tr 1	Tr 1	S 1	6	Masonry	Soakaway within [20], unfrogged red brick and mortar	3.32	1.48	0.84	12.69	*
25	Tr 1	*	S 1	6	Fill	Infill of [24], loose, dark grey brown, silty clay sand	3.12	0.98	*	12.69	*
26	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
27	Tr 1	Tr 1	*	6	Fill	Infill of [33], loose, dark grey brown, silty clay sand	2.9	1.28	*	12.69	*
28	Tr 1	Tr 1	S 1	6	Fill	Backfill of [31], friable, mid-dark brown, silty sand	4	4.78	1.22	12.72	*
29	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
30	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID	VOID
31	Tr 1	Tr 1	S 1	6	Cut	Construction cut for [33]	4	4.78	1.22	12.72	11.5
32	Tr 1	Tr 1	S 1	2	Fill	Fill of [8], firm, mid grey, yellow brown, silty gravelly clay	4	5.18	0.98	13.04	*
33	Tr 1	Tr 1	S 1	6	Masonry	Soakaway within [31], unfrogged red brick and mortar	3.2	1.68	1.22	12.72	*
34	Tr 1	Tr 1	S 1	6	Fill	Fill of [22], friable, dark grey brown, silty sand	4	1.46	1.06	12.72	*
35	Tr 1	*	S 1	6	Layer	Post-Med dump layer, firm, mid grey brown, clay sandy silt	4	33	0.4	13.6	13.52
36	Tr 1	*	S 1	5	Fill	Fill of [37], loose, mid grey brown, sandy silt gravel	*	1.08	0.28	13.28	*
37	Tr 1	*	S 1	5	Cut	Pit	*	1.08	0.28	13.28	13
38	Tr 1	Tr 1	S 1	4a	Fill	Fill of [42], loose, sandy silt	4	11.1	0.46	13.32	*

APPENDIX 2: SITE MATRIX



APPENDIX 3: POTTERY ASSESSMENT [MALCOLM LYNE]

1 Introduction

- 1.1 The two trenches yielded 74 sherds [1114 gm] of Roman and 12 sherds [302gm] of Medieval/Post-Medieval pottery between them: fifteen of the Roman sherds were either unstratified or from later features. A further 13 Roman sherds [84 gm] were recovered from the sieving of environmental samples: these latter also yielded four fragments of residual ? Late Bronze Age to Early Iron Age calcined-flint tempered ware.
- 1.2 The bulk of the Roman sherds are of mid-to-late first century date and include nothing which need be later than c.AD.300.

2 Methodology

- 2.1 All of the assemblages were quantified by numbers of sherds and their weights per fabric. Fabrics were identified using a x8 magnification lens with inbuilt metric graticule for determining the natures, forms, sizes and frequencies of added inclusions. Five numbered fabric series were then created with the prefixes C, F, A, M and PM for coarse Roman, fine Roman, Amphorae, Medieval and post-Medieval wares respectively: the first three fabric series are those created for the Shippam's Social Club site [Lyne 2005A] with additions.

3 The Assemblages

3.1 Phase 2. Early Roman

3.1.1 *Assemblage 1.* From the fill of Ditch 8 [Context 7].

The earliest pottery assemblages from the site are those from outer defensive Ditch 8 in Trench 1. The six sherds from this feature include three from a tournette-finished jar in the distinctive grey fabric C3 with large, angular, black fragments of iron ore; also known from Fishbourne Roman Palace in contexts dated c.AD.50-80 [Lyne 2005B]. The other sherds comprise a fresh handmade lid boss in patchy-fired Atrebatic 'Overlap' fabric C8 of pre AD.60 date and two beaker fragments in fine mica-dusted greyware fabric F4 [c.AD.50-120]. These sherds together suggest a c.AD.50-80 date for the ditch.

3.1.2 *Assemblage 2.* From the fill of Posthole 10 cut into the fill of Ditch 8 [Context 9].

The 17 sherds from this feature comprise seven in fabric 3 [c.AD.50-80], three from a closed form in cream Wiggonholt fabric C6B, one from a bowl in the coarser C6C version, two fresh joining fragments from a pre-Flavian South Gaulish Samian Dr 27

cup [c.AD.50-70], one bowl sherd in micaceous Hardham 'London' ware [c.AD.50-120] and an indeterminate oxidised fragment. These sherds may be derived from the fill of Ditch 8 and further reinforce its early date.

3.1.3 *Assemblage 3.* From the fill of inner Ditch 47 [Context 46].

This ditch yielded just one fresh sherd from a large necked-jar in Rowlands Castle grey ware. The form is fairly basic but paralleled at the Chapel Street excavations in a c.AD.43-70 dated context [Down 1978, Fig.10.8-30]. This suggests that Ditch 47 is similar in date to Ditch 8.

3.2 Phase 3. Late Roman

3.2.1 *Assemblage 4.* From the fills of Bastion Ditch 12 [Contexts 51, 11, 50 and 49].

The four sherds from this ditch all come from lower fill 11 and include a fresh sherd from a large jar in Rowlands Castle greyware [c.AD.50-300+], an abraded everted jar rim in indeterminate greyware [c.AD.120-300] and an abraded lid fragment in Alice Holt/Surrey greyware [c.AD.100-200]. The fourth, fresh, fragment is from a Medieval cooking-pot in Orchard Street type fabric [Barton 1971] with crushed flint and quartz sand filler [c.AD.1150-1300]: a fragment of flint tempered medieval peg-tile is also present. It seems likely that this was the Late Roman town ditch and remained sufficiently well defined to receive a little rubbish as late as the 13th century.

3.3 Phase 4. Medieval

3.3.1 *Assemblage 5.* From the fills of flat-bottomed Ditch 42 [Contexts 41, 44, 45, 40, 43, 39 and 38]

The 23 sherds from this ditch are very largely residual Roman in date and tend to be abraded. They include one much battered fragment each from a beaker in New Forest Colour-coat fabric F5 and a cooking-pot in BB1 fabric. The presence of an abraded jug sherd in fabric M2 with splashed green-glaze indicates that the ditch is later than AD.1250 and probably later than 1350.

3.4 Phase 5. Late Medieval

3.4.1 *Assemblage 6.* From the fills of Ditch 18 [Contexts 56, 55, 54 and 19]

The only pottery from this feature came from the uppermost fill [Context 19] and comprises a tiny residual chip of South Gaulish Samian, the base from a small jug or tankard in polished cream-yellow Late Medieval or early post-Medieval fabric M3: a fragment of 16th to 17th century peg-tile is also present.

3.5 Miscellaneous

3.5.1 The two gullies in Trench 2 present us with something of a problem. Gully 4 produced 20 sherds of pottery, including three joining sherds from an everted-rim jar in Rowlands Castle ware [c.AD.180-300], a rim sherd from a flanged bowl in fabric C5 [c.AD.120-250] and rim sherds from two dishes of Fishbourne type 203 [Cunliffe 1971, c.AD.70-300] and a bowl of type 81 [c.AD.50-120] in indeterminate greyware. The assemblage, however, also includes a rim sherd from a cooking-pot in crushed-flint and sand tempered Orchard Street fabric M1 [c.AD.1150-1300] and two jug sherds in fine-sanded cream fabric M2 fired brown with splashed green glaze. These sherds suggest that the feature is either late-second to early-third century in date with intrusive medieval material or of 13th-14th c date with residual Roman sherds.

3.5.2 The 14 sherds from Gully 6 were all retrieved through sieving and are very small and abraded. There are 10 non-descript Early Roman fragments and four abraded flint tempered sherds of Late Bronze Age to Early Iron Age date. The state of the Roman sherds suggests that they may have very well been residual in a later feature.

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5 Fabrics

5.1 The codings used here are those created for the Shippam Social Club pottery assessment with additions

5.2 Coarse Roman

C.1. 'Belgic' grog-tempered ware

C.2. Rowlands Castle ware

C.3.Tournetted very fine sanded greyware with poorly-sorted up to 5.00 mm angular, soft, black ferrous inclusions

- C.5. Very-fine-sanded grey Hardham 'London ware' fabric fired black externally with pink margins.
 - C.6A. Wiggonholt cream fabric with up-to 0.20mm multi-coloured quartz filler
 - C.6B. Wiggonholt cream fabric with sparse ill-sorted up-to 1.00mm multi-coloured quartz filler
 - C.6C. Similar fabric but with profuse filler and external blackened patches
 - C.7. Miscellaneous greywares
 - C.8. Handmade, patchy-fired Atrebatian 'Overlap' fabric with very-fine quartz sand filler
 - C.9A. Alice Holt/Surrey greyware
 - C.9B. Alice Holt/Farnham greyware
 - C.10. BB1
 - C.11. Miscellaneous very-fine-sanded oxidised fabric with profuse up-to 0.20mm multi-coloured quartz filler
- 5.3 Fine Roman
- F.1A. South Gaulish Samian
 - F.1B. Central Gaulish Samian
 - F.2. Micaceous Hardham 'London ware'.
 - F.3. Terra Nigra
 - F.4. Mica-dusted sandfree greyware with minute black ferrous inclusions
 - F.5. New Forest cream fabric with light-brown colour-coat
 - F.6. Pink fabric with silt sized quartz filler and smooth yellow-buff exterior
- 5.4 Amphorae
- A.2. Miscellaneous amphora fabrics
 - A.4. Cream Gauloise 4 fabric
- Medieval
- M.1. Flint and sand tempered Orchard Street fabric
 - M.2. Very-fine-sanded cream fabric fired brown with splashed green glaze
 - M.3. Silt-tempered polished cream-yellow fabric
- 5.5 Post-Medieval
- PM.1. Oxidised earthenware
 - PM.2. Silt-tempered orange fabric fired polished brown-black

