FORMER SEB DEPOT, BACK OF THE WALLS, SOUTHAMPTON

REPORT ON AN ARCHAEOLOGICAL EVALUATION



SITE CODE: SOU1666

REPORT NO: R11920

NOVEMBER 2014



PRE-CONSTRUCT ARCHAEOLOGY

FORMER SEB DEPOT, BACK OF THE WALLS, SOUTHAMPTON REPORT ON AN ARCHAEOLOGICAL EVALUATION

Local Planning Authority: Southampton City Council

Central National Grid Reference: 442163 111378

Planning Reference:

PCA Site Code: SOU1666

Museum Accession No: To be obtained

Written and researched by: Tony Molloy

Project Manager: Paul McCulloch

Commissioning Client: CgMs Consulting

Contractor: Pre-Construct Archaeology Ltd (West)

Block 4

Chilcomb House Chilcomb Lane Winchester Hampshire SO23 8RB

Tel: 01962 849549

E-mail: pmcculloch@pre-construct.com

Website: www.pre-construct.com

©Pre-Construct Archaeology Ltd

NOVEMBER 2014

The material contained herein is and remains the sole property of Pre-Construct Archaeology Ltd and is not for publication to third parties without prior consent. Whilst every effort has been made to provide detailed and accurate information, Pre-Construct Archaeology Ltd cannot be held responsible for errors or inaccuracies herein contained

PCA Report Number :R11920

DOCUMENT VERIFICATION

Former SEB Depot, Back of the Walls, Southampton

Archaeological Evaluation

Quality Control

Pre-Construct Archae	K3635		
	Name & Title	Signature	Date
Text Prepared by:	T Molloy		20/11/2014
Graphics Prepared by:	J Simonson		11/11/2014
Graphics Checked by:	J Brown	Josephine Gram	11/11/2014
Project Manager Sign-off:	P McCulloch	Ammund	25/11/2014

Revision No.	Date	Checked	Approved

Pre-Construct Archaeology Ltd (West)
Block 4 Chilcomb House
Chilcomb Lane
Winchester
Hampshire

SO23 8RB

CONTENTS

JSTF	RATIONS	
SUN	MMARY	3
INT	RODUCTION	4
2.1	Planning Background	4
2.2		
ME	THODOLOGY	6
RES	SULTS AND DISCUSSION	8
THE	E FINDS	15
6.1		
6.2		
6.3		
6.4	,	
6.5	· · · · · · · · · · · · · · · · · · ·	
6.6		
6.7	•	
6.8	•	
COI	•	
BIB	LIOGRAPHY	41
AC	KNOWLEDGEMENTS	42
	SUI INT 2.1 2.2 AIM ME 6.1 6.2 6.3 6.4 6.5 6.6 CO IMF BIB ACI PLA	 6.2 Clay-Pipe by Kevin Trott. 6.3 Ceramic Building Material by Kevin Trott. 6.4 Animal Bone by Kevin Rielly. 6.5 Slag by Dr. Grahame Morgan. 6.6 Metalwork by Kevin Trott. 6.7 Glass by Kevin Trott.

ILLUSTRATIONS

- Figure 1. Site Location Plan
- Figure 2. Trench and Section Drawings Location Plan
- Figure 3. Trench Plan Showing Walls and Discrete Features
- Figure 4. Trench Plan With Proposed Piling Locations
- Figure 5. Trench Plan overlain on Woolley's 1791 Map
- Figure 6. Trenches 1 & 2 Section Drawings
- Figure 7. Trenches 3 & 4 Section Drawings
- Figure 8. Trench 5 Section Drawings
- Figure 9. Trench 5 N & S Extensions Section Drawings
- Figure 10. Trench Location with Archaeology, Section Locations and Proposed Amended Piling Layout

1. SUMMARY

An archaeological evaluation was undertaken in advance of development at the former SEB Depot, Back of the Walls, Southampton. PCA (West) were appointed to undertake the work by CgMs Consulting. The site was located to the immediate east of the site of Southampton's medieval town wall in the known location of the town's double ditches. Evidence of Saxon activity had previously been identified cutting a berm between the inner ditch and the town wall to the north of the site and historic maps of the area indicate that a substantial late 18th century artillery bastion occupied the northern part of the site. Prior evaluation on the site had located a section of limestone wall interpreted as the outer wall of a late 18th century artillery bastion, based on cartographic evidence. The Southampton to Salisbury Canal is known to have passed through the site although its location is not precisely known.

The evaluation comprised the excavation of five trenches in two phases of fieldwork. Evidence of a berm between the town wall and the inner ditch was recorded in one trench and possible evidence of a berm between the double ditches was recorded in another. Evidence of silting deposits within the town ditches overlain by post-medieval infilling was recorded in several of the trenches.

The section of limestone (Bastion) wall previously identified by evaluation was located and further exposed and characterised in one trench although attempts to find its projected location elsewhere on the site failed. Possible evidence of deposits forming the rampart of the bastion were recorded in one trench.

No evidence of the canal was found within the trenches.

The evaluation confirmed the results of the previous investigations that the bulk of the site has been extensively disturbed by modern development, although two late 18th century discrete features were recorded cutting the infill of the inner town ditch in one trench, one of which contained evidence of iron metalworking.

It is recommended that, given the archaeological resource potential of the site has been demonstrably impacted and reduced, no further archaeological works are necessary other than in the north-east corner of the site in the area of Trench 2. In this area a watching brief should be maintained during groundwork for the proposed development.

2. INTRODUCTION

2.1 Planning Background

- 2.1.1 Pre-Construct Archaeology Ltd (PCA) were appointed by CgMs Consulting to undertake an archaeological evaluation of the former SEB Depot, Back of the Walls, Southampton, (Figure 1), hereafter 'the Site', in connection with its proposed redevelopment. Planning permission for redevelopment of the site has been granted, subject to the signing of a S106 agreement. The redevelopment comprises the erection of a building of between 6 and 9-storeys (including lower ground level) to provide a student hall of residence (350 rooms) with associated facilities, a cafe with associated parking and vehicular access from Canal Walk.
- 2.1.2 The archaeological evaluation is required by the LPA, acting on advice from the Historic Environment Team (HET), Southampton City Council, archaeological advisor to the LPA, to provide additional information toward understanding the archaeological implications of the proposed redevelopment and determining the subsequent treatment of archaeological resources within it, as per the conditions attached to the planning permission. This approach is in keeping with the NPPF Section 12 and Local Plan Policy. The site is situated within the City Centre and Itchen Ferry Local Area of Archaeological Potential (LAAP), designated by Southampton City Council in 2010.
- 2.1.3 In consequence of the advice provided by HET five archaeological conditions will be applied if planning consent is granted for the redevelopment of the site. These seek to secure the requirement for the implementation and completion of the archaeological evaluation (addressed by this document), the requirement for further archaeological works and an assessment of the threat to archaeological resources posed by the redevelopment.
- 2.1.4 The archaeological evaluation strategy set out in this document has been informed by a Desk-based Assessment (WA 2013), which summarised previous archaeological investigations on the site and in its vicinity, and follows consultation with the HET by CgMs Consulting. Previous investigations within the site have identified it contains archaeological resources that may be threatened by the proposed redevelopment.
- 2.1.5 The first phase of evaluation was undertaken over the period 04/09/2014 19/10/2014. The second phase of evaluation was conducted over the period 28/10/2014 31/10/2014.

2.2 Site Location, Topography and Geology

- 2.2.1 The site, a roughly rectangular area centred on SU442163 111378, measures approximately 1.9ha in extent and lies between Back of the Walls and Canal Walk. It is in two parts, the larger and higher western and southern part forming the current car park, at c. 6.5m above Ordnance Datum (aOD), and the smaller north-eastern part, at c. 5m aOD, which is currently open ground. The two parts are separated by a c. 1.5m high retaining wall topped by a metal post and rail fence. An electricity substation, not part of the site, lies along its eastern boundary.
- 2.2.2 The underlying geology of the site comprises Palaeogene sand, silt and clay of the Earnley Sand Formation, which are overlain by superficial Quaternary River Terrace Deposits comprising clay and silt 'brickearth' (British Geological Survey).

3. AIMS & OBJECTIVES

The aim of the archaeological evaluation was to determine the character, extent, date, condition and significance of archaeological resources surviving within the site, taking account of their potential to contain biological and palaeoenvironmental remains. The evaluation aimed to provide sufficient information, so that the future treatment of archaeological remains within the site, in respect of the proposed development, may be determined.

The evaluation trenches specific aims were:

- Does evidence of a berm survive between the outer face of the town wall and the western edge of the inner of the town ditches and does the berm contain evidence of Saxon settlement pre-dating the construction of the medieval defences (Trench 1)?
- Does evidence of the post-medieval artillery redoubt survive that can extend and build on the previous evaluation results by demonstrating the likely extent of the redoubt within the site (Trench 2)?
- Does the southern part of the site contain evidence of the inner and outer town ditches at depth i.e. below the level reached by the previous evaluation (Trench 3)?

4. METHODOLOGY

- 4.1 The initial phase of fieldwork comprised the excavation of three evaluation trenches. The trenches were mechanically excavated utilising a stepping-in technique to remove the threat of deep overhead sections whilst enabling good visibility and, potentially, access to deeply stratified deposits.
- 4.2 Trench 1 was located in the northwest area of the site adjacent to, and to the immediate south of, evaluation trenches T1 and T2 excavated by Southampton Archaeology (SA) on the site in 1994 (see Figures 2 & 4). The finished trench measured approximately 11m x 4.5m. The northernmost 2m of the trench was not excavated to any depth beyond the removal of the modern ground surface due to the presence of a limestone wall in the trench which hampered machine excavation in this area.
- 4.3 Machine excavation of Trench 1 was suspended at a depth of 1.2m below ground surface to allow for recording of the trench sections ahead of further, deeper, stepped machine excavation of the trench. Following monitoring and discussion between the Historic Environment Team Leader for Southampton City Council, CgMs and PCA it was agreed that machine excavation of Trench 1 cease at the attained level.
- 4.4 Trench 2 was located in the lower north-east corner of the site (see Figures 2 & 4). The trench was re-positioned approximately 0.5m to the east of the intended location to avoid disturbance to a breeze block retaining wall between the higher area of the site to the west and the lower area to the east, whilst retaining the alignment of the original trench. Machining in the southwest corner of the trench undermined the breeze block retaining wall in that area so it was decided to remove part of the retaining wall, thereby extending the southern limits of the trench. The trench sections were successively stepped in such a manner that safe entry into the trench was attained to a depth of approximately 3.5m below ground surface for recording purposes. The final metre or so, in depth, of trenching was recorded from the top of the lowest step.
- Trench 3 was located at the southern end of the site (see Figures 2 & 4). A 1m thick concrete foundation slab was encountered just below ground surface at the western end of the trench, however, a rectangular area measuring 5.5m x 4m was successfully removed revealing soft deposits below. The eastern end of the trench was greatly disturbed by both modern brick footings and an extensive cylindrical inspection pit leaving only two small rectangular areas (3m x 1.5m & 3.5m x 1.7m) that could be investigated by the machine. Subsequent to initial stepping at the western end of Trench 3, continued excavation resulted in both

the north and south facing sections becoming unstable due to the presence of extensive and deep post-medieval and modern drainage groundworks. It was, therefore, not possible to enter the trench to clean the sections and all recording was undertaken from the top of the trench.

- 4.6 Subsequent to the indeterminate results of the evaluations trenches it was decided that a further trench (Trench 4) be excavated based on an overlay of the historic maps of the site. Trench 4 was located centrally along the western area of the site in an attempt to locate the southern edge of the postulated post-medieval bastion as depicted by the historic maps. Its final position was also determined by the proposed piling location for the intended development (see Figures 2 & 4). Machining encountered a thick concrete foundation slab extending 6m from the southern trench of the trench which was left *in-situ*. Soft deposits were, however, encountered at the northern end of the trench. The finished dimensions of the trench were 9.4m x 2.5m. Trench 4 was not stepped but access to the trench was made by the concrete foundation slab at the southern end of the trench which formed a suitable step.
- 4.7 Subsequent to an interim report on the findings from the four trenches and the acquisition of a previously unconsulted historic map which provided, potentially, more accurate documentary evidence of archaeologically significant remains on the site, the HET requested that a further trench (Trench 5) be excavated based on an overlay of the historic map. Trench 5 was located between trenches 1 and 4 (see Figures 2 & 4).
- 4.8 It was decided that two machine excavated slots one at either end of the trench, be undertaken in order to rapidly assess the presence or absence of the bastion wall, previously encountered in Trench 2, within this area of the site. Whilst removing modern deposits at the eastern end of the trench, several large fragments of asbestos were identified within the spoil so machining was ceased immediately, the relevant parties informed, and this part of the trench backfilled.
- A second slot was mechanically excavated at the western end of the trench although the presence of a 1m deep concrete foundation slab restricted excavation to the south. The final dimensions of this slot measured 4.5m² and no evidence of the wall was located in this trench. Following further consultations it was decided that Trench 5 be extended both north and south to provide a contiguous length of trenching from Trench 1 to Trench 4 in an attempt to locate the southern edge of the bastion wall. The northern trench extension to Trench 5 measured 10m x 2.6m and the southern extension 10.5m x 3m. Unlike the previous trenches, Trench 5 and its extensions were not

stepped. The upper 1.5m of the east-facing section of Trench 5 was handcleaned following partial backfilling to allow safe access into the trench, otherwise the trench sections were recorded from the top of the trenches.

5. RESULTS AND DISCUSSION

5.1 Trench 1 (Figures 2 – 4; Plate 1)

- 5.1.1 Machine removal of the tarmac ground surface revealed a sequence of levelling and make-up layers (contexts 101 106) to an approximate depth of 0.7m extending across the trench. Beneath the modern make-up deposits and overlying post-medieval deposits, at the northern end of the trench, was a single course of a broadly E-W aligned limestone blocks (109). The limestones may have previously formed the base of a wall. The limestone course was truncated by the concrete footings and cast iron stanchions of later, modern buildings in several places.
- 5.1.2 Machining of deposits beneath the modern levelling layers south of wall 109 exposed a yellowish brown silty clay loam, 107, up to 0.7m thick which contained thin, irregular, dark greyish brown sandy clay loam lenses. In the south-facing section of the trench these lenses were clearly exhibited as alternating light and dark bands, whilst in the east-facing section they were seen to taper as they extended southwards. Beneath 107 was a dark greyish brown sandy clay loam layer, 108. The interface between the two layers was noticeably irregular and 108, similar to 107, tapered in thickness from the north end of the trench towards the southern end of the trench. A single sherd of Anglo-Norman scratched marked gritty ware and seven sherds of high - late medieval pottery comprising pitchers, jugs and cooking pots were obtained from context 108 (Trott, this report) whilst cleaning the trench. In addition, eight sherds of post-medieval pottery ranging in date from the late 17th to mid-18th century comprising panchions, chamber pots and jugs were recovered from this context. Ten fragments of animal bone from a variety of species was also recovered from **108**. A further two unstratified late – mid-18th century chamber pot sherds were recovered from the trench. Whilst clearly residual within postmedieval deposits the presence of pottery from earlier periods suggests activity from the post-Conquest period and onwards on the site.

5.2 Trench 2 (Figures 2 – 4; Plates 2 – 5)

5.2.1 The section of limestone wall previously exposed by Southampton Archaeology's 1994 evaluation Trench 1 – and interpreted as the outer wall of an artillery bastion - was encountered at a depth of 3.61m OD in Trench 2. Excavation revealed that this previously exposed section of wall formed part of

the upper course of a steeply battered N-S aligned limestone wall (209) which extended into both the north and south sections of the trench. The battered wall was measured to a depth of approximately 2.3m from its uppermost course to the bottom of the trench (circa 0.52m OD), where it cut into the waterlogged fills of the outer town ditch. Water ingress at the bottom of the trench obscured clear identification of the base of the wall which, presumably, was bedded on the underlying natural gravel. The outer face of the wall was composed of roughly rectangular limestone blocks bonded in a dark grey mortar containing charcoal inclusions. The use of this dark grey mortar is associated with structures of the 18th and early 19th century in Southampton (Garner, 1994, pp 6). The author has also encountered a similar bonding mortar within limestone structures at the early 19th century Royal Clarence Victualing Yard in Gosport. A N-S aligned domed red-brick culvert was encountered butting wall 209 low-down within the trench which utilised a similar dark grey mortar. Presumably, this mortar has some superior hardening properties over standard lime-mortar making it better suited to use in wet or waterlogged ground conditions.

- 5.2.3 Remnants of an upper, superstructure to wall 209 were exposed at a depth of 1.5m below ground surface (3.6m OD). This comprised irregular-shaped limestone blocks bonded in a soft creamy-white coloured mortar, offset by 0.2m to the west of the battered wall. The superstructure had been mostly robbed-out and the remaining wall was cut into by brick walls forming cellars at the rear of tenement buildings erected in the 1840s fronting onto Canal Walk. Whilst cleaning the remnants of the superstructure the dislodging of a large limestone block revealed a closely packed assemblage of clay pipes, oyster shell and an earthenware bottle. The clay pipe dates from the early 1840s (Trott, this report) and the assemblage was, most likely, deposited by builders when constructing the tenements lining Canal Walk. Two sherds of high-medieval pottery sherds and ten sherds of post-medieval pottery were recovered from wall 209 whilst hand-cleaning. The post-medieval pottery ranges in date from the late 17th mid-19th century and, given the nature of the disturbance of the wall, merely attests to activity on the site over an extensive period, although included within the assemblage are some sherds of high-status porcelain.
- 5.2.4 The surviving superstructure of the wall was overlain by a sequence of layers (201 206 and 215) some of which appeared to be present in the lower part of the west-facing section (context 225) and may, therefore, represent infilling of the ditch in front of the wall. Two sherds of mid-18th mid19th century Creamware were recovered from 225. The east and west sides of a cut (211)

was visible cutting infill deposit **202** in section above wall **209** and this may represent a robber trench associated with the robbing out of wall **209**.

- 5.2.5 At its southern end wall 209 was overlain by an east-west aligned limestone wall (210). The wall survived to a height of 0.3m below ground surface in the north-facing section of the trench whilst a section of the wall survived up to the height of ground level in the southwest corner of the trench following removal of the breeze block retaining wall. Wall 210 was of similar construction to wall 209, consisting of roughly rectangular limestone blocks bonded in a creamy-white lime mortar. Whilst wall 210 was observed to overlie wall 209 in the southwest corner of the trench its depth and thickness was not established. It is assumed that wall 210 is not contemporary with wall 209 as the arrangement of the walls deviates from the expected form of the bastion as depicted on Woolley's map and does not clearly conform to any of the known forms of bastion employed during the late 18th century. Furthermore, the arrangement of the walls would appear to compromise the integrity of what was intended as a defensive structure. A single tobacco clay-pipe bowl with a manufacture date of 1855 -1859 was recovered whilst hand-cleaning 210.
- 5.2.6 As this part of the site appears to be the most likely location of the course of the short-lived Southampton to Salisbury Canal —as indicated by the cartographic evidence- there is reason to question whether the walls might have an association with the canal. Even if wall **209** originally formed part of the bastion, it is questionable whether this section of wall could have been later incorporated into the canal and, together with wall **210**, formed a lock or part of a wharf, perhaps. How this arrangement would have functioned cannot be explained and is merely speculative; wall **210** may have a totally unrelated, later function.
- 5.2.7 A further, small section of limestone wall (229) was exposed in the south-west corner of the trench, and its eastern face was slightly set-back to the west of the western edge of wall 209 (see Plate 5). It may have previously overlain wall 209 prior to robbing-out, although its relationship with 209 was not established. Removal of the deposits overlying wall 209 revealed wall 229 extending to the west for c.1.4m where it appeared to cut a sequence of layers overlying what appeared to be natural brickearth between the western edge of the trench and the retaining wall dividing the upper and lower parts of the site, perhaps representing the berm between the inner and outer town ditches. To the immediate north of wall 229 and to the west of wall 209, machining revealed a north-south mortar surface c.1m wide overlying, what appeared to be, limestone

blocks which may represent either another north-south aligned limestone wall or demolition material from the robbing-out or demolition of walls **209** and, or, **229**.

5.2.8 At the fullest depth of the trench achievable by machine excavation was a blackish-blue waterlogged gravelly silt at an approximate depth of 4m below ground surface, representing waterlogged town ditch fills. In the west-facing section of the trench the tipping deposits visible overlying wall **209** in the east-facing section were visible at the base of the section overlain by a c.3m thick orange-brown gravel which represented the infill of a deep cut which extended across the entire eastern length of the trench. This cut possibly represents removal and infilling of the soft ditch deposits in preparation for the re-laying of Canal Walk, possibly sometime in the 1960s when the adjacent Palmerston House was constructed.

5.3 Trench 3 (Figures 2 – 4; Plates 6 & 7)

- 5.3.1 Two small rectangular trenches excavated at the eastern end of the trench revealed a sequence of eight deposits on a west to east tipline (337 344) spanning the two trenches. Blackish-blue gleys (351) were encountered at an approximate depth of 2.5m below ground surface in which the remnants of two *in-situ* wooden posts were identified. The posts have been identified as oak (by the author) and had been shaped into planks with tapered points. It is assumed that the posts were originally associated with the ditch, perhaps forming part of a bridge over the ditch. The gleys at the bottom of the trench represent waterlogged deposits within the town ditch and the overlying tipped deposits, infilling of the town ditch. Natural gravel (352) was exposed at a depth of 4.4m below ground surface within the trench. A solitary unstratified clay-pipe bowl of early-mid 19th century date was collected from within the area of the two trenches.
- Machining within the western area of Trench 3 exposed a sequence of modern levelling layers which, in the north-facing section, were cut by a modern service trench which ran at an oblique angle, and a modern pit or trench. In the south-facing section of the trench a sequence of layers with west to east tiplines was visible overlying the fills of a cut for a brick culvert, which was exposed at a depth of 3m below ground surface (3m OD). The cut for the culvert truncated a sequence of deposits at the western end of the trench comprising a mortar layer (356), which may represent a construction layer associated with the medieval town wall, beneath which was dark yellowish brown brickearth layer (359), and beneath that, natural brickearth (364). This sequence of layers overlying the natural may possibly represent layers forming the berm between the town wall

and ditch, although it was not possible to access the trench at this depth to investigate these deposits thoroughly. No features were observed cutting into these layers. At the eastern end of this trench the culvert cut a blackish blue deposit which probably represents infilling or silting-up of the inner town ditch.

5.4 Trench 4 (Figures 2 – 4; Plate 8)

- 5.4.1 Machining revealed a stratigraphic sequence comprising, from the top of the trench, alternate layers of concrete, tarmac and a further layer of concrete. Beneath these modern surfacing layers levelling and make-up layers (401 405) was a layer of cobbles laid lengthways and bedded in sand (406) which may represent a post-medieval yard surface or path.
- 5.4.2 In the west-facing section of the trench the cobble layer was underlain by a sequence of broadly, uniform thick gravel and clayey layers (407 - 415) which overlay a blackish-blue gley (416), representing the silting deposits within the town ditch. Two discrete features (410 & 411) were visible in plan cutting gravel layer 415. 410 was recorded as a sub-circular feature 0.6m in diameter and 0.36m deep, although in the east-facing section of the trench, which was adjacent to the western edge of the feature, the cut for this feature appeared to extend for approximately 0.5m in height where it cut layer 409. It's fill (417) was composed of a closely packed brick and mortar rubble. No finds were recovered from the feature. The uniform roundness of this feature gives the appearance of a large posthole rather than a pit, though this interpretation could not be substantiated. To the immediate southeast of 410 was a sub-square feature (411) measuring approximately 1m² with noticeably rounded corners. The feature was excavated to a depth of 0.22m and contained a primary fill (412) comprising a gravelly sandy clay with a small patch of charcoal evident centrally at the top of the fill. 412 yielded a substantial quantity of finds including 34 sherds of post-medieval pottery, 11 fragments of animal bone, clay-pipe, glass, oyster shell, brick fragments and several concreted lumps of slag which provide evidence of smelting (Morgan, this report). The pottery from 412 provides a date for the feature in the range of mid-18th – mid 19th centuries. Given the admixture of finds within this feature it is difficult to attribute an original function although the presence of iron slag from this feature indicates metalworking on, or near, the site. Given the proximity of features 410 and 411 there is a strong possibility that the features are associated although somewhat truncated by later Modern activity. The southern end of feature 411 was cut by an east-west orientated linear cut (413) which on further investigation was the cut for a modern service pipe.

5.5 Trench 5 (Figures 2 – 4; Plates 9 - 12)

- 5.5.1 The sections in Trench 5 revealed, at the top of the trench, a sequence of modern deposits comprising tarmac and concrete ground surfaces, make-up and levelling layers and a 0.9m thick concrete foundation slab in the southfacing section of the trench. Beneath the modern deposits was a 0.52m thick bluish black silty clay loam (517) which contained small oyster shell fragments throughout, which extended from the western trench edge on a west to east tipline towards the eastern end of the trench. A number of post-medieval glass fragments from a bottle were observed in this deposit, but not retrieved. Below 517 in the east-facing section was a 0.7m thick, firm, dark yellowish brown sandy clay loam (519), also on a west to east tipline. A single sherd of early mid-18th century Verwood dish was retrieved from **519**. Other than a few mortar inclusions 519 was otherwise uncontaminated. In the north-facing section two further, lesser, tipping deposits (518 and 508) were visible sandwiched between 517 and 519. Presumably, these tipping deposits represent post-medieval infills of the town ditch which suggests that the western edge of the inner town ditch would have been very close to the town wall here. At the eastern and of the trench the tipping deposits were cut by a brick culvert (509), which must be an extension of the culvert encountered in Trench 3, and which was sealed by a 1.2m thick homogenous clay loam (502).
- In the northwestern corner of the trench a linear feature (**503**) measuring up to 2.6m east-west and 1.6m north-south and 1.5m deep was cut by the town ditch (**501**). **503** contained two fills: a primary fill (**504**) which lined the cut and contained a substantial amount of unbonded limestone blocks of varying sizes and a secondary fill (**505**) which was a homogenous deposit with sparse limestone inclusions. Both fills were visible in the east and south-facing sections of the trench. Initially it was thought that this feature may be evidence of the southern edge of the bastion wall as shown on Woolley's 1791 map, however, as it was cut by the town ditch and bore no physical resemblance to the wall encountered in Trench 2 it would seem likely that it represents some earlier activity. Feature **503** cut natural brickearth (**506**) at the bottom of the trench and beneath the brickearth the blackish blue stained natural gravel (**507**) was encountered at a depth of 4.4m below ground surface.
- 5.5.3 Rather frustratingly, the course of the southern edge of the bastion wall on the site, as determined by overlay of Woolley's 1791 map, places it directly underneath an east-west aligned, 1m thick slab of concrete encountered in the trench. However, if the southern bastion wall was battered as in Trench 2, then

it seems likely that such a substantial wall would have been located within either the Trench 5 and northern extension to Trench 5 sections. The paucity of evidence for the bastion wall within Trench 5 suggests that it has, most probably, been removed by post-medieval and modern development.

5.6 Northern Extension to Trench 5 (Figures 2 – 4; Plates 13 – 15)

5.6.1 Machine removal of concrete ground surface in the northern extension to Trench 5 revealed a sequence of modern demolition deposits overlying a series of east-west orientated red brick walls and drainage pipes. Beneath the modern deposits at the northern end of the trench was a dark yellowish brown sandy clay layer (512) containing dark greyish brown lenses orientated on a northsouth tipline. This deposit is a continuation of layers 107 and 108 encountered in Trench 1 to the immediate north of this trench. Beneath the modern deposits at the southern end of this trench was a dark brown silty clay deposit (514) that extended 2m north from the southern end of the trench and tapered into the southern trench edge over its depth. This deposit may have represented the fill of a cut, however it was not possible to access the trench to hand-clean this area to clearly establish its boundaries. Deeper excavation of this trench revealed a 3m thick homogenous yellowish brown sandy clay (513) beneath 512 and 514 which sloped gently from north-south at its lower interface. Below 513 were two dark gleys (515 and 516) representing silting deposits within the town ditch. An assemblage of animal bone including a variety of species (Rielly, this report) was recovered from the lower deposit (516). Natural gravel was recorded beneath the gleys at a depth of 5.1m below ground surface.

5.7 Southern Extension to Trench 5 (Figures 2 – 4; Plate 16)

5.7.1 The stratigraphy recorded in the southern extension to Trench 5 comprised, from the top of the trench, a concrete ground surface layer which sealed a variety of modern make-up and demolition layers and the brick and concrete footings for pre-existing modern buildings. Beneath these modern deposits a 1.4m thick yellowish brown gravel make-up layer (500) was recorded, which was also present in Trench 5. This gravel overlay the yellowish brown silty clay backfill (502) of a brick culvert (also recorded in Trench 5) which flanked the western edge of the trench. Exposure of the brick culvert revealed an offshoot heading in a north-easterly direction. At the bottom of the trench the culvert cut the dark grey silting deposits within the town ditch (515).

6. THE FINDS

6.1 Pottery by Kevin Trott

Introduction

In total sixty-nine sherds of pottery representing thirty-nine vessels were submitted for examination. The pottery recovered ranges in date from the Saxo-Norman to the early modern periods. Where possible the codenames used for the archive of this site have been related to known Southampton codes (Brown 2002), although the fabric codes for the later post-medieval/early modern wares have not been officially printed, although recent work in the French Quarter (Brown in Brown & Hardy 2011) and elsewhere in the central Southern seaboard (Jarvis in Horsey 1992); (Barton in Fox & Barton 1986) & (Garratt & Osgood in Cunliffe & Garratt 1994) has listed the pottery assemblage based on the main manufacture centres. The Medieval and Post-medieval Type Series held in the Museum Stores on French Street, Southampton was consulted, along with the author's own Hampshire Type Series. Every effort was made to parallel the sherds found on this site with examples from the type series.

The assemblage was quantified by three measures: number of sherds, weight and vessel count within each context. Fabric identifications of some of the pottery was examined under x20 magnification. Recording of the medieval & Post-medieval assemblage was in accordance with the guidelines laid out in Slowikowski, *et al.* (2001).

Condition

The pottery is mostly in a slightly abraded to fairly fresh condition with sherd size mainly falling into the small to medium size range (below 50 grams). Only seven vessels are represented by more than one sherd and there are no cross-context joining sherds.

Overall Chronology and Source

A range of eight Saxo-Norman-to-medieval ware types and nine Post-medieval-to-early modern wares was identified; the type and general date range for these fabrics are shown in Tables 1 & 2. The Saxo-Norman to early modern period wares includes local and regionally/imported ceramics. A fairly limited range of vessels types was recovered in the Saxo-Norman/medieval periods included a range of cooking pots, jars and pitchers/jugs. During the Post-medieval/early modern periods the range of vessel types was more varied that included panchion/dishes, cups, plates, bowls, jug/flasks, chamber pots and lid.