6 Catalogue

6.1 Excavated Pottery

Context	Fabric	Form	Date-range	No. of sherds	Wt. in gm	Comments	
+	C7	Beaded+fl bowl	240-400	1	13	Abraded	
		Store-jar	50-200	1	40		
		Reeded rim bowl	70-200	1	84	Fresh	
	C11 F1A F1B A4 M1 PM1		Dr 18	43-90	5	42	
			Dr 18/31	120-150	1	4	Abraded
			Gauloise 4		1	2	
			Cooking-pot	1150-1300	1	55	Abraded
			Closed forms	1500-1900	2	80	Fresh
			4	176	Fresh		
				17	496gm		
3	C2	Ev rim jar	180-300	3	68	Fresh, joining	
	C5	F'bourne 216	70-150	1	2		
	C7	bowl	70-300	2	26		
	C8	F'bourne 203	30-60	2	18		
	F1B	dishx2	120-200	1	3		
	F3		43-70	1	6		
	M2	Dr 33 Platter base Jug	1250-1350	1	6	Abraded	
			70-300 ?Medieval sherd intrusive from ploughsoil above. Only abraded piece	11	149gm		
7	C3	Jar	50-80	2	48	Abraded but soft	
	F4	Beakers	50-120	2	14		
			50-80	4	62gm		
8 0.02- 0.06	C8	Lid	30-60	1	62gm	Fresh	
8 0.36- 0.40	C3	Jar	50-80	1	44gm		
9	C3	Jar	50-80	7	63	Fresh	
	C6B	Closed	50-120	3	38	Abraded	
	C6C	Bowl	50-120	1	58	Abraded	
	C11	Closed		1	4	Abraded	
	F1A	Dr 27	50-70	4	48	Fresh joining	
	F2	Bowl	50-120	1	7	Abraded	
			50-80	17	213gm		
11	C2	Large jar	70-300	1	50	Fresh	
	C7	Ev. rim jar	120-200	1	10	Abraded	
	C9A	Lid	100-200	1	21	Abraded	
	M1	Cooking-pot	1150-1300	1	10	Fresh	
				1150-1300	1	32	
				5	123gm		
19	F1A		43-110	1	1		
	M3		late Medieval	1	21		
	Tile		late medieval	1	30		
			Late Medieval	3	52gm		
34	A4		43-250	1	41gm	Abraded	
35	F1A	Closed	70-150	1	1		
	F6	Dr 27	43-110	1	2	Fresh	
			43-110	2	3gm		
40	C2	Ev. rim jar	70-300	1	16	Fresh	
	C5	Acute-latticed c'pot	110-150	1	7	Fresh	
				2	23gm		
42 10-20	C1		L.I.A.-50	1	8		
	C7		50-150	4	5	Abraded	

	M2	Jug	1250-1350	1	1	Abraded
			1250-1350	6	14gm	
42 20-30	C2 C7		70-300	1 2 3	2 4	Abraded
					6gm	
42 30-40	C2	F'bourne 203.2 dish	70-300	2	6gm	Fresh
42 50-60	C10 F5	Closed Closed	110-300/400 260-400	1 1	2 1	Abraded Abraded
			260-400 or later	2	3gm	
42 60-70	C2 C5 C11	Lid Jar	70-200 50-200	1 1 2	13 6 7	Abraded
			50-200	4	26gm	
42 90-100	C7	Closed		2	2gm	
42 100- 110	C2	Store-jar	70-300	1	26gm	
45	A2			1	50gm	
46	C2	Necked jar	50-70	1	66gm	Fresh

6.2 Sieved pottery

Context	Fabric	Form	Date-range	No of sherds	Weight in gm	Comments
3	C7	F'bourne 81 bowl	50-120	3	31	Abraded
	C9B	Beehive	200-400	1	28	
	F2		50-150	1	1	
	M1	Cooking-pot	1150-1300	1	5	
	M2		1200-1500	1	3	
	MISC			2	3	
			1150-1500	9	71gm	
5	Prehis t		L.B.A.-E.I.A	4	26	Abraded
	C2		50-300	3	10	Abraded
	C7		30-60	2	3	
	C8			1	5	Abraded
	C11			2	2	Abraded
	F2		50-150	2	4	Abraded
	Fired clay Slag			1 1	2 1	
			50-100	16	53gm	

APPENDIX 4: BUILDING MATERIALS ASSESSMENT [JOHN BROWN]

1 Quantity and Condition

1.1 Total No. Assessed boxes: 1

Total No. Assessed contexts producing Building material: 7

Total Count: 17

Total Weight kg: 3.541

Total No. Complete pieces: 0

Total No. Masonry Samples: 0

2 Introduction

2.1 The building material assessed consisted of fairly small amounts of material, almost all from the Roman period. Some small fragments of tile from context [3] may represent medieval fabrics. The Roman assemblage reflects a fairly typical array of forms used during this period, and was recovered from a site in close proximity to the Roman city wall that represents a large-scale public building programme of great significance. The material can be compared to the Roman CBM assemblage recovered from previous excavations in the vicinity undertaken by Pre-Construct Archaeology Ltd. [Brown 2005].

3 Methodology

3.1 The building materials were examined using the London system of fabric classification. Examples of the fabrics can be found in the archives of PCA and/or the Museum of London.

3.2 Quantification of items was undertaken and the data recorded and entered onto a computer database [Microsoft Access 2000]. After analysis common fabric types were discarded, with a type sample kept for archive. Unusual pieces or uncommon fabrics were also kept for archive.

4 Building Material Types

4.1 Fabrics and forms are shown in order of period and occurrence. Forms for Roman CBM follow Brodribb [1987]. Medieval forms follow the descriptions in the Museum of London Department of Urban Archaeology's guide to the identification of building materials.

Period	Source	Fabric	Form	Description	Fig
OTHER	Local clay sources	3102	DA	Daub	
ROMAN	Northwest Kent/Weald	3028	TEG	Tegula	
			R	Roman tile/brick	
			IM	Imbrex	
	Sussex? [local?]	3054nr3004	TEG	Tegula	
			IM	imbrex	
			RB	Roman brick	
	Sussex? [local?]	3054nr3006	TEG	Tegula	
			RB	Roman brick	
	Sussex?	3054	RB	Roman brick	
	Sussex? [local?]	WEWC05/2	R	Roman tile/brick	
MED	Local clay sources	2273 variant	T	Roof tile [uncertain form]	
	Local clay sources	WEWC05/1	TP	Peg tile, roof	

- 4.2 Some brick and tile fabrics were not considered close matches to fabrics recorded in the London Fabric Reference Collection and were given temporary fabric descriptions. Examples of these fabrics have been retained for the reference collection.

FABRIC	PERIOD	TYPE	COMMENT
WEWC05/1	MED	Tile	Light orange/brown medium sandy fabric with abundant sub-angular to rounded quartz <0.5mm, fairly sorted. Sparse yellow-white silt lenses <6mm and angular dark red ?grog inclusions <2mm. fine moulding sand.
WEWC05/2	ROMAN	Brick/Tile	Brown sandy fabric with frequent coarse sub-angular quartz, frequent poorly sorted red clay/iron oxide rounded inclusions <4mm. occasional rounded silt inclusions <4mm. Flinty moulding sand.

- 4.3 No unusual forms were observed during assessment.

5 Distribution

5.1 Phase 2: Early Roman [1st to 2nd centuries]

- 5.1.1 The assemblage for early material came from two contexts, fills [3] and [5] of two gullies/ditches [4] and [6] respectively. Nearly all of the Roman material was thought to belong to fabric type 3028, which is dated between the second half of the 1st century AD and the 1st quarter of the 2nd century AD in London contexts. One example of a fabric 3054 near 3004 may possibly be a fragment of medieval hip tile in local clay. All of the material from gully/ditch fill [3] was abraded indicating material was redeposited or was open to elements for some time. The early fabric 3028 reflects the early date of occupation for Chichester.

5.2 *Phase 3: Late Roman [3rd to 4th centuries?]*

5.2.1 The fill [11] of the bastion ditch contained several brick fragments of fabric 3054 and 3054 near 3004. Mortar on the broken edges of two brick fragments indicated they were reused, possibly in the construction of the city wall.

5.3 *Phase 4-5: Post-Roman*

5.3.1 The gully fill [3] contained one fragment of residual Roman material, and three fragments probably from medieval roof tile. This context has been interpreted as the fill of a Roman period ditch, and it is possible that the medieval material could represent contamination by root action etc.

6 Significance and Potential

6.1 Roman CBM fragments recovered from the site were generally abraded and residual, mostly identifiable as fabric types/forms found in London and not significant in itself. The temporary fabric WEWC04/2 may represent a locally produced tile, and could be compared with a local fabric reference collection if one such exists. The fabric types and forms are similar to those observed in other site assemblages for the locality [Brown 2004, 2005].

6.2 Much of the medieval material is similar to early roofing fabrics found in London, and the surface geology of Chichester reflects that along the south of Greater London around Croydon [Woolwich beds]. However the local fabrics do show similarities with earlier Roman fabrics 3028, 3238, and could indicate local manufacture for these Roman fabrics with the same clay sources being used in the medieval period.

7 Recommendations for Further Work

7.1 Fabrics identified as Roman fabrics 3028 and 3054 could be compared with examples from the reference collection. What is interesting is the similarity between some of the silty Roman fabrics and the later local medieval and post-medieval roof tile fabrics. Sources for these Roman fabrics are currently unknown, and similarity between fabrics of different periods suggests a local source of manufacture.

7.2 The temporary fabrics should be collated with those from other sites investigated in Chichester and compared to any local fabric reference collection. If one such does not

exist, they should be used to form the basis of such a collection and descriptions should be published.

- 7.3 No further work is recommended on the remainder of the material, other than to prepare the material not discarded during assessment, for archive.

8 Date Ranges

- 8.1 The **Date range** is the earliest date for the earliest CBM within the context and the latest date of the latest CBM in the context. The **Latest Date** represents the range for the latest dated CBM fabric. The **Best-fit date** compares the latest date for the earliest CBM and the earliest date for the latest CBM [note that if residual material appears in a context contradictions will be apparent in the later date of this field]. The **Deposition Date** is the suggested date of deposition for the materials in the context. Also noted is the **Size** [number of sherds] and **Weight** [grams] of each context. Groups are determined as small [1-30 sherds], medium [31-100 sherds], large [over 100 sherds], very large [over 10 boxes].

8.2 *CBM by context with size/weight and date ranges*

Phase	Context	Size	Weight	Date Range	Latest Date	Best Fit Date	Deposition Date
0	0	4	738	50 1220	1135 1220	1135 120	1135 to 1200 [post-medieval] [R]
2	3	4	78	60 1550	1200 1550	1200 120	1200 to 1550 [R]
2	5	2	5	-1500 1666	60 1666	60 120	60 to 120
3	11	3	1940	70 140	70 140	70 140	70 to 140
4	42	1	30	60 120	60 120	60 120	60 to 120
4	45	2	646	70 140	70 140	70 140	70 to 140
2	46	1	68	70 140	70 140	70 140	70 to 140

Contexts in italic are samples from masonry contexts.

[!] Possibly inclusive material

[r] Residual material

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APPENDIX 5.

SUMMARY REPORT ON RESULTS OF:

- ENVIRONMENTAL ASSESMENT: ON SELECTED SAMPLES FROM THE EVALUATION.
- SELECTED MONOLITH / SEDIMENTOLOGICAL DESCRIPTIONS
- BOREHOLE SURVEY RESULTS

P. HUNTER & C. A. PINE

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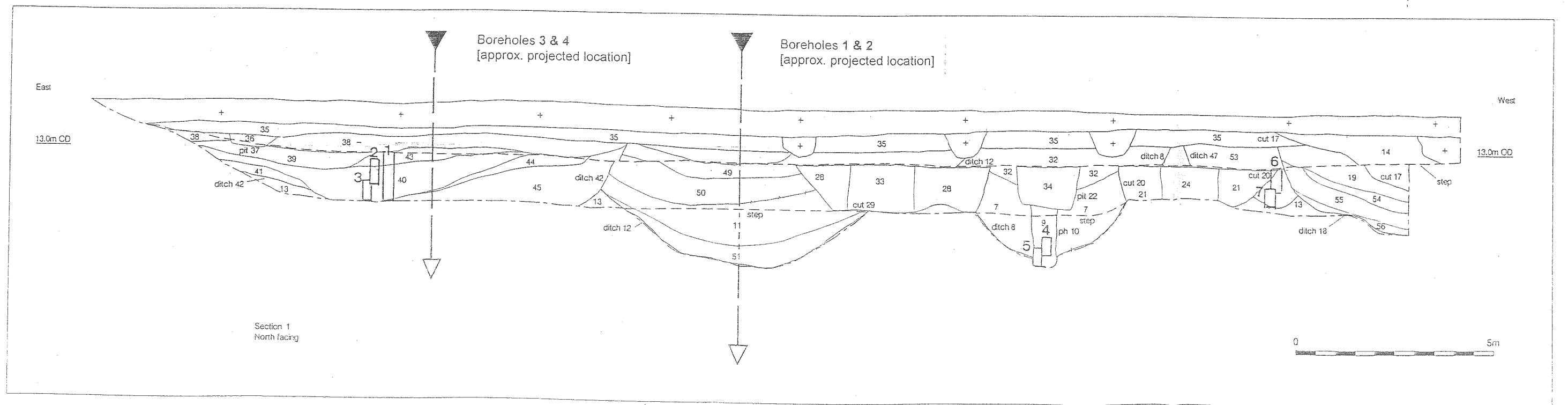
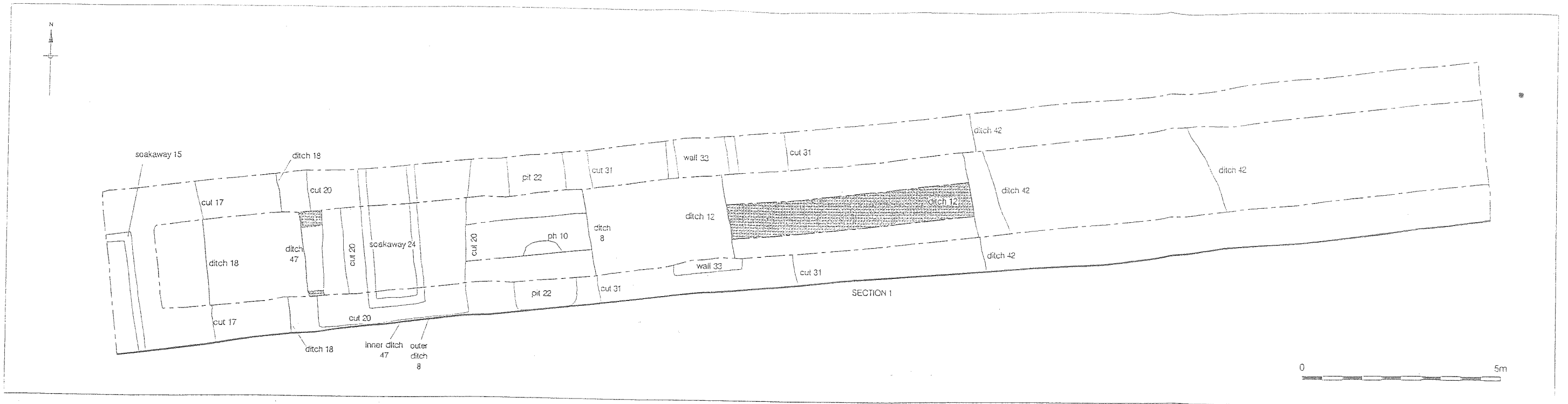
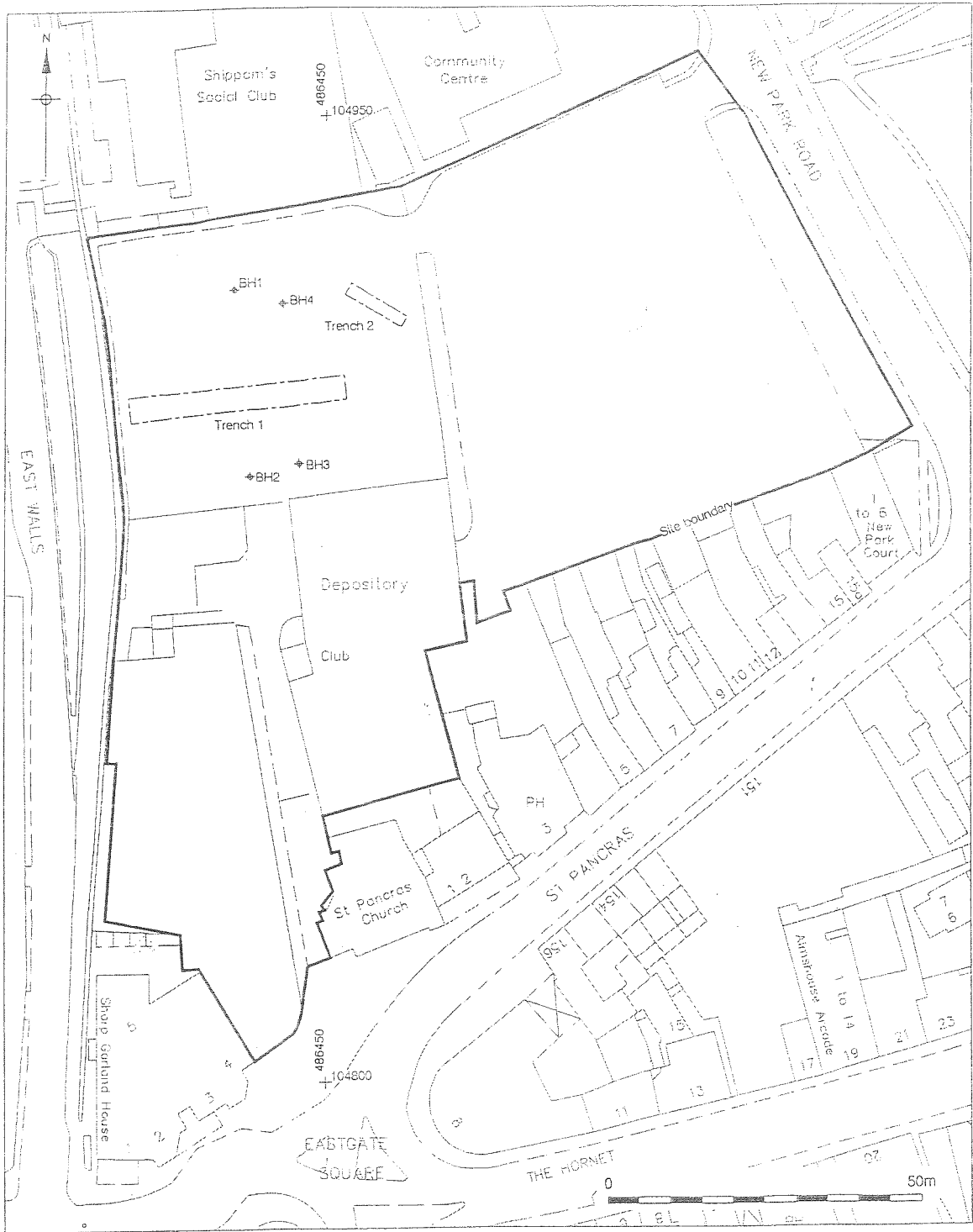