Context	Southampton Fabric Codes	Full Name	Vessel	Spot date	Total sherds	Total vessels	Weight (g)
108	1007	Scratched marked gritty ware	Jar/Cooking pot	11 th cent- c.1250	1	1	3
108	1027	Well-fired sandy ware	Cooking pot	1350- 16 th cent	3	1	58
108	1044	Southampton white ware	Pitcher/Jug	1250- 1350	1	1	24
108	1123	Southampton sandy course ware	Pitcher/jug	1250- 1350	1	1	11
108	1230	Southampton High Street course ware	Pitcher/jug	1250- 1350	1	1	4
108	1257	Langerwehe Stoneware	Jug/Flask	1350- 16 th cent	1	1	7
209	1024	Southampton course ware	Cooking pot	1250- 1350	1	1	9
209	1034	Laverstock ware	Pitcher/jug	1250- 1350	1	1	9

Table 1: Medieval Pottery codes and date ranges with total quantities by sherd and vessel count

Context	Southampton Fabric Codes	Full Name	Vessel	Spot date	Total sherds	Total vessels	Weight (g)
108	1326	Verwood- type ware	Chamber pot	1680- 1750	1	1	44
108	1326	Verwood- type ware	Jug	1720- 1750	1	1	7
108	1326	Verwood- type ware	panchion	Early- Mid 18 th Cent	1	1	4
108	1326	Verwood- type ware	panchion	Early- Mid 18 th Cent	1	1	27
108	1326	Verwood- type ware	Panchion	Early- Mid 18 th Cent	1	1	7
108	1532	Post- medieval Red ware	Panchion	Late 17 th - Mid 18 th Cent	1	1	6
108	1532	Post- medieval Red ware	Chamber pot	Late 17 th - Mid 18 th Cent	1	1	19
108	1532	Post- medieval Red ware	Jug	16 th - 17 th Cent	1	1	2
112	1523	Post- medieval Red ware	Chamber pot	Early- Mid 18 th Cent	1	1	15
112	1532	Post- medieval Red ware	Chamber pot	Late 17 th - Early 18 th Cent	1	1	12

	T	T 144			Γ	T	Γ	
		Westerwald	Jug	Late 17 th -				
209	-			17 - 18 th	1	1	9	
				Cent				
		Chantilly	Green printed	1760-				
209	-	soft-paste	decorated	1800	1	1	58	
		Porcelain	plate					
		Pearl ware	Black printed	Early-				
209	_		decorated tea	mid	5	1	114	
			cup	19 th				
		Doulton	Ink bottle	Cent 1860-				
209	-	stoneware	ITIK DOLLIE	1900-	2	1	173	
		English	Jack/snob	Mid-				
		Salt-glazed	545.45.152	18 th -				
209	-	ware		early	1	1	7	
				19 th				
				Cent				
		Cream	Blue sponge	Late				
240		ware	printed	18 th -	4	4	4.4	
210	-		decorated coffee pot	early 19 th	1	1	11	
			conee por	Cent				
		Transfer-	Royal blue	Early				
210	_	printed	printed	19 th	1	1	13	
		ware	decoration	Cent		<u> </u>		
		Cream	Plate	Mid-				
225	_	ware		late	1	1	5	
				18 th				
		Croom	Divo printed	Cent				
		Cream ware	Blue printed decorated tea	Late 18-				
225	_	ware	cup	mid	1	1	3	
			Cup	19 th				
				Cent				
412	1326	Verwood-	Lid	1780-	1	1	321	
712	1020	type ware		1810	'	'	JZ 1	
440	1500	Post-	Panchion	1750-	46	4	1 622	
412	1523	1523 medieval Red ware		1780 16		1	1.622	
		Post-	Chamber pot	1750-				
412	1523	1523 n	medieval	Chambol pot	1780	7	1	301
		Red ware						
		Post-	Bowl	1780-				
412	1523	medieval		1810	2	1	166	
		Red ware						
		Cream	Plate	Late				
412	-	ware		18-mid 19th	1	1	5	
				Cent				
		Cream	Black & red	Early				
412	_	ware	external	19 th	1	1	8	
			printed Jug	Cent	<u> </u>			
		Pearl ware	Blue printed	Early-				
412	_		decorated	mid			4	
			plate	19 th			'	
		For all a la	Internal rade	Cent				
		English	Internal red & Black printed	Mid-				
412	-	salt-glazed	decorated tea	late 18 th	1	1	8	
			cup	Cent				
		Transfer	Royal blue	Early-				
412		Printed	printed	mid	1	1	1	
412	_	ware	decoration	19 th	'	'	' '	
				Cent				
414	1326	Verwood-	Pitcher/jug	1720-	2	1	115	
		type ware	Doval bloc	1750				
414	-	Transfer Printed	Royal blue	Early- mid	1	1	1	
1	İ	riiitea	printed	HIIU		Ī	Ì	

Ī			ware	decoration	19 th			
					Cent			
	519	1326	Verwood- type ware	Panchion/dish	Early- Mid 18 th century	1	1	35

Table 2: Post-medieval codenames and date ranges with total quantities by sherd and vessel count

Anglo-Norman

A single relatively un-abraded sherd of Saxo-Norman Scratch-marked ware (SOU 1007) was recovered from Context (**108**). In Southampton Brown (2002, 9) suggests that this fabric appears in the post-Conquest period and flourishes throughout the 12th century, but to date, cannot be dated with certainty to the late Saxon period. Its presence on a site within the medieval town is an indicator of post-Conquest activity.

High Medieval

Overall, five of the pottery vessels recovered from the site can be dated to the high medieval period, between c.1250 to c.1350. Four of the five sherds recovered from Contexts (108) and (209) derived from Pitchers or jugs with a single fragment from a Cooking pot from Context (209) in a local Southampton coarse ware fabric (SOU 1024). This fabric is a finer version of SOU Fabric 1123 that survived in Context (108) as a splashed olive green glazed rod handle from a pitcher/jug. Two further pitcher/jug sherds from Context (108) were locally produced wares of Southampton White ware (SOU 1044) and Southampton High Street Course ware (SOU 1230). Both these products were found in a batch of wasters in Southampton High Street (Brown 2002, 13-14). A slightly abraded pitcher/jug sherd of Laverstock wheel-thrown sandy ware (SOU 1034) was found within Context (209). This was the only example from the site of a local import from the kilns near Salisbury.

Late Medieval

The two un-abraded late medieval sherds found on the site (Context **108**) consisted of the body fragment from a cooking pot, from a well-fired Sandy ware fabric (SOU 1027), and the lower body sherd from an imported Rhenish Langerwehe Stoneware (SOU 1257) jug or flask.

Thirty-one vessels of post-medieval to early modern type and date to between the mid-late 16th and mid-late 19th centuries. A large proportion of the earthenware sherds recovered from the site consisted of eight Verwood-type wares (SOU 1326) and eight Post-medieval red wares (4 x SOU 1523 & 4 x SOU 1532). The vessel types consisted of chamber pots, panchion's, jugs,

bowls and a lid. The earliest fabric was SOU 1532 that was mainly recovered from Context (108). These vessel forms were characteristic of ceramics common in either the 16th to 17th centuries that were phased out in the early 18th century when Fabric SOU 1523 dominated, along with the Verwood vessels of Fabric SOU 1326. A single decorated body sherd from an imported Westerwald jug from the Low Countries of late 17th to 18th century date was recovered from within Context (209).

Five late 18th-mid 19th century Cream ware products were found in Contexts (210), (225) & (412) and mainly consisted of tableware's (cups, plates, jug and a coffee pot). Further tableware's of similar date consisted of a Pearlware cup (Context 209) and plate (Context 412); also a single English salt-glazed tea cup also from Context 412). An imported French Chantilly porcelain plate dated to around 1760-1800 was found in context (209), its presence suggests some status.

The latest vessels that were recovered from the site (Contexts (210), (412) & (414) consisted of several early-mid 19th century Transfer printed plates with Royal blue printed decoration. It was probably around the middle of the 19th century when a Doulton stoneware ink bottle was discarded within Context (209).

The last ceramic item that is worth noting was recovered from Context (209) and it was a complete Jack or Snob made from English salt-glazed ware with a light blue underglaze and side serrations. The date of the gaming piece is based on the ceramic material that is salt-glazed ware and a mid to late 18th century date should be considered.

Summary and Recommendations

This small assemblage indicates Anglo-Norman to later medieval activity in this area of Southampton. The presence of the Langerwehe Stoneware vessel (SOU 1257) and the Post-medieval red ware jug (SOU 1532) suggests continuity of occupation/activity into the 16th century that continued (based on the ceramic evidence) into the early modern period. The assemblage is too small to suggest the nature or extent of this occupation. But the presence of imported post-medieval wares and tableware's indicates some prosperity in the discarded material on site. It is recommended that the entire assemblage is retained for future study.

BIBLIOGRAPHY

Barton, K.J., 1986, 'The Pottery' in Fox, R & Barton, K.J, Excavations at Oyster Street, Portsmouth, Hampshire, 1968-71. Post Medieval Archaeology **20**. 79-184.

Brown, D.H., 2002, Pottery in Medieval Southampton c.1066-1510. CBA Research Report. **133**.

Brown, D.H., 2011, 'Pottery' in Brown, R & Hardy, A. Trade and Prosperity, War and Poverty. An Archaeological and Historical Investigation into Southampton's French Quarter. Oxford Archaeology Monograph 15. 117-142.

Garratt, B. & Osgood, R., 1994, 'The Post-Medieval Pottery' in Cunliffe, B & Garratt, B, Excavations at Portchester Castle. Volume V: Post Medieval 1609-1819. Society of Antiquaries of London Research Reports **52**. 70-83.

Holling, F., 1971, 'A preliminary Note on the Pottery Industry of the Hampshire-Surrey Borders' Surrey Archaeological Collections **75**, 295-301.

Jarvis, K.S., 1992. 'Catalogue of the Pottery' in Horsey, I.P. Excavations in Poole 1973-1983. Dorset Natural History and Archaeological Society Monograph 10.62-130.

Slowikowski, A. Nenk, B. & Pearce, J. 2001. 'Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics'. Medieval Pottery Research Group. Occasional Paper 2.

6.2 Clay-Pipe by Kevin Trott

Introduction

In total of fifty-five fragments of clay tobacco pipe were recovered from the archaeological investigations, consisting of twenty-one bowl fragments, thirty-two stem fragments and two mouth-pieces. The assemblage contains no stamped or moulded marked pipes, but there are eighteen stamped heel marks dating from the late 18th century onwards.

Discussion

Most of the clay pipe assemblages are small apart from a modest-to-smallish group from Context (209). This group of pipes came from the excavation of the north-south aligned retaining wall of the Artillery Bastion and spans the late 18th to mid/late 19th century. It was noted during the study of these pipe fragments that several stem pieces and a stem/heal were exhibiting mortar that was attached to the outer surfaces and within the perforated bores.

Of the forty-seven clay pipe fragments from (209) fifteen marked heals represented three different makers; G H (George Harding of Southampton), A C (Arthur Coster of Fareham) & W M (William Martell of Portchester) who were working between 1780's to 1871. The majority of the marks relate to the principal Southampton pipe maker George Harding who ran his business from c.1843-1871. This date is supported by the single example of a William Martell pipe that is attributed to a date of 1871-1872. The remainder of this bowl assemblage included a marked pipe of Arthur Coster who was a pipe manufacturer in Fareham at the turn of the 19th century and an unmarked plain bowl of 19th century style.

The remainder of the tobacco pipe assemblage from the site included a bowl with simple ridging from Context (**210**) that is probably a product of James Russel and John Gates of Portchester who were producing pipes in 1855-1859. A single plain 18th-19th century stem was present in Context (**225**), along with three plain stems of similar date from Context (**412**). Context (**300**) contained a plain bowl of a style attributable to the early-mid 19th century.

Context	Total	Weight (g)	Туре	Description	Date
					Range
			Bowls with leaf	Fresh with a few	
			decoration seams	examples exhibiting	
209	11	119	and a relief-	soil staining on exterior	1843-1871
203	- ' '	119	moulded mark on		1043-1071
			the sides of the		
			heal reading GH		
			Bowls with flutes &	Fresh-slightly abraded	
			loops round lip	with soil staining on	
209	5	28	also a relief-	exterior	1843-1871
203	3	3 20	moulded mark on		1043-1071
			the sides of the		
			heal reading GH		
			Bowl with	Fresh with soil staining	
			decorated bottle &	on exterior	
			glass motif with a		
209	5	40	relief-moulded		1843-1871
			mark on the sides		
			of the heal reading		
			GH		
			Bowl with leaf	Fresh	
			decoration seams		
209	1	22	& flutes with a		1775-1790
			relief-moulded		
			mark on the sides		

			of the heal AC		
			Bowls with leaf	Fresh with soil staining	
			decoration seams		
209	1	13	and a relief-		1871-1872
203	'	13	moulded mark on		1071-1072
			the sides of the		
			heal reading WM		
			Bowl with leaf	Fresh with burning	
			decoration seams	patches on exterior	
209	2	12	without a relief-		19 th Century
203		12	moulded mark on		15 Century
			the sides of the		
			heal		
			Plain stems	Fresh-slightly abraded	
209	21	89		with some soil staining	19 th Century
				and mortar adhering	
209	2	9	Plain mouth pieces	Fresh with some soil	19 th Century
	_	-		staining	,
			Bowl with simple	Fresh	
210	2	13	ridging and leaf		1855-1859
	_		decoration on		
			forward seam		
225	1	7	Plain stem	Fresh	18-19 th
		•			Century
300	1	9	Plain bowl	Slightly abraded & soil	Early-mid
				stained	19 th Century
412	3	11	Plain stems	Fresh with some soil	18-19 th
				staining	Century

Table 3: Clay Tobacco Pipe Inventory

Recommendations

The clay tobacco pipe is in a very good condition with an excellent 19th century group from Context (**209**). The assemblage was associated with other dateable artefacts that include pottery. These pipe fragments should be retained for future study with the remainder of the archive.

References

Barton, K.J., 1986, 'Clay Tobacco Pipes' in Fox, R & Barton, K.J, *Excavations at Oyster Street, Portsmouth, Hampshire, 1968-71*. Post Medieval Archaeology **20**. 185-223.

Fox, R.T. & Hall, R.B., 1979. *The Clay Tobacco Pipes of the Portsmouth harbour Region 1680-1932*. Privately Published.

Garratt, B., 1994, 'Clay Pipes' in Cunliffe, B & Garratt, B, *Excavations at Portchester Castle. Volume V: Post Medieval 1609-1819.* Society of Antiquaries of London Research Reports **52**. 89-97.

Higgins D.A., 1999, 'The Clay Tobacco Pipes' in A. Connor and R. Buckley (ed.), *Roman and Medieval Occupation in Causeway Lane, Leicester.* Leicester Archaeology Monograph **5** 215-234.

Higgins D.A., 2011, Clay Tobacco Pipes' in Brown, R & Hardy, A. Trade and Prosperity, War and Poverty. An Archaeological and Historical Investigation into Southampton's French Quarter. Oxford Archaeology Monograph 15. 199-207.

Markell, D.J. 1992. 'The Clay Tobacco Pipes' in Horsey, I.P. *Excavations in Poole 1973-1983*. Dorset Natural History and Archaeological Society Monograph **10**. 159-175.

Markell, D.J. 1994. 'The Clay Tobacco Pipes' in Watkins, D.R. *The Foundry; Excavations on Poole Waterfront 1986-1987*. Dorset Natural History and Archaeological Society Monograph **14**. 56-59.

Oswald A., 1975, *Clay Pipes for the Archaeologist*. British Archaeological Reports **14**, 48-49. Oxford.

Trott, K. 2001. 'The Clay Pipes; in Trott, K. *The Excavation of a Post-medieval midden located during a watching brief at Riverway Industrial Estate, Newport, Isle of Wight*. Proceedings of the Isle of Wight Natural History and Archaeological Society. Volume **17**. 41-55.

6.3 Ceramic Building Material by Kevin Trott

Introduction

Nine fragments of ceramic building material weighting 1014g in total, were submitted for examination. The material ranges in date from the medieval to early modern period. The fragments were examined under x20 magnification. The resulting archive was then recorded using Poole's in Brown & Hardy (2011) Type series.

Condition

The material recovered is in a variable, but stable condition. The fragments are in a highly abraded to fairly fresh condition and individual fragment sizes varies from medium (35 grams) to large (468 grams).

The Ceramic Building Material

A limited range of ceramic building material, mainly comprising of undiagnostic flat peg tile, was examined along with a single glazed ridge tile and a modern drain pipe fragment. The types are shown in Table 4.