Figure 1:	Section 1 [north facing main evaluation trench, Trench 1] showing locations of Monoliths 1-7 and 'projected' locations of Boreholes 1-2 and 3-4 relative to contexts recorded within the trench.
Scale 1:100 at A3	



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<p>Figure 2:</p>	<p>Site plan showing locations Boreholes 1-4 relative to Archaeological evaluation Trenches 1 and 2.</p>
<p>Scale 1:1000 at A4</p>	

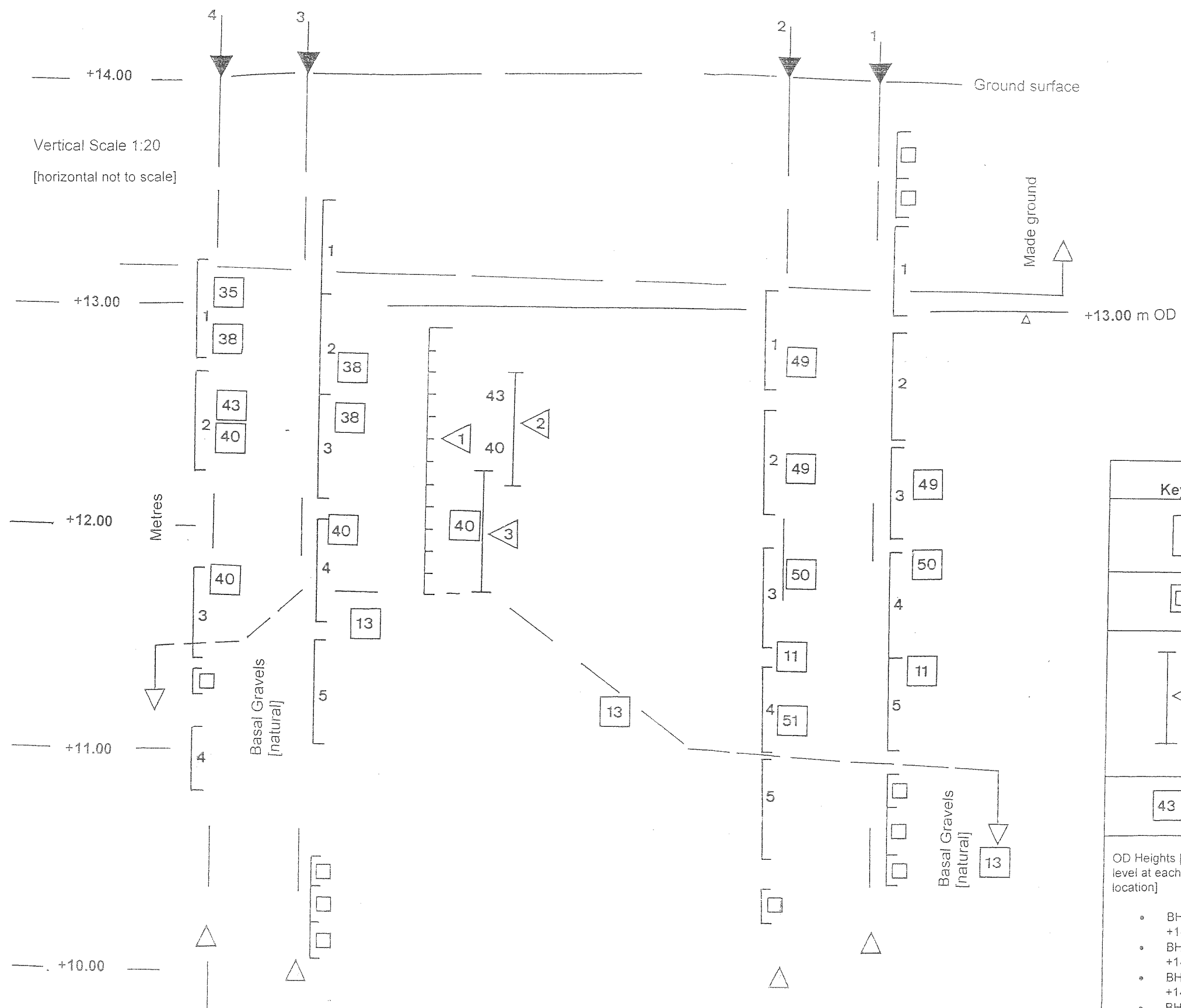


Figure 3:

Locations samples [U4/U100 core samples and associated bulk samples] recovered from Boreholes 1-4. Also shown are locations of Monoliths 1-3 with summary of main stratigraphic units and contexts recorded within Trench 1.

Key:	Description	Notes
[]	Location of U4 / U100 samples at each borehole location	U4 samples retained. Refer to Tables 11-14 for sedimentological description.
[]	Bulk sample location	Bulk samples [c. 5 Litres]
[]	Location of Monoliths 1-3	Monolith 1 recovered as 10cm deep spits [approx. 5 Litres volume] Refer to Section 1 Tables 1 - 4 for analysis. Monoliths 2 and 3 recovered in PVC channel. [Refer to Tables 5 - 6 for sedimentological description.]
[43]	Context	Refer to text and Appendix 1 [Context index to main report]
OD Heights [Ground level at each BH location] <ul style="list-style-type: none"> • BH 1 +14.013 • BH 2 +14.121 • BH 3 +14.013 • BH 4 +13.980 		

1 Environmental Analysis:

Methodology:

Preliminary environmental assessment was limited to processing and analysis of sample material from Trench 2 [Contexts [4] and [6] and Monolith 1 [samples as 10cm spits]. Monoliths 2-7 were recovered for sedimentological description only. For locations of Monoliths 1-7 refer to Figure 1.

Retrieval:

The sampling strategy followed that advocated by Fasham and Monk [1978] to gather a statistically viable sample. In addition "human biased samples" [van der Veen, 1992, or "judgement samples", Jones, M., 1991] were taken from areas thought to be appreciably richer in archaeobotanical remains; namely the two intrusive features recorded in Trench 2 [contexts [4] and [6]]. No waterlogged samples were observed during the evaluation.

The processing of the samples [bulks from contexts [4] and [6] and 10cm spit samples through Monolith 1 used a combination of flotation [producing a >250 μ m and >1mm flot] and wet screening [>1mm residue], with a modified version of the Ankara water-separation machine [French 1971]. The volume of earth processed varied from 10 to 20 litres per sample. Once air-dried, all of the flots and residues were fully scanned and the >1mm residues were sorted. The results of the residue's sorting are shown on Table 1.

Table 1: Description of the Sieved Residues: Bulk sample stack [retrieval in 10cm spits as Monolith 1: Refer to Figure 1 for location and Figure 3 for Monolith 1 division.

Context	Sample No.	Gravel			Volume [L.]	Weight [Kgms.]	Bone	Marine Mollusc	Slag	Daub
		<4mm	4 – 8mm	>8mm						
Mono 1 0.00- 0.10	-	A	M	M	3.2	4.2				
Mono 1 0.10- 0.20	-	A	M	O	1.2	1.9	O			
Mono 1 0.20- 0.30	-	A	M	O	1.3	1.7	O			
Mono 1 0.30- 0.40	-	A	O	O	1.8	2.0				
Mono 1 0.40- 0.50	-	A	O	-	0.7	0.5				
Mono 1 0.50- 0.60	-	A	M	O	0.7	0.9	O			
Mono 1 0.60- 0.70	-	A	O	-	1.1	1.5	O	O	O	O
Mono 1 0.70- 0.80	-	M	A	O	1.2	1.7		O		
Mono 1 0.80- 0.90	-	A	O	O	1.2	1.5		O		
Mono 1 0.90- 1.00	-	A	O	O	0.9	1.1	O	O		
Mono 1 1.00- 1.10	-	A	O	O	0.6	0.9	O			
Mono 1 1.10- 1.20	-	A	A	M	2.1	2.9				
3 [Fill of [4] T2	1	A	A	M	3.8	4.6	O	O		
5 Fill of [6] T2	2	A	O	O	2.4	3.9	O	O	O	

Key: A= Abundant, i.e. >20% in volume, M = Moderate, i.e. 5 - 20% in volume, O = Occasional, i.e. <20% in volume

Identification:

The identifications, for the molluscan and archaeobotanical material, used a binocular microscope [magnification x8-x40]. Nomenclature for the plant remains follows Stace [1999]. Nomenclature and taxonomy for the terrestrial molluscan remains nomenclature, and taxonomy, follows Kerney and Cameron [1994]. With regard to the faunal remains the majority of the bones were identified following the criterion set out by Halstead and Collins [1996] whilst the distinction between sheep and goat follows Boessneck and Uerpman [1969] for the teeth

bones. Not all ovi-caprids were speciated and as such a sheep/goat category is used. No biometrical data was collated at this stage of the analysis of the faunal remains; simply species and anatomical element presence/absence were recorded.

Results:

The Molluscan Remains:

Given below in Table 2 are the results from the wet-sieved samples with regard to the Terrestrial molluscan remains, of which all but samples <1> and <2> [contexts 3 and 5 respectively], are from the outer ditch [ditch [42. Many of the samples contain terrestrial molluscan remains [no freshwater/marshy ground species are present within the assemblages], but none of these samples contain terrestrial remains in any great numbers.

Table 2: The Terrestrial Molluscan Remains Retrieved, by Sieving [$>250\mu\text{m}$], during the Evaluation:

Context No.	Sample No.	Molluscan Remains.	
Mono 1 0.00 – 0.10		<i>Vallonia excentrica</i> <i>Trichia hispida</i> <i>Trichia striolata</i>	1 2 5
Mono 1 0.10 – 0.20		<i>Vallonia excentrica</i>	1
Mono 1 0.20 – 0.30		<i>Trichia hispida</i>	1
Mono 1 0.30 – 0.40		<i>Ceciliodes acicula</i>	1
Mono 1 0.40 – 0.50		<i>Ceciliodes acicula</i> <i>Trichia striolata</i>	1 1
Mono 1 0.50 – 0.60		<i>Cochlicopa lubrica</i> <i>Ceciliodes acicula</i> <i>Trichia striolata</i>	1 1 2
Mono 1 0.60 – 0.70			
Mono 1 0.70 – 0.80			
Mono 1 0.80 – 0.90			
Mono 1 0.90 – 1.00		<i>Vallonia excentrica</i>	1
Mono 1 1.00 – 1.10			
Mono 1 1.10 – 1.20			
Trench 2 [3]	<1>		
Trench 2 [5]	<2>	<i>Trichia striolata</i>	1
TOTAL			19

Three of the species, *Cochlicopa lubrica*, *Trichia hispida* and *Trichia striolata*, can be regarded as catholic [i.e. tolerant of a range of environments] and as such are of limited use in reconstructing past environments [Evans, 1972]. Furthermore *Ceciliodes acicula* [the blind snail] is a burrowing snail and is almost certainly intrusive.

However the remaining species *Vallonia excentrica* is a xerophile [i.e. favours dry environments] and is generally associated with open country – invariably short grass [Evans,

1972, 195]. The presence of this species in three of the samples suggests that there was open ground in the near vicinity.

Essentially these remains constitute the only molluscan remains that have been considered from Chichester's defensive ditch complex and whilst these results are from conclusive and amply demonstrate the need for further work in this field if there any further excavations of the defence ditches in the future – it is considered that additional environmental research will allow for a greater understanding of the environment immediately outside the City wall. This is all the more important with the defensive ditch complex as it is already apparent that there have been at least three ditches associated with the pre-tenth century City wall. As such there is the potential for the molluscan remains to provide a picture of this hinterland during the Roman period in the first and third century and also the Saxon period when Chichester served as a burh [Page & Peckham, 1973]. Very rarely does the opportunity to view an area at different, but relatively closely defined, stages in a town's history.

In addition several [10 in total] marine mollusca were also identified, Table 3, from the samples collected. Their presence is hardly surprising given Chichester's proximity to the coast and the fact that this resource would provide a valuable source of protein. However the presence of only the periwinkle [*Littorina littoralis*] and the oyster [*Ostrea edulis*], and the absence of both cockles [*Cardium edule*] and mussels [*Mytilus edulis*] is intriguing and may provide a clue to the fact that the shallow silty harbour [Barrett and Yonge, 1958, 157] was exploited rather than the deeper rocky waters found to the east of Selsey.

Most of the oysters retrieved during the archaeological investigation appeared to have been farmed and selected, rather than the result of the harvesting of wild oysters. Whilst the periwinkle [*Littorina littoralis*] are probably all wild as they are slightly more difficult as a species to farm than oysters.

Table 3: The Marine Molluscan Remains.

Context No.	Mono 1 0.60-0.70	Mono 1 0.70-0.80	Mono 1 0.80-0.90	Mono 1 0.90-1.00	3 <2> Trench 2	5 <2> Trench 2
<i>Littorina littoralis</i>		1	2	1		3
<i>Ostrea edulis</i>	1				1	1
TOTAL	1	1	2	1	1	4

The Archaeobotanical Remains:

A single barley [*Hordueum* sp.] grain was recovered from fill [5], it was not possible to determine whether this was a naked, hulled, four- or six-rowed barley. A single unidentified grass [*Poaceae* sp.] and a single culm node, which again could not be specified, were also identified.

Clearly with such sparse remains it is impossible to draw any real conclusions. Suffice to say the low level of archaeobotanical remains could reflect the fact that this area lay at some distance to an area of occupation and the levels of primary refuse are therefore relatively low. This is hardly surprising when one considers the location of the site – immediately outside a City wall along the City's defensive ditches. One facet of the samples that is apparent from these samples is that it does not appear that the sampled ditch [42] [Monolith 1] was backfilled with domestic refuse when the ditch fell into disuse as might be supposed from a section of ditch lying immediately adjacent to the East Gate.

Although the levels of archaeobotanical remains are low it does confirm their preservation and if any further excavations are carried out in the area – perhaps nearer to an area of occupation, it is conceivable that the levels of archaeobotanical remains increase.

Archaeological research in Chichester has often missed the opportunity to examine the archaeobotanical record, and although these results are not startling on their own, probably with time and further sampling across Chichester a greater understanding of the inhabitants' diet and the development of Chichester as a market/industrial centre could be gained.

The Faunal Remains:

In total, 15 bones/bone fragments were collected, 10 of which were identifiable, with the majority [14] representing large mammals [cow, horse, sheep/goat and bird].

In total, 15 bones/bone fragments were collected, 10 of which were identifiable, with the majority [14] representing large mammals [cow, horse, sheep/goat and bird]. The faunal remains are listed in **Table 4**, with the bones collected through wet-sieving and hand-collection being recorded together, although these remain bagged separately in the archive.

A general characteristic of this assemblage is its highly fragmented state with most of the bones being small, abraded and some dog-gnawed. This suggests that these bones were not disposed of formally but were lying on or near the surface for some time before becoming buried. This is hardly surprising as this area was clearly not one of occupation and these remains could easily reflect a very casual disposal.

As a result of the fragmentary nature of the bones it was not possible to age the species present within the assemblage using epiphyseal fusion [Silver, 1969] or to sex any of the individuals represented within this assemblage.

Within the mammal bones represented it appears that many of the remains are not the main meat bearing bones; instead much [of an admittedly small sample] of the assemblages are comprised of teeth, mandibles, vertebra and a rib. Only one of the bones, a tibia, is regarded as a meat bearing bone. Therefore it appears that these assemblages represent what could be considered primary waste, i.e. the bones that do not reach the 'dinner table' and as such those could be the waste from either a butchers [unlikely given the relatively low levels of bone] or more likely a kitchen.

Table 4: The Faunal Remains.

Context No.	SPECIES					
	Cow	Horse	Sheep/Goat	Sheep	Bird	No ID
Mono 1 10-0.20				P4 left side, worn to stage ? [5 gms.]		
Mono 1 0.20-0.30					1 rib [1 gm.]	
Mono 1 0.50-0.60			Tibia distal shaft right side, dog- gnawed [24 gms.].			
Mono 1 0.50-0.60				P4 left side, worn to stage? [6 gms]		
Mono 1 0.90-1.00	2 Bos-sized vertebra frags. [9 gms.]					1 [3 gms.]
Mono 1 1.00-1.10						1 [2 gms.]
Trench 2 3 <1>						3, 1 burnt [6 gms.]
Trench 2 5 <2>		Mandible, left side with M and M2 - both heavily worn. Radius frag, side unknown, at proximal shaft with fused ulna [38 gms.]				
TOTAL	2 [9 gms.]	4 [38 gms.]	1 [24 gms.]	2 [11 gms.]	1 [1 gm]	5 [11 gms.]

Within the assemblage it should also be noted that some biases may be present. At a glance it appears that bulk of the meat eaten was cow and sheep/goat, with relatively little exploitation of the pig. Firstly it should be borne in mind that pigs were often consumed when very young. The young age at death of these individuals would cause preservational bias of the bones, as the bones [not being fully developed] are softer and also smaller, thereby lending themselves firstly to scavenging and secondly to easier breakage than that generally suffered by a solid tooth, for instance.

Secondly, the absence of any fish bones is interesting, particularly given the presence of marine mollusca, and does not suggest that this was a resource which was not utilised - it almost certainly was. Further it is unlikely that this absence simply reflects a retrieval bias given that a number of samples were processed over a wet screen of 1mm. Instead it is possible that this bias represents the fact that only the bones of large animals and not fish are represented due to the refuse pattern in this part of Chichester – with the smaller bones being discarded elsewhere and probably more deliberately at a domestic level. Further detailed faunal work, following the sieving of soil samples, within and around the City walls will be required to prove if this is correct or not.

The study of faunal remains within an urban context can be extremely useful, and moves us beyond simply viewing urban populations as consumers, rather than producers. Grant [1988] suggests that to reconstruct production of the rural populations one should look at the urban contexts. However, these nodes acted as markets with components of the diet being exchanged in both directions. Therefore to reconstruct the diet of any period one has to acknowledge the importance of the urban centres, granted that most of the production occurred in the rural context, but not all.

On its own this small faunal sample is not sufficient to help us understand the machinations of Chichester's past economy, but these remains will hopefully add to the corpus of assemblages as further archaeological work is undertaken in Chichester. It is likely that a better understanding of the Chichester urbanites' diet and the rural-urban links of the area will be accomplished through the pursuit of this record in the future.

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2: Sedimentological description: Monoliths 2-7

Methodology

A total of 7 Monolith samples were recovered during the assesment phase. For location see Figure 1. Monoliths 1, 2 and 3 were taken from the fill of the flat bottomed Ditch 42. Monolith 1 was recovered in 10cm deep spits. Processing of samples recovered from Monolith 1, [sieving / sorting], was undertaken a detailed in section 1 above. Processing was undertaken to both recover environmental remains and recover dating evidence from sampled contexts. [Dating evidence based on recovered pottery is presented at Section 6.1 of Appendix 3].

Monoliths 2 and 3 were recovered as PVC channel / column samples to allow detailed sedimentological descriptions for contexts sampled by Monolith 1.

Monoliths 4 and 5 were recovered from the fill of post hole 10 cut into the base of Ditch 8 [Context 9].

Monoliths 6 and 7 were recovered form the fill of inner Ditch 47 [Context 46]. Note: Monolith samples 6 and 7 were recovered form south facing section of Trench 1.

Prior to laboratory based description Monoliths 2-7 were prepared [cleaned with a scalpel] to allow for accurate recording of structure and inclusions. The results are presented below.