Context	Total	Weight (g)	Full name	Description	Date Range
325	1	468	Ridge Tile	Brushed olive green glaze with streaks of white glazing on the exterior triangular crested ridge tile, with straight sides converging to an angular apex surmounted by the crest (SOU Type 1a Fabric D).	c.1250-c.1350
325	1	119	Drain pipe	Vitrified salt glazed drain pipe fragment with mortar adhering to the exterior surface and three opposing side fractures.	Late 19 th -20 th Century
327	3	224	Peg tile	Three con-joining peg tile pieces (SOU Fabric C) traces of mortar on upper face with one fragment displaying a kiln- blown trapped-air blister that had on erupted onto either opposing faces	Mid-13 th -16 th Century
412	2	96	Peg tile	Two fragments of very high-fired sandy fabric with evidence of sooting on the underside and side fractures of one example	18 th -19 th century

				Two pieces of peg	
				tile (SOU Fabric C)	Mid-13 th -16 th
414	2	107	Peg tile	with an example of a	
				circular peg hole	Century
				(12mm wide)	

Table 4: Ceramic Building Material Code names and Total Quantities by fragment count and weight

The make-up layer (325) produced a large fragment from a triangular crested ridge tile that conformed to Poole's Southampton Fabric D (2011, 147) that was identified, not only in fabric but style, within the excavations of the French Quarter in Southampton (Brown & Hardy 2011). Five pieces of peg tile in Poole's Fabric C (2011, 147) were recovered from the tipping/infill deposit of the inner ditch (327) and from the fill (412) of pit [411]. It was of note that the tile from Context (327) exhibited 'trapped air blistering' usually associated with kiln waste material, this tile although warped it was probably sold or utilised as a second.

The presence of later peg tile fragments from the fill (414) of the service trench [413] and the mortared fragment from a salt-glazed drain in (325). Indicate the presence of later post-medieval buildings and services in this investigated area of Southampton.

Recommendations

The ceramic building material recovered dates to the High medieval period to the later post-medieval/early Modern periods. The tile probably suggests the presence of buildings of this period in the vicinity of the site. The presence of the glazed ridge tile indicates some affluence. These tile fragments should be retained for future study with the remainder of the archive, excluding the Saltglazed drain, which should be discarded.

References

Poole c., 2011, 'Ceramic Building Material' in Brown, R & Hardy, A. Trade and Prosperity, War and Poverty. An Archaeological and Historical Investigation into Southampton's French Quarter. Oxford Archaeology Monograph 15. 147-162.

6.4 Animal Bone by Kevin Rielly

Methodology

The bone was recorded to species/taxonomic category where possible and to size class in the case of unidentifiable bones such as ribs, fragments of longbone shaft and the majority of vertebra fragments. Recording follows the

established techniques whereby details of the element, species, bone portion, state of fusion, wear of the dentition, anatomical measurements and taphonomic including natural and anthropogenic modifications to the bone were registered. The shoulder height estimates used in this report are based on the calculations described in Boessneck and von den Driesch (1974).

Description of faunal assemblage

The site provided a total of 37 bones, these arising from 6 deposits, as shown in Table 5. Three out of the five deposits could be dated while one remains unstratified. It should also be pointed out that the bone contents of context **516** were retrieved from the spoil heap and will represent a selection of the bones deposited in this fashion. The ditch deposits refer to the contents of the town ditch, while the wall **209** has been associated with the 18th century artillery bastion mentioned above. However, the late date of this deposit suggests the bones are likely to have derived from an adjacent waste dump probably associated with general city refuse, possibly from the tenement buildings built nearby in the mid-19th century.

The ditch fills, both in Trench 4, provided a wide range of species and skeletal parts including, from 516, a cattle and sheep/goat pelvis, an equid scapula, a dog mandible and pelvis, two cat humerii, a chicken ulna and a sheep-size rib. There were a further two equid parts, a radius and a metacarpus within ditch fill 351, these possibly derived from the same animal and maybe including the scapula from 516. This was clearly an adult, robust in build and with a shoulder height (calculated from the metacarpus) of 1542.2mm. Its size and stature would suggest it was similar to the Cleveland Bay, a 'breed' commonly used for pack and pillion work and, from the early post-medieval period, for pulling coaches. The two dog bones may also represent the remains of a single individual, again adult, while the cat humerii are clearly from two different animals, a sub-adult and a juvenile. There are no obvious indications from these bones to suggest a likely date (see the 'late' attributes described below). However, the size of the equid bones would perhaps suggest a post-medieval rather than medieval date, this based on the evidence compiled regarding medieval and post-medieval horses from London and Winchester (see Rackham 1995, Cowie and Pipe 1998, 243, Yeomans et al in prep and Serjeantson and Rees 2009, 153).

Context:	351	516	108	412	209	112
Description:	ditch	ditch	layer	pit 411	wall	unstrat
Species						

Cattle		1	3			1
Equid	2	1				
Cattle-size			2	4	1	
Sheep/Goat		1	1	3		
Pig			1		1	
Sheep-size		1	3	4	1	
Dog		2				
Cat		2				
Small mammal		1				
Chicken		1				
Grand Total	2	10	10	11	3	1

Table 5. Distribution of hand collected animal bones by context and context description.

Bones from the dated later deposits include the 18th century contents of layer 108 with a cattle femur and third phalange (both probably from adult animals); a sheep ulna and pig mandible (juvenile); plus a cattle-size limb bone fragment and a sheep-size rib. The pit fill 412 provided a more sheep-size orientated collection with three sheep metapodials (foot bones) and four sheep-size ribs complimented by a cattle-sized vertebral fragment and three indeterminate pieces. Two of the three metapodials were complete allowing the calculation of shoulder heights, one at 611.5mm and the other at 749.6mm. These and in particular the latter, are clearly from large animals. These are likely taken from late 18th/19th century improved 'types' (see Rixson 2000, 215). It should be pointed out, however, that notably large sheep do occasionally appear somewhat earlier, as for example at late 17th/early 18th century Aldgate in London (Armitage 139-140), here interpreted as Lincolnshire or Leicestershire longwools. Finally, there are the bones from the wall 209. Two out of the three bones in this small collection are clearly taken from 'improved' types, a juvenile pig tibia which is short and robust, and a rather large cattle-size rib. Both bones have also been sawn, the former about one third down from the proximal end. The use of the saw as a butchery tool dates approximately to the end of the 18th century, moving into the 19th century (Albarella 2003, 74).

Conclusion and recommendations for further work

The animal bones from this site clearly provide some insight into animal usage during the post-medieval occupation of Southampton. It can be supposed from the available dating evidence and the complimentary animal bone data (the 'late' attributes) that this collection principally derived from the later part of this period. There are too few bones, however, to warrant any detailed analysis and for this reason it is recommended that no further work be undertaken on these bones.

References

Albarella, U. 2003. Tawyers, tanners, horn trade and the mystery of the missing goat, in Murphy, P. and Wiltshire, E.J. 2003. *The Environmental Archaeology of Industry*. Symposia of the Association for Environmental Archaeology No.20, Oxbow Books, 71-86

Armitage, P, L, 1984 The faunal remains, in Thompson, A, Grew, F, and Schofield, J, Excavations at Aldgate, 1974, *Post-Medieval Archaeology*, **18**, 131-144

Boessneck, J and von den Driesch, A, 1974, Kritische anmerkungen zur widderristhöhenberechnung aus Längenmassen vor und frühgeschichtlicher tierknochen, Saugetierkdl Mitt 22 (4), 325-48

Cowie, R, and Pipe, A, 1998 A late medieval and Tudor horse burial ground: excavations at Elverton Street, Westminster, *The Archaeological Journal*, **155**, 226-251

Serjeantson, D, and Rees, H, (eds.) 2009 Food, craft and status in medieval Winchester: The plant and animal remains from the suburbs and city defences, Winchester Museums & English Heritage

Yeomans, L, Bendrey, R and Rielly, K, in prep, Horse remains from 21-23 London Road and the Kingston Rotunda, in Darton, L., Jarrett, C., Leary, J. and Mayo, C. New evidence for medieval pottery and tile production in Kingston-upon-Thames: Excavations at three multi-period sites on London Road', PCA Monograph Series

Rixson, D, 2000 The History of Meat Trading, Nottingham University Press

6.5 Slag by Dr. Grahame Morgan

Descriptions

Context (414) [1]. A dense grey spheroidal lump, weighing 230g. A section cut through this sample shows it to be composed of a grey powder containing flakes of rust, fragments of a brass-like copper alloy and small pieces of chalk or lime. Chemical tests with dilute hydrochloric acid showed it to be very calcareous, giving a pale green solution and a grey precipitate. The presence of lead was shown by reaction of a nitric acid solution tested with potassium iodide, which gave the typical bright yellow colour of lead iodide. The whole is some form of lead powder with traces of rust, chalk and copper alloy fragments. A sample completely fused when heated to 750°C. It would appear to be the residue from some unknown metal working process.

Context (414) [2]. Four pieces of slag-like material.

Context (414) [3]. A piece of vitrified to sintered vesicular clay furnace lining, with a glassy slag coating. 140g.

Context (414) [4]. Partly vesicular black glassy slag with some rust attachments. 363g.

Context (414) [5]. Black glassy material with small vesicles and some rust. 98g.

Context (414) [6]. Grey green opaque glassy slag-like material with some rust concretions. 826q.

Conclusions

The whole collection is very similar to the slag from a cupola furnaces used to re-melt cast iron. Such furnaces were used from the 19th to the 20th centuries and possibly earlier.

6.6 Metalwork by Kevin Trott

Introduction

Two single metal objects, one of iron and one copper-alloy were recovered from the archaeological investigations at the NCP Car Park, Back of the Walls in Southampton. The iron object (Context 112), comprised a corroded rectangular headed nail and shank from a horseshoe. The second metal object (Context 412) consisted of a complete cu-alloy nail with flat circular head and square shank. As individual artefacts, both the iron and Cu-alloy nails are of a type and style that have a long lifespan and to date the nails individually would be problematic.

Catalogue

Iron Object

(112) Plain rectangular-profiled nail head (0.05 x 0.03mm) with rectangular shank tapering to point; length 24mm; thickness 0.4 x 0.02mm. Weight 2 grams.

Copper Alloy Nail

(412) Plain circular-headed nail (0.07m diameter) with square tapering shank; length 35mm; width 0.2mm. Weight 1 gram.

References

Clark, J., 2004. The Medieval Horse and its Equipment: Medieval finds from excavations in London c.1150-c.1450. Museum of London. 5. London.

Garratt, B. 1994. 'The Small finds' in Cunliffe, B & Garratt, B. *Excavations at Portchester Castle, Volume V: Post Medieval 1609-1819.* Society of Antiquaries Research Report **LII**, 98-129.

Rees, H., Crummy, N., Ottaway, P.J. & Dunn, G., 2008. *Artefacts and Society in Roman and Medieval Winchester: Small finds from the suburbs and defences,* 1971-1986. Winchester Museums & English Heritage.

6.7 Glass by Kevin Trott

Introduction

In total five fragments of glass from two vessels were recovered from the retaining wall of the artillery bastion (209) and from the fill (412) of pit [411].

Discussion

The two con-joining fragments from Context (**209**) consisted of a near-complete tumbler in blown clear glass with panelled decoration down the sides. This type of glass tumbler was stylistically characteristic of later 18th century vessels that continued into the first part of the 19th century. An identical example to the Southampton vessel was recovered from the excavations at Portchester Castle in Hampshire (Cocroft, 1994, 84-88).

The second vessel recovered from Context (412) consisted of three isolated fragments of body glass (one showing signs of heat alteration) from a single dark green wine bottle of a style characteristic of an 18th century date.

Recommendations

The glass assemblage recovered from the site in Southampton comprises of vessel glass relating to later post-medieval period. The fragments retained are in a stable condition but show future signs of laminating that will require conservation if retained for long term storage. No further analysis is recommended of the assemblage.

References

Cocroft, W., 1994. 'The Glass' in Cunliffe, B & Garratt, B, *Excavations at Portchester Castle. Volume V: Post Medieval 1609-1819.* Society of Antiquaries of London Research Reports **52**. 84-88.

Willmott, H., 2002. *Early post-medieval vessel glass in England c.1500-1670*. CBA Research Report **132**. York.

6.8 Mollusca by Kevin Trott

Introduction

Molluscan faunal remains taken from investigations at the NCP Car Park, Back of the Walls in Southampton were assessed as an indication of the preferred species and size classes utilised for the diet of human inhabitants. Molluscs are a valuable food source for humans as they are rich in source of proteins. As a food resource molluscs are generally available all year round and can be readily

collected even from exposed shores, providing tidal cycles for allowing of foraging throughout the range of the eulittoral zone. In addition to the information from the species assemblage was used to indicate the dietary requirements of humans using the range of contexts on the site as a disposal point, the range of molluscan fauna collected can also suggest the habitat and environmental conditions from where they were collected and thus suggest distances travelled and efforts expended in their collection. There is usually little doubt that the molluscs were brought to the site by human activities (Deith 1985) and through assessment of the species present the nature of the human foraging activity can be inferred.

The comparison of size and infestation of oyster shells has been used by Winder (1992) to study the sources and exploitation of oysters in the past and her methods were used here. Shells of oysters (*Ostrea edulis*) were recovered from post-medieval to early modern context groups and were analysed by measuring size and recording the infestation and other shell characteristics. The objective was to find evidence for the source of the oysters and to detect any changes in their exploitation during the phases of the site.

Methods

The molluscan fauna from the excavations was not abundant across the whole site evaluated considering all complete and fragmented shell was retained from the site. The best group of marine shell was recovered from the retaining wall of the artillery bastion (209). Therefore based on the limitations of the shell retained they were considered by context or contexts grouped into sufficient numbers for the analysis (Table 6). The oyster shells were sorted into left and right valves and length and width measured (Table 7). The oysters were also examined for infestation by marine worms, sponges, barnacles and other organisms and for the attachment of young oysters. The condition and any unusual characters of the shells were also recorded together with the presence of notches or cut marks (after Winder 1992).

The percentage of all measured shells with each infestation or character was calculated (**Table 6**). The most useful dimension for comparison is the largest diameter, either width or length, of the left, cupped valve. This gives the maximum size of the live oyster as the flat, right valve lies inside it. This measurement (left valve maximum diameter, (LVMD) is used for the survey of modern oyster populations. For each group the mean maximum left valve diameter and standard deviation were calculated to compare the groups.

The general shape of the oysters was quantified simply by dividing the width by length so that those with a ratio of more than one were classified as broad, those less than one as long. The proportion of long shells was calculated. The relationship of width to length was examined by calculating the regression line for representative groups. The numbers of shells measured for each group of contexts, the minimum number (the largest number of either left or right valves totalled for the group including broken shells), and the percentage of broken unmeasurable shells were recorded. This data would assist in whether human foraging activities had influenced population size frequency distributions thus implying an impact on shellfish resources.

Results

Common oysters (*Estrea* edulis) made up 84% of the shellfish diet from the assemblage retained from the site, with the common cockles (Cerastoderma edule) making up the remaining 16% from post-medieval to early modern contexts.

Oysters

Attaching via calcareous cement the oysters attains the form of the substrate on which they reside and due to this they can 'exhibit a great variability size and other characteristics' (Cox & Herne 1991). Generally the oysters occur in dense beds in creeks and estuaries and also grow sub-littorally this is commonest in the south-east and west of the United Kingdom waters (Yonge 1949 and Haywood et al., 1996). Oysters can regularly grow up to 4 inches in diameter (9.7cm) but those recovered from the site were generally smaller than this. The average length for the oyster shells, based on the left valves, was between 65-106mm, with the width sizes ranging between 45-109cm. The lower shells (right valves) from the sample were generally flat further indicating a very low energy fine sediment habitat than the irregular shell valves that are suggestive of cramped environmental constraints. The irregular valves are also indicating the attachment to an undulating slightly cobble environments like an estuary or sheltered bays and are more typical of natural breeding populations. The only examples of oysters from this environment were three examples identified in Context (209). The growth lines (Winder 1980, 121-127) on the valves from all medieval phases appeared to have very rapidly perhaps indicating favourable climate and nutrients.

The assemblage also showed limited signs of infestation on the oyster shells retained in contexts (108), (225) & (412). The infestation on the left valves from (209) were caused by invertebrates that attack the oyster, or attach themselves

to the shell, and have specific ecological requirements and sometimes distinct distributions in nature. Evidence of infestation of oyster shells may indicate the location of the oyster beds being fished. Animal encrustations on the inner surface show that the shell has been lying on the sea bed after the death of the oyster which is therefore probably the result of natural causes rather than dredging practices. No examples were found within the Southampton assemblage. Although one left valve did exhibit tine perforation from an oyster rake.

Freshly-dredged live oysters are frequently covered by all manner of organisms including soft-bodied animals, like sea squirts and sponges, and seaweeds. In the oyster shells recovered from the site the only evidence to survive comes from those creatures that have left characteristic marks such as bore-holes in the shell or have left hard parts attached to the valves. The occurrence of these types of evidence was recorded for each measurable valve.

The pattern of infestation in the shells helps substantiate the idea that variability in appearance can be used to determine the location of the beds from which they were fished and can reflect changes in the substrates of the Harbour/bay or sea bed. There were four main types of evidence for infestation and encrusting organisms. These were the bore-holes of gastropod molluscs such as *Ocenebra ernacea*. The honey-comb borings of the sponge *Cliona celata* and the calcareous tubes of worms like *Pomatoceros triqueter*. This type of infestation was noted on the vast majority of the left valves recovered from Context (209) along with the acorn barnacles of *Balanus crenatus*.

Discussion

The assemblage of oyster valves from the site located within the limits of the former walled medieval town of Southampton, has indicated a wealth of information regarding the source of the oysters. The oyster from the site indicate, based on their encrustations, they derived from both farmed harbour grown species and from natural breeding populations within coastal bays.

The retained oyster valves from the Southampton site were broadly similar in size, growth as well as geographical indicators that were identified on the individual valve infestations. The morphology of the shells recovered are broadly contemporary with modern samples recovered by the author, during oyster seasonal oyster dredging off Stanwood Bay located to the west of Calshot Point in the Western Solent and from Southampton Water/Itchen River.

Conclusions

The shellfish remains from site indicate a strong preference for oysters with little consumption of other mollusc species. The average size of the oysters consumed at the site reflected medium-to-large sized oysters were harvested, although some smaller oysters were also recovered.

The ratio of right and left valves was broadly equal overall and this was prevalent within the assemblage from Context (209) where 55% of the valves were from the left saucer-shaped valve that contains the oyster meat and indicative of consumed food waste (Somerville, 1997, 167-169). The flatter right valves are usually associated with food preparation waste and there was 45% of the valve from this context. The ratio of left and right valves from Context (209) would indicate both food preparation and post-consumption waste were integrated together prior to disposal.

The source of the molluscs recovered from the site were likely to have been collected or dredged in deeper water as well as raked from the intertidal lower shore zones when tides were suitable. The oyster and cockle species are all from a natural growing population occurring within Southampton Water and the shallower bay waters along the northern seaboard of the Solent and its riverine tributaries.

The results of a study of the marine molluscs from the site would need to be compared with other excavated marine shell assemblages from either future work on the site and from the surrounding environs of Southampton.

References

Deith, M.R. 1985. Seasonality from shells: an evaluation of two techniques for seasonal dating of marine molluscs. In *Palaeobiological Investigations*. *Research and Design, Methods and Data Analysis*. Fieller, N.R.J., Glibertson, D.D. and Ralph, N.G.A. (eds) *Symposia of the Association for Environmental Archaeology* **5B** BAR International Series 266.

Hancock, D.A. & Franklin, A. 1972. Seasonal changes in the condition of the edible cockle. *Journal of Applied Ecology* **9**, 567-579.

Milne, G. 2003, Fish on Fridays. In *The Port of Medieval London*.105-114. Tempus.

Monckton, A. 1999. Oysters. In Connor, A & Buckley, R. *Roman and Medieval Occupation in Causeway Lane Leicester*. Leicester Archaeology Monographs **5**, 337-343.

Somerville, E.M. 1997. Marine Shells. In Lyne. M. Lewes Priory: Excavations by Richard Lewis, 1969-1982. Lewes Priory Trust.

Winder, J.M. 1980. The Marine Mollusca. In Holdsworth, P. *Excavations at Medbourne Street, Southampton, 1971-1976.* Southampton Archaeological Research Committee Report 1. CBA Research Report 33, 121-127.

Winder, J.M. 1991. Marine Molluscs. In Cox, P.W & Hearne, C.M *Redeemed* from the Heath. The Archaeology of the Wytch Farm Oil Field 1987-1990. Dorset Natural History and Archaeological Society **9** 212-216.

Winder, J.M 1992. Marine Molluscs. In Horsey, I.P. *Excavations in Poole 1973-1983*. Dorset Natural History and Archaeological Society **10** 194-200.

Winder, J.M 1994. Marine Molluscs. In Watkins, D.R. *The Foundry: Excavations on Poole Waterfront 1986*/7 Dorset Natural History and Archaeological Society **14** 84-90.

Yonge. C.M. 1949. The Sea Shore. Collins.

Context	Oyster	Cockle
108	1	
209	60	12
225	1	
412	1	
TOTALS	63	12

Table 6: Context and Species

Context	Left Valve	Right Valve	Length	Width	Infestation
108	1		80mm	71mm	
209	1		103mm	81mm	
209	1		96mm	91mm	Pomatoceros triqueter
209	1		90mm	86mm	Pomatoceros triqueter
209	1		85mm	86mm	Pomatoceros triqueter & Cliona celata
209	1		100mm	92mm	Ocenebra erinacea
209	1		106mm	95mm	Pomatoceros triqueter
209	1		80mm	85mm	Pomatoceros triqueter
209	1		90mm	79mm	Pomatoceros triqueter & Balanus crenatus
209	1		84mm	80mm	Pomatoceros triqueter
209	1		90mm	91mm	Pomatoceros triqueter & Ocenebra erinacea
209	1		85mm	90mm	Cliona celata & tine damage
209	1		87mm	90mm	Pomatoceros triqueter
209	1		80mm	93mm	Pomatoceros triqueter
209	1		92mm	77mm	Pomatoceros triqueter
209	1		90mm	88mm	Pomatoceros

				1	triqueter &
					Cliona celata
					Pomatoceros
					triqueter &
209	1		76mm	84mm	
					Balanus
					crenatus
	_			0.0	Pomatoceros
209	1		98mm	93mm	triqueter &
					Cliona celata
209	1		80mm	95mm	
209	1		101mm	109mm	Pomatoceros
					triqueter
					Pomatoceros
209	1		75mm	74mm	triqueter &
					Cliona celata
209	1		68mm	62mm	Pomatoceros
	-				triqueter
209	1		85mm	80mm	Ocenebra
					erinacea
					Pomatoceros
209	1		85mm	55mm	triqueter &
	·		00	00	Ocenebra
					erinacea
209	1		65mm	67mm	
209	1		67mm	52mm	
209	1		60mm	45mm	Pomatoceros
203	'		Oomin	45/////	triqueter
209	1		64mm	62mm	Pomatoceros
203	'		04/////	0211111	triqueter
209		1	90mm	95mm	
209		1	80mm	81mm	
209		1	75mm	75mm	
209		1	76mm	79mm	
209		1	73mm	74mm	
209		1	82mm	78mm	
209		1	90mm	95mm	
209		1	82mm	72mm	
209		1	73mm	70mm	
209		1	80mm	70mm	
209		1	90mm	82mm	
209		1	70mm	71mm	
209		1	73mm	76mm	
209		1	85mm	76mm	
209		1	71mm	76mm	
209		1	88mm	80mm	
203			OOMIN	JOHIII	

209		1	76mm	75mm	
209		1	81mm	80mm	
209		1	80mm	75mm	
209		1	70mm	70mm	
209		1	70mm	70mm	
209		1	75mm	73mm	
209		1	66mm	65mm	
209		1	75mm	64mm	
209		1	68mm	64mm	
209		1	64mm	66mm	Burnt
209		1	65mm	54mm	
209		1	60mm	51mm	
209		1	68mm	52mm	
209		1	55mm	53mm	Burnt
209		1	50mm	53mm	
209		1	52mm	41mm	
209		1	55mm	52mm	
225		1	5.3cm	5.3cm	
412		1	37+mm	41mm	
Totals	28	35			

Table 7: Oyster Measurements

7. CONCLUSIONS

7.1 Town Ditches and Berms

- 7.1.1 Evidence for the medieval town ditches was found in trenches 2, 3 and 4; Trench 1 was not excavated to a sufficient depth to observe the presence of ditch deposits in that trench. In Trench 3 the western edge of the inner ditch was located at approximately 3m from the western edge of the trench, though it had been severely truncated by modern disturbance and its fill was only visible at a depth of 3m below ground surface. The original western edge of the ditch, presumably, would have originated at a closer distance to the town wall here when taking into account the degree of slope lost by modern truncation. By comparison, at SOU 397 to the north of the site, the western edge of the inner ditch was also recorded some 3m from the town wall although it is presently not known if it had been truncated by later disturbance, and if so, to what extent.
- 7.1.2 Evidence of a berm surviving between the town wall and the western edge of the inner ditch was also encountered in Trench 3. It comprised a mortar layer overlying a 'dirty' brickearth layer which overlay, what appeared to be, natural brickearth. These layers extended c.1.2m from the western edge of the trench where they were cut by a construction trench for a brick culvert. No evidence of cutting features were recorded within these layers.
- 7.1.3 Further evidence of infilling of the town ditches was encountered in two machine excavated sondages at the eastern end of Trench 3. The pronounced west to east tiplines of the deposits recorded here suggests the vicinity of the western edge of the outer town ditch, although the upper fills were greatly disturbed by modern groundworks. Natural gravel was recorded at a depth of 4.4m below ground surface in the easternmost trench. Evidence for a berm between the inner and outer ditches was possibly located at the western edge of Trench 2 at an approximate distance of 18.5m east of the town wall located in Southampton Archaeology's Trench 1.
- 7.1.4 No evidence of a berm was found in Trench 5 or its northern and southern extensions, however post-medieval infilling of the town ditch was recorded in Trench 5.

7.2 The Artillery Bastion

7.2.1 The evaluation appears to have positively located a section of the retaining wall of late 18th century artillery bastion depicted on the historic maps and previously identified in Southampton Archaeology's 1994 trench evaluation. No evidence of the southern course of the wall extrapolated from Woolley's 1791 map to be

located within Trench 5 was found in either Trench 5 or its northern and southern extensions.

7.3 The Canal

7.3.1 No evidence of the canal was recorded within the trenches. The canal appears to have been entirely removed by modern disturbance from the site. The exact location of the canal within the site is uncertain although the most likely location is on the alignment of the present-day Canal Walk, where the presence of modern infilling suggests very little of it will have survived.

8. IMPACT ASSESSMENT

8.1 Archaeological Resource Potential

8.1.1 The evaluation trenches have demonstrated the surviving archaeological resource potential within the site. There appears to be limited evidence of the town ditches and related berms, that lay east of the line of the town walls, along with limited evidence of an 18th century artillery bastion, which historical evidence suggests stood partially within the site. No evidence for a canal was found within the trenches. None of the resources identified were seen to be particularly well preserved or largely intact; the evidence for the artillery bastion, while monumental in nature, appears to survive within a relatively limited area in the north-east corner of the site and represents a small component of a considerable structure that has largely been removed; that part which has survived appears to represent part of the lower section of its eastern side and foundation.

8.2 Existing Impacts

8.2.1 The limited surviving archaeological resource potential is the result of successive deep impacts formed by 19th and 20th century foundations and services within the site. These impacts comprise mass concrete foundations and slabs, as well as culverts, formed at various depths and at as much as 3m below the existing ground surface. The effect of these impacts has been to remove much of the archaeological resource potential that the site may have had, leaving, for instance, evidence for the fills of town ditches limited to discrete islands in between them. Evidence of the artillery bastion appears to have survived in the north-east corner of the site, reduced to height of just 3.6m OD.

8.3 Proposed Development Impacts

8.3.1 The proposed development, comprising a multi-storey building, is to be built on piled foundations and ground beams (Figure 10) forming a footprint over most of the site. The piled foundations are likely to impact the remaining, limited

archaeological resource potential within the proposed footprint. However, the surviving section of the artillery bastion that was found in Trench 2 lies in large part outside of the proposed footprint and approximately 1m below the proposed formation level. On this basis the remains of the artillery bastion are likely to be unaffected by the proposed foundations.

8.4 Recommendation

- 8.4.1 It is recommended that, given the archaeological resource potential of the site has been demonstrably impacted and reduced, no further archaeological works are necessary other than in the north-east corner of the site in the area of Trench 2. In this area a watching brief should be maintained during groundwork for the proposed development. The purpose of the watching brief should be to:
 - Ensure that the surviving section of the artillery bastion is not subject to needless damage and is conserved;
 - Monitor groundwork and investigate and record evidence of the artillery bastion that is unexpectedly uncovered;
 - Advise the main contractor on the adjustment of foundation design and construction so as to avoid unnecessary impacts upon the surviving section of the artillery bastion.

9. BIBLIOGRAPHY

Baker, T., and Son, 1802, Plan of Southampton From an Actual Survey

Doswell, J., and Son, 1800, A Plan of the County of the Town of Southampton

Garner, M., 1994, Evaluation Excavation, Old SEB Depot, Southampton (SOU 627) 1994, Southampton Archaeology Report 16

CgMs & PCA West 2014, Former SEB Depot, Back of the Walls, Southampton Written Scheme of Investigation for an Archaeological Evaluation

Mazell, P., 1771, A Plan of Southampton and of the Polygon

Milne. T., 1791, Plan of the Town of Southampton

Ordnance Survey, 1846, Plan of Borough of Southampton by Sergeant Campbell, 60 inches to one mile

Welch, E., 1977, The Bankrupt Canal

Woolley, 1791, A General Rough Plan of the Walls atte Southampton with two Sections Thro' the East walls and Ditches

10. ACKNOWLEDGEMENTS

PCA West would like to thank the following for their involvement and cooperation during the project:

Knightsbridge Student Housing for funding the project.

CgMs Consulting for commissioning the project.

Readypower and their machine drivers for their mechanical expertise.

The site staff: Dave Green, Thom Hayes, Jon Kaines and Tanya Kilstrom.

Kevin White for monitoring the project.

PCA CAD team for preparing the illustrations.

Kevin Trott, Kevin Rielly and Grahame Morgan for their specialist finds reports.

Paul McCulloch for Project Management and Editing.

10. PLATES



Plate 1. Trench 1 excavated to finished depth, looking north. Scale 1m.



Plate 2. Trench 2 fully excavated, looking north. Scale 1m. North-south aligned wall representing the artillery bastion at left of picture.



Plate 3. Trench 2 working shot, looking southwest prior to machine excavation of brick culvert flanking north-south wall **209**.



Plate 4. Trench 2 north-south wall **209**, looking south. Overlying east-west wall **210** visible top-left. Scale 1m.



Plate 5. Western edge of Trench 2 after removal of infill deposits overlying the north-south wall. Possible berm layers cut by wall at right of picture.



Plate 6. Tipping deposits overlying blackish-blue gleys within the outer town ditch in the northeast corner of Trench 3, looking north.



Plate 7. West-facing section of north-south machine excavated slot along northern boundary of Trench 3. Scale 1m.



Plate 8. West-facing section of Trench 4 showing cobble layer and stone infill of modern cut. Scale 1m.



Plate 9. East-facing section of Trench 5. Scale 2m.



Plate 10. South-facing section of Trench 5.



Plate 11. West-facing section of Trench 5. Scale 2m.



Plate 12. North-facing section of Trench 5. Scale 2m.



Plate 13. West-facing section of northern extension to Trench 5.



Plate 14. South-facing section of northern extension to Trench 5.



Plate 15. East-facing section of Trench 5. Scale 2m.



Plate 16. West and south-facing sections of northern end of southern extension to Trench 5. Scale 2m.