Table 5: Monolith 2: [50cm mono length] Top of Monolith at + 12.71m OD

. For location refer to Figure 1

Unit depth - [Archaeological Context]	Description
00.00-0.24/27 [43]	10YR 5/4 yellowish brown silt/clay silt. The matrix supports frequent sub angular to angular flint granules < 0.5cm in diameter. There are occasional sparse Sub rounded flint clasts to 2cm diameter throughout the unit. There are discrete vertically orientated pockets of 10YR 4/3 brown silt passing through the unit. [trace fossils/root/burrow infilling]. The matrix is moderately firm and compact
	0.24/27 Moderately sharp horizontal contact
0.24/27-0.50 [40]	10YR 5/4 yellowish brown clay silt/silty clay. No discernable structure [note very weak discontinuous horizontal laminations recorded in field section though absent / not discernable in monolith sample]. At 0.28-0.36 there is a discrete sub-unit of clast supported fine to very fine angular / sub angular flint gravel / coarse sand with clasts <5mm in diameter this sub – unit dips at c. 45 ^o west to east. The silt/clay matrix is moderately dense firm and compact.

Table 6: Monolith 3 [50cm mono length] Top of Monolith at + 12.21m OD.

For location refer to Figure 1

Unit depth - [Archaeological Context]	Description
0.00-0.23/28 [40]	10YR 5/4 yellowish brown silt to clay silt [as 0.24/0.50 at Monolith. At 0.15 there is a 'sub unit' of clast supported sub angular flint gravel with clast < 0.5cm diameter. The clasts are seen in association with 10YR 7/3 very pale brown granular silt [mortar 'debris'?] The sub unit is very loosely compacted [tip line?]
0.23/28 [40]	Moderately sharp dipping [c. 30 ^o] west to east contact.
0.23/28-0.50 [basal gravels]	10YR 5/3 brown clay silt. Matrix supports occasional sub angular flint clasts predominantly < 1cm in diameter with occasional clasts to 2.5 cms. The clasts show a weakly defined preferred orientation being horizontally orientated about their long axis. The matrix is moderately firm and compact

Comments : Monoliths 2 and 3:

Monoliths 2 and 3 cover sediment column sampled at Monolith 1. Monoliths sample mid / lower fill of Ditch 42 [Contexts [40] and [43] and contact at base of Monoliths 1 and 3 basal natural gravels [13].

The upper c. 25 cms of the sampled sediment columns comprises of silt clay supporting frequent sub angular to angular flint gravels the unit shows evidence of bioturbation as vertically orientated root traces not evident in immediately overlying context [38] suggesting [38] either truncates [43] or upper contact of [38] represents an exposed stable surface. The firm compaction of sediments within [43] and indeed [40] suggest infilling of the ditch occurred over a gradual period as a result of natural infilling, no dump episodes are suggested.

Within context [40] there are discrete laminations seen in finer silt / clay fractions and finer angular flint gravel lenses dip at c. 45^o from horizontal. Again this arrangement suggests in filling over a protracted period.

In Monolith 3 at 0.15 there is a discrete pocket of granular silt [mortar debris?] that is loosely compacted. This suggests an episode of localised rapid infilling possibly representing in fill during demolition / destruction episode.

Contact to [13] at base of column samples is sharp suggesting cutting into basal gravels commensurate with initial cutting of the Ditch [42] base.

Table 7: Monolith 4 [40cm mono length] Top of Monolith at + 11.01m OD.

For location refer to Figure 1.

Unit depth- [Archaeological Context]	Description
0.00-0.15 [9]	10YR 4/2 dark greyish brown silt / to clay/silt No discernable structure. Matrix supports frequent sub angular flint clasts in size range 1 to 1.5 cms diameter with occasional sub rounded flint clast to 3.5 cm diameter. Clasts in all size fractions exhibit a weak preferred orientation being horizontally orientated about their long axis. Matrix is moderately firm and compact though with pockets that are loosely compacted.
0.15	Diffuse dipping [c. 15 ^u from horizontal] contact
0.15-0.24/25 [9]	Single sub rounded flint clast with maximum length to 16 cms and width to 9cms. The clast is horizontally orientated about its long axis. The 'cobble' has <15% cortex cover 0.24-0.25 Pot fragment [submitted / held for specialist assessment].
0.24-0.40 [9]	Matrix as at 0.00-0.15 though shows slight increase in silt clay fraction being more clastic. The matrix supports occasional sub to well rounded chalk pellets < 15mm in diameter. At 0.30 there is a single <1cm diameter charcoal fragment. At 0.38 to 0.40 a ceramic [pot base] was recovered and submitted for specialist assessment.

Table 8: Monolith 5 [40cm mono length] Top of Monolith at + 10.72m OD.

For location refer to Figure 1

Unit depth - [Archaeological Context]	Description
0.00-0.40 [9]	10YR 4/3 brown to 10YR 4/2 dark greyish brown clay silt. The matrix exhibits no discernable structure. Matrix supports occasional sub angular to sub rounded to occasionally well rounded flint clasts to 1.5 cm in diameter. Clast fractions < 0.50 cms in diameter are predominantly sub angular to angular. Clasts exhibit no preferred orientation. At 0.36-0.40 there is a pocket of clast supported sub angular flint gravel with clasts predominantly in 1cm to 2 cm size range. Throughout this unit there are sparse flecks of 10YR 2/1 black charcoal. The matrix is moderately firm to loosely compacted.

Comments : Monoliths 4 and 5:

Monoliths 4 and 5 were sampled from the fill of Posthole [10] cut into the Ditch 8 [Context 9]. Larger clasts, particularly cobble, chalk pellets and ceramic inclusions are interpreted as

'packing' thus support the hypothesis that this cut feature is a post hole. Upper and lower sediment units of the fill are loosely compacted and silt fill is less firmly compacted than fill recorded at Ditch [42] suggesting a relatively rapid infilling of this post hole. No discolouration suggesting remnant post / wood traces were recorded.

Table 9: Monolith 6: [50cm mono length] Top of Monolith at + 12.68m OD.

For location refer to Figure 1

Unit depth - [Archaeological Context]	Description
0.00-0.16 [46]	10YR 5/4 yellowish brown silt. Matrix supports frequent sub angular to sub rounded flint clasts to 2-3 cm in diameter. Occasional sub rounded to well rounded chalk pellets < 5mm in diameter. The matrix supports occasional pockets of 10YR 7/3 very pale brown granular silt [mortar] the matrix is weakly laminated. The unit is moderately dense firm and compact.
0.16	Diffuse horizontal contact.
0.16-0.35 [46]	10YR 4/3 brown silt to clay silt. The matrix supports occasional sub rounded to occasionally well rounded flint clasts to 2.5 cm in diameter. There are sparse charcoal fleck throughout. Matrix shows no discernable structure and is disturbed by vertically orientated rooting [modern?]
0.35	Diffuse horizontal contact
0.30-0.50 [46]	Matrix as 0.00-0.16 though with slight increase in size of matrix supported flint clasts up to maximum 4cm in diameter. At 0.36 a fragment bone was recorded / recovered [submitted for specialist assessment] At 0.43 a single pot fragment was recovered and submitted for specialist analysis. The matrix is loose and friable.

Table 10: Monolith 7: [50cm mono length] Top of Monolith at + 12.25 m OD.

For location refer to Figure 1

Unit depth - [Archaeological Context]	Description
0.00-0.32 [46]	10YR 4/3 brown clay silt. The matrix supports occasional sub angular to sub rounded flint clasts to 4cm in diameter clast exhibit a weak preferred orientation being horizontally orientated about their long axis. At 0.20-25 there are discrete pockets of 10YR 7/3 pale brown silt / granular silt [mortar]. The unit is moderately firm and compact and partially disturbed by modern rooting.
0.32	Diffuse horizontal contact
0.32-0.50 [13?]	As 0.00-0.32 though becoming 10YR 5/3 brown silt down profile. Matrix supports sparse sub angular to angular flint clasts to 4cm in diameter. Clasts show weak preferred orientation dipping at c. 15° from horizontal west to east about their long axis. The matrix is moderately firm and compact.

Comments : Monoliths 6 and 7:

Note: Monoliths were recovered from south facing section of Trench 1.

Monoliths were recovered from fill of inner Ditch 47 context [46]. The lack of sharp contacts between sediment units and generally moderately firm and compact nature of fill suggests gradual infilling, no major 'dump' episodes are suggested. The predominant horizontal orientation of clast fractions and weak horizontal laminations again support a 'gradual' infilling process was responsible for infilling. In Monolith 6 at 0.30-0.50 the matrix is loose and friable this in conjunction with pot and bone inclusions suggests a single episode of relatively more rapid infilling.

3: Borehole survey:

- Introduction : Aims and objectives
- Methodology
- Results
- Discussion and comments on recorded sequence

Introduction:

To reduce impact of ditch elements anticipated to lie within the site area it was considered that sinking of a series of wire line percussive boreholes should be undertaken to enhance site information derived from traditional trial / assessment trenching.

The approved Brief and Specification for survey work allowed for the sinking of up to a maximum of five boreholes. The aims of the borehole survey / investigation was to confirm the north south extent of key ditch elements anticipated to lie within the site area and recover controlled samples [core / bulks] for laboratory based sedimentological description and to provide samples for possible future analyses. Results of borehole survey could be compared and contrasted with results of sections exposed during excavation of the main trial Trench 1 excavated within the site centre.

Fieldwork.

Fieldwork was undertaken between 15th and 17th March 2005. Drilling was undertaken by Southern Drilling Services and was monitored by C. A. Pine of Development Archaeology Services [DAS]. DAS undertook all field recording and monitoring of all ground works associated with the drilling investigation.

Drilling was undertaken using a wire-line percussive drill rig fitted with shell and auger. Logging of stratigraphy was undertaken using standard sedimentological terminology.

Locations of boreholes were surveyed in to relative Ordnance Survey National Grid and Datum Boreholes were located after exposure of key ditch elements within Trench 1. Boreholes 1 and 2 were e sited to confirm north south extent of the main central ditch exposed [Ditch 12] and boreholes 3 and 4 were located o confirm extent of the most easterly ditch recorded [Ditch 42] [For locations se Figure 2 and see also projected locations of boreholes relative to archaeological contexts recorded at Figure 2].

Recovered core samples were split [disc cut] at the end of each day drilling to rapidly assess the quality of recovered samples. Recovery of key stratigraphic information could then be confirmed, allowing a reactive borehole location field strategy to be undertaken ensuring key stratigraphic information was recorded and best sample recovery achieved.

U4/U100 core samples were recovered in plastic sleeves to facilitate subsequent examination of retained sediments by cutting / splitting of cores rather than extruding under pressure.

All recovered samples were removed from site for subsequent laboratory assessment. U4/U100 sample locations at each bore hole are shown at Figure 3.

Laboratory Description.

To facilitate examination of recovered core material cores were cut in half lengthways using a circular disc cutter. It was considered that removal of retained core material using a pressure extruder was likely to disturb features such as laminations or bedding structure within fine-grained sediments.

After cutting the surface of both halves of the core were cleaned using a broad bladed surgical scalpel. Scalpel passes were made horizontally across the face of the core with blade being cleaned at each pass to reduce trans-location of material up or down the core profile. The cleaned faces were then described using standard sedimentological terminology. Colours were described using Munsell Colour chart. [Munsell 1975]

The results of laboratory based description, combined with filed log notes, are presented in Tables 11-14 below.

After description the cores were vacuum wrapped and placed in controlled storage. Cores and associated samples are presently held by DAS.

Presentation of Results:

BOREHOLE SURVEY: Logs: Integration of field logs with laboratory based sample descriptions]

Table 11: Borehole 1: [Ground level at + 14.013m OD]

Sample depth [Below ground level] - [Archaeological Context]	Sample type	Description / Interpretation
0.00-0.23	Examined as disturbed bulk sample / not retained	Tarmac surface bedded on 'type 1' firm and compact 'rammed' make up.
0.23-0.60	Bulk sample [c. 5Ltrs x 2.]	10YR 3/2 very dark greyish brown silt granular silt. Matrix supports frequent brick fragments [modern] and sub angular flint clasts. The clasts are well sorted being < 3cm and > 2cm in diameter [Imported foundation layer to car park].
0.60-1.15	[U4 1] [overdriven]	10YR 3/2 very dark greyish brown clay silt /silt. The matrix is very dense firm and compact and supports frequent brick stone [grey stone] fragments and pockets of 10YR 7/2 light grey mortar fragments [Made ground to car park levelling].
1.05-1.60	[U4 2] part disturbed	10YR 3/2 very dark greyish brown to 10YR 3/1 very dark grey silt. The matrix is loose and friable and supports frequent sub angular flint clasts <3cm in diameter occasional well rounded flint clasts to 3cm in diameter and sub angular to moderately well rounded chalk clasts < 3cm in diameter. There are fragment of CBM [ceramic building material throughout] the unit is moderately dense firm and compact and rooted [modern] throughout. [Part modern / make-up with localised disturbance]
1.60-2.05 [49?]	[U4 3]	0.00-0.21 Void. 0.21-0.45 10YR 4/3 brown silt to clay silt. Matrix supports frequent sub angular flint clasts to 4cm in diameter. The unit is weakly laminated. Clasts show weak preferred orientation tending to exhibit horizontal orientation about their long axis. There are occasional oyster valves. At 0.35 there is a single intact mollusc [submitted for specialist assessment. The matrix is moderately firm dense firm and compact. [Ditch [12] Fill]
2.10-2.60 [50?] Continues>	[U4 4]	10YR 3/2 very dark greyish brown to 10YR 4/2 dark greyish brown silt to clay silt. The matrix supports sub angular rot sub rounded flint clast size range of 0.50cm to 3cm. There are occasional sub angular flint clasts to 6 cm max. dimension. Clasts exhibit no preferred orientation. Throughout the unit here are sparse

		pockets <2cm in diameter of 2.5YR 5/6 red brick and tile fragments seen in association with 10YR 7/2 light grey mortar fragments. The matrix is variably compacted with pockets that are loose and friable with areas that are moderately dense firm and compact. Ditch [12] Fill]
2.60-3.00 [11]	[U4 5]	Matrix as 2.10 to 2.60 though inclusions are less frequent. Clast inclusions are predominantly sub angular to sub rounded flint clasts in 1 to 3cm size range. Clasts exhibit weak horizontal orientation about their long axis. At 2.80 to 3.00 the silt clay silt matrix exhibits weak discontinuous horizontal laminations < 2mm deep
3.00-3.05	[Cutting Shoe]	As U4 5
3.00-3.10m BGL [13]	U4 attempted / no recovery	Sharp Contact. Transition to basal solifluction gravels. 80 blows for recovery for sample at 3.00-3.05
3.10-3.60 / 3.75 [13]	[U4 6 as bulk samples [c 5Ltrs x 3.]	10YR 4/4 dark yellowish brown clay silt to silty clay seen in association with abundant sub angular to angular flint clasts to 9cm diameter [mean clast size at c. 5cm diameter]. The unit appears to be clast supported and is very dense firm and compact. [Solifluction gravels] [100 blows for sample recovery]
		Borehole continued to 4 metres [as 3.10-3.60].

Table 12: Borehole 2: [Ground level at + 14.121 m OD]

Sample depth. [Archaeological Context]	Sample type	Description / Interpretation
0.00-0.95	Field description only	[As BH 1] 10YR 3/2 very dark greyish brown silt granular silt. Matrix supports frequent brick fragments [modern] and sub angular flint clasts. The clasts are well sorted being < 3cm and > 2cm in diameter [Imported foundation layer] [Made round car park fill]
0.95-1.40 [transition to [49]	[U4 1]	10YR 4/2 dark greyish brown clay silt. Matrix supports sub rounded to sub angular flint clasts to 1-3 cm diameter with occasional clast to 5cm, Clasts show weak preferred orientation being horizontally orientated about their long axis. Matrix supports in frequent sub rounded chalk pellets, 25mm diameter. There are weak flecks of 10YR 7/2 light grey mortar fragments and fragments of oyster [<i>ostrea edulis</i>] Matrix is moderately dense firm and compact. [Upper ditch [49] fill].
1.50-1.95 [49]	[U4 2]	10YR 5/4 yellowish brown to 10YR 4/4 dark yellowish brown silt. Matrix supports frequent sub angular to occasionally sub rounded flint clasts to 3cm diameter. Three are frequent 10YR 7/3 very pale brown mortar fragments throughout and sparse sub rounded chalk pellets < 0.50cm in diameter. [Infill to Ditch [12]
2.10-2.55 [49]-[50]	[U4 3]	2.10-2.25 Clast supported chalk gravel. Single chalk clast to 9cm diameter with fragment of sub angular to angular chalk clasts to 3cm [Fractured / fragmented during recovery] Chalk seen in association with sub angular flint clasts to 5cm diameter seen in association with 10YR 4/3 brown silt. 0.25 Very sharp horizontal contact. 0.25-0.50 10YR 4/2 dark greyish brown silty clay to clay silt. Matrix supports frequent sub angular flint clasts to 5cm diameter. There are sparse pockets of 10YR 6/2 light greyish brown silt granules [mortar] throughout. The unit is loosely compacted [Voids within fill suggested by sinking sample recovery]
2.55-2.65	Cutting Shoe	As base of overlying unit / U4
2.65-3.05 [11]-[51]? Continues>	[U4 4]	10YR 3/2 very dark greyish brown silt. The unit exhibits very weak discontinuous horizontal laminations with laminations < 5mm thick. There are infrequent sub angular flint clasts to 4cm diameter throughout. Clasts exhibit weak preferred orientation being horizontally orientated about their long axis. The matrix is moderately firm and compact.

Transition at 3.05-3.10m BGL		Sharp Contact. Transition to basal solifluction gravels. [111blows for recovery for sample at 3.05-3.10]
3.10-3.50 [13]	[U4 5] Part recovery only	10YR 4/4 dark yellowish brown clay silt to silty clay seen in association with abundant sub angular to angular flint clasts to 9cm diameter [mean clast size at c. 5cm diameter]. The unit appears to be clast supported and is very dense firm and compact. [Solifluction gravels] [122 blows for sample recovery]
3.65-3.80 [13]	Bulk	As U4 5.
Continued to 4 metres. BGL.		As 3.10-3.50

Table 13: Borehole 3: [Ground level at + 14.013 m OD]

Sample depth [Archaeological Context]	Sample type	Description / Interpretation
0.00-0.55	Bulk at 0.10 – 0.40]	As BH 1&2: 10YR 5/3 brown silt [granular silt] frequent brick [modern] and ash fragments. [Make up to modern car park]
0.55-0.95	[U4 1 Part recovery]	10YR 3/2 Very dark greyish brown clay silt. Matrix is dense firm and compact. Matrix supports frequent sub angular to occasionally sub rounded flint clasts to 4cm At 0.30 there is a pocket of sub rounded chalk clasts to 4cm diameter seen in association with sparse chalk pellets < 0.5cm diameter and CBM [modern] fragments. Clasts exhibit no preferred orientation. [Disturbed fill]
0.95-1.40 [38]	[U4 2]	10YR 4/2 dark greyish brown silt. The matrix supports frequent sub angular flint clast in size range 2-3.5 cm flint brick [modern] ferrous [metal wire] and angular chalk clasts to 3cm diameter. At 1.30 there is a 'sub unit' of oyster fragments. The matrix is loosely compacted. At 1.25 moderately sharp horizontal contact becoming 10YR 5/4 yellowish brown silty clay [Appears disturbed]
1.45-1.90 [38 / 39]?	[U4 3]	1.25-1.40 though becoming more dense firm and compact with depth and inclusions decrease with depth.
2.00-2.45 [40]	[U4 4]	10YR 5/4 yellowish brown silt clay silt seen in association with clast supported sub angular flint gravels with clast size in range 2 to 5cm. At 2.20 Sharp transition / contact to gravels [13]
2.50-2.95 [13]	[U4 5]	10YR 5/4 yellowish brown silt / clay silt with very dense firm and compact flint clasts to 5cm diameter. Very dense firm and compact
3.50-3.95	U4 6 as bulk samples [c 5Ltrs x 3.]	As U4 5.