APPENDIX Context Index

Con				Lengi	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
Context	Category	Key Description	Interpretation	Length (m)	h (m)	pth/T (m)	neter n)	ıds	
TRE	NCH 1								
100	Layer	Grey tarmac	Ground surface for car park	<5	<4.5	0.05		-	
101	Layer	Pinkish brown scalpings	Modern levelling	<5	<4.5	0.12		-	
102	Layer	Concrete slab	Modern building foundation	<5	<4.5	0.08		-	
103	Layer	Yellowish brown sand	Modern levelling	<1.4	?	0.05		-	
104	Layer	Yellowish brown sand	Modern make-up	<5	<4.5	0.3		-	
105	Layer	Pale brown sandy loam	Modern levelling	6	<4.5	0.14		-	
106	Layer	Mid-brown sandy clay loam	Post-medieval layer	5	<1	0.09		-	
107	Layer	Yellowish brown silty clay loam	Post-medieval layer	<6.5	<4	<0.7		-	
108	Layer	Greyish brown silty clay loam	Post-medieval layer	<2.5	<4.5	0.35		Pot, bone, shell	
109	Layer	Limestone blocks bonded with creamy-white lime mortar	Northern boundary wall of Royal British Schools building?	5	1	0.3		-	
110	Layer	Creamy white mortar	Bedding layer for wall 109	0.4	1	0.1		-	
111	Layer	Dark reddish brown loamy sand	Levelling layer below 110	0.74	?	0.04		-	

Context	Category	Key Description	Interpretation	Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
112	Unstratified	Finds				-		Pot, bone, Fe nail	
TRE	NCH 2								
200	Layer	Mixed gravel/loam/brick rubble	Modern overburden	>10.3	>10.6	0.4		-	
201	Layer	Mid-greyish brown sandy loam with yellow mottling	Levelling/make-up layer	2.3	1.2	0.6		-	
202	Layer	Greyish-white mortar	Levelling/make-up layer	1.34	?	0.02		-	
203	Layer	Yellowish-white mortar	Levelling/make-up layer	<4.6	?	0.02		-	
204	Layer	Greyish-brown sandy clay loam with yellowish-brown mottling	Levelling/make-up layer	<5	?	0.36		-	
205	Layer	Dark greyish-brown clinker	Levelling/make-up layer	0.72	?	0.04		-	
206	Layer	Greyish brown sandy clay loam	Levelling/make-up layer	0.6	?	0.2		-	
207	Cut	E-W Linear cut	Cut for modern retaining wall	?	0.74	0.94		-	
208	Fill	Pink sand and stone	Modern scalpings	?	0.74	0.94		-	
209	Structure	N-S aligned limestone wall with battered foundations bonded in a dark grey mortar. Remnants of superstructure bonded in creamy-white lime mortar robbed-out and truncated by construction work for 1840s tenement buildings	Retaining wall of artillery bastion depicted on Woolley's 1791 map	<8	1.1	<2.5		Pot, Clay pipe, Oyster shell	
210	Structure	E-W aligned limestone wall	Unknown function. Post-	4.4	?	<2		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
lext	Category	Key Description	Interpretation	h (m)	(m)	pth/T m)	eter	ds	
		bonded in creamy white lime mortar. Truncates southern end of wall 209	dates bastion wall						
211	Cut	Linear cut above wall 209	Robber cut?	?	0.9	0.34		-	
212	Fill	Dark yellowish brown sandy loam	Fill of 211	?	0.9	0.34		-	
213	Cut	E-W linear cut with vertical sides	Southampton Archaeology's 1994 evaluation trench	3.7	2.5	2.33		-	
214	Fill	Backfill deposits	Backfill of SA evaluation trench	3.7	2.5	2.33		-	
215	Layer	Dark greyish brown sandy clay loam	Make-up layer	3.2	?	<0.58		-	
216	Structure	E-W and N-S sections of brick wall	Cellars of Victorian tenements fronting Canal Walk	<8.6	0.25	<0.6		-	
217	Layer	Limestone slab floor	Floor of modern cellar	1.3	0.4	0.08		-	
218	Fill	Yellowish brown coarse sand and gravel with brick and concrete inclusions	Infill of deep cut	11	<1	2		-	
219	Cut	N-S linear cut below Canal Walk	Cut to remove canal and/or medieval town ditch?	11	<1	2		-	
220	Layer	Mid brown sandy loam	Make-up layer	?	2.5	0.5		-	
221	Cut	Linear cut with concave sloping sides and sub-rounded base	Construction cut for modern breeze block retaining wall	?	1.2	0.92		-	
222	Fill	Breeze block wall bedded in scalpings	Fill of 221	?	1.2	0.92		-	
223	Cut	Linear cut with vertical sides	Cut for services associated	?	0.72	0.58		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
Χŧ	Category	Key Description	Interpretation	(E)	<u> </u>	3) E	ter	, σ	
		and flat base	with tenements						
224	Fill	Mortar bonded brick structure	Toilet at rear of tenements	?	0.72	0.58		-	
225	Layer	Greyish brown sandy clay loam	Post-medieval infill deposit	<4.5	<4.5	0.92		Pot, shell	
226	Layer	Light grey sandy loam with abundant mortar and charcoal inclusions	Post-medieval infill deposit	<3.5	<2.3	0.32		-	
227	Layer	Brown sandy clay loam with abundant mortar and charcoal inclusions	External lining of brick culvert	<3.5	1.7	0.3		-	
228	Layer	Light olive brown mortar	External lining of brick culvert	?	1.1	0.94		-	
229	Structure	E-W aligned, irregular-faced mortar bonded limestone wall	Possible packing for retaining wall 209	1.46	1.04	1.12		-	
230	Layer	Very dark grey silty clay loam	Post-medieval layer	<8	<0.5	0.8		-	
231	Layer	Brown silty clay loam	Buried subsoil; possible berm deposit between town ditches	<8	<0.5	0.15		-	
232	Layer	Yellowish brown silty clay loam	Possible natural brickearth	Site	Site	>0.1		-	
233	Cut	Irregular sloping cut at western end of wall/packing 229	Cut for wall/packing 229	?	?	0.46		-	
TRE	NCH 3								
300	Unstratified Finds							Clay Pipe	
301	Layer	Black tarmac	Ground surface	Site	Site	<0.08		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
ext	Category	Key Description	Interpretation	(E)	(m)	n) th/T	eter	S	
302	Layer	Light grey concrete	Levelling layer	<6.8	<6.2	0.2		-	
303	Layer	Light yellowish grey cement	Levelling layer	5.84	?	0.1		-	
304	Layer	Dark brown sand	Levelling layer	2.1	?	0.06		-	
305	Layer	Strong brown sand	Levelling layer	0.4	?	0.12		-	
306	Layer	Dark brown sand	Levelling layer	<0.8	?	0.1		-	
307	Layer	Dark greyish brown sandy loam	Levelling layer	2.5	?	0.4		-	
308	Layer	Strong brown sand with brick rubble inclusions	Levelling layer	2.2	?	0.18		-	
309	Layer	Strong brown sand with brick rubble inclusions	Levelling layer	2.7	?	0.18		-	
310	Layer	Very pale brown mortar and concrete	Levelling layer	3	?	0.18		-	
311	Layer	Brownish yellow loamy sand	Infill deposit	<3.6	<2.7	0.7		-	
312	Layer	Light grey sandy loam	Make-up layer	0.9	?	0.32		-	
313	Cut	N-S linear feature	Modern Feature	0.94	?	<0.8		-	
314	Fill	Greyish brown loamy sand	Fill of 313	1.22	?	0.26		-	
315	Fill	Black sandy loam	Fill of 313	0.94	?	<0.08		-	
316	Fill	Yellowish brown sandy loam	Fill of 313	0.94	?	0.36		-	
317	Layer	Pinkish brown scalpings	Levelling layer	1.4	?	0.8		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
X	Category	Key Description	Interpretation	(m)	m)	h/Т i)	ter	.	
318	Layer	Dark greyish brown sandy loam	Make-up layer	1	?	0.12		-	
319	Layer	Dark brown loamy sand	Levelling layer	6.8	1.1	0.22		-	
320	Layer	Very dark brown sand with common clinker inclusions	Levelling layer	0.48	0.18	0.1		-	
321	Layer	Dark brown sandy loam	Levelling layer	1.14	0.48	0.12		-	
322	Layer	Yellowish red sand	Levelling Layer	1.18	?	0.12		-	
323	Layer	Pink sand and cement	Levelling layer	0.74	?	0.14		-	
324	Structure	Red brick, cement bonded brick pillar in southwest corner of trench	Remnant of pre-existing modern building	0.5	0.48	0.14		-	
325	Layer	Yellowish red gravelly sand	Make-up layer	2.4	?	0.21		СВМ	
326	Layer	Very pale brown sandy loam	Make-up layer	0.5	?	0.12		-	
327	Layer	Dark yellowish brown loamy sand	Tipping/infill deposit of inner ditch	0.54	?	0.26		СВМ	
328	Layer	White concrete with common brick inclusions	Foundation slab for pre- existing building	2.8	?	0.62		-	
329	Layer	Brownish yellow loamy sand	Make-up layer	0.4	?	0.68		-	
330	Layer	White concrete with common brick inclusions	Foundation slab for pre- existing buildings	>8.4	>6.8	<1.2		-	
331	Layer	Cancelled							
332	Layer	Reddish grey scalpings	Levelling for tarmac	Site	Site	0.1		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
ext	Category	Key Description	Interpretation	ר (m)	(E)	m) th/T	eter)	ЗS	
333	Layer	Cement bonded brick wall	Wall of pre-existing structure at eastern end of Trench 3	3.3	0.25	0.38		-	
334	Layer	White concrete with common brick inclusions	Foundation slab for pre- existing buildings	2.42	?	0.54		-	
335	Layer	Yellowish brown sand and gravel	Levelling layer	0.1	?	0.1		-	
336	Layer	Dark brown sandy loam	Levelling Layer	0.34	?	0.28		-	
337	Layer	Yellowish brown sandy clay loam	Infill of town ditch on a W-E tipline	0.5	?	0.14		-	
338	Layer	Dark brown sandy loam	Infill of town ditch on a W-E tipline	3.3	?	0.4		-	
339	Layer	Yellowish brown sandy clay loam	Infill of town ditch on a W-E tipline	3.3	?	0.4		-	
340	Layer	Dark brown sandy clay loam	Infill of town ditch on a W-E tipline	2.2	?	0.1		-	
341	Layer	Brown sandy clay loam	Infill of town ditch on a W-E tipline	3.3	?	0.25		-	
342	Layer	Dark brown sandy loam	Infill of town ditch on a W-E tipline	1.94	?	0.24		-	
343	Layer	Dark brown sandy clay loam	Infill of town ditch on a W-E tipline	2.4	?	0.14		-	
344	Layer	Dark brown sandy clay loam	Infill of town ditch on a W-E tipline	2.8	?	<0.3		-	
345	Layer	Thin band of cream coloured mortar	Infill of town ditch on a W-E tipline	2	1.8	0.04		-	
346	Layer	Dark yellowish brown sandy clay	Infill of town ditch on a W-E tipline	2.9	1.8	0.1		-	
347	Layer	Cement bonded brick wall	Wall of pre-existing structure at eastern end of Trench 3	1.8	2.5	0.4		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
ext	Category	Key Description	Interpretation	(m)	(E)	oth/T m)	eter)	ds	
348	Layer	Greyish white concrete	Foundation slab for pre- existing buildings	1.8	<0.8	0.5		-	
349	Layer	Dark brown sandy clay loam	Levelling layer for concrete 348	1.8	?	0.1		-	
350	Layer	Yellowish brown silty clay	Infill of town ditch	<3.2	<1.8	0.5		-	
351	Layer	Blackish-blue gley	Waterlogged fill of outer town ditch	<3.2	?	2		Animal Bone	
352	Layer	Rounded gravel in a dark grey sand matrix	Natural river terrace deposits	<3.2	<1.8	<0.12		-	
353	Layer	Light greenish grey mortar on a W-E tipline	Make-up/levelling Layer	1	?	0.1		-	
354	Layer	Rubble layer on a W-E tipline	Make-up/levelling Layer	<3.2	<1	<0.4		-	
355	Layer	Greyish brown sandy loam	Make-up/levelling Layer	<3.2	1.6	0.16		-	
356	Layer	Greyish yellow mortar	Layer associated with construction or demolition of town wall?	<3.2	1.6	0.3		-	
357	Layer	Black soot and clinker on W-E tipline	Infill of town ditch	<3.2	<1	0.14		-	
358	Layer	Mid brown sandy loam on W-E tipline	Infill of town ditch	<3.2	<1	0.1		-	
359	Layer	Yellowish brown silt loam	In-situ layer	<3.2	<1.3	<0.5		-	
360	Layer	Brownish yellow gravel	Infill of town ditch	<3.2	<2	1.2		-	
361	Cut	N-S aligned cut	Cut for inner town ditch	<3.2	<1.7	<0.12		-	
362	Fill	Bluish black silty clay loam	Silting deposits lining inner town ditch	<3.2	<1.7	<0.12		-	

Context	Category	Key Description	Interpretation	Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
		-	-						
363	Layer	Dark yellowish brown	Buried subsoil?	<3.2	<1.7	<0.5		-	
364	Layer	Yellowish brown silt loam	Natural brickearth	<3.2	<1.7	<0.3		-	
365	Cut	NW-SE aligned cut	Modern cut for drainage pipe	2.7	<3.2	1.06		-	
366	Fill	Mid brown sandy clay loam	Fill of 365	2.7	<3.2	1.06		-	
TRENCH 4									
401	Layer	Whitish grey concrete	Modern building foundation	Site	Site	0.12		-	
402	Layer	Yellowish grey sand	Levelling layer	<9.35	<4	0.08		-	
403	Layer	Black sand with clinker inclusions	Levelling layer	<9.35	<4	<0.2		-	
404	Layer	Whitish grey concrete	Modern building foundation	<9.35	<4	<0.26		-	
405	Layer	Dark yellowish brown sandy loam	Make-up deposit	<3.48	<2.34	0.3		-	
406	Layer	Cobbles set in yellowish brown sand	Former yard surface?	<2.34	<1.9	0.16		-	
407	Layer	Very dark greyish brown sandy clay loam	Make-up deposit	<2.34	<1.9	0.16		-	
408	Layer	Very dark brown clay loam	Make-up deposit	<2.34	<1.9	0.42		-	
409	Layer	Yellowish brown sandy clay loam	Make-up/levelling layer	<2.34	<2.2	0.6		-	
410	Cut	Sub-circular cut	Possible early modern posthole			0.36	0.6	-	
411	Cut	Sub-rectangular feature	Early modern pit	0.9	0.46	0.22		-	

Context	Category	Key Description	Interpretation	Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
412	Fill	Dark brown sandy clay loam	Fill of pit 411	0.9	0.46	0.22		Pot	
413	Cut	E-W aligned linear feature	Modern service trench	0.55	0.48	0.36		-	
414	Fill	Yellowish brown sandy clay loam	Fill of 413	0.9	0.55	0.12		-	
415	Layer	Mid yellowish brown silty clay	Make-up/levelling layer	0.9	0.55	0.12		-	
416	Layer	Bluish black silt loam	Make-up/levelling layer	0.9	0.65	0.19		-	
417	Fill	Brick rubble in yellow sand	Fill of 410			0.36	0.6		
TRE	TRENCH 5								
500	Layer	Tarmac, scalpings, sand, gravel, brick rubble and loamy deposits	Sequence of Modern levelling and make-up deposits beneath ground surface	<3.7	<3.6	1.6		-	
501	Cut	N-S aligned cut with gradually sloping concave side	Cut for western edge of town ditch?	<3.7	<3.6	1.7		-	
502	Fill	Yellowish brown silty clay loam	Backfill of brick culvert	<3.6	<1	1.2		-	
503	Cut	E-W aligned cut with steep sloping concave side and sub rounded base	Linear feature containing limestone blocks of unknown function	<2.6	<1.8	1.6		-	
504	Fill	Dark greyish brown silty clay loam with limestone block and fragment inclusions	Primary fill of feature 403	<2.6	<0.5	0.6		-	
505	Fill	Mid brown silty clay loam	Upper fill of feature 403	<2.6	<1.1	0.9		-	
506	Deposit	Yellowish brown silt loam	Natural brickearth	Site	Site	<0.6		-	