Table 14: Borehole 4: [Ground level at + 13.980 m OD]

Sample depth [Archaeological Context]	Sample type	Description / Interpretation
0.00-0.12	Field description only	Tarmac overlying 10YR 5/3 brown granular silt and flint gravels. Make up / fill debris [Modern]
0.12- 0.45	[Bulks only c. 5 Ltrs x2]	10YR 3/1 very dark grey to 10YR 3/2 very dark greyish brown granular silt. Matrix supports frequent fragments of CBM [modern] with occasional sub angular to angular flint clast being well sorted with size range of 1.5 cm to 3cm. The unit is moderately dense firm and compact. [Modern make up]
0.80-1.25 [35 / 38]	[U4 1]	10YR 5/2 dark greyish brown to 10YR 3/3 brown silt. Matrix supports sparse sub angular flint clasts to 3cm and occasional sub rounded chalk clasts < 0.5cm diameter. At 1.20 there is a single vertically orientated oyster valve. The matrix exhibits no discernable structure. Clasts exhibit no preferred orientation.
1.30-1.75 [43 / 40]	[U4 2]	10YR 5/6 yellowish brown clay silt with matrix supporting frequent sub angular flint clasts to maximum 8 cm diameter with predominant size range > 2 and < 4cm diameter. The sediment fraction is weakly laminated with laminations seen as 10YR 5/6 yellowish brown fine sand laminations are discontinuous though tending to horizontal orientation. The clasts exhibit no preferred orientation. The matrix is moderately firm and compact.
2.20-2.45 / 2.55 Transition to [13]	U4 3 [Part recovery]	2.20 to 2.35/40 as U4 3. At 2.40 sharp transition / contact to 10YR 5/4 yellowish brown silt clay silt seen in association with clast supported sub angular flint gravels with clast size in range 2 to 5cm
2.65-2.70 [13]	Bulk c. 5 Ltrs x 1	10YR 5/4 yellowish brown silt clay silt with slight coarse sand fraction. Becoming flint clast supported gravels
2.90-3.20 [13]	[U4 4] Recovered as bulk sample	As overlying bulk [Very dense firm and compact [133 blows for recovery]

Discussion and comments on recorded sequence

Boreholes 1 and 2:

Boreholes 1 and 2 were located to confirm north south extent within site area of selected Ditch elements, specifically Context / Ditch [12] exposed in Trench 1.

The upper c. 1.00 metres of stratigraphy at both borehole locations is interpreted as 'modern' fill or levelling to the existing car park area. A sub unit lying between c. 1.00 metres to 1.60 metres in Borehole 1 [U4/2] is interpreted as disturbed upper fill to Ditch 12 [correlates with context [49]. At borehole 2 the corresponding unit appears less disturbed suggesting disturbance / impact on upper ditch fills is variable across the length of this feature.

At both Boreholes 1 and 2 sediments that correlate with context [49] appear to be well defined at between c. 1.50 to 2.00 metres below ground surface [c. + 12.50-12.00m OD]. Note due to pockets of loose and un cohesive sediments recorded at 2.10-2.60 in Borehole 1 and possible voids in fill recorded / suggested at 2.10-2.55 in Borehole 2, the contact height / transition to Context [50] is estimated only at c. +12.00m OD [c. 2.00-2.25 metres borehole depth].

At both boreholes sediments at between c. 1.50-2.50 appear representative of a dump fill deposit suggesting relatively rapid in filling.

Lower ditch fills, contexts 11 and 51 are represented by samples recovered in Borehole 2 at 2.65-3.05 and 2.60-3.00 in Borehole 1. The sediment characteristics, of lower fills suggests possibly extended 'in-fill' periods as suggested by reduced 'imported' CBM / debris material and generally finer, laminated sediment content.

Contact to basal gravels [13] in both Borehole 1 and 2 are recorded at c. + 10.80 metres OD. Contact to 'natural' gravels at Trench 1 is recorded at a c. 10.30 at the centre of Ditch 12. This c. 0.50 metre discrepancy is attributed to either boreholes being c. 1-1.50 metres off centre of Ditch 12 or actual variability in depth of Ditch 12.

It is considered that sequences recorded in both boreholes 1 and 2 correlate with ditch fill sequence of Ditch 12 exposed in Trench 1.

Boreholes 3 and 4

Boreholes 3 and 4 were located to confirm north south extent within site area of Ditch elements, specifically Context / Ditch 42 exposed at the eastern end of Trench 1.

As with Boreholes 1 and 2 Boreholes 3 and 4 record made ground to depths of c. 1.00 metres below ground surface.

At depths between 0.95 metres to 1.40 metres sediments at both borehole locations are considered to correlate with contexts 35 and 38 as described in Trench 1. At both borehole locations sediments at between c. 0.95-1.40 appear as loosely compacted, coarse grained sediments with variable clast fractions, including oyster, cbm, and flint pebbles/cobbles suggesting a dump episode is responsible for in-filling of 'upper' ditch elements.

Transition to sediments considered to be equivalent to those described as Contexts 43 overlying Context 40 in Trench 1 are recorded in Borehole 3 at c. 2.00 metres depth. At borehole 4 transition to more dense firm and compact contexts 43/40 is recorded at c. 1.30-1.75 metres. This variation suggests deeper disturbance / truncation of the sequence at Borehole 3.

At both borehole locations contact to basal gravels [13] is recorded at c. +11.80m OD. Contact height to gravels [13] within Trench 1, as recorded in Monoliths 1 and 3, is recorded at c. +11.50m OD. The small, 30cm variation, in contact height to basal gravels and correlation of overlying units between Boreholes 3 and 4 and sequence present in Trench 1 strongly suggests both Borehole 3 and 4 have recorded north and south extensions of Ditch 42.

OASIS ID: preconst1-7816

Project details

Project name An Archaeological Evaluation at East Walls Car Park, Chichester

Short description of the project The evaluation consisted of two trenches located in the eastern portion of the proposed development. Trench 1 measured 33.00m in length and was located to the east of the existing town walls primarily to assess the defence ditches associated with the Roman settlement at Chichester. Trench 2 was located to the N/E of Trench 1, measured 10.00m in length and was located primarily to assess the extramural land to the east of the defence ditches. The evaluation found natural deposits in both trenches although the natural horizon was heavily truncated in Trench 1. The evaluation revealed evidence for five N/S orientated ditches of various size and date with three dating to the Roman period and two dating to the 13th/14th century. Two of the ditches appear to represent the V-shaped ditches commonly associated with an earlier phase of defensive earthworks surrounding the Roman settlement at Chichester whilst the third ditch is associated with the construction of bastions on the settlement wall in the 4th century. The remaining ditches date to the later medieval period, however, at present it remains unclear as to the role of these two ditches with regards the settlement at Chichester. A N/S orientated linear feature dating to no earlier than the 1st century was encountered in the N/E of the site suggesting that extramural activity is present in this area. The remainder of the deposits on site consisted of 19th century dump layers, pits and soak-aways. These in turn were sealed by a layer of 20th century hardcore and the associated concrete slab that forms the car park surface presently occupying the site.

An additional element of the evaluation was sinking of 4 purposive wire line percussive drilled boreholes at spaced locations across the site. The aim of the borehole investigation was to confirm north south extent, within the site area, of the most easterly ditch element, Ditch [42,] exposed and recorded in the valuation Trench 1 and central Ditch [12] and recover controlled sedimentological samples for possible future analysis. Result of the borehole survey are reported on as Appendix 5 to the main report

Project dates Start: 15-03-2005 End: 18-03-2005

Previous/future work Yes / Yes

Any associated project reference codes WEWC05 - Site code

Type of project Field evaluation

Site status Scheduled Ancient Monument [SAM]

Site status Local Authority Designated Archaeological Area

Monument type INNER DEFENCE DITCH Roman

Monument type OUTER DEFENCE DITCH Roman

Monument type DITCH Roman

Monument type DITCH Medieval

Monument type DITCH Medieval

Significant Finds	POTTERY Late Prehistoric
Significant Finds	POTTERY Roman
Significant Finds	POTTERY Medieval
Methods & techniques	'Environmental Sampling','Targeted Trenches' Borehole Survey
Development type	Pre-Determination
Prompt	Direction from Local Planning Authority - PPG16
Position in the planning process	Not known / Not recorded
Project location	
Country	England
Site location	WEST SUSSEX CHICHESTER East Walls Car Park, Chichester
Study area	c. 9956.00 Square metres
National grid reference	SU 48645 10490 Point
Height OD	Min: +12.90m [+9.00 metres Borehole survey] Max: +13.00m
Project creators	
Name of Organisation	Pre-Construct Archaeology Ltd / Development Archaeology Services
Project brief originator	Development Archaeological Services
Project design originator	Chris Pine [DAS]
Project director/manager	Jon Butler
Project supervisor	Joanna Taylor
Sponsor or funding body	Seaward Properties Ltd
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