Context				Length (m)	Width (m)	Ht/Depth/T hk (m)	Diameter (m)	Finds	
	Category	Key Description	Interpretation	h (m)	(m)	pth/T	eter 1)	ds	
507	Deposit	Yellowish brown gravel in a sandy loam matrix	Natural gravel	Site	Site	UE		-	
508	Fill	Very dark grey silty clay loam on W-E tipline	Fill of 501	?	1.6	0.54		-	
509	Cut	N-S aligned steep sided cut	Cut for brick culvert	<3.4	<1.1	2.4		-	
510	Fill	Mortar bonded domed brick structure containing black silt	Brick culvert	<3.4	<1.1	0.7		-	
511	Fill	Stony pale brown sandy clay loam	Fill of town ditch?	?	2.7	0.7		-	
512	Layer	Dark yellowish brown sandy clay	Re-deposited brickearth layer	?	<2.3	0.74		-	
513	Fill	Yellowish brown sandy clay	Infill of town ditch	<4.7	<3.1	2.8		-	
514	Fill	Dark brown silty clay	Infill of town ditch	<1.8	?	1.6			
515	Fill	Very dark grey silty clay	Fill/silting of town ditch	<3.02	<2.7	0.74		-	
516	Fill	Black sandy silt loam	Fill/silting of town ditch	<2.66	<2.7	0.52		Animal bone	
517	Fill	Bluish black silty clay loam with common oyster shell inclusions on W-E tipline	Upper infilling of town ditch	<3.4	<2.1	<0.52		-	
518	Fill	Yellowish brown silty clay loam on W-E tipline	Infilling of town ditch	<1.6	?	0.34		-	
519	Fill	Dark yellowish brown sandy clay loam	Infilling of town ditch	<2.2	?	0.9		Pot	
520	Fill	Pale brown sandy loam	Infilling of town ditch	<1.4	?	0.34		-	

OASIS ID: preconst1-196151

Project details

Project name NCP Car Park, Back of the Walls, Southampton

Short description of the

project

Archaeological Evaluation

Project dates Start: 04-09-2014 End: 31-10-2014

Previous/future work Yes / Not known

Any associated project

reference codes

SOU1666 - Sitecode

Type of project Field evaluation

Current Land use Vacant Land 1 - Vacant land previously developed

Monument type TOWN DITCHES Medieval

Monument type ARTILLERY BASTION Post Medieval

Significant Finds POTTERY, CLAY-PIPE, CBM, OYSTER SHELL Post Medieval

Project location

Country England

Site location HAMPSHIRE SOUTHAMPTON SOUTHAMPTON NCP Car

Park, Back of the Walls, Southampton

Postcode SO14 3HA

Study area 1.90 Hectares

Site coordinates SU 442167 111429 50.8975165744 -1.37118081292 50 53 51

N 001 22 16 W Point

Height OD / Depth Min: 1.30m Max: 1.30m

Project creators

Name of Organisation PCA West

Project brief originator CgMs Consultants Ltd

Project design originator PCA West

Project director/manager Paul McCulloch
Project supervisor Tony Molloy

Project archives

Physical Archive recipient Hampshire Museums and Archives Service

Physical Contents "Animal Bones", "Ceramics"

Digital Archive recipient Hampshire Museums and Archives Service

Digital Media available "Images raster / digital photography", "Images

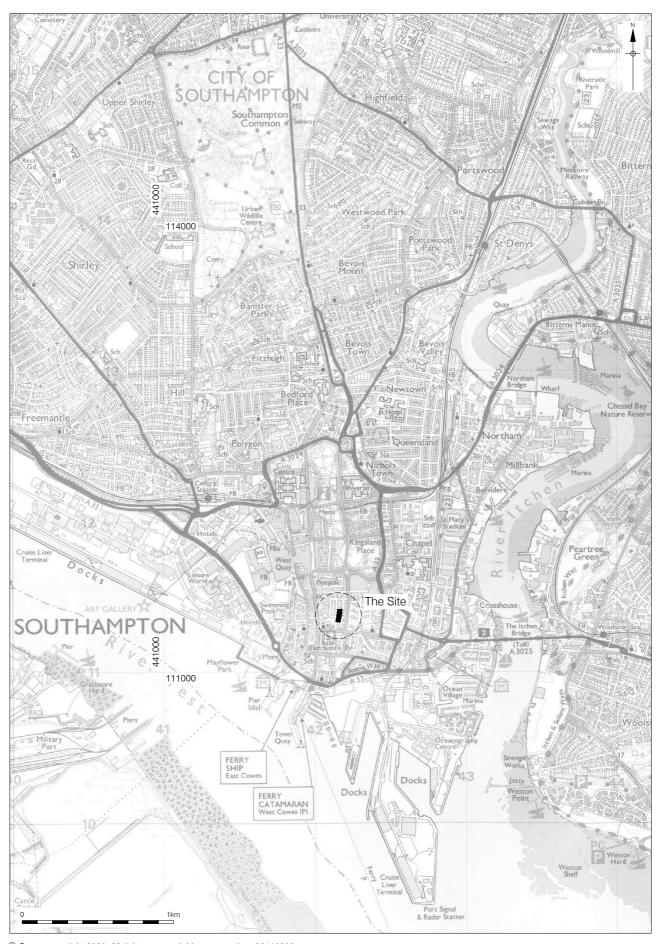
vector", "Spreadsheets", "Text"

Paper Archive recipient Hampshire Museums and Archives Service

Paper Media available "Report"

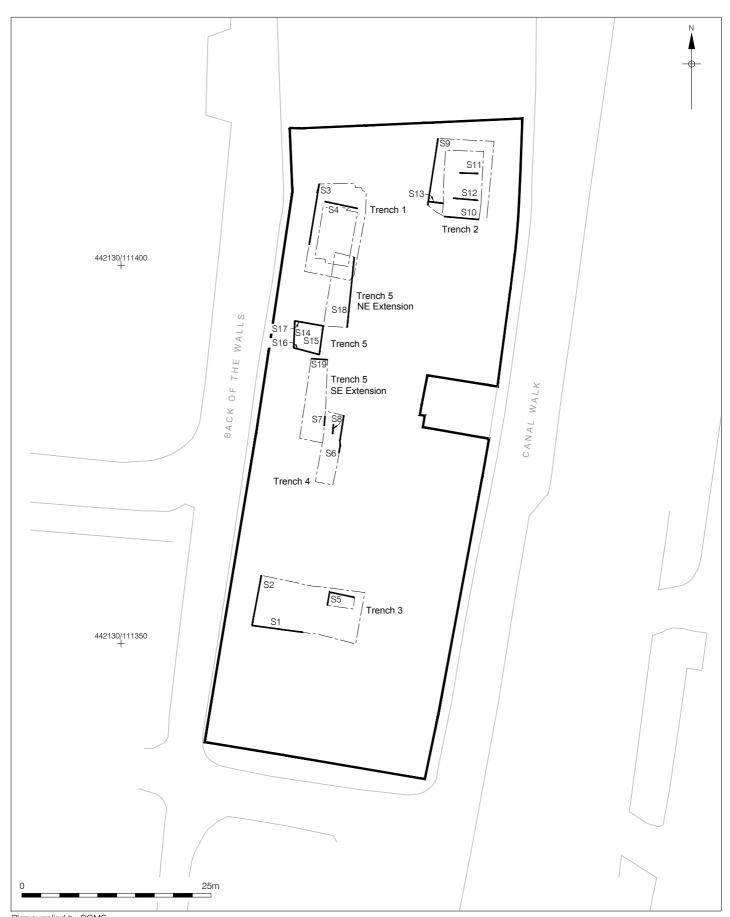
Entered by Tony Molloy (TMolloy@pre-construct.com)

Entered on 24 November 2014

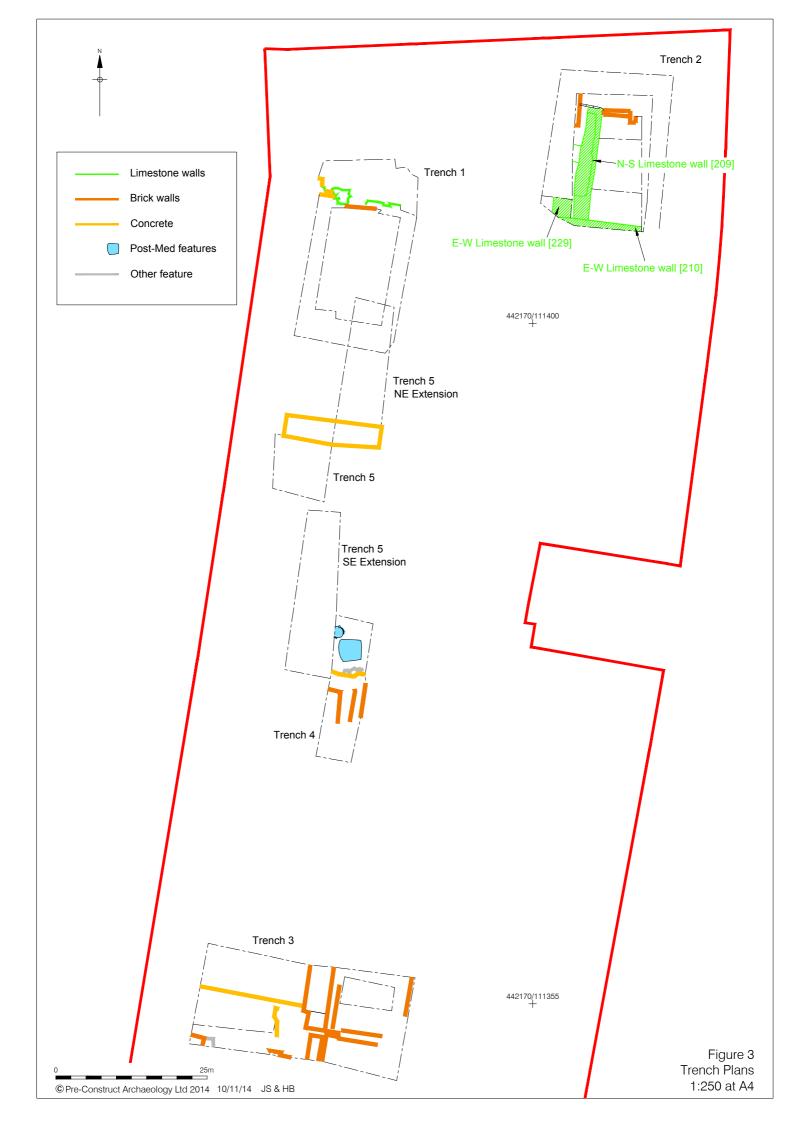


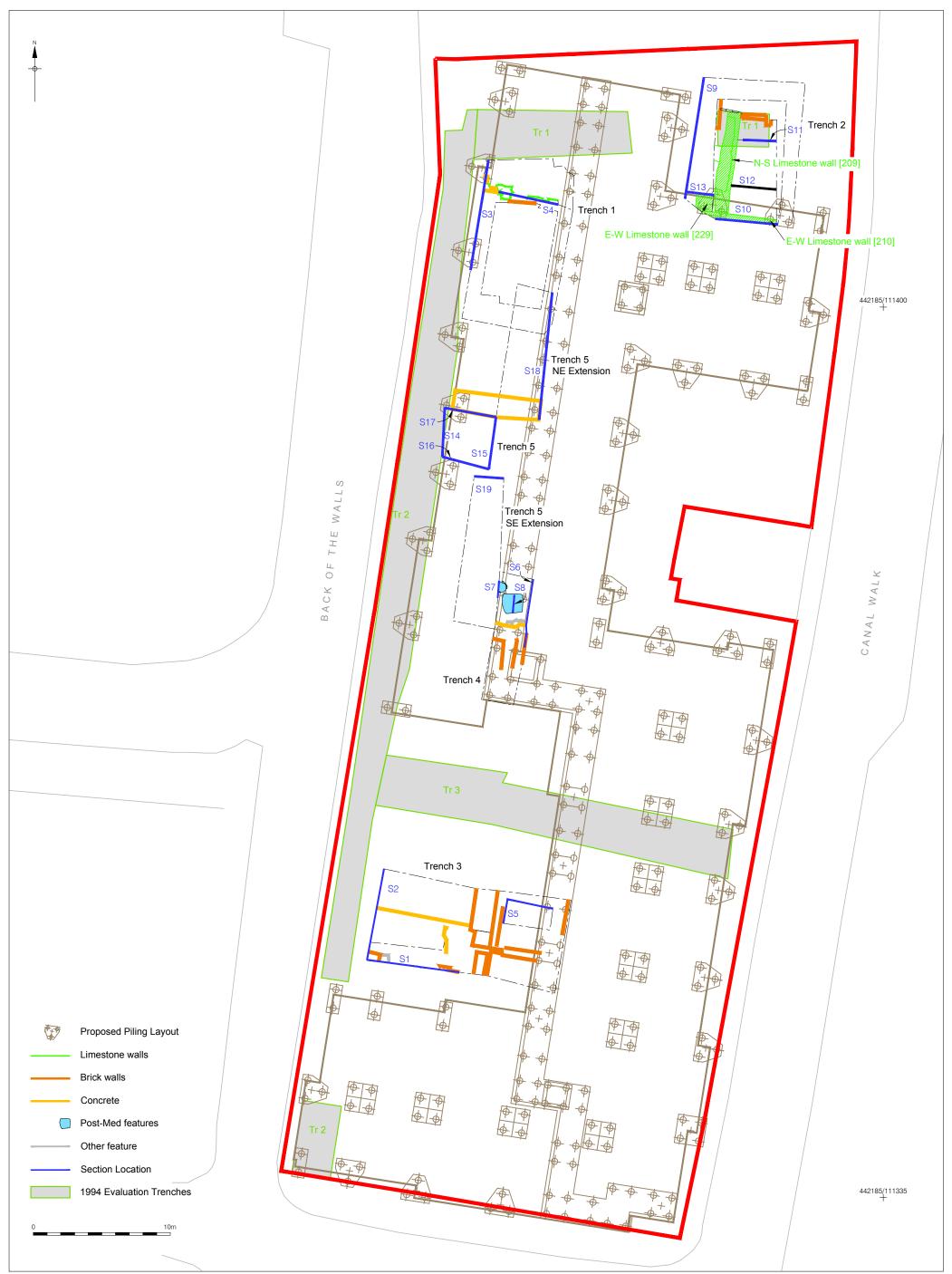
© Crown copyright 2006. All rights reserved. License number 36110309

© Pre-Construct Archaeology Ltd 2014



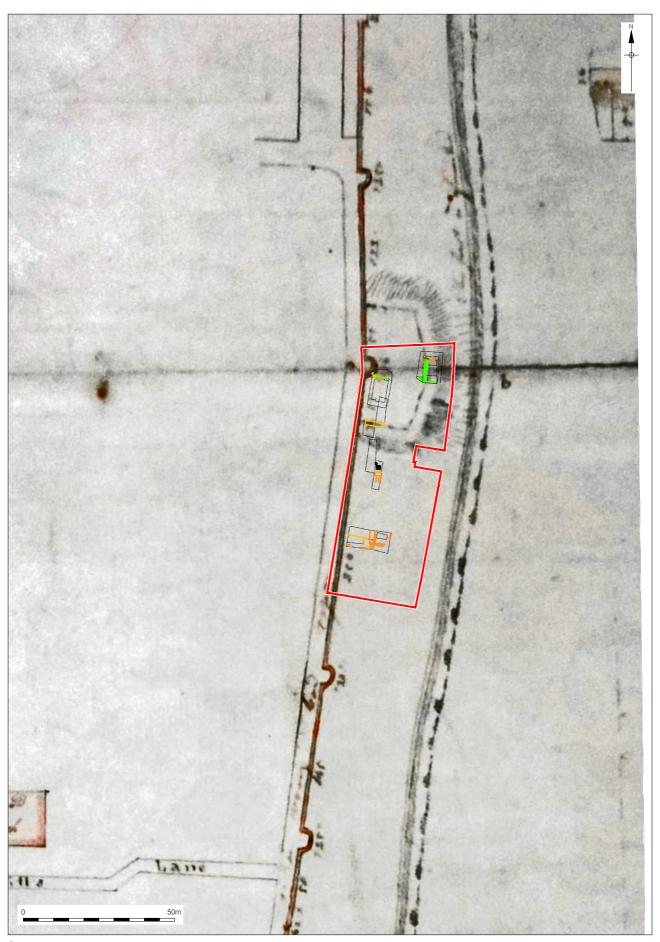
Plan supplied by CGMS
© Pre-Construct Archaeology Ltd 2014
11/11/14 JS (revision 1)



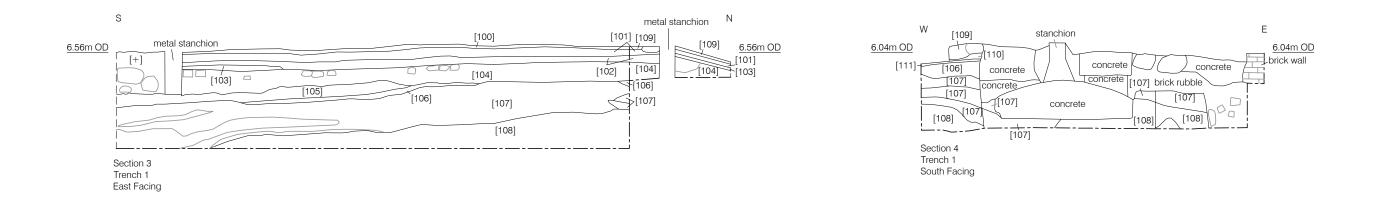


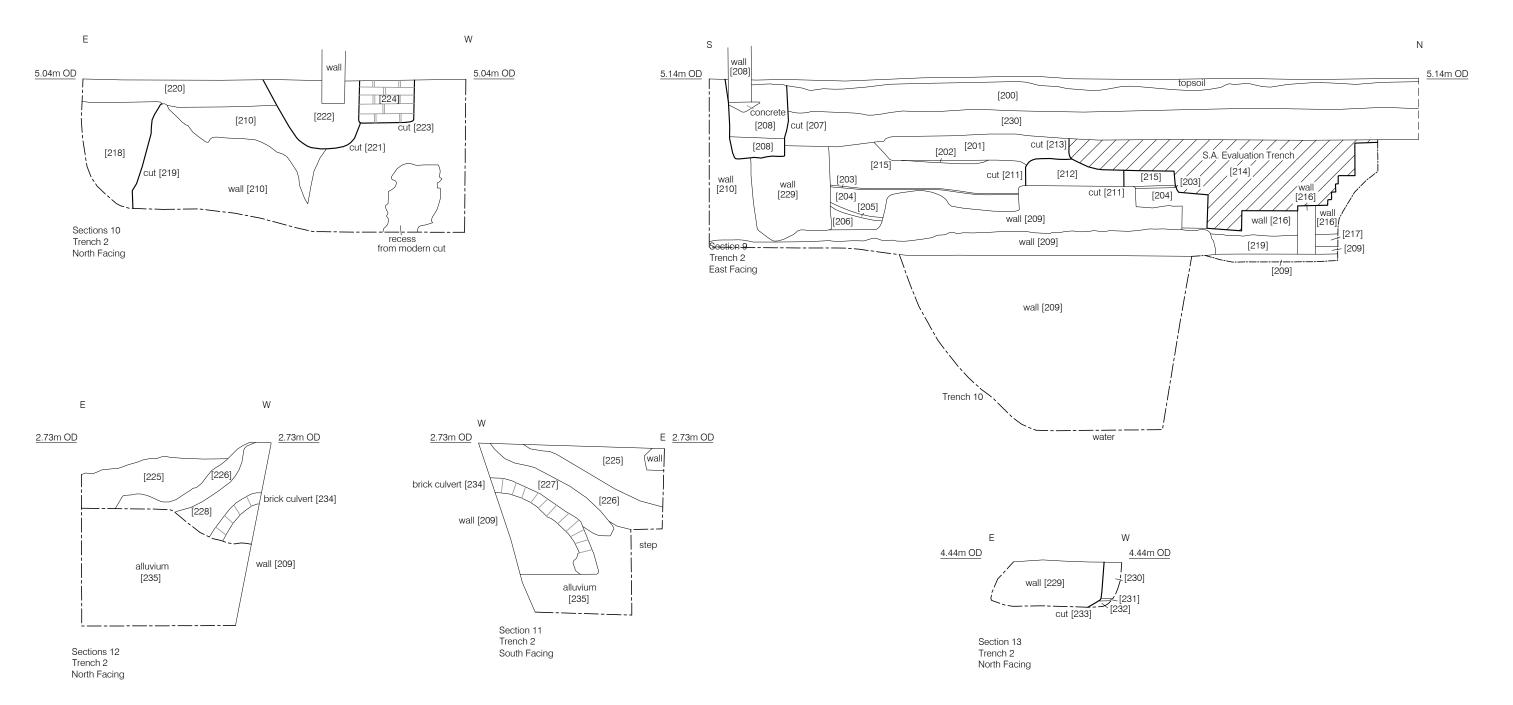
Plan supplied by CGMS

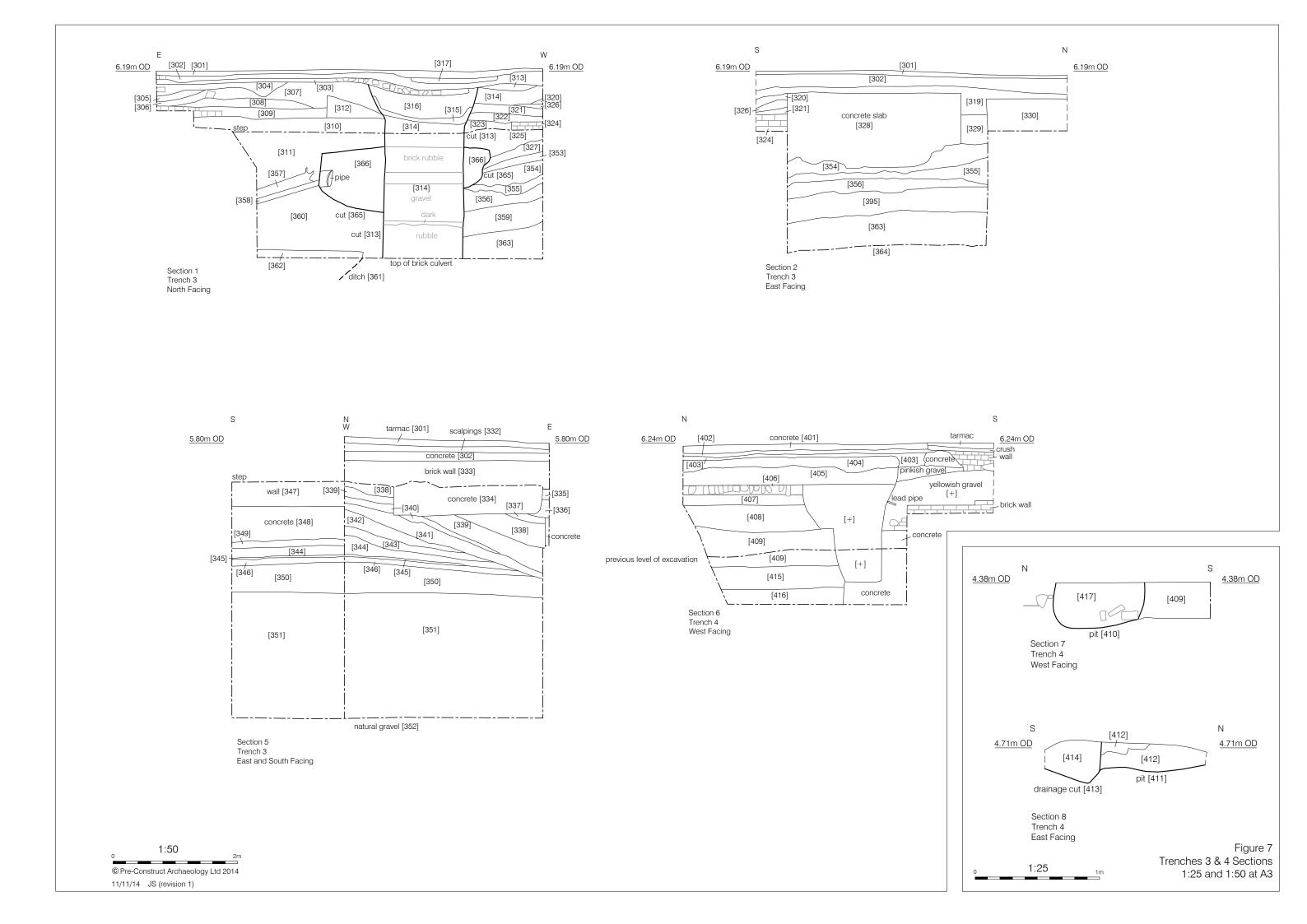
© Pre-Construct Archaeology Ltd 2014
10/11/14 HB & JS
11/11/14 JS (revision 1)

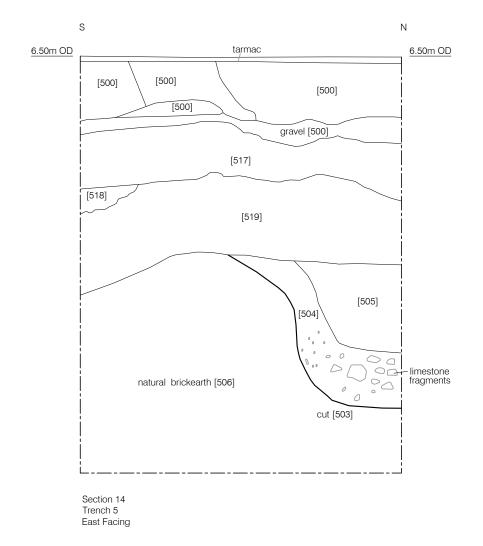


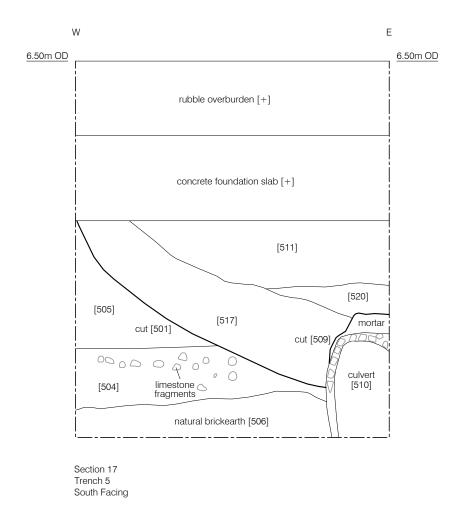
© Pre-Construct Archaeology Ltd 2014 10/11/14 MR & JS 11/11/14 JS (revision 1)

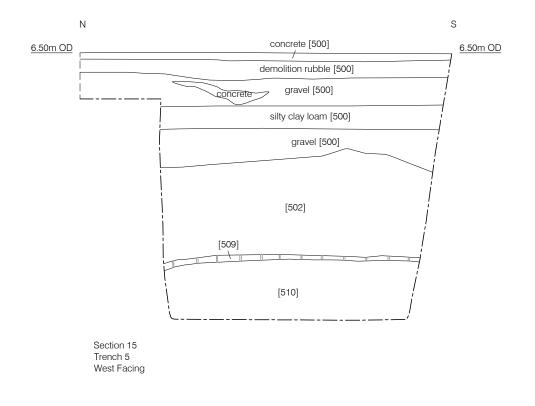


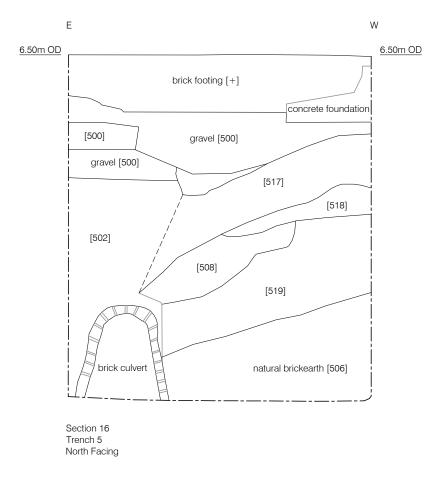


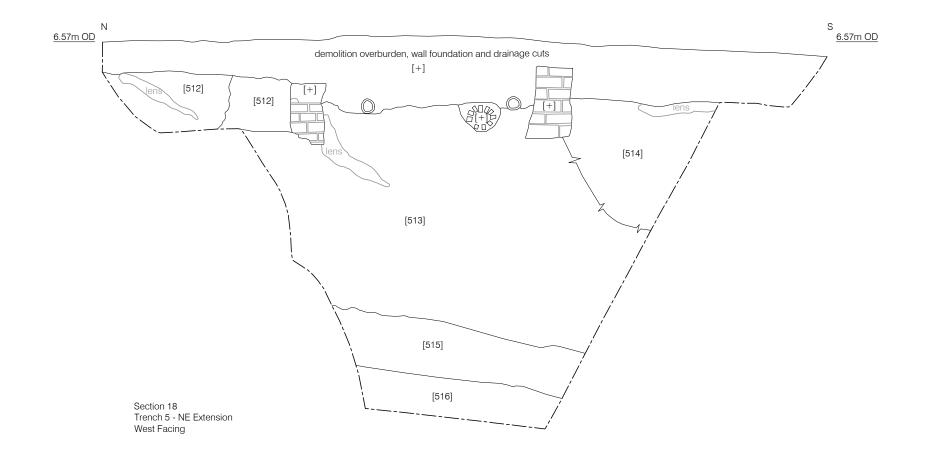


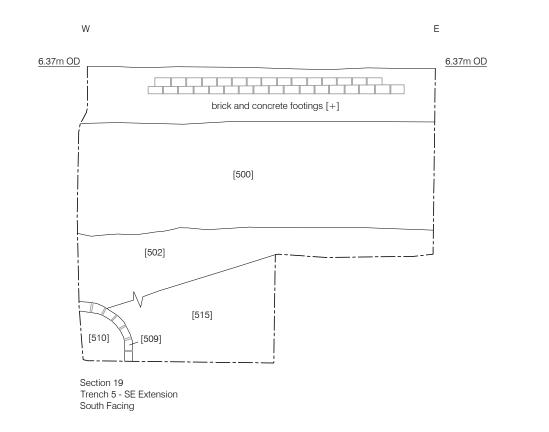














Piling Layout Plan supplied by Bailey Johnson Hayes
© Pre-Construct Archaeology Ltd 2015
10/11/14 JS: updated 20/01/15 HB

PCA

PCA SOUTH

UNIT 54

BROCKLEY CROSS BUSINESS CENTRE 96 ENDWELL ROAD

BROCKLEY

LONDON SE4 2PD

TEL: 020 7732 3925 / 020 7639 9091

FAX: 020 7639 9588

EMAIL: info@pre-construct.com

PCA NORTH

UNIT 19A

TURSDALE BUSINESS PARK

DURHAM DH6 5PG TEL: 0191 377 1111

FAX: 0191 377 0101

EMAIL: info.north@pre-construct.com

PCA CENTRAL

THE GRANARY, RECTORY FARM BREWERY ROAD, PAMPISFORD CAMBRIDGESHIRE CB22 3EN

TEL: 01223 845 522 FAX: 01223 845 522

EMAIL: info.central@pre-construct.com

PCA WEST

BLOCK 4 CHILCOMB HOUSE CHILCOMB LANE WINCHESTER HAMPSHIRE SO23 8RB

TEL: 01962 849 549

EMAIL: info.west@pre-construct.com

PCA MIDLANDS

17-19 KETTERING RD LITTLE BOWDEN MARKET HARBOROUGH LEICESTERSHIRE LE16 8AN TEL: 01858 468 333

EMAIL: info.midlands@pre-construct.com

